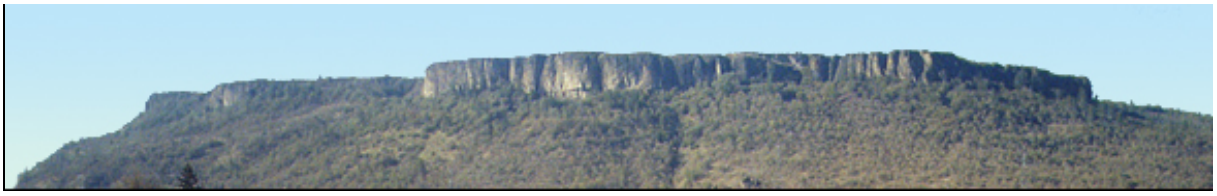

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RFPs

10 South Oakdale, Room 100
Medford, Oregon 97501
Phone: (541) 774-6900
Fax: (541) 774-6791
Contact:

Paul Korbulic, Director of Roads, Parks & Planning Services;

Alwin Turiel, Planning Manager;

Robert Gilmore, Building Official

Hours: Monday, Tuesday, Thursday and Friday - 8 a. m. to 4 p.m.; Wednesday 1 p.m. to 4 p. m.

2004 Comprehensive Plan (Comp Plan)

Listed below are the Jackson County Comprehensive Plan Elements (Exhibit 2) amended by Board of Commissioners Ordinance No. 2004-1.

Ordinance No. 2004-1 was approved on January 12, 2004; and became effective March 12, 2004.

The Jackson County Comprehensive Plan is the official long-range land use policy document for Jackson County. The plan sets forth general land use planning policies and allocates land uses into resource, residential, commercial and industrial categories. The plan serves as the basis for the coordinated deelopment of physical resources, and the development or redevelopment of the county based on physical, social, economic and environmental factors.

As required by state law, the county's Comprehensive Plan has been developed in accordance with the Statewide Planning Goals adopted by the Land Conservation and Development Commission (LCDC). These Statewide Planning Goals provide basic planning direction and establish the framework for planning programs of all governmental agencies and bodies in the state and county. The Jackson County Comprehensive Plan addresses each of the 14 applicable Statewide Planning Goals, as well as local goals, and contains policies and implementation strategies aimed at compliance with these goals.

If you wish to pick up a copy of the entire Comprehensive Plan, it may be purchased at the Zoning Counter of this Department. Otherwise, each component/element is available below in printable format for your convenience.

GENERAL_INTRODUCTION_ELEMENT.PDF (31.2KB)
GENERAL INTRODUCTION ELEMENT (AMENDED BY ORDINANCE 2004-1 ON 3-12-2004)

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BACKGROUND

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ALTERNATIVE FUTURES

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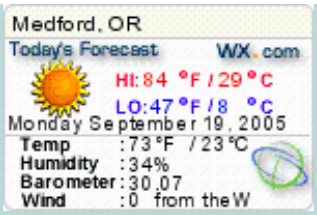
MAP DESIGNATIONS (AMENDED BY ORDINANCE 2004-1 ON 3-12-2004)

EXISTING_LAND_USE.PDF (1774.4KB)
EXISTING LAND USE



DEFINITIONS_ELEMENT.PDF (18.5KB)
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GENERAL_IMPLEMENTATION.PDF (190.8KB)
GENERAL IMPLEMENTATION

Printer friendly version

GENERAL INTRODUCTION[1]

AUTHORITY:

The Jackson County Comprehensive Plan results from major updates and revisions to the County's first Comprehensive Plan adopted in 1972. This Plan was revised to comply with Senate Bill 100, passed by the Oregon State Legislature in 1973 (as subsequently amended by SBs 570 and 846, and HB 2944), and the mandatory Statewide Planning Goals adopted by the Land Conservation and Development Commission (LCDC) in 1975. Subsequent revisions resulted from the County's first periodic review approved by the Department of Land Conservation and Development (DLCD) on April 11, 1994. Further revisions occur as Jackson County continues the on-going process of inventorying and analyzing data; reviewing alternative solutions; and responding to changes in local, regional and state conditions to ensure that the plans and regulations remain in compliance with the statewide planning goals and local needs.

PURPOSE:

The 1982 Jackson County Comprehensive Plan is the official long-range general land use policy document for Jackson County. The Plan sets forth general land use planning policies and allocations of land uses; and, serves as the basis for the coordinated development of physical resources, and the development or redevelopment of the County based on physical, social, economic, and environmental factors. More specifically, the Comprehensive Plan provides the overall framework for the following planning functions:

1) Guides all units of government and affected agencies in the County in developing and implementing activities which relate to the County's public planning process;

2) Establishes the means for consistent policy basis and planning decisions among all affected public and quasi-public agencies for a general, comprehensive, and long-range approach to the provision of public facilities and services needed for future development throughout the County;

3) Makes planning information available to assist citizens to better understand the basis for public and/or private planning related decisions and encourages their participation in the process;

4) Provides the general public with a guideline for individual planning decisions;

5) Assists citizens in measuring the progress of the County and its elected officials in achieving the Plan's goals, policies, and implementation strategies;

6) Provides continuity in the planning and land development process over an extended period of time;

7) Serves as a general comprehensive planning framework to be augmented, as needed, by more detailed planning programs to meet the specific needs of the various units of local government, special districts, and affected agencies.

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[1]*Adopted by Ordinance #82-26 on 10-20-82, effective 12-19-82 (File 82-50-OA); amended by Ordinance #2004-1 adopted 1-12-04, effective 3-12-04 (File 2003-1-OA).*

8) Provides a basis for public decisions on specific issues balanced with long-range needs and objectives.

USE OF THE PLAN:

The major components of the Jackson County Comprehensive Plan are: The written text, which consists of supporting materials, findings, goals, policies, implementation strategies, and the land use Plan map(s), which graphically depict the current and proposed land use patterns for the County.

The goals, policies, and implementation strategies contained in this Plan are not presented in any particular order of importance. The County recognizes that there are discernible conflicts and inconsistencies between and among some goals and policies. When making decisions based on the Plan's contents, not all of the goals, policies, and implementation strategies can be met to the same degree in every instance, otherwise it would be an inflexible and unworkable document. Use of the Plan requires a balancing of its various components on a case-by-case basis, as well as the selection of those particular items and factors most pertinent to the issue at hand. In addition, it is important to realize that the written portion of the Plan text should take precedence over the Plan map, where apparent conflicts or inconsistencies occur.

The Comprehensive Plan maps are general diagrams which graphically depict the allocations of projected land use needs and patterns in the County, and reflect the goals, policies, and implementation strategies embodied in the text and elements of the Plan. Some of the information shown on the Plan maps include land use categories, urban growth boundaries, incorporated municipal boundaries, major transportation routes, and major rivers and stream courses.

Zoning maps are separate diagrams which more specifically depict the allocations of existing and near term land uses within each of the broader Comprehensive Plan map designation categories. Zoning districts are established in accordance with the corresponding Plan map designations to further refine varying levels of density and development intensity permitted by the Plan map. Appropriate density and development intensity is determined in a manner consistent with the Comprehensive Plan policies and guidelines applicable to each area of the County. As such, the Plan and Zoning maps cannot be used independently from, or take precedence over, the written portion of the Plan text.

POLICIES AND IMPLEMENTATION STRATEGIES:

The Comprehensive Plan policies, once adopted, have the force of law. They represent the most important feature of the whole Comprehensive Plan. Adoption of the policies does not imply immediate implementation; however, policies and their staging characteristics fall into the following categories:

1) Policies which will be implemented early in the form of zoning or subdivision ordinance provisions, or those which are reflected in the application of zoning districts to land. The ordinance provisions fall into two categories: Those needed to satisfy state goals which will be adopted early, and those which are desirable and will be adopted when time and priorities exist.

2) Policies which will guide the review and decision on discretionary land use actions.

3) Policies which state a long-range concern through the policy, and will be implemented only when the concern reaches a level where sufficient support exists to cause funding or necessary staffing to implement the policy.

4) Those policies requiring new forms of state legislation, wherein the County will lobby for state action.

5) Those policies requiring new forms of local legislation or agreements. Implementation of these will typically depend on the establishment of priorities for development of legislation and action.

Following each policy in the Comprehensive Plan is a list of implementation strategies. These lists of strategies are provided for the following purposes:

1) To clarify, in part, the intent of the policy and the types of actions necessary to implement the policy; and,

2) To provide County decision-makers with a wide range of options which may be used to implement the policy.

Listing of a strategy does not obligate the County to employ that strategy. Strategies are considered to be guidelines only and are not binding by law. Prior to implementation of a policy, the listed strategies, plus any others conceived at the time, will be evaluated. The strategy or strategies which best fit the conditions existing at that time will be used.

RELATIONSHIP TO STATEWIDE PLANNING GOALS, OTHER PLANS, AND POLICIES:

As required by state law (ORS 197.175), the County's Comprehensive Plan has been developed in accordance with the Statewide Planning Goals adopted by the Land Conservation and Development Commission (LCDC). These Statewide Planning Goals provide overall basic planning standards and establish the framework for planning programs of all governmental agencies and bodies in the state and County. The Jackson County Comprehensive Plan addresses each of the Statewide Planning Goals, as well as local goals, and contains policies and implementation strategies aimed at compliance with these goals.

While the County's Comprehensive Plan is the basic guiding land use policy document, it is not the only such document. As previously indicated, the Comprehensive Plan is a general framework which may be augmented by more detailed plans, programs, or policies. These refinements to the Comprehensive Plan can include zoning and subdivision regulations, specific area or community plans, or special purpose or functional plans such as water, sewer, or transportation. In all cases, however, the Jackson County Comprehensive Plan is the guiding document, and refinement of other applicable plans, policies, and implementation strategies must be consistent with this document. Should inconsistencies occur, the Jackson County Comprehensive Plan is the prevailing document.

EXCEPTIONS:

While recognizing the need for common standards for planning, the citizens of Oregon and LCDC have realized that there are instances where strict adherence to a particular goal is not possible or in the best public interest. So too, it is recognized that the objective of one goal may conflict with the objective of another in some areas; thus, the exceptions process is a provision to allow

resolution of conflicts or inconsistencies between goals or where application of a specific goal is not prudent because of unique and overriding local conditions.

The exceptions process of Goal 2, Land Use Planning, is a method for describing how the requirements of certain Statewide Planning Goals have been balanced against local land use related needs. The exceptions process provides the flexibility within the context of the Comprehensive Plan to deal with these conflicting issues. The exception itself is the documentation of a conclusion that it is not possible to apply a particular Goal to certain land areas or under certain circumstances; it cannot be used to indicate disagreement with a Goal, or to express the desire not to comply with a specific goal. Rather, the exceptions process and conclusions must be based on a justifiable need for a use not otherwise allowed by a Goal to be located in a specific area.

The Goal Exceptions Element of the Comprehensive Plan describes the process and parameters adopted by Jackson County to initially identify and justify Goal 3 and 4 exception areas that were included within the County's 1982 land use Plan. Other exception areas, some relating to other Statewide Planning Goals, have subsequently been adopted resulting in post-acknowledgment Plan and Zoning map amendments. The ordinances which justify the post-acknowledgment map amendments are indexed in the Codified Ordinances of Jackson County Oregon, Part 12, Appendix I.

UNINCORPORATED CONTAINMENT BOUNDARIES:

The concept and intent of unincorporated containment boundaries is one of allowing for the in-filling, but not the outward expansion, of development in such designated areas by virtue of providing for a choice in living environments of a segment of the populace while simultaneously protecting resource lands and providing for an efficient and orderly transition from urban to suburban to rural lands, consistent with the goals and policies comprising the Jackson County Comprehensive Plan. As such, future amendments to unincorporated containment boundaries will not occur, except as provided under OAR 660, Division 22 where an area is shown to be qualified as an Unincorporated Community.

UNINCORPORATED COMMUNITIES:

A statewide policy for the planning and zoning of unincorporated communities is established by LCDC rule OAR 660, Division 22, the "Unincorporated Communities" Rule. The rule is intended to expedite the planning process for counties by reducing the need to take exceptions to statewide planning goals when planning and zoning unincorporated communities. Unincorporated communities may be urban, rural, or resort areas that would otherwise be subject to Statewide Planning Goals 3 and/or 4. Adopted unincorporated communities are depicted on the Official Comprehensive Plan and Zoning Maps of Jackson County. Rural unincorporated community plans are included in the Rural and Suburban Lands Element of the Comprehensive Plan, while adopted urban unincorporated community plans are included as part of the Urban Lands Element of the Comprehensive Plan. The Jackson County Land Development Ordinance outlines zoning regulations and development standards specific to each community type. All zoning applied within an unincorporated community must be consistent with the appropriate community plan. Any proposal to designate or amend such a community must be consistent with the provisions of OAR 660, Division 22.

PLAN EVALUATION AND UPDATE:

The Comprehensive Plan is not intended to be a static document. Changing conditions in the form of changing attitudes, economics, law, or other conditions which were projected within the Plan, but never attained, all lend support to periodical review of the Plan. As conditions change, so should the Plan in many instances.

Changes to the Plan should, however, not be taken lightly. As the guiding long-range land use policy for Jackson County, changes should only be made after thorough study and assurance that the options have been explored and an amendment is warranted. Specific Plan amendment procedures are outlined in the Jackson County Land Development Ordinance for initiation and consideration of Plan amendments.

PLAN AMENDMENTS:

The Comprehensive Plan is a set of goals and policies designed to guide the future of land uses in Jackson County. Plan amendments should be made where necessary and proper, and may range from minor changes such as a request from an individual property owner, to a major revision which involves significant impacts beyond an immediate area or issue. The Plan amendment process is a mechanism which seeks to determine for all interested parties:

1) Progress in implementing the Plan;

2) Adequacy of the Plan to guide land use actions in the manner intended;

3) If the Plan continues to reflect community desires, interests, as well as physical, social, economic, energy, and environmental factors;

4) If a major action or trend in minor actions is consistent with the Plan;

5) If the overall effect of actions and/or changes has diminished the Comprehensive Plan's pertinence.

The procedural requirements and approval criteria for Comprehensive Plan amendments are set forth in the Jackson County Land Development Ordinance.

AMENDMENTS TO URBAN GROWTH BOUNDARIES:

Major Revisions

Major revisions in boundary or policies will be considered amendments to both the city and County comprehensive plans, and as such, are subject to a legislative review process. A major revision shall include any boundary change that has widespread and significant impact beyond the immediate area, such as quantitative changes allowing for substantial changes in population or significant increases in resource impacts; qualitative changes in the land use itself, such as conversion of residential to industrial use; or spatial changes that affect large areas of many different ownerships. Any change in urbanization policies is considered a major revision.

Major revisions will be considered by the city and County at periodic intervals in accordance with the terms of the mutually adopted urban growth boundary agreements between the County and each municipal jurisdiction. It is the intent of the governing bodies to review the urban growth boundary and urbanization policies for consistency upon completion of the city and County comprehensive plans.

A request for a major revision can be initiated only by the County or city governing bodies or their respective planning commissions. Individuals, groups, citizen advisory committees, and affected agencies may petition the County or appropriate city in accordance with the procedural guidelines adopted by the jurisdiction for initiating major legislative amendments. The party who seeks the revision shall be responsible for filing adequate written documentation with the city and County governing bodies. Final legislative action on major revision requests shall be based on the factors stated in each mutually adopted urban growth boundary agreement. Generally these are:

1) Demonstrated need for the change to accommodate unpredicted population trends, to satisfy urban housing needs, or to assure adequate employment opportunities;

2) The orderly and economic provision of urban facilities and services;

3) Maximum efficiency of land uses within the current urbanizable area;

4) Environmental, energy, economic, and social consequences;

5) Compatibility of the proposed change with other elements of the city and County comprehensive plans; and,

6) The other statewide planning goals.

Major revision proposals shall be subject to a mutual city and County review and agreement process involving affected agencies, citizen advisory committees, and the general public. The review process has the following steps:

1) CAC and joint Planning Commissions' review and recommend to City Council and Board of Commissioners.

2) Proposal mailed to affected agencies and property owners; and,

3) Proposal heard and acted upon by joint City Council and Board of Commissioners.

Minor Boundary Line Adjustments

Minor adjustments to an urban growth boundary line may be considered subject to similar procedures used by the city and County in hearing zoning requests. A minor amendment is defined as focusing on specific individual properties and not having significant impact beyond the immediate area of the change.

Application for a minor boundary line amendment can only be made by property owners, their authorized agents, or by a city or County governing body. Written applications for amendments may be filed in the office of the Jackson County Department of Planning and Development on forms prescribed by the County. The standards for processing an application are as indicated in the mutually adopted urban growth boundary agreement. Generally these are the same factors as for a major urban growth boundary amendment.

FINDINGS, POLICIES, AND IMPLEMENTATION STRATEGIES

1

FINDING:

The Jackson County Comprehensive Plan is designed to be the controlling land use plan over the foreseeable future. However, it is not intended to be a static document. Changing conditions in the form of changing attitudes, economics, law or other conditions which were projected within the Plan, but were never attained, all lend support to the need for periodic review of the Plan. As conditions change, so should the Plan. The County should re-examine the Plan periodically to consider possible amendments to the Plan. During this process, the thinking that led to the principal concepts of the Plan will be weighed against the merits of the proposed changes.

POLICY: THE COUNTY WILL CONSIDER TEXT AND DATA BASE CHANGES ON A PERIODIC BASIS AS PART OF THE PLANNING COMMISSION WORK PROGRAMS. PLAN GOALS, POLICIES AND THE COMPREHENSIVE PLAN MAP AND MAP DESIGNATION CRITERIA WILL BE EVALUATED PERIODICALLY THROUGH A BROAD LEGISLATIVE PROCESS. A MAJORITY VOTE OF EITHER OF THE PLANNING COMMISSIONS OR BY THE BOARD OF COMMISSIONERS IS REQUIRED TO INITIATE SUCH AMENDMENTS.

IMPLEMENTATION STRATEGIES:

A) Each Planning Commission will consider data base updates and other minor text changes not related to goals, policies or map designations as provided by staff or initiated by the Commission. The Planning Commissions will hold public hearings for the proposed updates and will forward their recommended changes for Board consideration.

B) Plan goals, policies, major text revisions, and the Comprehensive Plan and zoning maps will be evaluated where significant special studies by the Planning Commissions or Board indicate a need for such major amendments. Proposed amendments must conform to Statewide Planning Goals and the other unamended portions of the Plan.

C) Citizen Advisory Committees will be given an opportunity to review proposed major amendments. The Planning Commissions may elect to hold public hearings as provided for in the Land Development Ordinance, and a Planning Commission recommendation for changes will be forwarded for Board review. The Board will give notice and hold public hearings as required.

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BACKGROUND

JACKSON COUNTY—THE LAND AND PHYSICAL CHARACTERISTICS:

Jackson County, covering 2,182 square miles (1,802,880 acres), occupies the upper portion of the Rogue River Valley and is strategically located midway between the southern population centers of San Francisco and Sacramento, and the northern metropolitan areas of Portland and Seattle. The county is unusual in the extreme variations found in topography. Generally, four major land forms characterize Jackson County:

Bottomland physiographic areas occur along the Rogue River, Applegate River, Bear Creek, Little Butte Creek, and Evans Creek. There are also inclusions of bottomlands throughout the county in areas of level to gently sloping terraces. Bottomland elevations generally range from 1,000 to 2,000 feet. Average annual precipitation in bottomland areas will usually amount to about 20 inches, while annual growing seasons extend for 190 days. Most of these areas are under cultivation, having soils well suited for agricultural use. Portions of the bottomland areas are subject to flooding, and considerable damage to agriculture and residential properties has occurred in the past.

Low foothills and valley terraces are found in pockets along major streams and along the rims of valley floors. They are characteristically irregular in shape and lie below elevations of 2,000 feet. A frost-free season of 190 days is indicated by climatological records. Average precipitation seldom exceeds 20 inches and limits natural vegetative cover on foothill areas to oak, madrone, pine, scrub brush, fescue, and medusa head rye grass. Soils are widely diversified and severely limit agricultural and urban developments.

The Klamath Mountain region, portions of which are known as the Siskiyou Mountains, include all the uplands west of Bear Creek and Sams Creek. The terrain is characterized by moderate to very steep slopes with elevations ranging from 1,500 to 6,000 feet. Due to rugged topography, much of the area is inaccessible. Coniferous forests cover most of these areas at elevations above 2,500 feet on northern slopes and up to about 3,000 feet on southern exposures. Vegetation at lower elevations is predominantly white oak, scattered brush, and a variety of grasses. One of the most significant features of the Klamath Mountains is the high quality soil for timber production and range forage.

The Cascade Slopes and Mountains form the backbone of the county's eastern boundary. These slopes and mountains range from 2,000 to over 5,000 feet on the peaks. Annual precipitation varies widely from 20 inches at lower elevations to more than 70 inches on the higher slopes. Vast commercial forests cover most of the Cascades. The topography is steep, with rock outcroppings and slopes in excess of 20 percent.

Another feature of Jackson County is the diverse climate. Seasonal temperatures range from very hot, dry summers to moderately cold, wet winters, with all season variations visibly apparent.

HISTORY:

The county was established in 1852, and named after President Andrew Jackson. It originally included lands now in Klamath, Lake, Coos, Curry, and Josephine counties. The first settlement occurred in the 1840s and was primarily supported by farming and livestock production. Settlement was dramatically accelerated by the discovery of gold near Jacksonville in 1852, and by the resulting increase in mining operations. However, emphasis shifted to agriculture and logging as the higher grade gold deposits were exhausted.

By 1853 the road to California was completed and settlement in the Rogue Valley was further stimulated. Growth was, however, moderately retarded during 1855 and 1856 as a result of deteriorating relations between the settlers and the local Indian population which, in turn, led to several hostile encounters between the two groups. Nevertheless, upon the arrival in 1883 of the Oregon and California Railroad, which provided both freight and passenger service, growth in the Rogue Valley was again accelerated.

The 1870s and 1880s saw the rise of the lumber industry. Improvements within the industry, both in methods and new equipment, along with the arrival of the railroad, gave considerable impetus. Mines still produced limited quantities of gold and copper well past the turn of the century, but the wood products industry made lumber the most important export commodity. The railroad provided a practical means for distribution. The dominance of the lumber and wood products industry continues today.

Along with the growth of the lumber industry came the development of horticultural crops in the Bear Creek Valley. The area soon became famous for its fruit production, especially pears. As a result, the production of fruit has been one of the mainstays of the economy for many decades.

Jacksonville, which had been the center of mining activities for all of southern Oregon in the late 1800s, gave way to the Medford area as the economic center of the county. Lumber and agriculture were, of course, dependent on rail service, and the Oregon and California Railroad had bypassed Jacksonville. The Medford area, which now lies on the route of Interstate 5, continues to be the major development area of the county.

Source: Rogue Valley Council of Governments, 208 Water Treatment Master Plan, 1978.

THE PLANNING PROCESS:

As society grows in numbers, more and more demands are placed on the environment and the public systems used daily to meet basic needs. There simply are more people using the land, air, water, and other natural resources than there were 100, 50, or even 10 years ago. This population growth places stress on the environment and on public systems, resulting in obvious problems of air and water pollution, crowded streets and highways, crowded schools and libraries, and the general demand for additional public services. The beauty of the natural surroundings is frequently marred by man's abuse of a natural resource. The intensity of the problem increases as population increases.

Comprehensive planning is a continuous process in which these and related problems are identified, analyzed, and solutions developed to solve or mitigate problems; taking into consideration the interrelationships of elements of the environment in hopes of finding

reasonable tradeoffs which occur as a result of man using the natural environment to serve his basic needs. The planning process is as follows:

PLANNING PROCESS

A) Problems and values are identified, or issues become evident

B) Problem is analyzed (research, data collection and evaluation)

C) Alternative solutions are developed

D) Alternatives are evaluated

E) A solution is selected and adopted as policy

F) Policy is implemented (Ordinance, capital improvement, etc.)

G) Change in conditions, attitude, legislation, technology, etc —requires eventual recycling through the process.

In Oregon legislation has been enacted which supports the planning process and requires all counties to develop comprehensive plans (ORS 215.050) and to do that planning in conformance with Statewide Planning Goals (ORS 197.250). Jackson County adopted its first comprehensive plan in 1972. Statewide goals were developed and had the effect of state law in 1975. This revision of the 1972 comprehensive plan occurred, in part, due to legislative requirements.

Jackson County's program to revise the comprehensive plan is divided into three phases: alternative futures, comprehensive plan, and implementation. Each phase of the program becomes progressively more detailed and refined. Very broad, but basic issues were addressed in the alternative futures stage. That stage then provided direction for development of the more detailed policies of the comprehensive plan. Eventually, the plan's implementation/and ordinances will be developed, based on the policies and recommendations provided herein to respond to many local site-specific issues which are too detailed to address within the context of this plan. The following briefly defines the emphasis of each phase.

Phase I—Alternative Futures: Broad issues relating to population distribution and growth, open space, development quality, lifestyle considerations, and energy concerns.

Phase II—Plan: Countywide policies and recommendations dealing with citizen involvement, land use, agriculture, forests, open spaces, scenic and historic areas, natural areas, air quality, water quality, land resources quality, natural hazards, recreation, economy, housing, public facilities and services, transportation, energy, and urbanization. This plan, upon adoption, will satisfy the legislative requirements to develop a plan in conformance with statewide goals.

Phase III—Plans: Implementation/development of planning area or neighborhood-related policies, land development ordinances, recommendations and implementation measures (ordinances, programs, and capital improvements) which are applied to site specific situations.

Planning areas will likely be based on existing Citizen Advisory Committee (CAC) areas or combinations thereof.

HISTORY OF PLANNING IN JACKSON COUNTY:

Planning is not new to Jackson County. It has been a topic of discussion or controversy for three decades. The following summarizes the most important activities during this 30-year span. It is obvious that planning has not had overwhelming support. Progress has been painfully slow.

- 1948 — Countywide ballot measure was proposed to authorize the County court to adopt zoning. Measure failed by 72 votes out of 11,682 cast.
- 1950 — Countywide ballot measure to adopt zoning was again submitted. Failed by 642 votes.
- 1955 — Planning Commission was formed, December 19th.
- 1958 — The Oak Grove zoning district was formed on the outskirts of the City of Medford. The County did not administer zoning in the district. A local property owners' board handled such matters. This district stayed in effect until adoption of countywide zoning in 1973.
- 1959 — Interim zoning was adopted for southwest Phoenix and north Central Point areas. County subdivision ordinance was adopted.
- 1960-1964 — Several other interim zoning areas were adopted. Southwest Phoenix area did not pass the change from interim to permanent zoning in 1962 and was thereby repealed. The north Central Point area became the first permanently zoned area in the county in 1962. In 1961, an attempt to adopt a county building code met with very strong opposition and the measure was dropped.
- 1964-1966 — Interest was still expressed by county residents for zoning in selected areas. Southeast and northeast Ashland and Modoc-Agate interim zoning was adopted. South Talent and Wagner Creek interim zoning repealed. County and cities joined together to prepare a local transportation plan, the Bear Creek Area Transportation Study (known as BCATS). The County Planning Department conducted the study. The Bear Creek Urban Region Comprehensive Plan was prepared in conjunction with BCATS, but was not officially adopted. Zoning considered for west and north Medford, Brownsboro, and Shady Cove areas. Concept abandoned due to strong opposition.
- 1965 — Subsurface sewage disposal became a land use planning issue. The Bear Creek Valley Sanitary Authority (BCVSA) was formed to solve numerous sewage disposal problems.

- 1966 — Planning Commission expressed concern over noncompliance with county subdivision ordinance and state subdivision regulations, as they pertain to created roads and land partitioning. A resolution was passed, indicating that all new roads created in the county must be county standard roads. The issue of land partitioning off of existing public and other unimproved private and prescriptive right roads began to surface. The County passed its first sanitation ordinance.

- 1967 — County building official hired to prepare a countywide building code. Project dropped in 1968. First BCATS plan published.

- 1972 — Citizen Advisory Committee recommendations were finalized. Comprehensive plan drafts were prepared. Public hearings were held on the plan. The plan was adopted by the Planning Commission on June 22, 1972, and endorsed by the Board of Commissioners on July 12th. Upper Rogue interim zoning was adopted as local citizens expressed concern over development occurring in conjunction with Lost Creek Dam construction. The County attempted to solve the land partition and road access problems by amending the subdivision ordinance to include a provision for creation of private ways.

- 1972-1973 — The County planning staff began to draft countywide zoning maps and a zoning ordinance. Meetings began with the CACs to discuss zoning. Final ordinance draft and zoning maps were completed in April. Public hearings were held. Countywide zoning adopted by the Board of Commissioners on June 30, 1973, and became effective September 1, 1973. Previously zoned areas were repealed and replaced by countywide zoning. The final BCATS report was published.

- 1973 — The County contracted with a Portland planning firm to prepare a master water and sewer plan. The plan was not adopted.

- 1973-1974 — The County Planning Department stopped providing planning assistance to the Rogue Valley Council of Governments (RVCOG). The Planning Department assisted Central Point in the preparation of a city plan. The CACs continued to assist the Planning Commission in matters pertaining to current planning. Senate Bill 100 passed and Statewide Planning Goals were adopted. Changes were reflected in ORS Chapters 215 and 197. The state subdivision and land partitioning laws were revised (ORS Chapter 92).

- 1974 — The impact of the 1973 State Supreme Court "Fasano" decision dramatically changed the land use planning procedures in the state and county, as did the later "Baker vs. City of Milwaukee" decision. The County Planning Department took over the subsurface sewage disposal program from the Health Department. The new County building division was placed in the Planning Department. The department was renamed "Planning and Development." The County began enforcing the State Building Code on July 1, 1974.

- 1975 — The County began the task of revising the comprehensive plan and subdivision ordinance to comply with new state statutes. A private road ordinance was adopted as a means of improving the land partition-access problem.

- 1975-1976 — A Committee for Citizen Involvement was formed to assist the County in complying with the requirements of Statewide Planning Goal #1, Citizen Involvement. A range of planning issues began to surface. Numerous citizens' groups began to request comprehensive plan amendment studies. A County Mobile Home Park Study was completed in an attempt to solve a county mobile home industry issue. Nothing was resolved. The land partition-access issue surfaced again. Sewer facilities placement became a major planning issue.

- 1976 — The County amended the zoning ordinance to comply with Oregon Supreme Court findings in the Baker case.

- 1975-1976 — The County developed its Land Conservation and Development Commission (LCDC) compliance schedule. A 1981-1983 target date for full plan compliance was set. The County obtained an LCDC grant to assist with the comprehensive plan update work. Urban growth boundaries and agricultural lands were the first two priorities for plan update. Studies were completed on the north Medford airport approach, west Medford area, and aggregate resources. A county environmental geology study and a Department of Housing and Urban Development (HUD) floodplain study were started. A new subdivision ordinance draft was prepared and rejected on the first draft by the Planning Commission. A new subdivision ordinance approach was begun. The Planning Commission expressed concern with the length of time regarding the plan update and LCDC compliance schedule. Consensus was that a shorter time period was more appropriate. A 1978-1979 target date was agreed to. Urban growth boundary studies and city-agency coordination were given high priority. A "208" Water Quality Report for the entire Bear Creek Valley was published by the RVCOG. The County Planning Department was responsible for the major portion of that document.

- 1977 — A draft comprehensive plan was developed for Planning Commission consideration. No action was taken. Urban growth boundaries were a prime concern, with studies prepared for most communities. The Planning Commission was actively engaged in joining meetings and hearings with the cities of Ashland, Central Point, Medford, Phoenix, Rogue River, Shady Cove, and Talent. The Shady Cove urban growth boundary was the first boundary to be adopted and the only one approved in 1977. An Agricultural Committee was created to assist the County in developing policies and recommendations to satisfy Statewide Planning Goal #3. A phase one report describing the economy of local agriculture was completed.

- 1978 — The Planning Commission completed most of its urban growth boundary studies and offered recommendations to the Board of Commissioners. The Board initiated hearings and adopted boundaries in Ashland, Central Point, Gold Hill, Jacksonville, Medford, Phoenix, and Rogue River. The Planning Commission turned its attention to the comprehensive plan and addressed broad policies through the study and public review of "Alternative Futures." The decision of these scenarios provided direction for development of the comprehensive plan. The Agricultural Committee completed its recommendation on agricultural policies and criteria for applying Exclusive Farm Use (EFU) zoning. Early in the year the Board of Commissioners considered taking an interim measure to protect agricultural lands, but due to public opposition dropped the issue. LCDC later gave the County a directive to adopt final EFU zoning by September 30, 1978. A complete draft of the plan was finished and distributed for public review in October.

- 1979 — Public hearings were held on most of the elements of the draft comprehensive plan (substantial opposition developed on both the agricultural and forestry elements). Due to the opposition presented at the hearings, the program was reevaluated, schedule altered, and the agricultural committee assigned to further assess the agricultural issue. Additionally, LCDC, in January, applied an enforcement order, directing the County to take an interim action to protect agricultural lands. This the County did, with the adoption of a minor partition ordinance in January, which required the review of partitioning by the Board of Commissioners to determine if it complied with the agricultural goal.

- 1980 — The Planning Commission was reorganized and cut from seven (7) to five (5) members to expedite the process. Due to an LCDC threat to apply another enforcement order, the County pledged to complete the plan and ordinances by September 1, 1980. During the spring of 1980 the Planning Commission met two to three times a week for three months to accelerate the process to meet the deadline. Likewise, the Agricultural Committee met weekly to fulfill its obligation to find an improved solution to the agricultural issues. Additionally, representatives of the aggregate and forest industries worked with staff to finalize sections of the plan affecting their concerns.

ALTERNATIVE FUTURES

The 1972 Jackson County Comprehensive Plan recognized that change is a basic element of society, and therefore, the Plan envisioned the need for review and modification every five years.

The change which the 1972 plan envisioned has occurred. Since 1972 approximately 20,000 additional persons have moved to Jackson County, a 20 percent increase in six years. Additionally, attitudes have changed, perhaps in part because of these new residents, but most likely due to a shift in the attitude of society as a whole toward environmental concerns including air quality, energy, natural resources, and carrying capacity.

These concerns, or the degrees of concern, are not shared equally by all Jackson County residents. Differences become obvious at any meeting at which land use, zoning, subdivision development, carrying capacity or other related subjects are discussed. These vocal expressions of diverse opinions did little to provide clear direction for plan amendment.

The comprehensive plan revision process needed a beginning which would provide clear direction for preparation of amendments. This beginning took the form of an "Alternative Futures" proposal. Four alternative futures were developed for public review and discussion. Each represented a contrastingly different approach to future development of the county in hopes of addressing the issues frequently mentioned by the public. The alternative futures were:

A) A highly urbanized county wherein all valleys would eventually be urbanized.

B) A limited growth concept where development would only occur in cities.

C) A plan based on the 1972 Comprehensive Plan, which envisions extensive rural development, reflecting in part the current trend.

D) A plan which emphasized the creation of dense rural neighborhoods and preservation of the overall rural character in most other outlying areas.

Extensive public comment was solicited and received on the four alternatives. Each alternative received some public comment, with Number 2 receiving the strongest support, followed closely by Number 4.

Based on testimony presented, the Board of Commissioners and Planning Commission developed a direction for the comprehensive plan by selecting those compatible characteristics of Alternatives 2 and 4, which received public support. The direction for the comprehensive plan is delineated in the following accepted statement by the Board of Commissioners and the Planning Commission:

> "Future development should be based on improvement in air and water quality, energy efficiency and restraint in use of nonrenewable resources. The Board of Commissioners is committed to trying new approaches and appropriate technology (pro-active) as opposed to limiting adverse impacts (reactive). To achieve this would require:

i) Local regulations imposed by city and county governing bodies regarding air and water quality control.

ii) Emphasis upon alternative energy technologies to meet demands.

iii) Recreation opportunities located closer to urban and compact community areas with emphasis upon nonmotor opportunities. Developed sites will be accessible by public transit or nonmotor means.

iv) Public transit routes, supplemented by expanded bicycle facilities and opportunities for carpooling, vanpooling, and local employment to reduce reliance on private vehicles.

v) Public facilities sited to serve developing neighborhoods.

vi) Active promotion of energy conservation and efficiency by the cities and county, and other jurisdictions and agencies.

vii) Design-review standards and building code requirements to ensure energy efficiency.

Preservation of open space, forest lands, and agricultural areas and maintenance of the overall rural character of the county. To do this would require:

i) More efficient use of rural land with emphasis upon farm and forest production, homes in hamlets versus five-acre lots, appropriate types of community-level facilities.

ii) Preservation of agricultural lands for farm uses on the valley floor. Some agricultural holdings may become smaller, worked by families to produce more locally-consumed foods. Some less productive farmlands may be developed for rural residences.

iii) Expanded rural communities located in cleaner air areas in proximity to schools, businesses, and other employment opportunities.

iv) Outward expansion of urban centers restricted to areas serviced by public transit, water, and sewers.

v) Provision of open spaces and greenways along with neighborhood facilities like ball fields and field houses.

The encouragement of new industry should be predicated upon the existing local skills among the unemployed and upon the industries presently in Jackson County. Timber, agriculture, tourism, medicine, and the commercial center for southern Oregon will remain as mainstays of the local economy. New industries which are nonpolluting and

energy efficient should be encouraged to add economic diversification to the area[1]. Additionally, home industry or business such as a doctor's office, insurance office, and so on, should be encouraged[2].

Enhancement to quality of life beyond the physical environmental amenities shall be emphasized:

i) Cultural opportunities will increase in urban areas and in neighborhood centers.

ii) Historic and natural areas shall be preserved.

iii) Education and vocational training should be provided[3]."

The comprehensive plan, based on the cited direction, will, upon adoption, serve to guide all future land use and related activities in the unincorporated area of Jackson County. It will be the foundation upon which all other more detailed studies leading to implementation will be developed. Zoning ordinances, subdivision ordinances, public facility plans and programs will eventually be updated to conform to the adopted policies and direction of the comprehensive plan. Additionally, the plan, when adopted, will satisfy the requirements of ORS 215.050, which states that all comprehensive plans or amendments shall conform to the Statewide Planning Goals.

[1]Added by Board of Commissioners' memo dated 7-28-78.

[2]Added by Planning Commission action, 6-5-78.

[3]Added by Planning Commission action, 6-5-78.

MAP DESIGNATIONS[1]

NATURE OF THE MAPS:

The Comprehensive Plan maps are general diagrams which graphically depict the allocations of projected land use needs and patterns in the County, and reflect the goals, policies, and implementation strategies embodied in the text and elements of the Plan. Some of the information shown on the Plan maps include land use categories, urban growth boundaries, incorporated municipal boundaries, major transportation routes, and major rivers and stream courses. These maps include the Countywide general land use map entitled "Jackson County Comprehensive Plan Map", the unincorporated community detail plan maps for individual geographic areas of the County such as White City, and the background maps supporting the individual elements of the Jackson County Comprehensive Plan. When the terms "Comprehensive Plan Map" or "Plan map" are used in the Map Designations Element, the reference is intended to be to the Jackson County Comprehensive Plan Map except where an unincorporated community plan map exists where the reference is to the applicable unincorporated community plan map.

Zoning maps are separate diagrams that refine the Plan map by specifically depicting the allocations of existing and near term land uses within each of the broader Comprehensive Plan Map Designations. Zoning districts are established in accordance with the corresponding Plan map designations to further refine varying levels of density and development intensity permitted by the Plan map. Appropriate density and development intensity is determined in a manner consistent with the Comprehensive Plan policies and guidelines applicable to each area of the County. As such, the Plan and Zoning maps cannot be used independently from, or take precedence over, the written portion of the Plan text.

RELATIONSHIP OF THE PLAN TEXT TO THE PLAN MAPS:

The Plan maps are site-specific expression of the goals, findings, policies, and implementation strategies found in the Plan text. The arrangement and distribution of existing and projected land uses illustrated on the maps is based on the elements and principles embodied in the written Plan. Together, the Plan maps and text provide the overall framework within which more detailed planning can occur.

The Jackson County Comprehensive Plan was first acknowledged by the Oregon State Land Conservation and Development Commission in 1983 as consistent with the Statewide Planning Goals and ORS 197. The Map Designations Element adopted therein established how the entire area of the County was inventoried to determine appropriate land uses on a broad scale. This Element set forth the criteria and characteristics of lands for each Plan designation. As a rule, some type of resource land designation was required for all land located outside urban growth boundaries unless identified within a Goal 3 or 4 exception area. The inventory of Goal 3 and 4 exception areas was determined by criteria set forth in the Goal Exceptions Element of the Plan. For example, an island made up of a single property or group of properties that may not have met all of the resource lands mapping criteria, but was under 20 acres surrounded by resource lands which did meet the criteria, was designated as within resource lands unless an

[1]*Adopted by Ordinance #82-26 on 10-20-82, effective 12-19-82 (File 82-50-OA); replaced by Ordinance #2002-16 adopted 7-17-02, effective 9-15-02 (File 2000-7-OA); replaced by Ordinance #2004-1 adopted 1-12-04, effective 3-12-04 (File 2003-1-OA).*

exception was taken. In these cases the island of lands would have been included within a map designation consistent with the justified exception area findings.

Since that time, state and County land use policies have been significantly modified as a result of legislative enactments, court interpretations, and far-reaching structural changes to agriculture, forest, and other resource based extraction industries. This Map Designations Element has been modified to provide better guidance with respect to map amendment requests. Now, instead of establishing parameters for designating land on a Countywide basis, the Element establishes standards and criteria to determine the appropriateness of amendments to the original Plan.

ESTABLISHMENT OF MAP DESIGNATIONS AND CORRESPONDING ZONING DISTRICTS

The Jackson County Comprehensive Plan Map establishes broad categories of land use over the geographic area of the County consistent with the Statewide Planning Goals and the policies established in the text of the Jackson County Comprehensive Plan. A description of each designation follows, including purpose, characteristics, mapping criteria, amendment requirements, and parameters for establishing appropriate zoning districts within each Map Designation category. The general land use categories established in this Element as Comprehensive Plan Map Designations are set forth in Table 4-1.

POLICY 1:

Minor map amendment requests to the Jackson County Comprehensive Plan will be reviewed through the quasi-judicial Type 4 process established in the Jackson County Land Development Ordinance. Amending the map designation of only a portion of a resource designated parcel or tract will not be considered unless the purpose is to limit uses to those justified through the Goal 2 Exceptions procedure, to implement protection of a Goal 5 resource, to establish industrial lands consistent with the provisions of this Plan, or to implement an unincorporated community plan or urban growth management agreement.

TABLE 4-1	
Comprehensive Plan Map Designations	**Implementing Zoning Districts**
Forestry/Open Space Land	Forest Resource (FR), Woodland Resource (WR), and Open Space Reserve (OSR)
Agricultural Land	Exclusive Farm Use (EFU)
Aggregate Resource Land	Aggregate Removal (AR) District
Rural Use	RU
Rural Residential Land	RR-2.5, RR-5, RR-5(A), RR-10 and RR-00
Urban Residential Land	UR-1, UR-4, UR-6, UR-8, UR-10, and UR-30
White City Urban Residential Land	WCUR-4, WCUR-6, WCUR-8, WCUR-10, WCUR-30
Urbanizable Area	Mutually adopted zoning districts administered by a City pursuant to an urban growth boundary management agreement.
Limited Use	Limited Use (LU)
Commercial Land	General Commercial (GC), Interchange Commercial (IC), Neighborhood Commercial (NC), Rural Service Commercial (RS), and Unincorporated Communities Rural Service Commercial (ARS, RRS, SVRS)
Industrial Land	General Industrial (GI), Light Industrial (LI), and Rural Limited Industrial (RLI)

FORESTRY/OPEN SPACE LAND

1) Purpose

To conserve forest lands for forest uses and ensure a continued yield of forest products. The Forestry/Open Space designation in this Plan restricts the type and intensity of development on forest, woodland, and open space lands to preserve the economic base of Jackson County and to reduce conflicts between rural development and forest resource management. This designation is also intended to protect and provide for compatible forest uses, fish and wildlife habitat, watershed and aquifer recharge areas, recreational opportunities, scenic attributes, and other natural resources including unique scientific, ecological, botanical, or geologic areas.

2) Map Designation Criteria:

A) The four principal forest land environments[2] described in the Forest Lands Element of this Plan are inventoried as commercial forest lands and must be designated for Forestry and Open Space unless the land is otherwise qualified as agricultural or aggregate resource land, or an exception to Goal 4 is taken. The generalized boundary of the principal forest land environments is depicted on the Forest Land Environments map in the Forest Land Element. The specific boundary in relation to individual parcels is determined based on the text description of the Forest/Woodland transition elevations described in the Geographic Location and Conditions section of the Forest Lands Element. The valley floors, terraces, and slopes depicted on the Forest Lands Element profile illustrations are lands below the noted transition elevations, and are not part of the commercial forest base. Tracts of land located predominantly below the noted transition contour will similarly be inventoried as being outside the principal forest land environment and may be considered for Woodland or a rural designation found to be compatible with adjacent forest area.

B) Woodland areas within or near the physiographic areas discussed in (A) above, but located at or below the established elevation contour lines for commercial forest land environments, on which production of timber and wood fiber is, or can become, a primary use of the land are also designated for Forestry/Open Space unless the land is otherwise qualified as agricultural or aggregate resource land. These lands are generally in private nonindustrial ownerships, with some wood product industry and less productive publicly owned lands; have parcel sizes predominantly greater than 20 acres; have been specially assessed or are interspersed among similar properties that have been specially assessed as forest or wood land; and have a cubic foot site class potential for timber production or occur adjacent to and buffer productive forest lands.

C) Transition areas of intermingled agricultural and forest lands, and areas not generally suited to intensive land uses or development for a broad range of physical and natural factors, where no other appropriate rural designation exists, are designated for Forestry/Open Space unless the land is otherwise qualified as

[2]The forest resource is distributed throughout four specific forest land environments in the County: the Cascade Slope, South Siskiyou, Rogue-Umpqua Divide, and Rogue-Applegate Upland regions.

agricultural land aggregate resource land. These lands are generally poorer forest capability lands than found in the Woodland Resource zoning districts or are located on lands with no forest capability combined with poor agricultural soils such as occurs in the Agate Desert.

D) Map amendment requests may demonstrate that property is not located in forest land environments described herein by providing substantive site specific evidence which clearly indicates that the subject property is not forest land or woodland as outlined in the Forest Lands Element of the Jackson County Comprehensive Plan.

E) Except where another resource land designation is requested, or where justified through the Goal Exceptions process, Goal 4 is deemed to apply and the Forest/ Open Space designation will not be removed from:

i) Lands within the principal forest land environments described in subsection 2A above or woodlands described in 2B above; or,

ii) Lands which would qualify as agricultural lands as defined under Statewide Planning Goal 3 and ORS Chapter 215; or,

iii) Lands within mountainous lands where the majority of acreage is comprised of slopes where the average grade exceeds 40% or where the majority of acreage is otherwise subject to risk from identified natural hazards (e.g., rapidly moving landslides); or,

iv) Lands with no legal public road access or where the only public road access is by Bureau of Land Management or Forest Service roads; or,

v) Lands including or adjacent to inventoried Goal 5 natural resource areas except where a Goal 5 review of conflicting uses justifies the proposed land use map designation; or,

vi) Lands adjacent to, intermingled with, or needed for access to public or private commercial forest lands; or,

vii) Lands under a federal or state timber management program; or,

viii) Lands identified as being needed for watershed or aquifer recharge maintenance protection; or,

ix) Lands having outstanding or unusual ecological, botanical, geological, scenic, or other natural resource characteristics; or,

x) Lands outside rural fire protection districts or deemed too remote from other essential public services to support the requested change of use; or,

xi) Lands where the feasibility of providing on-site septic disposal systems and domestic water supply has not been established; or,

xii) Lands that are needed to provide a natural buffer between the commercial forest stands and existing nonresource or exception areas; or,

xiii) Lands that include public use reservoirs or lakes as a predominant feature.

F) Where it can be demonstrated with substantive findings the lands currently designated as Forestry/Open Space pursuant to sections 2A through 2C above do not merit Goal 4 protection pursuant to section 2D above, a rural lands designation may be established that is otherwise consistent with the Statewide Planning Goals and the Jackson County Comprehensive Plan. An appropriate rural zoning district may then be applied to the land consistent with the Comprehensive Plan map designation requirements and the Jackson County Land Development Ordinance.

3) Establishment of Zoning Districts:

A) The Forest Resource (FR) zoning district will be established for the Forest/Open Space Land described in 2(A) above.

B) The Woodland Resource (WR) zoning district will be established for Forest/Open Space Land described in 2(B) above.

C) The Open Space Reserve (OSR) zoning district will be established for the Forest/Open Space Land described in 2(C) above.

D) Permissible development standards will be established for these districts in the Jackson County Land Development Ordinance in accordance with state law and the Jackson County Comprehensive Plan.

AGRICULTURAL LAND

1) Purpose:

Areas designated as Agricultural Land in Jackson County will be zoned for Exclusive Farm Use pursuant to ORS Chapter 215 and Statewide Planning Goal 3, unless otherwise designated as Forest Land pursuant to Goal 4. Jackson County intends to preserve agricultural lands for farm use, preventing uses or activities that are incompatible with farm use within or near agricultural land.

2) Map Designation Criteria:

A) Agricultural Land does not include land within acknowledged urban growth boundaries or land within areas acknowledged as exceptions to Statewide Planning Goal 3.

B) Agricultural Land comprises:

i) Land classified by the USDA Natural Resource Conservation Service as predominantly Class I-IV soils; and,

ii) Land in other soil classes that is suitable for farm use as defined in ORS 215.203 (2)(a), taking into consideration soil fertility; suitability for grazing; climatic conditions; existing and future availability of water for farm irrigation purposes; existing land use patterns; technological and energy inputs required; and accepted farm practices; and,

iii) Land that is in capability classes other than classes I-IV that is adjacent to or intermingled with lands in capability classes I-IV within a farm unit inventoried as agricultural lands even though this land may not be cropped or grazed; and,

iv) Land that is necessary to permit farm practices to be undertaken on adjacent or nearby lands, but which would not otherwise qualify as Agricultural Land, is nonetheless designated as Agricultural Land.

C) Proposals to remove areas from the Agricultural Land designation that are based on demonstrating the inapplicability of Statewide Planning Goals 3 or 4 must be supported by a land use study of the surrounding area within one mile of the subject property. The study must:

i) Inventory historic and current farm uses that have occurred on the subject property and within the study area; and,

ii) Provide an analysis prepared by an agricultural engineer, agronomist, or similarly qualified professional that relates soil limitations, irrigation, climate, and other agricultural capability factors that prevent use of the subject property as permitted under the state's Goal 3 land use program. The soils component of the analysis must be consistent with the NRCS Soils Maps for Jackson County, or be supported by more detailed soils data based on the NRCS land capability classification system; and,

iii) Identify other resource-zoned properties within the study area that are similar to the subject property with respect to agricultural capability, and analyze the potential cumulative impact on the remaining agricultural lands should the proposed nonresource designation be allowed for the

subject property and the other lands in the study area that are similarly limited in agricultural capability;

iv) Provide a supported conclusion that the subject area need not be identified as Agricultural Land based on the requirements of Statewide Planning Goal 3, as set forth in OAR 660, Division 033, Rule 30 (Identifying Agricultural Land); and,

v) The subject area must be shown to otherwise qualify for a Plan map designation in accordance with the Jackson County Comprehensive Plan.

3) Establishment of Zoning Districts:

A) The Exclusive Farm Use (EFU) zoning district will be established on the Jackson County Zoning Maps for all Plan map designated Agricultural Land, and permissible development standards will be established in the Jackson County Land Development Ordinance in accordance with state law and the Jackson County Comprehensive Plan. It may also be applied to land designated on the Comprehensive Plan for long-range nonresource uses as an interim zoning district (e.g., within an urban growth boundary).

AGGREGATE RESOURCE LAND

1) Purpose:

The Aggregate Resource designation provides for the protection of aggregate resources. These areas, like other rural natural resources, are considered unique and warrant their own designation. The designation is intended to protect the resources from incompatible uses, particularly residential uses, which may inhibit the extraction, crushing, and transportation of the resource. Policies for use of aggregate resources are included in the Aggregate and Mineral Resource Element of the Comprehensive Plan.

2) Description:

Areas designated for Aggregate Resource are located in a wide variety of locations and settings. Alluvial deposits along Bear Creek and the Rogue River provide the source of most sand and gravel. Bedrock quarry activities are more widely dispersed, but primarily occur within basalt formations. Typically these areas are located near the urban areas of the County, but are distant enough to not have negative impacts such as noise or dust on urban communities.

3) Map Designation Criteria:

A) Significance Determination. The County shall analyze information relating to the location, quality and quantity of mineral and aggregate deposits. Information necessary to demonstrate the significance of a resource shall include:

i) A map and other written documentation sufficient to accurately identify the location and perimeter of the mineral or aggregate resource; and

ii) Information demonstrating that the resource deposit meets or can meet applicable city, County, state, or federal quality specifications for the intended use(s). Oregon Department of Transportation quality specifications for aggregate include: (1) the Los Angeles Rattler test for abrasion (AASHTO T96, OSHD TM 211—loss of not more than 30 percent by weight), (2) the Oregon Air Degradation test (OSHD TM 208—loss of not more than 20 percent by weight), and (3) the Sodium Sulfate Soundness test (OSHD TM 206—not more than 12 percent by weight). Information may consist of laboratory test data or the determination of a certified, licensed or registered geology professional, or other qualified person; and

iii) Information demonstrating the quantity of the resource deposit as determined by exploratory test data or other calculation compiled and attested to by a certified, licensed or registered geology professional, or other qualified person.

B) Inventory. Based on the analysis of information relating to the location, quality and quantity of mineral and aggregate deposits, the County shall determine the inventory status of the resource site. Each site considered by the County shall be placed on one of three inventories based on the following criteria:

i) If the resource site does not meet the definition of a significant resource in the Land Development Ordinance, the County shall include the site on an inventory of “Nonsignificant Sites”; or

ii) If information is not available to determine whether the resource site meets the definition of a significant resource as defined in the Land Development Ordinance, the County shall include the site on an inventory of "Potential Sites." Sites shall remain on the "Potential sites" inventory until such time as information is available to determine whether the resource site is significant; or

iii) If the resource site meets the definition of a significant resource, the County shall include the site on an inventory of "Significant Goal 5 Resource Sites."

C) Identify Impact Area. For each site determined to be significant and to be included on the inventory of "Significant Goal 5 Resource Sites", the Impact Area shall be identified and mapped. The Impact Area shall be 1,500 feet unless increased or decreased based on analysis and findings developed in the course of the Goal 5 process.

D) Identify Conflicting Uses. For each site determined to be significant and to be included on the inventory of "Significant Goal 5 Resource Sites", conflicting uses, as defined in the Land Development Ordinance, shall be identified.

i) The identification of conflicting uses and other Goal 5 resources shall include uses in existence at the time of review, as well as the potential for the establishment of new conflicting uses. Identification of potential conflicting uses shall be accomplished by analyzing the uses allowed in the adjacent zone(s).

ii) If no conflicting uses are identified, the impact area designation shall not be applied to the property surrounding the resource site.

E) Analysis of Conflicting Uses. For each site determined to be significant, the economic, social, environmental and energy (ESEE) consequences of conflicting uses shall be analyzed.

i) The analysis shall be limited to uses and Goal 5 resources identified pursuant subsection D.

ii) The analysis shall consider the consequences associated with protecting the mineral or aggregate resource, as well as extracting and processing the resource.

iii) The analysis shall determine the relative value of use of the mineral or aggregate resource site as compared to existing or potential conflicting uses.

iv) The analysis shall consider the consequences for both existing and potential conflicts, and shall consider opportunities to avoid and mitigate conflicts. The analysis shall examine:

a) The consequences of allowing conflicting uses fully, notwithstanding the possible effects on surface mining operations;

b) The consequences of allowing surface mining operations fully, notwithstanding the possible effects on conflicting uses;

c) The consequences of protecting conflicting Goal 5 resources.

F) Decision on Program to Provide Goal 5 Protection. Based on the analysis of ESEE consequences, the County shall make a determination on the level of protection to be afforded each site. Each determination shall constitute a decision to comply with Goal 5 for the specific site, and shall be incorporated into the Comprehensive Plan, and reflected on the County zoning maps, as appropriate. The County shall make one of the following determinations:

i) Protect the resource site fully, allow surface mining. To implement this decision the County shall apply the Aggregate Removal zone. Development and use of the mineral or aggregate resource shall be governed by the standards within the Land Development Ordinance. As part of the final decision, the County shall adopt site-specific policies prohibiting the establishment of conflicting uses within the area designated as the Impact Area surrounding the Extraction Area.

ii) Balance protection of the resource site and conflicting uses, allow surface mining. To implement this decision, the County shall apply the Aggregate Removal zone. Development and use of the mineral or aggregate resource shall be governed by the standards in the Land Development Ordinance and any other site-specific requirements designed to avoid or mitigate the consequences of conflicting uses and adopted as part of the final decision. Development of conflicting uses within the Impact Area shall be regulated by the Land Development Ordinance and any other site-specific requirements designed to avoid or mitigate impacts on the resource site and adopted as part of the final decision.

iii) Allow conflicting uses, do not allow surface mining. To implement this decision, the County shall not apply the Aggregate Removal zoning district. The site will not be afforded protection from conflicting uses, and surface mining shall not be permitted except through the permit review process in the Land Development Ordinance.

4) Establishment of Zoning District:

The Aggregate Removal (AR) zoning district will be applied when an aggregate site plan consistent with the requirements of this Section has been approved by the County. The site plan will be adopted by ordinance concurrent with the map designation amendment and zone change application. The approving ordinance will serve as the development ordinance for land uses on the subject property.

RURAL USE

1) Purpose:

The Rural Use designation is provided for lands outside urban growth boundaries or unincorporated community boundaries that are not deemed to be Forestry/Open Space or Agricultural lands as set forth in the Map Designations Element of the Jackson County Comprehensive Plan to implement Statewide Planning Goals 3 and/or 4. This designation is only applied where very low intensity rural development is found to be appropriate over the foreseeable future due to topographic, environmental, natural hazard, public access, or needed public service constraints. This designation is not intended for exception areas taken pursuant Statewide Planning Goal 2 where Goals 3 or 4 would otherwise be applicable.

2) Map Designation Criteria: In the existing Agricultural Land and Forestry/Open Space Comprehensive Plan map designations, Statewide Planning Goals 3 and/or 4 apply to the areas so designated unless the applicant can demonstrate otherwise. The burden is on the applicant to demonstrate to the County that Goals 3 and 4 are inapplicable based on all of the following criteria:

A) The proposed Rural Use area does not meet the definitions of "Agricultural Land" and "Forest Lands" contained in the Statewide Planning Goals, and as set forth in the Definitions Element, Map Designations Element, Agricultural Lands Element, and the Forest Lands Element of the Jackson County Comprehensive Plan.

B) The proposed Rural Use area will be located within a rural fire protection district or where a rural fire protection district has agreed to provide service by contract.

C) Appropriate and essential public services are available to support uses allowed in the Rural Use zoning district.

D) Extension of public roads through resource lands will not be necessary to accommodate the proposed change of land use.

E) Activities allowed under the Rural Use designation will not interfere with accepted agricultural or forest uses in the surrounding area.

F) Other factors such as soils, slope, wildlife habitat and other environmental issues, suitability for viticulture (vineyards) and any other issue regarded as relevant by the reviewing body may be considered in a determination as to the appropriateness of the Rural Use designation.

3) Establishment of Zoning District:

The Rural Use zoning district established in the Jackson County Land Development Ordinance will be depicted on the Jackson County Zoning Maps for all Plan map designated Rural Use areas. The Land Development Ordinance establishes permissible uses and development standards for the zoning district consistent with the purpose statement in Section (1) above. No further land division will be permitted in Rural Use areas, although property line adjustments are permitted. Residential use will be limited to one lawfully established single family dwelling per existing parcel.

RURAL RESIDENTIAL LAND

1) Purpose:

The official Plan map designates rural residential areas to provide for moderate to large acreage homesites in an open setting, consistent with the physical capacity of the land to accommodate such development. Exceptions to statewide planning Goals 3, 4 and 14 (as applicable) are required to establish Rural Residential lands outside adopted Urban Growth Boundaries. The primary purpose of the Rural Residential designation is to enable the retention of land in a rural and open environment, minimizing land uses and parcelization that adversely affect the economic and efficient operations of nearby or adjacent farm, forest, and other resource land dependent operations. This designation also serves as the principle holding category for lands within incorporated cities' urban growth boundaries where extension of public facilities and services would be adversely affected by premature urbanization of the land. The large Rural Residential lot sizes prescribed by this designation will ensure the orderly and economic transition of rural lands to urban uses subject to the respective urbanization agreements between the County and the cities.

It is also the purpose of the Rural Residential designation to provide for some variety and choice of Rural Residential parcel sizes; to allow for small scale farm activities even where the land may not entirely qualify as agricultural land; to control development impacts in adjacent riparian, wildlife, and natural hazard areas; and to provide potential for recreational and institutional usage such as for parks, schools, churches, and other uses provided in accordance with the Plan's implementing ordinances.

2) Map Designation Criteria:

A) Currently designated Agricultural or Forest/Open Space Lands may not be designated as Rural Residential unless an exception to the applicable Goal 3 or 4 is justified in accordance with the Goal 2 Exceptions Process, ORS 197.732, and OAR 660, Division 4.

B) Rural Residential lands are to be located on lowland foothill, valley terrace, and valley floor areas with a moderate to gently sloping or level terrain. Other lands may also be included which do not logically fit within any other Plan category, where shown to be suitable for residential use. In any case, feasibility of development in accordance with the standards of one or more of the implementing Rural Residential zoning districts must be established. The following requirements must be included within feasibility findings to support a Plan map amendment to Rural Residential:

i) Within mutually adopted urban growth boundaries, the designation must not conflict with the city's comprehensive plan or mutually adopted urbanization agreement for the urbanizable area; a public road developed to County road standards sufficient to serve the proposed and existing development exists or is proposed for (re)construction within a five-year period as delineated in the Jackson County Capital Improvements Program or as otherwise assured to meet similar standards in the applicable municipality's comparable public works program; and the designation will preserve the ability to develop future sewer, water, and other public utility systems necessary for the long-term urbanization of the area.

ii) Outside urban growth boundaries, the development potential must not be dependent upon the extension or construction of urban public facilities

such as public sewer or water service, unless an exception to Statewide Planning Goals 11 and 14, as applicable, is justified in accordance with the Goal 2 Exceptions Process, ORS 197.732, and OAR 660, Division 4; private sewage disposal[3] and individual domestic water supply systems must be adequate to service the existing and potential development consistent with the Public Facilities and Services Element of the Jackson County Comprehensive Plan; and a road developed to County road standards C, D, or E, or the equivalent state standards, exists or is proposed for (re)construction within a five-year period as delineated in the Jackson County Capital Improvements Program or as otherwise assured in accordance with OAR 660, Division 12, the Transportation Planning Rule. Forest Service or Bureau of Land Management roads may not be used to satisfy this requirement. However, feasibility of private road access development to a qualifying public road may be considered for Plan amendment purposes.

C) The subject area must be within a municipal, rural, or voluntary fire protection district having the capacity to serve the existing and potential growth, or is otherwise shown to be provided with contract fire hazard protection service from such a district. The implementing zoning district will be determined, in part, based upon findings of acceptable wildfire hazard risk to the proposed development, the surrounding community, and to nearby commercial timber stands and wildlife areas.

D) Where the proposed area includes or adjoins identified Goal 5 resources, or is otherwise mapped within a Goal 5 impact area, a conflicting use analysis must be provided in accordance with the Goal 5 process to support the proposed Plan designation.

E) The Rural Residential designation is appropriately applied where consistent with a rural unincorporated community plan acknowledged under OAR 660, Division 22 (the Unincorporated Community Rule).

3) Establishment of Zoning Districts

A) Rural Residential zoning districts will be established on the Jackson County Zoning Maps and permissible development standards will be established in the Jackson County Land Development Ordinance

B) Zoning districts permissible within the Rural Residential category may not permit residential densities exceeding one single family residence per ten acres unless otherwise allowed within an acknowledged urban growth boundary, unincorporated community, or where a Goal 14 exception has been taken.

[3] Where private sewerage systems are required, the area conditions such as capability of the soils and subsurface geologic characteristics to accommodate on-site systems must meet Department of Environmental Quality regulations for on-site waste disposal systems.

URBAN RESIDENTIAL LAND

1) Purpose:

The Comprehensive Plan map designates Urban Residential areas where the lands are justified for that use through the Goal Exceptions process or lie within urban growth, urban containment, or urban unincorporated community boundaries. The Urban Residential designation provides for urban level densities where public facilities and services are sufficient to serve that level of development. Urban level development within urban growth boundaries can only occur consistent with the mutually adopted urban growth boundary agreements, which usually require annexation. Urban residential lands in the White City Urban Unincorporated Community Boundary are included in a separate category pursuant to the White City Urban Unincorporated Community Plan, Phase 2.

2) Map Designation Criteria:

A) Urban Residential areas originally were established by the Jackson County Comprehensive Plan in 1982, and acknowledged by the state in 1983. These areas were located solely within county-designated urban containment boundaries and mutually adopted urban growth boundaries to reflect existing or committed urban residential development;

B) Additional areas may not be established as Urban Residential Land outside acknowledged urban growth boundaries unless consistent with an urban unincorporated community plan acknowledged under OAR 660, Division 22 (the Unincorporated Community Rule), or where otherwise justified by a Goal 14 exception pursuant to the Goal 2 Exceptions Process, ORS 197.732, and OAR 660, Division 04. An exception to Statewide Planning Goal 11, Public Facilities and Services, will also be needed if the resulting development would violate the provisions of that goal.

C) Urban Residential areas may be established within acknowledged urban growth boundaries only where consistent with the urbanization policies mutually adopted by the County and the respective city, including the City's comprehensive plan for the area when the City has adopted long-term plan designations beyond its municipal boundary.

D) Urban Residential land will be located:

i) On level or gently sloping terrain and have access to a sufficient urban level of existing or planned public sewer and water facilities to support the extent of development that exists or is otherwise proposed; and,

ii) In areas supported by an urban level street system within the County, City, or State transportation system, in close proximity to public schools, shopping facilities, transit, and employment opportunities; and,

E) Urban Residential land may not be established in areas:

i) Impacted by mainline railroads and spur lines, freeways, or high levels of noise, dust, glare, heat, smoke, odors, vibrations, or other obnoxious factors which would impact residential environments; or,

ii) Which will, when fully developed, have the potential to create conflicts with resource lands devoted to farm or forest management; or,

iii) Which are found to be susceptible to substantial risk from natural hazards.

F) Where the proposed area includes or adjoins identified Goal 5 resources, or is otherwise mapped within a Goal 5 impact area, a conflicting use analysis must be provided in accordance with the Goal 5 process to support the proposed Plan designation.

3) Establishment of Zoning Districts:

A) Urban Residential zoning districts will be established on the Jackson County Zoning Maps and permissible development standards will be established in the Jackson County Land Development Ordinance. These districts will provide residential densities of one (UR-1), four (UR-4), six (UR-6), eight (UR-8), ten (UR-10), and thirty (UR-30) dwellings per acre.

B) The Urban Residential category provides for a variety of urban densities up to 30 dwellings per acre. The actual allowable density or zoning will be determined by existing use, housing supply, school district capacity, overall land use patterns in the area, capacity of public facilities serving the area, and the ability of emergency service providers to serve the area.

C) The County may establish an Urban Residential designation in an area without a corresponding urban residential zoning district where it is found that the subject area is not currently appropriate for urban residential use, but where it is anticipated that Urban Residential land will be needed over the five- to ten-year horizon in order to facilitate mid- to long-term planning for the area. The existing zoning district, or other zoning district suitable to preserve the land for future urbanization, may be established under the Urban Residential Plan designation over the intervening period in these situations.

WHITE CITY URBAN RESIDENTIAL LAND

1) Purpose:

White City Urban Residential areas provide for urban levels of residential development where adequate public facilities and services exist. The zoning districts established for these areas provide opportunities primarily for single family, multi-family, and manufactured dwelling development. Creative design is encouraged through such means as planned unit developments, variable lot sizes, and a wide range of densities. The actual allowable density or zoning will be determined by existing use, overall land use patterns in the area, and the capacity of public facilities serving the area.

2) Map Designation Criteria:

A) Lands which are located within the White City Urban Unincorporated Community Boundary; and,

B) Lands for which urban public facilities and services are available and adequate to serve the existing and potential development, including potable water, sewer, storm drains, police, fire protection, and transportation facilities. Services which should be considered include medical services, recreation facilities and schools; and,

C) Where the proposed area includes or adjoins identified Goal 5 resources, or is otherwise mapped within a Goal 5 impact area, a conflicting use analysis must be provided in accordance with the Goal 5 process to support the proposed Plan designation.

3) Establishment of Zoning Districts:

A) White City Urban Residential zoning districts will be established on the White City Zoning Maps and permissible development standards will be established in the Jackson County Land Development Ordinance. These districts will provide residential densities ranging between four (WCUR-4), six (WCUR-6), eight (WCUR-8), ten (WCUR-10), and thirty (WCUR-30) dwellings per acre.

B) Within the White City Urban Unincorporated Community Boundary, the WCUR-8 and the WCUR-30 zoning districts may also include nodes of neighborhood commercial uses that primarily serve neighboring residential areas, as described in the implementing ordinances.

URBANIZABLE AREA (UA)

1) Purpose:

To provide for an efficient and economic transition for urbanizable land located within the urban growth boundary of a city, where the City and County have mutually adopted an intergovernmental agreement to transfer land development review authority from the County to the City. The Plan designation recognizes that the County retains its legislative authority over unincorporated lands inside the urban growth boundary, thereby ensuring citizen interests will continue to be represented by their elected governmental body. Implementation of the land use plan adopted by the County, however, is contracted to the City in recognition that the urbanizable area will ultimately be the City's responsibility and that coordination of public facilities and services is more efficiently managed by the City as an urban services provider. Changes to the land use program proposed by the City will continue to require County approval for application in the unincorporated urbanizable area.

2) Map Designation Criteria:

A) A mutually adopted urbanization agreement must be adopted between Jackson County and the City that is consistent with the requirements of applicable Statewide Planning Goals and the Oregon Revised Statutes.

B) Jackson County must adopt a generalized land use plan map and development ordinance to be applied in the urbanizable area that is consistent with the City's adopted Land Use Plan.

C) The urbanizable area between the municipal boundary and the urban growth boundary will be designated on the Countywide generalized Comprehensive Plan map as (UA). The mutually adopted zoning map for the urbanizable area will implement the Comprehensive Plan for the UA designated lands.

D) Legislative amendments to the City's general land use plan map that would change the City plan designation of unincorporated property must be approved by Jackson County to be applicable to the unincorporated area. Jackson County will be bound by the terms of the urbanization management agreement while the agreement is in effect, but retains the authority to rescind the management agreement in accordance with the terms of the intergovernmental agreement.

3) Establishment of Zoning Districts: Zoning districts must be mutually adopted to enable the City's administration of the County adopted development ordinance.

LIMITED USE (LU)

1) Purpose:

The Limited Use designation limits uses, densities, public facilities and services, and activities to only those justified in a Comprehensive Plan Amendment goal exception statement adopted by the County and acknowledged by the State pursuant to ORS 197.732 and as required by OAR 660-004-0018, where no other Plan designation or zoning district is available to appropriately limit uses to those justified in the goal exception statement. It is intended that uses and activities permitted will be those specified in the ordinance adopting the LU designation, together with other similar, related, accessory and supplemental uses consistent with the acknowledged ordinance adopting the designation for the property.

2) Map Designation Criteria:

A) The subject area is land for which an exception for the specified use(s) may be approved under applicable Statewide Planning Goals, pursuant to ORS 197.732 and OAR 660, Division 4; and,

B) The proposal is consistent with the applicable parameters and conditions of Policy 1 of the Public Facilities and Services Element for sewer and/or water service; and,

C) All-weather access is available that directly connects to a County road, or State highway of appropriate capacity and construction, and the proposal is otherwise consistent with the County's access and transportation facility plans; and,

D) Where the proposed area includes or adjoins identified Goal 5 resources, or is otherwise mapped within a Goal 5 impact area, a conflicting use analysis must be provided in accordance with the Goal 5 process to support the proposed Plan designation; and,

E) A review of other available map designations reveals that no other district designation would sufficiently limit uses as required by OAR 660, Division 4, and the proposed use does not otherwise meet the locational/use requirements for a Rural Limited Industrial (RLI) designation.

3) Establishment of Zoning Districts: The (LU) zoning district will be applied when a master development plan consistent with the requirements of the Goal Exception(s) document has been approved by the County. The development plan will be adopted by ordinance concurrent with the map designation amendment and zone change approval. The master development plan will serve as the development ordinance for land uses on the subject property.

COMMERCIAL LAND

1) Purpose:

Commercial Land is established to provide markets in appropriate locations for the efficient and economic exchange of goods and services. The municipalities within Jackson County provide the primary, centralized marketplaces in the region due to the comparative economic advantage of locating places for commercial exchange near the majority of housing and job opportunities.

However, jobs and housing also exist in the rural and urban unincorporated areas of the County. The traveling public also has commercial needs which are related more to the transportation facility than the location of cities, and are thereby appropriately served by the County. Consequently, Commercial Land is designated throughout the County with levels of service regulated by zoning districts. These districts, in turn, must be consistent with state law and the policies adopted by Jackson County in the Rural and Suburban Lands Element, the Urban Lands Element, the Public Facilities and Services Element, and the Transportation Element of the Jackson County Comprehensive Plan. The Jackson County Land Development Ordinance will establish appropriate development restrictions on commercial areas located outside urban growth boundaries in accordance with Goal 14 and the Unincorporated Community Rule (OAR 660, Division 22).

2) Map Designation Criteria:

A) The Commercial Land designation includes all commercial zoning districts previously acknowledged in unincorporated Jackson County.

B) Proposals to establish new commercial areas or to expand existing commercial areas on the Jackson County Comprehensive Plan Map must be consistent with the Statewide Planning Goals, the policies embedded within the Elements of the Jackson County Comprehensive Plan, and any County adopted community plan, urbanization agreement, regional plan, or transportation/public facility plan.

C) A traffic impact analysis is required for all Plan amendments where the proposed commercial land was not previously included in a transportation system plan. Facility improvements, as found to be necessary, must be assured within a five-year time horizon as a requirement for a Plan amendment. The facility plan must be prepared for adoption with the proposed Plan amendment. The actual zone change will require a guarantee of necessary facility improvements upon completion of commercial development. If such improvements are found to be disproportionate to the amount of anticipated development, the proposal may not be approved.

D) Commercial land must be located where sufficient trade/market area characteristics are shown to be sufficient to warrant the trade and services activities that would be anticipated. Amendment proposals must identify:

i) The market projected to be served, including that within incorporated areas; and,

ii) The existing and planned inventory of commercial land within the identified market area in terms of total acreage, number of parcels, and level to which such land has been built-out or is otherwise unsuitable to serve the market area; and,

iii) The serviceability of the proposed area in terms of compatibility with surrounding lands, load bearing and drainage/environmental constraints

of the site, sufficiency of size to accommodate commercial activities as well as required parking and landscaping, and the availability of adequate public services. Consideration of adequate public services must include police, fire protection, transit, sewer, water, and other public utilities.

E) The County must consider whether or not extension of facilities is reasonably likely to be required as a result of the proposed amendment, and whether such extension of needed services is appropriate for the planning area.

F) The planning area must be serviceable, generally free of environmental constraints, accessible, supportable by the identified market area, and consistent with the applicable state and local urban or rural lands policies. Where the proposed area includes or adjoins identified Goal 5 resources, or is otherwise mapped within a Goal 5 impact area, a conflicting use analysis must be provided in accordance with the Goal 5 process to support the proposed Plan designation.

G) Plan amendment proposals must be coupled with a request for an appropriate zoning district to assure that future commercial uses will not be developed to an intensity inappropriate to the area.

3) Establishment of Zoning Districts:

A) General Commercial (GC):

i) General Commercial zoning districts outside acknowledged urban areas may not be expanded in area, and new (GC) zoning districts may not be established, unless an exception to Statewide Planning Goal 14 is justified. Uses within existing (GC) districts outside urban areas may continue or be redeveloped in accordance with the Land Development Ordinance development standards and in accordance with Policy 4 of the Rural and Suburban Lands Element.

ii) General Commercial zoning districts may otherwise be established where a Commercial Land Plan designation is located within an urban growth boundary or acknowledged urban unincorporated community boundary and where:

a) A County commercial “A” standard road or its equivalent exists to directly serve the area, and where safe and convenient access to the site can be provided without creating traffic or pedestrian conflicts;

b) Public sewer and water systems are physically and legally available to serve the area;

c) Adjoining residential uses can be adequately buffered or integrated into a mixed-use plan to reduce land use conflicts;

d) Adequate area must be available to buffer commercial uses from adjacent industrial or resource lands.

B) Interchange Commercial (IC):

i) Interchange zoning districts outside acknowledged urban areas may not be expanded in area, and new (IC) zoning districts may not be established, unless an exception to Statewide Planning Goal 14 is justified. Uses within existing (IC) districts outside urban areas may

continue or be redeveloped in accordance with the Land Development Ordinance development standards.

ii) Interchange Commercial zoning districts are not intended to be created within urban growth boundary areas because urban interchange facilities are of critical importance to the cities' transportation system plans. The (IC) district is enabled along rural Interstate-5 interchanges where Policy 6 of the Rural and Suburban Lands Element is satisfied. In order to approve new (IC) zoning districts, the County must also provide specific and substantive findings that the proposal complies with the Transportation Planning Rule (OAR 660-012), and the Unincorporated Communities Rule (OAR 660-022).

iii) Adequate area must be available to adequately buffer the commercial uses from residential, farm, forest, and industrial uses located near the subject site.

C) Neighborhood Commercial (NC):

i) Neighborhood Commercial zoning districts may only be established within urban growth boundaries or urban unincorporated community boundaries in accordance with Policy 7 of the Urban Lands Element, and where urban public facilities and services are available to serve present and future development.

ii) Proposed (NC) zoning districts must be located:

a) Along collector streets at or near corner intersections and within walking or short driving distance for a majority of the local supporting residential population; and,

b) Where sufficient parcel size and form is available to accommodate neighborhood commercial activities and incidental parking and landscaping in such a manner that adjacent noncommercial land use conflicts will be minimized; and,

c) Where public sewer and water systems are physically and legally available to serve the area.

iv) Proposed (NC) zoning districts may not be located near school pedestrian crossings or high accident volume intersections, nor areas impacted by mainline railroads and spur lines, freeways, or high levels of noise, dust, glare, heat, smoke, odors, vibrations, or other obnoxious factors.

D) Rural Service Commercial (RS):

i) Rural Service Commercial zoning districts may be provided in rural areas and unincorporated communities in accordance with Policy 5 of the Rural and Suburban Lands Element. The Jackson County Land Development Ordinance will provide standards to ensure that commercial development intensity conforms with the requirements of the Unincorporated Communities Rule (OAR 660-022) for unincorporated communities, and that lesser intensities be permitted for other rural areas outside acknowledged community boundaries. Rural Service zoning districts in acknowledged unincorporated community boundaries will be distinguished as Applegate Rural Service (ARS), Ruch Rural Service

(RRS), and Sam's Valley Rural Service (SVRS), or as otherwise established in future unincorporated community plans as they occur.

ii) Adequate area must be available to buffer the commercial uses from residential, farm, forest, and industrial uses located near the subject site.

iii) The planning area must be located within a fire protection district, or otherwise be able to obtain fire protection service by contract from a fire district.

INDUSTRIAL LAND

1) Purpose:

The Industrial Land designation is intended to provide a supply of sites of suitable sizes, types, locations, and service levels to meet the economic objectives of the region. Industry is the systematic employment of labor to add value to production inputs. Jackson County allocates industrial land supply at different intensities by zoning district to provide the targeted mix of production input factors needed by industrial firms to produce goods and services. The County recognizes the importance of establishing and preserving industrial districts where a combination of production input factors is available to provide an economic comparative advantage to local industry. These areas must be preserved to prevent the crowding out of primary employment areas by incompatible uses.

2) Map Designation Criteria:

A) The Industrial Land designation includes all industrial zoning districts previously acknowledged in unincorporated Jackson County.

B) Proposals to establish new industrial areas or to expand existing industrial areas on the Jackson County Comprehensive Plan Map must be consistent with the Statewide Planning Goals, the policies embedded within the Elements of the Jackson County Comprehensive Plan, and any County adopted community plan, urbanization agreement, regional plan, or transportation/public facility plan. The location of industrial uses outside of urban growth boundaries or urban unincorporated community boundaries is specifically subject to Policy 8 of the Economy Element in the Jackson County Comprehensive Plan.

C) A traffic impact analysis is required for all Plan amendments where the proposed industrial land was not previously included in a transportation system plan. Transportation facility improvements, as found to be necessary, must be assured within a five-year time horizon as a requirement for a Plan amendment unless the proposal identifies a longer term need to preserve the area for industry where a zone change is not anticipated over the short term. A long term transportation facility plan must be prepared for adoption with the proposed Plan amendment in the latter situation. Concurrent zone change requests will require a guarantee of necessary facility improvements upon completion of development. If such improvements are found to be disproportionate to the amount of anticipated development, the proposal may not be approved.

D) Proposals to remove from or add to the Industrial Land designation must be supported by an economic opportunity analysis with the following information provided:

i) Review of national, state, and local trends. The analysis must identify the major categories of industrial uses that could reasonably be expected to locate or expand in the planning area based on available information about national, state, and local trends.

ii) Site Requirements. Identify the sites that are likely to be needed by industrial uses which might expand or locate in the planning area, and the extent to which alternate areas are or will be available to satisfy the industrial siting requirements. Types of sites must be identified based on the site requirements of expected uses. Incorporated areas and commercial areas with compatible site requirements will need to be considered where similar locational input factors exist. A use or category of use could reasonably be expected to locate in the planning area if the

area possesses the appropriate locational factors for the use or category of use. These factors include, but are not limited to:

a) Location relative to markets;

b) Availability of key transportation facilities;

c) Key public facilities;

d) Labor market factors;

e) Materials and energy availability and cost;

f) Necessary support services;

g) Pollution control requirements; or

h) Educational and technical training programs.

iii) Inventory. The analysis will be coordinated with any industrial and commercial lands inventory adopted pursuant to OAR 660-009 by jurisdictions within the delineated market area.

E) The County must consider whether or not extension of facilities is reasonably likely to be required as a result of the proposed amendment, and whether such extension of needed services is appropriate for the planning area.

F) Industrial land must be serviceable, generally free of environmental constraints, accessible, supportable by the identified market area, and consistent with the applicable state and local urban or rural lands policies. Where the proposed area includes or adjoins identified Goal 5 resources, or is otherwise mapped within a Goal 5 impact area, a conflicting use analysis must be provided in accordance with the Goal 5 process to support the proposed Plan designation.

G) Plan amendment proposals must be coupled with a request for an appropriate zoning district to assure that future commercial uses will not be developed to an intensity inappropriate to the area, except where the Plan designation is intended to preserve land for industrial use over the long term but where the short term need for a zone change does not exist.

3) Establishment of Zoning Districts: The economic opportunity analysis in criterion (2), above, will be used as the basis for determining which of the following zoning districts is most appropriate for the planning area:

A) General Industrial (GI): This district is appropriate for heavy industrial uses which may produce high levels of noise, dust, glare, heat, smoke, odors, vibrations, or other significant externalities.

i) General Industrial zoning districts outside acknowledged urban areas may not be expanded in area, and new (GI) zoning districts may not be established, unless an exception to Statewide Planning Goal 14 is justified and the proposal is consistent with Policy 8 of the Economy Element. Uses within existing (GI) districts outside urban areas may continue or be redeveloped in accordance with the Land Development Ordinance development standards.

ii) General Industrial zoning districts may otherwise be established where a Industrial Land Plan designation is located within an urban growth boundary or acknowledged urban unincorporated community boundary and where:

a) A public road network adequate to sustain General Industrial traffic loads exists to serve the area, and where safe and convenient access to the site can be provided without creating traffic or pedestrian conflicts;

b) Public sewer and water systems are physically and legally available to serve the area;

c) Adequate area is available in the planning area to provide buffering from the adjoining nonindustrial uses.

d) The economic opportunity analysis in criterion (2), above, justifies the need for General Industrial uses in the area.

B) Light Industrial (LI):

i) Light Industrial zoning districts outside acknowledged urban areas may not be expanded in area, and new (LI) zoning districts may not be established, unless an exception to Statewide Planning Goal 14 is justified and the proposal is consistent with Policy 8 of the Economy Element. Uses within existing (LI) districts outside urban areas may continue or be redeveloped in accordance with the Land Development Ordinance development standards.

ii) A public road network adequate to sustain Light Industrial traffic loads exists to serve the area to ensure that safe and convenient access to the site can be provided without creating traffic or pedestrian conflicts;

iii) Public sewer and water systems are physically and legally available to serve the area;

iv) Adequate area is available in the planning area to provide buffering from the adjoining nonindustrial uses.

v) The economic opportunity analysis in criterion (2), above, justifies the need for Light Industrial uses in the area.

C) Rural Limited Industrial (RLI):

i) Rural Limited Industrial land is applied outside urban growth boundaries or urban unincorporated community boundaries where consistent with state law and supported by the economic opportunity analysis in criterion (2), above and Policy 8 of the Economy Element.

ii) Rural Limited Industrial zoning is appropriate for uses:

a) Dependent on a significant, site-specific, natural resource; or,

b) Incompatible in urban areas; or,

c) That provide a direct benefit to local agricultural or forest uses or other uses of naturally occurring resources.

iii) The conditions of the Public Facilities and Services Element, Policy 1, category C or D, apply to RLI zoning district.

iv) The planning area must be of sufficient size and form to accommodate the proposed use including required parking and landscaping.

v) Rural Limited Industrial uses must be on land where the uses can be made compatible with adjacent land uses, and not adversely impact the rural nature of the surrounding region and sensitive fish and wildlife areas.

vi) Access must be available to state or County roads with adequate capacity for the anticipated traffic associated with the specific use or which can be improved to accommodate industrial traffic.

vii) The land must be reasonably free from excessive natural hazards.

EXISTING LAND USE

Because of factors such as topography, climate, soils, and vegetation, the more intense land uses in Jackson County occur primarily in the Bear Creek Valley, the middle Rogue Valley, and to a lesser extent in the Applegate Valley.

Development has followed from the land use patterns of the original settlers; farmers who located on the rich bottom lands, and miners and woodsmen claiming the foothill areas.

The existing land use map displays, in a general way, eight different land uses:

- Forest Lands
- Agricultural Lands
- Open Space Development (20 plus-acre lots)
- Rural Development (5- to 20-acre lots)
- Suburban Development (1- to 5-acre lots)
- Urban Development (incorporated cities, urban residential, and commercial)
- Industrial Development
- Rural Service Centers

The map illustrates existing land uses–those lands which are actually being used, and the level of intensity of those uses relative to the above classifications.

Forest Lands: Mountainous forest lands, about three-quarters of which are held in common public ownership for all citizens, surround the valley and provide commercial timber and recreation areas.

These lands, due to their topography, climate and remoteness are not generally suitable for any type of intensive development, although there are houses on very large acreages and other intensive activities compatible with forest environment. These uses include: timber production, livestock grazing, scenic, historical, or botanical areas, and passive recreation activities such as hiking, fishing, and hunting, etc.

The land that remains to provide space to meet the needs for housing, business and industry, schools, farms, roads, waste disposal and treatment sites, and so on is a relatively limited area.

Agricultural Lands: Those lands shown as "agricultural" are in a variety of different uses, including orchards and row crops, field crops, and the raising of small livestock. Many of the parcels, outside of the large commercial orchards and some field crop areas, are small. Also included in this description are areas where poultry is raised.

Grazing lands, which occur throughout the county and which often coincide with open space development, are not included.

Open Space, Sparsely Developed: These lands have housing and other development on tracts that are generally 20 or more acres, including some very large parcels. The uses associated with this type of development are basically the same as under "forest land," but include more housing and very small-scale "hobby farms."

Many of the wooded areas, including timber lands of marginal quality, are located within this category.

Rural Development: This category includes lands where development has taken place on parcels which generally range from 5-20 acres. The uses which occur under this definition are: lands for "farm residential" use, where the activities are agriculture, single-family dwellings, produce stands, grange halls or community centers, home occupations, and other agriculture-related buildings.

Other uses are included in a mixed fashion which varies widely from area to area. Some of these are riding stables, kennels, day nurseries, and mobile home parks.

Suburban Development: This general designation identifies areas where development has occurred on parcels ranging from 1-5 acres. While the atmosphere may be semi-rural in areas of five-acre parcels, the land is much less open in feeling and visual appearance than in the preceding categories. This category includes many areas where subdivisions have been built, and is a more intense use of the land than that which occurs under rural development.

These areas are most often found in close proximity to urban areas, with the land between generally developed in a "strip" of service and retail facilities.

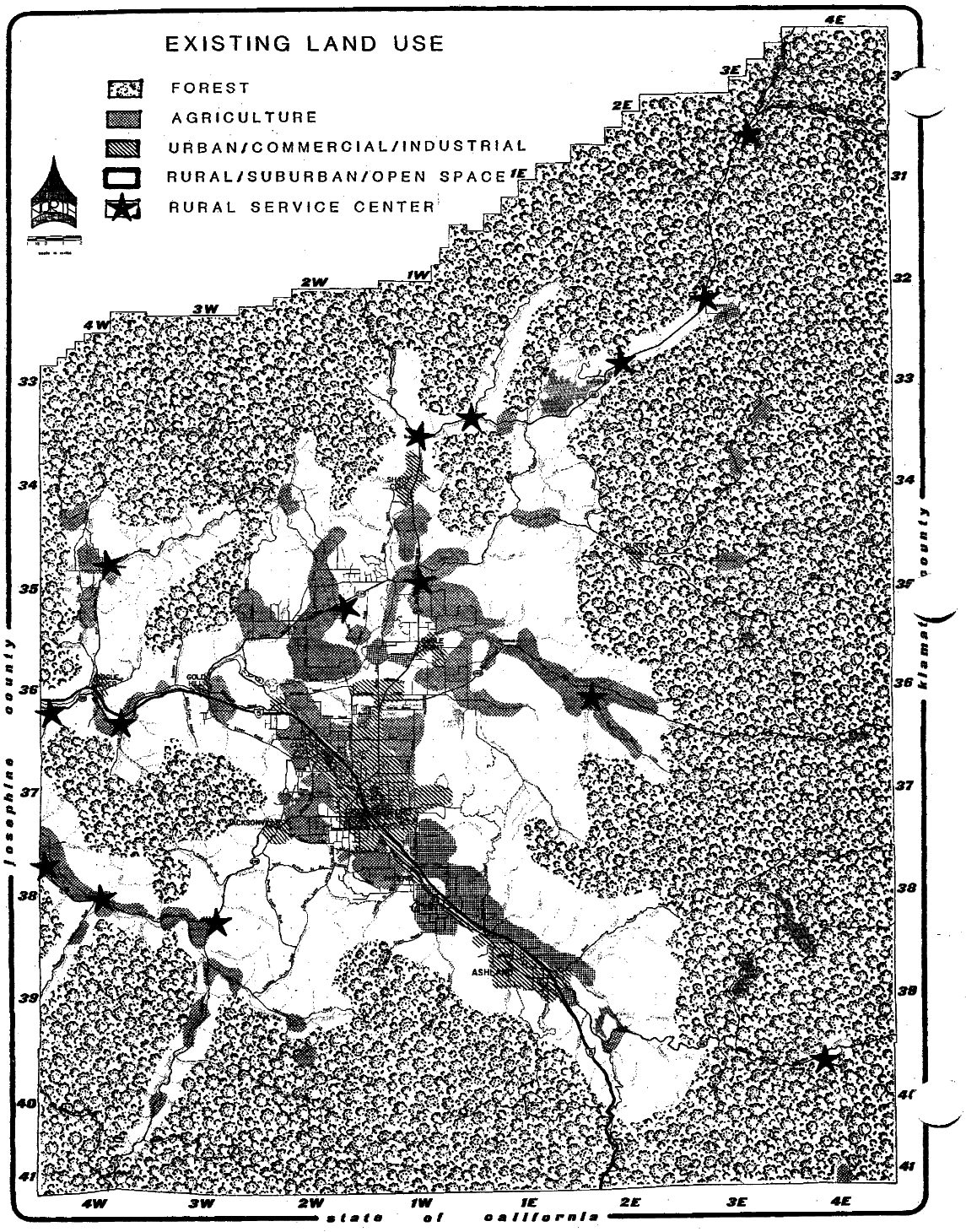
Urban: Residential and Commercial: These areas cover the residential and commercial development in the eleven incorporated cities and towns, plus urban residential and commercial uses that occur in unincorporated areas. Industrial land use is identified separately to provide a clearer picture of actual use.

Industrial Development: Most industrial activity occurs in the northern portion of the valley, centering on the Medford Industrial Park at White City. Other industrial activity takes place at Tolo Mills, between Central Point and Gold Hill on Interstate 5, and in areas immediately to the north, south, and west of Medford. Smaller and less intensive uses, mostly light manufacturing, are scattered along Highway 99 near Phoenix, Talent, and Rogue River. There is minimal industrial activity in Ashland and Eagle Point, and none in Jacksonville.

Rural Service Centers: People living in the rural areas of the county, especially the more remote areas, need basic commodities and services located near them. Due to this public need, uses such as small retail facilities and services have evolved over the years in areas where they serve the outlying population. These are known as "rural service centers." There are currently 20 such centers in the county.

In areas such as Ruch, Wimer, Prospect, Applegate, Trail, and Pinehurst, they also function as community centers, where people share information and socialize.

Typical uses business or professional offices, churches, feed and seed stores, garden shops, groceries and general stores, laundromats, second-hand stores, and similar services. Rural service centers are designated on the existing land use map by a star.



DEFINITIONS[1]

Where terms or words are not defined in the Jackson County Comprehensive Plan, they are construed to have the meaning set forth in the Jackson County Land Development Ordinance. Where terms or words are not otherwise established, they are construed to have their ordinary accepted meanings in the context of their use. The contemporary edition of *Webster's Third New International Dictionary* (unabridged) (Merriam-Webster, Inc. Springfield, MA 1986) as supplemented, is to be used as the source for these accepted meanings. Nothing in this Plan is meant to supercede definitions appearing in State or Federal land use law, which may also be directly applicable in land use planning.

1) CARRYING CAPACITY: Level of use which can be accommodated and continued without irreversible impairment of natural resources productivity, the ecosystem, and the quality of air, water, and land resources.

2) CLUSTER DEVELOPMENT: The grouping of primary structures on one portion of a given site, while the remainder of the site is retained in recreational, agricultural, or some other open space use.

3) COMMERCIAL FOREST LANDS: Areas where sustained timber production and preservation of a self-perpetuating forest environment is considered to be the dominant land use. These lands are principally located in higher elevations; are, for the most part, owned and/or managed by the Bureau of Land Management, the U.S. Forest Service, or wood products industry for large scale commercial timber production; have parcel sizes 40 acres or greater; and, are specifically assessed as forest land and/or have a cubic foot site class rating of between 2+ and 5 or capable of producing twenty cubic feet per acre of annual wood growth, as discussed in the Forest Lands Element.

4) FOREST LANDS: (1) lands composed of existing and potential forest lands which are suitable for commercial forest uses; (2) other forested lands needed for watershed protection, wildlife and fisheries habitat, and recreation; (3) lands where extreme conditions of climate, soil, and topography require the maintenance of vegetative cover, irrespective of use; (4) other lands which lie adjacent to urban and agricultural areas and which provide urban buffers, windbreaks, wildlife and fisheries habitat, scenic corridors, and recreational use; and, (5) ranching and grazing areas in the above environments.

5) MASS MOVEMENT: Down slope movement of soil or rock in response to gravity and includes landslides, mudslides, and similar down slope movements of any speed.

6) NATURAL AREA: An area of land or water; an ensemble of natural elements, which either retains or has re-established its natural character, although it need not be completely undisturbed or which retains unusual flora, fauna, geological, or similar features of scientific or educational interest.

7) NATURAL RESOURCES: Air, land, and water, and the elements thereof, which are valued for their existing and potential usefulness to man.

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[1]*Adopted by Ordinance #80-17 on 8-29-80, effective 10-28-80 (File 80-1-ZOA); replaced by Ordinance #2004-1 adopted 1-12-04, effective 3-12-04 (File 2003-1-OA).*

8) PUBLIC FACILITIES AND SERVICES: Projects, activities, and facilities provided by public and quasi-public agencies and private enterprises which are necessary to protect and enhance the public health, safety, or welfare.

9) RECLAMATION: In a surface mining operation, the employment of procedures designed to provide for rehabilitation of the earth's surface by plant cover, soil stability, water resources, and other measures appropriate to the subsequent beneficial use of the reclaimed lands.

10) RECREATION NEEDS: The existing and future demand by citizens and visitors for recreation areas, facilities, and opportunities.

11) RURAL FACILITIES AND SERVICES: Basic facilities that are primarily planned for by county government, but which also may be provided by other units of local government and private enterprise at levels suitable and appropriate for needs of rural, open space, and most suburban lands in accordance with the Jackson County Comprehensive Plan. Rural facilities and services include one or more of the following:

   A) Limited, nonmunicipal police protection;

   B) Limited, nonmunicipal fire protection;

   C) Subsurface or small community sewerage disposal systems;

   D) Individual wells or small community water systems;

   E) Planning, zoning, and subdivision control;

   F) Recreation facilities or services;

   G) Energy and communication services; or,

   H) Limited transportation and school facilities or services.

12) SLOPE EROSION: Removal of soil from a slope by sheet wash, rill wash, or gullying.

13) SOIL CAPABILITY CLASS: A soil classification system developed by the USDA Natural Resource Conservation Service which is to indicate the capability of land for sustained agricultural uses.

14) SOIL MAPPING UNIT: A single soil, of a soil series, that is delineated on a map by use of a symbol such as (32A) or (64D). The number represents the soil series to which the mapping corresponds, and the letter refers to the degree of slope.

15) SOIL SERIES: A method of grouping soils of common character or profile, and providing additional interpretation regarding the engineering properties of the soil.

16) THREATENED SPECIES: A species or race which is likely to become endangered within the foreseeable future throughout all or a significant portion of its ranges. This may include species categorized as rare, very rare, or depleted. It may be threatened naturally or due to human related activities.

17) TORRENTIAL FLOOD: Flood characterized by rapidly moving water in a channel with no floodplain, as in a mountain ravine.

18) TRANSFERABLE DEVELOPMENT RIGHTS (TDR): A system of transferring development rights from one area to another.

20) UNINCORPORATED URBAN CONTAINMENT BOUNDARY: An unincorporated urban containment boundary is a site specific line imposed on the Comprehensive Plan maps and Zoning Maps of Jackson County which identifies unincorporated areas that have developed over time to an urban-type density. These areas have been determined to be suitable for fill-in, but not outward expansion, and are specifically identified in the Urban Lands Element of the Jackson County Comprehensive Plan.

21) URBAN FACILITIES AND SERVICES: Basic facilities that are primarily planned for by local government, but which also may be provided by private enterprise, and are essential to the support of development in accordance with the city's comprehensive plan. Urban facilities and services include police protection, fire protection, sanitary facilities, public water facilities, storm drainage facilities, planning, zoning and subdivision control, health services, recreation facilities and services, energy and communication services, and community governmental services including schools and transportation.

22) WATER TABLE: The upper limit or surface of groundwater.

AGGREGATE AND MINERAL RESOURCES

GOAL: TO PROTECT AGGREGATE RESOURCES FROM INCOMPATIBLE DEVELOPMENT AND ENSURE THAT AGGREGATE IS AVAILABLE FOR USE.

MINERAL RESOURCES:

Most of the information contained in the section is derived from the following publications: Land Use Geology of Central Jackson County, which was produced by the State Department of Geology and Mineral Industries in 1977; Mineral and Water Resources in Oregon, written by the United States Geological Survey in 1969; and, The Minerals Yearbook, written in 1976 by the Bureau of Mines. Two other publications, although not utilized in the report, provided information on minerals in Jackson County. These documents are Gold and Silver in Oregon, written by Howard C. Brooks and Len Ramp for the Department of Geology and Mineral Industries in 1968; and, Mineral Industries of Southern Oregon, which was written in 1914, by Joseph Silas Diller.

The most recent comprehensive inventory of aggregate and mineral resources is a data base prepared by the Oregon Department of Geology and Mineral Industries: Mineral Information Layer for Oregon by County (MILOC), published in 1991. The inventory includes nearly 700 mineral occurrences, prospects, and mines in Jackson County, of which approximately 150 are aggregate sites having mined land reclamation permits.

History:

The production of minerals in Oregon began with the discovery of gold in Jacksonville in 1851. Within a few years after the discovery of gold, nearly all of southwest Oregon had been prospected for gold. The value of mined gold, in these early years, was substantial. A mine located at Gold Hill is said to have produced $400,000 worth of gold in the single year of 1860. By the beginning of the 1940s, the production of gold came to a near stand-still throughout most of Oregon. Because the value of gold has risen from its fixed rate of $35 per ounce in 1972, to approximately $330 per ounce in 1993, the mining of gold in Jackson County may increase.

Within Oregon, gold was the dominant mineral produced until the 1930s. However, starting in the middle of the 1930s, the production of non-metallic minerals began to exceed the value of the state's gold production, according to the publication Mineral and Water Resources of Oregon. In Jackson County that same relationship exists today. The value of mined aggregate, which consists of sand, gravel, and quarry stone far exceeds the value of all other mined minerals including gold, which is now the second most valuable mineral produced in the county.

*Although aggregate is defined in this plan as including all mineral resources this element discusses mineral resources and aggregate resources separately.

Metallic Minerals:

According to Land Use Geology of Central Jackson County, three metallic mineral, gold, silver, and uranium, have a very high potential for future development, partially because of the high value of the substances.

Land Use Geology of Central Jackson County, states that minerals with a moderate potential for future development include chromite, copper, lead, zinc, and tungsten. This report goes on to say that, generally, "known deposits are not large enough to compete with outside sources."

Molybdenum, nickel, platinum, mercury, manganese, and cobalt, have a low probability for future development according to Land Use Geology of Central Jackson County. This is expected, in part, because of outside competition and the poor record of discovery. If found in sufficient quantities, molybdenum and platinum have a relatively higher potential for development. Table I, provides a brief explanation of the geologic occurrence, production history, and estimated potential development of the metallic and nonmetallic minerals of Jackson County.

Nonmetallic Mineral:

According to the Oregon Metal Mines Handbook, nonmetallic minerals present in Jackson County include coal, shale oil, asbestos, carbon dioxide, clay, peat, pumice, silica, limestone, and aggregate. Aggregate is the most important mineral mined in Jackson County, and is described in the aggregate section of this element.

Land Use Geology of Central Jackson County, identifies coal a as a nonmetallic mineral with a very high potential for future development. This report also states that "oil has a low potential for discovery, but would be exploited if it ever were discovered."

Clay is identified as a mineral having moderate potential for future development; however, deposits may not be large enough to compete with outside sources. One location of note is the Klamath Falls Brick and Tile site near Ashland.

According to the Oregon Metal Mines Handbook, the deposit of oil shale in Jackson County, which is called the Shale City Deposit, is the only such deposit in the state. Rock is considered an oil shale when it yields 10 to 100 gallons of oil per ton. The Oregon Metal Mines Handbook states that the Shale City deposit is good commercial grade shale, yielding 36 gallons per ton. The production of oil shale has not proved economical in the past.

Only four deposits of silica have been worked commercially in Oregon. The Bristol Silica Quarry, located near the town of Rogue River is one of those deposits. The Bristol Silica Quarry has been producing industrial silica since 1938. The silica is used as a nursery grit for tree seedlings; it is used as a catalytic medium and for filtration purposes in the refining of oil; and, it is used for aquarium grit.

For many years, cement was produced by the Ideal Cement Company, located near Gold Hill. The limestone used to make the cement was derived from quarries in Jackson and Josephine Counties. The plant closed in 1967. There are plans to utilize limestone, located at the Bristol Silica Quarry, for the neutralizing effect it has on the PH of agricultural soils.

AGGREGATE RESOURCES:

Aggregate resources consist of sand, gravel, rock, stone, soil, precious metals, and other earth or natural materials, and are finite nonrenewable minerals necessary for most public works projects and nearly all types of commercial, industrial and residential construction. Aggregate is used in concrete, asphalt and as fill and base for public and private roads in urban, rural and forest land areas. Every house that is constructed requires an average of forty cubic yards of

aggregate and generates a secondary demand in the community for an additional one hundred cubic yards of aggregate products. An estimated 80 percent of the aggregate mined in the county is projected to be used for the building of structures and for public and forest road construction purposes. The high demand for aggregates will continue consistent with population growth and the development and redevelopment needs of the urban and rural areas in the county. Thus, there is a clear public need to protect aggregate resource lands and processing sites and ensure that this resource is readily available for use.

County Aggregate Production and Estimate for Future Production:

Jackson County produces 3.2 percent of all the sand and gravel in the state and 12.6 percent of all the stone. The average annual production in the county, from 1970 to 1976, was 596,000 tons of sand and gravel, and 1,670,000 tons of stone. Between 1970 and 1976, only one county has produced more sand and gravel than Jackson County.

The Bear Creek Valley distribution area, from Eagle Point to Ashland, consumes and estimated 75 percent of aggregate used in the county. This region is expected to continue as the principal market area in the county. The demand for aggregate exists on a more sporadic basis in rural and forest areas in the county. Large public works projects can cause wide fluctuations in consumption rates and temporarily will increase normal demands in certain county areas.

Aggregate Inventory Needs:

Two studies were prepared in 1970, and a third was prepared in 1976, on the aggregate resources of Jackson County. Although these studies provide inventory data on aggregate resources, they do not provide, nor do adequate up-to-date sources exist, indicating the quality, quantity and locations of aggregate resources which remain in Jackson County, in any one single published document. For purposes of immediate identification of those aggregate sites in need of protection and special land use planning strategies, an informal Aggregate Resource Advisory Committee was formed in 1980 to assist in mapping known resource sites including lands with existing investments in aggregate production. In 1992, the Board of County Commissioners appointed an Aggregate Resources Advisory Committee to recommend alterations to the existing inventory and text of the Land Development Ordinance.

A DOGAMI open-file report on the sand and gravel of Jackson County (Schlicker and Deacon, 1970) was perhaps the best study at that time. The report incorporated actual consumption data and also incorporated forecasts for future needs. The basic assumptions of this report were valid; however, the report predicted a population growth of 72 percent from 1965 to 1985, when actual growth from 1965 to 1990 was only 58 percent. It is evident that Jackson County's rapid growth of the 1970's has tapered off to a more modest rate. At a 10 percent growth rate from 1980 to 1990, Jackson County ranked eighth in Oregon, where the statewide increase was 7.4 percent.

The baseline data and assumptions for Tables 1 and 2 are as follows. Unpublished data collected by DOGAMI in 1990 from some of the larger corporations, together with industry estimates, suggested the total aggregate consumption for Jackson County was about 1.5 million tons. The confidence expressed in this number at the time was about plus or minus 10 percent. Per capita aggregate consumption in Jackson County is slightly more than 10 tons, approximately the same as in 1970 (Schlicker and Deacon, 1970). Jackson County per capita aggregate consumption parallels national consumption, plus or minus 10 percent. Hence,

population growth and aggregate consumption are intimately parallel. It is assumed that Jackson County will average a population growth rate of 10 percent per decade from 1990-2100.

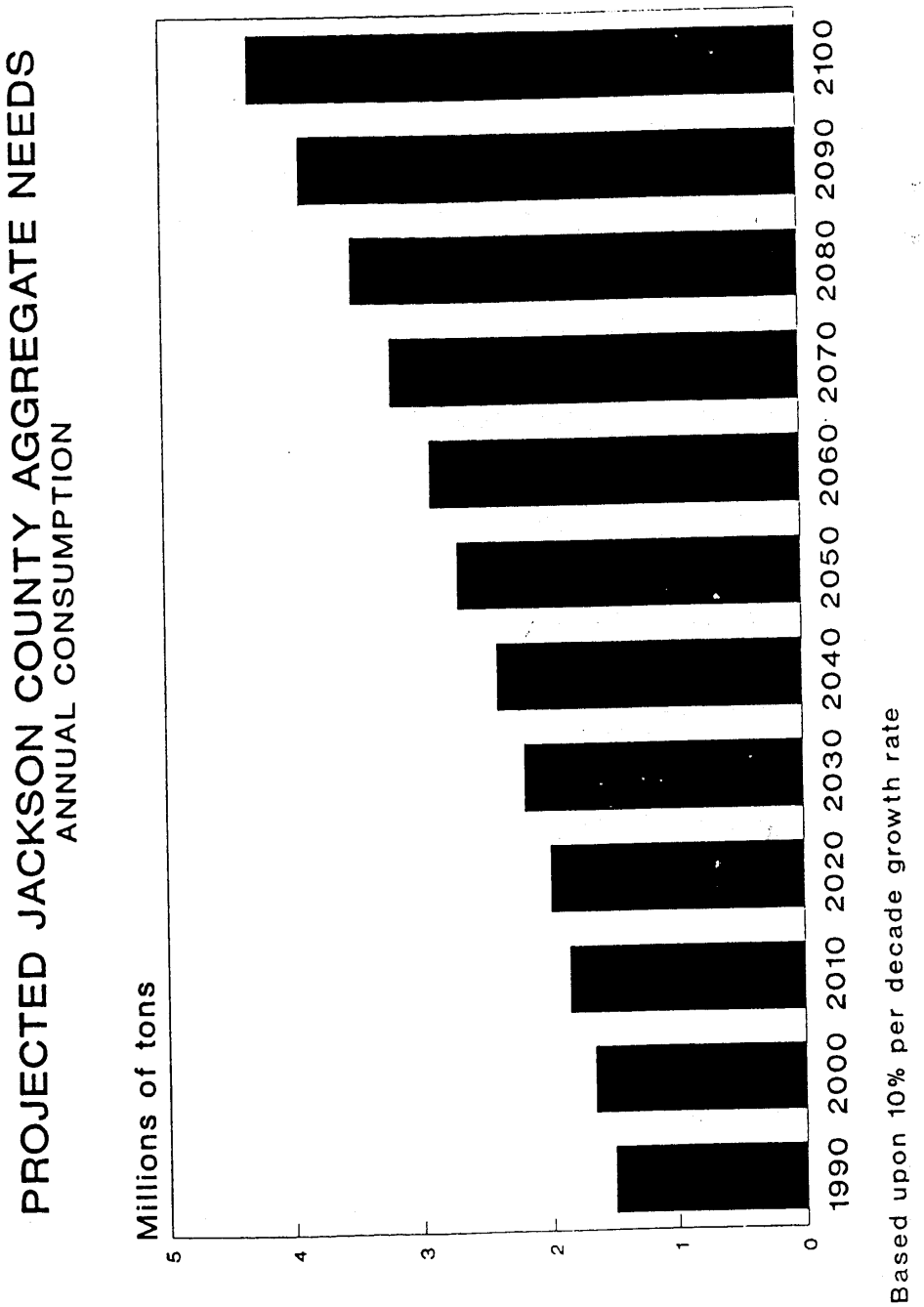


TABLE 1

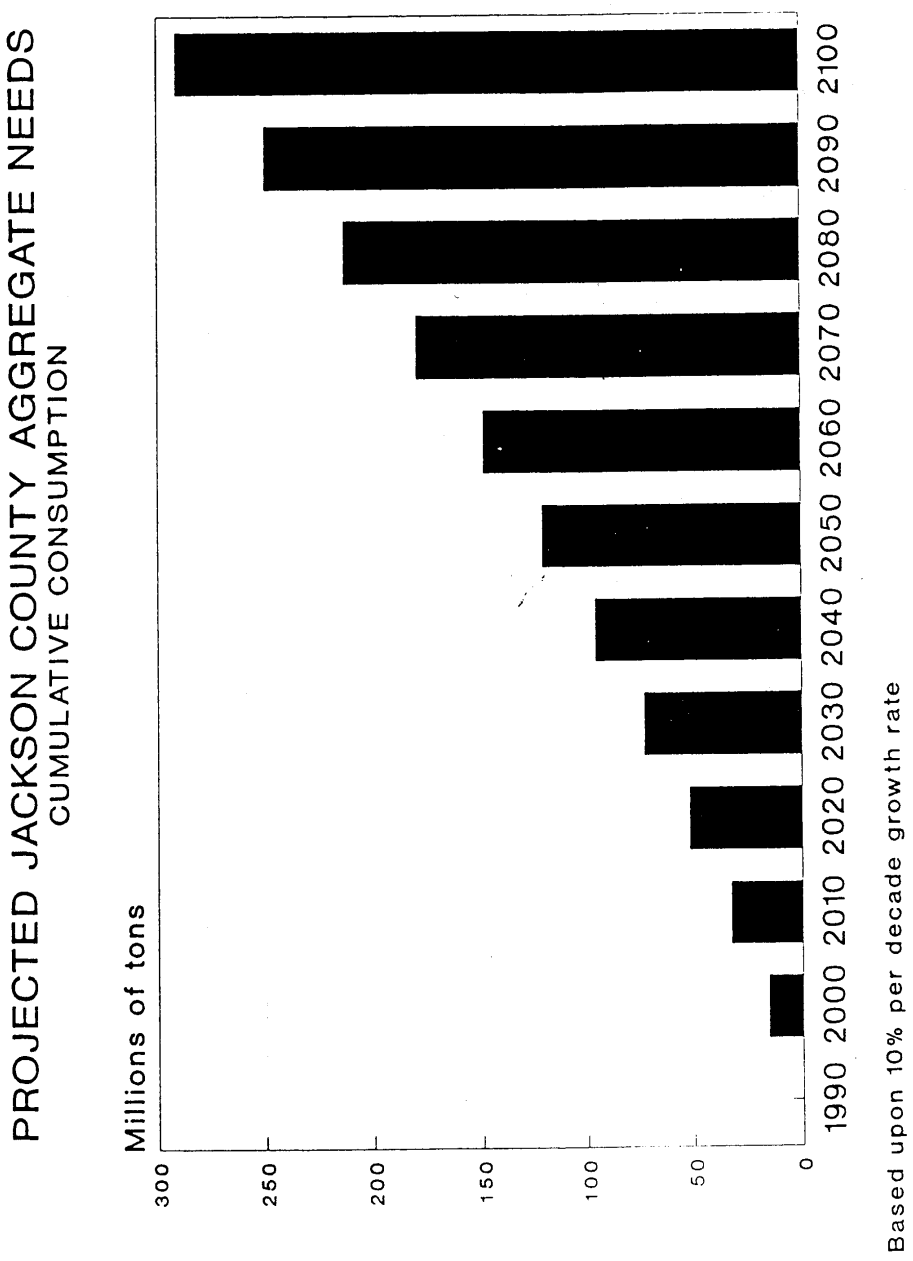


TABLE 2

A model of 10-percent-per-decade growth, averaged over one hundred years, has the following advantages. First, it is slightly higher than the most recent national average, reflecting the fact that growth has occurred predominantly within 100 miles of the nation's coasts, which is expected. Second, it is consistent with world growth parameters projected at the Electric Power Research Institute for the next half century (Starr and others, 1992). The 10-percent-per-decade

model for Jackson County shows that by the year 2060, aggregate consumption will increase by a factor of 193 percent (1990 baseline) or 201 percent (1986 baseline).

Source: Letter dated December 10, 1992, from Frank Hladky, Resident Geologist, Department of Geology and Mineral Industries.

Consideration of "need" for aggregate resources is not appropriate in determining whether a resource is significant. The determination of significance is a matter of local discretion based on information concerning the location, quality and quantity of resource sites. The relative abundance and quality of resources are important factors in determining significance, as is the location of resources in response to local or regional markets.

The Aggregate Industry:

The production and distribution of aggregate materials is subject to a variety of influences. A substantial number of private industries and public works agencies in the county are directly dependent upon readily available sources of aggregate.

As a general rule, the private industry sector can be divided into two groups: fixed base producers, and construction contractors. The fixed base producers market a single product line granite or pit-run quarry rock, or a range of products such as concrete, asphalt, or crushed rock. The construction contractors generally operate on a project basis, using portable equipment. Many companies operate interchangeably. Public agencies operate similar to private contracting firms; however, they often require fixed-based locations for stockpiling materials used in maintenance projects.

Environmental and Land Use Considerations:

Surface mining activity cannot be disassociated from environmental and land use considerations. Improperly operated or located surface mines can have an adverse impact on air, water, and land resources, and residential and other types of developments. Provisions which establish minimum standards for protection of these other resources can be implemented by adoption of a sound zoning ordinance which would provide adequate separation between aggregate production sites and conflicting land uses.

Development of lands in Jackson County for residential and commercial purposes has already occurred on aggregate resource lands, rendering those deposits nonrecoverable. Areas planned and zoned for residential, commercial, or other uses incompatible with the extraction and processing of aggregate should not be considered as potential aggregate sites. Taking into account history of public acceptance and environmental considerations, the open areas and heavy manufacturing categories identified by the Comprehensive Plan as forest resource, rural resource, open space resource, agriculture and industrial lands, provide the best general setting for aggregate mining and processing.

Reclamation:

Oregon law required reclamation of land subjected to surface mining activity if the mining began after July 1, 1972. The law applies to all surface mines which mine 5000 cubic yards or affect more than one acre of land per year. The reclamation project, plan and performance bonds are

under the jurisdiction of the Department of Geology and Mineral Industries and are subject to review and coordination with local affected agencies.

Future Planning Considerations:

The Bear Creek Valley, from Eagle Point south to Ashland, is expected to continue as the principal area of aggregate utilization in the county. A decline in available sites, especially sand and gravel deposits providing source material for aggregates, is occurring.

The industries operating in this region are being forced to look at other alternatives for rock sources and preserve key sand and gravel deposits, specifically for concrete production. Key sites for concrete aggregates and other sand and gravel uses have been identified and mapped on lower Bear Creek and the terraces and floodplain bordering the Rogue River from Gold Rey Dam upstream, to near Dodge Bridge. Key sources of quarry rock, granite and basaltic shale exist in the Jacksonville, Eagle Point, Agate Lake and Brownsboro areas.

Within the remaining county rural area the demand for aggregate will vary, depending on the location. The outlying cities of Rogue River, Gold Hill, Shady Cove, and Butte Falls will all generate a sizeable market for aggregate products. The rural development areas of Sams Valley, Ruch, Wimer, Prospect and other similar areas will generate a significant but lesser need of aggregate for home and farm use. Most of the aggregate mined in the rural county areas will be used for road construction purposes.

The amount of aggregate consumption in the outlying areas can change yearly; it is not easily predictable nor are priority aggregate sites easily identified. A number of influences, such as major public works projects, damaging floods, prolonged ice or snow conditions, or substantial rural growth, can increase the annual demand in any given area of the county. In recognition of this, planning and zoning concepts must retain a certain degree of flexibility, particularly as they apply to the zoning of rural aggregate resource sites. It is reasonable to expect that rock quarries scattered throughout the forest resource areas will continue to provide the best viable source of aggregate for the outlying county, state and forest road systems. Similar rock quarries in or near rural communities and cities are sources for both pit-run and processed material for use in road base, fill and paving rock.

Bedrock aggregate deposits capable of supplying these materials exist in proximity to each area of demand. Sand and gravel deposits in this identified distribution area exist in substantial quantity only in the Applegate River floodplain. Lesser deposits exist in the floodplains of Evans Creek, and the Rogue River between Dodge Bridge and Shady Cove. The Applegate deposits are large enough to have both localized and regional significance and should be recognized as such. Along Evans Creek and the section of the Rogue River mentioned above, riverwash gravel deposits have built up at various locations in excess of the stream's bedload capabilities. In these areas, properly engineered gravel removal can provide multi-purpose benefits.

FINDINGS, POLICIES AND IMPLEMENTATION STRATEGIES:

1

FINDING:

The production of minerals is an important part of the local economy. Moreover, the utilization of minerals, which are nonrenewable resources, is necessary if our society and culture is to be maintained as we now know it. Mineral resources may be rendered nonrecoverable if incompatible development, such as residential development, locates on or adjacent to these resources. Planning and zoning action can ensure that mineral resources are protected from incompatible development and they can help prevent unnecessary regulations from impeding or stopping the mining of these resources. However, these objectives cannot be accomplished without adequate inventory information. There is no comprehensive inventory of the various mineral resources present in the county. Information which is available is incomplete and in some cases of questionable accuracy.

This information is inadequate to properly identify and protect mineral resources through the planning process. An inventory of the mineral resources is necessary in order to properly protect and ensure the availability of these resources. Until a comprehensive inventory is undertaken, mineral production will occur and be regulated through the conditional use permit procedure.

POLICY: MINERALS ARE RECOGNIZED AS A NONRENEWABLE AND NECESSARY RESOURCE THAT MUST BE PROTECTED FROM INCOMPATIBLE DEVELOPMENT AND BE AVAILABLE FOR MINING.

IMPLEMENTATION STRATEGIES:

A) The county shall request that the Oregon Department of Geology and Mineral Industries conduct a comprehensive inventory of the mineral resources of Jackson County and upon completion of that inventory, zoning and other implementing ordinances shall be amended to accommodate the intent of this policy.

B) Allow the excavation and processing of non-aggregate mineral resources through a conditional use permit process in appropriate rural zoning districts.

C) Coordinate with the Oregon Department of Geology and Mineral Industries, Division of State Lands, and other affected agencies, to ensure that the mining of mineral resources occurs in conformance with appropriate standards pertaining to fish and wildlife habitat, erosion control, air and water quality, visual quality, noise standards, and access requirements.

2

FINDING:

Aggregate is a finite resource necessary for most phases of private construction and public works projects. These resources have been partially exhausted at many key locations in the county due to the high demand for aggregate materials. Additional key sites have been or are now in danger of becoming unusable because of incompatible development which has occurred on or near aggregate resource lands. Projections indicate that there will continue to be a strong demand for aggregate.

Adopted as part of this comprehensive plan is a map designating currently identified aggregate lands. It identifies the location of existing and potential aggregate operations; it will serve as a useful document by which land use actions proposed to be located near aggregate resources may be evaluated for their conformance with this aggregate section of the comprehensive plan.

There are many areas in the county where dual resource use of the land will occur. One example is aggregate operations being established within a forest resource or through a conditional use permit process. In forest areas, aggregate mining is necessary and accessory to proper forest management and timber harvesting and such activity will have minimal impact on the overall timbershed if proper removal methods are followed. The issue is more sensitive in agricultural areas because the key deposits of concrete aggregates, sand, and gravel, are all located on the high and low floodplains and terrace lands within or immediately adjacent to agricultural land. The specific area of vital concern is the lower Bear Creek and middle Rogue River floodplains, which contain the largest deposits of sand and gravel within an economical distance of the urbanizable areas of White City, Central Point, and Medford. These same floodplains are also classified as agricultural land by statewide planning goal definition. The ESEE analysis process is designed to recognize the significance of aggregate resources as comparable with farm and forest resource values.

POLICY: THE COUNTY SHALL PROTECT AND CONSERVE AGGREGATE RESOURCES, REDUCE CONFLICTS BETWEEN AGGREGATE OPERATIONS AND ADJACENT LAND USES, AND ENSURE THAT AGGREGATE RESOURCES ARE AVAILABLE FOR CURRENT AND FUTURE USE.

IMPLEMENTATION STRATEGIES:

A) Jackson County shall form an expert committee to make recommendations on the question of which parcels should be zoned Aggregate Resource (AR). This committee may be comprised of staff members of the Jackson County Public Works and Planning Departments, the Oregon Department of Fish and Wildlife, the Oregon Department of Geology and Mineral Industries, and representatives from the aggregate industry and Committee for Citizen Involvement.

B) Include within the county zoning ordinance, site-specific criteria and performance standards for aggregate removal which will provide for proper maintenance of air, water, and land quality.

C) Upon completion of a comprehensive inventory of aggregate resources in Jackson County, by the Department of Geology and Mineral Industries, the county shall take action to legislatively rezone appropriate parcels to Aggregate Resource. In addition, the County shall, at periodic intervals legislatively rezone appropriate parcels to Aggregate Resource.

D) Allow for aggregate mining and processing in Exclusive Farm Use, Forest Resource, Woodland Resource, Open Space Reserve, Farm Residential, and General Industrial zoning districts as a conditional use.

E) Zone for long-term aggregate use appropriate county, state highway, and forest agency stockpile sites and maintenance yards in the outlying areas of the county.

F) Include agriculture and forest uses as a permitted use in the Aggregate Resources (AR) zoning district.

3

FINDING:

Aggregate resources are a bulky and expensive product to transport. It is necessary to locate for energy conservation, in conformance with other sections of this plan, aggregate locations within reasonable distances of each urban center and principal rural communities in the county.

POLICY: EMPHASIS WILL BE PLACED ON THE ZONING OF LANDS FOR AGGREGATE RESOURCE PURPOSES NEAR EACH URBAN CENTER AND KEY RURAL COMMUNITY IN THE COUNTY.

IMPLEMENTATION STRATEGY:

A site should be given high priority for Aggregate Resource zoning if it has: 1) a substantial quantity of high quality aggregate for which there is a strong public demand; 2) if it is located near an urban area or located near an urban area or located near where is will be used; 3) if aggregate has been or currently is being utilized at this site; and, 4) if conflicts with adjacent land uses can be minimized through the ESEE analysis.

4

FINDING:

Aggregate is a nonrenewable resource. Under continued use, aggregate resource sites will become depleted. This section recognizes that a change in zoning will generally be desirable, once a site zoned Aggregate Resource has been depleted of the aggregate, and is otherwise not suitable for aggregate operations.

POLICY: WHEN AN AGGREGATE SITE IS NO LONGER SUITED FOR AGGREGATE OPERATIONS, A CHANGE FROM AGGREGATE RESOURCE ZONING TO ANOTHER ZONING DESIGNATION IS DESIRABLE. THE PROPOSED ZONING MUST BE

CONSISTENT WITH THE COMPREHENSIVE PLAN ORDINANCES, AND RECLAMATION PLAN.

IMPLEMENTATION STRATEGY:

Ensure that new zoning on properties which are currently zoned Aggregate Resource is consistent with the map designations and other relevant sections of the comprehensive plan and ordinances.

1) The county shall protect significant mineral and aggregate resources consistent with Statewide Planning Goal 5 and the process for complying with the Goal specified in Oregon Administrative Rules Chapter 660, Division 16.

2) The county shall maintain an inventory of mineral and aggregate resource sites. The comprehensive plan inventory shall consist of three parts:

   a. An inventory of "significant sites" identified through Goal 5 process as important resources that will be protected from conflicting uses;

   b. An inventory of "potential sites" for which sufficient information concerning the location, quality, and quantity of a resource site is not adequate so as to allow the county to make a determination of significance;

   c. An inventory of "other sites" for which available information demonstrates that the site is not a significant resource to be protected.

3) The location of a mineral or aggregate resource shall be identified as the site of a recoverable source of material. A resource site may consist of all or portions of a parcel, and may comprise contiguous parcels in different ownerships. Identification of a resource site need not include mineral and aggregate reserves that are irrevocably committed to other land uses which are incompatible with surface mining.

4) For an aggregate site to be determined significant, the resource must possess a minimum of 100,000 cubic yards of minable reserves. This standard is not absolute; the county may consider the significance of a site based on unique circumstances even though the volume threshold may not be met. The 100,000 cubic yard threshold allows for protection of sites in remote areas as well as high-quality materials that may be relatively scarce, but located near larger markets. Further, Oregon Department of Geology and Mineral Industries inventories define large sources of material as those having more than 100,000 cubic yards. It is the policy of the county to protect a variety of large reserves to serve the regional market which also meet Oregon Department of Transportation specifications for construction grade material. Oregon Department of Transportation quality specifications for aggregate include: 1) the Los Angeles Rattler test for abrasion (AASHTO T96, OSHD TM 211--loss case of not more than 30 percent by weight), 2) the Oregon Air Degradation test (OSHD TM 208--loss of not more than 30 percent by weight), and 3) the Sodium Sulfate. Soundness test (OSHD TM 206--not more than 12 percent by weight).

5) The significance of non-aggregate mineral resources shall be judged on a case by case basis, taking into account information concerning the commercial or industrial use of the

resource, as well as the relative quality and relative abundance of the resource within at least the county.

6) Because material source sites owned or controlled by municipal, county or state government agencies have been acquired for the purpose of maintaining the public road system, and collectively form a network of great importance, the county shall deem such sites presumptively significant. Such sites shall be analyzed along with other significant sites to establish the appropriate level of protection from conflicting uses.

7) The county shall allow continued mining at existing significant resource sites. Expansion beyond the limits of an existing site shall be in accordance with County zoning regulations.

8) The scope of an existing or "grandfathered" aggregate operation shall be established by:

   a. Authorization by a county land use approval; or

   b. The extent of the area disturbed by mining and processing on the date of adoption of the revised regulations.

9) Sites on the "others sites" inventory shall not be protected pursuant to Goal 5.

10) For sites on the "potential sites" inventory, the county shall review available information about mineral and aggregate resources, and if the information is sufficient, determine the site to be significant when one of the following conditions exists:

   a. As part of the next scheduled periodic review.

   b. When a landowner or operator submits information concerning the potential significance of a resource site and requests a comprehensive plan amendment.

   c. When resolution of the status of a potential resource site is necessary to advance another planning objective.

11) For each site determined to be significant, the county shall complete the remainder of the Goal 5 process of identifying conflicting uses, analyzing the ESEE consequences of the conflicting use(s), and designating a level of protection from conflicting uses. If the final decision concerning the site is to fully preserve or partially protect the resource from conflicting uses, the site shall be zoned Aggregate Resource (AR).

12) When analyzing the ESEE consequences of potential conflicts between a significant mineral or aggregate resource and another significant Goal 5 resource, the county shall consider the protection program adopted for the conflicting resource. Conflicts with other natural resources shall not be the basis for mining restrictions unless the county has included or includes the conflicting resource on the inventory of significant Goal 5 resources, and has adopted or adopts a resource protection program.

13) In order to approve surface mining at a site zoned for exclusive farm or forest use, the county shall find, as part of the ESEE analysis, that the proposed activity will not: 1) force a significant change in, or significantly increase the cost of, accepted farming or

forestry practices on surrounding lands, and 2) will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel. These criteria may be satisfied through imposition of clear and objective standards.

14) The county shall not independently apply the Aggregate Resource zone to land within another county, or within a city or its urban growth boundary. The county shall seek to ensure protection of significant sites where the impact area surrounding the resource extends across jurisdictional boundaries through cooperative agreements with another county or a city.

15) The county shall require increased setbacks, insulation, screening, or similar measures as conditions of approval for any new conflicting use within an impact area surrounding a mineral or aggregate resource site when such measures are necessary to resolve conflicts identified in a site-specific Goal 5 analysis.

16) The county shall impose conditions on surface mining when necessary to lessen conflicts identified as part of a site-specific Goal 5 analysis. Where such conditions conflict with criteria and standards in the Aggregate Resource zone, the conditions developed through the Goal 5 analysis shall control.

17) As part of the Goal 5 process to determine the amount of protection given a significant mineral and aggregate resource sites, the county shall determine the appropriate post-mining use of the site.

18) The county recognizes the jurisdiction of the Department of Geology and Mineral Industries over of mined land reclamation pursuant to ORS 517.750 to 517.900 and the rules adopted thereunder.

19) Unless specifically determined on a case by case basis, it shall be the policy of the county, pursuant to ORS 517.830(3), that DOGAMI delay its final decision on approval of a reclamation plan and issuance of an operating permit until the county decides all comprehensive plan amendments or site plan approvals.

20) No surface mining or processing activity, as defined by the zoning ordinance, shall commence without land use approval from the county, and approval of a reclamation plan and issuance of an operating permit by DOGAMI.

21) Land shall not be rezoned from Aggregate Resource until the mineral or aggregate resource is depleted, and the site has been reclaimed.

AGRICULTURAL LANDS

GOAL: TO PRESERVE AND MAINTAIN AGRICULTURAL LAND

INTRODUCTION/BACKGROUND:

Jackson County was established in 1852, the same year gold was discovered near Jacksonville. The Oregon and California Railroad was built through the county in about 1883, bringing along with it commercial and agricultural development. Aside from gold mining and commercial activities that supported mining, most commerce in the early days was associated with the railroad. The railroad also encouraged the development of the lumber industry. Agriculture began in the county on Homesteading Donation Land Claims, and consisted of general farming, ranching, and some fruit orchards. Most of the farm products were for local consumption. It was not until 1900 that the railroad and other land promoters engaged in large scale development of pears, apples, and other orchard fruits. About 12,000 acres of orchards, consisting mostly of pears, survived the economic difficulties of the 1920s and 1930s, and it was this pear industry which emerged from World War II as the county's leading agricultural activity. During the years immediately after World War II, agriculture was the most important sector of the economy.

Since that time the forest products industry, tourism, medical services, retail and other supporting activities have increased in economic importance in Jackson County. However, agriculture continues to be a significant economic and employment base in the county. And agriculture does not react as severely to natural economic trends as the forest products industry.

The Rogue Valley is distant from major markets and consequently has a competitive disadvantage compared to agricultural areas located closer to markets. Dependance on irrigation and the variable quality of soils increase economic risks inherent in agricultural enterprises compared to the risks in farming areas with milder and wetter climates.

This points to the need to decrease pressure on farm land values and to reduce conflicts that increase the costs of farming. Pressure on farm land values can be reduced by retaining large ownerships that can withstand economic difficulties more easily than smaller operations. Conflicts with accepted farming practices can be reduced by retaining agricultural lands in large blocks and by limiting intrusions of nonfarm uses in agricultural areas.

Rural living has been an important part of the history of Jackson County. Since World War II there has been an increasing demand for country homes in Jackson County. By 1950, 40 percent of the rural population of the county was nonfarm, and of the farm population, nearly 40 percent sought off-farm employment for the full year. The county experienced dramatic population growth between 1940 and 1950 (+61%), and from 25 to 40 percent growth per decade until the eighties. From 1980 to 1990 the percentage of growth slowed to 10.5%, but the actual numbers of new families coming into the county continue to have a significant effect on pressures to develop rural lands for residential use. This increase in population in rural areas has created or increased conflicts between rural living and agriculture.

With the decline in full-time agriculture, there has been an increase in part-time agriculture. The significance of part-time farming was recognized in a 1958 Bureau of Reclamation report

regarding the Talent Irrigation Project. That report addressed the repayment of bonded indebtedness by water users within the irrigation district. "Income earned from off-farm employment will remain a very important part of the repayment ability. Approximately two-thirds of the water users will need some income other than from the farm." This continues to hold true in Jackson County.

Economic Importance of Agriculture: Agriculture is a significant part of the county's economy. According to the "1990 Jackson County Estimated Gross Value of Agricultural Production", the estimated value of gross sales of farm products in Jackson County in 1990 was $71,195,000, a 40% increase over gross sales in 1979 of $51,022,818. The Agricultural Economics Department of Oregon State University has calculated that for each dollar of agricultural sales, a $2.50-$2.75 total effect is felt on a county's economy. Using the 2.50 multiplier effect, we can estimate that the total economic impact of 1990 Jackson County agricultural sales was approximately $177,987,500. This estimated total economic impact represents money spent on products and services directly related to agriculture and money spent by agricultural wage earners in other sectors of the economy.

In spite of an estimated 40% increase in farm sales in just over a decade, growth in agricultural income has fallen behind the growth of total income in Jackson County. According to calculations using personal income data from the U.S. Census Regional Economic Information system, the importance of agricultural income and wages in the total Jackson County economy has decreased by half from 1971 to 1990.

The decade from 1980 to 1990 had a cumulative inflation rate of 25.7%, as calculated from annual rates listed in the Consumer Price Index. That means that a minimum 25.7% increase in gross agricultural sales was necessary just to keep up with inflation. Profitability has also been affected by changing prices. While the index of prices paid by farmers increased by 5.6% in the year 1989-90, the index of prices paid to farmers decreased 2.7%.

Predominant Farm Uses in Jackson County: Full-time agricultural production and employment are limited in the county. The major farm crops and farm uses are described below and compared in Table II. Hobby farming and small scale agriculture provide opportunities for agricultural diversity and are particularly appropriate for specialty crops and specialty or exotic livestock.

The median size range for farms that annually gross more than $10,000 dollars is from 100 to 139 acres, and the median gross sales income is $25,000 to $40,000. These farms include about 48 per cent of the land in farms in Jackson County (Tables 2 and 16, 1987 Census of Agriculture), leaving about 52% of land in farms either in small scale agriculture or unmanaged. Farms with gross incomes less than $10,000 only account for 8 percent of the county's gross annual farm receipts. These figures strongly support the need to preserve farm land in large blocks in order to preserve and maintain those farms that contribute in a substantial way to the area's existing agricultural economy. However, in areas where parcelization and/or residential development has already occurred, small scale agriculture is often the only way to keep land in productive farm use. Encouraging a variety of types of agriculture in the county provides a greater possibility of innovation and resiliency in the agricultural economy.

Important Aspects of Agriculture in Jackson County:

1) Orchard Crops: Pears are the most important single farm crop in Jackson County. Gross farm income from pears in 1990 was $38,353,000, over half of total farm income. Overall, orchard crops produced $40,682,000, providing 56% more gross income in 1990 than the $25,999,418 reported in 1979. Future economic stability and health of the orchard industry depends on the cost and availability of energy for frost protection and transportation and water for irrigation and frost protection.

   A significant number of established orchards are old and their productivity is declining. Some of these older and declining orchards are found on clay soils which are predominantly Class III and IV. Orchardists are removing older, unproductive orchard stock and replanting the same lands at a higher density. Cover crops are being planted in orchards to make it possible to use tractors and spray equipment in the orchards, even when the soil is wet.

2) Vegetables, Seed, Specialty and Nursery Crops: In 1990 vegetable and nursery crops, such as sweet corn, tomatoes, onions, berries, and greenhouse products were grown principally on 350 acres and generated an estimated $2,271,000 dollars in gross farm income. While the acreage committed to such crops is small, the income yield per acre is the highest of any crop category; an estimated $6,488 per acre in 1990. Seed and specialty crops were produced on an additional 520 acres, with a gross value of $836,000.

3) Forage Crops: Forage crops are produced throughout the county on farms which have one or more of the following features: irrigated bottom or valley terrace land, gently sloped hillsides with suitable soils in terms of drainage, depth and fertility, and mountain meadow or plateau land with irrigation. Most forage crop production occurs in conjunction with other farm uses such as livestock, seed crops or dairy. The estimated gross value of forage crops was $4,591,000 in 1990, up 15% from the estimated amount of $3,980,000 in 1979. In that same time period the estimated total acreage committed to forage crops was reduced by 8.5%, from 26,900 acres in 1979 to 24,600 acres in 1990.

4) Cereal Crops: Cereal crops, such as wheat, barley and oats, are produced on Class I through IV soils. Gross value of cereal crops decreased by 26% from 1979 to 1990, from $866,000 to $649,000. The potential for future expansion of cereal crop production may be limited because of a lack of water and affordable large parcels of land.

5) Dairy Industry: Although production by the dairy industry increased about 25 percent between 1978 and 1979, in the last decade the gross value of dairy products has declined by approximately 40%. In 1979 the estimated gross value was $4,910,00; in 1990 it was only $2,938,000. Available data indicates 16 registered dairies in the county in 1992. Among the reasons for the decline are health and sanitary regulations that have increased the necessary investment for facilities and the need for potable water to the point that part-time and small dairy operations are not viable. Only high producing dairies with adequate facilities can continue to operate profitably. Prior to 1986 production quotas were set by a State Marketing Order. Currently there are no legislated restrictions on production. However, a Federal Marketing Order establishes prices (based on prices received in Minnesota and Wisconsin) for each of the following use classifications:

Class 1 - fluid milk (highest classification)
Class 2 - soft yogurt, cottage cheese, etc.
Class 3 - butter, powdered milk, cheese

The majority of dairies in Oregon produce for Class 3.

TABLE I

FARM CROPS AND USES IN JACKSON COUNTY 1979

USE	ACRES*	FARM SALES**	PREDOMINANT FARM LOCATION
Tree Fruit & Nuts	10,808	$25,999,418	Bear Creek Valley & middle Rogue Valley
Truck & Specialty Crops	950	499,400	Class I & II soil areas in Bear Creek and Applegate Valleys
Forage Crops	26,900	3,980,000	Applegate & Bear Creek Valleys, Sams Valley, Eagle Point area
Cereals	4,000	866,000	North end Bear Creek Valley, Eagle Point area
Seed & Specialty Crops	935	665,000	North end Bear Creek Valley
Farm & Forestry	N/A	1,512,000	N/A
Dairy	N/A	4,910,000	Applegate & Bear Creek Valleys, & Sams Valley
Beef	N/A	7,727,000	Throughout the county
Sheep and Wool	N/A	253,000	N/A
Swine	N/A	141,000	N/A
Misc. Livestock	N/A	655,000	N/A
Poultry	300	3,815,000	Eagle Point and Central Point Areas & Applegate Valley
TOTAL:	N/A	$51,022,818	

Source: Agricultural Extension Service

*Some acreage figures are based on 1977 data.
**Estimated value of documented sales over $50.00.

TABLE II

FARM CROPS AND USES IN JACKSON COUNTY 1990

FARM USE	ACRES	FARM SALES 1979-1990	CHANGE IN GROSS VALUE*
Tree Fruit & Nuts	9,083	$40,682,000	(+) 56%
Vegetables and Nursery Crops	350	2,271,000	(+) 355%
Forage Crops	24,600	4,581,000	(+) 15%
Cereals	3,600	649,000	(-) 25%
Seed & Specialty Crops	520	836,000	(+) 26%
Farm & Forestry	N/A	4,990,000	(+) 230%
Dairy	N/A	2,938,000	(-) 40%
Beef	N/A	8,854,000	(+) 14.6%
Sheep and Wool	N/A	227,000	(-) 10%
Swine	N/A	413,000	(+) 192%
Misc. Livestock	N/A	1,910,000	(+) 192%
Poultry	300	2,844,000	(-) 25%
TOTAL:	N/A	$71,195,000	(+) 40%

*Gross sales figures are not adjusted for inflation which is estimated to be 25.7% for the study period.

SOURCE: Agricultural Extension Service, "1990 Jackson County Estimated Gross Value of Agricultural Production".

6) Cattle Production: Beef cattle production is second only to pear production in gross value in Jackson County. However, the 14.6% increase in estimated gross value of beef cattle from 1979 to 1990 (from $7,727,000 to $8,854,000) has not kept up with inflation.

Commercial cattle production is characterized by a combination of three types of farm land and practices. A successful operation usually comprises 1) irrigated land used for production of forage crops and winter feeding areas, 2) spring grazing land on marginally productive soils in the uplands below 3600' altitude, and 3) summer grazing above approximately 3600' in Forest Resource areas. A significant part of the land available for summer grazing is federal land leased by cattle ranchers.

The soils in spring and summer grazing areas are predominantly Class V, or poorer. They are nonirrigated except where narrow strips of land are adjacent to streams. An estimated 200,000 acres of privately owned dryland foothill rangeland in the county are utilized for early spring livestock grazing. After the annual forage plants dry up, the livestock are moved to the approximately 36,500 acres of irrigated pastures in the county, or to land available for grazing on BLM lands (343,915 acres), USFS lands (52,681 acres) or private forest lands. Otherwise unproductive lands adjacent to more intensive livestock areas may be an important part of a viable livestock operation, providing seasonal grazing and winter feeding areas.

The livestock industry generally makes productive use of marginal lands in the county which do not have valuable forest or other agricultural uses. In addition, ranching operations increase the productive use of good forest land by enabling the dual use of the land.

7) Other Livestock Operations: In addition to the production of beef, livestock production in Jackson County includes sheep and wool production, swine and miscellaneous livestock, such as rabbits, goats and horses.

The estimated value of sheep and wool production declined by 10% between 1979 and 1990, but the Extension Service expects prices in the sheep industry to increase in 1992. Poultry production has declined approximately 25% in that same period. Estimated sales values for swine and miscellaneous livestock have increased significantly - up 192% for both categories. Overall livestock sales for products other than beef and dairy products have grown about 11%.

There are an estimated 10,000 horses in Jackson County that are used for recreational purposes and for commercial purposes including breeding, showing and sales. Sheep and rabbits are usually raised in the county as part-time farming enterprises, as 4-H or FFA projects, or in conjunction with other farming enterprises. In 1991 there were an estimated 4,400 ewes producing wool and lambs. Swine operations may be single enterprises or in conjunction with other farm enterprises. There were an estimated 250 sows producing 2 litters of 10 pigs each per year in 1991. Other varieties of livestock, including llamas, miniature horses, donkeys, buffalo, exotic deer, emus, pot belly pigs and ostriches, have been introduced on a small scale, and interest in such exotic species is expected to increase. Raising miscellaneous livestock is not limited to good agricultural soils areas.

8) Poultry: Poultry enterprises consist mainly of chicken egg production, with 267,000 commercial laying hens producing in the county in 1991. The raising of farm chickens and turkeys has been on a steady decline in the county for years. The change from 1979 to 1990 was a 25% decline, from $3,815,000 to $2,844,000. While that is a significant decline, poultry production continues to contribute about 4% of the county's gross farm sales.

Available Information on Soils: When this Plan was updated in 1979, the U.S. Soil Conservation Service, Agricultural Soil Capability Classes, were mapped on approximately 593,000 acres of land in the county, or approximately 33 percent of the land area. The area not mapped at that time consisted predominantly of areas above 2,400 feet in elevation. In 1992 SCS soils data is

available for all public and private lands in Jackson County except U.S. Forest Service lands, and the Forest Service has soils inventory data for those lands. Soils inventory data is useful both for mapping agricultural lands and for determining the suitability of land for farm use on a case-by-case basis.

Agricultural Diversity:

Soils data, irrigation mapping, and other mapped information have enabled the County to designate suitable areas to be preserved for agricultural use. However, because of the diversity of agricultural types and the different field sizes needed for different crops and farm products, Jackson County has not characterized different farm zones based on parcel sizes. Instead, zoning designations have been based on general suitability for farm use. The appropriateness of a farm parcel for a particular use is determined case-by-case, based on the parcel sizes and income data included in the Oregon State University document Profiles of Commercial Agriculture for Southern Oregon.

References: The first three references below are the primary documents on which the 1978 and 1982 Agricultural Element of the Comprehensive Plan were based. Items 5, 6, 7 and 8 are documents used for updating the Plan in 1992.

1) Phase One Report of the Jackson County Agricultural Land Use Committee, September 1, 1977.

2) Phase Two Report of the Jackson County Agricultural Land Use Committee, May 23, 1978.

3) Agricultural Land Identification Study, Jackson County Department of Planning and Development, a series of land use, soils, and irrigation maps.

4) Selected references (a list of these references is contained within the agricultural lands background document).

5) Profiles of Commercial Agriculture for Southern Oregon, District IV, Jackson County, Oregon State University Extension Service, Department of Geography, Special Report #698, 1983.

6) 1990 Jackson County Estimated Gross Value of Agricultural Production, Estimated Value of Agricultural Production and Informative Statistics for Jackson County, Jackson County office of the Oregon State University Extension Service.

7) Business and Employment Outlook, 1992, Economic Structure and Analysis, District 8, Jackson and Josephine County, Volume I, Oregon Employment Division.

8) 1987 Census of Agriculture, Special Tabulations, U.S. Department of Agriculture.

FINDINGS, POLICIES, AND IMPLEMENTATION STRATEGIES:

1

FINDING:

Agriculture in Jackson County consists of tree fruits, livestock and related forage crops, grains and seed products, berries and vegetables. Exclusive Farm Use zoning has been developed to recognize the need to protect all types of farm uses and provide for the variety of management and farming practices that are utilized.

POLICY: LAND SHALL BE DESIGNATED EXCLUSIVE FARM USE BASED ON THE FOLLOWING CRITERIA:

A) AGRICULTURAL LAND DOES NOT INCLUDE LAND WITHIN ACKNOWLEDGED URBAN GROWTH BOUNDARIES OR LAND WITHIN AREAS ACKNOWLEDGED AS EXCEPTIONS TO STATEWIDE GOALS 3 OR 4.

B) AGRICULTURAL LAND COMPRISES:

i) LAND CLASSIFIED BY THE U.S. SOIL CONSERVATION SERVICE (SCS) AS PREDOMINANTLY CLASS I-IV SOILS.

ii) LAND IN OTHER SOIL CLASSES THAT IS SUITABLE FOR FARM USE AS DEFINED IN ORS 215.203(2)(A), TAKING INTO CONSIDERATION SOIL FERTILITY; SUITABILITY FOR GRAZING; CLIMATIC CONDITIONS; EXISTING AND FUTURE AVAILABILITY OF WATER FOR FARM IRRIGATION PURPOSES; EXISTING LAND USE PATTERNS; TECHNOLOGICAL AND ENERGY INPUTS REQUIRED; AND ACCEPTED FARM PRACTICES.

iii) LAND THAT IS IN CAPABILITY CLASSES OTHER THAN CLASSES I-IV THAT IS ADJACENT TO OR INTERMINGLED WITH LANDS IN CAPABILITY CLASSES I-IV WITHIN A FARM UNIT SHALL BE INVENTORIED AS AGRICULTURAL LANDS EVEN THOUGH THIS LAND MAY NOT BE CROPPED OR GRAZED.

iv) LAND THAT IS NECESSARY TO PERMIT FARM PRACTICES TO BE UNDERTAKEN ON ADJACENT OR NEARBY LANDS; BUT WHICH WOULD NOT OTHERWISE QUALIFY FOR THE EXCLUSIVE FARM USE DISTRICT, SHALL BE ZONED EXCLUSIVE FARM USE.

IMPLEMENTATION STRATEGIES:

This policy has been implemented through the creation of the Exclusive Farm Use zoning district and map designation which set forth standards for development and division of

agricultural land consistent with Oregon Revised Statutes 215, and Statewide Planning Goal 3. Land that is not zoned Exclusive Farm Use may qualify for farm assessment on the basis of use and income. Unzoned farmland must conform with applicable sections of ORS 308.370 to 308.406.

2

FINDING:

Some agricultural land has special characteristics that make it especially important for the continuation of the existing agricultural economy. Oregon Administrative Rules Chapter 660, Division 33 defines High Value Farm Land and specifies stricter standards for some types of development on land that qualifies as High Value Farm Land.

POLICY: LAND SHALL BE DESIGNATED HIGH VALUE FARM LAND WHEN A TRACT IS COMPOSED PREDOMINANTLY OF SOILS THAT ARE:

A) AND CLASSIFIED PRIME, UNIQUE, CLASS I OR CLASS II; OR

B) NOT IRRIGATED AND CLASSIFIED PRIME, UNIQUE, CLASS I OR CLASS II; OR

C) GROWING SPECIFIED PERENNIALS GROWN FOR MARKETING OR RESEARCH PURPOSES INCLUDING BUT NOT LIMITED TO NURSERY STOCK, BERRIES, FRUITS, NUTS, CHRISTMAS TREES OR VINEYARDS, BUT NOT INCLUDING SEED CROPS, HAY, PASTURE OR ALFALFA. A FINDING THAT A TRACT IS GROWING SPECIFIED PERENNIALS SHALL BE BASED UPON THE MOST RECENT AERIAL PHOTOGRAPH OF THE SOIL CONSERVATION SERVICE TAKEN BEFORE NOVEMBER 4, 1993.

IMPLEMENTATION STRATEGIES:

A) This policy has been implemented through noting in LDO Chapter 218, Exclusive Farm Use District, those uses that are subject to special standards when they are proposed to be located on High Value Farm Land, and requiring a determination whether a tract qualifies as High Value Farm Land when reviewing a proposal for any such use.

B) High Value Farm Land will be mapped as a separate zoning district, as an Area of Special Concern, or some other appropriate zoning map designation, in the next periodic review after December 31, 1994.

C) At the time that High Value Farm Land is mapped, soils that are specially suited to orchard or vineyard development shall be considered for inclusion in the High Value map designation, even if they would not otherwise qualify as High Value Farm Land.

3

FINDING:

Incompatible land uses, such as residential developments, create problems for the farmer. The farmer may be subjected to vandalism theft, harassment, and increased liability because of such activities. Proper zoning assists in preventing incompatible land uses from locating adjacent to farmland. Zoning alone does not solve the problems caused by existing urban and suburban development adjacent to agricultural land. In many of these conflicting situations there is not enough land area to create sufficient buffering to protect the farmer.

POLICY: CONFLICTS BETWEEN AGRICULTURAL AND NONAGRICULTURAL LAND USES SHALL BE MINIMIZED BY THE FOLLOWING:

A) THE COUNTY, IN COOPERATION WITH THE CITIES, SHALL DEVELOP AND IMPLEMENT MINIMUM SETBACKS TO BUFFER FARM USES FROM NONAGRICULTURAL LAND USES ON THE PERIPHERY OF URBAN GROWTH BOUNDARIES ABUTTING AGRICULTURAL LAND. ADDITIONAL BUFFERING TECHNIQUES SUCH AS FENCING AND LANDSCAPING SHALL BE ENCOURAGED ON THE NONFARM LAND.

B) THE COUNTY SHALL ZONE RESIDENTIAL LANDS THAT ARE DEVELOPED WITHIN AGRICULTURAL AREAS TO ALLOW MINIMUM PARCEL SIZES NO SMALLER THAN 2.5 ACRES IN SIZE. A 2.5-ACRE MINIMUM MAY BE ESTABLISHED ONLY WHERE THE EXISTING AVERAGE LOT OR PARCEL SIZE IS LESS THAN OR EQUAL TO 2.5 ACRES AND IT CAN BE CLEARLY ESTABLISHED THAT REQUIREMENTS FOR BUFFERING RESIDENTIAL USES FROM FARM LANDS CAN BE MET ON THE RESIDENTIAL PROPERTY.

C) LANDS THAT ARE DEVELOPED AS RESIDENTIAL USES WITHIN AGRICULTURAL AREAS SHALL NOT BE ALLOWED TO INCREASE IN AREA, AND "FILL-IN" DEVELOPMENT OF SUCH LANDS SHALL BE SET BACK A MINIMUM OF 200 FEET FROM LAND ZONED EXCLUSIVE FARM USE, EXCEPT AS PROVIDED IN THE LAND DEVELOPMENT ORDINANCE.

IMPLEMENTATION STRATEGY:

A) The Jackson County Land Development Ordinances and other applicable ordinances shall conform with the above policy. These ordinances should

prevent the expansion of pockets of rural and suburban development that lie within agricultural uses.

B) Where urban and agricultural lands lie adjacent to each other, any additional urban development will be managed by requiring that: development be set back from agricultural land; adequate security fencing be constructed; or, special site design or easements be utilized.

C) Amendments to the location of city urban growth boundaries shall either follow roads, streams, or other natural or significant man-made boundaries which create a physical separation between agricultural and nonagricultural lands or shall include buffering requirements to protect farm operations from conflicts with urban uses.

D) When Urban Growth Boundaries or Growth Management Agreements are expanded or otherwise revised, growth into agricultural areas shall be avoided. If expansion into an agricultural area becomes unavoidable, it shall be directed to that available land which is the least productive in terms of existing farm uses or agricultural capability. Requirements for minimum setbacks and buffering by urban land users shall be included in any such agreement.

4

FINDING:

Jackson County recognizes that nonfarm uses may be permitted in Exclusive Farm Use zoning districts. It is also understood that those nonagricultural uses can cause serious agricultural impacts.

POLICY: THE PRIORITY USE OF FARM LAND SHALL BE FARM USES.

IMPLEMENTATION STRATEGY:

Land use actions subject to review as conditional uses under the Jackson County Land Development Ordinance shall comply with this policy.

CITIZEN INVOLVEMENT

GOAL: TO PROVIDE OPPORTUNITIES FOR CITIZENS TO BE INVOLVED IN ALL PHASES OF THE JACKSON COUNTY PLANNING PROCESS.

INTRODUCTION/BACKGROUND:

Prior to enactment of the Oregon Statewide Planning Goals, Jackson County had formal and organized citizen involvement groups for local geographical areas. The Citizen Advisory Committee (CAC) program began in 1970, initially to provide feedback for zoning actions in the upper Rogue area. Eleven planning areas were subsequently organized throughout the county in 1971; the boundaries of each roughly correspond to local school district boundaries. In 1977 another CAC was formed in the White City area, bringing the total to 12.

The Committee for Citizen Involvement (CCI), representing all county CACs and interested city CACs, developed a Citizen Involvement Program which was added to the county's Comprehensive Plan in 1976. This program complies with the Statewide Goal for Citizen Involvement and serves to define the organization and administration of the total citizen involvement process.

Periodically, the Board of Commissioners creates special countywide advisory committees to study and recommend on specific planning issues. Members of such committees represent segments of the community which are affected by the particular issue. They study and debate planning issues to express an informed public response to new policy ideas and problems.

Jackson County residents concerned with land use issues can participate in CACs and countywide advisory groups, as well as other organized interest groups and associations. While the CACs and advisory committees are a focal point for distribution of planning information and for receipt of advisory input, other interested associations also benefit from communication efforts. Timely, informed and effective advisory input is a goal which poses recurrent questions for active citizens, the CACs, the CCI, planning officials and staff. However, frustrated efforts in specific issues underscore the continual gaps in community information and perspectives about the basic function, service, and decision-making process involved in land use planning.

The function of the citizenry is to express their position based on local knowledge and opinion. The Board of Commissioners, Planning Commission, and Hearings Council will, by necessity, balance the citizen recommendation within the other technical and legal constraints that may exist.

In order to understand how the existing Citizen Involvement Program is intended to operate, the roles and responsibilities of the participants in the program are generally described below. These identified responsibilities should be used as a broad guide by the respective organizations in pursuing their committee or departmental activities.

It should be noted that the CCI and CACs are considered to be public bodies. As such, they must comply with open meeting law and shall provide notice in advance of any regular or special meeting. If a permanent time for regular meetings is established, the committees may not need to give notice for those meetings. Special meetings of the committees, by law, require

appropriate special notice. The committees must adopt and follow uniform bylaws and operating procedures, which include at a minimum: meeting organization and responsibilities; election and tenure of board members and officers; conduct of business, and procedures for amendments to bylaws. In addition, these citizen's committees should comply with the Program for Citizen Involvement, adopted by the Jackson County Board of Commissioners.

The Citizen Advisory Committees shall strive to elect a board of directors which is geographically and philosophically representative of the residents of the planning area. Board members and chairpersons shall be residents of their CAC area.

Committee for Citizen Involvement:

The Committee for Citizen Involvement (CCI) was established for the purpose of assisting the Board of County Commissioners and the Planning Commission with the development, implementation, and evaluation of the program and process for citizen involvement in Jackson County. Membership on the CCI is composed of one resident representative, nominated from each of the Citizen Advisory Committees, and appointed by the Board of Commissioners. The incorporated municipalities may also select one representative. The broad objectives of the committee are as follows:

- To develop and to recommend for adoption a program to ensure citizens the opportunity to participate in matters related to land use planning.
- To assist in the implementation of the Citizen Involvement Program.
- To assist in formulating a recommendation for an annual budget relative to citizen involvement.
- To evaluate the success of the Citizen Involvement Program annually, and to recommend changes necessary for the improvement of its effectiveness.
- To investigate, evaluate, and submit appropriate recommendations in special areas of concern relative to citizen participation.
- To develop educational programs designed to increase the level of citizens' involvement in the area of land use planning.
- To provide coordination between the various Citizen Advisory Committees.

Citizen Advisory Committees:

The primary objective of the Citizen Advisory Committee (CAC) is to advise and provide information to the Board of Commissioners, Planning Commission, and Hearings Council, relative to specific current land use planning and long-range comprehensive planning issues. Membership is open to all persons of voting age who reside in and/or own property within the CAC planning areas. The following generally describes procedures for maintaining communication and coordination between the areawide CACs and the various County offices and committees:

- The Citizens Advisory Committee shall notify the Department of Planning and Development of the time, place, and agenda of any meetings.

- Each committee may employ additional methods of publicizing meetings and generating interest, such as posting notices of meetings in public places, forming telephone committees or any other method determined to be an effective means of involving the citizenry.

- The committee chairman shall be responsible to see that a formal written report, based on the outcome of the meeting, is forwarded to the department within sufficient time to be presented at the public hearing of the application. The report should reflect the community position, including all concerns and conditions which apply to each specific action. It may be in the form of a recommendation for approval or denial, stating the majority and minority position of the citizens. Positions of the interested citizens of a planning area normally are made without technical and legal constraints which must be considered by the Board of Commissioners, Planning Commission, and Hearings Council.

- Reports by the committees will be presented as formal testimony to the Board of Commissioners, Planning Commission, and Hearings Council by the planning staff, or a designated Citizen Advisory Committee representative. The committee chairman or a representative may be present at the hearing for discussion.

- The CAC chairman shall read the recommendations and decisions of the Planning Commission, Hearings Council, and the Board of Commissioners to their Committee.

The Citizen Involvement Staff:

The Jackson County Department of Planning and Development provides staff assistance to the Committee for Citizen Involvement, and coordinates the meetings as well as the day-to-day business of the committee. Additionally, the department is responsible for providing adequate technical and financial assistance to the Citizen Involvement Program as a whole. Generally, the responsibility of the citizen involvement staff is as follows:

- The citizen involvement staff shall assist the Committee for Citizen Involvement in formulating an annual budget recommendation for citizen involvement each year. The budget shall be a part of the Planning Division's budget of the Department of Planning and Development, and shall be administered by the Planning Director.

- The citizen involvement staff for the Department of Planning and Development will be responsible to see that all information, data, and reports are expedited to and from the various Citizen Advisory Committees.

- Copies of individual applications requiring public hearings before the Board of Commissioners, Planning Commission, and Hearings Council regarding land use decisions, together with necessary information and maps, will be mailed to the Citizen Advisory Committee Board. A public hearing will be scheduled no sooner than three calendar weeks after notice is mailed to the committee chairman.

- After receiving notification of the time and place of a Citizen Advisory Committee meeting, the citizen involvement staff will, within budgetary limitations, expedite notices to committee members of the affected area, as well as to the news media (newspapers of general circulation and radio and television stations). Meeting notices will also be posted within the office of the Department of Planning and Development.

- The Department will provide additional available information to the Citizens Advisory Committee prior to the meeting.

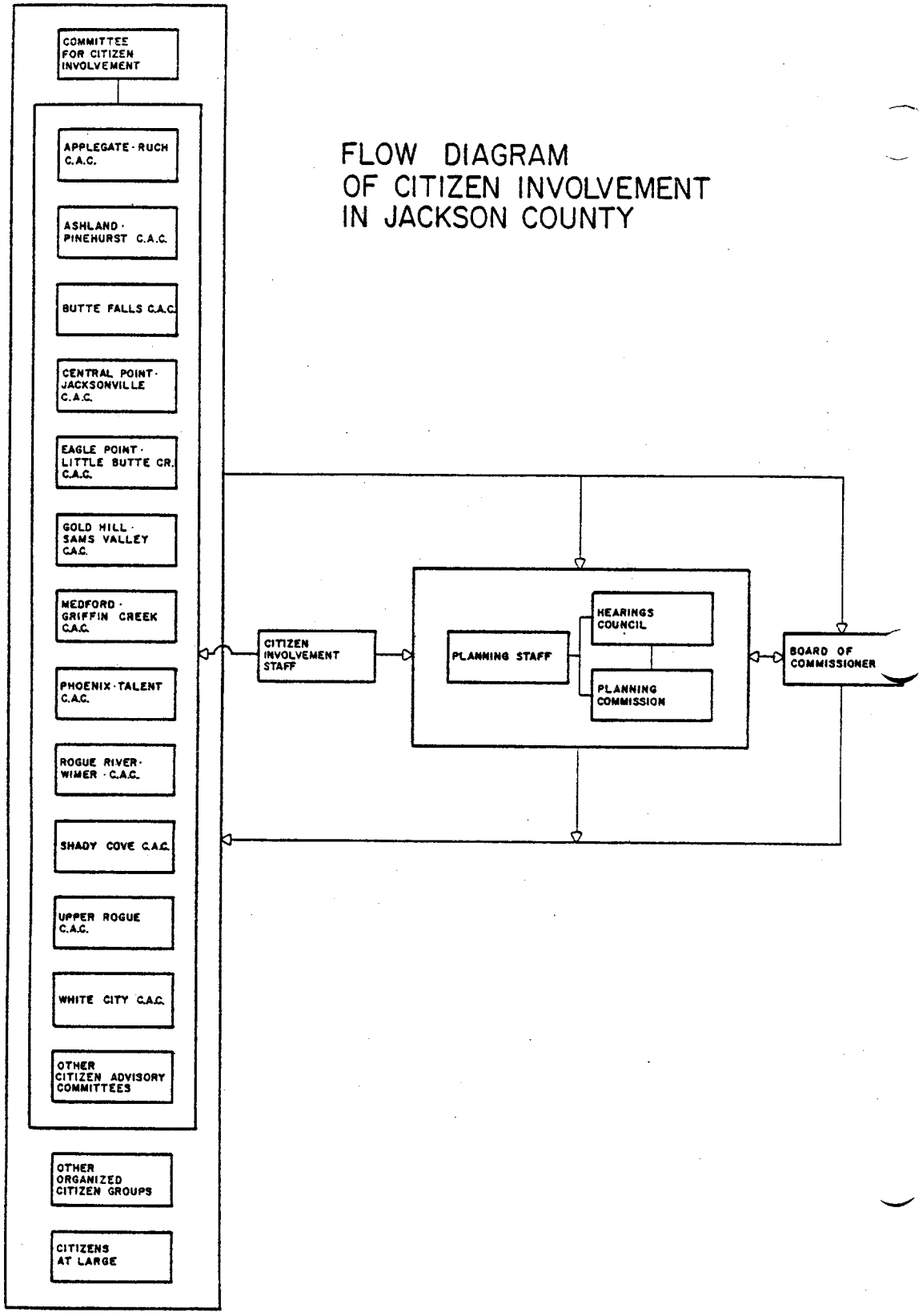
- On matters of comprehensive plan amendments, and/or countywide proposals, planning staff may make initial presentations to all Citizen Advisory Committee Boards of Directors prior to any public hearings before the Planning Commission.

- Information concerning countywide proposals will be provided to the Boards of Director's of the Citizen Advisory Committees. Notices of Boards of Director's meetings will be prepared and mailed by the planning staff. These meeting notices will be published in a newspaper of general circulation.

- To assure citizens of a response from the policymakers, final orders relative to land use issues, indicating the findings of fact and decisions of the Board of Commissioners, Planning Commission, and Hearings Council will be mailed by the planning staff to the Citizen Advisory Committee Chairman.

- The planning staff will participate when practical in the development, implementation, and coordination of the educational programs.

As described above, citizens can enter the planning process through a variety of forums, which were established for their participation. The County will continue to refine its citizen involvement program as the need for changes becomes apparent to citizens, the CCI, officials and planning staff. General policies relating to the refinement of the Citizen Involvement Program follow. These changes are proposed in order to help citizens to better understand their role in the planning process, and their influence upon land use decisions.



FLOW DIAGRAM
OF CITIZEN INVOLVEMENT
IN JACKSON COUNTY

FINDINGS, POLICIES AND IMPLEMENTATION STRATEGIES:

1

FINDING:

Like other processes, the Jackson County Citizen Involvement Program is dynamic and therefore subject to revision. Changes in the program should be based upon local citizens' needs or desires, and the importance of obtaining relevant, informed citizen comment for consideration by County planning officials. In order to establish the opportunities for, and basic constraints on individual or collective citizen recommendations, the Citizen Involvement Program needs clearly defined responsibilities for all participants, including decision makers and staff.

Increased opportunities for public involvement in the land use planning and decision making process carry a burden of responsibilities for citizen committees, to increase the level of participation within their planning area, and to become more familiar with planning issues and procedures. County decision-making bodies should consider how effectively these responsibilities are being met when evaluating citizen comment on a proposed action.

The Citizen Involvement Program is needed to learn which options for change have public support, to clarify conflicting preferences among competing interests, and to identify special needs of various groups and areas within the county. The citizen involvement staff have an important role in communicating this information between planning officials and the public.

Finally, planning officials have a responsibility to provide sufficient notice of when final actions may be taken on land use matters to afford the public an opportunity to comment.

POLICY: JACKSON COUNTY SHALL SUPPORT AND CONTINUALLY STRIVE TO ACHIEVE AN INFORMED AND INVOLVED CITIZENRY.

IMPLEMENTATION STRATEGIES:

A) Citizens should know how and when they have an opportunity to participate and should be informed of their role, responsibilities and limitations.

   i) The Committee for Citizen Involvement shall assist the Board of Commissioners, Planning Commission, and Hearings Council with the development, implementation and evaluation of the Citizen Involvement Program as it relates to comprehensive and/or current planning issues.

   ii) The Citizen Advisory Committees shall establish uniform bylaws to ensure that individual members always have a fair and equal opportunity to participate. The Committee for Citizen Involvement shall review bylaws to ensure uniformity.

   iii) The Committee for Citizen Involvement should sponsor projects to inform county residents of the importance of land use planning to their lives and inspire their commitment to sustained involvement.

iv) The Committee for Citizen Involvement and Citizen Advisory Committees shall actively work to fulfill the broad objectives given them by the Board of County Commissioners and the Statewide Planning Goals and Guidelines.

v) The vote and voice of the Citizen Advisory Committees should be given serious consideration by the Planning Commission, Hearings Council, and the Board of County Commissioners. Meeting attendance levels, uniformity and adequacy of bylaws, clarity of recommendation and member attendance at training and orientation sessions should be considered in determining the degree of emphasis placed on Citizen Advisory Committees' comments by County land use decision bodies.

vi) The Committee for Citizen Involvement and Citizen Advisory Committees' Boards should be provided with agendas and other pertinent available information regarding meetings of the Board of Commissioners, Planning Commission and Hearings Council, which will affect land use within their planning areas. The Committee for Citizen Involvement and Citizen Advisory Committees' Boards should then be responsible for keeping their constituent Citizen Advisory Committee members informed of land use actions taken or under review by the County.

vii) The Committee for Citizen Involvement and Citizen Advisory Committees' Boards should work in cooperation with the Citizen Involvement Coordinator to develop new incentives or methods to encourage greater attendance at Citizen Advisory Committee meetings.

viii) The effectiveness of the Committee for Citizen Involvement, in carrying out its responsibilities as contained in the Board order, should be formally evaluated each year by the Citizen Advisory Committees. The Committee for Citizen Involvement should then prepare a report for the Board of Commissioners and the Citizen Advisory Committees, which would outline any needed changes in procedure or policy that could better enable the committee to fulfill its mission.

B) The Jackson County Planning Department shall provide technical and financial assistance to the Citizen Involvement Program, to the extent allocated in the budgetary process. Staff assistance to the Committee for Citizen Involvement and Citizen Advisory Committees generally consists of the following activities:

i) Work with the Committee for Citizen Involvement to maintain an effective and informative citizen involvement process;

ii) Coordinate and publicize the activities of the Citizen Advisory Committees;

iii) See that all information, data and reports are communicated to and from the citizen committees and County land use decision-making bodies; and,

iv) Ensure that citizens receive direction, encouragement and understandable technical information about issues and alternative solutions; and, provide sufficient materials and time to complete their considerations.

C) Public notice of meetings of the Board of Commissioners, at which final action may be taken on land use matters, will be given in accordance with state law in advance of the meeting to afford citizens the opportunity to comment on the proposed action. Notice of the meeting and the agenda shall be posted or published in places generally accessible to the public residing in the affected planning area.

2

FINDING:

During the life of this comprehensive plan, the need may arise to create new Citizen Advisory Committees in an effort to refine and improve the quantity and quality of citizen input.

POLICY: PROVISION SHALL BE MADE FOR THE FORMATION OF NEW, OR CONSOLIDATION OF EXISTING, CITIZEN ADVISORY COMMITTEE PLANNING AREAS.

IMPLEMENTATION STRATEGIES:

A) Formation or consolidation of CACs should be based upon a consideration of the following:

i) Existing CAC area covers an area which is too large, diverse or populated to adequately represent the land use planning needs of all citizens in that area.

ii) A new or consolidated CAC would generate and sustain greater local participation because the issues and discussion would be more pertinent on a smaller scale.

iii) Current planning application work load is sufficiently heavy to preempt discussion on longer term land use planning goals of area.

iv) Widespread support by local residents for formation or consolidation of CACs.

v) Unique physical or social conditions exist in the proposed new CAC area.

B) The Jackson County Committee for Citizen Involvement (CCI), comprising representatives from existing CACs, will evaluate and make recommendations to the Board of Commissioners and Planning Commission concerning formation or consolidation of new CAC planning areas according to procedures recommended by the Committee for Citizen Involvement on June 27, 1979. An

unbiased chairperson shall preside over the Committee for Citizen Involvement subcommittee which investigates the merits of formation and consolidation of Citizen Advisory Committees.

3

FINDING:

The Jackson County Planning Department needs to continue to develop and implement public educational programs in order to provide important informational links between county residents and planning officials. Individual citizens will consider their involvement to be worthwhile if the significance of land use decisions and the Comprehensive Plan can be made clear. Informational efforts need to be increased so that county residents know why their participation is important. As such, the Citizen Involvement Program should provide a continuous stream of educational opportunities so that citizens can help make choices which affect themselves and others in the community. Citizens who are extensively involved in the citizen committee structure should be given the opportunity to attend training and orientation sessions in order to increase their knowledge of land use planning issues. Increasingly, more emphasis is being placed on environmental concerns and land use planning related matters in the school systems. This increased awareness will produce informed citizens who are sensitive to land use and environmental issues. In the long range, this increased awareness should improve the quality of citizen input.

POLICY: EFFORTS SHALL BE MADE TO PROVIDE LAND USE RELATED EDUCATIONAL OPPORTUNITIES FOR CITIZENS OF ALL AGE GROUPS.

IMPLEMENTATION STRATEGIES:

A) The planning staff should seek to inform citizens of land use issues through the media, schools, and interested citizens' groups of all ages.

   i) Provide staff assistance to public and private schools for the purpose of information dispersion.

   ii) Support local media efforts to better inform citizens of land use related issues and solutions.

   iii) Provide staff assistance to special planning interest groups for the purpose of information dispersion.

B) The County planning staff should conduct training sessions for the Committee for Citizen Involvement, Citizen Advisory Committee Board members, and interested citizens in the use of the comprehensive plan related rules and ordinances, and in basic land use decision-making processes. CCI and CAC board attendance of these sessions should be considered in the evaluation of comments received on matters before the Board of Commissioners, Planning Commission and Hearings Council.

C) Utilize public television and public affairs programs to keep citizens aware of planning issues and decisions.

4

FINDING:

County residents need to know that their opinions and views can make a difference to decision makers. The citizen involvement program should develop more effective two-way communication between the public and decision-making bodies.

POLICY: THE BOARD OF COMMISSIONERS, PLANNING COMMISSION AND HEARINGS COUNCIL SHALL DEVELOP, ADOPT, AND CONTINUALLY STRIVE TO REFINE PROCEDURES FOR RESPONDING TO SPECIFIC CITIZEN COMMITTEE COMMENTS, AND FOR NOTIFYING ADVISORY BODIES OF THEIR FINAL ACTIONS OR RECOMMENDATIONS ON LAND USE RELATED MATTERS.

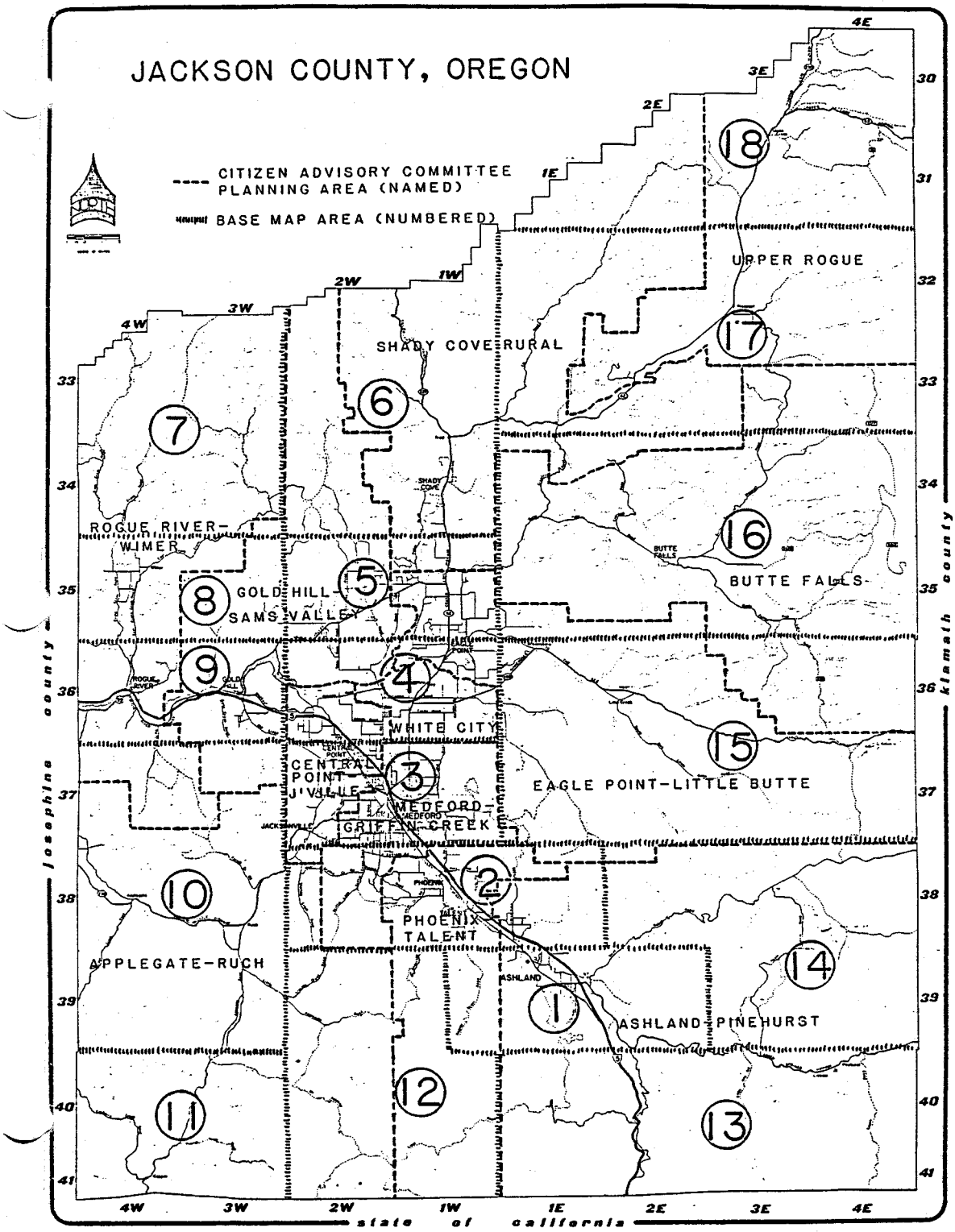
IMPLEMENTATION STRATEGIES:

A) The Board of Commissioners, Planning Commission, Hearings Council, and planning staff should respond to citizen comment through written responses and should keep a written record of reasons for their land use decisions. A procedure for official response to specific advisory inputs should be developed to satisfy citizens that their comments are considered, and to indicate problems or inadequacies of the advice received.

B) Minutes of the proceedings of the Board of Commissioners, Planning Commission and Hearings Council should be made available to the CCI and CAC board members which are pertinent to land use issues.

C) Written responses to citizen/committee comment on proposed land use decisions or final orders/findings of the Board of Commissioners, Planning Commission, and Hearings Council should be read and presented to the CCI and/or CACs by its chairperson.

D) Additional feedback methods should be devised for better communications between decision-making bodies, planning staff, and the Citizen Advisory Committees, as required.


JACKSON COUNTY, OREGON
CITIZEN ADVISORY COMMITTEE PLANNING AREA (NAMED)
BASE MAP AREA (NUMBERED)
UPPER ROGUE
SHADY COVE RURAL
ROGUE RIVER-WIMER
GOLD HILL-SAMS VALLEY
BUTTE FALLS-
WHITE CITY
CENTRAL POINT-JACKSONVILLE
MEDFORD-GRIFFIN CREEK
EAGLE POINT-LITTLE BUTTE
PHOENIX-TALENT
APPLEGATE-RUCH
ASHLAND-PINEHURST
josephine county
klamath county
state of california

ECONOMY

GOAL: TO IMPROVE AND DIVERSIFY THE ECONOMIC BASE OF JACKSON COUNTY IN BALANCE WITH AIR, WATER, LAND, AND HUMAN RESOURCES.

INTRODUCTION/BACKGROUND:

Jackson County was for many years dependent upon a strong lumber and wood products industry and agricultural industry for most of its employment. A variety of factors have changed this situation, making it important to strengthen other sectors of the economy and to create new basic employment opportunities.

An economy can be divided into two generalized categories: basic and nonbasic. The basic, or export sectors, produce and sell goods for consumption outside of the area, and thus bring new income into the local economy; nonbasic industries are service or residentiary industries, which produce and sell goods that simply circulate existing income within the area. Therefore, the basic sector provides the flow of money into the local economy which is used to purchase the nonbasic sectors' goods and services. A healthy economy includes a wide variety of basic industrial activities and a ratio of basic to nonbasic employment which falls within the range of one basic job for every two and one-half to three nonbasic jobs.

The traditional basic industries in Jackson County have been the lumber and wood products industry and the agricultural industry. These industries rely upon limited, and possibly diminishing, resources. In the case of agriculture, population growth and the resulting pressure for land and development, simple land speculation, along with less than ideal climatic conditions, make it impossible for agriculturists to operate as they did in the past. The timber industry reached its peak in years when little thought was given to managing the forests for long-term industry needs, a matter which is now of prime concern. Further, both industries have become increasingly mechanized with decreased manpower needs. Because of these factors, it is unlikely that either industry will expand to provide more jobs or capital for the local economy in any substantial manner.

The makeup of Jackson County's economy, as well as that of the nation, has been changing substantially in the past several decades. The populace has become more affluent and shifted the direction of their buying habits to consume more goods and services. This fact, coupled with the pace of in-migration to the region, and the emergence of Medford as a regional service center, has resulted in the wholesale and retail sector, and the service and miscellaneous sector growing extremely rapidly during the last decade. The combined average annual employment in these two sectors were 9,200 in 1968, and 18,700 in 1978. These were the fastest growing sectors of the local economy and together represented a 51 percent increase in employment. While this situation could be positive, in excess it makes the County economy extremely volatile. The following example illustrates this point. In 1974 the national economy was in the initial stages of a recession and, likewise, the national housing market slumped. In response, the local lumber and wood products firms laid off over 1,480 workers in December. This action triggered further lay-offs in other sectors, and resulted in total unemployment climbing to 7,820 or 16.6 percent of the labor force by January 1975. The retail sector, in an attempt to stimulate consumer purchases and reduce excessive inventories, had numerous "after Christmas sales."

The local trade and service sectors are, as stated earlier, dependent to an unknown degree upon the patronage of people living throughout southern Oregon and northern California. As such, it is relatively certain that the ratio of basic to nonbasic employment exceeds the one-to-three ratio within Jackson County. Those dollars brought into the local economy from people residing outside the area can be considered basic. Yet, that portion of the sector that can be considered basic does not lend strength and stability to the local economy as might be expected. This is due to the fact that the entire region is dependent upon the wood products industry for the majority of their basic employment, as is Jackson County. Therefore, the basic as well as nonbasic portions of the wholesale and retail sector, and the services sector, are closely tied to the health of the wood products industry.

Manufacturing adds to the economy by what is known as "value added by processing." This is especially true of agriculture, where it includes all activities by handlers such as packers, canners, freezers, and transporters. The additional activities of getting the local product out to a nonlocal market yield additional jobs. In 1974 agriculture contributed approximately $23,051,000 above and beyond the cash receipts of $28,503,700, for a total of $51,554,700.

Local manufacturing, including agriculture, contributes in other ways to the local economy, while nonlocal chain stores make lesser contributions. Much of the benefit comes from "productive input requirements;" things needed for production. Again, taking agriculture as an example, about 85 percent of the sectors purchase inputs locally. About 15 percent of the purchases are wages and salaries, five percent are property taxes, and 80 percent are supplies and services, which generate other local business activity. The other 15 percent goes for electrical power or specialized equipment, and does not give rise to additional business activity. Nonmanufacturing does not require supplies to that degree, and primarily generates other trade and service jobs.

Another major contributor to the local economy is tourism. Visitors to the area bring in new dollars without requiring the continuing services needed by a new and permanent population such as, police and fire protection, and sewers. As an example, in 1970 the Oregon Shakespearean Festival in Ashland sold $416,068 worth of tickets to some 27,000 people, about 85 percent of them tourists. It is estimated that these visitors spent some $1,116,840 for food and lodging, gasoline, services of various kinds, and retail goods. The 1976 ticket sales totaled $1,136,000, about $908,000 to visitors, more than double the 1970 figure. (Source: U.S. Department of Commerce, Economic Development Administration Evaluation of EDA Investments, and Oregon Shakespearean Festival Association.)

Providing a good setting for tourism includes activities which will be undertaken to meet other statewide planning goals, for natural resource quality, open space, and agricultural lands. It has been demonstrated, by numerous planning studies done by the state and private firms, that tourist and convention activities are one of the few growth industries in Oregon. Because of location, climate, cultural, and recreational offerings, and the physical character of the land, Jackson County is in a position to strengthen this part of its economy.

The following figures show the estimated amounts of payroll contributed to the economy by manufacturing, services, government, and various retail trade activities in 1978. It should be noted that the payroll and profits of locally owned firms stay, for the most part, in the local economy, whereas profits of nonlocal firms are lost to other regions.

ESTIMATED TOTAL PAYROLL

Agriculture, Forestry, and Fisheries	$5,640,000	1.2%
Mining	$1,280,000	0.3%
Contract Construction	$31,730,000	6.8%
Manufacturing	$124,040,000	26.7%
Transportation, Communication, and Utilities	$31,930,000	6.9%
Wholesale and Retail Trade	$107,620,000	23.2%
Finance, Insurance, and Real Estate	$14,640,000	3.1%
Services	$47,340,000	10.2%
Government	$100,130,000	21.6%
Total:	**$464,350,000**	**100.00%**

Source: Oregon Covered Employment and Payrolls, State of Oregon Employment Division.

Because of the weakness in traditional primary sectors, and the overemphasis on trade and service jobs which depend on those primary sectors, Jackson County must further diversify its economy if it is to improve economic conditions. This can be done by:

1) Stimulating development and utilization of a greater range of local labor force skills;

2) Broadening the export area served from a local market to a western region market for greater stability; and,

3) Shifting from a partly seasonal economy to one that is fully operative year around.

This will be difficult to do for a number of reasons:

1) The labor force has increased at a greater rate than has the total population; from 37,240 in 1970 to 47,760 in 1975, for a 22.03 percent increase; and, to 55,720 people in 1978 for a total growth of 7,960 in three years. The estimated employment in 1978 was 51,830 with an unemployment rate of seven percent. (These figures include only those people actually registered with the state employment service. It is reasonable to assume that there are more people seeking work than are found in this group.)

   Of the 51,830 people employed; 41,670 were in nonagriculture wage and salary employment leaving 10,160 persons in the categories of self-employed, unpaid family workers, domestics, agriculture, and labor disputants. Most workers (33,720) were in nonmanufacturing, with only 7,950 in the manufacturing sector. (More complete labor force data is available in the 1979 Jackson County Economic Development Program Report)

2) As noted, the economy is heavily weighted in trade and services, with over 11,450 people working in wholesale and retail trade in 1978. Many of these jobs are low-paying, unskilled positions with little chance for advancement. For example, in March of 1979 the average hourly earnings for manufacturing jobs were $7.60, whereas, average earnings in the services sector were more than $1.25 less at $6.32 per hour.

3) The existing labor force is an unbalanced mix:

   A) It contains many unskilled young people;

   B) Has many workers skilled only in the types of work for which few expansions are seen;

   C) Has many people with low levels of education;

   D) Includes more women than ever before, and they are often kept out of the 'male' manufacturing, crafts, and technical jobs; and,

   E) Also has many people with good experience and education who often must take jobs where their expertise is unused.

4) The county lacks a skills training center.

5) No coordinated efforts exist to match the future needs of industry to existing job training programs.

6) The county itself has no program for expanding job opportunities through seeking new industry.

Evaluation of personal income statistics provides another method by which an economy can be reviewed. Such statistics give an indication of the welfare of the citizens of an area. In 1976 Jackson County's per capita income was $5,545 or 88.5 percent of the state figure of $6,265. Because per capita income is an average, it does not indicate actual conditions. Income tax returns are much more specific, showing the number of returns in various income categories.

In 1976 there were 42,035 Oregon State Income tax returns filed in Jackson County and they yielded the following:

1) 54.6 percent were under $10,000 (of this amount, 42.8 percent were under $7,000);

2) 7.1 percent were in the $10,000 to $12,000 range;

3) 10.7 percent were in the $12,000 to $15,000 range;

4) 20.3 percent were between $15,000 to $25,000; and,

5) 7.2 percent were over $25,000.

The median family income of Jackson County residents has been declining in real dollars, (correcting for inflation) and in relation to that of all of Oregon. The January 1, 1977, median income in Jackson County was $14,404, and grew to $15,187 in January 1, 1978. This $783 increase, when adjusted by the 1977 and 1978 consumer price indexes, translates to an actual $290 decrease in real dollars. Further, the percentage of Jackson County's median dropped relative to the state's median by 1.5 percent; 85.9 percent in 1977, to 84.4 percent in 1978.

The number of people below the poverty level is yet another indicator of the general welfare. During the 1970 census there were 11,515 people, 12.1 percent, within the county below the poverty level. In 1978, there are believed to be 13,944, 11.2 percent persons below the poverty level, and this number is projected to increase to 14,345 persons by 1980. The poverty level for a family of four within Jackson County was $6,200 in 1978, and is projected to increase to $7,236 by 1980.

The policies and related implementation strategies of this element will form the basis of an economic development program. The economic development program, above all else, must strive to ensure an improvement in the quality of life for the citizens of the area. Economic development must attempt, not only to provide increased quality and quantity of employment opportunities, but also to maintain or improve the quality of the social and physical environment. The program should do all of this as well as ensure stability in the economy and provide for steady development. Lastly, an economic development program must be realistic and based upon the existing potentials and constraints of the county.

An economic development program is composed of four basic parts; statistical and economic data, specific short-term and long-term goals, proposed development projects, and a short-term and long-term strategy or work program to achieve the goals. Particular emphasis should be placed upon coordination of the program. It is important to realize that program actions may have impacts beyond the boundary of a particular city or even the county. Further, a project may only be feasible if it is undertaken cooperatively with several jurisdictions, or with the assistance of federal and state agencies. Every economic development program will be different, and must be tailored to the individual community, due to the uniqueness of program goals, the human and natural resources of the community, the problems or constraints present, and the wide variety of projects which could be selected to achieve the goals.

Economic development programs must consider economic development in the broadest sense possible. Economic development is not necessarily synonymous with industrial development. Economic development, in addition to industrial development, may include such activities as manpower training, community services, improvement (water, sewer, power, roads, police, and fire protection, schools and libraries), housing and tourist development (source: Oregon Department of Economic Development, How To Do Economic Development Planning). However, economic diversification through industrial development must be considered within the program because of Jackson County's heavy reliance upon resource-based industries for income and employment. What ever specific projects are proposed, each must be evaluated in terms of the opportunity costs or trade-offs which will be made if one project is chosen over another. Further, each project must be consistent with the program strategy.

The general tenor of the policies contained within this element were extracted from the 1978 Jackson County Economic Development Report. This program is updated each year by the Economic Development Committee, and sets forth the most current economic data for the

county. The committee is expected to be delegated the authority and responsibility for the development, implementation, and coordination of the countywide economic development program. The committee will be drawn from as diverse a sampling of the socioeconomic makeup of the county as possible. The committee serves in an advisory capacity to the Jackson County Board of Commissioners.

The introduction/background section of this element was extracted primarily from the 1979 Economic Development Report. Additional historical information can be found within the 1977 and 1978 Economic Development Reports. Industrial sites in Jackson County including the incorporated cities are included within the Jackson County Industrial Site Survey, May 1982, and is adopted by reference.

FINDINGS, POLICIES AND IMPLEMENTATION STRATEGIES:

1

FINDING:

The past economic development programming efforts of the county have been somewhat frustrated by the lack of overall coordination and direction of the program. The county has been participating in the U.S. Department of Commerce, Economic Development Administration since 1971. Through this program the local program has been able to facilitate the dispersion of more than $2 million in federal funds within the county. However, this is only one facet of an economic development program. The programming efforts should encompass a far broader range of activities with special emphasis upon coordination.

POLICY: JACKSON COUNTY SHALL CREATE AND MAINTAIN A PROGRAM TO OVERSEE AND PARTICIPATE IN ECONOMIC DEVELOPMENT ACTIVITIES WHICH INCREASE AND DIVERSIFY EMPLOYMENT OPPORTUNITIES FOR RESIDENTS.

IMPLEMENTATION STRATEGIES:

A) Consider establishment of an Economic Development Committee to develop and oversee the economic development program.

B) The program should include projects to increase and diversify employment opportunities for local residents within the private sector, and other projects consistent within the policies of this element.

2

FINDING:

Many commercial centers throughout Jackson County have similar problems, caused by:

1) Poor traffic circulation and related high pollution emission levels;

2) Lack of aesthetic appeal;

3) Absence of historic preservation efforts; and,

4) Lack of public amenities, such as parks and rest areas for shoppers.

POLICY: CONDITIONS FOR EXISTING COMMERCIAL ACTIVITIES SHOULD BE IMPROVED THROUGH EFFORTS TO REVITALIZE COMMERCIAL AREAS, ESPECIALLY CENTRAL DISTRICTS.

IMPLEMENTATION STRATEGIES:

A) Encourage redevelopment and restoration of city centers, including mini-parks, sidewalks, street plantings, benches, bikeways, and street lighting.

B) Encourage small scale aesthetic improvements by cities and merchants.

C) Encourage the establishment and strengthening of local downtown business associations.

D) Encourage the expeditious construction of the Highway 238 bypass at Jacksonville to protect historic structures and maintain the city character.

E) Revise and amend the existing sign regulations in the zoning ordinance and site plan review ordinance to provide the specificity of language required to cover new county commercial centers. Enforce this and existing ordinances. Recommend adoption and enforcement of similar criteria by cities.

F) Improve traffic management.

G) Encourage local financial institutions to establish a low interest, rehabilitation loan program to encourage a general upgrading of established commercial centers.

3

FINDING:

Conditions currently exist in Jackson County which inhibit maximum production from two of our most valuable economic segments, agriculture and timber. Many locally controllable conditions relate to existing land use ordinances, the modification of which is covered in greater detail in the forest lands and agricultural lands elements and the 1977 Economic Development Program Report.

POLICY: EFFORTS SHALL BE MADE TO IMPROVE CONDITIONS FOR AGRICULTURE, TIMBER AND LIVESTOCK PRODUCTION, PROCESSING AND REMANUFACTURE.

IMPLEMENTATION STRATEGIES:

A) Encourage the development of stronger programs aimed at determining suitable alternative crops and horticultural techniques which should be undertaken.

B) Emphasize and encourage the local secondary processing of agricultural and timber-related products where possible.

C) Encourage the continuation of experiments aimed at soil improvement through techniques such as the application of treated sewerage on agricultural lands.

D) Encourage local agricultural organizations to promote farmers' markets.

E) Encourage forest management programs which will provide an adequate and sustained volume of forest products and which will place emphasis upon reforestation of forest lands.

4

FINDING:

Jackson County's Economic Development Program Report has, since 1977, enumerated the extent and future potential of tourism, one of the most under-utilized economic sectors. The potential for expansion of tourist related activities is probably greater than for any other single element of the economic base in terms of generating capital from outside the region.

The State of Oregon has recognized the fundamental over-riding need to expand and diversify the economic base of the state through provision of self-contained recreational destination resorts. The State has acknowledged the significance of destination resorts through the Oregon Land Conservation and Development Commission's amendment of Statewide Planning Goal 8 to provide a process for placement of large-scale, capital investment intensive recreational resorts, even though it is understood that most such resorts would require location on farm and forest land. As noted in the Recreation Element of the Comprehensive Plan, tourism is a principal economic mainstay of Jackson County's economy. To date, the only close equivalencies of destination related recreational opportunities in the county are dependent on state and county parks, hunting and fishing, boating and river rafting, and the passive recreational opportunities provided in urban areas, principally in Ashland and Jacksonville.

Tourism and destination resort oriented recreation is essentially undeveloped. The richness and diversity of the natural environment of Southern Oregon and Jackson County, in conjunction with its attractive climate, is a significant under-utilized economic asset. It is essential to the diversification of Jackson County's economy and of statewide interest that a mechanism for the siting of destination resorts be provided through Jackson County's Comprehensive Plan and Land Development Ordinance. It is of utmost importance that a balancing of Statewide Planning Goals 2, 3, 4, 5, 8, and 9 be achieved to ensure that this untapped economic resource can be developed properly. A properly conceived destination resort can exist compatibly within resource designations through proper planning.

POLICY: TOURISM SHALL BE ENCOURAGED. JACKSON COUNTY SHALL COOPERATE WITH AND ASSIST THE PRIVATE SECTOR IN THE DEVELOPMENT

OF FULL-SERVICE DESTINATION RESORTS. A DESTINATION RESORT SHALL NOT BE DISCOURAGED BY THE COUNTY IF THE PROPOSAL IS CONSISTENT WITH STATEWIDE PLANNING GOALS, THE COUNTY'S ACKNOWLEDGED PLAN, AND ITS IMPLEMENTING REGULATIONS.

IMPLEMENTATION STRATEGIES:

A) Provision should be made for destination resort tourist developments at appropriate areas in the county pursuant to a destination resort overlay district provision in the Land Development Ordinance and Comprehensive Plan. The destination resort provision shall be consistent with the requirements of Statewide Planning Goal 8, but shall provide for a clear mechanism to allow for the siting of a destination resort anywhere within Jackson County, consistent with the County's acknowledged Comprehensive Plan and implementing ordinances, Statewide Planning Goals, and Oregon Administrative Rules.

B) Capital improvements programming, strong promotional programs, and the exploration of public and private funding sources should be undertaken to create convention and other facilities.

C) Programs should be created to promote recreation and tourist facilities and should be coordinated with local chambers of commerce and the state office of tourism.

D) Make adequate provision for overnight accommodations, camping and lodging, near urban centers and recreation areas.

E) Priority items for capital improvement programming by local governments include but are not limited to:

   i) Cultural convention facilities at the South Medford Interchange site

   ii) Completion of the Jackson County Exposition Park;

   iii) Expansion of the Jacksonville Museum;

   iv) Future expansion of the Britt Festival facilities;

   v) Development of the Bear Creek Greenway;

   vi) Improved public transportation systems;

   vii) The development of bike paths; and,

   viii) Implementation of the county road plan.

5

FINDING:

Currently the financing of public improvement projects and budgeting is done on a year-by-year, generally ad hoc basis, with some exceptions. Many dissimilar projects compete for limited county funds and without the aid of a comprehensive spending plan, priorities can become unclear from year to year. A formal method for programming capital improvements and capital expenditures is being insisted upon more and more by banks as well as federal agencies participating in many grant and loan programs. Throughout this comprehensive plan, references are made to the funding of various projects and programs. Obviously, not all projects can receive full funding. The capital improvement program will provide a vehicle to determine long and short-range priorities and initiate perhaps the most important tool to ultimate implementation of the comprehensive plan. A more complete discussion of capital improvement programming is contained within the general implementation element.

POLICY: JACKSON COUNTY SHALL IMPLEMENT A COMPREHENSIVE AND COORDINATED CAPITAL IMPROVEMENT PROGRAM TO GUIDE THE LONG RANGE FINANCING AND PRIORITIZATION OF PUBLIC IMPROVEMENT PROJECTS.

IMPLEMENTATION STRATEGY:

The policy itself is an implementation measure. From the Comprehensive Plan and other sources a capital needs list should be developed. This list should be reviewed and revised each time the plan itself is reviewed. Generally capital improvements programs cover a five-year period beyond the capital improvement budget for the first year.

6

FINDING:

Many employment opportunities within certain types of businesses are left undeveloped due to the firm's small size, employment characteristics, financial constraints, and in some cases, limited demand for their products. These potential businesses, because of their limited scale, cannot justify the expenditure necessary to locate in a developed and/or designated commercial or industrial zone. A small number of these firms do not require the isolation and/or consolidation that most businesses and industries require. Many could be located, subject to certain conditions, within residential zoning districts. These nontraditional businesses will provide an alternative form of employment for the citizens of Jackson County.

The development of home occupations within the residential areas of the county will result in numerous benefits, of which increased job opportunities, local control and ownership, improved utilization of local natural resources, increased value added to products which are exported, and conservation of energy are but a few. Furthermore, the make-up of the economy will be more diversified and will thus ensure greater overall economic stability without deteriorating natural amenities.

POLICY: ALLOW FOR THE DEVELOPMENT OF NON-TRADITIONAL BUSINESSES WITHIN CERTAIN ZONING DISTRICTS.

IMPLEMENTATION STRATEGY:

Urban and rural home occupations shall be permitted outright in their respective zoning districts.

7

FINDING:

Increased commercial and industrial development can expand and improve the local economy. Competition for environmentally sound commercial and industrial development is keen. Most other areas in the state and nation, as a whole, have the same interest in attracting new development which will alleviate their economic problems. Plant relocation is an uncommon occurrence and it is not realistic to believe that Jackson County can capture a disproportionately large share of enterprise with these desirable attributes. On the other hand, the county can expect to attract its fair share, if it proceeds on a logical course of action.

POLICY: ATTRACT NEW COMMERCIAL AND INDUSTRIAL ENTERPRISE APPROPRIATE TO JACKSON COUNTY.

IMPLEMENTATION STRATEGIES:

A) Appropriateness, as used in the above policy shall be determined through compliance with the following criteria.

   i) Utilization of the existing labor force;

   ii) Utilization of the existing and planned transportation system;

   iii) Nonpolluting nature; and,

   iv) Best utilization and conservation of energy and other local natural resources.

B) Explore funding alternatives and support the promotion of economic development such as the creation of a port district.

C) Encourage private efforts to attract new commercial industrial enterprises.

D) Encourage the use and development of funding programs such as the State Economic Development Bonds which would diversify economy.

E) Maintain and update the Jackson County Industrial Site Survey on a regular and continuing basis.

8

FINDING:

Locational decisions by industrial firms are based upon consideration of numerous factors of which labor costs, distance from primary inputs, distance from final markets and shipping costs are carefully reviewed. Urban locations are sometimes inappropriate or inefficient.

An urban location may be inappropriate for a use which creates obnoxious odors or would otherwise be incompatible with urban industrial development. It is recognized that few industrial uses are inappropriate for a general industrial zoning district and only a few of these will be compatible with rural development.

A rural location of an industrial use may be appropriate when necessary to provide for the development or efficient utilization of a rural natural resource. Proposals to site an industry in rural areas to reduce transportation costs of production must be evaluated in terms of the costs for final product distribution and employee transportation costs. Total energy costs for transportation should be carefully considered.

Certain locations within rural Jackson County may allow for some locational advantages vis-à-vis other urban locations. It is not consistent with economic development goals of the incorporated communities to allow siting decisions to be governed wholly by the degree of efficiency that a rural location may possess over an urban one. Rarely are the costs, excluding land price differentials, great enough to warrant setting aside the needs of the incorporated cities for a broader and larger industrial base. If the locational advantages of rural and urban lands for firms not requiring urban level facilities were weighed based exclusively on the needs of the firm, the rural location would be chosen if for no other reason than the lower land costs. A policy to allow rural industrial development based wholly upon the efficiency of the firm could cause substantial instability in real estate markets for industrial land, which could adversely impact existing efforts to attract new industries to the Rogue Valley.

POLICY: THE LOCATION OF INDUSTRIAL USES OUTSIDE OF URBAN CONTAINMENT OR URBAN GROWTH BOUNDARIES OR AREAS COMMITTED TO INDUSTRIAL USE SHALL ONLY BE PERMITTED SUBJECT TO SATISFACTION OF THE FOLLOWING STANDARDS:

A) THE SPECIFIC PROPOSED INDUSTRIAL USE REQUIRES A RURAL LOCATION FOR ONE OF THE FOLLOWING REASONS:

i) THE ACTIVITY IS NOT COMPATIBLE WITH URBAN INDUSTRIAL USES. FACTS SHOWING THAT THE USE IS EITHER NOT PERMITTED WITHIN ANY INDUSTRIAL ZONE AS EITHER A CONDITIONAL USE OR A PERMITTED USE, OR THAT AN APPLICATION FOR A CONDITIONAL USE TO SITE WITHIN A GENERAL INDUSTRIAL ZONE HAS BEEN DENIED AFTER ALL APPEALS AT THE LOCAL LEVEL HAVE BEEN EXHAUSTED ARE NECESSARY TO SHOW SATISFACTION OF THIS STANDARD; OR

ii) THE ACTIVITY IS NECESSARY FOR THE DEVELOPMENT OR EFFICIENT UTILIZATION OF A RURAL NATURAL RESOURCE. FACTS SHOWING THAT THE RESOURCE IN THAT LOCATION OR IN OTHERS IS NOT CURRENTLY BEING UTILIZED BY OTHER FIRMS WITHIN URBAN INDUSTRIAL SITES ARE NECESSARY TO SHOW SATISFACTION OF THIS STANDARD.

B) IF THE LOCATION IS PROPOSED TO OCCUR ON RESOURCE LANDS, ALTERNATIVE RURAL LOCATIONS WITHIN LAND COMMITTED TO NONRESOURCE USE MUST BE EVALUATED. THE AREA CONSIDERED SHOULD BE LARGE ENOUGH TO ENCOMPASS ALL SITES WITH SIMILAR CHARACTERISTICS (SUCH AS DISTANCE FROM MARKETS, LABOR AVAILABILITY, DISTANCE FROM RAW MATERIAL INPUTS, ETC). THE PROPOSED SITE MUST BE FOUND TO BE THE BEST AVAILABLE SITE KNOWN TO THE COUNTY WHICH IS SUITABLE FOR THE PROPOSED USE, TAKING INTO CONSIDERATION ALTERNATIVE SITES ON COMMITTED LANDS.

C) FINDINGS MUST BE MADE ADDRESSING THE LONG TERM ENVIRONMENTAL, ECONOMIC, SOCIAL, AND ENERGY CON-SEQUENCES OF THE SPECIFIC INDUSTRIAL USE AT THE PROPOSED AND ALTERNATIVE LOCATIONS EXPLAINING WHY THE PARTICULAR ALTERNATIVE WAS CHOSEN.

D) THE PROPOSED USE MUST NOT ADVERSELY IMPACT THE RURAL NATURE OF THE SURROUNDING REGION OR SENSITIVE FISH AND WILDLIFE AREAS, AND MUST BE COMPATIBLE WITH ADJACENT USES.

IMPLEMENTATION STRATEGY:

Establish a Rural Limited Industrial zoning district.

ENERGY CONSERVATION

GOAL: TO EFFECT THE OPTIMUM CONSERVATION OF ENERGY AND USE OF LOCAL RENEWABLE RESOURCES.

INTRODUCTION/BACKGROUND:

Goal 13, of the Statewide Planning Goals, is devoted to the subject of energy conservation. Furthermore, energy considerations are explicit in nine of the other goals. As such, the primary purpose of this energy element is to incorporate the fundamental aspects and significance of energy into the Jackson County Comprehensive Plan. It is the basic intention in the element, that both the long and short-term benefits of energy conservation and use of renewable energy sources be realized in a timely and cost-effective manner. Supplemented by material from the Energy Background Report[1], the energy element serves to link energy considerations with the other components of the Comprehensive Plan.

Growing numbers of people are beginning to see that the real energy problem is that governments and energy suppliers are opting for the continued expansion of nonrenewable energy resource consumption and centralization of energy producing and generating systems, which cannot solve the maze of associated problems. In order to avoid the trap of becoming dependent on generation after generation of increasingly complex and costly technologies to harvest these nonrenewable sources, many states, counties, and cities in this country are developing comprehensive programs to lead themselves out of their own energy problems. In the process, they are assuming the lead in resolving the nation's energy crisis. These intensive regional and local efforts to deal with energy problems, are becoming the rule and not the exception.

Numerous studies by both governments and independent private groups have indicated that the United States can have a healthy and growing economy in the future by investing in conservation activities and the development of alternate, renewable energy sources. These studies have also confirmed that more jobs would be generated per unit of investment (energy or monetary) than a comparable investment in the continual construction of, and reliance on, conventional power plants and fuels. While these alternatives will not individually result in large energy savings, they can add up to a cumulative benefit, and do not require exotic or expensive solutions. (Reference is directed to the Jackson County Energy Background Report section entitled The Case for Conservation of Renewable Energy Resources.)

The message is clear. Energy efficiency and local efforts can save money by reducing operating costs and levels of consumption through conservation measures. Ultimately, the success of local and individual energy conservation efforts will be determined within communities and neighborhoods having the potential for developing energy conservation measures or resources that are uniquely suited to particular needs and available resources.

Jackson County recognizes that current sources of nonrenewable energy are limited and should not be wasted. Therefore, whenever possible, in both new development and rehabilitation efforts

[1]The Energy Background Report is available for review in the Jackson County Planning Department, Comprehensive Planning Division.

and activities, special energy conservation measures should be promoted, in accordance with the concepts and policies contained in this plan.

These policies set forth a course of action, selected in light of given conditions, to guide and determine present and future decisions in this regard. The associated implementation strategies are potential actions that will implement the particular policy. Energy conservation is an integral factor and consideration in every element of the Comprehensive Plan because there are relationships between energy and all land use and development actions.

Energy Suppliers:

Conventional energy sources include natural gas, petroleum products (gasoline, heating oil, etc.), coal, and uranium. Electricity is also a conventional energy source, derived as an end product from thermal power generating plants using either oil, coal, or uranium as a fuel. Electricity in Oregon comes from the federal Columbia River power system via the Bonneville Power Administration (BPA), and from generating facilities operated by Portland General Electric (PGE), Pacific Power and Light (PP&L), Idaho Power Company, and the Eugene Water and Electric Board (EWEB), through a cooperative arrangement, and a variety of formal agreements to accomplish the coordinated production and use of power.

Pacific Power and Light is the exclusive distributor of electricity in Jackson County, although actual power provided may come from other sources in the northwest power pool in an effort to coordinate production and use needs. PP&L's major electric power lines and their distribution and location throughout the county are depicted in the following graphic entitled Major Electrical Power Lines.

Natural gas in Jackson County is mostly provided by CP National, a private utility. Their major distribution facilities are depicted in the following graphic entitled Major Natural Gas Distribution Facilities.

Propane and butane, also natural gases, are distributed locally through a variety of independent outlets, primarily for use by individual households and commercial sectors which account for the largest consumer shares of natural gases, being relatively evenly distributed between the two. Most of this consumption is for space and water heating.

Petroleum is available in many forms, including residual oil, distillate oil, gasoline, and diesel fuel. These petroleum products are not supplied by utilities, as is the case with electricity and natural gas, but rather through a multitude of private companies, distributors, and retail outlets. Residual oil is used primarily for large-scale heat generation, such as commercial and institutional space and hot water heating, and industrial process heat. Distillate oil is used primarily for heat generation also, but usually for smaller applications. Main uses in the county are residential space heating and agricultural orchard heating. Gasoline and diesel fuel are used almost exclusively for vehicular applications. The majority of use is for highway transportation, although a small percentage is consumed in off-road use for agricultural tilling, mill yard machinery, timber harvesting, and so forth.

From the outset, it must be recognized that Jackson County is an arbitrary political unit rather than a geographic region. Thus, the county is connected in numerous ways to adjacent counties, the state, and the nation. This is especially true of energy, for the majority of Jackson County's energy is imported and therefore, energy consumed locally is paid for with local dollars,

a portion of which are later transferred out of the local economy. Further, energy dollars spent to produce goods or products for export are paid for by the final consumer, resulting in a situation which could give rise to higher costs for locally produced goods, ultimately making them less competitive on the open market. When viewed from this perspective, the local generation and distribution of energy appears financially attractive.

Renewable Energy Resources in Jackson County:

Jackson County has several potential renewable energy resources including solar, wind, biomass from wood and slash wastes and agricultural residues or crops, solid waste, and hydro power. Other potential, more conventional resources include deposits of low grade uranium, oil shale, and coal. It is therefore in the best interest of the county and its citizens to protect these renewable resources to ensure their future availability until such time as appropriate technology makes their recovery and use economically and environmentally feasible, and to ensure that those currently being used are managed in a manner which guarantees their continued wise utilization. Evaluation of the availability and feasibility of use of these local renewable energy resources is also in the public interest. Preliminary investigations in this regard reveal the following potentials for renewable energy resources in the county.

SOLAR: A study by the United States Department of Energy in 1978 entitled Solar Energy for Pacific Northwest Residential Heating, found that "based upon climatic factors, the attractiveness of solar heating is better for most Pacific Northwest locations studied than for other typical northern locations surveyed (Chicago, Illinois; Madison, Wisconsin; Schenectady, New York; and Great Falls, Montana)." Additionally, this study states: "The Richland/Prosser area of Washington and the Medford, Oregon area appear to be the most attractive areas (in the Pacific Northwest) for solar heating applications." (emphasis added)

In summary, the United States Department of Energy study concluded:

> Solar systems in Oregon appear to be more cost-effective than had previously been recognized.
>
> Conditions in southern and east/central Oregon are more hospitable to solar economics and use than are other areas in the state.
>
> Solar energy in Oregon cannot completely replace other fuels for space and/or water heating, but solar systems, both active and passive, can economically provide between twenty-five and seventy-five percent of space and/or water heating needs for many homes.
>
> In Medford, a horizontal collector surface received the approximate solar equivalent average of 750 BTUs per square foot per day during the October to March heating season.
>
> Solar collection in the Pacific Northwest latitudes is improved significantly during winter months by tilting collector surfaces 45^{o} to 60^{o} above horizontal facing south; available solar energy on such inclined south-facing collector surfaces is approximately twice that of horizontal surfaces during November, December, and January. In the Jackson County-Medford area this is equivalent to an approximate average of 1,035 BTUs per square foot per day during the October to March heating season.

The integration of passive solar measures in new construction is the most cost-effective space heating application available.

Computer simulations on passive solar systems suitable for use in the Pacific Northwest region have been performed by the University of Oregon. Initial results show that a well insulated house with passive solar system in Medford-Jackson County, utilizing a twelve-inch-thick concrete thermal storage wall equal in area to one-half the house floor area, will provide 71 percent of the heat needed for space heating on a typical winter day.

The Department of Energy study also analyzed the economic feasibility of residential solar space and hot water heating for different areas in the Pacific Northwest; the results for Medford-Jackson County are depicted in the Energy Background Report section entitled Solar Economics. This analysis reveals that for solar hot water heating, the payback period for new construction ranges from four to fourteen years, and for additions to existing structures, from four to twelve years, depending on electricity and solar collector costs. For solar hot water and space heating, the analysis reveals a payback period of five to ten years for new construction, and from five to nine years for additions to existing structures.

The Oregon Department of Energy has determined:

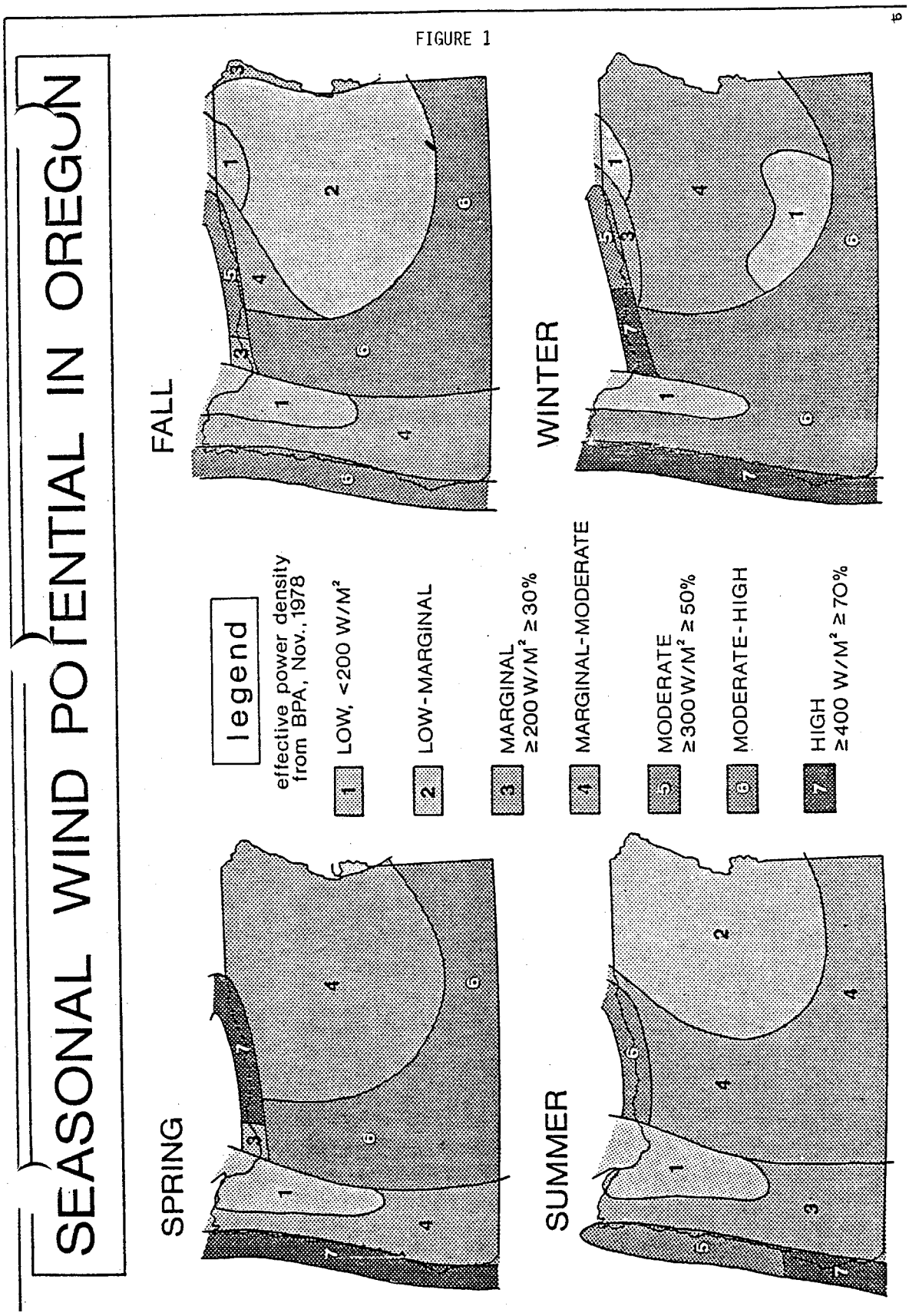
Sixty-two percent of the solar systems certified in the state for the alternative energy tax credit will pay for themselves in the owner's lifetime.

Eighty-one percent of the passive space heating solar systems pay off completely in less than twenty years.

WIND: Historically, wind in Oregon has been a source of renewable energy for water pumping and electrical generation, but only a few wind generators are left throughout the state. Two types of opportunities for generating electricity from wind exist, being similar to historical use; small local units to supplement other electricity sources, and large wind powered generating units contributing to the regional power grid. Oregon is well situated to develop either type of resource given its proximity to ocean and mountain areas where winds are high. The following graphic depicts the Seasonal Wind Potential in Oregon. A more detailed study and evaluation of wind potential in the Pacific Northwest is currently in progress by Oregon State University Wind Power Study Group, using data from 78 wind anemometer locations. Initial estimates indicate there is sufficient wind power in Oregon to provide between three to twelve percent of the electrical needs of the continental United States.

In Jackson County a number of opportunities exist for utilizing wind power. The large number of mountain ridges occurring throughout the area are potentially conducive to producing wind of useable amounts. The topographic features afforded by the Table Rock formations and nearby hills also offer potentials for wind power generation, especially in the Sams Valley area. Other potential sites conducive to wind energy applications include the Pompador Butte area, and Stony Mountain near the Green Springs summit.

FIGURE 1


SEASONAL WIND POTENTIAL IN OREGON
FALL
WINTER
SPRING
SUMMER
legend
effective power density from BPA, Nov., 1978
1 LOW, <200 W/M²
2 LOW-MARGINAL
3 MARGINAL ≥200 W/M² ≥30%
4 MARGINAL-MODERATE
5 MODERATE ≥300 W/M² ≥50%
6 MODERATE-HIGH
7 HIGH ≥400 W/M² ≥70%

HYDRO: Hydroelectric resources provide approximately 80 percent of the electricity used in the Pacific Northwest region. A number of hydroelectric facilities exist in Jackson County, and their locations, operations, and generator sizes are listed in Table I below. See the graphic entitled Major Electric Power Lines for the location of these hydroelectric facilities in the county.

TABLE I

Jackson County Hydroelectric Facilities

Location/Station	Operator	Generator Size
Prospect 1	Pacific Power & Light	4,975 KW
Prospect 2	Pacific Power & Light	37,750 KW
Prospect 3	Pacific Power & Light	7,800 KW
Prospect 4	Pacific Power & Light	1,250 KW
Brownsboro-Eagle Point	Pacific Power & Light	3,200 KW
Lost Creek Dam	U.S. Army Corps of Engin.	48,000 KW
Greensprings	Bureau of Reclamation	18,000 KW

The City of Ashland is investigating the feasibility of restoring its 300 kilowatt (Kw) hydroelectric facility at Reeder Reservoir on Ashland Creek, or replacing the smaller generator with a larger 600 Kw unit. A private concern is also studying the Gold Hill Ideal Cement hydroelectric generator facility to determine the feasibility of its renovation and use.

Investigations by the Army Corps of Engineers, Bureau of Reclamation, and the U.S. Geological Survey have identified over two dozen dam and reservoir sites in Jackson County that could potentially be developed for hydroelectric generation facilities. A complete listing of these potential sites in the county, as well as their hydroelectric capabilities, is provided in the Energy Background Report section Energy Reserves and Renewable Energy Resources in Jackson County.

A recent study by the Water Resources Research Institute at Oregon State University in Corvallis has analyzed the low-head hydroelectric potential of 1,443 stream stretches through Oregon, and includes a number of such opportunities in Jackson County. The study (A Resource Survey of River Energy and Low-Head Hydroelectric Power Potential in Oregon, April 1979) shows that many small streams represent a viable and practical alternative energy source. In Oregon the study estimates this low-head hydro potential to equal about ten Bonneville Dams, five Trojan Nuclear Plants, or four and one-half coal burning plants. Specific information regarding low-head hydro potential for over twenty watercourses in Jackson County is contained within the Energy Background Report section Energy Reserves and Resources in Jackson County.

BIOMASS: Utilization of biomass material for its energy content already plays a significant role in the Oregon energy picture. It is estimated that approximately 15 percent of Oregon's total energy supply is from wood waste alone, and in Jackson County, use of wood as a fuel source accounted for 46.8 percent of the total per capita energy consumed in 1975, mostly by the wood products industry. There is a potential for much greater utilization of biomass waste materials to produce useable energy. Agricultural crops and residues, wood wastes, solid wastes and

other materials which have very often been discarded, may well become important future sources of energy. For example, if the total wood wastes burned in Jackson County in 1977, under the State Smoke Management Plan, were converted into electrical energy, it would have produced the total electrical energy needs of almost 17,000 all-electric dwellings.

Besides wood wastes, other biomass sources in the county include agricultural wastes and residues from orchards, packing houses, manure, and crops. The potential exists to actually grow certain crops because of their high energy content for use as either methane gas or ethyl alcohol, an ingredient of gasohol. Other biomass sources are solid and municipal sewage and wastes.

Jackson County Energy Reserves: Coal, Oil, Natural Gas, and Uranium:

Jackson County is notably deficient in commercially feasible sources of fossil fuels, although some local geologic formations are indicative of such resources. The following inventory briefly discusses these energy reserves as they apply to the county:

COAL: Coal deposits in Jackson County have a small-scale history of production. The coal field occurs in a long, narrow belt extending south from Evans Creek in the northwestern part of the county to a point about ten miles south of the Oregon-California state line, a distance of approximately 100 miles. The results of analyses of various samples taken in 1940 show the Rogue River coal field deposits to contain a large number of partings and bands of impurities.

Historically, there has been coal prospecting throughout the area, and in many places, mining for local use. For the most part, exploration has not been extensive enough to determine the geologic structure of the area, and to determine the actual extent of the coal bed deposits. A 1977 report by the State Department of Geology and Mineral Industries entitled Land Use Geology of Central Jackson County, Oregon stated, "Coal potential has not been regionally assessed, but the presence of coal and the growing need for energy sources suggest possible future activity." The report cites the estimated relative potential for future coal discoveries as being "likely" in "small volumes," and rates the future development of coal in the county as having "possibly very high potential."

OIL AND NATURAL GAS: Petroleum and natural gas deposits in Jackson County have no historical presence or production. Geologically, the county is not favorably conducive to such deposits, as reported by the State Department of Geology and Mineral Industries report cited previously. Seven test wells are recorded as having been drilled near Medford. The deepest of these test wells, the Trigonia Oil Company well, went to a total depth of 2,257 feet and reported unconfirmed oil and gas shown, as indicated in a 1969 report to the U.S. Senate's Committee on Interior and Insular Affairs entitled Mineral and Water Resources of Oregon. Conversely, while the 1977 Land Use Geology of Central Jackson County, Oregon report substantiates the above by citing the estimated relative future potential for discoveries of oil in the county as being "very low," the same report indicates oil in Jackson County as having a "very high potential for future development." Initially, this latter estimate appears contradictory to earlier findings, but, on the other hand, could refer to the county's one small deposit of oil shale at the Shale City site near Ashland, the only such known deposit in Oregon. The State Department of Geology and Mineral Industries has investigated the Shale City property on three occasions (1943, 1950, and 1966), and estimates the shale body "to contain 150,000 tons of high grade oil shale." Samples of the parent material from the Shale City site were tested in 1965 at the laboratories of the U.S. Bureau of Mines and are reported to contain 35 to 37 gallons

of oil per ton of parent material, indicating a potential of slightly more than 4,000 gallons, or 97.6 barrels for the entire deposit. This compares to an estimated 80 billion barrels of high-grade oil shale in the Green River Formation of Utah, Colorado, and Wyoming. Thus, while the Shale City oil deposit can potentially yield an average of 36.6 gallons of oil per ton of raw shale material, the relatively small quantity of oil shale in the county precludes its economically feasible recovery.

URANIUM: While commercial quantities of uranium ore have not been discovered in Jackson County, and there is no historic record of production, the land use geology report cited herein concluded: "The bedrock geology, ground water conditions, and sediment source areas of the Eocene bedrock units in the northern Bear Creek Valley and Sams Valley are consistent with the development of economic uranium deposits in other parts of the United States. Many areas in Oregon have yielded higher than normal radioactive counts, but potential commercial deposits have been found only in the Lakeview area, Steens Mountain, and western Crook County. Actual production has come from the Lucky Lass and White King mines near Lakeview in Lake County. Regarding Jackson County specifically, the report sited above states that uranium deposits in this area have "possibly very high potential for future development," although the report also generally concludes that "systematic analysis is generally lacking, and deposits are best characterized as possible reserves."

Energy Consumption and Conservation:

In addition to the potentials for using locally available renewable energy sources to meet a portion of future energy needs in the county, the efficient use and conservation of current energy sources also represents a significant opportunity for substantial savings. Recent studies show that Americans consume significantly larger amounts of energy per capita than do other citizens of western nations with a comparable standard of living. The United States, with only six percent of the world's population, uses over 30 percent of the world's energy. Energy conservation is thus an attainable and obviously desirable goal. See Figures 2 and 3.

By establishing a per capita reduction in energy usage countywide, a significant and positive benefit can be realized for every county resident without economic hardship or drastic change in life-style. For example, in a recent report by the Council on Environmental Quality entitled The Good News About Energy, it was determined that the United States could operate on 30-40 percent less energy and still enjoy a comparable life-style and meet national economic goals. Numerous other studies have shown conservation and the development of renewable resources to actually provide more jobs per dollar invested than construction of new thermal power plants. (Reference is directed to the Energy Background Report section The Case for Conservation and Renewable Energy Resources, to provide substantiation.)

FIGURE 2

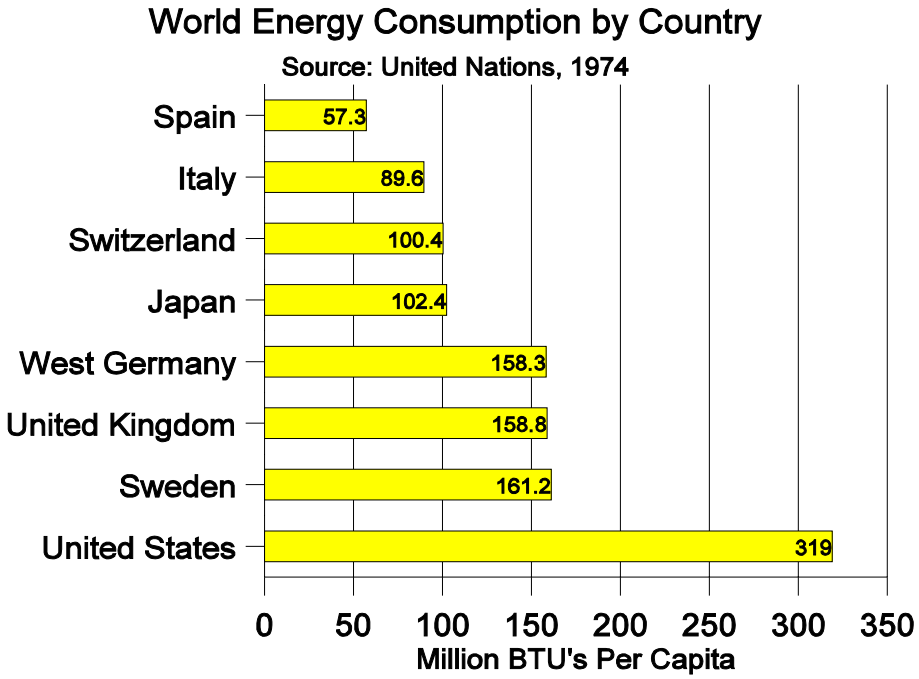
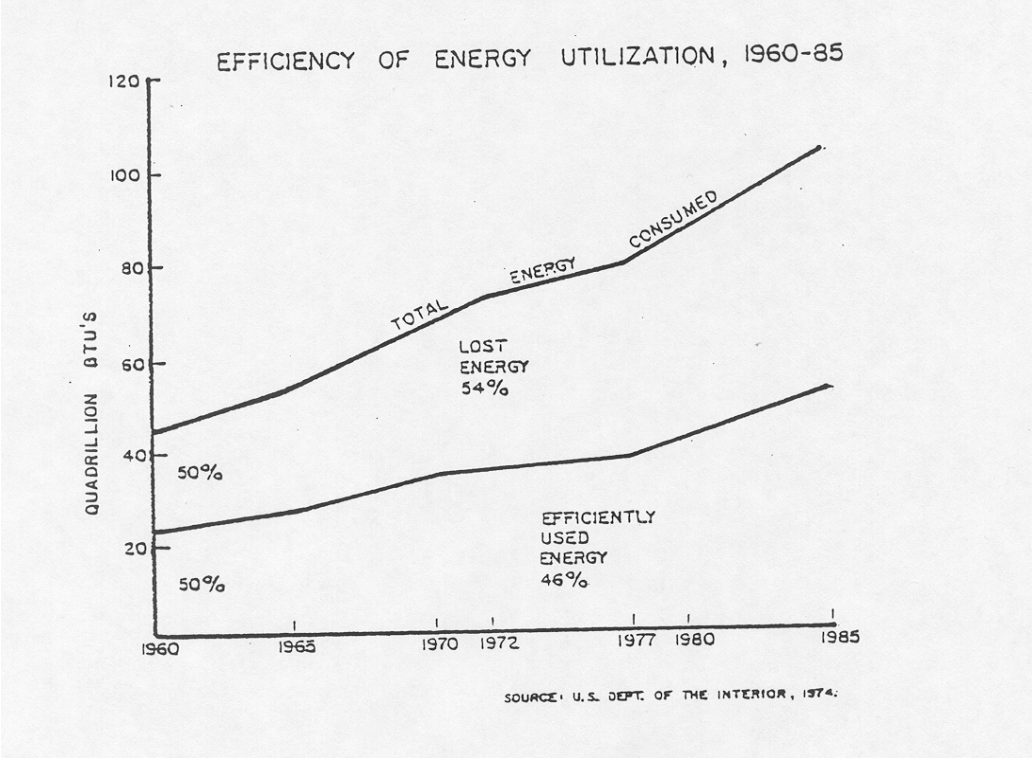


FIGURE 3



A more recent report by the Harvard Business School entitled Energy Future, addressed the issue of conservation on a national scale and determined that conservation presents itself as the most immediate opportunity. It should be regarded as a largely untapped source of energy. Indeed, conservation, not coal or nuclear energy, is the major alternative to imported oil. It could perhaps supply up to 40 percent of America's energy usage. Moreover, the evidence suggests that ". . . a conservation strategy could actually spur growth."

While studies vary in their assessment of what conservation programs could achieve, there is little doubt that a significant potential exists, namely, that the cheapest source of energy we will ever have is using more efficiently what has already been produced—conservation. The reduction of wasted energy through conservation constitutes the least costly, most flexible, and most environmentally acceptable energy resource available.

Besides the above regional assessments of the role energy conservation could possibly play in the region's energy future, a number of other investigations have shown that increased insulation standards are practical, cost effective, and cost little or slightly more to implement than current universal building code standards.

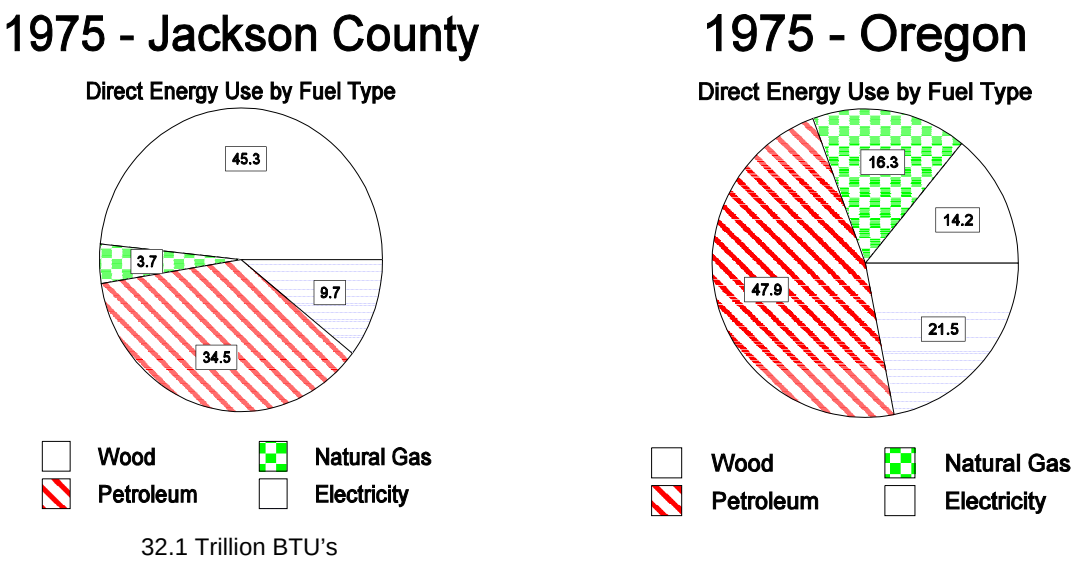
In order to capitalize on energy conservation opportunities to the optimum extent possible, however, it must be determined how and for what uses energy is currently being consumed. The following is therefore a brief summary of energy consumption in Jackson County. Detailed findings are available in the Energy Background Report section Inventory of Jackson County; Specific Energy Consumption by Energy Type and Sector. Table II below presents a comparison of the relative 1975 energy use by sector of Jackson County and Oregon as a whole, while Figure 4 provides a comparison of the total 1975 energy budgets by fuel type for the county and state as a whole.

TABLE II

COMPARISON OF ENERGY CONSUMPTION BY SECTOR
FOR JACKSON COUNTY, OREGON 1975

SECTOR	PERCENT OF TOTAL ENERGY USE	
	JACKSON COUNTY	OREGON
INDUSTRIAL	48.29	36.7
TRANSPORTATION	26.95	35.6
RESIDENTIAL	15.16	16.4
COMMERCIAL/INSTITUTIONAL	7.81	10.4
AGRICULTURAL	2.05	0.9
TOTAL BTU'S:	32.1 TRILLION	530 TRILLION

FIGURE 4



From Table II it appears that Jackson County roughly follows the same trend as the state, being somewhat higher in relative energy consumption in the industry and agriculture sectors, and correspondingly low in the remaining sectors. This distribution would seem to reflect the overall economic makeup of the region, as timber and agriculture, rather than services, have been historically predominate in the county's economy. However it is readily apparent from consideration of Figure 4 that wood plays as large a role in the Jackson County energy picture as does petroleum in the state as a whole. Thus, almost half of the energy consumed in the county in 1975 was provided by wood, corresponding to nearly one-fifth of all the wood burned for energy in the entire state. The extensive utilization of wood in Jackson County has significance that goes beyond just the amount of energy provided. Wood is grown and harvested within Jackson County; it is a renewable resource that, if properly managed, will provide the same amount of energy per year on a continual basis. Since the energy released by wood combustion is the product of stored sunlight, it is probably safe to say that Jackson County uses more indigenous "solar energy" than any other county in Oregon. These facts put Jackson County well on the road to energy self-sufficiency.

If the data presented in Table II, and Figure 4, is tabulated into BTUs for comparative purposes, it permits calculation of some relevant ratios:

TABLE III

COMPARISON OF JACKSON COUNTY AND
OREGON ENERGY BUDGETS FOR CONVENTIONAL AND TOTAL ENERGY, 1975

ITEM	JACKSON COUNTY	OREGON
POPULATION, 1975	108,800	2,293,100
TOTAL ENERGY (BTUS)	32.1 TRILLION	530.0 TRILLION
CONVENTIONAL ENERGY (BTUS)	17.0 TRILLION	454.9 TRILLION

Ratio of county to state population: 108,800/2,298,100 + 4.73%

Ratio of county total energy to state total energy: 32.1/530.0 = 6.06%

Ratio of county conventional energy to state conventional energy: 17/454.9 = 3.74%

Million BTUs per capita, total energy = Jackson County: 295; Oregon: 231

Million BTUs per capita, conventional fuels = Jackson County: 156; Oregon: 198

Thus, Jackson County, with about five percent of the state's population, consumes roughly more than six percent of the state's total energy, but consumes only about four percent of the state's supply of conventional fuels. The county population thus utilizes more energy per capita than the state average, while remaining less reliant on imported sources than average.

In summary, Jackson County differs from the state in its sources and uses of energy, as well as in its vulnerability to disruption. Industry in the county is reliant on conventional sources for only a small portion of its direct energy use, but reliant on conventional sources for all of its energy supply due to wood harvesting and transportation uses of conventional fuels. Transportation is a major issue in the county's energy future, and requires further investigation. Transportation consumes only about one-quarter of the county's total energy, but consumes over half of its imported supply. It should also be noted that the energy form consumed in the transportation sector—petroleum—is the energy form most likely to be subject to shortages and rapidly escalating costs, due both to its depletability and to the inherent instabilities of the supply network that is international in scope.

Disruptions in the transportation sector would cause dissonance in the other sectors as well, since all sectors rely heavily on transportation for their normal functioning. In the unlikely extreme case—a total curtailment in motor fuel supply—the county would lose almost 74 percent of its total energy supply, since transportation is a controlling variable in wood utilization. If the curtailment included all petroleum products, Jackson County would lose over 81 percent of its total energy supply.

These facts are important, not only in demonstrating the county's high vulnerability to an oil shortage, but also in demonstrating what a key item petroleum is in the local economy. Steady escalation of prices will be reflected in the prices of all other fuels, either directly (increases in dollars spent on timber harvesting) or indirectly—(greater demand for substitute fuels).

As such, strategies impacting conservation and type of energy fuels used should be directed on a sector-by-sector basis, due to the differing fuel mixes and uses in each sector. The most apparent sectors in which energy conservation efforts can have an appreciable impact are in transportation, residential, and commercial/institutional.

From the available data, the following broad conclusions regarding energy are applicable relative to Jackson County, and thus serve as overall guidance in the development of energy conservation strategies:

> Supply of conventional fuels depends on factors beyond the immediate control of the county. Demand may, to some degree, be governed within the county.

Many energy costs for production in the county are borne by consumers outside the county. Costs for passenger transport, commercial energy use, institutional energy use, and residential energy use are borne by the residents within the county, and may prove to be a substantial economic burden in the future.

Transportation is the sector in most danger of energy supply disruptions and escalating costs. This could create serious repercussions in all other sectors of life in the county.

Jackson County is probably closer to being self-sufficient in energy than any other county in Oregon. The extensive use of wood as an energy source greatly enhances the energy carrying capacity of the area in the long-term perspective, but may be off-set by declines in the timber industry and availability of timber unless increased reforestation or forest management activities are undertaken.

Electricity supply is probably assured in the foreseeable future, but at steadily escalating prices due to the increasing reliance on thermal generating facilities.

There are many options and opportunities for energy conservation in the county; renewable resources (solar, wind, hydro, biomass) show promise and potential as a viable alternative to conventional fuels, or as a supplement. The potential for solar, low-head hydro and biomass appear, from preliminary evaluations, to be the most viable and practical options for future development and use. These potentials need further investigation and assessment to determine their feasibility of scale and application to widespread practical use.

The sectors most dependent on conventional resources are commercial, institutional, residential, and transportation. All are indirectly dependent on conventional fuels via the transportation sector.

Petroleum supply is a critical issue in the immediate future; simultaneously, it is the least susceptible to county control.

Energy conservation in all sectors, but principally in transportation, residential, and commercial/institutional areas, is the single, most effective short-term means of easing our long-term energy problems, and provides an important link in the transition toward an economy based on local renewable energy resources.

The State of Oregon has recognized the need to conserve and use available energy supplies more efficiently, as well as the potentials of locally available renewable energy sources and appropriate technologies to provide a significant portion of the state's present and future needs. In response, the Oregon legislature has established numerous incentives to capitalize on these energy saving and producing opportunities in the form of personal income tax credits, property tax exemptions and deferrals, and low interest loans to finance energy conservation improvements and development of alternative renewable sources and systems. A detailed inventory of those state incentives is provided in the Energy Background Report appendix, Oregon Energy Legislation.

FINDINGS, POLICIES, AND IMPLEMENTATION STRATEGIES:

1

FINDING:

Numerous studies have shown a distinct correlation between various land use patterns and densities, and energy consumption. While these studies have shown that energy conservation by itself is unlikely to provide a total rationale for changes in land use patterns, when combined with other land use planning concerns, they make reduced levels of energy consumption possible and practical. Thus, although the lead-time necessary to implement land use changes conducive to energy conservation has a long-term payoff, energy efficient land use planning is a function of county government that can have significant beneficial impacts regarding energy consumption and conservation.

Land use policies and patterns affect energy use in two principal ways: 1) They influence the amount of travel through the arrangement of land uses, and 2) they determine the number, design, and orientation of buildings which can be built in a given area. Land use also determines density, which in turn, has an important affect on the cost effectiveness of mass transit and its ability to compete with other less efficient modes of transportation. Land use policies also influence energy use through site requirements. Certain landscaping, street width, building orientation, and auxiliary requirements, such as height limits, and building configurations, have a significant impact on total energy use.

Thus, many land use techniques, either individually or collectively, can offer significant energy saving opportunities with little effort and can aid in realizing the full potentials of numerous diverse energy saving strategies. Energy efficient land use policies are therefore, a useful supplement to other energy conserving strategies, and each offer opportunities for beneficial economic, environmental, and social effects.

POLICY: THE COUNTY SHALL DEVELOP AND IMPLEMENT LAND USE POLICIES AND RELATED PLANNING AND IMPLEMENTATION TECHNIQUES THAT WILL MAXIMIZE ENERGY CONSERVATION AND EFFICIENCY.

IMPLEMENTATION STRATEGIES:

A) Manage and control land use patterns and uses in a manner which will optimize the conservation and efficient utilization of all forms of energy, based upon sound economic, environmental, and social principles.

B) Consider means by which land use planning decisions and applicable codes and ordinances can reduce future demands for energy.

C) Encourage land use patterns and densities that facilitate energy efficient public transportation systems.

D) To the optimum extent possible and desirable considering the retention of the county's rural character, increase densities, where appropriate, along high volume/capacity transportation corridors to achieve greater energy efficiency.

E) Encourage the development of fewer and more land intensive commercial and industrial centers as opposed to strip, isolated, and scattered developments, with emphasis on convenient access to major transportation corridors and systems of public transportation.

F) Encourage people to live in proximity to activity centers and particularly their places of employment.

G) Encourage and promote urban-centered growth within urban communities, as opposed to rural and/or urban/suburban sprawl.

H) Encourage close locational relationships among developments for living, working, shopping, and recreation.

I) Periodically review, update, and amend all applicable policies, codes, and ordinances to reflect energy efficiency in land use matters.

2

FINDING:

Energy availability strongly impacts upon every aspect of human existence, and is essential to the health, safety, and welfare of county residents, and to the well being of the state and county economy. Wasteful, inefficient, uneconomic, and unnecessary use of energy will result in a serious depletion of energy and environmental resources and thus, represents a threat to preserving the health, safety, welfare, and economic well-being of the people of the county, state, and nation. Therefore, the efficient and wise utilization and management of energy resources represents a meaningful, immediate, and appropriate county government response to the energy problem.

The role of the County in energy is primarily three-fold: 1) To exemplify an innovative and leadership role in energy conservation, and use of renewable resources; 2) To assure accomplishment of the goal and policies herein; and, 3) To foster a transition conducive to optimum use of local renewable energy resources. In this capacity, the County should strictly abide by the goal and policies herein by expeditiously implementing conservation actions directly within county government operations and procedures, and by encouraging, and where appropriate, facilitating, conservation actions by the private sector.

POLICY: THE COUNTY SHALL TAKE NECESSARY MEASURES TO CONSERVE ENERGY CONSUMPTION IN THE OPERATION OF PUBLIC FACILITIES AND IN THE DELIVERY OF SERVICES. WHERE POSSIBLE, THE COUNTY SHOULD APPLY INNOVATION RELATED TO USE OF RENEWABLE ENERGY RESOURCES AND ALTERNATIVE ENERGY SYSTEMS.

IMPLEMENTATION STRATEGIES:

A) Weatherize all public buildings to the optimum extent possible.

B) Develop and implement a life-cycle costing procedure in all future actions to procure the most energy-efficient equipment and buildings.

C) Adopt and implement the voluntary energy conservation standards and procedures for the management of public buildings set forth by the Energy Conservation Board of the Oregon Department of Commerce to reduce energy use in mechanical and operational functions.

D) Establish and maintain an energy monitoring and accounting system to track county energy consumption and costs in order to identify conservation opportunities, and prepare an annual energy consumption and conservation report.

E) Require that optimum energy conservation measures are used in any new construction or major renovation of any facility in which county funds are used.

F) Require, prior to the construction or major renovation of any facility in which county funds are used, that life-cycle and energy consumption analyses are conducted, including the analysis and consideration of using renewable energy resource devices and systems.

G) Require both long- and short-term cost effectiveness considerations in all energy related decisions by county departments.

H) Require and provide input to the State Legislature, State Energy Policy Review Board, and other appropriate agencies on proposed energy related legislation, rules, and policy statements.

I) Investigate opportunities to co-generate or recover energy within county operations and implement those found to be cost- effective.

J) Develop and maintain an employee suggestion program to receive and evaluate suggestions by county employees on how to conserve energy in county operations and provide incentives for those suggestions acted upon which result in energy conservation or reduced consumption.

K) Establish an energy management task force to provide a management level forum for discussion and advice to the Board of Commissioners and city councils on energy related matters of concern which affect the public and private sectors, for example, requirements, grants, new programs, or innovations.

L) In cooperation with cities and energy suppliers prepare and adopt an emergency energy curtailment and contingency plan delineating priority cutbacks in energy use that can be put into effect in the event of critical energy shortages, and including steps that can be positively implemented in the public sector and steps that can be encouraged in the private sector.

M) Investigate the feasibility of consolidating state, federal, county, and city motor pool fleet operations and joint-use of such, or some combination thereof; and, to the extent possible, purchase and use gasohol in county-owned vehicles.

N) Seek out and apply for federal and state grants as appropriate, to implement those strategies set forth herein. Normally, such grants often provide funding for personnel, planning, administration, and implementation activities, and the costs incurred directly by the county are usually limited to a 10 to 20 percent match of the grant amount and space provisions. This strategy could also evolve into an employment training program wherein installation contractors would participate in on-the-job-training projects.

O) Prepare and distribute with any application for a building permit, energy conservation information and techniques, and related materials listing the advantages/market potential of each.

3

FINDING:

The most serious obstacles to the utilization of energy efficient site design are requirements relating to the proper orientation of buildings for solar utilization and streets, and the lack of consideration given to landscaping as a beneficial thermal moderating technique. When these components are considered and designed together, their positive impact on energy consumption reduction can be dramatic. Optimum solar orientation and judicious use of landscaping can benefit desirable heat gains and losses.

Proper landscaping measures can act as windbreaks in winter by reducing heat loss from buildings; in summer months, can provide shading and aid in natural cooling by channeling breezes and by evaporation processes. Strategic locations of buildings and landscaping can assure adequate summer shading while also providing and optimizing access to winter sun for possible solar heating, necessitating flexibility in site planning and design without impairing protection of the public's health, safety, or welfare. Options for flexible setback requirements, street alignment, zero-lot lines, cluster developments, and planned unit developments also enhance opportunities for energy efficient site designs. Because street orientation and alignment and setback requirements essentially determine the orientation and shape of parcels, and therefore, the orientation and shape of the building placed on the parcel, these considerations also influence solar access and passive and active designs and utilization.

POLICY: ENERGY CONSERVATION MEASURES SHALL BE UTILIZED IN NEW DEVELOPMENT PROJECTS TO ACHIEVE ENERGY EFFICIENT DEVELOPMENT THROUGH COMBINATIONS OF SITE PLANNING, LANDSCAPING, BUILDING DESIGN AND CONSTRUCTION PRACTICES.

IMPLEMENTATION STRATEGIES:

A) 1) Enforce the energy conservation provisions of the Uniform Building Code to the extent necessary to assure policy compliance; 2) Issuance of any building permit will be conditional upon evidence that the applicant has complied with adopted standards for energy conservation in planning, design, and construction of all residential, commercial, industrial, and institutional/public buildings; 3) Incorporate an insulation and installation inspection into the building code inspection process; and 4) Promote the development and construction of new

residences which incorporate the design and insulation level aspects of a typical Eugene Water and Electric Board or Arkansas Power and Light energy conservation house through voluntary incentives. In a period not to exceed five years after adoption of this element/strategy, phase-in new energy conserving building standards as the minimum thermal efficiency performance levels for development in Jackson County. Installation and construction standards should provide 30 percent more energy savings than current uniform building code requirements (1979 Revised UBC). The requirement that all new residences be fitted with an automatic thermostat setback control device, and all new structures be fitted with a flow restrictor on shower-heads.

B) Monitor the activities of, and provide input to, the State Structural Code Advisory Board, and any other state level organizations or advisory groups dealing with energy conservation matters related to the Uniform Building Code.

C) Establish optional thermal efficiency performance standards for structures designed to utilize passive solar space heating techniques based upon the concepts embodied in the City of Davis, California's code and modified to reflect the southern Oregon climate.

D) Devise and amend applicable codes and ordinances to foster the alignment of streets which maximize opportunities for solar orientation of structures.

E) Revise and amend applicable codes and ordinances to provide flexible setback requirements conducive to the solar orientation of structures.

F) Develop incentives, such as property tax exemptions or reductions, or density bonuses for structures, subdivisions, or planned unit developments, which increase the energy efficiency of such structures.

G) Develop performance standards and amend ordinances to provide for landscaping for structural protection against winter winds, shading of glass areas during summer months, and shading of streets and parking areas.

H) Develop a solar easement ordinance to guarantee access to incident solar radiation for property owners, except where preexisting conditions preclude such access. Revise and amend applicable codes and ordinances to assure the integration of solar access protection provisions as provided for in Senate Bill 299 (1979 Oregon Laws Chapter 671).

I) Prepare and distribute a developer's energy conservation handbook and guide manual delineating energy conserving principles and techniques covering site design, climatic factors of southern Oregon, solar orientation, landscaping for wind and sun control, building design and construction, alternative energy systems and devices, and other energy conserving/efficiency factors.

J) Revise applicable regulatory requirements in codes and ordinances to permit or require where appropriate, the use of on-site renewable energy facilities, including individual homesite and district heating and cooling, and integrated

community/neighborhood renewable energy generation systems whose energy sources include solar, hydro, wind, biomass, and geothermal.

K) Assure compliance with the state lighting standards for new public buildings under the provisions of House Bill 2155, 1977 Legislative Session and promulgated by the Oregon Department of Energy, to be enforced under (A) (2) above.

4

FINDING:

Existing structures of all types, and especially those constructed prior to the adoption of minimum energy conservation standards, use large amounts of energy because of excessive heat gain and loss. This is due primarily to inappropriate building techniques and material, minimal or no insulation, window sizing and placement, and poor weatherization. In that these structures will represent the bulk of the county's housing, commercial, industrial, and institutional/public building stocks for the foreseeable future, and to a large extent, are energy inefficient, it is desirable from the perspectives of consumer benefit, energy conservation, and social and economic interests of the public at large, to take cost effective measures that will increase their energy efficiency. While older structures might be uneconomical to bring into conformance with current standards, some level of additional insulation and/or weatherization can be justified based on the structure's remaining usable life, especially considering the number of available federal, state, and utility company programs affording tax credits and low or no interest loans for such insulation and weatherization measures. The modification of existing buildings for energy conservation is now an explicit inducement. (Refer to the Energy Background document.)

POLICY: THE COUNTY SHALL ENCOURAGE, PROMOTE, AND EFFECT THE OPTIMUM USE OF INSULATION, WEATHERIZATION, AND OTHER ENERGY SAVING MEASURES IN ALL EXISTING STRUCTURES TO THE EXTENT THAT THEY ARE COST-EFFECTIVE.

IMPLEMENTATION STRATEGIES:

A) Participate in the Federal Housing and Community Development Block Grant Program with the explicit intent of developing a self-sustaining and perpetuating very low interest loan and grant programs to subsidize energy conservation actions and measures for poverty level income households.

B) Assist small businesses and industries with problems of capital accumulation to obtain the capital required for investment in improved process and mechanical systems efficiencies, alternative energy systems, and other major energy conservation actions through loans made available through the sale of revenue and general obligation bonds and participation in the Federal Housing and Community Development Block Grant Program for this explicit purpose.

C) Encourage the location and development of businesses engaged in manufacturing and installation of conservation materials and alternate energy systems.

D) Encourage businesses, industry, and institutional facilities (schools, hospitals, and government) to: 1) Adopt life-cycle costing purchasing procedures; 2) Participate in voluntary energy conservation programs and implement cost effective measures; and, 3) To develop an on-going energy audit of consumption patterns and rates, and to utilize available incentives regarding conservation measures, use of renewable resources, and energy systems.

E) Develop an ordinance to require realtors or utilities, or other energy suppliers, to provide an energy efficient rating disclosure for single-family residences in real estate transactions. Said energy efficiency rating system is to be as that developed by the Oregon Department of Commerce under Chapter 413, Oregon Law 1977, Senate Bill 370.

F) Support the efforts of local nonprofit groups providing energy conservation and/or renewable energy systems.

5

FINDING:

The utilization of alternate renewable energy sources can have a significant beneficial impact on the total energy use and consumption of the county and region. By shifting energy demands to more appropriate end-uses and alternative and renewable sources such as solar, wind, hydro, biomass, or geothermal sources the useful and economic life of existing conventional facilities may be greatly increased; overall costs, both direct and indirect, can thereby be substantially reduced. The potential of renewable energy sources to yield useful energy outputs as a viable alternative to conventional methods warrants their exploration and utilization.

Solar: All structures can take advantage of solar energy by utilizing optimal solar orientation and potential. When proper solar orientation is utilized in conjunction with increased energy conservation techniques and standards, very substantial savings are possible with minimal additional expenditures. Through proper solar orientation, heat gain during summer months can be minimized and maximized during winter months, thereby reducing energy needs for cooling and heating. Such changes would primarily affect subdivision design, street layout and road requirements by attempting to reduce the amount of materials used and thereby, the amount of embodied energy required.

Southern Oregon has been identified as having some of the best attributes for solar utilization in the entire Pacific Northwest region, and the Oregon Department of Energy has determined that solar energy can economically provide between 25 and 75 percent of a structure's year around space and water heating needs.[2] Passive solar is not an expensive or exotic technology,

[2]SOURCES: Solar Energy for Pacific Northwest Residential Heating, U.S. Department of Energy, and EPA, May 1978. Oregon's Energy Future, Third Annual Report ODOE, January 1979, pages 34-35. Transition, Oregon Office of Energy Research and Planning.

but is rather simply a modifying of building techniques to incorporate solar principles. These primarily include:

A) The largest wall and window areas should face south rather than north, east, or west. The south side of a building at 40^{o} latitude receives three times as much winter sun as the east or west sides and several times more than the north side.

B) To benefit most from southerly orientation, major living areas, such as the living room and kitchen, should be where the large south-facing windows are.

C) A large thermal mass located where the winter sun will shine on it provides heat storage within the house, so the sun's heat can be used even after the sun has set, and tends to moderate day/night temperature swings.

D) Shading should be provided to prevent overheating in summer. It can be in the form of shade trees, deciduous if on the south side of the house, or eaves with a sufficient overhang to block the summer sun.

E) Windows on other sides of the house should be kept to a minimum. Particularly on the west side, windows should be eliminated or provided with adequate shading so the late afternoon summer sun won't overheat the house.

Woodwaste: A very real potential for slash utilization as an energy resource exists within Jackson County. In 1977, (Oregon Smoke Management Plan Annual Report, 1977) 610,149 tons of slash was submitted to be burned. Of this total, 448,012 tons were actually burned. The difference between the two figures is a result of Oregon's Smoke Management Plan constraints placed upon burning operations. Of the total amount allowed to burn, 80.7 percent was in-piled burn. The 448,012 tons of material burned represents a substantial amount of energy, as well as a large air pollutant source. If the total fuel burned were to be converted into electrical energy, via a steam boiler and turbine, the total electrical needs of 16,930 all-electric dwelling units would be satisfied. If the fuel were used exclusively for space heating, hot water and cooking, this fuel would supply the needs of 35,841 dwelling units; nearly every home in Jackson County.

The technology for utilizing this resource is available today. A large portion of slash is usable wood that needs only cutting and splitting; the rest is small brush, limbs, and trees which require chipping for use. Field operated chippers are available and in use in many parts of the nation. End uses of fuel could be in many forms including:

A) Direct home use.

B) Chipped and fed into steam boilers for steam and hot water use at industrial sites.

C) Shipped and burned in steam boilers for electrical generation such as at the Boise-Cascade wood products plant in northeast Medford.

D) Chipped and pressed into fuel pellets to be sold and used off-site.

E) Chipped and biologically reduced to methane or alcohol.

F) Chipped and, through destructive distillation, converted to alcohol and other flammable gases.

G) Used as a supplement to resource recovery.

These examples show the feasibility of renewable energy resource use available in Jackson County. Other alternative forms, such as low-head hydro and wind, are also potentially viable renewable energy resources given their abundance throughout the county.

POLICY: THE COUNTY SHOULD BE MORE ENERGY SELF-SUFFICIENT AND SHALL ACTIVELY ENCOURAGE THE DEVELOPMENT AND USE OF LOCAL RENEWABLE ENERGY RESOURCES AND ALTERNATIVE ENERGY SYSTEMS ON THE COMMUNITY, NEIGHBORHOOD, AND INDIVIDUAL HOMESITE LEVEL.

IMPLEMENTATION STRATEGIES:

A) Adopt the following as an interim set of performance standards for solar space and water heating and cooling systems until such time as more definitive and applicable standards become available:

i) Solar Heating and Domestic Hot Water Systems, HUD Intermediate Minimum Property Standards Supplement, U.S. Department of Transportation and Urban Development.

ii) Interim Performance Criteria for Solar Heating and Cooling Systems in Commercial Buildings, National Bureau of Standards (Center for Building Technology and Institute for Applied Techniques) prepared for Energy Resource and Development Administration, Division of Solar Energy, Washington, D.C.

B) Establish an energy advisory committee for the following purposes:

i) To assist and educate the public, building contractors and trades, labor groups, and financial lending institutions in conservation and alternative forms of energy related matters.

ii) To act in an advisory capacity to the county and the Energy Management Task Force on energy related matters (Strategy K in Policy 3).

iii) To assist in the development of the energy conservation package and incentive program (Strategy O, Policy 3).

iv) To assist in the development of optional thermal efficiency performance standards for passive solar design (Strategy C, Policy 4).

v) To monitor the activities of groups involved in modification to the Uniform Building Code related to energy conservation and report same to the Board of Commissioners for action (Strategy H, Policy 3).

vi) To assist in the development of Strategies G, H, I, and J in Policy 4.

vii) To develop an innovative, comprehensive county action-oriented program for developing energy supplies from locally available renewable energy resources. This would include an action-oriented Alternative Energy Resources Development Plan for Jackson County with specific recommendations for implementation methods and mechanisms to fund implementation of the program and methodologies for making a timely transition to such renewable energy and alternative system applications.

C) Encourage private lending institutions to give incentives for the utilization of alternative renewable energy resources and systems.

D) Require the use of solar energy to heat swimming pools, except in cases of therapeutic necessity.

E) Develop and distribute a pamphlet on fireplace/wood stove care, proper use of such devices, how to improve efficiency, and information related to wood curing, types of wood and burning characteristics, BTU content and similar information.

F) Revise and amend the zoning ordinance to incorporate alternative energy systems and devices.

G) Institute a long-term continuous and action-oriented energy planning program which places a high priority on citizen involvement.

H) Investigate the feasibility of utilizing the public utility districts of local improvement or special district concept as a means of encouraging energy conservation and self-sufficiency. This could be applicable for developing a solar utility district.

6

FINDING:

Large amounts of energy are used to operate pumps which move water from place to place such as for the extraction of groundwater, to pressurize distribution systems, and to treat such waters for human consumption. The fastest growing cost item in the nation's and Pacific Northwest region's water budget is the energy needed to pump water from one place to another. Increases in water use efficiency can have a significant impact on energy use and thus, air quality. It is estimated that new structures could save up to 50 percent of water consumed and existing structures could realize a savings of up to 38 percent of water consumed, if water conservation features were installed/retrofitted, and thus, would have significant impact on the energy needed to operate these facilities. Additionally, any reductions in the volume of sewage flows would also reduce energy requirements for waste treatment. However, some trade-offs must be examined on a case-by-case basis. For instance, conversion to sprinkler or drip systems is a major method for increasing irrigation efficiency, but the energy required to pressurize these systems must be considered in determining net changes in energy consumption.

In any case, the use of water requires energy inputs in the collection, treatment, and distribution of potable water supplies, and in the collection, treatment, and disposal of waste waters; therefore, conserving water will result in net energy savings.

POLICY: THE COUNTY SHALL SUPPORT AND ENCOURAGE THE CONSERVATION OF ENERGY IN THE USE OF WATER.

IMPLEMENTATION STRATEGIES:

A) Develop an ordinance/resolution to require the use of water conservation devices in all new and rehabilitated structures. Such devices include, but are not limited to: Lowflow or aerator shower-valves, and insulated hot water lines and storage mediums.

B) Encourage the use of swales and other natural landscape techniques which conserve water as opposed to increased use of conventional storm water run-off measures.

C) Monitor the activities of, and provide input to, the State Water Policy Review Committee and State Water Resources Department as they affect water conservation.

D) Prepare and distribute with all building permit applications a pamphlet listing water conserving techniques besides those afforded under Strategy A above.

7

FINDING:

Embodied energy is that energy consumed in the process of manufacturing and distributing materials. Materials used in Jackson County may be manufactured in other areas and shipped here, thereby causing considerable consumption of embodied energy before the materials are used locally. Some pertinent examples of embodied energy are:

A) About 70 percent of all energy used by a final consumer in the form of goods and services rather than species of energy, such as electricity or gasoline.

B) The energy required to generate the materials which comprise solid waste is 99 percent of the energy involved in the total conventional solid waste management process . . . generation, collection, hauling, transfer, and disposal.

C) Recycled aluminum can save 95 percent of the energy required to make new metal from ore.

D) Only about one-third as much energy is needed to make paper from other waste paper than to make it from trees. The energy savings from recycled newspaper into newsprint, including transportation, is about 1.5 million BTUs per year per ton of recycled paper.

This consumption, although not local, may have local impacts on the total availability or cost of energy. It is important to note that the county can affect the consumption of embodied energy by cautious selection of materials used for various purposes and especially, by recycling materials for beneficial uses.

Given the populace's growing per capita consumption of goods and the subsequent increased per capita disposal of waste materials, it is apparent that trash and garbage is a growing resource. For example, in Jackson County it has been estimated that nearly 10,000 tons of newsprint alone is disposed of annually. This represents almost 160,000 trees that would need to be harvested in order to make that amount of newsprint, and excludes any packaging products. The Medford School District alone uses 122,000 reams of paper per year. Additionally, approximately 31,400 pounds of glass are disposed of daily in landfills in the county. Also, if the projected amount of aluminum generation in the Jackson County Solid Waste Management Area Study (done five years ago) is correct, then over $500 of aluminum is buried in county landfills every day in the form of TV dinner trays, aluminum foil, packaging, old lawn chairs, and window frames. Using 1977 market values for aluminum, this amounts to over $400,000 per year. When compared to projections predicting declining future timber yields for Oregon, it would appear that efforts to recycle waste paper would have beneficial impacts on timber availability. The same correlation applies to other waste materials also.

The Federal Resources Conservation and Recovery Act of 1976 placed new emphasis on reduction of the solid waste problem through resource recovery for reuse and energy production. Resource recovery is the separation of solid and liquid wastes into valuable component parts. Normally glass and metal are separated for their own value, while organic materials are processed into fuel. The fuel may be processed into a material suitable for burning, or biologically reduced to form producer gas or methane, which is then fed directly into the natural gas transmission network.

Two major factors come into play which, in the long-term, will make resource recovery not only desirable, but necessary. The factors are: Increasing population with increasing per capita generation of solid wastes, and the depletion of natural resources. Given these factors and others previously discussed, it is desirable in the Solid Waste Management Plan to up-date and give serious consideration to resource recovery and recycling as a viable and necessary component of solid waste management.

POLICY: THE COUNTY SHALL ENCOURAGE RESOURCE RECOVERY AND RECYCLING OF SOLID WASTES.

IMPLEMENTATION STRATEGIES:

A) Amend the resolution adopting the Solid Waste Management Plan for Jackson County, dated November 14, 1974, to include consideration of labor intensive resource recovery and recycling.

B) Amend the Solid Waste Franchising and Nuisance Abatement Ordinance, Section 9.03, Requirements for Collection Franchises, to include resource recovery and recycling as the preferred solid waste management strategy.

C) Encourage private sector efforts regarding resource recovery and recycling.

8

FINDING:

There are a number of local geographical features within Jackson County which make a particular site or locale more suitable than others for the application of alternative energy equipment and facilities. Additionally, there are numerous potential energy resources naturally occurring within Jackson County, particularly solar, water, hydro, geothermal, and coal. In order for the county to take full advantage of these alternatives and resources for future generations, it is necessary to ensure their protection from inappropriate uses.

POLICY: IDENTIFIED AREAS OF THE COUNTY HAVING A HIGH ENERGY POTENTIAL, SUCH AS WIND OR WATER POWER SITES SHALL BE APPROPRIATELY DESIGNATED FOR A POTENTIAL FUTURE USE.

IMPLEMENTATION STRATEGIES:

A) Modify the zoning ordinance to include solar, wind, hydro, and geothermal overlay zones.

B) Identify during the areawide planning effort, unique micro-climatic locations in the county suitable for use as an alternative renewable energy source, including:

i) Rainfall;

ii) Temperatures;

iii) Wind speed and direction;

iv) Solar absorption capabilities; and,

v) Conventional and low-head hydroelectric sources.

ENVIRONMENTAL QUALITY

GOAL: TO ENSURE AND IMPROVE THE QUALITY OF THE COUNTY'S NATURAL ENVIRONMENT AND RESOURCES IN A RESPONSIBLE MANNER WHICH WILL MAINTAIN AND ENHANCE THE LIFE SUSTAINING ENVIRONMENT.

INTRODUCTION/BACKGROUND:

Man is the only creature capable of significantly degrading the natural environment. Impacts from man's activities can be intentional or inadvertent. Environmental abuse, in either case, always represents a cost to some segment of society. This cost may be specific, such as for a particular technology to abate a hazardous pollutant, or it may be more subtle, such as in the increasing costs of goods derived from decreasing supplies of nonrenewable resources. The very nature of man's demands on natural resources has created a continued decline in the quality of the environment. While man and society are socially and economically adaptable, the bio-physical laws of nature are constant. In this sense, the quality of the environment is an essential aspect of the livability and quality of life man enjoys.

The real social and economic costs of environmental degradation caused by the unwise or indiscriminate use of the environment and its resources are becoming more predictable—and more preventable. The fundamental remedy to a continuation of environmental degradation is the application of environmental planning and sound natural resource management. As such, the maintenance and improvement of air, water, and land resources quality in the county need full consideration in all phases of land use planning and development.

Jackson County is a mosaic of environmental resources and quality characteristics. Conditions influencing environmental quality vary with respect to differences in topography, geology, soils, vegetation, hydrology, and other factors. Each characteristic, whether natural or man-induced, will in some form, have varying responses to, and capacities for, land use and development. Failure to recognize these characteristics or their interrelationships in the land use planning and development process, can adversely affect the quality of the natural environment, and hence, the quality and standard of life that county residents presently enjoy, including health, social activities, the overall economic situation, and the rural and natural character of the county.

Clean air and water, an attractive landscape, and a rural atmosphere are essential elements of Jackson County's environmental quality that contribute most directly to the area's livability, economy, and growth. It is important, however, that future growth carefully considers these beneficial attributes and not significantly contribute to further environmental quality degradation in order to maintain a quality environment. Protection of environmental quality is manifested in numerous activities of the county, as well as, in many state and federal agencies. The environmental quality element is intended to protect and enhance the public's health, safety, welfare, and environmental quality by establishing within the Comprehensive Plan a basis for policy direction regarding environmental quality, and providing a framework within which proposals for development may be evaluated by the many agents responsible for environmental considerations. As such, the concerns of the environmental quality element relate directly to a majority of the functional aspects of the Comprehensive Plan in order to ensure the integration and complimentary functioning of each element into a comprehensive and cohesive framework

for implementation. The environmental quality element addresses the issues of air, water, and land resource quality, noise and solid and hazardous wastes.

GENERAL ENVIRONMENTAL QUALITY:

The carrying capacity of the natural environment is limited. Each development action allowed results in some level of alteration to the environment. The improper location, size, design, or operation of industrial, commercial, residential, or public developments could exceed the recognized capacity of the air, water, and land resources of the county and be detrimental to the public's general convenience, health, safety, and welfare. Therefore, it is necessary to create and maintain conditions under which man and nature can exist in productive harmony. In order to fulfill the social, environmental, and economic needs of present and future generations, mechanisms must be created for the identification and evaluation of all proposed development actions, both public and private, which could potentially have a significant adverse impact on the natural environment of the county, and to find alternatives and mitigation measures to minimize such disruptions in an environmentally and economically sound manner, in order to examine the salient issues, identify trade-offs, make difficult decisions, and preserve some options for future generations. The County's role in achieving the environmental quality goal is basically one of integrating applicable federal or state environmental quality statutes, rules, standards, and implementation measures into a local management strategy that prevents resource quality deterioration or degradation while still allowing reasonable levels and types of development, and ensuring that these developments and activities comply with applicable regulations.

Generally, Jackson County has retained an overall natural environment of high quality, with some exceptions. Yet, the impact of increasing population and subsequent human activities has tended to upset the natural ecological system of checks and balances, and thus, the overall real and aesthetic quality of the county's natural environment. The unchecked continuation of such, poses the threat of continued deterioration in the future unless development actions are examined for their environmental quality degradation impacts, and a system of checks and balances is instituted in the development process which identifies potentially significant or adverse impacts, and options to mitigate or abate these environmental quality degradation actions.

Generally, the Bear Creek-Rogue Valley is highly prone to air pollution as a result of climatic and physiographic conditions, namely a valley basin surrounded by mountainous terrain and subject to summer and winter air inversions and stagnation. The county's surface and ground water resources are prone to degradation as a result of land development and forest and farm activities, coupled with natural conditions such as erosive and sediment producing soils, steep topography, and geo-hydrologic conditions, among other factors. Subsurface and sewage disposal systems located in unsuitable soils in some areas also presents water quality and related public health and safety problems. For the most part, the county continues to enjoy a natural setting of overall good quality, although local problems do exist in varying degrees of degradation from a variety of natural and man-induced conditions. These issues and the physical factors influencing them are discussed more fully in the environmental quality background report and in the following pages.

AIR QUALITY:

The topographic and meteorological conditions of the Bear Creek-Rogue River Valley create an extremely high potential for air mass stagnation and the subsequent accumulation of air

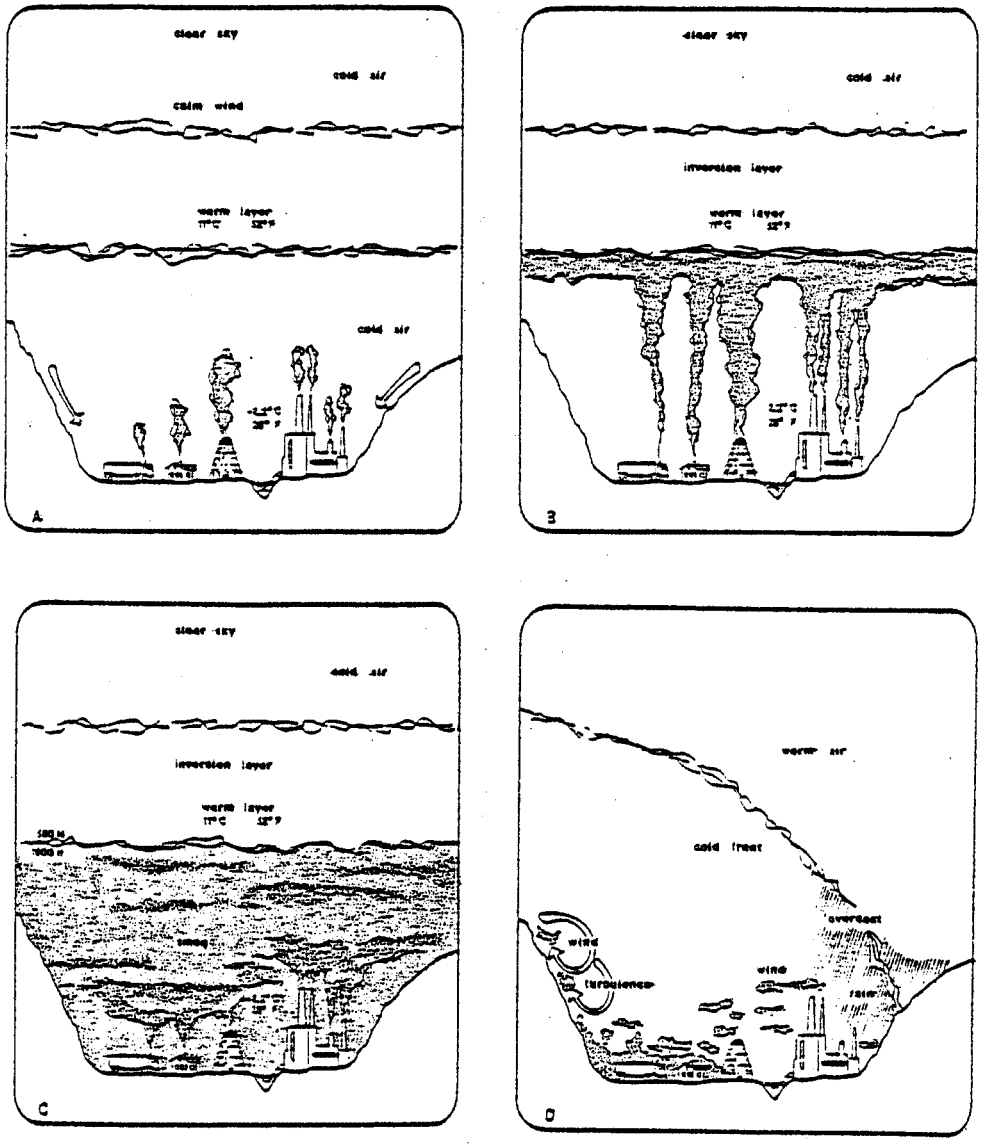
pollutants within the air shed. As such, the Department of Environmental Quality (DEQ) established the Medford-Ashland Air Quality Maintenance Area (AQMA) in 1974, for air pollution control and management purposes. The AQMA boundary is 228 square miles in area and is located from the mountainous interior valleys formed by the Rogue River and its tributary Bear Creek. The AQMA includes the cities of Medford, Ashland, Central Point, Phoenix, Talent, Jacksonville, White City, and Eagle Point. (See AQMA map.)

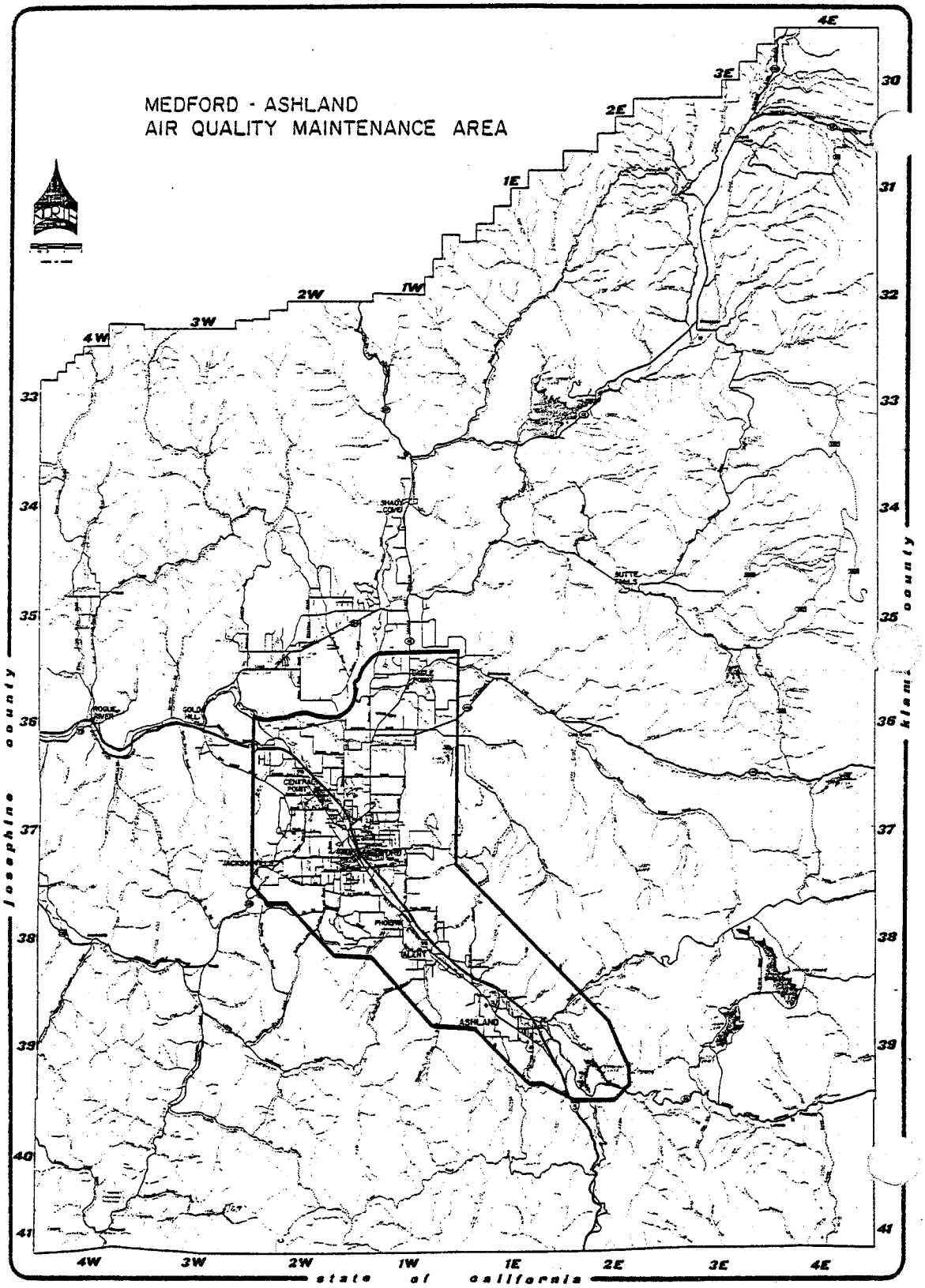
The surrounding Cascade and Siskiyou/Klamath Mountains, ranging from 3,000 to 9,500 feet in elevation and their relationship to the interior valleys formed by the Rogue River and Bear Creek in which the AQMA is located and coupled with an average wind speed of less than five miles per hour and frequent air inversion limits the amount of air available in which pollutants can be dispersed and also, has the affect of concentrating these airborne pollutants to undesirable levels.

Meteorologically, air conditions within the AQMA are largely influenced by air inversions during hot summer and winter seasons. An air inversion is the relation of a high or low pressure air mass to topography and temperature. As illustrated in Figure 1, Diagrams A through D, a winter radiation inversion occurs regularly in the AQMA during the months of December, January, and February. During winter months, temperatures near the ground decrease rapidly after sunset so that as soon as the surface air cools, it slides down the mountain slopes forming a pool of cold air in the valley with warmer air above it (Figure 1, Diagram A). Cooling within this layer is often sufficient to cause the formation of fog. As pollutants are discharged into the atmosphere during winter inversions, the warm air mass above the valley, which typically occurs at about 44 meters, 145 feet above ground level, traps the omitted contaminants and prevents them from dispersing (see Figure 1, Diagram B). During such stagnant air conditions, the inversion of fog and trapped pollution may remain under this "lid" of warmer air for several successive days and continue to accumulate until the levels of pollutants reach undesirable levels (see Figure 1, Diagram C), or until the inversion is broken up (see Figure 1, Diagram D).

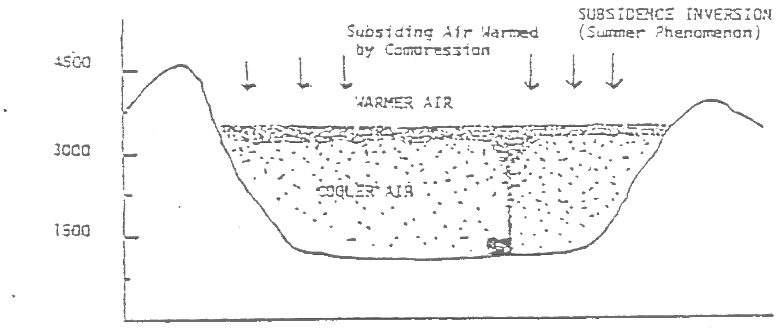
FIGURE 1

INVERSION FORMATION AFFECTING AQMA AIR QUALITY




MEDFORD - ASHLAND
AIR QUALITY MAINTENANCE AREA
4E
3E
2E
1E
1W
2W
3W
4W
30
31
32
33
34
35
36
37
38
39
40
41
josephine county
klamath county
state of california
ASHLAND

The second type of air mass phenomenon affecting the AQMA is a subsidence inversion, experienced frequently from June through September (see Figure 2). Unlike winter radiation inversions, summer subsidence inversions occur several thousand feet above ground level, and are formed by descending cold air which is warmed by compression. A summer subsidence inversion may last several days and is associated with stagnant winds at high altitudes and high pressure areas. Essentially, when high level winds become slower than normal, there is a tendency for the colder, heavier air at high levels in the atmosphere to sink downward. Air that moves from low pressure, high elevation to high pressure, lower elevation, will warm up at the rate of 5½ degrees per 1,000 feet. Thus, the sinking air is compressed as it moves into the region of higher pressure at lower elevations. The air is thereby warmed and it also becomes drier. This process is called subsidence, and when it happens, a subsidence inversion or layer of warm air is developed at a higher level in the atmosphere at a few thousand feet above the earth. This development tends to prolong the period of stagnation of a high pressure air mass over an area and contributes to a worsening of the pollution problem that takes place underneath the radiational type of inversion at lower levels.



Air Pollutants: Existing information indicates the quality of air in portions of the AQMA to be very poor when evaluated in terms of standards set by the state and federal governments under the Clean Air Act of 1963, as amended. General standards are set for six classes of pollutants: 1) suspended particulates; 2) ozone; 3) carbon monoxide; 4) sulfur oxides; 5) hydrocarbons; and, 6) oxides of nitrogen. The standards set for these contaminants consider the concentration of the pollutant and the time period over which the pollutant can be allowed (see Table I). The state and federal standards for suspended particulates, ozone, and carbon monoxide are consistently exceeded within the AQMA.

Total Suspended Particulates (TSP): Suspended particulates are solid and liquid particles of soot, dust, aerosols, and fumes ranging in size from 0.1 to 100 microns and averaging about two microns in size (micron equals 1/2540 inch).

Particulate levels in the AQMA are unusually high and from 1970 to 1978, were the second highest recorded in the State of Oregon. Recorded suspended particulate levels for 1961 through 1978 are shown in Figure 3, which illustrates past history and indicates trends in local ambient suspended particulate levels. The rapid drop in ambient concentrations in the mid to late sixties was due to first round control strategies being applied to industrial sources, changes in orchard heating practices, and an economic slowdown in the industrial sector. However, since 1975 there has been an increase in particulate levels due primarily to increased industrial activity and the high growth rate of the region, as well as increasing emissions from man's daily activities.

TABLE I

AMBIENT AIR QUALITY STANDARDS FOR OREGON

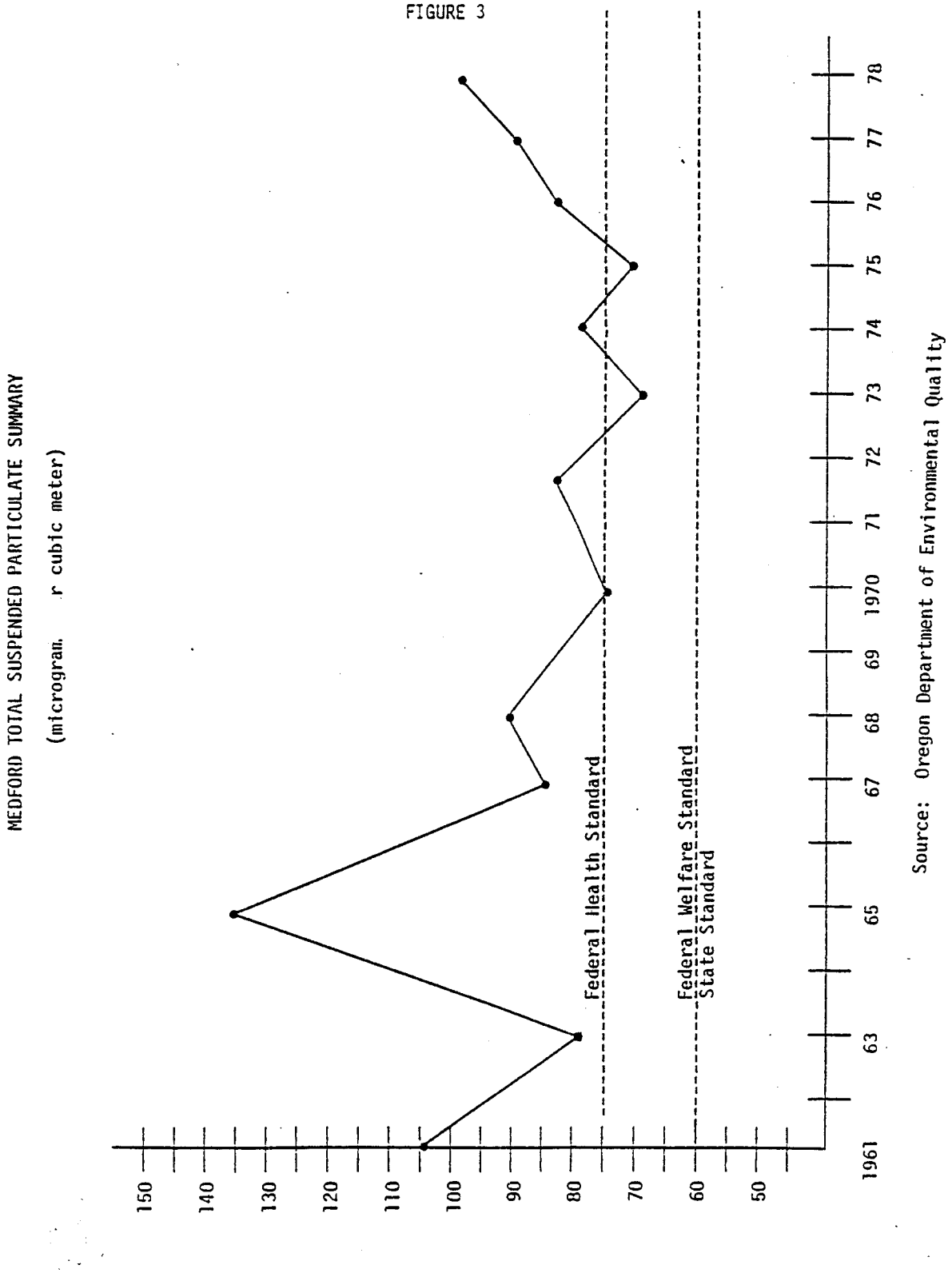
POLLUTANT	AVERAGING TIME	FEDERAL STANDARDS		STATE OF OREGON STANDARDS
		PRIMARY (HEALTH)	SECONDARY (WELFARE)	
SUSPENDED PARTICULATE MATTER	Annual Geometric Mean	75 ug/m^3	60 ug/m^3	60 ug/m^3
	24 Hours	260 ug/m^{3*}	150 ug/m^{3*}	150 ug/m^{3*}
	Monthly	——	——	100 ug/m^{3**}
CARBON MONOXIDE	8 Hour	10 mg/m^3	10 mg/m^3	10 mg/m^3
	1 Hour	40 mg/m^3	40 mg/m^3	40 mg/m^3
SULFUR DIOXIDE	Annual Arithmetic Average	80 ug/m^3	None	60 ug/m^3
	24 Hour	365 ug/m^{3*}	None	250 ug/m^{3*}
	3 Hour	None	1300 ug/m^{3*}	1300 ug/m^{3*}
PHOTOCHEMICAL OXIDANTS	1 Hour*	235 ug/m^3	235 ug/m^3	160 ug/m^3
NITROGEN DIOXIDE	Annual Arithmetic Average *	100 ug/m^3	100 ug/m^3	100 ug/m^3
HYDROCARBONS (NONMETHANE)	3 Hour * (06--0900)	160 ug/m^3	160 ug/m^3	160 ug/m^3
LEAD	Monthly	——	——	3 ug/m^3

Notes: * Not to be exceeded more than once per year.

** 24 Hour average not more that 15% of the time.
ug/m^3 = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter

The areas within the AQMA with the highest particulate levels (Medford, Central Point, and White City) are shaded in the graphic entitled Annual TSP Levels. Identified sources of total suspended particulates and their relative contribution to the AQMA air pollution problem include industrial processes, 23 percent; industrial wood burning, 23 percent, paved road dust, 32 percent; residential wood burning, 12 percent; and, open burning and orchard heating, 7 percent (see Figure 4). These figures will be updated when DEQ compiles a new study of local TSP sources.

FIGURE 3


MEDFORD TOTAL SUSPENDED PARTICULATE SUMMARY
(micrograms per cubic meter)
150
140
130
120
110
100
90
80
70
60
50
1961
63
65
67
68
69
1970
71
72
73
74
75
76
77
78
Federal Health Standard
Federal Welfare Standard
State Standard
Source: Oregon Department of Environmental Quality

Carbon Monoxide (CO): Carbon monoxide is a highly toxic, colorless, odorless gas. The DEQ began monitoring CO levels in the AQMA in 1976. State and federal health standards for CO were exceeded in 178 days during 1977 and 184 days during 1978. The City of Medford is the only community in Jackson County with a CO problem, which occurs primarily in the central city area. The CO health standard is exceeded regularly on Main, Central, Riverside, Court, and several other Medford streets. Automobiles are the major source of CO emissions in Medford; industrial emissions of CO are not likely to be contributing to the problem. Figure 5, graphically illustrates the relative contributive CO sources in the AQMA.

Ozone (0_3): Ozone, commonly known as smog, is formed by the reaction that takes place when reactive hydrocarbons are well mixed with oxides of nitrogen in the presence of sunlight. The controlling factors include concentration, time, and the amount of available solar radiation. The reaction is accelerated when concentrations are high and a plentiful amount of sunlight is available. The AQMA experiences high levels of ozone because of poor ventilation and inversion layers that trap and concentrate pollutants within the valley. In 1977 the AQMA exceeded the ozone standard on 40 days. In the fall of 1976 an aerial survey of ozone concentrations within the AQMA was performed by the Oregon Graduate Center. Those areas within the AQMA where ozone levels were highest on the survey day are the shaded areas indicated in the graphic entitled Ozone Isopleth. Air monitoring information does indicate a frequent ozone problem, especially during the summer and fall months. It also suggests that the problem is widespread and is generated from local sources, though the transport of ozone and ozone precursors is not entirely ruled out. Motor vehicles and industry are the two major sources of ozone precursors in the AQMA. Figure 6 illustrates volatile organic hydrocarbon emission sources and their relative contributions; likewise, Figure 7 illustrates nitrogen oxide emission sources and their relative contribution to the ozone problem.

Other Pollutants: There is presently no evidence that would indicate that the Medford-Ashland AQMA is experiencing problems with sulfur dioxide, lead, or nitrogen oxides. However, these and other hazardous pollutants should be monitored to ensure that the present low levels are maintained and future problems are not created.

Impacts of Air Pollution: Generally, air pollution waste and process discharge emissions have long been recognized as a burden on the area's livability. Significant amounts of discharge emissions can be expected to have a number of adverse impacts on the health of both human and wildlife populations, and can generate other somewhat intangible, but real, economic costs as well.

Briefly, air pollution impacts vegetative resources, both indigenous and domestic plants, by greatly diminishing their natural resistance, and thus, leaving them susceptible to diseases and insect infestations. In Jackson County, this diminished capacity to disease and insect infestation resistance can also result in decreased plant and tree growth, productivity rates, and thus, harvest levels.

FIGURE 4

IDENTIFIED TOTAL SUSPENDED PARTICULATE SOURCES IN JACKSON COUNTY

SOURCE: 1976 DEPARTMENT OF ENVIRONMENTAL QUALITY EMISSION INVENTORY

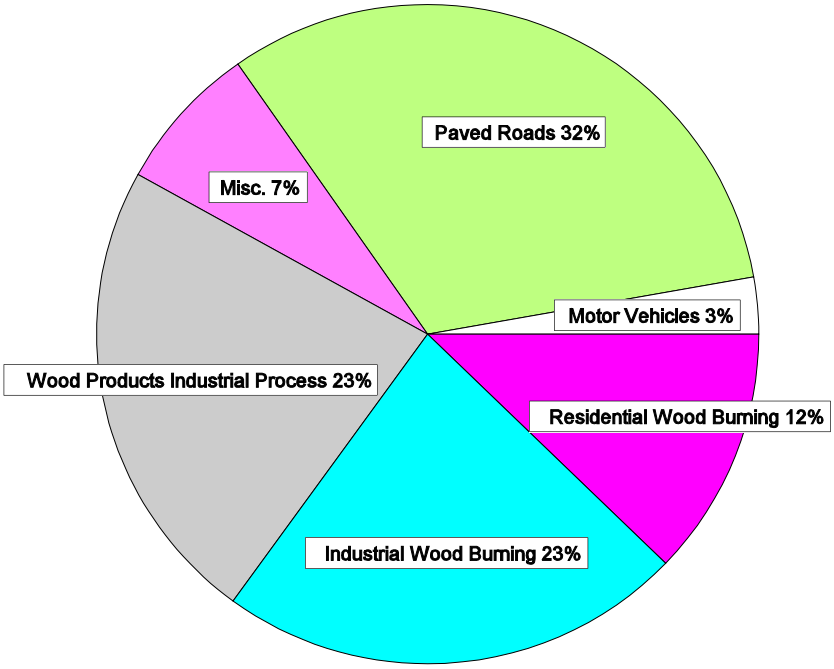


FIGURE 5

CARBON MONOXIDE SOURCES IN MEDFORD—ASHLAND AQMA

SOURCE: 1977 DEPARTMENT OF ENVIRONMENTAL QUALITY EMISSION INVENTORY

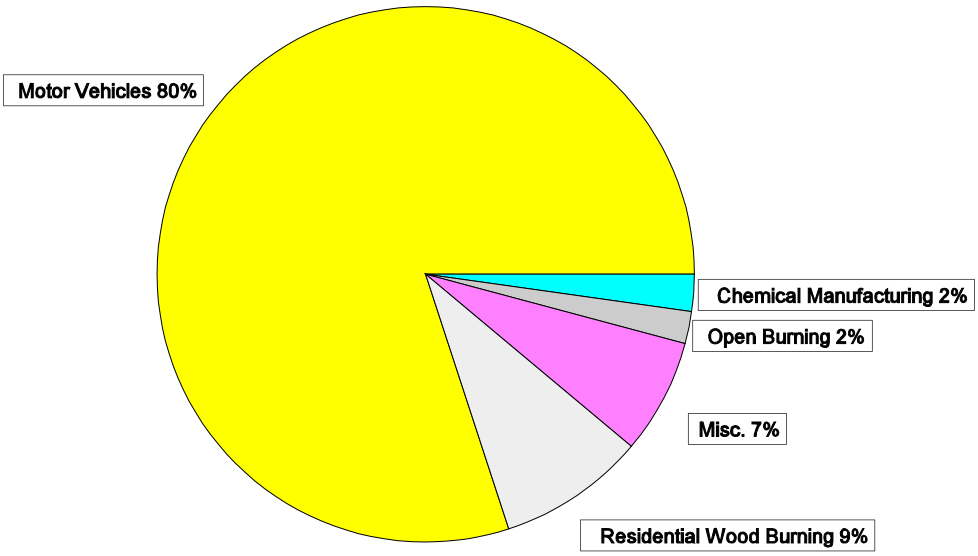


FIGURE 6

VOLATILE ORGANIC COMPOUND EMISSION SOURCES IN MEDFORD—ASHLAND AQMA

SOURCE: 1977 DEPARTMENT OF ENVIRONMENTAL QUALITY EMISSION INVENTORY

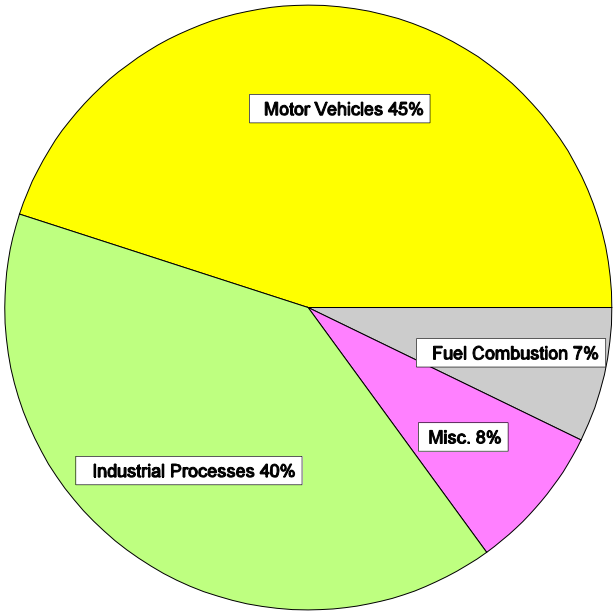
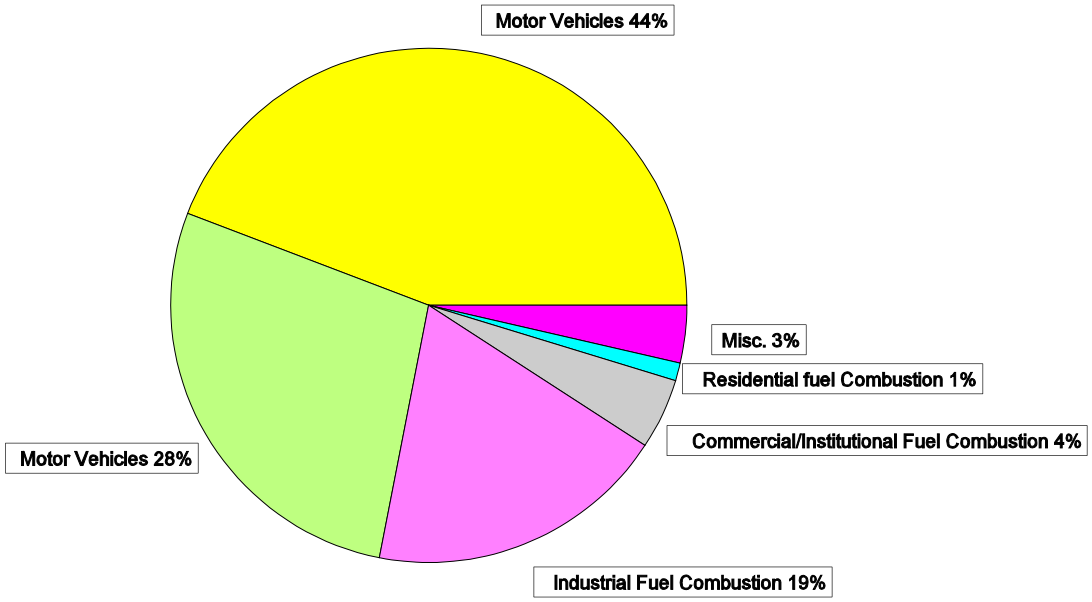
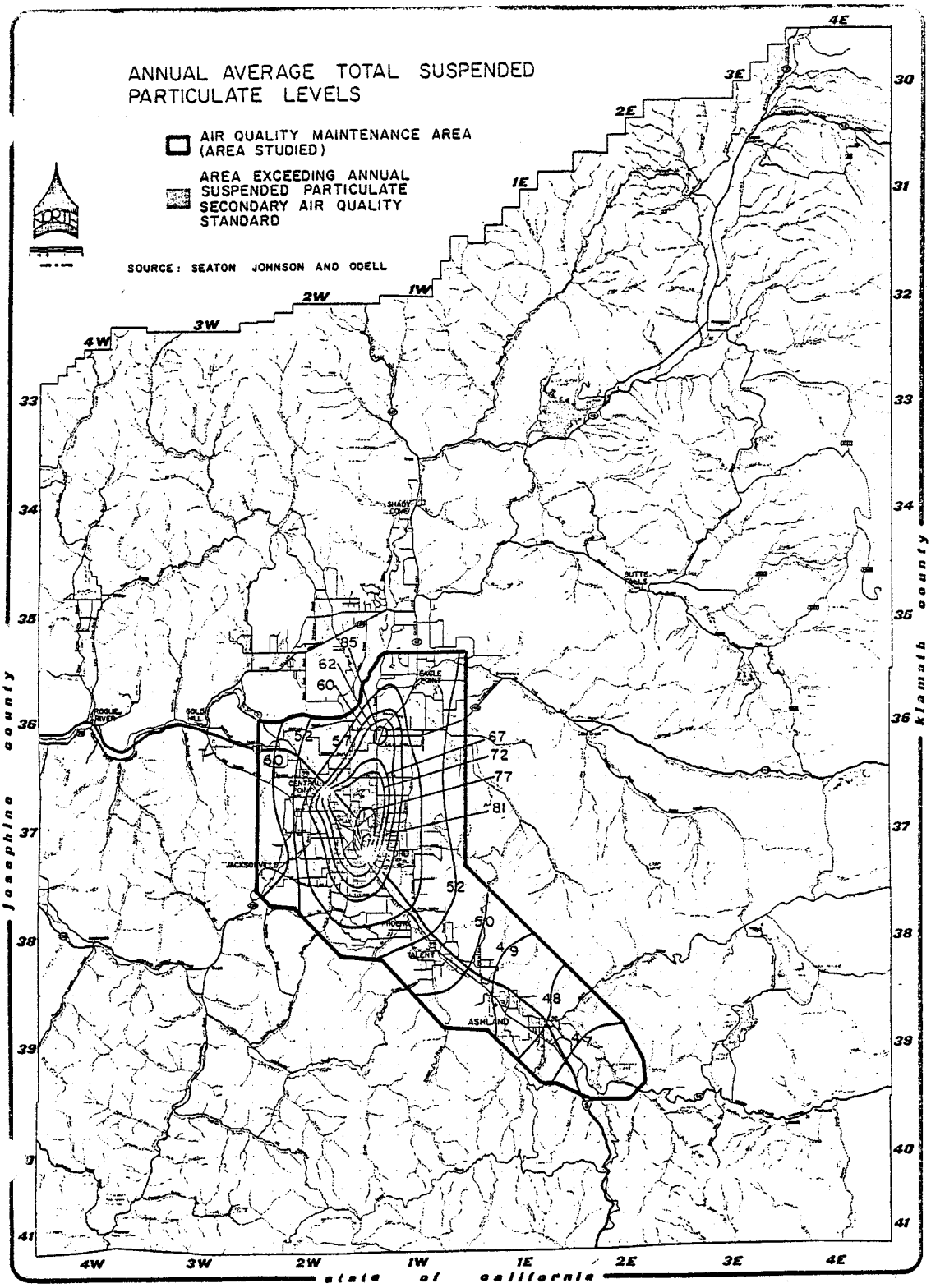


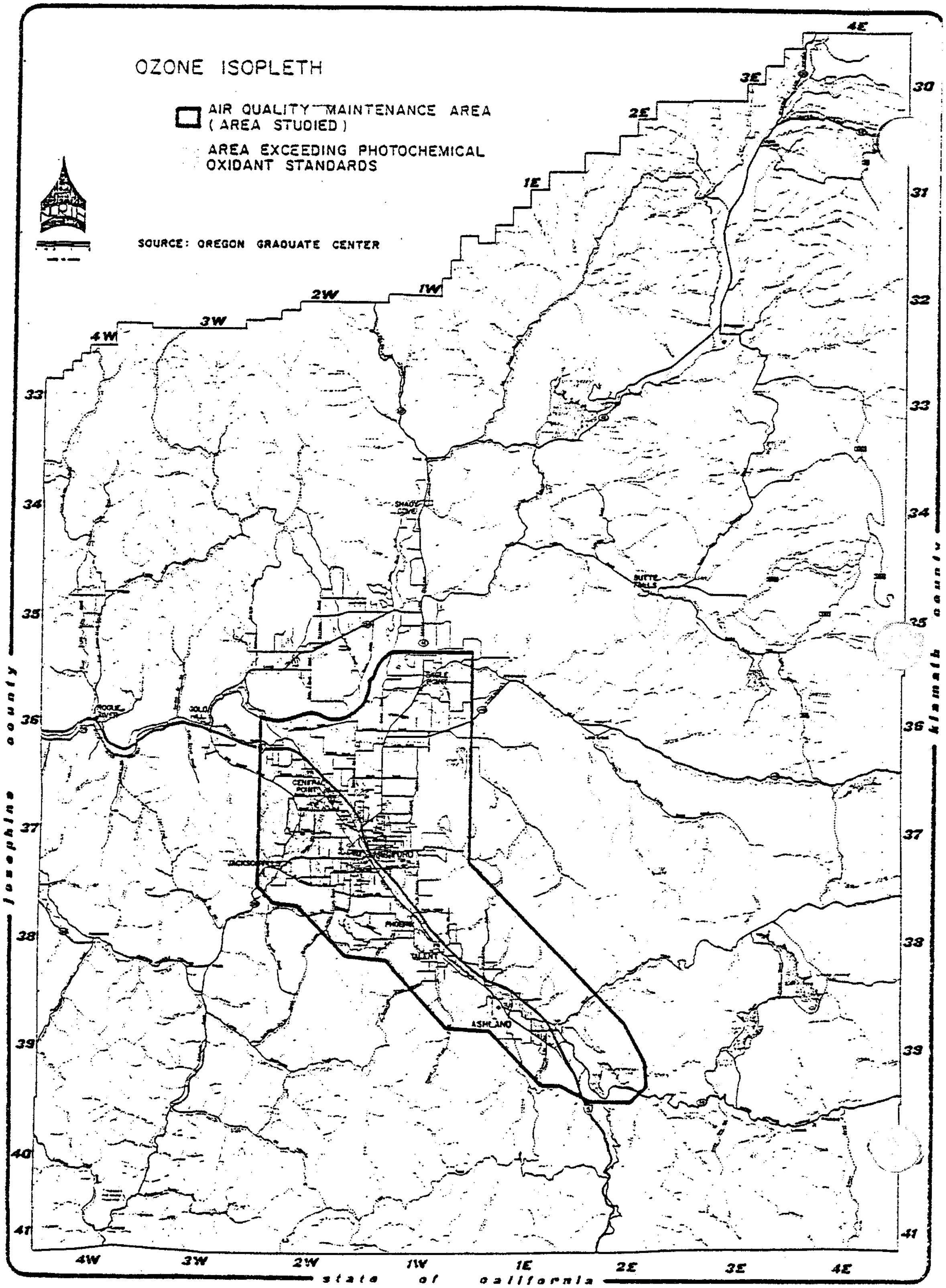
FIGURE 7

NITROGEN OXIDE EMISSION SOURCES IN MEDFORD—ASHLAND AQMA

SOURCE: 1977 DEPARTMENT OF ENVIRONMENTAL QUALITY EMISSION INVENTORY




ANNUAL AVERAGE TOTAL SUSPENDED PARTICULATE LEVELS
AIR QUALITY MAINTENANCE AREA (AREA STUDIED)
AREA EXCEEDING ANNUAL SUSPENDED PARTICULATE SECONDARY AIR QUALITY STANDARD
SOURCE: SEATON JOHNSON AND ODELL
4E
3E
2E
1E
1W
2W
3W
4W
30
31
32
33
34
35
36
37
38
39
40
41
josephine county
klamath county
state of california
SHADY COVE
BUTTE FALLS
EAGLE POINT
ROGUE RIVER
GOLD HILL
CENTRAL POINT
JACKSONVILLE
MEDFORD
TALENT
ASHLAND
85
62
60
52
51
60
67
72
77
81
52
50
49
48
47


OZONE ISOPLETH
AIR QUALITY MAINTENANCE AREA
(AREA STUDIED)
AREA EXCEEDING PHOTOCHEMICAL
OXIDANT STANDARDS
SOURCE: OREGON GRADUATE CENTER
4W
3W
2W
1W
1E
2E
3E
4E
30
31
32
33
34
35
36
37
38
39
40
41
josephine county
klamath county
state of california
ASHLAND

Air pollution also affects local climates by increasing rainfall and fog occurrences in high smog content atmospheres. Other climatic resource impacts caused by increased levels of air pollution include decreased visibility due to haze, which adversely impacts visibility and aesthetic qualities in the county. Increased ambient air temperatures due to the greenhouse effect are another result of air pollution. A secondary, but nonetheless potentially adverse impact increased levels of air pollution might have, especially ozone, regards the availability and amount of usable solar insolation levels. Indicators reveal that during periods of high ozone concentrations, the levels of usable solar insolation are diminished, affecting the efficiency and economics of solar energy systems and devices. A correlation exists between the levels of ambient ozone concentrations and usable solar radiation wherein increased air pollution levels decrease the quantity and quality of usable solar thermal energy reaching ground level.

Numerous private and governmental studies have also shown a substantial correlation between chemicals found in air pollution and human and wildlife health. The diseases known to be related to air contaminants include bronchitis, emphysema, pneumonia, asthma, tuberculosis, nonrespiratory and lung cancers, and cardiovascular disorders. The damage inflicted on a wide variety of materials by air pollution is also well documented. The major impacts are accelerated deterioration of many natural and man-made materials, and shortened useful life spans of these materials. In short, air pollution shortens the life span of all organisms and affects the useful life span of much of the property owned by county residents.

While measuring air pollution damage in dollar amounts is difficult, the price for pollution is paid by everyone, either directly or indirectly. County residents pay increased costs to research and manufacture corrosion-resistant materials in such items as telephone bills (wires and insulation), and automobile prices (metals, paint, and tires), all hidden charges for air pollution. Residents also pay for air pollution in increased medical expenses and time lost away from employment. The federal government estimates that the annual cost of air pollution is in the billions of dollars.

Air Pollution Planning and Control Measures: The Oregon State Legislature created the Department of Environmental Quality (DEQ) in 1969, and charged it with the responsibility of developing and implementing a comprehensive plan for the abatement and control of air pollution throughout the state. Congress, in 1970, passed amendments to the Clean Air Act of 1963, which required each state to submit a State Implementation Plan (SIP) to the U.S. Environmental Protection Agency (EPA) for approval. Each SIP outlines how the National Ambient Air Quality Standards, which are designed to protect public health and welfare will be met in that particular jurisdiction.

DEQ's first SIP was submitted to EPA in 1972. At that time, only one pollutant, TSP, was recognized as a problem contaminant in the Medford-Ashland AQMA. Additional air quality monitoring in 1976 and 1977, revealed that carbon monoxide and ozone are also a problem in the AQMA. DEQ submitted a revised SIP to EPA in 1979, which is currently under review. It is anticipated that EPA will suggest modifications to the SIP for attainment.

DEQ is subject to both state and federal air pollution requirements. The majority of the current Oregon air quality requirements are found in Oregon Revised Statutes (ORS), Chapter 468, and Oregon Administrative Rules (OAR), Chapter 340. Current federal air quality requirements are found in the Clean Air Act, as amended in 1970 and 1977, and administrative rules published in relevant issues of the Federal Register.

States are allowed to set air quality standards and require air pollution control measures that are more stringent than those established by the federal government. In Oregon, local governments are allowed to adopt air quality standards and rules that are more stringent than the federal and state standards, but they must be approved by DEQ prior to implementation. In an effort to reduce its unusually high air pollution levels, Jackson County has exercised its option to propose rules that are more stringent than the existing state and federal requirements. Jackson County's rules were adopted, with some modifications, by the State Environmental Quality Commission (EQC) in 1979.

In March 1979, the EQC adopted the Medford-Ashland AQMA Emission Offset Rule, which requires major new emission sources to offset these new emissions by reducing existing emissions elsewhere in the AQMA. Major modifications of existing emission sources are also subject to the offset requirements. This offset rule applied to sources that have the potential to emit five tons per year, fifty pounds per day, or ten pounds per hour, of particulate matter. The offset rule also applies to sources that have the potential to emit twenty tons per year or 200 pounds per day of volatile organic compounds.

DEQ is responsible for implementing and enforcing all industrial and point source pollution control standards and rules in Jackson County, including the two rules mentioned above. In addition to the above rules, the EQC adopted statewide volatile organic compound (VOC) regulations in December 1978. In the Medford-Jackson County area, these VOC regulations require major emitters to reduce their 1977 emissions by half by 1983. This should result in significant air quality benefits regarding VOC contaminant discharges.

The governor in March 1978 formally recognized the Jackson County Board of Commissioners as the local lead agency, responsible for controlling mobile air pollution sources in the county. The Medford-Ashland Air Quality Advisory Committee (AQAC) examined eighteen transportation-related control measures listed in the federal Clean Air Act as potential control candidate measures. Subsequently, in December 1978 the Medford-Ashland AQAC made a recommendation to the County that the following measures be reviewed for their costs and benefits in controlling such nonpoint, mobile air pollution sources, and where feasible, be implemented as expeditiously as possible.

1) Vehicle inspection and maintenance;

2) Fleet conversion to cleaner engines and fuels;

3) Long-range public transit improvements;

4) Downtown Medford Parking and Traffic Circulation Plan; and,

5) Measures excluded from comprehensive analyses.

More specifically these measures can be summarized as follows:

1) Vehicle inspection and maintenance: Inspection and maintenance is a program which works to lower carbon monoxide and ozone levels by requiring regular inspections of in-use vehicles and emission related maintenance for those vehicles which fail to meet prescribed federal and state emission standards. In April 1979 the Board of Commissioners appointed a Motor Vehicle Emission Inspection and Maintenance

Advisory Committee. In September 1979 the committee forwarded a draft inspection and maintenance ordinance to the Board of Commissioners. In July 1979 the County initiated a voluntary vehicle emission inspection program. From August through December 1979 the county's voluntary vehicle emission inspection program tested nearly 3,000 vehicles, or about 2.5 percent of the county's registered vehicles. The passing rate was 59 percent. Testing was accomplished via a mobile van equipped with two emission analyzers and two inspectors, which offered free emission tests in Medford, Ashland, Talent, Phoenix, Eagle Point, White City, Shady Cove, Prospect, Butte Falls, Jacksonville, and Ruch. Phase II of the county's voluntary vehicle emission testing program is scheduled to run from January through July 1980. During this second phase, the program emphasis will shift from residential communities to working communities, shopping centers, and major employers.

If no transportation control measures are implemented, carbon monoxide emissions from vehicles in 1987 are projected to be 5,700 tons per year. A biennial inspection and maintenance program could reduce this by 36 percent or by 2,100 tons per year, while an annual program could reduce this amount by 40 percent or 2,300 tons per year. To reach the state and federal health standards for carbon monoxide by 1987, a reduction of 3,500 tons per year is needed. Thus, an inspection and maintenance program would provide about 60 percent of the total emission reductions needed for carbon monoxide.

In the Medford-Ashland ozone nonattainment area, there will be approximately 6,800 tons per year of volatile organic compounds emitted from stationary sources, and 3,400 tons per year emitted from vehicles in 1987. These figures assume local industry is able to meet state requirements for control of emissions. A 2,100 ton per year reduction is needed to meet the state health standard for VOC. If a mandatory inspection and maintenance program were to begin in 1982, then a 24 percent VOC reduction, or 800 tons per year, could be achieved with a biennial program, while an annual inspection and maintenance program could reduce vehicle VOC emissions by 29 percent, or 1,000 tons per year. Thus, a countywide inspection and maintenance program could achieve about 40 percent of the total VOC reductions that are needed to achieve the state ozone standard. A report on the county's Phase I inspection and maintenance program can be found in the background document.

2) Fleet vehicle conversions to cleaner engines and fuels: Approximately one to three percent of the vehicles registered in Jackson County fall into the government and private sector fleet vehicle category. Very little information is available at this time regarding the potential for fleet conversions to cleaner engines or fuels. By 1987 it is possible that some of these existing fleet vehicles could be converted, or replaced by, cleaner engines or fuels. In any case these fleets should contain vehicles that emit relatively low levels of carbon monoxide and volatile organic compounds due to increasingly stringent emission standards required for new vehicles by the Clean Air Act. Automobiles manufactured during or after model year 1983 are required to achieve an emission reduction of 90 percent as compared to vehicles manufactured in model year 1970. Converting the existing fleet of vehicles in the county to cleaner engines or fuels, such as electric, gasohol, or solar cells, could achieve about a one percent emission reduction.

3) Long-range transit improvements: The Rogue Valley Transportation District (RVTD) was formed in 1975, and initiated bus service in July 1977, after two years of research and passage of a tax levy. The RVTD's service and ridership have increased

significantly since its inception, from an average of 200 daily riders in late 1977, to about 1,200 daily riders in late 1979. RVTD is currently providing service to Medford, Ashland, Jacksonville, White City, Talent, and Phoenix, and is pursuing service to other local communities. Public transit presently accounts for about one percent of the commuter and shopping trips into Medford's central business district.

Long-range transit improvements are made up of new transportation policies and facilities or major changes in existing facilities. The long-range transit improvements considered by the AQAC consist of a major expansion in RVTD's services, consisting of one or more of the following:

A) Create new bus routes within the existing RVTD boundary;

B) Offer more frequent runs on the existing bus routes;

C) Expand the bus marketing program and erect bus shelters;

D) Expand the RVTD boundary to include all of Jackson County; or,

E) Coordination of other para-transit services such as other private transportation systems, taxis, carpool/vanpool programs, and other specialty services.

A one to two percent reduction in carbon monoxide emissions in downtown Medford might result if public transit were improved. However, it is also possible that there might not be any net reduction in CO emissions if commuters' vehicles which were left at home in order for those commuters to take the bus were then used by other members of the family to shop in the central business area. Several studies have found that for every two percent increase in bus runs or mileage, a one percent increase in bus riders or passenger-miles occurs. It has been estimated that 71 tons per year reduction of carbon monoxide emissions could be achieved through improved public transit.

4) Medford Parking and Traffic Circulation Plan: Parking and traffic circulation plans are a relatively new method of dealing with the cause of CO problems within cities. Basically, such plans assess the trip requirements of a central city area, provide sufficient parking to meet those needs, divert as much through traffic as possible from the impacted area, and develop a land use plan which, if followed, will accommodate the air quality impacts of future developments.

A transportation and environmental consulting firm is currently preparing a Parking and Traffic Circulation Plan for Medford. It is anticipated that in developing this plan, the consultant will research and evaluate the potential traffic, air quality, health, welfare, social, economic, and energy impacts of the following measures: street improvements; parking management; pedestrian malls; park and ride lots; bicycle programs; common carrier (truck) restrictions; improved public transit; carpool programs; staggered work hours; and employer programs to promote carpools, public transit, bicycles, and walking. The consultant's air quality modeling work will include assumptions for such strategies both with and without an inspection and maintenance program. The plan is scheduled for completion by June 1980. The potential emission reduction that could be achieved by a comprehensive parking and traffic circulation plan in Medford will be provided by the consulting firm, Alan M. Voorhees and Associates, Inc.

5) Measures Excluded from Comprehensive Analyses: The basis for excluding any of the 18 potential candidate control measures listed in the Clean Air Act must be because the measure in question will not result in any significant air quality improvements. Exclusion based solely on costs or impacts on any particular segment of the community is not acceptable as a basis for exclusion. At the regular meeting of the City/County Air Quality Liaison Committee during October 1979, it was moved and passed unanimously to recommend that three of the 18 potential candidate control measures be excluded from detailed analysis. The three measures are:

A) Programs to control vapor emissions from fuel transfer and storage operations using solvents;

B) Programs to institute road user charges, tolls, or differential rates to discourage single occupancy automobile trips; and,

C) Programs for retrofit of emission devices or controls on vehicles and engines, other than light-duty vehicles, not subject to regulations under Section 202, Title II, of the Clean Air Act.

Information regarding cumulative impacts of all the transportation control measures analyzed will not be available until the Medford Transportation Study, also referred to as the Medford Parking and Circulation Plan, is available. Generally, the EPA and other state air pollution control agencies have found, based on the experiences of other communities, that vehicle inspection and maintenance programs are the most effective way to reduce transportation related emissions, and that all of the other potential candidate control measures listed in the Clean Air Act will generally reduce emissions in a nonattainment area by a total of five to seven percent. A preliminary analysis of the air quality, health, welfare, social, economic, and energy impacts of the candidate air pollution control strategies recommended by the City/County Air Quality Liaison Committee is found in the background report.

Congress and the EPA are serious about reducing air pollution because of the many adverse effects that can be experienced when air quality standards are exceeded. The measures needed to achieve attainment with federal and state air quality standards must be adopted in a legally enforceable manner by the deadlines set by the Clean Air Act, as amended, and EPA. If these time-frames are not met, economic sanctions may be placed on the Medford-Ashland AQMA. Such sanctions might consist of gasoline rationing, a ban on all major new industrial construction, or a halt to all federal highway and sewage treatment funds.

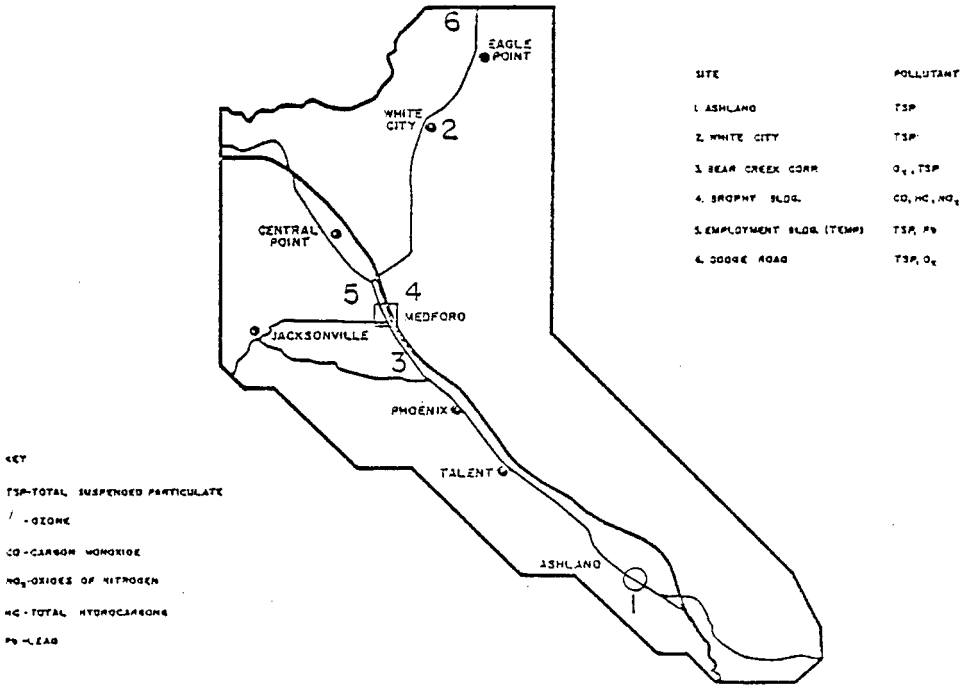
Air Quality Monitoring: Air quality monitoring equipment reveals the amount, either in parts per million or micrograms per cubic meter, of pollution in the air. A specific monitor reveals the quality of the air at the location of the monitor. In order to determine the quality of air upwind and downwind of the monitor, meteorological stations which provide information regarding wind speed, wind direction, and precipitation are needed also. DEQ receives information daily from a meteorological station located at the Jackson County Airport. Additional meteorological stations and air quality monitoring stations are needed in Jackson County to provide information regarding the levels of air pollution, the effectiveness of air pollution control measures, and the movement of air pollutants. One

local industry, 3-M, has a meteorological station and air monitoring equipment located in White City.

Ambient air quality sampling is done by DEQ at various locations throughout the AQMA. These particular monitoring locations were selected because of the potential public exposure to pollutants and because they reflect overall, the poorest ambient air quality conditions. If national air quality standards can be met at these locales, they will indicate that the entire air shed within the AQMA is also meeting them.

Furthermore, DEQ began a special particulate monitoring study in 1979 called the Medford Area Characterization study. The purpose of the study is to determine more accurately the size and sources of suspended particulate emissions in the air shed. The final report of the DEQ study is due in February 1981.

FIGURE 8
MEDFORD-ASHLAND AQMA & AIR SURVEILLANCE NETWORK



WATER QUALITY:

Water is used and reused in a never-ending hydrologic cycle of precipitation, evaporation, transpiration, and runoff. Essentially, no water is gained or lost . . . it merely changes form. People are primarily concerned with and involved in the hydrologic cycle through the impoundment or diversion of surface water, and the pumping of groundwater for a variety of uses. Consumptive uses of water are those which take water, and do not directly return it to the source of withdrawal, such as for domestic, irrigation, municipal, or industrial uses. Nonconsumptive uses include those uses which divert water from a stream or is pumped from

natural underground reservoirs and immediately return it to the source such as fish hatcheries, hydropower, or in-stream recreational use.

Water quality is affected by these consumptive and nonconsumptive uses, which in turn, affect both surface and groundwater supplies and quality. It can thus be seen that the hydrologic cycle touches all parts of the natural and man-made environment, and that water quality management provides a basis for improving the functioning of these natural systems.

The issue of water quality affects both surface and groundwater supplies. Jackson County is rich with a diversity of water resources: The Rogue River and its major tributaries, Bear and Evans Creeks, as well as numerous minor watercourses; the Applegate River and its tributaries; natural and man-made lakes and reservoirs such as Howard Prairie, Hyatt and Squaw Lakes, Lost Creek Reservoir, and others. Water quality problems in the county's watercourses and waterbodies stem from both point and nonpoint sources of pollution. A point source is defined as a discharge into a stream, river, or other water body by way of direct conveyance such as a pipe, ditch, channel, or a sewage treatment plant. A nonpoint source of water pollution includes indirect discharges from natural runoff, timber and agricultural activities, construction and mining activities, and urban storm drainage, as well as from natural resources. Generally, nonpoint sources are much more difficult to control than are point sources. This is because regulatory agencies are aware of the relatively few direct or point sources, as opposed to the wide spread nature of nonpoint source pollution.

DEQ is the lead agency with the primary responsibility for managing water quality in the state under the authority of applicable federal and state statutes, rules, and standards. This function includes long-range planning contained in both the State Water Quality Management Plan and the Rogue River Basin Water Quality Management Plan, current planning, and the issuance of a number of permits that regulate the discharge of waste water into streams, water bodies, or into groundwaters. The State Water Quality Management Plan divides Oregon into major watersheds or river drainage basins, each with its individual river basin water quality management plan. Jackson County is located in the Rogue River basin. The purpose of these plans is to document and set forth a program which preserves and enhances water quality, and which provides for beneficial uses of the public's water resources while preserving environmental quality and the general health and welfare of the people. More specifically, the objectives of these plans and DEQ's responsibilities regarding water quality are:

1) To identify and delineate recognized beneficial uses of Oregon's public waters for water quality management purposes;

2) To establish water quality standards which will describe the quality necessary to serve all recognized beneficial uses to the greatest extent possible;

3) To protect existing water quality where such quality is higher than the established standards;

4) To guide logical and orderly planning and implementation of such waste treatment capabilities and waste controls that may be necessary to accommodate planned future growth and development without sacrificing water quality; and,

5) To identify water quality deficiencies and standards which are not in compliance and to propose and implement the necessary corrective action to resolve the problems.

These state and river basin plans are primarily water pollution prevention programs since, to date, they have emphasized the elimination and control of point sources, such as municipal and industrial sewage treatment facilities.

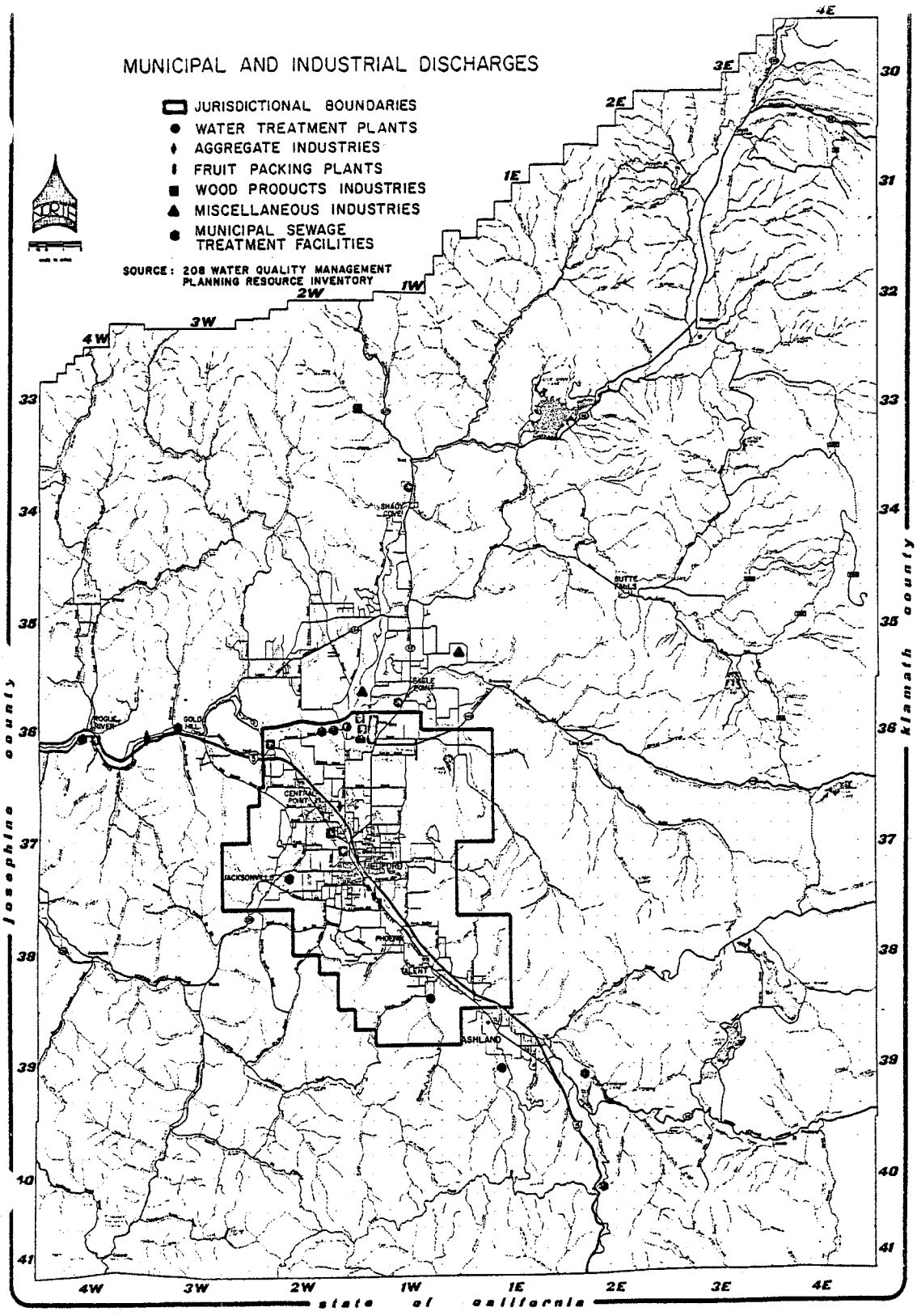
DEQ's proposed Water Quality Management Plan for the Rogue River basin sets forth the beneficial surface water uses to be protected in the Rogue River basin and establishes surface water quality standards in order to serve all the recognized beneficial uses to the greatest extent possible without impairing water quality. (See the background document.) DEQ uses these specific river basin water quality standards and management plans as a compliance or enforcement tool to prevent waste discharges and activities which, either alone or in combination with other activities or wastes, cause or threaten to cause violations of the river basin's general or specific water quality standards.

Two types of surface water quality standards are presently applicable to the watercourses and water bodies in the Rogue River basin: 1) General, descriptive standards that apply to all public waters in the basin, where not superseded by special standards. These general standards are qualitative in nature and are designed to prevent tastes and odors, accumulation of biological slimes and aquatic plant nuisance growths, color, and other unaesthetic conditions which interfere with the recognized beneficial uses; and 2) Special water quality and waste treatment standards specify numerical limits for selected physical conditions and chemical constituents for water, and include but are not limited to, limits for temperature, pH, dissolved oxygen, total coliform bacteria, and certain dissolved chemicals and toxic substances.

In order for DEQ to enforce these standards, the department has been given certain management tools to ensure compliance. Generally DEQ implements its water quality program, in part, through the issuance of permits. The Federal Water Pollution Control Act of 1972 (P.L. 92-500) requires that before waste can be discharged into a stream, a waste discharge permit must be issued. In Oregon DEQ has the responsibility for issuing these permits. DEQ also requires a Water Pollution Control Facilities Permit for the construction and operation of those disposal systems that discharge no effluent into a stream. Both of these permits may only be issued if they are consistent with the federal rules and the applicable portions of the state's and river basins' water quality plan. DEQ must also approve all plans for municipal sewage and industrial waste treatment facilities, both new or expanded, and new or extended sewer systems, prior to the start of construction. DEQ must certify to the EPA that sewage works construction grant applications address a priority need in the state and that they meet state requirements. This certification is required for planning, design, and construction grant applications. The construction of on-site subsurface sewage disposal facilities also requires approval from DEQ. In Jackson County the Sanitation Division of the Department of Planning and Development has authority to issue such on-site permits under contract to DEQ. A detailed listing of DEQ actions affecting land use in the county concerning water quality is provided in the background report.

The map entitled Municipal and Industrial Discharges illustrates the types and locations of point source discharges throughout the county.

Water quality in Oregon is also affected by timber harvesting, and forest practices and management activities. A large portion of the state's and Jackson County's land resource base are comprised of commercial forests, and many watersheds are located on timber producing lands. Timber harvesting and management activities have an affect on local water quality.


MUNICIPAL AND INDUSTRIAL DISCHARGES
JURISDICTIONAL BOUNDARIES
WATER TREATMENT PLANTS
AGGREGATE INDUSTRIES
FRUIT PACKING PLANTS
WOOD PRODUCTS INDUSTRIES
MISCELLANEOUS INDUSTRIES
MUNICIPAL SEWAGE TREATMENT FACILITIES
SOURCE: 208 WATER QUALITY MANAGEMENT PLANNING RESOURCE INVENTORY
4W 3W 2W 1W 1E 2E 3E 4E
30 31 32 33 34 35 36 37 38 39 40 41
Josephine county
klamath county
state of california
CENTRAL POINT
JACKSONVILLE
MEDFORD
PHOENIX
TALENT
ASHLAND
EAGLE POINT
BUTTE FALLS
SHADY COVE
GOLD HILL
ROGUE RIVER

Under the Federal Water Pollution Control Act amendments of 1972, each state is required to address forestry-related nonpoint sources of water pollution, such as sedimentation, debris clogging of streams, nitrogen pollution from fertilizers and slash burning, and potential contamination from herbicides and insecticides. In Oregon the Forest Practices Act (ORS 527.610-527.730 and 527.990), and its rules provide the timber management guidelines and best management practices for controlling water pollution related to forestry activities as required under the federal statutes cited earlier. The State Department of Forestry has the primary responsibility for enforcing the Oregon Forest Practices Act and its rules. A report entitled Meeting Water Quality Objectives Through the Oregon Forest Practices Act, was prepared in 1977 to assess forestry related water quality problems, and to make the determination as to whether the rules contained within the act do indeed constitute the best management practices to control these sources. The report determined that the Forest Practices Act rules have been moderately effective in meeting water quality goals, and as such, were deemed the best management practices to control forestry related water quality problems by the governor with concurrence by EPA. Since virtually all watersheds in the county are located on timber producing lands, and logging and related activities have an affect on water quality, the rules of the Forest Practices Act concerning nonpoint related water pollution problems on such lands and their use and enforcement, become an important variable in water quality throughout the county. Under a recently enacted Oregon law (House Bill 3008), counties have limited ability to control forest operations as they affect water quality. It is not clear at present, what restrictions counties may employ to protect streams and water quality. In any case the Forest Practices Act must adhere to the rules and regulations of the state EQC.

Nonpoint sources of water pollution are regulated by DEQ under the authority of the Federal 208 Program. Locally, the Rogue Valley Council of Governments (RVCOG) is the agency responsible for the development and implementation of the 208 water quality program. This program contains an assessment of the location, type, and severity of water quality problems caused by nonpoint sources. Based on this assessment, priorities for nonpoint source water quality management will be assigned, and best management practices recommended for controlling various sources which typically include agriculture, forest practices, construction, and mining activities, and urban storm waters. During 1977 and 1978, DEQ undertook an assessment of nonpoint sources throughout the state, funded by Section 208 of the Federal Clean Water Act of 1972. From this DEQ assessment, nonpoint problems and their severity as identified in Jackson County are as follows:

1) Streambank Erosion: The lateral movement of a stream channel that undercuts banks and removes soil and vegetation. When excessive, streambank erosion can destroy productive land and impact several beneficial uses of water. The beneficial uses most severely impacted are those associated with fish and aquatic species habitats. In addition, sediment derived from streambank erosion can interfere with domestic and industrial water supplies. Most of the streambank erosion problems probably represent accelerated erosion that results from the management activities of man on the general terrain and especially within the stream corridor.

2) Sedimentation: The presence of suspended or settled solids which interfere with beneficial uses of water. Sedimentation can affect a wide array of beneficial uses including water supplies, irrigation, fish, and aquatic species' habitats, recreation, and aesthetics. The sediment which causes sedimentation problems can arise from both the land and through streambank erosion. Sedimented materials represent a loss of land

productivity, and overall, sedimentation is the most widespread and pervasive nonpoint source problem.

3) Excessive Debris: The presence of logs, slash, and other materials in amounts large enough to hinder the beneficial uses of water. Excessive debris can physically degrade a stream channel and impact several beneficial uses of water, either directly or indirectly. The commonly impacted beneficial use are fish passage and boating. In addition, excessive debris at critical points can cause severe damage to culverts and bridges.

4) Water Withdrawals Causing Stream Quality Problems: Water withdrawal is a consumptive use of a resource that adversely affects other beneficial water uses. The two uses most commonly affected are downstream consumption and fish and aquatic species' habitats. In some cases, water withdrawal reduces stream flow, and therefore, interferes with almost every other beneficial use. Most of the water withdrawal problems occur in areas having natural low flows during summer months. The problem thus represents an aggravation of a natural condition. Water withdrawal problems tend to be confined to moderate and large sized tributaries, because many of the small tributaries in affected areas naturally go dry during summer, and thus, are not suitable sources for water withdrawal in the first place. The appropriation of water rights to a stream has a direct affect on water withdrawal problems. Over appropriation is a problem affecting the county's water courses and resources.

5) Elevated Water Temperatures: An increase in temperature which interferes with aquatic life or other beneficial uses of water. The use most severely affected by elevated water temperatures is the rearing of salmonoid fish. Specifically, the most common impacts on the salmonoids are increased occurrences of diseases, decreases in dissolved oxygen concentrations, and elimination of rearing areas. Elevated water temperatures are related to low flows, high ambient air temperatures, and stream corridor management.

6) Nuisance Algae or Aquatic Plant Growths: Excessive growths which interfere with the beneficial uses of water. Such excessive growths can interfere with water supplies, irrigation, fish rearing, recreation, and aesthetic quality. These growths usually indicate other types of problems in the water, such as high nutrient concentrations, high temperatures, or low water flows. Local water bodies are also impacted by this nonpoint source problem, mainly during the summer months.

A cumulative ranking on the above nonpoint source problems affecting water courses in the county indicates that the most severe composite water quality problems occur on Evans Creek main stem from its juncture with its south fork to the Rogue River; lower Pleasant Creek; Bear Creek main stem from below Emigrant Lake to its juncture with the Rogue River; and, the Applegate River main stem from Copper to Ruch.

As such, surface water quality characteristics of the county can be generally described as follows: Streams in the Bear Creek basin, which drain the most densely developed portions of the county, are of limited quality and do not meet certain state and federal criteria at certain times of the year. Turbidity, suspended sediments and bacteria are the principle causes of these nonpoint related water quality problems. Generally, streams in the remainder of the county, with the exception of Evans Creek, meet or exceed state and federal requirements. However, naturally occurring low flows and the concurrent increase in water temperatures aggravate water

problems during summer months in many county streams, in particular, the Applegate River and Evans Creek watersheds.

The most common and overlooked water quality problem in the county affecting surface waters is stream sediment from granitic soils, generated from nonpoint sources such as mining, timber operations, and urban storm drainage. Other practices such as flood irrigation and increased runoff from development, have also eroded away an excessive amount of agriculturally productive soils, degraded downstream use, smothered fish spawning beds, and caused excessive shoaling, which in turn, affects water temperatures. These conditions are easily seen in varying degrees in nearly all county streams. While recognized as a natural phenomenon, human activity has significantly accelerated erosion and sedimentation.

The county's natural lakes and man-made reservoirs in the Cascades are of generally excellent quality, although Agate and Emigrant Reservoirs have water quality problems during low drawdown in the summer months due to the growth of algae and algae produced toxins, which affect other aquatic organisms. The effects of the new Lost Creek Reservoir on Rogue River's water quality is unknown at this time, as are the impacts of the Applegate dam and reservoir, although these facilities were designed to improve irrigation capabilities and moderate stream flows, and thus, improve overall water quality in these major water courses and bodies.

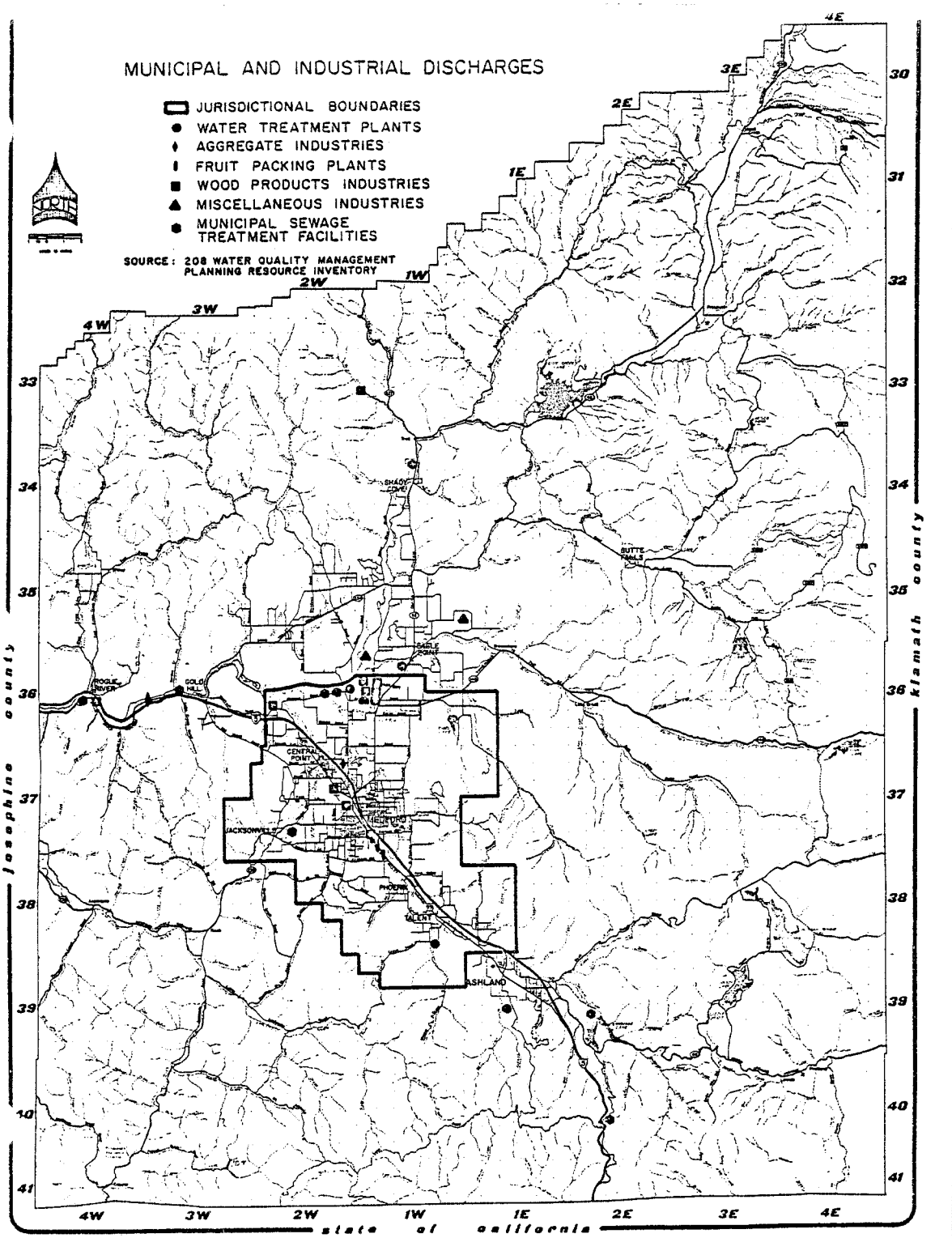
Both surface and groundwater quality are also affected by the presence of on-site subsurface sewage disposal systems as well. Many soils occurring within the county are generally unsuitable for the use of conventional septic systems and drain fields, although alternative waste treatment systems are available such as the evapotranspiration absorption (ETA) system, and the recently approved recirculating sand filter system. Saturation of the soils and groundwater table by sewage and other waste products is affecting the quality of water in many areas of the county, with considerable concern expressed by residents of those areas affected. Some of these areas have deteriorated to the point of becoming recognized public health hazards, and steps are being taken to alleviate these hazardous conditions stemming mainly from failing septic tanks and drainfields. These areas are more fully addressed in the public facilities element of the Comprehensive Plan, and the RVCOG 208 document entitled Greater Bear Creek Waste Treatment Master Plan, spring 1978. The map entitled General Suitability Rating for Septic Tank Sites, illustrates areas throughout the county and their general suitability or capability for the use of conventional, on-site subsurface sewage disposal systems, while Figure 9, indicates the severity of the problem.

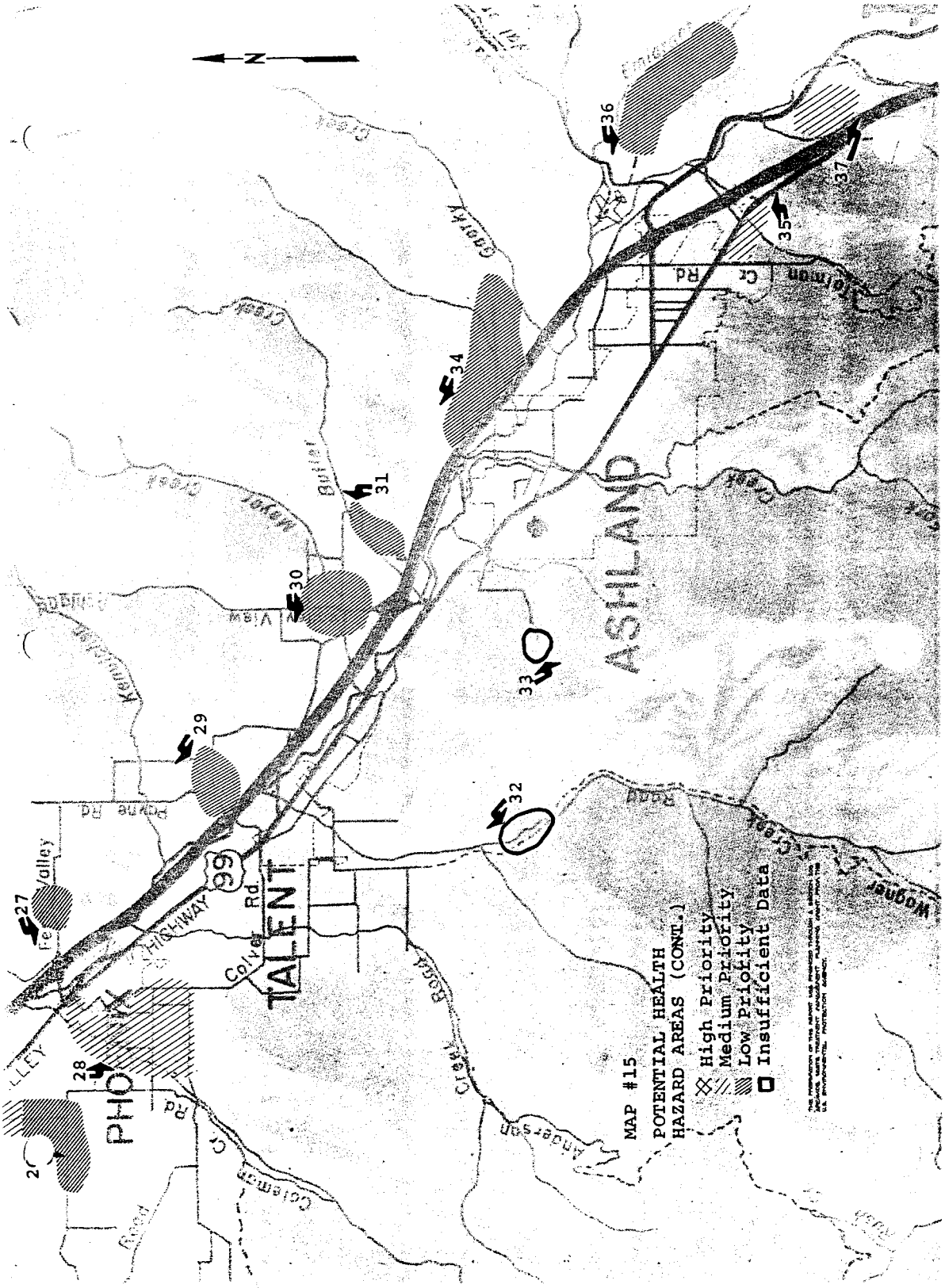
To control health hazards from septic systems, the County administers state regulations regarding the location and functioning of such systems. The County's role as a contract agency of the state DEQ administrating state law, leaves very little opportunity for independent research into developing alternative or experimental subsurface sewage systems, as only those disposal methods given approved or alternative status by the state are allowed.

The following information relative to site selection and functioning of the approved standard septic tank and drain field is taken from the RVCOG's 208 Waste Treatment Master Plan.

> "Soil behavior is based on established criteria for soil related hazards and limitations. The information presented has been generalized on a countywide basis from data supplied by the USDA, Soil Conservation Service. General soil suitability for standard septic systems is based on OAR, Chapter 340, Division 7, September 1975."

FIGURE 9


MUNICIPAL AND INDUSTRIAL DISCHARGES
JURISDICTIONAL BOUNDARIES
WATER TREATMENT PLANTS
AGGREGATE INDUSTRIES
FRUIT PACKING PLANTS
WOOD PRODUCTS INDUSTRIES
MISCELLANEOUS INDUSTRIES
MUNICIPAL SEWAGE TREATMENT FACILITIES
SOURCE: 208 WATER QUALITY MANAGEMENT PLANNING RESOURCE INVENTORY
4W 3W 2W 1W 1E 2E 3E 4E
30 31 32 33 34 35 36 37 38 39 40 41
josephine county
klamath county
state of california
ROGUE RIVER
GOLD HILL
CENTRAL POINT
JACKSONVILLE
MEDFORD
PHOENIX
TALENT
ASHLAND
BUTTE FALLS
EAGLE POINT


N
ASHLAND
TALENT
PHOENIX
MAP #15
POTENTIAL HEALTH
HAZARD AREAS (CONT.)
High Priority
Medium Priority
Low Priority
Insufficient Data
27
28
29
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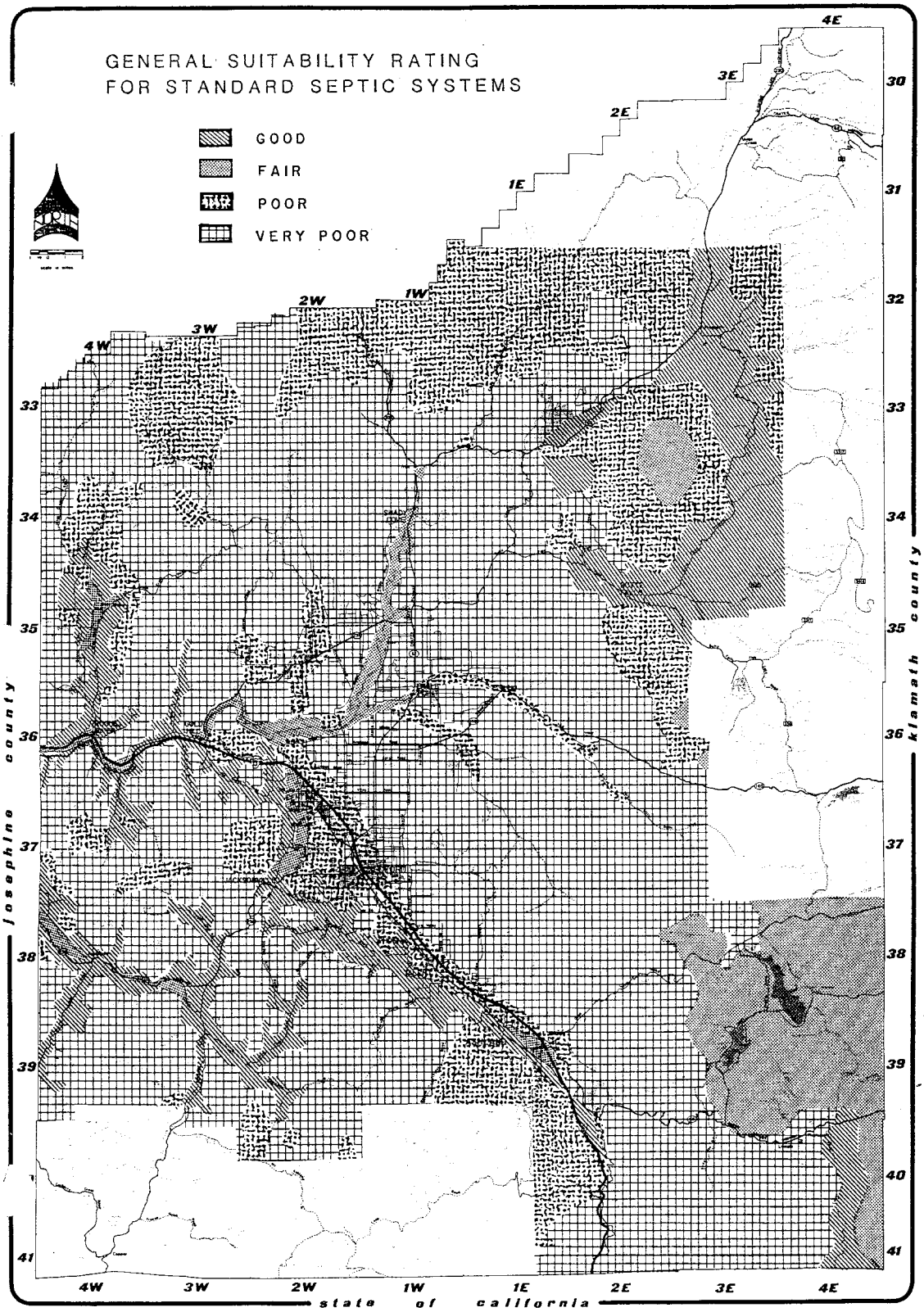

GENERAL SUITABILITY RATING
FOR STANDARD SEPTIC SYSTEMS
GOOD
FAIR
POOR
VERY POOR
4E
3E
2E
1E
1W
2W
3W
4W
30
31
32
33
34
35
36
37
38
39
40
41
josephine county
klamath county
state of california

Septic tanks, contrary to popular opinion, do not accomplish a high degree of bacteria removal, although the sewage does undergo some treatment while in the tank. Since not all the infectious agents will be removed, septic tank effluent is not safe. In fact, as the tank effluent is also septic and malodorous, it is a highly objectionable substance. This does not however, detract from the value of the tank's primary function; to condition sewage so it will not clog the soil absorption system.

Additional treatment of the effluent, including the removal of pathogens, is affected by percolation through the soil. Percolation is a process by which permeable soil permits diffused movement of the effluent away from the drainfield. The soil will, at the same time, provide filtration of suspended materials. Biological decomposition of the organic matter in the effluent will then occur, and the disease producing bacteria will, in time, die out in the unfavorable environment afforded by the soil. If the soil and geographic conditions are appropriate, the combination of the processes will result in the eventual purification of the sewage effluent.

Under natural soil and landscape conditions, the most desirable soils for domestic subsurface sewage disposal systems are those which have adequate depth, an acceptable subsoil water movement rate, and occur on relatively flat to gently sloping landscapes. Soils should not be subject to flooding, ponding, high water table, or have impervious or restrictive materials near the surface. Nor should they have porous substratas which can allow inadequately treated effluent to reach the groundwater system. Unfortunately, not all soils in Jackson County meet these ideal conditions. In fact, they vary considerably in their natural characteristics and qualities, and these, in turn, affect the ability of different soils to facilitate effluent movement, filtration, and biological decomposition.

In order to present a generalized overview of conditions in the county, the USDA Soil Conservation Service has grouped various soils along with other physiographic considerations to produce a general soil map. Four general categories have been established by the Jackson County Department of Planning and Development's soils section: good, fair, poor, and very poor (refer to the General Stability Rating for Septic Tank Sites Map). These categories relate the general soil information to the state rules for standard septic systems, OAR 340, Division 7. Limitations are primarily based on five soil related criteria. The effect of each has been briefly summarized:

Water Table: A high seasonal surface water table limits the capacity of the soil to absorb and filter the additional liquid being discharged by the drainfield or any other soil absorption installation. The probable result is usually contamination of groundwater supplies or the surfacing of the untreated effluent, or in some instances, both.

Impervious and Porous Rock Material: Soils which are shallow and overlie bedrock or other impervious layers do not have adequate volume to absorb and filter sewage effluent. In addition, dense bedrock acts as an impervious layer which can conduct untreated effluent laterally for long distances, thereby endangering underground water sources. Conversely, coarse grained material, gravel, cobbles, and boulders, mixed with some fine materials, permits sewage to percolate too rapidly to be filtered. Again, groundwater contamination is a potential result.

Slope: The natural slope of the landscape affects both the manner of sewage effluent distribution and the level of free water in the soil. Soil absorption systems installed on sloping sites must also make allowances for groundwater entering the area from higher elevations, either as surface runoff or as water moving down slope within the soil. Either condition raises

the free water level in and around the disposal system causing absorption and filtration to become more difficult. A curtain drain intercepting groundwater flow can improve this situation. Slope and depth to restrictive or impervious layers are intricately related. The steeper the slope, the deeper the requirement to either of the two layers. This is due to the increased possibility of effluent surfacing below the drain field as slope increases.

Floodplain: Subsurface sewage disposal systems installed in floodplains subject to stream overflow create a serious environmental health hazard. Inundation of these systems causes contamination which greatly increases the risk of contracting communicable diseases.

Permeability: Very slow movement of water through a soil will not provide adequate absorption of sewage effluent or exchange of air, whereas extremely rapid movement of waste material constitutes a potential pollution hazard to groundwater supplies. High shrink-swell clay soils, for example, are too dense to allow adequate movement of air and water, and they tend to become clogged when effluent movement is restricted, compounding the problem. In general, medium textured soils containing equivalent amounts of sand, silt, and clay particles serve as the best filter material. Soil permeability is also a function of structure (natural soil aggregation) and pore space (void space, shapes, and sizes of pores).

Approved Alternative Sewage Treatment Systems:

The Environmental Quality Commission (EQC) has approved a geographic region rule that allows the use of a septic system previously considered experimental. This system, commonly called an ETA (Evapotranspiration Absorption), is designed primarily for use in impermeable clay soils prevalent in the Bear Creek Valley. The ETA system works primarily on the principles of evaporation by heat from sunlight, and transpiration by high water-use plants seeded on the cover soil over the system. Absorption in the ETA system provides very little of the actual treatment, as opposed to the standard septic tank and drainfield.

In order to qualify for an ETA system, a site must meet the following criteria:

1) Receive less than 25 inches of rainfall annually; and,

2) Have a ground slope of less than 15 percent; and,

3) Have soils and position that are moderately-well to well drained; and,

4) Yield clay soils a minimum of 30 inches deep; and,

5) Have open exposure to facilitate adequate insolation for evaporation.

Another approved alternative disposal system is the sewage stabilization pond, which functions primarily through evaporation of diluted sewage effluent from a shallow, open pond. Site selection criteria for this alternative system is nearly as stringent as other disposal methods as it requires a 300 foot setback from all property lines and dwellings, an adequate supply of water with which to dilute the effluent, a relatively level site for pond construction, and a site where annual evaporation rates will exceed annual rainfall. The DEQ also requires pond design to be developed by either a registered engineering firm or a registered sanitarian.

Land disposal of effluent by irrigation is also an approved alternative sewage disposal system, but the effluent to be irrigated must be first treated and cleaner than the product of a standard septic tank. The effluent is then sprinkler irrigated on a parcel of land with position, soils, and groundwater conditions considered suitable by DEQ. The land must be planted with vegetation not intended for human consumption. A storage area for periods when irrigation is not feasible, such as periods of high rainfall, is also required.

Another DEQ approved alternative septic tank treatment system is the previously experimental recirculating sand filter system, which was voted by the State Legislature to be made available to the public as of January 1, 1980. This system adds a large concrete, sand and gravel filled box to the standard septic tank and drain field which adds another effluent treatment process before the effluent runs into the standard drain field. A sump pump regulates flow into the sand filter box. DEQ has tested four such systems in the county and has found they produce a cleaner effluent than other conventional systems.

These recirculating sand filter systems will provide some relief in areas of the county where there is insufficient soil types or depth to allow adequate filtration/treatment of sewage effluent by standard septic systems and drain fields, or in some instances, where groundwater table problems preclude the installation of other types of systems. Sand filter systems are not however, a universal answer for such areas/conditions, but they might help residents who have previously been denied a permit for standard or conventional systems because of such natural constraints. The primary advantages of the recirculating sand filter system are: 1) After the sewage effluent passes through the sand filter, the discharge is supposedly clean enough that it poses little threat to the quality of any water it might come in contact with. This factor could also reduce future occurrences of public health hazards from failing conventional systems, and thus, potentially reduce the need to service such areas with sanitary sewers. This, in turn, could reduce expensive regional treatment plant expansions above those deemed necessary to serve future urban area population needs; 2) Such systems can be used on lands with up to a 30 percent slope with only a foot of soil under the surface. Whereas standard systems only work on slopes of 25 percent or less, with a minimum of three feet of earth under the surface; and 3) It might take some development pressure off of the agricultural lands, by allowing such development to occur on otherwise nondevelopable lands which could not obtain a septic permit for a standard or conventional system, and thus, ease the growing demand for rural homesites on resource lands. The primary disadvantages of the recirculating sand filter systems are: 1) They are among the most expensive of the approved systems, costing somewhere between $8,000 and $9,000 at 1979 prices; 2) It is a highly technical and relatively delicate system requiring continuous maintenance after the system is installed to keep it functioning properly; and, 3) It might open considerable rural lands for development that haven't been developable before, causing the county's population to spread. Whereas the County has denied nearly 50 percent of the applications for standard septic tank systems since 1973, because of the natural limitation characteristics of much of the soils and topography of the rural areas, the Sanitation Division anticipates a 90 percent approval rate for the recirculating sand filter system.

Permits for the ETA and recirculating sand filter systems are issued by the County, but permits for the sewage stabilization pond and land irrigation systems must be obtained directly from DEQ.

Experimental Systems Program:

DEQ and various counties are testing several means of treatment and disposal of sewage wastes. Hopefully through this experimental program, suitable sewage disposal systems will emerge that will overcome many of the shortcomings and deficiencies of building sites considered unsuitable for standard design septic systems.

As of November 1978, the state has issued 145 permits for 15 different types of experimental septic systems, 50 of which were issued in Jackson County. These types of systems are designed to overcome such problems as insufficient soil depth, highly restrictive soils, water table problems, and insufficient area situations.

Many of Jackson County's 50 experimental systems have been in continual use for nearly two years. Although information on the systems is still inconclusive, some of the systems do show considerable promise, some have been rather disappointing.

Originally, it was planned that the experimental systems would be monitored for two years to determine which types might be considered alternative to the standard septic system. At the onset of the program, it was felt that a two-year testing period would be sufficient to determine how well the various systems functioned. During the past year, it was decided by DEQ that two years was not a long enough testing period. Consequently, all new systems being installed will be monitored from three to five years.

The following provides highlights and descriptions of some of the more promising experimental systems under consideration and testing by DEQ:

Oversized Drain fields: Jackson County currently has permits issued for 14 experimental, oversized drain fields. Most of the systems are similar to the standard septic system except for size. The principle behind the oversized system is to create more absorption area, hopefully overcoming the drain field failure problems associated with slow drainage in highly restrictive soils.

Several of the systems, in addition to being oversized, incorporate a pressurized equal-distribution system allowing for small amounts of sewage effluent to be distributed to all portions of the drain field at the same time. Systems with this distribution technique are designed primarily for use in the most highly restrictive soil situations.

Although monitoring of the systems is incomplete, they appear to be functioning with no obvious problems in most of the soil situations being tested. Very high water levels in the trenches of the systems installed in the heaviest soils indicate that more site evaluation and sizing criteria work may be needed. Most of the problems encountered involve some of the mechanical equipment in the more elaborate pumping systems. More monitoring will be needed before system suitability can be determined. Cost for this system is quite variable, depending on soil characteristics, and whether or not pumping and equal-distribution techniques need to be implemented.

Composting Toilets: Two permits have been issued for composting toilets in Jackson County but neither unit is in use. Both units are of the Clivus Multrum type. One unit is being installed on a site that has very shallow soil over rock. Gray wastes will be disposed of via a recirculating sand filter. The other will use a reduced size drain field for gray waste disposal.

Because of the county's recent entry into the composting toilet program, no local information is available concerning the various units. However, in February 1978 DEQ issued a report on the progress of the state's experimental composting toilet program. At that time, 33 permits had been issued for various types of composting toilets and gray waste treatment/disposal systems. In February 12 applicants had not yet completed building their homes, leaving 11 compost toilets in use. Of these 11 units, four reported fly problems (three Clivus Multrum and one Toa Throne) during the summer months; seven had liquid problems (two Biu-Lets, four Ecolets and one Clivus Multrum; twice, rising winter water tables leaked through the Clivus Multrum's compost retrieving hatch, filling the units lower composting chamber). One Biu-Let became dehydrated. The owner has had to add tap water to the system from time to time. One family had their Biu-Let composting toilet removed after running into liquid build-up problems. Reports tend to indicate that the smaller units have more frequent problems than the larger units.

It's important to point out that the various composting toilets have their limitations. Their function involves a biological process that reduces human wastes to humus compost. They do not dispose of all human wastes. The State of Oregon requires that all liquid wastes (gray wastes) be disposed of in an approved manner, necessitating the installation of a separate means of gray waste treatment/disposal.

Persons considering a composting toilet should plan on spending a minimum of $800 to $1,500 on just the compost toilet and hardware. This figure does not include the cost of installation or the gray waste treatment/disposal system. A complete package could cost between $1,800 to $2,000.

The composting toilet has achieved the status of approved alternative system only recently as it has become an approvable toilet fixture under the rules of the Department of Commerce. DEQ rules require a full sized drain field area as so many homeowners with these units have been dissatisfied and have replaced them with standard toilets.

Deep Agricultural Draintile: Several permits have been issued for agricultural draintile systems in Jackson County. These systems were proposed as a solution to sites that are severely affected by high water table problems. The most significant feature of these systems is a drainage system that encircles the entire drain field area. Critical to site selection for this drainage system is a low area, such as an entrenched stream, in which to outlet the drain. These systems are only now being installed and no information is available on their performance.

In addition to the contamination problems associated with failing septic systems, in some areas of the county, the sewer system remnants of the World War II Camp White army facility presents water quality degradation and health problems to some county residents at times as well. When the army dismantled most of its facilities at Camp White (now the unincorporated White City area) after World War II, it sealed off about 800 connections to the sewer lines serving the military facility. The problem arises from the failure of many of these seals, over a thirty-year period, allowing significant infiltration of storm waters into the existing pipeline network and overloading the system's treatment lagoons during heavy rain storms. This additional infiltration causes the treatment lagoons to exceed their capacity and overflow, causing raw sewage to be discharged directly into the Rogue River. Subsequent to such events, downstream users are subjected to contaminated water supplies and possible health hazards. During such occurrences, the City of Gold Hill's residents must boil their drinking water. The Bear Creek Valley Sanitary Authority (BCVSA) is aware of these problems, as is EPA, and actions are

pending to alleviate the situation. Gold Hill is also in the process of building a water treatment plant to mitigate their drinking water problems.

Water which lies beneath the land surface is called groundwater. These waters are also a critical element of the hydrologic cycle. Man primarily affects the quality of these groundwaters through the use of subsurface sewage disposal, the polluting of surface waters that recharge groundwater aquifers with fertilizers, urban runoff, sediment from forest and farming operations, development activities, and the removal or displacement of natural vegetation. Groundwater quality is also affected by the geology of local aquifers, depth of water bearing zones, permeability, and other factors.

Groundwater is contained in underground geologic formations called aquifers, a permeable formation of rock material. Groundwaters occur in zones of saturation within the aquifer, and these zones occur at different depths within the same aquifer or geologic formation. Groundwaters become recharged or replenished by infiltration of rain, snowmelt and surface water, or by seepage from a stream, lake, or river, and in some instances, precipitation percolates directly into an exposed formation or aquifer. Stored groundwaters are released through evapotranspiration, by outflow to springs and leakage into other water bodies, and by direct discharge from well pumping. An aquifer is thus, a natural underground storage reservoir, with a continuing and complex interplay between surface and groundwater withdrawals and infiltration/recharge.

Although many impurities in aquifer recharged waters may be filtered out as this water moves through the soil and overlying geologic formations, this filtering is not absolute. The possibility of reducing the quality of groundwaters occurs with failing subsurface sewage disposal systems, leaking sewer lines, unsealed sanitary landfills, and a host of other point and nonpoint sources. If an aquifer is dependent on lakes, streams and wetlands for its recharge, the pollution or depletion of those surface waters will allow the subsequent pollution and depletion of the groundwater resource. Thus, poorly planned waste disposal, heavy use of fertilizers and other chemicals in forest and farm operations, and other practices in development activities can allow undesirable and potentially damaging substances to enter the groundwater resource. The areas of groundwater recharge for the valley regions in the county are the surrounding hills and mountains, and the streams entering the valleys from these higher elevations. Therefore, protection of water quality in such water resources also protects the quality of groundwater. This is especially important in Jackson County since so many users obtain their potable water supplies by individual wells tapping the groundwater resources.

The main aquifer present in the Bear Creek Valley occurs in the alluvial deposits found on the valley floor. The alluvium in the upper end of the valley (Ashland/Talent) is generally very thin, lies above the water table, and is susceptible to pollution. The aquifer for this area is recharged by the precipitation that infiltrates the land surface. The most productive alluvium aquifer is found in the lower end of the valley, specifically in the Medford-Agate Desert area. It is here that the alluvium reaches thicknesses of 100 feet (Agate Desert) and averages 30 feet on the valley base area. It is usually saturated from 10 feet to 15 feet with water. In the lower valley, groundwater recharge generally occurs along the valley margins, with movement toward the stream bottoms where most discharge occurs.

The other known aquifer for the Bear Creek Valley is the Hornbrook formation, which is situated along the southwest margin of the upper valley. The sandstone beds of this geologic formation form an aquifer, with seepage carrying water along bedding planes as well as in the weathered

granitic rock underlying the sandstone dips northeast beneath the impermeable mudstone of the valley floor. The northeast dip of the Hornbrook formation, and consequently its artesian characteristics, decrease in moving toward the lower end of the valley.

The absence of large producing aquifers in the area is reflected in the low base flows of local streams and the typically small yields produced by wells tapping the groundwater reservoir. The natural recharge rate to the groundwater reservoir in the entire Rogue River basin is about 1.7 million acre-feet per year with about 75 percent of the recharge occurring in the upper Rogue River basin section within Jackson County. Generally, inferred directions of groundwater movement, based on water levels in wells, is from areas of recharge toward areas of discharge. In other words, movement of groundwaters within the local aquifers is down valley, in the same general direction as the surface drainage.

Although exceptions are many, some generalizations can be made as to the relationship between different geologic units and overall groundwater quality, as well as with typical yields. As a result of U.S. Geologic Survey's geohydrological investigations, it is possible to relate water quality to various geologic units, and thus, give an overall indication of potential groundwater quality characteristics. This can also be correlated to general water quantity characteristics as well, from the appropriate section in the natural and scenic resources element of the Comprehensive Plan. The following are geologic units commonly found throughout the county, and the typical water quality characteristics normally associated with each unit:

1) Alluvium: Commonly yields water of the calcium bicarbonate type. The water is generally hard to very hard, but dissolved solids are usually not excessive. Water from alluvium is likely to be of generally good chemical quality for the most part, except for excessive iron in shallow zones, and is free of most high concentrations of fluorides and boron.

2) Colestin Formation: Yields calcium sodium bicarbonate water probably of suitable chemical quality for most uses. On the average, this water is softer than that from alluvium, but has a somewhat higher boron and fluoride concentration, and also, the water may be saline in some areas.

3) Umpqua Formation/Nonmarine Sedimentary Rocks: This formation varies significantly as to the type and chemical nature of water in different areas. It yields mostly calcium bicarbonate water, except in the Sams Valley area where sodium bicarbonate water is dominant. Wells in a few areas north of Medford yield sodium chloride water. The high sodium yield water from the Umpqua Formation is usually of suitable chemical quality, but some chemical constituents in excessive quantities occur in a few areas.

   It may also be too saline for use in some areas, and may be saline below moderate depths in most areas. Sodium bicarbonate water is more likely to contain arsenic than other types of water. Excessive arsenic in drinking water can cause chronic poisoning. The southwest part of Sams Valley and the area between Medford and Jacksonville, have been noted for their high concentrations of boron, with quantities toxic to certain types of plants reported in some wells. Water from numerous wells near Ashland are high in various mineral constituents and carbon dioxide. Also found in some areas around Ashland, is a highly concentrated sodium bicarbonate chloride water, locally known as Lithia water.

4) Hornbrook Formation: Yields from the Hornbrook Formation are of variable chemical quality, although they are generally adequate for most uses.

5) Granodiorite (Quartz Diorite): Water is usually of good chemical quality.

6) Applegate Formation: This formation yields two distinct types of water, namely calcium bicarbonate and sodium bicarbonate. This formation is too variable to predict the particular type of water in a given area and the water is generally hard. The type of water yielded may depend upon the particular unit lithology penetrated. Water produced from the metamorphic unit in the formation is commonly high in both boron and fluoride, with boron repeatedly present in sufficient concentration in some wells to be toxic to certain plants. Boron and fluoride are likely to be important constituents of the sodium bicarbonate water from this formation.

On a more refined level, the U.S. Geological Survey analyzed groundwater quality characteristics in the Ashland and Medford quadrangles based on water well reports submitted to the state engineer from 1955 through August 1969, and published in their respective Hydrologic Investigation Atlases. The following discusses local water quality for these areas and is extrapolated from the cited USGS Atlases (HA-392 and HA-421).

1) Medford Quadrangle (HA-392): In the general Medford area, principle groundwater quality problems include excessive hardness, fluoride and boron. None of the 77 samples analyzed exceeded the fluoride limit of 2.0 milligrams/liter (as set forth by OAR, Chapter 33, Section 42-210), but none exceeded the nitrate limit of 10 milligrams/liter. Large amounts of nitrate can cause methemoglobinemia or "blue baby effect" in infants. Only a few samples contained more that the recommended limit for iron (0.30 mg/l). Excessive iron causes staining of plumbing fixtures and laundry, and can give a peculiar taste to the water. In the Medford area, water that contains excessive iron is likely to be unsuitable for other reasons also, such as being too saline.

   Sulfate concentrations in excess of the recommended limit (250.0 mg/l) was exceeded in only one sample. Sulfate causes permanent hardness of water, and in excessive concentrations can have a laxative effect on persons not accustomed to such water. The few samples (5) that had more than the recommended chloride limit (250 mg/l) also were those waters having more than the recommended limit for dissolved solids. Chloride in excess of about 500 mg/l, and dissolved solids in excess of 1,000 mg/l, give a salty or mineral taste to the water. As stated earlier, none of the samples exceeded the nitrate limit; however, because high concentrations often result from pollution by failing subsurface sewage disposal systems, it may be advisable to have bacteriological checks made on water that has more than about 10 mg/l of nitrate. Most of the water wells sampled were considerably harder than was the Medford public supply from Big Butte Springs (40 mg/l).

   Sodium bicarbonate water in the Medford quadrangle area is likely to contain boron in excess of one mg/l. While necessary in irrigation water up to about .05 mg/l, boron in higher concentrations has a toxic effect on plants. Some plants are more sensitive to boron than are others. Among the more sensitive plants are citrus, peaches, apples, pears, and walnuts. Water that contains more then 4 mg/l of boron may be unsuitable even for tolerant crops. Of the 77 samples analyzed for the Medford quadrangle, nine had boron concentrations in excess of 4 mg/l. Sodium bicarbonate water is also more

likely to contain excess arsenic levels, above the recommended permissible limit of .05 mg/l, than are other types of water, but the permissible limit was not exceeded in any of the five tested sodium bicarbonate samples.

2) Ashland Quadrangle (HA-421): Groundwater in the Ashland quadrangle is generally of good chemical quality, although most is hard, and some contains excessive amounts of iron. However, excessive iron is likely to be a problem only in some wells yielding waters from alluvium or very shallow, nonmarine sedimentary rocks. Excessive chloride probably occurs only near the Lithia area, or along some fault zones. Concentrations of fluoride and boron are not a problem in the Ashland area as they are in places to the northwest in the adjacent Medford quadrangle.

   Excessive sulfate is not likely to occur. However, obnoxious odors caused by small amounts of hydrogen sulfide have been reported for some wells, but do not necessarily indicate a high concentration of sulfate. No samples exceeded the nitrate limits. Most of the groundwater is considerably harder than the Ashland municipal supply (28 mg/l). All waters to be used for irrigation are suitable for that purpose.

   A more detailed listing of the location and specific chemical analyses for about 250 samples of groundwater taken from various locations throughout the county is shown in a table contained in the background report under the water quality section.

Water quality in Oregon is the primary responsibility of a myriad of federal and state agencies, under the authority of a variety of statutes, rules and regulations. In addition to those DEQ responsibilities cited earlier, the Oregon State Health Division monitors and enforces safe drinking water standards for public water supply systems, such as restaurants. Municipal water supplies come under the jurisdiction of the EPA offices in Portland, authorized by the Federal Safe Drinking Water Act which sets turbidity and bacteriological standards, among others, for drinking waters. The Oregon Forest Practices Act and its rules regulate forest operations that impact water quality. Jackson County's primary responsibilities regarding water quality concern the issuance of permits for wells and for subsurface sewage disposal systems, and ensuring that development activities do not contribute significantly to water quality degradation. From this perspective, the County's role in meeting the statewide planning goal for environmental quality as it regards water quality, is primarily to determine the carrying capacity of the planning area's water resources and ensure that all plans and programs affecting these resources will not impact or exceed these capacities through the review and coordination of all plans and programs affecting waste and process discharges as applicable to the county's jurisdictional boundaries.

LAND QUALITY:

Land resource characteristics in the county are extremely variable, from mountainous uplands, plateaus, and meadows to valley floors, terraces, and foothills. Within each of these physiographic features there occurs unique blends of geologic, soil, meteorologic, hydrologic, vegetative and wildlife conditions that create distinct ecosystems with various opportunities and constraints for development activities on a site-specific basis. Land use planning and management require an adequate data base, an understanding of the various environmental components involved and their relationships with regard to the potential uses and physical limitations of the land in order to effectuate practical measures that allow development to occur, but not at the sacrifice of adversely impacting the natural environment or its quality. The continued existence and well-being of these ecosystems and their components greatly enhance

the quality of human life too; for to destroy or adversely impact the habitat upon which all organisms are dependent is to degrade the natural environment of which man is a part. It is not possible within the context of the Comprehensive Plan to address all the features, issues and abuses of land in the county. The subject of land resource quality is therefore, limited to summarizing the natural conditions most prevalent in the county.

Generally, the land forms occurring in Jackson County are diverse and sometimes unusual, and are the result of geologic processes over time. Ages of the geologic units present in the county range from 200 to 400 million years to the present. A total of 17 geologic units are encompassed throughout the county and include four surficial, six volcanic and sedimentary, three metamorphic, and four intrusive rock units. The county also encompasses three major and distinctive physiographic provinces in which these geologic units occur: the Klamath Mountains, the Cascade Range including the Western and High Cascades, and the interior valley's provinces. The following descriptions summarize the geology, soils, and landforms of the county occurring within these physiographic provinces combined with other influential environmental factors. Specific information in this regard can be found in the background report or from the sources listed within it.

Siskiyou Mountains: The Siskiyou Mountains physiographic province of southwest Oregon is one of extraordinary geologic and biologic diversity. Generally, the Siskiyous are the Oregon portion of the Klamath Mountains, a very old range bounded on the north and south by the younger coast ranges of Oregon and California, respectively, and on the east by the Rogue River Valley and the south end of the Cascade Mountains. The oldest rocks in western Oregon and some of the oldest in the state are found in the Siskiyous. The mature topography is complex, rugged and deeply dissected, and canyons are commonly narrow and steep walled.

Graphically, the Siskiyou Mountain province occurs along the entire western border of the county. The highest crest of which is Mt. Ashland at 7,480 feet; most of the range lies below 5,000 feet.

Geomorphology and Soils: Geology and physiography are principle contributors to diversity in the Siskiyous. The terrain is rugged and deeply dissected with deeper, more fully developed soils on the moist west slopes, and shallower, rocky soils on the drier east slopes. Bedrock formations form a complex mosaic of sedimentary, igneous and intrusive rocks, much of which has been altered by various processes to schist, marble, serpentine and shale. The time spanned from the earliest Siskiyou rocks known (schists on the Oregon-California border) is on the order of 300 million years old, while the majority of the exposed rocks date from 60 to 200 million years ago. The pronounced chemical and physical differences in soils formed on such diverse materials as old marine sediments, granite and serpentine are extremely important in influencing plan distribution within the Siskiyou Mountains.

The region is famous for its ore deposits, with gold, nickel and chromium being the principal ones. Most of these ores are associated with intrusive rock types like granite and serpentine. Gold has come from mines associated with granite intrusions. Serpentine is a metamorphic rock of considerable importance in the region and its high concentrations of nickel and chromium have attracted extensive mining operations. The tendency for the rock to shear off has resulted in considerable road construction difficulties and large slides. Serpentine soils also provide a unique habitat, inhospitable to many common plants, but home to a great number of species that have adapted to its harsh chemical and physical properties. While serpentine is an extreme case in substratum influence on ecosystem composition and productivity, other Siskiyou rock

types, such as granodiorite, gabbro, and ancient sedimentary rock, provide a wide range of influences on flora and fauna that must be distinguished and integrated with climate, fire and topography factors in the development of efficient forest and land use planning management strategies.

Ecosystems and Biota: The Klamath Mountains have been continuously vegetated for at least 65 million years. During that time, they have been a refuge and a source for both flora and fauna to restock adjacent areas, which periodically were devastated by lava flows or glaciers, or which had subsided below sea level.

Even today the Klamaths are the meeting ground of flora of the West Coast Mountains and certain plants associated with areas farther east. The chaparral and redwood of California, the Douglas fir-western hemlock forests of the Pacific Northwest, and the sagebrush and bluebunch wheatgrass of the arid Central Oregon Great Basin all mingle with endemic species like Brewer's spruce, and unique regional vegetation typified by the mixed evergreen forest of Douglas fir, tanoak and associates. The result is a remarkable array of ecosystems and a diversity unequaled elsewhere in the Pacific Northwest.

As in other mountain range provinces of western Oregon, coniferous forests form the predominant vegetation. The Siskiyous differ in having a far greater representation of shrub and herb communities due to the drier climate, harsh soil conditions, and frequent fires.

Douglas fir, tanoak, western hemlock, grand fir and Port Orford cedar are the common forest constituents of the coastal slopes, as ponderosa pine, sugar pine, incense cedar and Douglas fir are prevalent in inland low elevation forests. The widespread mixed evergreen forest of Douglas fir plus other conifers in various combinations with tanoak, live oaks, madrone, deciduous oaks and sclerophyllous shrubs is a vegetation association unique to these mountains and is the link between the dry chaparral shrub associations and the more closed coniferous forest.

When fires are frequent, knobcone pine may dominate to the exclusion of other tree species. The tree stratum on dry serpentine sites is almost the exclusive domain of Jeffrey pine, a close relative of ponderosa pine. The trees are widely spaced, giving a parkland effect, and the understory consists of a large number of shrub and herb species, many of which are endemics, that grow only on serpentine. Shrubby variants of widespread species line chinquapin are found exclusively on serpentine. Moister or higher elevation serpentine forests typically include Port Orford cedar and white pine. On normal soils, higher elevation forests are dominated by various combinations of white fir, Shasta red fir, Brewer's spruce and mountain hemlock.

In summary, more flora species occur in the Siskiyous in a greater variety of plant communities than in any other part of the Pacific Northwest.

Shrub communities are highlighted by the northern edge of the California chaparral communities. Shrubby associations of manzanita, ceanothus, live oaks, madrone, chinquapin and other shrubs cover large areas on dry lowland slopes. Other shrub and herb communities are found on serpentine soils, rocky outcrops, wet meadows and mountain plateaus.

Streams and rivers are the most characteristic aquatic ecosystems, although small lakes, vernal pools and bogs occur over a wide range of elevations, and on both serpentine and more normal rock types.

The Siskiyou Mountain Province is by far the richest in terms of numbers of species, endemic species and rare species. The rare species are typically associated with specific rare habitats such as bogs and serpentine soils.

Interior Valley: The Western Oregon Interior Valley physiographic province includes the valley bottoms and lowlands enclosed by the Cascade Range on the east and the Coast Ranges or Siskiyou Mountains on the west. The major unit within this province is the Rogue River/Bear Creek valleys, but also includes the Evans and Applegate River valleys. Because of their location in the rain shadow of the Coast Ranges or the Siskiyou Mountains, the valleys are relatively warm, dry regions, especially in comparison with the remainder of western Oregon.

Because of the moderate climate and low elevation mountain passes, the interior valleys have been an important north-south pathway of plant and animal migration. An illustration of this can be seen in the pronounced California influence on the flora and fauna of the Rogue Valley. A number of species characteristic of the warmer Sacramento and San Joaquin valleys of California have leap-frogged the northern California mountain ranges into the Rogue Valley, where their northern most populations hold forth.

Geomorphology and Soils: The dominant valley bottom landforms in the Rogue River, Applegate and Evans valleys are alluvial fans, terraces, and floodplains. A wide variety of soils have developed on these deposits, ranging from deep prairie type soils on well-drained terrace locations, to rocky, droughty soils, such as those of the Agate Desert northeast of Medford. In the vicinity of Medford, an especially difficult black clay soil can be found. Its characteristic expansion and contraction (shrink-swell) behavior on wetting and drying create problems. Soils of the foothills surrounding the southern Oregon valleys are generally shallow and rocky. As a result, they are very droughty during the dry summer period.

Of particular note, within the Rogue River/Bear Creek interior province, are the unusual geologic formations of Upper and Lower Table Rocks, and the Agate Desert. The Table Rocks are erosional remnants of vast lava flows that once covered the area, and are capped by basaltic materials underlain by Ecocene sedimentary sandstones. The Agate Desert is the depositional remnant of an ancient inland lake with materials consisting of semi-consolidated gravel, sand, clay, and silt forming restrictive soil layers.

Ecosystems and Biota: The natural ecosystems of the interior valleys are relatively poorly known since they have had the longest history of influence by humans. Agriculture and urban development have predominated in this century, while native American Indian influence dates back many thousands of years. Certain low lying or heavy clay soils support various mixtures of deciduous forests and meadows, while stony, shallow valley margin soils support a mosaic of oak woodland and grassland. Characterization of the natural vegetation of the southern Oregon interior valleys is difficult. Regardless of human influence, the situation is complex. The warm dry summers and resulting drought stress promote a variety of resistant nonconiferous vegetation on shallow soils. In addition to the Oregon white oak, one finds California black oak, live oak, and chaparral shrub associations. Soil diversity adds to this habitat diversity. When one adds to this varied landscape great plant and animal diversity, the potential complexity is astounding. Far more rare plants are found in southwestern Oregon than elsewhere; close to half the rare plants for the entire state. Eastern Oregon plants, like sagebrush and bitterbrush, have crossed the pass west of Klamath Falls and are found at their northern limits. Dry rocky hillslopes with open and sparse vegetation provide the only western Oregon habitat for the arid zone animal species common east of the Cascades, such as the sharp-tailed snake and the

western rattlesnake. Many California plants range into southwest Oregon interior valleys at their northern limit.

Rivers and associated wetlands have made these interior valleys centers of high biological activity. Slow moving water courses meander through these interior valley soils, depositing fresh silt and forming extensive and highly productive wetlands along their course. Numerous sloughs, oxboe lakes, ponds, and marshes line past and present river channels. These wetlands and the mild climate have made the valleys attractive habitat for a large number of wildlife species, including now greatly diminished species such as the northern bald eagle, and American Osprey. In addition, because of the low elevation mountain passes, the valleys are along an important north-south wildlife migration route, and these wetlands provide important resting and feeding habitat for migrating species. Dams, drainage, and channelization have seriously reduced wetland habitat and, in conjunction with other human activities, have drastically reduced population levels of many species and have forced others out of the valleys. The bevy of alien plant and animal species introduced by man have been another serious factor in displacing or seriously disrupting many native populations. The bullfrog has exterminated valley populations of the western spotted frog, and virtually all of the valley grasslands are dominated by exotics, regardless of whether they have been plowed or not.

All of the western Oregon interior valley ecosystems have been strongly influenced by human activities. Cities, farms, drainage projects, dams, channeled streams, introduced plants, and roads dominate the landscape. Most of Oregon's population lives in these valleys, and the irreversible impact of urban and rural development is a distinct threat to the remaining representative ecosystems. Under these circumstances, virtually all remaining quality sites are under pressure from human activities, and the task of setting preservation priorities is timely and difficult.

Western Slopes and Crest, Oregon Cascades: This physiographic province is the Oregon section of a long mountain range paralleling the coast from Mt. Lassen in northern California into southern British Columbia, where it merges with the coast mountains. The width varies from 30 to 80 miles and has an average elevation of 5,000 feet. Towering over the remainder of the range are the magnificent Cascade volcanos; Mt. Rainier at 14,410 feet, and Mt. Hood at 11,225 feet are the tallest peaks in the Washington and Oregon Cascade Range, respectively. Mt. Mazama could have been as tall or taller prior to its collapse and the subsequent formation of Crater Lake. Locally, Mt. McLoughlin at 7,495 feet is a geological gem being an excellent example of a snowfed cinder cone volcanic remnant. Other such volcanic remnants occurring locally in the Cascade Range include Brown Mountain, Pelican Butte, and Rustler Peak. The route of the Klamath River, which breaches the Cascade Mountain Range very close to the Oregon border in northern California, has been an important passage in east-west plant and animal migration and in weather exchange.

The Cascade Mountains, to a much greater degree than the Coast Range, serves as the barrier between the mild temperate climate of western Oregon and the more continental climate of eastern Oregon. Pacific Ocean weather fronts drop most of their precipitation in the Coast Range and west slopes of the Cascades, leaving the east slopes quite dry. On the west slopes of the Cascades, precipitation increases with elevation and decreases from north to south. Temperatures decrease and the growing season shortens at higher elevations while both increase from north to south. Snowfall increases at higher elevations until, at the highest elevations it becomes the predominant source of precipitation. As such, ecosystem composition and function vary markedly along both elevation and latitude gradients.

Geomorphology and Soils: The Cascades of Oregon include two distinct physiographic and geologic areas, the Western Cascades and the High Cascades. The High Cascades on the east include all major peaks of the range, Mt. Hood, Mt. Jefferson, and Three Sisters, and originated during late Plicene to Pleistocene times, starting several million years ago. The Western Cascades consist of older volcanic flows laid down during the Oligocene and Miocene or 10 to 40 million years ago.

The older Western Cascades varies in relief from gentle in the west to rugged in the eastern portion. Over much of the area there is a striking accordance of main ridge crests at an average elevation of about 4,920 feet. Some glaciation occurred in the Western Cascades during the Pleistocene, but glaciers were largely confined to the principal stream valleys and had little effect on shaping present day land-forms. Basalt, andesite, and pyroclastics are the most common bedrock materials. Since pyroclastic materials are readily weatherable, soils from these materials tend to be deep and fine textured, especially on gentler slopes. Pyroclastic soils are frequently imperfectly drained, and mass movements such as slumps and earth flows, are common. Soils derived from basalt and andesite in the Western Cascades are generally well drained and tend to be stonier and coarser textured. On steep slopes, soils are shallow and rocky. At higher elevations, these soils often contain noticeable amounts of aerially deposited volcanic ash and pumice.

The topographic characteristics of the younger High Cascades are considerably different. The High Cascades area is basically a gently rolling high plateau interrupted at intervals by deep glaciated stream channels and striking volcanic cones and peaks. Volcanic activity, which reached its maximum during the Pleistocene, has continued until recently; some flows of lava are only several hundred years old. The High Cascades are dominated by immature soils developing in volcanic ejects and by soils showing more development which are derived from glacially deposited materials. In the southern High Cascades, extensive areas are mantled with deposits of volcanic ejects, such as pumice, cinders, and ash. These are young soils and characteristically show little profile development. They are often coarse and excessively drained and support a sparse vegetation cover.

Ecosystem and Biota: The western slopes and crest of the Cascades support a vast range of ecosystem types, from lowland forests to alpine ponds, bogs, and meadows. The predominant ecosystems, however, are clearly the dense coniferous forests. Major patterns of variability in composition and productivity of these forests are associated with elevation and with local and regional climatic gradients. The two principal gradients are ones associated with increased elevation and the second associated with patterns of increasing temperatures and decreasing precipitation from north to south.

In the southern half of the province, forests are mixtures of Douglas fir, sugar pine, incense-cedar, white fir, ponderosa pine, and western hemlock. Fires are more frequent in the warmer, drier climate and successional shrub fields are common. The lower subalpine forests are characterized by white fir and Shasta red fir as climax species and these grade into mountain hemlock forests at higher elevations.

A variety of wet to dry meadow communities are associated with the higher ridges of the Western Cascades and with the subalpine and alpine lands of the High Cascades; rare plants of the Cascades are largely associated with these habitats. Lava flows, pumice fields, riparian habitats and rock cliffs provide settings for additional biotic diversity in the province.

Rivers and streams are the dominant aquatic ecosystems in the Western Cascades. A few low elevation lakes and ponds with associated marsh and bog vegetation provide habitat for uncommon species. Lakes and ponds, commonly either glacial in origin or formed when lava flows blocked drainage, are abundant in the High Cascades and are one of the primary attractions of the high country. Additional aquatic features of the High Cascades are marshes and bogs.

Riparian plant communities are also significant vegetation areas in the county, and occur throughout all the major physiographic provinces. A riparian community is a narrow band of flora generally occurring within twenty meters of either side of, and adjacent to, the banks of a water-course or other body of water. Plant species within a riparian habitat will vary with elevation, similar to the major vegetal zones, although Oregon ash is a very characteristic species of these stream side habitats in the Interior Valley zone as well as in the adjacent, higher elevation forest zones; bigleaf maple also commonly occurs. Understory plants within the riparian habitat community are typically composed of herbaceous types, particularly sedges or dense shrubs. Other riparian flora, characterized by cattails, rushes and cresses, are commonly associated with the numerous and widespread seeps and springs throughout the planning area.

Riparian communities are especially important habitat areas for fish and wildlife in Jackson County, as identified by biologists from the State Department of Fish and Wildlife. These watercourse habitats act as natural corridors, allowing wildlife to freely migrate between feeding ranges during seasonal changes. They are also important plant areas for enhancing water quality, preserving fish and wildlife habitat and species, and preserving recreational and aesthetic values. Many wildlife species rely on riparian communities for their primary habitat value in sustaining a diverse and abundant wildlife community, and hence, a quality environment for man, too.

NOISE:

Noise is generally described as undesired sound, and involves three major elements: the sound itself; the path of transmission; and, the receiver. As perceived by the human ear, noise is a function of pitch (frequency), loudness (intensity), and duration. Noise is normally reduced over the distance it travels by such factors as absorption, deflection or reflection, and is affected by wind, temperature, time of occurrence, structures, landforms, and to some degree, by vegetation.

Noise is measured with an instrument consisting of a receiver and a meter that is visually read, called a sound level meter. Such meters have scales devised to measure particular qualities and quantity of sound. The most common and often used noise measurement scale is based on the decibel (dB) and adjusted to account for noise as perceived by the human ear, or A-weighted, thus dBA. This scale is popular because it provides less weight to lower frequencies, as does the human ear, it correlates well with the human response to noise throughout the audible frequency range, and it applies the appropriate amplitude correction factor at each frequency, as does the human ear. Figure 10 lists the decibel or audible range along with examples of the types and levels of noise sources that would create each noise situation typically occurring in a developed environment.

Sound is logarythmic in nature; that is, for every ten decibel increase in sound level, there is a doubling in loudness. In contrast to the obvious sounds and noises which have known sources, there is a large class of incidental sounds which seem to be ever-present in modern life. This

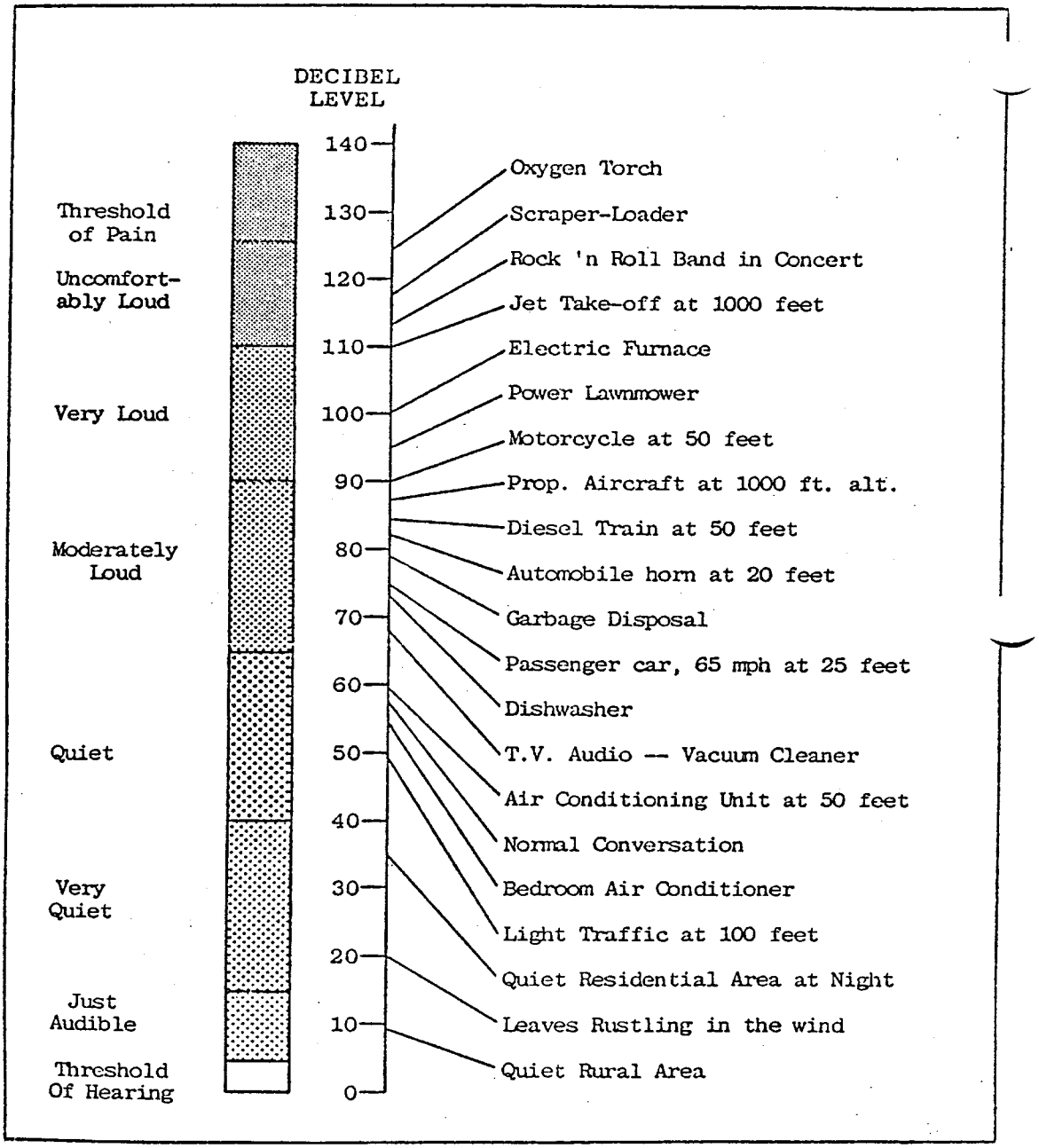
incidental noise is usually referred to as ambient or background noise, and is produced by all kinds of equipment and activities. Background noise is hard to control since its sources are many, as are its directions and distances from the receiver. Sounds that exceed these ambient background levels are intrusive; as the ambient sound levels decrease in the evening and nighttime hours, these intrusive noises become even more noticeable and irritating. Other noise measurement scales are also utilized which more precisely delineate and take into consideration the time of occurrence during which the noise exposure is experienced. The Day-Night Average Sound Level (Ldn) scale was developed in 1973-74 to account for just such time of occurrence differences. Ldn is the average equivalent noise level for a 24-hour period, adjusted to include a ten decibel penalty for noise exposures during nighttime hours (10:00 p.m. to 7:00 a.m.).

Although many believe noise to be only an irritant or annoyance, they are not aware of the direct physical and psychological impacts excessive noise has on health. Humans are capable of adapting to some types of noise such as ambient sounds with few ill effects. However, it is well documented that noise is a public health hazard and can cause detrimental and adverse effects.

Agencies studying noise and its effects have found noise to generally cause or influence: 1) physiological stress; 2) interruption of sleep; 3) communication interference; 4) nervous tension; and, 5) a general degradation of the quality of life. More specifically, it has been found that excessive noise can cause or aggravate headaches, muscle tension, fatigue and other similar reactions in humans. Temporary and permanent impairments of hearing function are also caused by excessive noise exposure. Other activities noise disrupts are rest, study, and sleep. Sleep interruption or modification is detectable by awakening, insomnia, shifting to shallower and less beneficial stages of sleep and interruption of dream stages. Feelings of annoyance, such as irritability, distraction and frustration are also caused by noise.

Physically measurable stress effects of noise are also well documented, such as glandular response, cardiovascular response in the form of high blood pressure, and hypertension. All of these adverse effects of noise on humans are cited as examples to understand why excessive noise is recognized as a serious threat to public health and welfare. The federal and state governments have long recognized the ill effects of excessive noise exposure, and have enacted legislation to deal with the issue of undesired sounds. Accordingly, the Congress found in 1972 that ". . . 1) inadequately controlled noise presents a growing danger to the health and welfare of the nation's populations, . . . and, 3) that, while primary responsibility for control of noise rests with state and local governments, federal action is essential to deal with major noise sources, control of which require national uniformity of treatment, . . ." and subsequently enacted the Noise Control Act of 1972 (P.L. 92-574). Similarly, the Oregon Legislature found in 1971 that noise at "unreasonable levels is as much a threat to the environmental quality of life . . . and the health, safety and welfare of the people of this State as is pollution of the air and waters . . .," and subsequently adopted the Oregon Noise Control Act in that year. ORS 467 authorizes DEQ, through the EQC, to adopt and enforce statewide standards of noise control (OAR 340-35). The Oregon Noise Control Act (ORS 467), as amended in 1977, provides that a city or county may adopt and enforce noise standards and ordinances not covered under state regulations. Standards presently adopted by the EQC are contained in ORS 340-35-005 through 35-100, and address such sources as motor vehicles, industry and commerce, aviation operations, and off-road recreational vehicles. A list and summary of DEQ noise programs and actions affecting land use and respective federal and state statute and rule citations is provided in the background document under noise.

FIGURE 9



NOISE LEVELS OF
TYPICAL COMMUNITY NOISE SOURCES
Figure

Generalized Sources of Noise: Noise may originate and emanate from linear sources, such as highways and railroad tracks; from spot sources, such as the location of a specific type of activity, county sports park; or from an area of activity, such as an industrial district or airport. Most noises can be categorized according to their associative emanation. The following is a description and brief assessment of the noises emanating from the basic noise categories as they affect Jackson County:

1) Transportation Noise: Transportation noise emanates from a variety of sources and modes, including aircraft, railroads and vehicles, consisting of varied sounds from horns, engines, tire squeals, sirens, noise caused by cars, trucks, buses, aircraft, trains, emergency vehicles, and other sources. The EQC has established, and DEQ enforces noise standards relative to new and in-use vehicles. A primary concern of the Comprehensive Plan's Environmental Quality Element's noise section is with the transportation related noise.

Aircraft: The primary objectives of planning for aircraft noise concerns the reduction of noise conflicts at and around airport facilities and their approach and flight paths, and to make surrounding development compatible with the noise levels desired for that particular type of land use.

The Medford-Jackson County Airport is the primary commercial air operation facility serving the area. Operations include intrastate commercial passenger and freight flights, inter-Oregon commuter flights, and private pleasure aircraft use. Each month this regional facility accommodates an average of 13,500 flight operations, of which approximately less than five percent are commercial and commuter type flight operations consisting mainly of jet-engine aircraft, with the remaining 95 percent being general aviation flight operations consisting mostly of propeller-driven private aircraft. This major aviation facility is located in the mid-Bear Creek Valley area north of the City of Medford, and is of concern relative to its position in the midst of the densely developed portions of the area.

The aviation activities of the Medford-Jackson County Airport are regulated under the Federal Aviation Administration (FAA), and as such, noise and attenuation measures are addressed in detail in the Medford-Jackson County Airport Master Plan, which delineates existing and projected future noise impacted areas, as well as attenuation measures currently in progress. The County, in cooperation with the City of Medford, has addressed the land use related aspects of noise associated with this facility and its activities through the use of an Airport Development zone to ensure land use compatibility adjacent to the aviation operation area. Figure 10 depicts existing and projected 1995 noise contours for the Medford-Jackson County Airport facility. These contours are only plotted at present to Ldn 65 dBA, the current federal standard. The EQC recently adopted rules for airport noise environments which stipulates Ldn 55 dBA as a standard. Modified airport noise contour lines reflecting this new Ldn 55 dBA state standard have not been plotted as yet, but will be forthcoming as a result of the recent EQC action. Also to be reflected in these modified noise contours for the Medford-Jackson County Airport, will be the reduction in number of major carrier flight operations occurring at this facility due to United Airline's recent cut backs in air service to Medford.

The Ashland Municipal Airport, located at the southern end of the Bear Creek Valley, is the home base of operations for approximately 65 to 70 aircraft, all of which are propeller driven aircraft. An Ashland Airport Master Plan is currently under development for this general aviation facility. The County utilizes an Airport Approach overlay zone and very low density residential zoning surrounding the facility to ensure land use compatibility for not only safety and airspace obstruction concerns, but also as a mechanism to regulate land uses and densities regarding noise. The County will continue to work with airport authorities, affected agencies, concerned citizens, and the cities of Ashland and Medford

on any matters affecting noise emanating from these aviation facilities and their flight operation activities. Methodologies for dealing with airport-related noise, such as zoning, land acquisition, and sound-proofing of structures are discussed in these airport master plans.

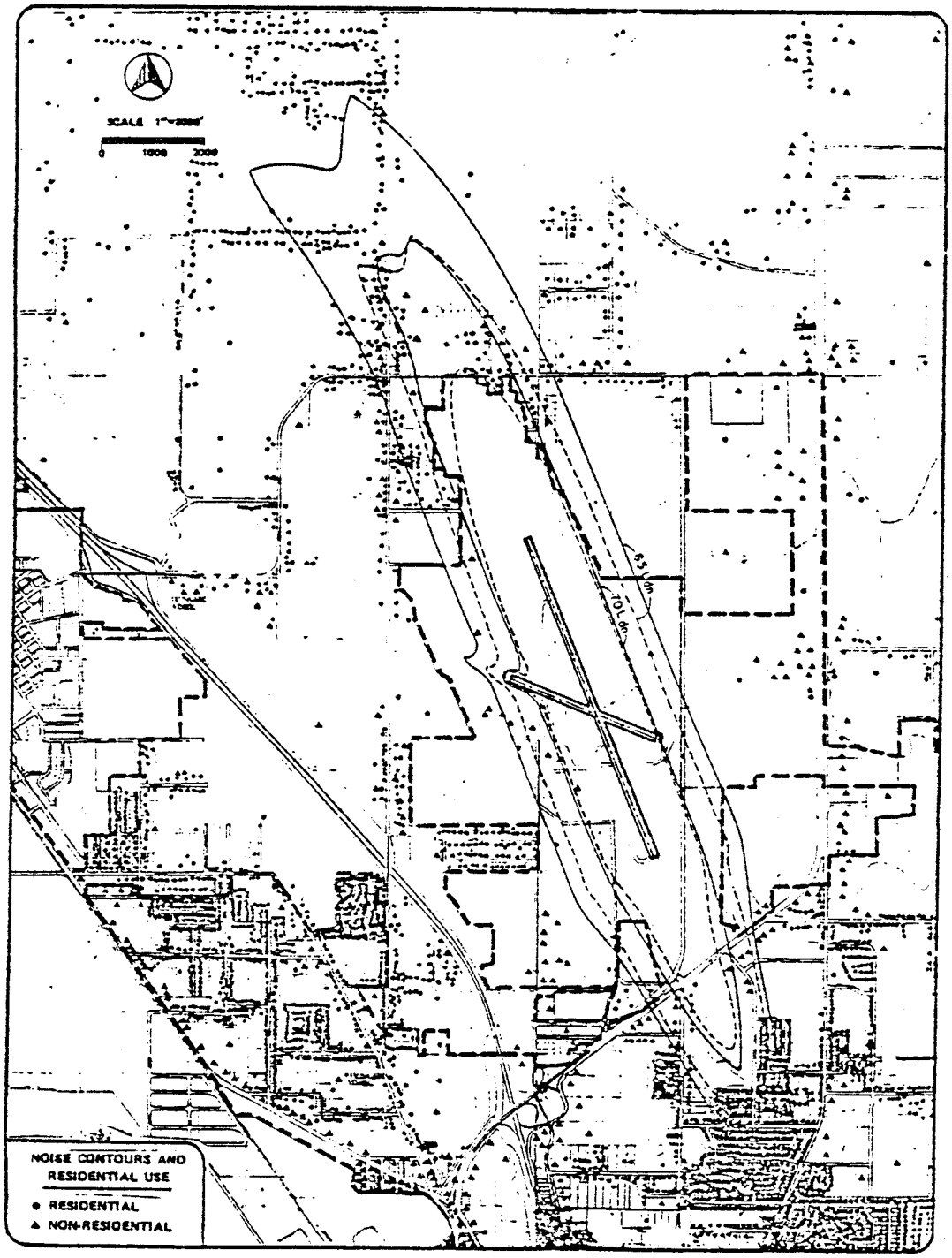
Railroad: The Southern Pacific Transportation Company is the exclusive provider of rail freight service through and to Jackson County via their Siskiyou Line tracks. Originally owned by the Oregon and California Railroad and subsequently acquired by Southern Pacific, the right-of-way alignment of this route roughly parallels that of the Rogue Valley Highway 99 route. Typical daily freight operations occurring over the Jackson County portions of the Southern Pacific Siskiyou Line generally includes at least one southbound through freight from Eugene into California, and one northbound through freight from California to Eugene. Once a week, an additional southbound freight operation occurs. Other activities occurring on the Siskiyou Line in Jackson County are confined to switching operations and typically include a daily run between Medford and Ashland, sporadic operations between White City and Medford, two evening runs between the Tolo Road area and Phoenix, and local operations in the general Medford area. Many of these switching operations take place in industrial areas, are sporadic in nature depending on daily needs, and are generally not near other quiet land uses.

Specific noise information pertaining to railroad operations occurring on the Southern Pacific Siskiyou Line and associated spur tracks serving industrial areas in the county is not available at this time, nor does Southern Pacific Transportation Company generate such information. Given these constraints, and in order to generate the required data, it will be necessary to rely on other accepted methodologies, the most reliable of which is a guide manual entitled Assessment of Noise Environments Around Railroad Operations. This document, prepared through the combined efforts of the major U.S. railroad companies in the west, sets forth a means to determine railroad-related noise levels and delineate noise contours based on the number of train operations per day, their average length and speed, gradient of tracks, number of locomotives involved, time of day or night operations occur, and other associated factors. The generation of such railroad operations-related noise information is forthcoming and will be integrated accordingly into the Comprehensive Plan, the land use planning process and subsequent development activities occurring in such noise impacted areas.

In addition, the potential for railroad operations and activities to increase along the Southern Pacific Railroad Siskiyou Line exists due to planned tunnel improvements. Should such occur in the future, it will be necessary to recalculate noise impacts generated as a result of the increased activity and to integrate this information into the comprehensive plan and land use development process. Until such time as lands and receptors exposed to excessive noise levels from railroad activities and operations can be identified and assessed using the above cited source/methodology, all proposed developments occurring adjacent or in close proximity to such railroad activities and operations should be assessed for their potential noise impacts, and appropriate abatement or mitigation measures conditioned prior to permit issuance.

FIGURE 10

MEDFORD-JACKSON COUNTY EXISTING (----) AND
PROJECTED (——) 1995 NOISE CONTOURS



Vehicular: The Interstate 5 freeway is the only source of freeway noise in Jackson County, and its impact on the county is, for the most part, minimal. However, there are some lands and uses either adjacent, or in close proximity to, the freeway that are, at times, impacted by freeway-generated noise levels exceeding the federal standards of Ldn 67 dBA for such transportation facilities. The Oregon Department of Transportation (ODOT) Highway Division's Environmental Section has inventoried interstate freeways throughout the state for their noise characteristics. Table I displays these noise characteristics for four sections of the I-5 freeway as they occur within Jackson County. Each section of freeway inventoried lists the linear distance in feet from the freeway centerline to the Ldn 67 dBA noise level contour interval for a hard site (pavement-dirt) and a soft site (trees, shrubs, and grass). Sensitive receptors occurring within these noise zones are probably adversely impacted by undesirable noise levels from freeway traffic; sensitive receptors are defined as either all residential dwelling units, parks, churches, and schools when there is an outside activity area (balcony, patio, play area, or yard), or for receptors without an outside activity area, interior noise levels were considered impacted if the structure did not have acoustical insulation (determined by visual inspection). The ODOT then plotted the Ldn 67 dBA noise contours on aerial photographs and all sensitive receptors within the contour interval were identified. Receptors which are naturally shielded by cut slopes or topographic terrain features were not included in the survey. This information is only available in the Portland offices of the Highway Division's Environmental Section and is not collected by the County. As such, data is not readily available to identify specific sites or structures impacted by excessive noise within the county, although it can be readily assumed that any sensitive receptors occurring within the broad Ldn 67 dBA noise contour listed in Table I are impacted, to some degree, by undesirable noise levels.

Technically, the noise problems associated with the I-5 freeway is a federal responsibility, and the burden of mitigation rests with the U.S. Department of Transportation and the Federal Highway Administration. In this regard, the County should vigorously pursue the expeditious implementation of noise abate-measures by these agencies for impacted lands and receptors. Regarding all future developments proposed to occur within the hard site linear distances listed in Table I for the applicable freeway section, they should be assessed for their potential noise impacts, and appropriate abatement or mitigation measures conditioned prior to permit issuance.

Noise emanating from major surface streets also constitute a source of vehicular noise of concern as well. Of particular concern in this regard are highways and roads having daily traffic volumes in excess of 10,000 trips, or having an average daily truck traffic volume of 500 trips. According to 1977 traffic counts, the following highways or roads, or segments thereof, in the county experienced such average daily traffic volumes. Some of the thoroughfares listed occur within municipal boundaries:

i) West Vilas/Hamrick Roads from Table Rock Road to Head/Biddle Roads.

ii) Head/Biddle Roads from Table Rock Road to I-5.

iii) Pine Street from I-5 to Rogue Valley Highway/U.S. 99 (City of Central Point).

TABLE I

INTERSTATE 5 FREEWAY NOISE SURVEY

Distance to FHWA Leq 67 dBA Noise Level

INTERSTATE 5 FREEWAY SECTION	MILEPOSTS	LENGTH MILES	HARD/REFLECTIVE SITE*	SOFT/ABSORPTIVE SITE*
Calif. State Line to North Ashland Interchange	00.00 19.10	19.1	275	160
North Ashland Interchange to Barnett Rd. Interchange	19.10 27.58	8.5	400	180
Barnett Rd. Interchange to Crater Lake Hwy. 62	27.58 30.29	2.7	480	220
Crater Lake Hwy. 62 to Louse Creek Interchange	30.29 61.45	31.2	450	190

**Distance to Leq 67 dBA Noise Levels in Feet*

The Federal Highway Administration (FHWA), through the Federal Highway Program Manual, (7-7-3) and the FHWA Highway Traffic Noise Prediction Nomograph technique, has established design levels and predicted the distance from the roadway centerline to the Leq 67 dBA noise level contour, using existing traffic volume data and estimates. The Leq 67 dBA level is the design noise level for sensitive receptors. Any such uses/receptors subjected to this noise level or louder will be noise impacted above the recommended FHWA design levels, and area candidates for noise abatement and/or mitigation measures. Generally, a doubling of the linear distance from the noise source will result in a 4½ dB increase in noise level, under average conditions.

SOURCE: State of Oregon Interstate Freeway Noise Survey, Oregon Department of Transportation, Highway Division, March, 1979

iv) Rogue Valley Highway from Ashland to Pine Street (Central Point).

v) McAndrews Road from Court Street to Columbus Avenue (Medford).

vi) Stewart Avenue from Columbus Avenue to Rogue Valley Highway/U.S. 99 (Medford).

In addition to the thoroughfares listed above, the following road segments are projected to experience average daily traffic volumes in excess of 10,000 vehicles per day in 1987:

i) West Main Street from Ross Lane to Columbus Avenue (Medford).

ii) Biddle Road from north Medford I-5 Interchange to Medford-Jackson County Airport (Medford).

Specific data regarding the level of noise exposure along these thoroughfare corridors is not available at this time, but these routes are recognized as being noise impacted. As such, all proposed developments occurring either adjacent or in close proximity to these major vehicular transportation/noise corridors should be assessed for their potential noise impacts, and appropriate abatement or mitigation measures conditioned prior to permit issuance.

While efforts are being made in the area of vehicular noise to reduce these noises at their source, other efforts can be made locally to protect receptors. Whenever possible, residences, schools, libraries, convalescent homes and other noise sensitive receptors should be isolated from such transportation-related noise emanators by attenuation devices and/or barriers, right-of-way design or treatment, or by a distance sufficient for the lowering of the noise level to acceptable limits.

2) Commercial and Industrial Noise: Noise sources defined as commerce and industry must meet ambient noise standards as set forth by the EQC and enforced by DEQ under OAR 340-35-035, as measured at the nearest noise sensitive property. Commercial and industrial noise standards are based upon protection of speech communication during the daytime (7:00 A.M. to 10:00 P.M.), and protection of sleep at night (10:00 P.M. to 7:00 A.M.). Special standards for commercial and industrial sources that produce impulse sounds (blasts, drop forges and punch press noise and gun club/shooting range) limit these sounds. Other special standards, imposed after special consideration, are the octave band and discrete tonal rules, which apply to sources that produce noise having specific tonal characteristics often described by such terms as hum, whine, hiss, toot, or wail.

A list of typical noise sources has been compiled by DEQ as an indicator of the types of problems perceived as commonly violative of the noise standards for commerce and industry (see background document under noise). More specifically, the following types of noise problem sources of a commercial/ industrial nature have been identified by the local DEQ office from the list mentioned above as being known or potential noise emanators in Jackson County:

A) Vent fans, blowers, and cyclones;

B) Refrigeration systems;

C) Motorized log and lumber handling equipment;

D) Quarry blasting;

E) Railroad switchyards and crossings;

F) Racetracks;

G) Wood products industry machinery: barkers; chippers; chain conveyors; and planers.

H) Rock crushers;

I) Large industrial complexes;

J) Steam release blasts.

Most noise source problems occurring within the county are presently on a compliance schedule established by DEQ to achieve noise attenuation to diminish their impact to acceptable levels. The compatibility of various land uses and their relationship to such existing and potential noise sources are of particular concern regarding future land use and developments. As such, all proposed developments occurring either adjacent or in close proximity to such noise problem sources, or proposed commercial/industrial developments with recognized noise generation potential, should be evaluated for their potential noise impacts, and appropriate abatement and/or mitigation measures conditioned prior to permit issuance.

3) Recreation Noises: Recreation areas, such as ballfields, outdoor swimming pools, power boating areas, school playgrounds, active parks, and other spectator facilities, are potential sources of noise. Fortunately, the activities that take place in these areas are usually confined to daytime hours and are not usually a nighttime problem. Recreational noise is usually less irritating to most people than other types of noise, and in most cases, the recreational areas of Jackson County are not a major source of noise problems.

A type of recreation noise that is a potential problem in the county is that of the Sports Park located southeast of White City off Highway 140. The County Parks and Recreation Department is well aware of the noise impact potentials of this major recreation facility and is cooperating with DEQ in noise monitoring and abatement measures. The facility itself was designed with noise a significant design variable. As such, the sound suppression berm constructed at the park is designed to suppress any noise at its point of origin and reflect any excessive noise generated away from nearby residential areas. This was accomplished by developing noise projections for a major drag race event and plotting various noise level contours to identify impacted areas, as illustrated in Figure 11. The DEQ will monitor such events at the Sports Park for their noise generation and exposure area, and work with the parks department in developing further abatement measures as needed. A basic design tool used by the Parks and Recreation Department as a guide in reducing noise impacts around such facilities is a

U.S. Department of Commerce manual entitled Noise Barrier Design Handbook. For land use and noise compatibility planning purposes, the noise contours depicted in Figure 11 for the county Sports Park facility, should be considered a maximum noise exposure event, with land use adjusted accordingly. These noise monitoring and planning activities and subsequent abatement measures/designs should be a continuing cooperative function between DEQ and the Parks and Recreation and Planning and Development Departments, with findings integrated accordingly into the Comprehensive Plan and the land use planning and development process.

Another type of recreation related noise that is a potential problem in the county is that of off-road vehicle recreation. DEQ enforces ambient standards for off-road recreational vehicles impacting adjacent noise sensitive property under the authority of OAR 340-05-035. Additionally, the Federal Bureau of Land Management has recently instituted rules for operating 4-wheel drive vehicles, dune buggies, motorcycles, snowmobiles, and other cross-country vehicles on land it manages. The regulations provide a framework under which specific areas of federally administered lands will be designated as either open, limited, or closed to off-road vehicle use. Areas designated as open will allow vehicle operation subject to operating regulations and vehicle standards, whereas limited areas will have limitations, such as number or types of vehicles allowed and times of use permitted. Vehicles will be prohibited in closed areas. Specific area designation will be made through BLM's continuing planning system and the development of multiple use plans for their public lands. The County should be involved in these BLM activities as they pertain to noise in order to achieve a complimentary approach to noise compatible land use planning.

Figure 12 illustrates those areas in the county identified as being popular motorcycle, snowmobile, and other off-road vehicle use areas, and thus, represent potential recreation related noise problems if they occur on or in close proximity to residentially developable lands or sensitive wildlife habitats. Because of the nature of off-road vehicle activities, such recreational areas could also potentially create erosion problems with subsequent water quality degradation from excessive sedimentation.

4) Residential Noises: Noises produced in residential areas generally include such sources as power lawn mowers and other small power tools, air conditioning and heat pump equipment units, excessively loud human voices, barking dogs, and radios, stereos and other music equipment. Walls, barriers, or other sound attenuation devices are often not the answer in these cases and would, in most instances, be detrimental to neighborhood unity. A noise ordinance could set limits on the hours of operations of certain types of equipment. However, probably the most effective way to combat the residential noise problem is through the resident's own cooperation, involving a combination of increased community pride, public awareness and concern, and consideration for the privacy and well being of neighbors. Residential neighborhoods in Jackson County are, for the most part, pleasant and quiet places with no major residential noise problems, although some noise conflicts do arise in residential areas proximate to major transportation routes or major industrial and commercial areas, and from the sources cited above and earlier.

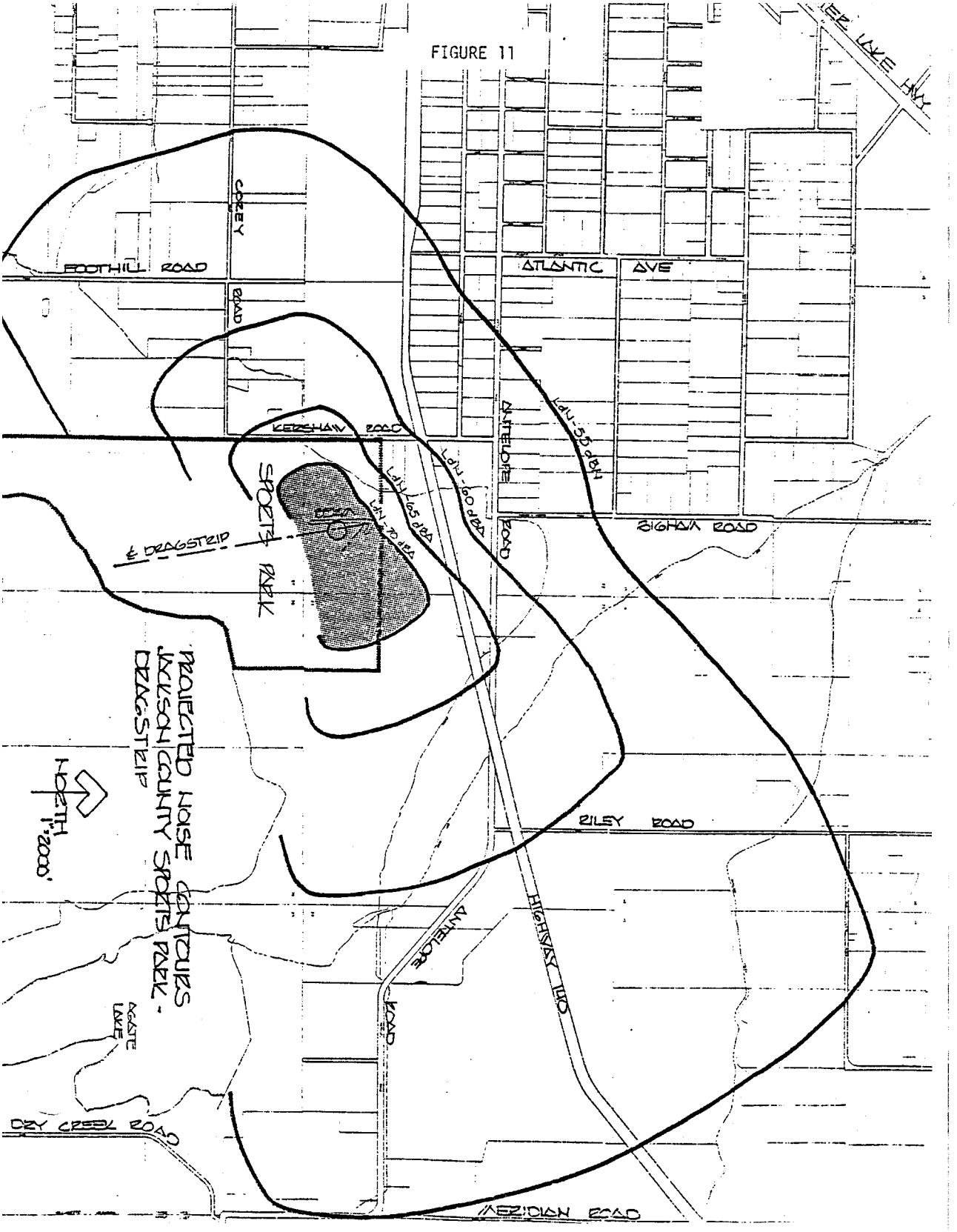


FIGURE 11
FOOTHILL ROAD
COREY ROAD
ATLANTIC AVE
KERSHAW ROAD
SPORTS PARK
℄ DRAGSTRIP
PROJECTED NOISE CONTOURS
JACKSON COUNTY SPORTS PARK -
DRAGSTRIP
NORTH
1"=2000'
RILEY ROAD
ANTELOPE ROAD
HIGHWAY 140
DRY CREEK ROAD
MERIDIAN ROAD

Eliminating existing noise conflicts is more difficult than preventing future ones, since in existing situations some preventative options may not have been considered in the original planning or design. A noise ordinance can delineate a variety of actions to reduce the conflict, varying in degree of public involvement and approach to the noise conflict problem, but in any case, should give due consideration to remedial measures and potential amortization of noise problems that cannot be corrected through typical attenuation measures.

Planning for Noise: Noise compatible land use planning is the primary means to ensure a quieter living environment for county residents, and does not necessarily mean that land in the immediate vicinity of excessive noise levels or adjacent to noise sources remain vacant. Many sources can be attenuated or quieted to acceptable limits, while others, such as industry and commerce, can exist within a moderately noisy environment. Many other types of activities and land uses can be accommodated through proper site selection, building design, use of attenuation measures, or sound proofing. The intent of noise compatible land use planning is to maintain or achieve acceptable noise exposure levels through a variety of measures and techniques such as zoning performance standards, mitigation plans and programs, or the adoption and enforcement of a community noise ordinance. It may be advantageous to adopt noise related guidelines or standards to aid in land use decisions involving noise compatible activities or land uses, as illustrated in Figure 13, which provides an overall example of criteria for determining acceptable noise environments throughout the county. It also provides an interpretation as to the general suitability of various types of land uses with respect to the range of noise exposure potential occurring in the county. The noise section within the environmental quality element's background report also offers examples of three types of noise standards: community noise standards, land use standards, and standards used by federal agencies.

The following briefly discusses various planning measures which can be used to maintain or achieve acceptable noise exposure levels through noise compatible land use planning:

1) Zoning: A commonly used local administrative technique to direct land use in accordance with a plan for orderly growth to protect the public's health, safety, and welfare. The zoning ordinance specifies what type of land use(s) is permitted in each zoning district. Zoning specifications have been used to control environmental emissions, off- street parking and facilities, lot size, solar orientation and access, building height, and ratio of open space to developed land, among other factors. These precedents make zoning a potentially useful tool for noise control also.

   Since the areas within a locality which are impacted by excessive noise do not usually coincide with traditional zoning district boundaries, a method can be developed which defines the area(s) where any acoustical regulations might apply. This modification to traditional zoning is the creation of a simple alternative noise overlay zone, a special purpose noise zone superimposed over the regular zoning map used to define areas which need special considerations due to their noise exposure impacts. Lands which occur in such a noise overlay zone would be subject to not only the normal zoning rules pertaining to the particular zone in which they lie, but also to the additional regulations pertaining to the special purpose noise considerations of the noise overlay zone. These same principles are currently applied in the County's Airport Approach Overlay zone. In the case of a noise overlay zone, the zone could include all lands which are exposed to noise over a specified exposure level, such as 55 dBA; or, it could more easily, but less

appropriately be defined as all land within a certain distance from major noise sources, such as from major roads, airports, railroad tracks, or sports parks.

The zoning ordinance can also require specific construction practices or site design details which tend to improve potential noise incompatibilities; these include:

A) Buffer Strips: An overlay zone incorporated into the zoning bylaws could require a buffer strip between all new residential development in that zone and the noise source. This requirement can be directly stated in the zoning law or it can be included in local development standards or subdivision rules as being applicable in the overlay zones. Some provision for plantings or ground cover within the buffer can also be incorporated.

This technique is most practical in areas where required lot size is relatively large so that the incorporation of a buffer strip as one's yard poses no unusual hardship. For example, in residential areas with one-acre minimum lot size, a yard buffer of over 200 feet from the residence could be provided by subdividing into 125 feet by 350 feet lots. In such an example the residence would be located at the end of the lot away from the noise source and near an interior residential street. Thus, subdivision costs are reduced by decreasing street lengths and costs associated with utilities and driveways due to the narrow lot width and location of the residence on the lot.

B) Noise Barriers: Construction of an earth berm or wall during development of a subdivision can be incorporated into a community's zoning laws. A berm can provide noise attenuation of up to 15 decibels if it is several feet higher than the line of sight between the noise source and the receiver. This is comparable to the noise reduction of walls and fences which are used as barriers. Some of the frequently used materials for noise wall construction are masonry, precast concrete and wood. Walls are most effective when they are air tight without gaps at the base and have a surface density of four to six pounds per square foot.

Residential subdivisions adjacent to arterial streets can be buffered with berms and walls with occasional wall breaks for pedestrian access. Driveways should not pierce the barrier; therefore, access to each residence should be from an interior residential street and not the arterial.

C) Height Restrictions: Height restrictions to limit residential buildings to a maximum height can be incorporated into the zoning ordinance which applies to noise impacted areas. Height restrictions, when used in conjunction with natural or manmade barriers, can prevent some of the most severe highway and other surface level noise from directly hitting bedroom windows without banning all residential uses. Although very simple, this solution has some drawbacks:

i) It will only be effective if the terrain is such that single-story buildings are effectively out of the line of sight of the noise source.

FIGURE 12

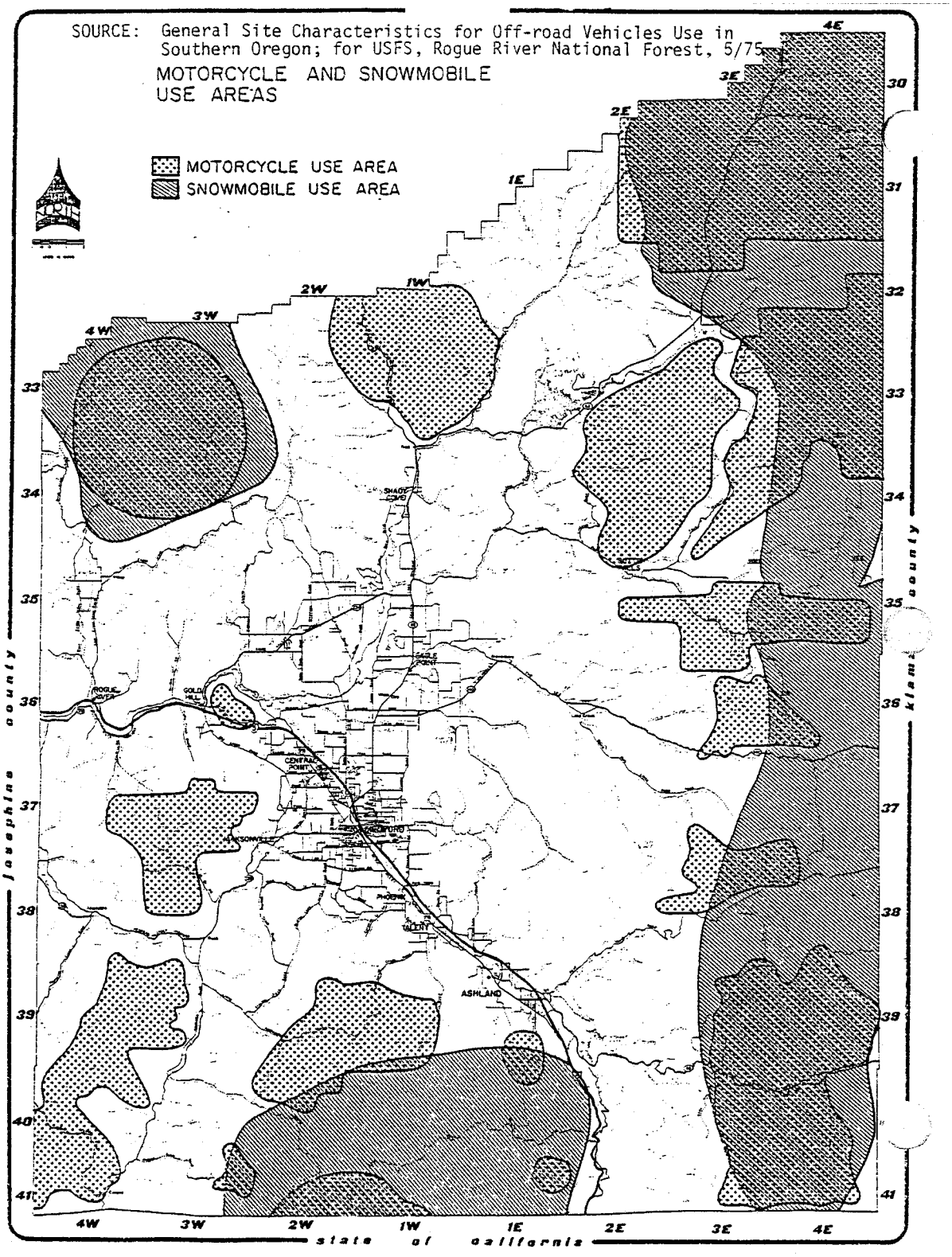
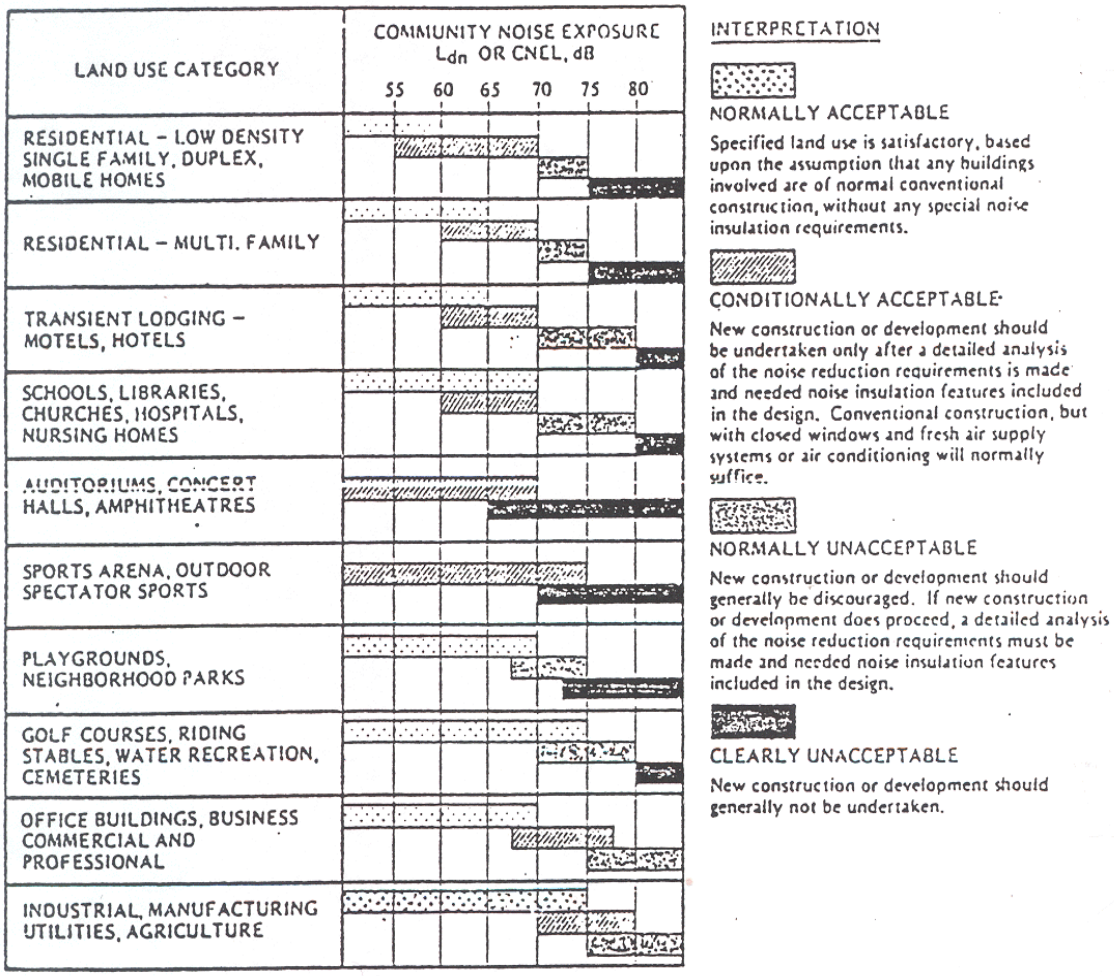

SOURCE: General Site Characteristics for Off-road Vehicles Use in Southern Oregon; for USFS, Rogue River National Forest, 5/75
MOTORCYCLE AND SNOWMOBILE USE AREAS
MOTORCYCLE USE AREA
SNOWMOBILE USE AREA
4E
3E
2E
1E
1W
2W
3W
4W
30
31
32
33
34
35
36
37
38
39
40
41
Josephine county
Klamath county
ASHLAND
state of california

FIGURE 13

Land Use Compatibility for Community Noise Environments



SOURCE: Office of Noise Control, California Department of Health.

ACCEPTABILITY RATING DEFINITIONS

CLEARLY ACCEPTABLE:	Both indoor and outdoor environments are pleasant.
NORMALLY ACCEPTABLE:	Indoor environments still pleasant with normal construction, and outdoor environments reasonably acceptable for recreation and play; noise may cause some concern.
NORMALLY UNACCEPTABLE:	More severe noise exposure making it necessary to use unusual construction and/or barriers between sources and impacted site to make the environment tolerable.
CLEARLY UNACCEPTABLE:	Noise exposure at the impacted site is so severe that abatement construction costs are prohibitive to make the indoor environment acceptable; it would still be intolerable outdoors.

ii) It may not be necessary in the entire noise impacted zone, but for only the houses nearest the noise source.

D) Acoustical Treatment: Construction standards can be developed and implemented for the construction of new residences in overlay zones that are marginally compatible for such use. Sound proofing can mitigate noise impact within the structure and thus, partially protect the inhabitants. Requirements can take four basic forms:

i) Requirements for specific construction techniques such as double-glazed windows, double studded walls, or air conditioning.

ii) Requirements for specific attenuation characteristics from construction in terms of mandatory sound transmission class level.

iii) Specification of certain interior noise levels after construction, such as peak levels in bedrooms at night.

iv) Interpretive regulations with precise standards left up to the discretion of the building inspector in each specific case.

In addition to protecting noise sensitive uses from existing noise sources, such as highways and airports, zoning can be used to ensure that new industrial noise sources are built on noise compatible sites. Noisy sources can be grouped together and form industrial parks. Such parks must have adequate transportation corridors for railroads and trucks that do not in themselves cause community noise problems. Adequate buffers should be planned around the industrial park. Golf courses and other recreational areas may be acceptable buffers around such noise sources.

Zoning around commercial sources should ensure compatibility to adjacent uses also. Some commercial operations may be appropriate as buffers between arterial streets and residential uses. However, others that attract large volumes of motor vehicle traffic in otherwise quiet areas must be carefully planned in order to prevent severe impacts to surrounding residential uses in such cases. The use of multi-family dwellings or mobile home parks as buffers is not encouraged. If it is desirable to locate apartments along arterials, then acoustical treatment should be required in the construction of such apartments.

2) Performance Standards: New and modified noise sources can be evaluated against a specific quantitative noise standard. Prior to issuance of building permits or conditional use permits, sources can be required to demonstrate the ability to comply with a noise standard. For example, prior to building approval of a new industrial source, the local jurisdiction may require the source to demonstrate, by noise production methods, that the DEQ decibel limits for industry can be met. Other standards may be desirable within industrial parks to provide some measure of noise protection between industrial sources.

3) Mitigation Programs: The development and implementation of noise mitigation plans and programs may be the only viable solution to some existing noise problems. In some cases, a mitigation program to eliminate existing noise sensitive uses from impacted

areas or to provide sound proofing to affected residents may be desirable, such as a similar program to that occurring in the noise impacted areas around the Medford-Jackson County Airport facility. Major transportation corridors, railroad tracks and major commercial and industrial centers are examples of noise sources that also lend themselves to such a noise mitigation plan and program.

Noise is a very important, but often overlooked, aspect of any community. Noise factors must become an integral part of the County's land use planning and development considerations and functions in order to identify potential noise problems and control their source prior to its becoming an existing problem that is more difficult to deal with later.

SOLID AND HAZARDOUS WASTES AND SUBSTANCES:

Solid waste management is regulated by EPA under the authority of the Solid Waste Management Act, as amended by the Resource Conservation and Recovery Act of 1976 (P.L. 94-580), and procedures set forth by the EQC and DEQ under the authority of ORS 459.015 and OAR Chapter 340, Division 6. The goals of the above federal and state efforts are: 1) To assure that all solid and hazardous wastes are managed in a manner that will protect health and the environment; and, 2) To conserve natural resources directly and through the management, reuse, or recovery of solid and hazardous wastes.

Solid waste is generally considered to be any wastes in solid or semi-solid form discharged to the environment, and is further defined in OAR as: "All putrescible and nonputrescible wastes, including but not limited to, garbage, rubbish, refuse, ashes, waste paper and cardboard, sewage sludge, septic tank and cesspool pumpings or other sludge, commercial, industrial, demolition and construction wastes, discarded or abandoned vehicles or parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes, dead animals, and other wastes."

Resource recovery is generally considered the separation and recovery of materials for their valuable component parts and energy from solid waste. More specifically, resource recovery entails separating or collecting reusable solid wastes for resale and/or use as an energy source, or the activity of collecting, separating and reclaiming reusable solid wastes at a disposal site or resource recovery center. Normally, glass and metal are separated and recycled for their own value, while organic materials may be converted into a substance suitable for use as an alternative fuel, such as ethanol, a component of gasohol, or these organic materials can be biologically reduced via aerobic digestion to form producer gas, methane.

A Solid Waste Collection and Disposal Ordinance was adopted by Jackson County in 1969, and amended in 1970. This ordinance is to provide for and regulate a solid waste management program, and to regulate solid waste collection and disposal franchising. The Board of Commissioners supervises administration of the aforementioned ordinance, is authorized to regulate solid waste management, prescribes the quality and character of, and rates for, solid waste collection and disposal, and sets forth minimum requirements to maintain service. The Board of Commissioners is also authorized by the ordinance to grant franchises for solid waste collection and disposal services, and to prescribe procedures for issuance, renewal or denial of such franchises.

The Jackson County Health Department is involved with solid waste for the administration of the above ordinance, review of franchise applications, and enforcement of the rules of DEQ

regarding solid waste. The Health Department also conducts routine evaluations of existing and proposed disposal sites and gives guidance in overall programs for waste management. The Solid Waste Specialist in the Jackson County Department of Planning and Development provides technical and other assistance on solid waste disposal matters, and is responsible for performing solid waste master planning for the county.

In late 1974 a Solid Waste Management Plan for Jackson County was developed and adopted covering such issues as the establishment, construction and/or operation of solid waste disposal sites, planning and design of facilities, program administration, financing, collection and transfer systems, and projection of future collection, processing and disposal needs. More specifically, the Jackson County Solid Waste Management Plan includes: 1) An inventory of existing conditions covering present (1974) solid waste management practices, sites and facilities; 2) Criteria for and projections of, solid waste factors; 3) An evaluation of alternative solid waste management systems; and, 4) Short (five-year) and long (20-year) range plant recommendations covering collection, transfer, processing and disposal. Cost estimates are also provided, based upon the best available information as of 1974. The plan also provides a brief description of present (1974) resource recovery activities in the county, and a cursory evaluation of future resource recovery potentials in Jackson County based on the state-of-the-art circa 1974.

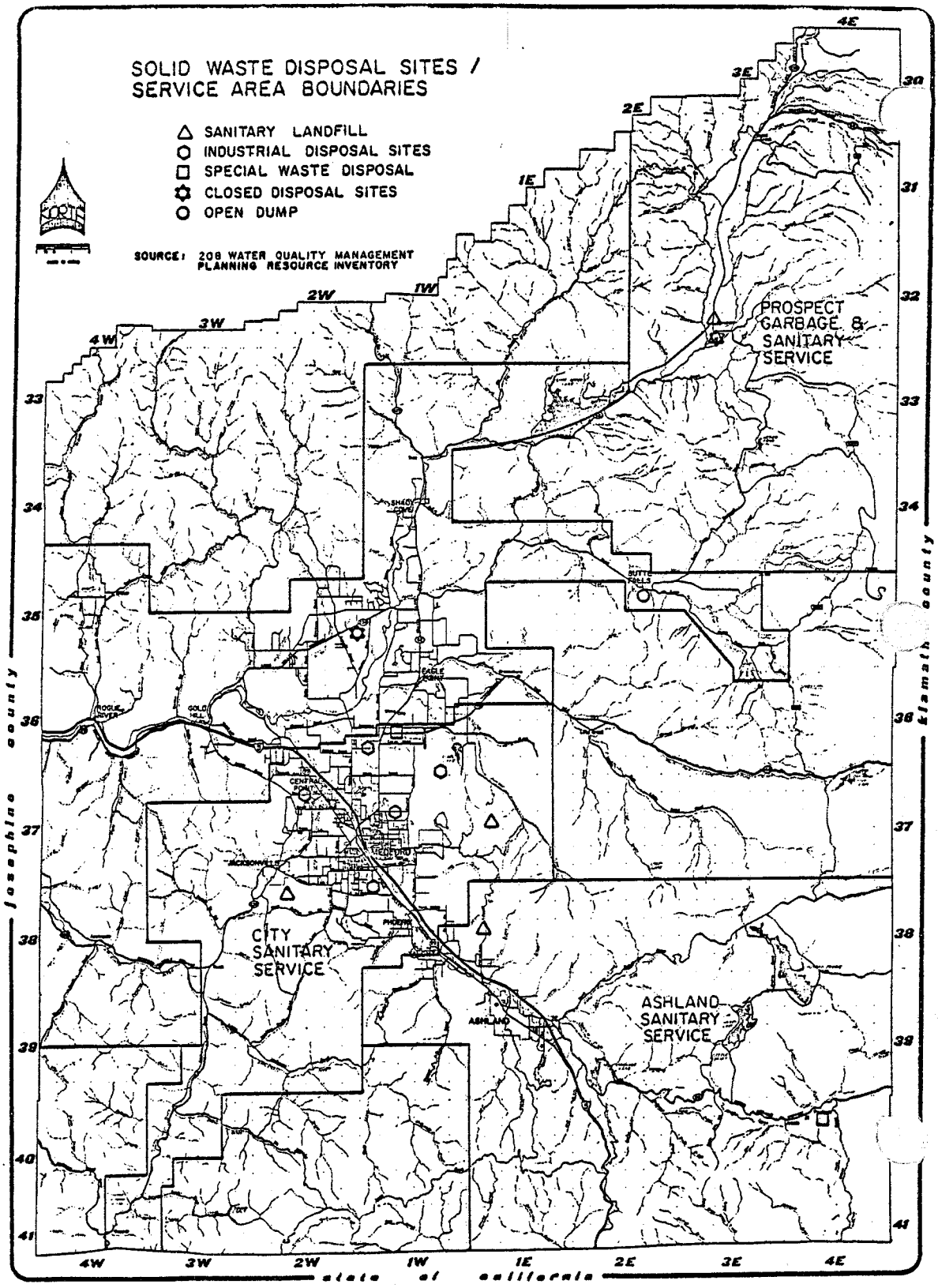
Commercial solid waste collection services are franchised in Jackson County and are geographically divided as shown in the graphic entitled Solid Waste Disposal Sites/Service Area Boundaries. As indicated by this graphic, the county has franchised and is served by Ashland Sanitary Service, City Sanitary Service, Pat's Sanitary Service, and Prospect Garbage and Sanitation Service for the areas shown, for the collection, transfer, hauling, and disposal of solid waste. Publicly operated solid waste activities are provided by the County Parks and Recreation Department for servicing of county parks, and the County Public Works Department for litter pickup along public roads. State and federal agencies also perform solid waste services for parks or other lands under their responsibility.

The Jackson County Solid Waste Management Plan reveals that 80,554 tons of household, commercial, demolition, and industrial wastes were generated and disposed of in the county in 1973. This breaks down as follows: 221 tons or 442,000 pounds per day; 4.2 pounds per day per person. When only mixed refuse is considered, household and commercial wastes, roughly 3.1 pounds per day of solid wastes were generated per capita. These wastes are projected to increase at about two percent annually, which would result in 223,836 tons of waste being generated annually in the county by 1993, or 1,227 million pounds per day. The Solid Waste Management Plan also estimated that a central resource recovery center located in the White City industrial area could handle approximately 55 percent of all wastes projected for the Jackson-Josephine County region, or 350 tons per day. This reflects a dynamic resource recovery potential.

Presently, a number of solid waste disposal sites are utilized in Jackson County to receive wastes from residential, commercial, industrial, and public/governmental sectors. These sites are depicted on the graphic cited previously, and include: Prospect Sanitary Landfill, Ashland Disposal Site, South Stage/Jacksonville Sanitary Landfill, Dry Creek Sanitary Landfill, and other minor sites operated by the major wood products industries for disposal of mill yard process residue and log deck refuse under written authorization for DEQ. These disposal sites are further described and inventoried in the Solid Waste Management Plan and the solid waste section of the background report. These solid waste disposal sites are projected to

accommodate the county's sanitary landfill needs through the early 1900s with no reduction in the projected waste stream amounts of refuse from resource recovery operations.

The County's 1974 Solid Waste Management Plan addresses the issue of resource recovery by analyzing the feasibility of a centrally located, regional resource recovery center to be used and managed jointly by Jackson and Josephine Counties, and the amounts of recoverable wastes that could be anticipated by such a facility. Based on the Solid Waste Management Plan's population projections and assumed rates of per capita waste generation, the plan estimated the following types and amounts of wastes potentially recoverable.


SOLID WASTE DISPOSAL SITES /
SERVICE AREA BOUNDARIES
SANITARY LANDFILL
INDUSTRIAL DISPOSAL SITES
SPECIAL WASTE DISPOSAL
CLOSED DISPOSAL SITES
OPEN DUMP
SOURCE: 208 WATER QUALITY MANAGEMENT PLANNING RESOURCE INVENTORY
PROSPECT GARBAGE & SANITARY SERVICE
CITY SANITARY SERVICE
ASHLAND SANITARY SERVICE
Josephine County
Klamath County
State of California

RESOURCE GENERATION INVENTORY JACKSON COUNTY
TOTAL POUNDS PER DAY

ITEM	1973	1978	1993
Paper:	162,600	224,500	348,600
Newsprint	32,500	44,900	87,400
Cardboard	32,500	44,900	87,400
Other Paper	97,600	134,600	173,800
Glass:	22,800	31,400	61,200
Metals:	29,300	40,400	78,700
Ferrous	22,800	31,400	61,200
Nonferrous	6,500	9,000	17,500
Tires:	2,900	4,000	7,900
Autos:	20,200	23,500	33,100
Appliances:	3,500	4,000	5,700
Organics:	104,100	143,600	231,800

Source: Jackson County Solid Waste Management Plan, 1974 (p.IV-64).

Given these resource recovery potentials, the Solid Waste Management Plan estimated that a centrally located regional resource recovery center serving both Jackson and Josephine counties could produce revenues ranging from $461,097.00 to $835,400 annually in 1982. Other economic indicators also revealed such a facility to be feasible. Subsequently, the Solid Waste Management Plan recommended "Development of a major processing and recovery center is recommended for this region." A conservative 1982 construction date is shown in the plan, however, construction of the processing facility prior to this date, about 1980, appears feasible. A net revenue could result from the recovery center and could reduce other labor costs of the recommended system. Under the least optimistic evaluation, disposal costs would be significantly reduced even if the recovery center operated at a net cost. Additionally, the Solid Waste Management Plan concluded: "Under the poorest market conditions, the recovery center would reduce the cost of waste disposal from 28 to 51 percent. If market conditions were favorable, a net revenue to the county could be achieved from the regional facility."

As such, the plan states in Section 3, paragraph F: "In a time period prior to 1980, a comprehensive economic evaluation should be made to determine whether or not a resource recovery center is feasible or warranted for Jackson County. An update study of sanitary landfill sites, collection systems and transfer operations should also be made at this time." However, in early 1979, the Solid Waste Advisory Committee voted to delay the implementation of the plan update and resource recovery feasibility evaluation due to federal delays in the setting forth of guidelines and regulations of the Resource Recovery and Conservation Act. Nonetheless, current indicators of resource recovery potentials and present recycling activities and operations strongly indicate the task and need remain, and as such, should proceed as expeditiously as possible. Until such time as the County's adopted Solid Waste Management Plan is updated to reflect these resource recovery potentials and subsequent revision to the Solid Waste Collection and Disposal Ordinance occurs, these documents and tools will continue to serve as the County's official plan, management tool and regulating mechanisms concerning solid waste collection, transfer, transportation, and disposal.

Presently, a number of small scale resource recovery and recycling activities are operating within the county, the most notable examples of which include the following:

1) SORT: The Southern Oregon Recycling Team is a nonprofit, public service resource recycling organization which collects newspapers for recycling from various drop-boxes located throughout the county's populated areas. SORT also operates, in cooperation with DEQ and RVCOG, a collection site for used motor oil. SORT has also determined, from evaluation of the data in the Solid Waste Management Plan, that numerous opportunities to increase resource recovery from the existing solid waste stream exists; among these opportunities are:

   A) The potential to recover $1,530 worth of discarded aluminum from county landfills, or over $400,000 annually (at 1977 market values), in the form of foil, aluminum window frames, and TV dinner trays. This would result in substantial energy savings also, since it only takes five percent of the energy to recycle an aluminum waste product than to process it from raw ore.

   B) The potential to increase the amount of newsprint recovered and recycled daily. SORT has been able to increase their newsprint recycling from 4.5 percent of the county's daily generation to nearly nine percent, but paper alone accounts for over half of the volume of domestic refuse generated in the county. The 480 tons of newsprint SORT has recycled in the past few years represents almost 8,000 trees. Additionally, SORT estimates that other grades of paper of high market value are a source that is virtually untapped locally even though a 1975 State Legislative mandate required that school systems and government offices recycle ledger, office, and notebook paper wastes. The Medford school system alone uses roughly 122,000 reams of paper per year. SORT has expanded their operations to include increasing recycling of such paper products locally;

   C) The potential to increase the amount of used motor oil recovered and recycled. According to DEQ: "Last year, five million gallons of used motor oil were dumped into Oregon's waterways, ditches and rivers, and onto the land. If this same oil had been recycled, the energy saved could have produced the heating needs of 6,800 homes. The ability to follow up the oil recycling program could be instrumental in statewide energy savings."

2) Bulky Waste Recovery: Smashing and transportation of appliances, used batteries, and vehicle hulks occurs in most of the county by Medford and White City based firms. The County Public Works Department has also been involved in a cooperative, nonprofit program with the local National Guard unit in the removal of over 1,500 vehicle hulks from various county areas. About 7,000 tons of these bulky wastes are effectively reclaimed annually.

3) Cardboard Recovery: Cardboard recovery and recycling is conducted at the South Stage/Jacksonville and Ashland disposal sites. A bailer was installed at the Ashland site and recovers cardboard from mixed wastes.

4) Wood Residue Utilization: Wood residue utilization takes place mostly in the White City industrial area, and on the Medford fringe. Utilization consists, in most instances, of use of the chips and sawdust in the manufacture of particle board or pulp, and use of bark and sawdust for boiler fuel. A few of the local wood products' industries utilize these wood residue wastes to generate electricity on-site, although air quality constraints limit their expansion.

Although not normally considered as resource recovery centers, local thrift and second-hand stores have recycled goods, often reconditioned, back into the consumer mainstream for many years. The more exemplary include such organizations as the Salvation Army, Goodwill Stores, and local church operations.

In a sense, solid wastes are one of the county's growing resources, both from a material and energy perspective. Some of the franchised solid waste services are currently involved in limited source separation and recovery of the larger items in the county's waste stream, but indicators point to a much more significant potential. Numerous organizations throughout the state and nation have provided a variety of successful resource recovery and recycling examples from which the County can develop similar programs. The 1974 Solid Waste Management Plan determined that a centrally located, regional resource recovery center would be feasible in the county by 1982. Current indicators reveal a similar finding, but emphasize a more decentralized and labor intensive operation than that evaluated in the plan. In any case, factors seem to indicate that the recovery and recycling of solid wastes is an obvious and efficient means of conserving resources and energy. As such, the establishment of resource conservation, separation, recovery, and recycling should be the preferred solid waste management approach in Jackson County.

Solid wastes also provide potential as an alternative energy source. Organic and other combustible materials common to the typical waste stream can be separated and used to provide a low-sulfur, nonstandard, competitive fuel for steam plants generating electricity. On a national scale, EPA estimates the potential recovery of energy from municipal solid waste in urban areas is equivalent to 400,000 barrels of oil per day, or one-third the flow of the Alaska pipeline. Energy recovery technology is currently available to support this waste to energy scenario: Denmark presently converts 60 percent of its wastes to energy; Switzerland 40 percent; the Netherlands and Sweden 30 percent each; Germany 20 percent; England 10 percent, and the U.S. one percent. A significantly greater rate of implementation to energy from waste systems in this country appears feasible in this regard. Locally, the Eugene Water and Electric Board has determined that energy generated from garbage burning is competitive with other environmentally acceptable solid waste disposal methods. The following chart illustrates the energy content of various solid waste components as compared to that of coal:

ENERGY CONTENT OF VARIOUS SOLID WASTE COMPONENTS

	10^6 BTU/TON
COAL (AVERAGE)	23.0
NEWSPAPER	16.96
BROWN PAPER	15.39
CORRUGATED BOARD	14.85
FOOD CARTONS	15.46
PULP TRAYS	16.52
WAXED MILK CARTONS	23.47
PLASTIC FILM	27.68
POLYSTYRENE	31.57
POLYETHYLENE	29.90
AVERAGE OF GARBAGE COMPONENTS	21.31

As can be seen from this chart, garbage can indeed be used as an alternative fuel source with similar energy contents to that of conventional fuels.

Additionally the Solid Waste Management Plan determined that, locally combustibles from refuse could "become marketable, nonstandard fuel similar to hog fuel but with a slightly higher BTU value and handling properties." A summary of the economic feasibility of marketing combustibles derived from solid waste refuse in the county is provided in Table IV-28 of the Jackson County Solid Waste Management Plan, page IV-68. Moreover, a recent study of Southern Oregon State College in Ashland entitled Report on Generation of Steam by Oregon College, Ashland (J.K. Kroeker and Associates, 1971) indicated ". . . a 10,000 pounds per hour additional steam demand by 1975 could be furnished economically by burning garbage. With 1982 fuel prices representing an 80 percent increase over 1971 prices, the college could save $50,000 per year in fuel costs by burning garbage . . ."

Unused wood residue and wastes from lumber mills and logging operations are also a significant alternative energy source potential locally. The Oregon Department of Energy (ODOE) in 1978 estimates that approximately 15 percent of the state's total energy supply could come from such wood waste materials. The energy content of dried wood generally equals about 7,000 to 9,000 BTUs per pound. In this sense, the 488,012 tons of forest slash burnt in the southwestern Oregon/Jackson County area in 1977 under the Oregon Smoke Management Plan contained almost eight trillion BTUs of energy. If this energy were converted into electrical energy, the total electrical needs of 16,930 all-electric dwelling units could have been provided by this wood waste resource. If used exclusively for space and water heating, and cooking, the needs of 35,841 Jackson County dwelling units would have been supplied by converting this wood waste into

energy. According to 1979 Bonneville Power Administration estimates a 25 megawatt (MW) wood-waste burning energy conversion plant would utilize 134,000 dry tons of fuel annually and, construction cost, estimated in 1982 dollars, would be 28.3 million dollars; cost of a 5 MW plant would be about 13 million dollars. A 25 MW pilot plant is currently being studied for siting in the Estacada area in the northern Oregon Cascades. The difference in operational costs between burning oil or natural gas, and nonstandard fuels such as wood wastes and residues and combustibles from garbage, can only increase when the projected and marginal (real) costs of such fuels are examined. Such analyses favors the use of these wastes for their energy content, although local air quality constraints may limit their potential somewhat.

Hazardous Wastes: Chemicals are all around us, in the air, water and food, and in all products and goods. Many of these chemicals are essential to modern life and livelihood, and their use contributes significantly to the economy. Chemical sales now exceed $100 billion annually, representing more than six percent of the U.S. Gross National Product. There has been a dramatic surge in the development and use of synthetic chemicals since World War II. Presently, there are an estimated two million recognized chemicals and compounds; to these, a thousand new ones may be introduced each year. For many of these chemical compounds, little is known of the ill effects they might cause after many years of exposure. While citizens have enjoyed the extensive economic and social benefit of these chemicals, the risks to human health and environmental quality associated with them has not always been fully realized.

In the last few years, many chemicals commonly used and widely dispersed have been found to present significant and often irreversible health and environmental dangers. Vinyl chloride, commonly used in the manufacture of plastics, has caused the deaths of workers exposed to it. Asbestos has long been known to cause cancer when inhaled. Mercury has caused debilitating effects in Japan. DDT, a once common chemical used in the agricultural sector, has been banned for its persistent and harmful effects on human health and wildlife and fish populations. Perhaps the most vivid example of the dangers of uncontrolled chemical contaminants is the family of chemicals called polychlorinated biphenyls, or PCBs. It was not until tens of millions of pounds of PCBs were produced and released into the biosphere however, that scientists realized just how toxic and persistent PCBs are. Despite limited restrictions imposed in the early 1970s by industry to reduce the production of and to restrict the use of PCBs, high levels of this chemical continue to persist in major waterways across the nation. Over the past few years, PCBs have been found in our body's fatty tissue and in the milk of nursing mothers. Recently, some close relatives of PCBs, polybrominated biphenyls, or PBBs, have posed a similarly grave threat to human health and the environment. The EPA also recently banned the use of some common herbicides containing dioxin because they were correlated to premature and spontaneous abortions and malformations of the fetus. As a result of these chemical catastrophes, new laws and regulations will greatly improve our ability to anticipate and address chemical dangers and risks before it is too late to undo the damage they might produce.

Hazardous wastes are chemical substances which can harm, contaminate, or kill living organisms because they have ignitable, corrosive, reactive, or toxic characteristics. More specifically, Congress has defined hazardous waste as "a solid waste or combination of wastes which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may: a) cause or significantly contribute to an increase in mortality or . . . serious, irreversible, or incapacitating, reversible illness; or, b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed." These wastes, including but not limited to, acids, toxic chemicals,

caustics, explosives, and other harmful or potentially harmful substances, are the by-products of chemical and industrial production, and are considered wastes because they cannot be reused or recycled for other beneficial uses. Unless hazardous wastes are carefully treated, stored, transported, and disposed of, they threaten human health and environmental quality. Recent incidents have brought attention to the public health risk of many current and past practices for managing or disposing of such substances, and stand as a warning that many such dangerous relics of our industrial past exist and may continue to persist unless methods and regulations for dealing with them without jeopardizing human health are instituted. EPA has information on over 400 cases nationwide of damage to health or to the environment due to improper hazardous waste management.

Hazardous wastes have the following four major characteristics:

1) Toxic: Poisonous; potentially harmful to human health; can cause cancer and birth defects; can contaminate, harm or kill fish and wildlife.

2) Corrosive: A substance which could corrode storage containers, or damage human tissue if touched.

3) Reactive: An unstable substance which could react if exposed to heat, shock, air or water; reactions include explosions.

4) Ignitable: A substance which could explode, catch fire, or emit toxic gases or fumes into the environment.

There are six basic ways that improperly stored, transported, or disposed of hazardous wastes enter the ecosystem and cause environmental damage or harm public health; they are:

1) Groundwater contamination via leaching from land disposal sites or poor disposal practices;

2) Surface water contamination through runoff (storm or agriculture);

3) Air pollution via waste incineration, evaporation, or wind erosion of disposal sites;

4) Poisoning via direct contact (spills during transit or in storage facilities);

5) Indirectly through poisoning via the food chain or bioaccumulation (plants to fish to humans); and,

6) Fire and explosion.

At the national level, there are a variety of agencies responsible for the control of hazardous wastes. What agency is responsible and under what legislation is dependent upon whether the wastes are being transported, stored, disposed of, the types of wastes, and where they are found in the ecosystem. The major federal legislation dealing with hazardous wastes include the Resource Conservation and Recovery Act (P.L. 94-580), the Toxic Substances Control Act (P.L. 94-469), and the Federal Insecticide, Fungicide and Rodenticide Act (P.L. 94-140). Figure 14 is a brief synopsis of these and other relevant federal hazardous waste responsibilities.

FIGURE 14

FEDERAL HAZARDOUS WASTES REGULATION

AREA	AGENCY	LEGISLATION	PROVISIONS
TRANSPORTATION	DEPARTMENT OF TRANSPORTATION	HAZARDOUS MATERIALS TRANSPORTATION ACT P.L. 93-633	REGULATES INTERSTATE COMMERCE OF HAZARDOUS MATERIALS
	U.S. ENVIRONMENTAL PROTECTION AGENCY	RESOURCE CONSERVATION AND RECOVERY ACT OF 1976 P.L. 94-580	SETS STANDARDS FOR MANIFESTS (SHIPPING TICKETS AND TRANSPORTERS)
	U.S. COAST GUARD	PORTS AND WATERWAYS SAFETY ACT OF 1972	THE QUESTION OF BULK SHIPMENT OF OIL AND OTHER HAZARDOUS MATERIALS ON THE LAKES.
WASTE DISPOSAL	U.S. ENVIRONMENTAL PROTECTION AGENCY	RESOURCE CONSERVATION AND RECOVERY ACT OF 1976 P.L. 94-580	SETS STANDARDS AND ISSUES, PERMITS FOR PRODUCERS, TRANSPORTERS, AND DISPOSAL SITES.
AIR QUALITY	U.S. ENVIRONMENTAL PROTECTION AGENCY	CLEAN AIR ACT OF 1970 P.L. 91-604 AMENDED 95-95	SETS EMISSION STANDARDS FOR 5 HAZARDOUS AIR POLLUTANTS
WATER QUALITY	U.S. ENVIRONMENTAL PROTECTION AGENCY	CLEAN WATER ACT OF 1977 P.L. 95-217	SETS STANDARDS FOR TOXIC DISCHARGES THROUGH NPDES PERMITS TO ACHIEVE FISHABLE AND SWIMMABLE WATER
SPILLS	U.S. ENVIRONMENTAL PROTECTION AGENCY	CLEAN WATER ACT OF 1977 P.L. 95-217	PREPARES NATIONAL CONTINGENCY PLAN FOR SPILLS, COORDINATES SPILL RESPONSE, LEVIES PENALTIES AND RECOVERS COSTS
NUCLEAR WASTES	NUCLEAR REGULATORY COMMISSION	ATOMIC ENERGY ACT P.L. 83-703	SETS STANDARDS AND LICENSES NUCLEAR WASTE DISPOSAL SITES
DRINKING WATER	U.S. ENVIRONMENTAL PROTECTION AGENCY	SAFE DRINKING ACT OF 1974 P.L. 93-523	SETS NATIONAL STANDARDS FOR SAFE DRINKING WATER, REGULATES THE UNDERGROUND INJECTION OF WASTES WHICH COULD CONTAMINATE DRINKING WATER.
FOOD	FOOD AND DRUG ADMINISTRATION	FOOD, DRUG, AND COSMETIC ACT P.L. 75-717	SETS, ENFORCES TOLERANCES FOR CONTAMINANTS IN FOOD FOR INTERSTATE COMMERCE, BANS UNSAFE FOODS
OTHER CONSUMER PRODUCTS	CONSUMER PRODUCT SAFETY COMMISSION	CONSUMER PRODUCT SAFETY ACT ; HAZARDOUS SUBSTANCES ACT. P.L. 92-573	SETS AND ENFORCES TOLERANCES FOR HOUSEHOLD PRODUCTS, REQUIRES LABELING, BANS UNSAFE PRODUCTS.

AREA	AGENCY	LEGISLATION	PROVISIONS
FISH AND WILDLIFE	DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE	FISH AND WILDLIFE COORDINATION ACT OF 1965	RESEARCH, TECHNICAL ASSISTANCE SPILL RESPONSE, MONITORING FOR CONTAMINANTS AND EFFECTS ON FISH AND WILDLIFE
OCCUPATIONAL SAFETY	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION	OCCUPATIONAL AND SAFETY HEALTH ACT P.L. 91-596	SETS AND ENFORCES STANDARDS FOR WORKER EXPOSURE
CHEMICALS	U.S. ENVIRONMENTAL PROTECTION AGENCY	TOXIC SUBSTANCES CONTROL ACT	OBTAINS INDUSTRY DATA ON PRODUCT USE AND HEALTH EFFECTS OF CHEMICALS.
		P.L. 94-469	REGULATION OF MANUFACTURE, USE, DISTRIBUTION, AND DISPOSAL OF CHEMICAL SUBSTANCES
PESTICIDES	U.S. ENVIRONMENTAL PROTECTION AGENCY	FEDERAL INSECTICIDE, FUNGICIDE AND RODENTICIDE ACT AS AMENDED IN 1975. P.L. 94-140	REGISTRATION AND CLASSIFICATION OF ALL PESTICIDES

At the state level, the need for improved hazardous waste disposal practices, adequate planning, emergency contingency plans, and an enforcement program, was recognized several years ago when the 1971 Oregon Legislature passed House Bill 1931. This bill placed the responsibility for management and control of hazardous wastes within DEQ's Solid Waste Section. The 1971 Legislative Act authorized DEQ to establish and adopt rules for the handling, storage, and disposal of hazardous wastes, and further, to identify such wastes. The bill also established requirements and procedures for licensing hazardous waste disposal sites and prohibited disposal of such wastes on any land within Oregon that is not owned by the state and designated to receive hazardous wastes by DEQ.

The rules required under House Bill 1931 were adopted in April 1976, and are currently being revised to reflect revisions made by the 1977 State Legislature which amended ORS 459 to: Revise the rules for the classification of hazardous waste; require generators of hazardous waste to maintain records and use a manifest system for handling such wastes; allow the establishment of waste collection sites; and prohibit the sale, manufacture, disposal, or use of products containing the chemical PCB except under certain conditions. The rule revisions are primarily to bring Oregon statutes in this regard into compliance with requirements of the Federal Resource Conservation and Recovery Act.

Although the prime responsibility of DEQ regarding hazardous wastes is handling, storage and disposal, some control of the transportation of such wastes is also necessary. Within the state, a memorandum of understanding between DEQ and the Public Utility Commission assures that certain protective measures in hazardous waste transportation and reporting of spills is required. The new legislation, revised rules and federal requirements have resulted in the development and implementation by DEQ of a manifest system to further control the transport of hazardous waste and provide for a reporting system that shows the originating company and the transporting firm; quantities of waste and its composition and physical state; methods of reuse, recovery or treatment, and ultimate disposition. Individual small containers will be labeled to show their contents. The State Department of Agriculture regulates the use of pest control

chemicals (pesticides and herbicides) in the state by registering all such chemicals and training and licensing all applicators. Until passage of hazardous waste legislation in 1971, the Department of Agriculture also regulated disposal of waste pest chemicals and containers.

The following lists those activities most likely to produce hazardous wastes, and is intended only to identify possible sources of hazardous waste in order to facilitate land use planning and development of a nature that considers such sources and their relationship to environmental quality and public safety:

1) Automotive battery manufacture/renovation;

2) Electric utilities; PCB fluid from transformers and capacitors;

3) Ink and paint formulation;

4) Metal fabrication and machining;

5) Metal plating;

6) Electronics assembly;

7) Publishing and printing;

8) Resin manufacturing;

9) Wood preserving;

10) Plywood manufacture.

Other industrial and commercial facilities can also generate various amounts and types of hazardous wastes. These might include household and industrial chemical manufacturers and suppliers, automotive maintenance (oils and asbestos or metals from brake reconditioning), asphalt manufacture, food and meat products, fiberglass fabrication, photographic development and railroad tank car maintenance.

Low-level radioactive wastes result from the use of radioactive materials at medical facilities, educational or scientific laboratories, research activities and some industrial activities. Approximately 2,050 feet per year of low-level radioactive wastes from such sources are presently generated by all sources in the state. Locally, the Rogue Valley Memorial Hospital is the primary source and repository for radioactive materials used in medical settings. Such materials are regulated by the State Board of Health, with state and county departments of health responsible for monitoring and enforcement. Only very short lived isotopes are used medically, and wastes are stored and continuously monitored on-site until background levels are undistinguishable from normal outdoor levels. The materials are then considered safe for disposal along with other hospital wastes. The health department inspects the operation routinely for compliance with applicable state and federal regulations and safety precautions.

Approximately 50 percent of Oregon's hazardous wastes are handled by Chem-Nuclear Systems, Inc., at a facility in Arlington, Oregon. This company was granted a license to develop and operate the Arlington hazardous waste disposal site by the EQC in February 1976. The site

is operated under the direction of DEQ. The Arlington facility accepts liquids, sludges, dry materials or contaminated containers and machinery used in processing or handling wastes. DEQ monitors air, water, and soil quality twice annually, and Chem-Nuclear samples four times per year to assure safety. A system of monitoring wells is established on the site. The only hazardous wastes not accepted at the Arlington site are radioactive materials, pressurized poisons and gases, and water sensitive materials. Radioactive wastes are transported and stored at the Hanford Nuclear Reservation, a 540 square mile federally owned facility located in eastern Washington near Richland. The Interstate 5 freeway and the Southern Pacific Railroad Siskiyou Line through Jackson County are major carrier routes for shipments of hazardous wastes to both the Arlington, Oregon and Hanford Nuclear Reservation hazardous waste disposal sites.

There are 24 solid waste disposal sites in the state authorized to receive "declassified" empty pesticide containers. In order to be considered declassified, a pesticide container must be triple-rinsed with water or solvents, depending on the original contents. In Jackson County, the Dry Creek disposal site has been designated as a DEQ approved and authorized pesticide container disposal site. The Solid Waste Management Plan for the county determined: "Pesticides and chemical containers were found to enter the public waste disposal stream through both commercial collections and through private handling directly to the disposal sites. Some containers were found to have pesticide or chemical residues which should have been removed prior to disposal. In most instances, the containers were compacted and buried with other mixed refuse at the disposal site. The overall impact of this practice is not measurable however, without an extensive program to sample and monitor the sites. (Page III-18) "Regarding agricultural pesticide wastes, the Solid Waste Management Plan determined that chemical containers are stored on private property and disposed of at local landfills. Generally, the containers were empty, but chemical residues remained (p. 111-19)." DEQ's manifest tracking and recording system will, for the most part, preclude such future occurrences.

Pest control chemicals of a potentially hazardous nature are used locally for forest and agricultural related management activities, for weed control along public roads, for vector control, and other similar activities. State agencies using pest control chemicals include the Departments of Agriculture, Forestry, and Transportation. Federal agencies include the Forest Service and Bureau of Land Management, and County agencies include Public Works, Weed and Vector Control, and Parks and Recreation. The substance 2-4-D is the predominant control chemical used by the County for weed and some roadside broadleaf vegetation control. Approximately 300 gallons are used annually, depending on seasonal variants, to control pests along roughly 1,800 miles of public road right-of-way. The County is exploring alternative biological control methods, commonly called integrated pest management. Presently, the County has about 65 gallons of 2-4-5-T stored at facilities in White City, representing the amount remaining in County stock after EPA banned most applications of this substance. A small amount of unidentified materials of a potentially hazardous nature are also stored at the County's White City facilities awaiting disposal at the Arlington site. Additionally a quantity of declassified containers are also stored at White City until such time as their numbers warrant economical disposal. The County is cooperating closely with DEQ in the safe handling, storage, use, transport and disposal of these substances.

In the private sector within the county there are approximately seven chemical product companies, 17 pest control firms, and one aerial crop dusting service operating which use potentially hazardous substances. Other private sector firms or activities which probably use such materials include nurseries, nursery supplies, farm and orchard supplies, industrial

supplies, and other similar operations. Any hazardous substances which might occur in conjunction with such commercial enterprises or public agency use is subject to DEQ's manifest recording and tracking system, as well as federal and state statutes and rules regulating the handling, storage, transport, use and disposal of environmentally hazardous wastes and substances. State rules pertaining to the management and disposal of such substances are contained in OAR Chapter 340, 63-005 through 63-035, and were adopted pursuant to ORS Chapter 459, and became effective April 1, 1976.

For handling spills and problems associated with hazardous materials, ten agencies of the State of Oregon responsible for such situations developed a common-cause Oregon Accident Response System and Plan for responding to such emergency contingencies. OARS is an interagency mechanism designed to provide coordinated actions in incidents involving chemical, oil, biological, and radiological spills or accidents. Within Jackson County, the OARS coordination role is a function of the Emergency Services Division within the Sheriff's Department. A complete description of this environmental emergency procedure is contained in the document entitled Oregon Accident Response System, (interagency) OARS Clearinghouse Council, February 1978, on file in the County Emergency Services Division offices and in the background report.

FINDINGS, POLICIES AND IMPLEMENTATION STRATEGIES:

1

FINDING:

The Jackson County environment, is for the most part, a high quality and rich mosaic of environmental factors comprised of many diverse elements reflecting numerous opportunities and constraints, options, and opinions. There are, however, also many instances where the air, water and land resource qualities of the county are impaired, normally occurring in increasing frequency of degradation nearest to man's activities. In any case, the local environment, both natural and man-made, is a complex system which includes social, economic, legal and political aspects relating to natural environmental features. The physical, social, environmental, and economic costs associated with pollution emissions within this setting have long been recognized as a burden on the quality of the area's environment and livability. Pollution can generally be expected to have a number of adverse impacts on environmental resources and quality, as well as levels of health for human and wildlife populations. Because of the diversity of the county's natural environment and the opportunities and constraints presented by this diversity, different development actions and land use activities will, either individually or cumulatively, also have the potential to affect environmental resource attributes and quality, and thus, livability in different ways and degrees of impact.

In that anticipated levels of increased physical development will also generate increased amounts of pollutant emissions, and that this development has the added potential to adversely impact the natural environment and the quality of the county's resource attributes as well as the potential to degrade the overall quality of life in the county, these environmental and development factors raise some basic issues. Can we conserve natural resources and preserve environmental quality while developing an increasingly prosperous and diversified economy? Can we maintain urban and rural areas and their character while meeting the needs of additional housing and people? Can we guide and direct future development in a manner that precludes

irreparable damage or irreversible degradation to the natural and man-made portions of the environment we know as Jackson County? Are we, as stewards of the land resource, making wise and responsible decisions that won't preclude or foreclose options and opportunities for future generations?

With the advent of the Statewide Planning Goals, the County's Comprehensive Plan and Environmental Quality Element, and the objectives set forth in Alternative Futures 5, the answer to the above issues is probably yes. However, in order to ensure that future development actions and land use activities of a discretionary nature will not unnecessarily degrade or exceed the county's air, water or land resources or their quality, or threaten the long-term availability of quality of such resources, or threaten to degrade the quality of the man-made environment; and, in order to determine just what the potential impact(s) of various discretionary land use development actions and activities might involve, both beneficial and adverse; it is necessary to establish an equitable and efficient mechanism to systematically identify these environmental quality degradation priorities prior to their occurrence, and describe alternative measures which might help to offset, minimize or mitigate this potential on a reasonable and equitable basis.

The following policy and implementation strategies should not be construed, nor are they intended to supersede or replace any existing pollution related requirements or permits of any state or federal agency, or any legislative requirements, standards, rules or statutes.

POLICY: CRITERIA SHALL BE DEVELOPED TO CONSIDER ENVIRONMENTAL IMPACTS ON ALL DISCRETIONARY LAND DEVELOPMENT ACTIONS AND TO ASSURE COMPLIANCE WITH APPLICABLE STATE AND FEDERAL ENVIRONMENTAL QUALITY STANDARDS.

IMPLEMENTATION STRATEGIES:

A) Develop a standard environmental review and assessment mechanism to comprehensively evaluate all discretionary land development actions and alternatives for their potential impacts on environmental resources and qualities, and assure compliance with all applicable state and federal environmental quality standards.

B) Utilize the following documents as guide models and resource directories for developing the environmental assessment mechanism:

   i) Environmental Assessment Resource Handbook; First Edition, Environmental Impact Assessment Project, Oregon State University Extension Service; September 1976.

   ii) Environmental Assessment Manual: Special Report, ibid.

C) Develop a matrix of data needs and sources/providers of such information relative to the environmental assessment mechanisms cited for use by applicants in obtaining necessary factors.

D) Redraft standard application forms and amend the planning and development process to integrate the environmental assessment mechanisms cited.

E) Support the Rogue Valley Council of Governments' efforts to develop a growth impact index.

2

FINDING:

Since the quality and quantity of the county's air resources are finite and limited, and man is dependent upon clean air to support basic life- sustaining needs, the management, wise utilization, and improvement of this resource in a manner conducive to ensuring its long-term availability and high quality is in the best interests of county residents. This is basically accomplished by adoption and implementation of the total County Comprehensive Plan, which places emphasis on urban centered growth, improved transportation flows and diversity of transit modes, and control measures on pollutant discharge sources.

POLICY: THE COUNTY SHALL MANAGE AND IMPROVE THE QUALITY OF ITS AIR RESOURCES.

IMPLEMENTATION STRATEGIES:

A) Continue to monitor air quality and expand and refine existing benchmark air quality inventories.

B) The following documents and management components listed below serve as the County's implementation mechanisms regarding air quality management, and steps should be taken to implement them.

i) Oregon State Clean Air Act Implementation Plan, June 1979, DEQ.

ii) OAR.

iii) Jackson County Comprehensive Bicycle Plan, June 1978.

C) Review of discretionary land development actions and uses should consider the threshold of the county's air resource qualities within the parameters set by the statewide implementation plan and the Medford-Ashland Air Quality Maintenance Area Off-set Rule, as applicable.

D) Develop and implement, as necessary, specific measures to deal with the air pollutants listed in Table I of the environmental quality element, when they are determined to be a problem within Jackson County, or when they threaten to exceed the applicable federal, state or county standards for such pollutants. Examples include, but are not limited to:

i) Motor vehicle emission inspection and maintenance programs;

ii) Programs for improved public transit;

iii) Programs to establish exclusive bus and carpool lanes and areawide carpool programs;

iv) Programs for long-range transit improvements involving new transportation policies and transportation facilities or major changes in existing facilities;

v) Programs to control on-street parking;

vi) Programs to construct new parking facilities and operate existing parking facilities for the purpose of park and ride lots and fringe parking;

vii) Provisions for employer participation in programs to encourage carpooling, vanpooling, mass transit, bicycling, and walking;

viii) Programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;

ix) Programs for staggered hours of work;

x) Programs to reduce emissions by improvements in traffic flow;

xi) Conversion of fleet vehicles to cleaner engines or fuels, or to otherwise control fleet vehicle operations.

E) Notify federal and state environmental regulating agencies of applications for projects needing environmental permits.

F) Prepare and distribute an annual Medford-Ashland Air Quality Maintenance Area report covering current air quality conditions, the progress of programs dealing with air pollutants, and comparisons with past histories and future projections.

G) Continue to solicit input from all affected persons, groups, agencies and others involved in air quality issues.

H) Request DEQ to continue monitoring of air pollutant emissions and enforcement of applicable air contaminant discharge permits.

I) Cooperate with DEQ and work to improve and promote the strict enforcement of applicable federal, state, and county air pollution standards, rules and statutes.

J) Oppose the lowering of any air quality standards for pollutants affecting the county and its residents.

3

FINDING:

Water is a finite resource, although it is renewable on an annual basis. It is, nonetheless, a basic necessity, both in terms of quantity and quality, for life on this planet. Together with air and land resources, water sustains all forms of organic life. Pollution of the waters of the state and county constitutes a menace to public health and welfare, creates public nuisances, is harmful to wildlife, fish and aquatic life, and impairs domestic, agricultural, industrial, recreational, and other beneficial uses of water (ORS 468.710). Therefore, it is imperative to assure protection of surface and groundwater supplies and their quality in Jackson County.

POLICY: CONSERVE THE WATER RESOURCE OF JACKSON COUNTY AND PROTECT, MANAGE AND IMPROVE THE QUALITY OF SURFACE AND GROUNDWATERS, FOR THE PROPAGATION OF WILDLIFE AND FOR DOMESTIC, AGRICULTURAL, INDUSTRIAL, RECREATIONAL AND OTHER BENEFICIAL USES.

IMPLEMENTATION STRATEGIES:

A) Revise water quality benchmark data in cooperation with the 208 program as subsequent information becomes available. Adjust implementation strategies as necessary to assure goal and policy compliance.

B) The following documents and management components listed below serve as the County's mechanisms regarding water quality management and steps should be taken to implement them.

i) 208 Water Quality Management Plan, Rogue Valley Council of Governments, October 1978.

ii) Greater Bear Creek Basin Waste Treatment Master Plan, Rogue Valley Council of Governments.

iii) Statewide Water Quality Management Plan, Volumes I and II, Oregon Department of Environmental Quality, December 1976, as applicable to the Rogue River Basin.

C) Identify and map watershed and groundwater recharge areas, and within the parameters of House Bill 3008, develop and enact specific management policies for such areas; and, develop and enact enabling ordinance to protect such areas and provide in applicable codes and ordinances for the maximum retention of vegetative cover in all recognized watershed areas.

D) Continue to monitor and work with the Department of Environmental Quality and other appropriate agencies to designate alternative methods and systems for use in controlling water pollution, including but not limited to: waste water recycling plants and systems, solid waste disposal and recycling methods and sites, sludge disposal and resource recovery methods and sites, gray water treatment and reuse systems, and alternative septic systems.

E) Monitor the activities of, and provide input to, the local decisions of the State Water Resources Department and the State Water Policy Review Board, especially as they relate to the forthcoming update of the Rogue Basin Water Plan scheduled for 1980.

F) Oppose the lowering of any water quality discharge standards into the rivers or streams within the county.

G) In cooperation with the Jackson County State Watermaster, and well drillers/pump suppliers, develop a comprehensive, computerized water well lot survey to delineate groundwater availability, quality, production and depletion rates on a Township, Range, Section basis for determining the effects on such by land development actions. Such data should be integrated into the County's computer system for easy updating, storage and retrieval, and should be utilized in environmental impact assessments regarding water supply and quality. Seek out appropriate federal and state grants to fund, or partially fund, such a project.

H) Investigate the feasibility of establishing incentives to encourage rehabilitation/updating of old septic systems, which might include tax credits, low interest loans, or some form of credit system; and, explore the availability of existing programs that could accomplish the above.

4

FINDING:

Certain activities which take place in a municipal watershed can have an adverse impact on that resource. Such impacts include: mineral and aggregate extractions; removal of any vegetation such as logging and fire break construction; road construction and maintenance of roads in the watershed area, including grading; use of chemicals such as herbicides, insecticides and fertilizers in the watershed area. These uses not only affect the quality of the water, but also increases the erosion of the soil and sediment load of the streams draining the area, resulting in increased sediment in the Municipal Watershed system.

POLICY: THE COUNTY SHALL, TO THE EXTENT OF ITS LEGAL AUTHORITY, PROVIDE FOR THE PROTECTION OF MUNICIPAL WATERSHEDS FROM USES WHICH COULD IMPACT THE QUALITY OF THE WATER AND INCREASE EROSION.

IMPLEMENTATION STRATEGY:

A) The County shall identify those areas which contribute to water pollution and soil erosion.

B) The County may provide, if the need arises, for special protection of municipal watersheds, making such uses which may cause erosion subject to a permit process.

C) The County may provide, if such a permit process is adopted, for review in an appropriate public forum of the affected agency and the land owner involved, and

provide for an arbitration procedure for settlements of disputes by persons of the proper technical capabilities.

5

FINDING:

Land resources, and in particular, soils, support both domestic and natural populations of flora and fauna. Since man is dependent upon the balanced relationship and proper functioning of this resource to sustain his needs, the conservation of the county's soil resources and their inherent qualities is of utmost concern to the continued health, safety and well-being of county residents. Degradation of the soil resources of the county without consideration for its environmental consequences may create public nuisances, is harmful to both domestic and indigenous flora and fauna, and impairs uses of the land for wildlife populations. Therefore, the conservation, management and wise utilization of the county's soil in a manner conducive to preserving its long-term quality is in the best interests of county residents. Of special concern are man's activities as they relate to development actions affecting soil erosion and sedimentation.

POLICY: SOIL EROSION AND SEDIMENTATION AND WISE UTILIZATION OF SOIL SHALL BE CONSIDERED IN LAND USE DEVELOPMENT ACTIONS.

IMPLEMENTATION STRATEGIES:

A) The document entitled Jackson County Erosion and Sediment Control, 1976, should serve as the County's guideline for environmental review and analysis of land development actions regarding soil quality.

B) Create appropriate site grading and compaction criteria and performance standards covering cut and fill provisions, compaction and minimum slope standards, to be used by developers and public officials in reviewing development and road construction proposals in an effort to minimize potential soil quality degradation or erosion problems.

C) Utilize conservation easements and encourage cluster development.

D) Encourage soil conserving agricultural and silvicultural practices.

E) Cooperate with, and encourage the utilization of services offered by the U.S. Department of Agriculture's Soil Conservation Service and the Jackson Soil and Water Conservation District.

F) Promote increased streambank, soils and vegetation protection to minimize erosion, sedimentation, and fish and wildlife habitat destruction.

G) Cooperate with the Rogue Valley Council of Governments, the County Extension Service, agricultural groups, and other affected organizations and individuals, and work toward implementing the 208 Agricultural Water Quality Management Plan, as it relates to agricultural erosion and runoff.

H) Cooperate with affected agencies, groups and individuals, and work toward implementing the Oregon Forest Practices Act relative to erosion, sedimentation and water quality in forested areas, and in particular, watersheds supplying community drinking water supplies.

6

FINDING:

Streets, roads and highways have a direct effect upon air and water quality during the construction phase and later use. The pollutants are hydrocarbon and particulate emissions. As the facility comes into use, the emissions will be vehicular, in the forms of oxides of nitrogen, carbon monoxide, hydrocarbon, lead and other particulates. Additionally, surface runoff has been shown to carry lead, oil and asbestos as water pollutants. Noise may also be a problem both during construction and operation.

POLICY: MODES, ROUTING, AND IMPROVEMENT OF TRANSPORTATION SYSTEMS SHALL BE PLANNED AND DESIGNED TO MINIMIZE GENERATION AND CONCENTRATION OF AIR AND WATER BORNE POLLUTANTS, AND TO LESSEN NOISE IMPACTS.

IMPLEMENTATION STRATEGIES:

A) Analyze the potential air, water, and soil quality and noise impacts, and establish mitigating procedures and measures during the approval process for any nonforest public or private road construction or improvement projects.

B) Coordinate with other agencies providing public roads to assure compatibility between the County Comprehensive Plan and federal or state highway projects.

7

FINDING:

Jackson County has several air contaminant and water pollutant sources for which it is responsible. The responsibility includes acquiring and maintaining appropriate permits and meeting the conditions of those permits. The County also instigates various projects which may have serious environmental impacts if necessary mitigation measures are not taken. Examples of county pollutant sources are:

A) Jackson County Exposition Park parking lot;

B) Sewage treatment facilities at recreation sites;

C) Fleet vehicles;

D) Incinerators;

E) Paved and nonpaved county roads;

F) County operated aggregate removal operations.

The County can assist the region in meeting various state and federal environmental standards by minimizing, and in some cases even eliminating, these sources.

POLICY: THE COUNTY SHALL PROVIDE FOR THE CONTAINMENT OF IDENTIFIABLE POLLUTANT SOURCES IN REGARD TO AIR, WATER AND LAND QUALITY AND NOISE WHERE THE COUNTY IS RESPONSIBLE FOR THOSE SOURCES.

IMPLEMENTATION STRATEGIES:

A) Submit large scale parking facilities, including those at the Exposition Park, to DEQ for an Indirect Source Review.

B) Specify in all contracts let to bid a requirement that successful bidders have all applicable environmental permits.

C) Review each existing and any future proposed County operated source for compliance with all environmental quality statutes, rules, regulations, and standards.

D) Begin phasing out of operation, pollutant sources for which feasible alternatives are available which will reduce pollution.

8

FINDING:

Continued growth and advancing technology throughout history have brought increasing levels of noise to the human environment, contrary to the public interest. Unreasonable or excessive noise is as much a threat to the environmental quality of life and the health, safety and welfare of the people of Jackson County as is pollution of the air, water, and soils. Today, noise ranks as a major pollution problem and can jeopardize the well being of those affected if not controlled. Noise can cause detrimental physical and psychological effects and discomfort, and has been found to cause or influence: l) physiological stress; 2) interruption of sleep; 3) speech interference; 4) nervous tension; and, 5) a general degradation in the quality of life. In order to provide protection of the health, safety and welfare of Jackson County citizens from the hazards and deterioration of the quality of life imposed by excessive noise emission, it is necessary to ensure acceptable noise standards through standard planning techniques, and if necessary, regulation.

POLICY: THE COUNTY SHALL PROMOTE AN ENVIRONMENT FREE FROM UNNECESSARY, EXCESSIVE AND OFFENSIVE NOISE THAT MAY JEOPARDIZE THE HEALTH, SAFETY, AND WELFARE OF COUNTY CITIZENS.

IMPLEMENTATION STRATEGIES:

A) Adopt a noise abatement ordinance and cooperate with DEQ to take steps to effectively enforce federal and state noise standards.

B) Require the general analysis and evaluation of noise sources such as freeways, highways, rail and airport facilities, and sports parks, relative to noise sensitive uses such as residences, schools, churches, and libraries, and establish mitigating conditions during the approval process for discretionary permits for land use actions. Mitigation conditions may include, but are not limited to, the following:

   i) Acoustical architectural design and construction techniques and soundproofing of structures;

   ii) Spacial separation;

   iii) Berming or solid block type or similar wall construction;

   iv) Acquisition of adjacent, affected properties;

   v) Discretionary operation standards;

   vi) Subdivision design seeking to maximize the distance between noise sources and noise sensitive structures or areas;

   vii) Height restrictions, when used in conjunction with natural or man-made buffers, to prevent the most severe noise levels from hitting upper floor windows in noise sensitive areas.

C) Establish a countywide task force on noise which would work cooperatively with DEQ, Jackson County Health Department, other affected agencies, and concerned citizens to:

   i) Analyze and determine the need for local noise abatement/mitigation standards over and above state and federal regulations;

   ii) If local standards are found to be necessary and desirable, the task force should determine what the standards should be and who should administer and enforce them. Emphasis should be placed on incentives rather than regulations to induce compliance and reduce administrative cost.

D) Develop a public awareness program dealing with the potential hazards of excessive noise, state and federal noise standards, and noise abatement and mitigation opportunities.

E) Encourage the routing of high use transportation corridors in a manner which reduces potential conflicts with noise sensitive areas.

F) To the optimum extent possible, utilize the concepts of noise compatible land use planning and development on, adjacent to, and in proximity of, lands and/or uses recognized as known or potential noise emanators.

G) In cooperation with the Southern Pacific Transportation Company, seek technical assistance from DEQ in assessing the noise impacts of the Southern Pacific Railroad Siskiyou Line through the county.

9

FINDING:

Inadequate or improper solid waste collection, storage, transportation and disposal methods create nuisance conditions and hazards to the public health, safety and welfare, and contribute to the pollution of the air, water and land resources of the county. In order to assure that all solid wastes are managed in a manner that will protect the public's health and the environment, and to conserve natural resources both directly and through the management, recovery and reuse of solid waste materials, it is necessary to establish within the Comprehensive Plan overall public policy in this regard.

POLICY: THE COUNTY SHALL FACILITATE EFFECTIVE AND EFFICIENT SOLID WASTE COLLECTION AND DISPOSAL SERVICE. IT SHALL FURTHER PROMOTE AND SUPPORT COMPREHENSIVE SOLID WASTE MANAGEMENT AND RECYCLING OF SOLID WASTES TO THE MAXIMUM EXTENT FEASIBLE.

IMPLEMENTATION STRATEGIES:

A) The document entitled Solid Waste Management Plan, Jackson County, Oregon, adopted by the Board of Commissioners by resolution on November l4, 1974, will serve as the County's mechanism regarding solid waste management until such time as said document is updated and revised per provisions accorded in paragraph 3, Item f, in the resolution of adoption.

B) Revise and amend the County's Solid Waste Collection and Disposal Ordinance accordingly after updating the Solid Waste Management Plan. Expand the ordinance to improve the enforcement and control of nuisances caused by excessive collection of material in residential areas.

C) Encourage and support the private sector's initiative in the development and use of resource recovery and recycling of solid waste components. Contribute County waste paper and used oil to recycling efforts, and encourage cities, school districts, and private enterprise to do likewise.

D) Develop transfer/deposit stations at various population centers within the county. Amend the zoning ordinance to allow as a conditional use the placing of dropboxes/bins by nonprofit organizations on county or private property for the collection of recyclable materials.

E) Determine the feasibility of resource recovery as a component of an updated Solid Waste Management Plan.

F) Expand the Solid Waste Management Plan, update the scope of work to include an inventory of historical dump sites with special emphasis on hazardous waste sites; to identify such areas and preclude future development thereon.

G) In coordination with private enterprise, implement an experimental resource recovery project.

H) Explore the utilization of nondegradable solid waste materials for their intrinsic value or as materials for construction.

I) Explore the feasibility of using sanitary landfill sites as future potential sources of methane gas production and its recovery.

J) Explore the feasibility of using combustible solid wastes as potential future sources of alternative energy.

K) Seek financing from the Oregon Pollution Control Fund (SB 925) to establish a waste reduction program in the county.

10

FINDING:

Hazardous Substances: The County's use of pest control chemicals is generally confined to weed and vector management activities by the departments of Public Works, and Parks and Recreation. Chemical control substances are used by the County primarily to control pests along about 1,800 miles of local public road rights-of-way and for general noxious weed control. Between 100 to 300 gallons of chemical pesticide concentrate are used annually for such purposes by personnel tested and licensed by the Oregon Department of Agriculture.

The use of chemical substances containing dioxin and phenoxy compounds have been the subject of public controversy in recent years. It should be noted that the County has not applied dioxin contaminated pesticides since 1978. Use of pesticides is under continuing review by the County to determine the best available means to control pests.

POLICY: JACKSON COUNTY SHALL CONTINUE TO EXPLORE ALTERNATIVES TO ITS USE OF PESTICIDES FOR COUNTY WEED, VECTOR, AND PEST CONTROL ACTIVITIES, AND SHALL IMPLEMENT THOSE APPROPRIATE ALTERNATIVES WHICH ARE DEEMED PRACTICAL.

IMPLEMENTATION STRATEGIES:

A) The County Public Works, and Parks and Recreation Departments will continue to cooperatively investigate pest control management techniques which rely on nonchemical biological methods and substitute such in favor of applications of chemical control measures where feasible.

B) Jackson County will continue to coordinate its spraying needs with the State Departments of Environmental Quality and Agriculture to limit any potential negative impacts on bees and agricultural production.

FOREST LANDS[1]

GOAL: TO CONSERVE FOREST LANDS FOR FOREST USES AND ENSURE A CONTINUED YIELD OF FOREST PRODUCTS.

INTRODUCTION:

Forest lands, identified as Forest Resource on the Comprehensive Plan Map, are of critical environmental, economic, and social importance to Jackson County.

In order to stabilize and conserve the forest land base for present and future resource needs, development and land uses allowed within the area are only those considered compatible with the forest environment. Managing, growing, and harvesting of timber will continue to be a dominant land use on the majority of this land, as are activities governed by the state's Forest Practices Act (ORS Chapter 527) which specifies minimum standards to safeguard against environmental damage. The County cannot adopt regulations which set more stringent standards than the Act.

The Forest Lands Element identifies the forest resource, provides a discussion of land use-related issues and management practices which may affect the resource and the timber industry, and prescribes the County's future intentions for protection of the forest through goals, policies, and implementation strategies.

This element is related in varying degrees and significance to other portions of the Comprehensive Plan, including the Economy, Agricultural Lands, Recreation, Natural and Historic Resource, Natural Hazards, and Environmental Quality Elements. These elements all contribute to a more detailed and thorough understanding of forest resource issues and concerns.

FOREST LANDS AND USES DEFINED:

For land use planning purposes, forest lands are defined as: 1) lands composed of existing and potential forest lands which are suitable for commercial forest uses; 2) other forested lands needed for watershed protection, wildlife and fisheries habitat, and recreation; 3) lands where extreme conditions of climate, soil, and topography require the maintenance of vegetative cover, irrespective of use; 4) other lands which lie adjacent to urban and agricultural areas and which provide urban buffers, windbreaks, wildlife and fisheries habitat, scenic corridors, and recreational use; and, 5) ranching and grazing areas in the above environments.

Forest uses permitted on these lands include: 1) the production of trees and light processing of forest products; 2) open space, buffers from noise, and visual separation of conflicting uses; 3) watershed protection and wildlife and fisheries habitat; 4) soil protection from wind and water; 5) maintenance of clean air and water; 6) outdoor recreational activities and related support services and wilderness values compatible with these uses; and, 7) grazing land for

[1] Amended by Ordinance #94-60; acknowledged by DLCD Order #00119 dated 9-2-94; effective 9-12-94; Planning file 93-18-OA.

livestock. Forest lands may accommodate several land uses which are inherently, or can be made, compatible with Statewide Planning Goal 4, Forest Lands, and the Oregon Administrative Rules for Forest Lands (OAR 660, Division 6).

Forest lands include heavily timbered areas, areas which are now or were formerly stocked by live coniferous or hardwood trees, brushlands, grasslands, meadows, and barren mountainous areas. Within Jackson County's forest land, there are two distinct resource types:

Commercial Forest Lands are areas where sustained timber production and preservation of a self-perpetuating forest environment is considered to be the dominant land use. These lands are principally located in higher elevations; are, for the most part, owned and/or managed by the Bureau of Land Management, the U. S. Forest Service, or wood products industry for large scale commercial timber production; have parcel sizes of 40 acres or greater; and, are specifically assessed as forest land and/or have a cubic foot site class rating of between 2+ and 5, as discussed later in this element.

Woodland areas are those on which production of timber and wood fiber is, or can become, a primary use of land. These lands are generally located at or below the established elevation contour lines for commercial forest lands; are generally in private nonindustrial ownerships, with some wood product industry and less productive publicly owned lands; have parcel sizes predominantly greater than 20 acres; are specially assessed as forest land or have a cubic foot site class potential for timber production; or, occur adjacent to, and buffer, other forest lands.

Incorporation of both resource types into one Forest Resource designation was based, in part, on interpretation of the Forest Rule (OAR 660, Division 6) and Statewide Planning Goal 4.

GEOGRAPHIC LOCATION AND CONDITIONS:

The forest resource is distributed throughout four specific forest land environments in the county: the Cascade Slope, South Siskiyou, Rogue-Umpqua Divide, and Rogue-Applegate Upland regions, as shown on the following forest land map. Geographic factors play a key role in determining the boundaries of these environments and their suitability for growing trees.

Topography is a controlling influence on forest productivity. Basins and benches along a slope or high elevation convex surface can affect tree growth and regeneration potential due to frost, high winds, and increased rates of evaporation and transpiration. Wide mountain valleys, such as the Rogue River/Bear Creek drainage basins, are generally hotter and drier than average for their elevation, while narrow valleys protected from direct solar radiation part of the day are cooler and more moist. Slope and aspect influence the intensity and duration of direct solar radiation and the levels of soil and air temperature. Slope affects soil stability, and elevation affects temperature, moisture, and the length of the growing season.[2]

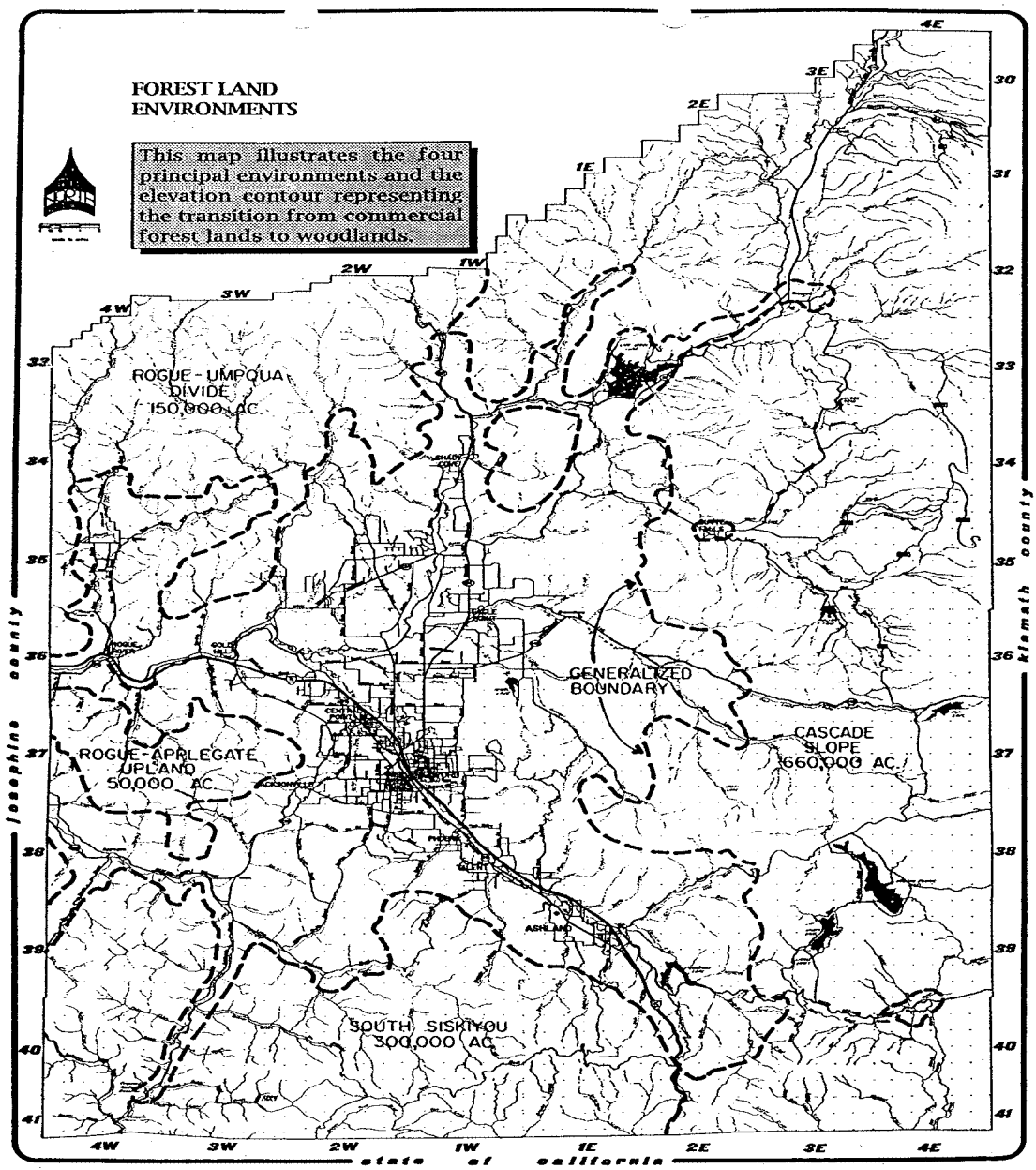
Soil and moisture are obvious determinants of tree growth. The site index measure of tree growth is directly linked to soils which are formed as a response to such factors as precipitation, slope, aspect, temperature, vegetative cover, and type of parent material. In Jackson County, varied seasonal rainfall and low humidity, combined with high temperatures from intensive solar

[2]Cleary, et al: Regenerating Oregon's Forests, 1978.

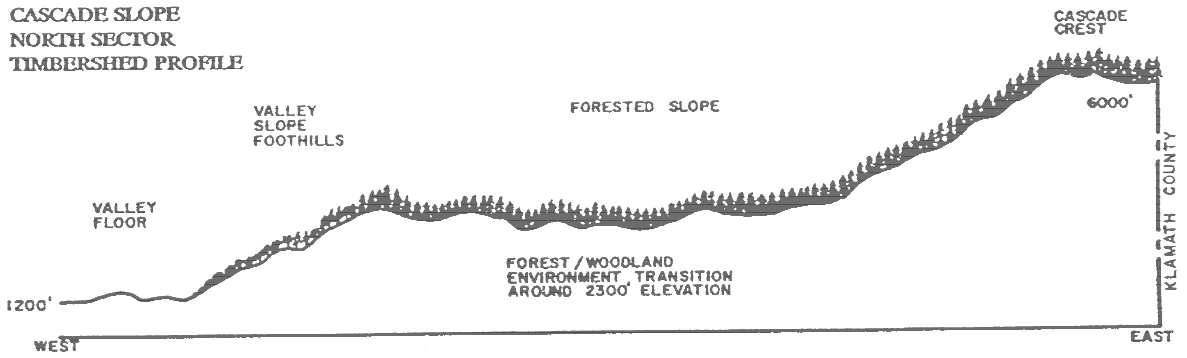
radiation during the growing season, create a significantly different timbershed than those in other areas of the Pacific Northwest. These problems are compounded by a ridgeline and streamline network which produces a significant number of southwest-facing slopes, receiving the greatest solar radiation. Reforestation in the county has generally been unsuccessful on these southwest-facing slopes which have been clearcut or fire-cleared.

The four principal forest land environments, and their elevation contours representing a generalized transition area between commercial forest and woodland areas, are described below:

FOREST LAND ENVIRONMENTS



The Cascade Slope region is located on the eastern part of the county bordered by Klamath County to the east, Douglas County to the west, and Siskiyou County, California, to the south. The transition zone between the commercial forest and woodlands on the west part of the timbershed lies around the 2,300 foot elevation on the north and the 3,000 foot elevation on the south.

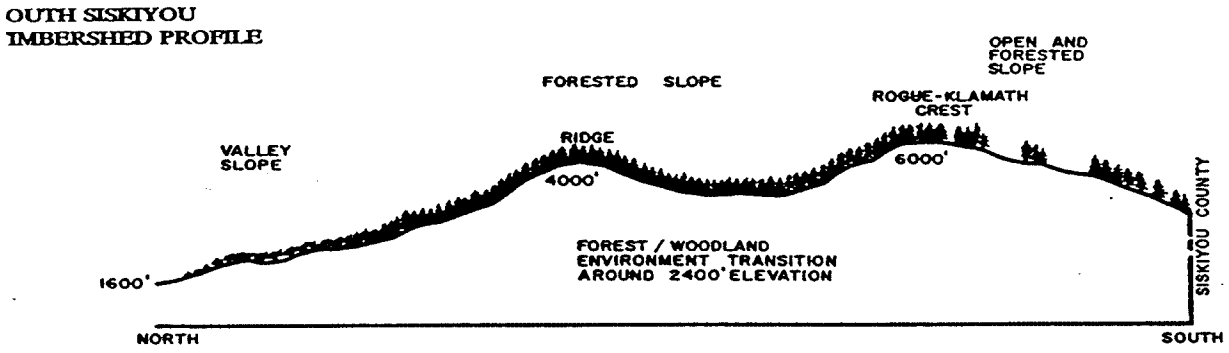


The Cascade Slope region is the largest and most productive timbershed in the county, and has few timber management restrictions beyond standard environmental considerations. Recreational use is high, particularly in and near developed public recreation facilities scattered throughout the area. A portion of the region, lying near the Klamath County line, is mountainous and inaccessible, and is recognized for both its scenic and unimproved recreation values.

Ranching and cattle grazing on public and private land is a use common to the area. A high percentage of the land north of Dead Indian Road is within the Rogue River National Forest, while the Bureau of Land Management controls considerable area in the southern and western section of the region. Private ownerships are, for the most part, intermingled with the Bureau of Land Management tracts.

The area drains principally into the Rogue River watershed, with the southern portion lying in the Klamath River Basin. Two aquifer recharge areas of extreme importance have been identified: The largest, located northeast of Prospect, contributes to sustained flows in the Rogue River; while the City of Medford's domestic water supply source relies heavily on the other, located east of Butte Falls.

The South Siskiyou timbershed is the second largest unit in the county. The physiographic features are very diverse, with the land rising rather abruptly from north to south, and sloping more gently near the California state line. The region is interspersed with numerous deep canyons and sharp ridges. A portion of the area in the southwest section of the county is extremely rugged and remote, and is considered very scenic.



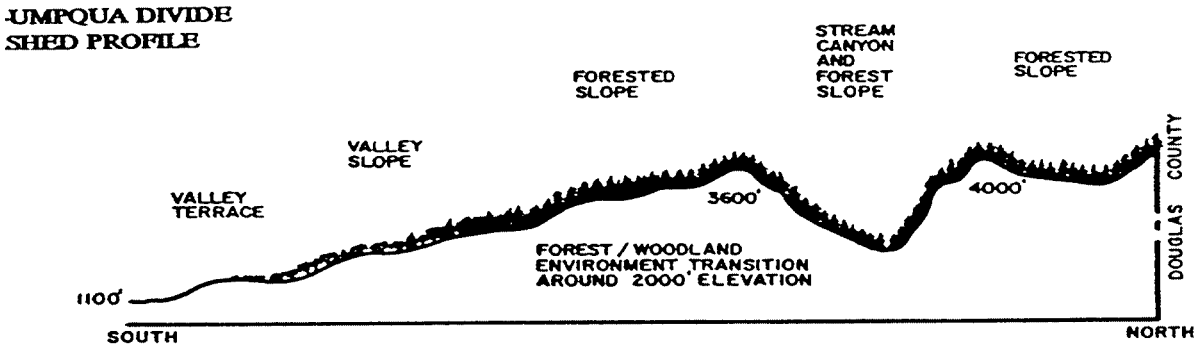
The transition zone between commercial forest and woodlands in the South Siskiyou unit begins at approximately the 2,400 foot elevation to the north. Much of the timber at lower elevations has been logged, and considerable area has regenerated in hardwood and brush cover. Regeneration of commercial forest species is generally more favorable on north slopes and at higher elevations.

The Mt. Ashland Ski Area is the principal developed recreation site in the unit. Other popular recreation sites include Squaw Lake and numerous campgrounds scattered along the Applegate and Little Applegate Rivers, with the Applegate Dam and Reservoir providing additional recreation opportunities. The entire area is also used extensively for back country hiking, scenic enjoyment, and hunting activities.

The majority of land is publicly owned or controlled by private timber companies. There are very few permanent residents in the region, and the only all-weather roads providing access are the road serving the Mt. Ashland Ski Area and the Upper Applegate and Carberry Creek county roads. Summer grazing of cattle is common.

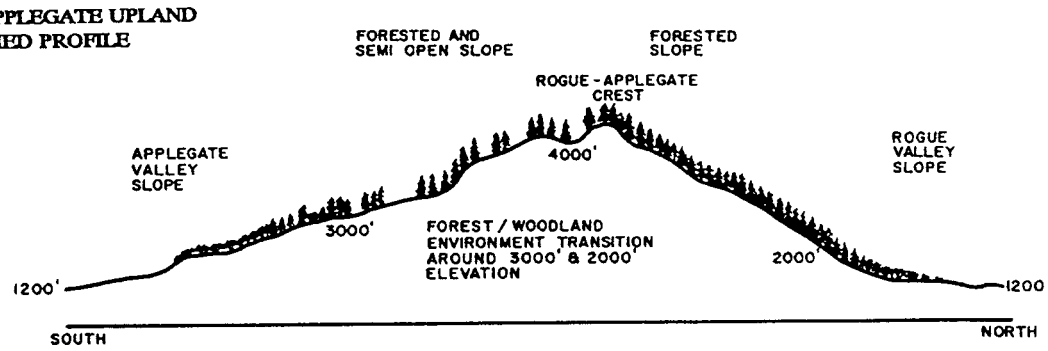
Principal streams draining the area are the Applegate and Little Applegate Rivers, and Ashland Creek. The area surrounding Ashland Creek is considered a critical watershed because the creek is the source of the City of Ashland's municipal water supply.

The Rogue-Umpqua Divide forest land environment is located in the northwest portion of the county. The majority of the land in the unit consists of evenly-forested steep slopes, narrow stream canyons, and ridges. In general, this forest environment lies at lower elevations than the Cascade Slope, and precipitation levels are considerably less. The transition zone between commercial forest and woodlands lies at about the 2,000 foot elevation. The area was extensively logged in the 1950s and 1960s.



The region is somewhat remote, contains very little human settlement, and very few public roads provide access to the area. Major landowners are the Bureau of Land Management and private timber companies. It is not considered a high use recreation area, and few sites are developed. Principal stream drainages are Evans and Grave Creeks, which flow south and west to the Rogue River.

The Rogue-Applegate Upland region lies between the Applegate and Rogue River Valleys, and has a generally rugged terrain with numerous intermittent stream canyons and ridges. The commercial forest/woodland transition zone generally occurs at about the 3,000 foot elevation contour on south-facing slopes, and at about 2,000 feet on the north-facing Rogue Valley slope. Considerable portions of the upland have been extensively logged, with some areas having been restocked with commercial species.



There is little development, and public access to the area is poor. Land ownership is generally divided between public agencies and numerous private landowners.

IDENTIFICATION BY CUBIC FOOT SITE CLASS:

Statewide Planning Goals and Guidelines for forest lands specify that the resource be inventoried and mapped according to cubic foot site class—a common measure of the capacity of a given acre of land to produce commercial quality timber within a specified period of time. The cubic foot site class system allows for comparison of land productivity in terms of its ability to produce wood fiber for more than one tree species. In this system, lands are rated from 1 to 8, with 1 being the most productive.

In order to establish a consistent breaking point between what is considered commercial and noncommercial forest land, federal and state agencies use a minimum standard of 20 cubic feet per acre per year. This standard is quite low, even for southern Oregon, and is equivalent to a cubic foot site class rating of less than 6.[3] Most of Jackson County's existing and potential forest land is above this threshold, with cubic foot site class ratings of 4 and 5. While this may be considered marginal in comparison to better Willamette Valley forest lands, the total combined productivity is very important to the county's forest and economic base.

The cubic foot site class rating system is generally based on soil classifications. Since Jackson County did not initially have a complete soil survey, alternative measures of productivity were used in the inventory and designation of the county's lands. These other classification systems were determined to be equivalent measures of productivity. Each of the classification systems originally used in forest land identification is reviewed below.

The Bureau of Land Management's Timber Production Capability Classification identifies commercial forest land which could be managed on a sustained yield basis. This inventory process is used to partition public lands within the Bureau's jurisdiction into categories, based on the land's physical and biological capacity to produce timber.[4] In Jackson County, the approximate equivalencies with the cubic foot site class system are: High intensity

[3]Oregon State Department of Forestry: A Technique for Mapping Forest Land by Site Productivity Using Soil Information, 1978.

[4]Bureau of Land Management: Draft Timber Management Environmental Statement, 1979.

management—Classes 3, 4, and 5; low intensity management —Classes 4-, 5, and 6+; and, limited management potential—Classes 5- and 6.

The U. S. Department of Agriculture uses its Forest Service Timber Land Classification System to classify the national forest land base. Land is rated according to its capability to produce commercial timber and on the constraints placed on timber harvest activities from other resource needs and uses. The Forest Service inventory distinguishes between nonforest, unproductive, and productive forest land based on the 20 cubic feet per acre per year standard. Productive forest lands are then classified according to proposed use of the timber resource. Commercial forest land is further subdivided into four harvesting components based on management considerations.[5] The average cubic foot site class for commercial forest land in the Rogue River National Forest, one of four national forests with lands in Jackson County, is a 4- rating.[6]

Private forest lands in Jackson County were assigned revenue designations by the Oregon Department of Revenue. These designations were for tax assessment purposes, and were based on 40-acre tract on-site inspections throughout the county. This classification is most easily compared with the cubic foot site class system, with "FA" equating to a Class 2+ and "FG" to a Class 5. Since revenue designations are based on a western Oregon standard of 50 cubic feet per acre per year, this system excludes those lands which have a cubic foot site class rating of 5- and 6. Where revenue designations are unavailable, yet the land is specially assessed as forest land, the Jackson County Assessor's Office or Oregon State Forestry Department has inspected the property and assigned the site index.

Soils information within the county has been completed, in part, through the efforts of the Soil Conservation Service. By 1990, substantial remapping had been finalized for all of the county's land base, excluding those lands under the national forest jurisdiction. The Bureau of Land Management lands, through an agreement with the Soil Conservation Service, can now be identified and classified by the use of a standardized procedure. The national forest lands, in general, continue to use soils information compiled by the U. S. Forest Service. The Rogue River National Forest relies on soils information contained in the U. S. Department of Agriculture, Forest Service, Pacific Northwest Region, Soil Resource Inventory for the Rogue River National Forest, 1977.

OWNERSHIP, ACREAGE, AND ASSESSMENT:

In western Oregon, over one-half of the forest land area is publicly owned. The largest public landowner is the U. S. Forest Service, followed by the Bureau of Land Management, and then the State of Oregon. Approximately two-thirds of the private forest land is owned by the forest industry.

This ownership pattern is repeated in Jackson County where 48 percent of the total land area is under federal jurisdiction. In the county, commercial forest land area is estimated to be 1,486,500 acres, which includes 877,388 acres of federal land. The Bureau of Land Management and U. S. Forest Service have principal responsibility for management of these

[5]U.S. Department of Agriculture, Forest Service: Final Environmental Statement Timber Resource Plan, Rogue River National Forest, 1978.

[6]Conversation with Ray Langguth, U.S. Department of Agriculture, Forest Service, February, 1980.

lands, with other public lands constituting a small percentage of the total forest land environment.

One-third of the county's commercial forest lands are privately owned, with approximately 25 percent in the ownership of fewer than a dozen timber industry or other large corporate owners. Boise Cascade and Medford Corporation are the major industrial forest owners in the area. The remainder of private forest lands in the county are owned by small companies and individuals.

In 1976, nonindustrial ownership accounted for 14 percent of the total commercial forest land in Oregon, and 38 percent of the privately owned forest land. At that time, the total statewide commercial timberland acreage was 19,555,000 and, in western Oregon, the private nonindustry ownerships accounted for 2,009,000 acres. By 1990, this figure for western Oregon was revised to reflect 353,000 fewer acres owned by nonindustrial private landholders—a reduction of 16 percent over the 1976 study.

Ninety-six percent of private holdings in the commercial forest lands and one-third of lands in the woodland areas are receiving some type of special assessment to encourage the continued use of land for timber production. Most private forest lands are assessed under the County-administered Western Oregon Forest Land and Severance Tax section of the Oregon Revised Statutes, Chapter 321. Under this designated forest land program, forest land is taxed on the value of its use, rather than on market value. In order to receive the special assessment, the property owner must maintain a minimum stocking requirement of one hundred coniferous trees per acre, or have an adopted forest management plan to bring understocked lands up to the minimum stocking requirement. Data compiled from 1992 Assessor's records indicates there were 2,632 tax lots, of 20 acres or larger in size, in the county receiving a forest assessment. This land was in 1,123 ownerships, and had an average parcel size of 162.4 acres.

A relatively small amount of forest land in Jackson County is enrolled in the State Forestry-administered Western Oregon Small Tract Optional Tax program (ORS 321.705). Jackson County Assessor's records for 1992 indicate that 166 woodland owners, with a collective acreage slightly greater than 11,000 acres, are currently enrolled. This program is geared toward small woodland owners, and taxes are based on land's ability to produce income from timber sales, rather than on the value of the timber. Stocking requirements are identical to the designated forest land program.

A very small percentage of the forest assessed acreage in the county was included in the exceptions process and, therefore, is not included within the Forest Resource plan designation.

▶ Tables II through VII

TABLES ARE TO BE REVISED AND CONSOLIDATED ONTO ONE PAGE FOLLOWING APPLICATION OF THE FOREST RESOURCE DESIGNATION.

THE TIMBER INDUSTRY—PAST, PRESENT, AND FUTURE:

Harvest of timber in the county dates back to before the turn of the century, and logging and milling have served as important economic enterprises since the county's establishment. Early sawmills used hydropowered machinery and were constructed along the valley's streams and rivers. These sites grew from small settlements into centers of commerce and trade. During the period from the 1920s until World War II, the business of timber harvesting became more

industrialized. Major milling complexes were constructed in, or adjacent to, the region's urbanizing areas, and the ready supply of timber enabled mills to generally operate consistently even during the depression of the 1930s.

During the war, many commercial sawmills operated throughout the area to serve the increased demand for local lumber caused, in part, by significant government purchases for the war effort here and overseas. These mills were small and scattered countywide near the available timber resources. After the war, the major development of mills and the timber industry began in earnest. Several small mills were started to supply lumber to the local and larger markets to serve the ever-increasing demand for home construction all over the country. Rural Jackson County was soon dotted with individually owned sawmills and burners that processed the raw lumber for market.

Until the 1970s the majority of timber was cut from private lands. Then, principally due to the declining mature sawtimber base from which private industry could harvest, and changes in federal harvest policies, the cut dropped on private lands and drastically increased on public lands. In contrast, during the 1970s, harvesting statewide on public lands dropped below harvest levels on private land for the first time since 1961.[7] Although federal lands contain 60 percent of Oregon's sawtimber supply, they contributed only 40 percent of 1970 harvest levels; private industry, with 24 percent of the sawtimber supply, contributed 51 percent of the harvest; and, nonindustry private woodlands, holding almost 12 percent of the supply, accounted for 5.8 percent. In 1976 the Beuter Report[8] projected that at current logging levels, mature inventories on forest industry lands would be cut in three decades.

From 1977 to 1986, the average annual harvest of timber in Oregon was 7.3 billion board feet.[9] During this period, federal lands provided 52 percent of the total harvest, with the national forest alone providing 39 percent. The lowest harvest levels in this period occurred during the recession years; only 5.7 billion board feet were harvested in 1981. After the recession, harvests again approached record levels, with the 1986 harvest of timber from all lands reaching 8.7 billion board feet.

Forest industry lands have historically had the highest site productivity, while national forest lands have had the lowest—approximately 32 percent of the public forest is unavailable for timber production. The sale and harvesting of timber on federal lands has also become increasingly constrained by administrative and judicial appeals brought by the concerned public. To a great extent, the focus of these appeals has been the preservation of old-growth forests and northern spotted owl habitat.

The Beuter Report did not, and could not, predict the coming of the recession, significant revision of federal management plans, or the spotted owl controversy. In turn, this report established an important benchmark for the forest industry and a public that has demonstrated both concern about, and interest in, the management of the state's forest resources. Since the mid-1970s, public polls have indicated the general perception is that harvested areas are not

[7]Oregon State Department of Forestry, 1977.

[8]College of Forestry, Oregon State University: Timber For Oregon's Tomorrow: The 1989 Update, published in May, 1990.

[9]Oregon State Board of Forestry: Forestry Program for Oregon, 1990.

being replanted, while the forests are being over-cut. Many suspect that current harvest levels cannot be sustained, and that future forests will resemble vast, genetically-cloned tree farms.

In response to these concerns, Oregon State University's College of Forestry updated the Beuter Report.[10] The new study examines forest inventories and harvest rates on both public and private forest lands statewide. The update generally establishes an optimistic outlook for the long-term health of the state's forest resources and the timber industry. The short-term outlook for the remainder of the decade is not as positive. Using the 1983-1987 period as a baseline, the study forecasts an average five to ten percent decline in harvest levels statewide. Within most timbersheds in southwestern Oregon, declines of up to 20 percent are forecast—a result of increasing dependence on federal timber reserves, some of which may not be available for harvest.

In the short-term the statewide baseline average harvest level of 1.2 billion cubic feet per year between 1983 and 1987 could decrease two percent to 1.17 billion. With the potential implementation of intensified management practices, however, harvest could exceed levels from that period by the year 2010, and continue to rise into the new century to a long-term level in excess of 1.35 billion. Opportunities exist on nonindustrial private forests to increase the harvest above baseline levels if those owners can be motivated to cut more of their inventory.

Harvest on private, industrial forests is expected to decline by seven percent, a direct result of a near-term shortage of timber which is mature enough to be harvested. Levels will begin to increase again by 2020 as second and third-growth industrial forests reach maturity, although they may not rise as high as their initial level if the volume per acre in the old-growth forest was greater than that under second-growth management.[11]

Harvest on federal forest lands is expected to decline by 17 percent, a result of congressional and U. S. Forest Service responses to the controversy over the harvest of timber from the region's national forests. Harvest levels from the period of 1983-1987 are not sustainable because the size of the land base available for growing timber has been reduced. Acreage has been allocated away from timber production, and multiple-use constraints on the remaining timberland have reduced the short-term harvest levels. In the long term, timber production could rise as cut-over acres mature and the effects of intensive management take hold. The proportion of harvest from federal forests (45 percent between 1983 and 1987) is projected to decline from 42 percent of the total between 1991 and 2000 to 38 percent by 2090, as these harvests remain stable while those of other owners rise.

Planned long-term management intensification on U. S. Forest Service and Bureau of Land Management lands is very high, and includes the increased use of genetically improved stock, control of undesirable competing vegetation, pre-commercial thinning, commercial thinning, and fertilization. The Rogue River National Forest's Land and Resource Management Plan was adopted in July of 1990, and revised with its Regional Forester approved northern spotted owl protection plan in March of 1992. During August of 1992, the Medford District of the Bureau of Land Management issued its draft of the Medford District Resource Management Plan and

[10]College of Forestry, Oregon State University: Timber For Oregon's Tomorrow: The 1989 Update, published in May, 1990.

[11]College of Forestry, Oregon State University: Timber For Oregon's Tomorrow: The 1989 Update, published in May, 1990.

Environmental Impact Statement, with the review and comment period closing in December of 1992.

On forest industry and state lands, management intensification will not increase as much because these lands are already managed at nearly their planned intensity. Nonindustrial private owners, in the aggregate, are currently managing their own lands in the least intensive manner of all forest land owners and are unlikely to change.

ECONOMIC SIGNIFICANCE:

The Local Lumber and Wood Products Industry: In 1960 employment in the county's wood products industry averaged 3,950, and accounted for 78 percent of the manufacturing sector. In that year, the largest part of the industry was involved in logging and lumber production. Between 1960 and 1976, employment in lumber and wood products was on the increase. In 1973, prior to the 1974-75 recession, lumber and wood products employment averaged 5,800, the highest figure recorded, and accounted for 75 percent of all manufacturing employment. Production of lumber and plywood slumped badly during the recession of the early 1980s, but recovered strongly between 1982 and 1987. Between 1987 and 1990, lumber production dropped by 25 percent, while plywood output decreased by 28 percent.

By 1990, the wood products industry employed an average of 5,320 workers, and comprised 60 percent of the total manufacturing employment of 8,810. The largest individual sector was veneer and plywood, although strong growth had developed in other wood products sectors such as millwork, particleboard or hardboard, and other miscellaneous wood products. Timber and other production cost increases provided an economic incentive to use as much of the basic tree in the production process as possible. The covered payroll generated in 1990 was $133.1 million, while total manufacturing income was listed by the Oregon Employment Division's Covered Employment Payrolls as being $212.4 million.

While complete data for 1991 was unavailable from the Employment Division, it is predicted that 1991 figures will show a continuation of these trends in production with nonfarm employment declining for the first time since 1981, with most of the reduction occurring in the wood products industry. These figures would indicate 1,100 fewer jobs in the county's timber manufacturing sector than in 1990—a reduction of 20 percent. Manufacturing outside of the timber industry has been affected by the economic recession, with employment falling by about six percent from 1990 to 1991.

In addition to persons directly employed in the lumber and wood products industry, workers are also employed in the closely related areas of contract road building, reforestation, and trucking. Also, Medford is the headquarters of the Rogue River National Forest and the Medford District of the Bureau of Land Management. On an annual average basis, these activities account for approximately 800 to 1,500 jobs in support of the basic wood products industry.

Production and employment trends in the wood products industry will continue to a great extent to depend on the availability of commercial timber. Large reductions in the allowable cut are planned by the Bureau of Land Management and the U. S. Forest Service in response to a variety of forest management and environmental issues. These include new management areas and guidelines for the northern spotted owl, adjustments of the timber harvest output (Allowable Sale Quantity) for sustainable yields, changing the deer and elk winter range management

areas, the need for conservation areas for peregrine falcon and bald eagle, and the increased demand for recreation and domestic supply watersheds.

The long-term trend for employment in Jackson County's lumber and wood products industry appears to be downward. It is unlikely that this industry will be a source of new jobs in future years to meet the demand for employment generated by a continually growing labor force. Expected reductions in timber supply, technological change, rising interest rates, reduction in mortgage funds, and the resulting fall in the level of residential construction could very likely result in a decrease in both the number of firms and number of employees in the industry in the future. Compounding these trends, the county's current annual mill capacity is roughly twice its available timber supply, so timber must be brought into the area. The decline may be slowed somewhat by the continued demand for commercial construction, even though the majority of the local timber products are used for residential construction.[12] Despite these projections, the forest industry is expected to maintain a position of primary importance in the local and regional economies. In addition to the timber-related economy, forest areas have profound economic influence on the recreational, tourist and livestock industries.

O&C Funds: Income from the federal Forest Reserve Rental and Oregon and California Railroad Lands (O&C) is of particular significance to the stability of the county's economy. A 1916 act of congress revested interests of the Oregon and California Railroad to the federal government as a result of the railroad's violation of its agreement to construct a rail line between Portland and California. Following the establishment of the Bureau of Land Management during the 1940s, these lands, including those within the boundaries of national forests, were placed under its jurisdiction. Congress further directed that these lands be brought under sustained yield management if they were suitable for timber production.

The federal government pays fifty percent of the gross receipts from timber sales directly to counties with O&C lands. Based on its percentage of the lands, Jackson County receives nearly sixteen percent of these funds. Federal Forest Reserve Rental funds are received from the U. S. Forest Service, and are dedicated by state law to road and school use.

According to the Jackson County Treasurer, the County has received the following income in recent years, in lieu of taxes on forest land:

JACKSON COUNTY FORESTRY INCOME

SOURCE	1987-88	1988-89	1989-90	1990-91	1991-92
O & C	$10,721,748.29	$17,059,929.52	$17,223,068.15	$16,175,923.86	$15,137,676.46
FEDERAL FOREST RESERVE RENTAL	5,494,406.02	5,543,110.81	6,493,020.81	4,486,158.75	4,974,679.03
TOTALS:	$16,216,154.31	$22,603,040.33	$23,716,088.96	$20,662,082.61	$20,112,355.49

Importance to Agriculture: Coordination between forestry and agricultural interests has been a long-standing tradition in Jackson County. Water for agriculture is precipitated and stored in

[12] Jackson County Economic Development Program, 1979.

the higher elevation forest lands and, during the dry season, this water passes through a well developed network of canals and aqueducts to irrigate fields and orchards at the lower elevations. Large ranching operations are found in many parts of the forest resource, and have historically been a primary use of open space forest land in the county. In addition to using private grazing lands and natural meadows, ranchers have relied on the Bureau of Land Management and the U. S. Forest Service to offer forest land for grazing on a fee basis. The county government receives a small portion of grazing fee revenues for improvement of grazing lands.

Range management practices aim for sustained yield of forage for cattle and wildlife. Grass, browse, and other edible plants are under management similar to that for trees. Planting and seeding practices partially increase the amount of forage, as does the removal of undesirable plants. Construction of watering places, dividing land into manageable units, and distribution and movement of livestock are employed as measures to prevent overgrazing. Types of livestock, timing, and quantity also are major factors in range management practices.

In 1991, approximately 12,000 livestock animals grazed on forest lands for varying amounts of time. In addition to providing revenue, grazing livestock on federal lands permits county ranchers greater production potential than that which they would be able to achieve on private lands.

PROTECTION OF THE RESOURCE:

Forest lands are an essential part of Jackson County's current and future economic, social, and environmental well-being in terms of employment, tax revenues, forest products, livestock grazing, watershed protection and groundwater replenishment, fish and wildlife habitat, recreational opportunities, and scenic enjoyment.

In order to conserve these lands for forest uses and to ensure a continued yield of forest products, Jackson County has incorporated all of its forest lands into one Forest Resource designation and established a 160-acre minimum parcel size. Reasons for establishing this parcel size include:

1) A need for future County services in remote areas should not be established. In this regard, two major service problems exist:

   Access: Many areas of the forest resource have a highly developed public road network; however, many of these public roads are under the jurisdiction of the Bureau of Land Management and the U. S. Forest Service. These agencies do not guarantee access from their roads for the purpose of land division and development. Lack of legal access precludes provision of public safety and other services expected by rural residents.

   Fire Protection: According to the Southwest District of the Oregon Department of Forestry, "As the number of structures, people, and power driven machinery

increase in forest areas, the risk of fire occurrence will also increase." Fire is an obvious threat to both the forest resource and to people living in or around it.[13]

2) The 160-acre minimum parcel size for the forest resource designation is consistent with the Alternative Futures Element of the Comprehensive Plan, which emphasizes urban centered growth, environmental quality, energy efficiency, and preservation of resource lands and the rural character of the county.

3) The designation protects forest lands for forest uses by minimizing the impact of residential development on forest uses—especially timber production and harvesting. The Southwest District State Forestry Department is of the opinion that ". . even though adjacent Bureau of Land Management lands are intensively managed, as residences and structures are built in the forest resource, management restrictions are usually demanded by the new owners. Harvesting may be visually objectionable, dusty, or noisy. Activities such as site preparation, chemical grass control or brush control may also be restricted."[14] These impacts would also be felt by the U. S. Forest Service and private timber companies.

Residences are considered a nonforest use according to the philosophy and interpretation of Statewide Planning Goal 4, Forest Lands, by the Land Conservation and Development Commission and the Forest Rule (OAR 660, Division 6). The forest resource lot size discourages residential development without prohibiting it, thereby satisfying state and county goals.

Woodlands, as well as commercial forest lands, are included in the Forest Resource zoning designation and, therefore, afforded this protection for the following additional reasons:

1) Although nonindustrial private owners have different reasons for owning or managing existing or potential forest land, their objectives frequently include maximum timber growth, recreation, aesthetics, grazing or other objectives compatible with the forest resource.

2) These lands can continue to provide an effective buffer between rural development and the commercial forest lands. For example, "an owner of a 20-acre tree farm can afford to clear brush and remove dead and down wood to sell or use himself for firewood. He can also fence his property, which will in turn put a stop to the damage, such as erosion, fire and mutilation of trees caused by the misuse of off-road vehicles."[15]

3) Only 20 percent of nonindustrial private forest lands are managed for timber production. Inclusion of these areas within the Forest Resource designation should encourage more intensive management of smaller parcels through incentive programs contained in the policy section of this element.

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[13]Memorandum from the Oregon State Forestry Department, Southwest District, to Jackson County, March 17, 1979.

[14]Memorandum from the Oregon State Forestry Department, Southwest District, to Jackson County, March 27, 1979.

[15]Memo from John Henderson, Double Dee Lumber, February 12, 1980.

4) For timber industry and publicly owned forest lands, the inclusion of the woodland areas reduces conflicts between commercial forest and nonforest uses by maintaining a 160-acre minimum parcel size, and by requiring that proposed development be subject to review to assure that private land partitioning and development does not adversely affect forest productivity.

5) Lands which are capable of producing timber or wood fiber, but do not have the physical capabilities for commercial forest management, will be protected.

FINDINGS, POLICIES, AND IMPLEMENTATION STRATEGIES:

1

FINDING:

The Oregon State Department of Forestry, assuming present management practices will continue, projects substantial future declines in employment and timber harvests in Jackson County and the rest of western Oregon.[16] The Oregon State Board of Forestry suggests that the continued decline can be averted and reversed in the long run, but there is substantial debate regarding the wisdom of such actions as increasing harvests from public lands to offset declining saw timber supplies on private forest lands.[17] Since the county's economy is, and will continue to be, greatly affected by the outcome of these debates and by the resulting public and private decisions, the County should systematically review and comment on proposed plans which affect its forest resource base and economy. Forest plans, recommended allowable harvest plans, timber resource plans, roadless area and wilderness issues, slash use or disposal plans, and land exchanges are among the public and private actions about which the County has legitimate interest.

Jackson County should also use its own authority to protect and preserve forest lands. The Forest Resource zoning designation describes permitted, discretionary, and conditional uses, and establishes a 160-acre minimum parcel size in support of statewide conservation and use objectives for forest lands. The district restricts the type and intensity of development on forest lands due to the necessity to preserve the economic base of the county, and to reduce conflicts between rural development and forest resource management. The County's land division regulations should also be used to protect forest resources.

POLICY: THE COUNTY SHALL CONSERVE ITS FOREST RESOURCES, REDUCE CONFLICTS BETWEEN FOREST AND NONFOREST USES, AND ENCOURAGE A SUSTAINED YIELD OF FOREST PRODUCTS.

[16]Oregon State Department of Forestry: Phase I of the Jackson County Carrying Capacity Study, and the Jackson County Economic Development Program Annual Update, 1979.

[17]Oregon State Board of Forestry: Forestry Program for Oregon, 1977.

IMPLEMENTATION STRATEGIES:

A) Pursue a more active role in encouraging reforestation and better overall management practices on forest resource lands. To achieve this, the County should:

i) Review and comment on significant federal, state, and local governmental and private management and development plans which either have a substantial or cumulative effect on, or occur in, forest lands;

ii) Encourage and require, wherever possible, multiple use of all roads, trails, easements, and rights-of-way necessary to permitted or conditional uses of the forest to minimize impact on the resource, and encourage and require coordination of planning for all new construction or revisions of all roads, trails, easements and rights-of-way between all owners and users of the resource;

iii) Support state and federal legislation to increase reforestation efforts and intensive management practices;

iv) Support the requirements of the Forest Practices Act as a means for regulating timber harvest and related practices; and,

v) Endorse the provisions of the state's Forestry Program for Oregon, 1990.

B) Maintain the 160-acre minimum parcel size for the Forest Resource zoning district, as established by the Jackson County Zoning Ordinance adopted in 1973, unless compliance with the parcel area reduction provision of the Land Development Ordinance has been demonstrated.

C) Allow dwellings in the forest zone as authorized by state law, provided findings are made in conformance with the requirements of the Jackson County Land Development Ordinance.

D) Restrict access roads and public facilities such as sewer, water, electricity and telephone, unrelated to a permitted or conditionally approved forest use, in designated forest lands.

2

FINDING:

Jackson County's forest lands provide amenities that are difficult to measure in monetary terms. The attractive setting and forest environment provide many recreational opportunities that serve to attract both in-state and out-of-state tourists to the area, helping to strengthen the local economy by bringing in new dollars. In addition to their scenic and recreational values, forests serve to help maintain local wildlife and fish populations. Maintaining such populations can also have a positive effect on the local economy by attracting tourist trade directly related to hunting and fishing.

Although the managing, growing and harvesting of timber will continue to be the dominant use of forest resource lands, other recognized forest uses may compete for primary or secondary importance in such areas. Watershed protection can become a primary use where municipal water supplies are involved. Domestic livestock grazing, aquifer recharge maintenance, wildlife habitat, and recreation all share an important position in the hierarchy of uses permitted within forest lands.

Federal and state legislation encourage grazing on forest lands, and livestock grazing, particularly summer grazing at higher elevations, is an established practice on which local ranchers depend. Use of forest lands for grazing also helps to prevent overgrazing on lower elevation agricultural lands.

POLICY: ACTIVITIES ON FOREST LANDS SHOULD BE CARRIED OUT TO THE BENEFIT OF FOREST PRODUCTION, DOMESTIC LIVESTOCK GRAZING, WATERSHED PROTECTION AND AQUIFER RECHARGE MAINTENANCE, WILDLIFE AND FISHERIES HABITAT, OPEN SPACE AND SCENIC RESOURCES, RECREATION, AND CONTROLLED MINING.

IMPLEMENTATION STRATEGIES:

A) Permit only those agricultural, recreational, residential, and mining uses which support or do not interfere with forest resource management.

B) Inventory and place in a priority listing for retention as a public resource, areas of high scenic or recreational value (methods and techniques for scenic and recreational land acquisition are addressed in the general implementation element).

C) Subject forest practices within watersheds principally used for municipal water supply to environmental review procedures to assure protection of water quality.

3

FINDING:

Forest resource areas require protection and buffering from incompatible land uses. Adjacent residential areas are frequently subjected to noise, dust, pesticides (such as herbicides, silvicides, fungicides, and insecticides), and truck traffic at levels not compatible with residential land uses. The presence of residential uses may also have negative consequences on secondary forest uses. Wildlife populations and migratory routes, forest vandalism, and the increased fire potential resulting from human settlement, all have an effect on the ability of the county's forest resource to sustain itself on a long-range, self-perpetuating basis. However, properly sited residences in areas designated Forest Resource can be an important element of a property owner's forest management plan, and may minimize forest vandalism and provide a source of water and manpower to suppress wildfires.

POLICY: BUFFERING TECHNIQUES SHALL BE ESTABLISHED BETWEEN LANDS ZONED FOR FOREST USE AND ALL OTHER ADJACENT ZONING DISTRICTS TO PROTECT RESOURCE LANDS FROM THE INTRUSION OF INCOMPATIBLE LAND USES.

IMPLEMENTATION STRATEGIES:

Buffering techniques include, but are not limited to, the following:

A) Require developments within, or adjacent to, the Forest Resource zoning district to provide adequate buffering, which may include site plan review, special setbacks, and fire safety provisions.

B) Maintain guidelines for land partitioning within the Forest Resource zoning district to assure that lot layout and siting proposals reasonably carry out the intent of policies and strategies contained in this element, which are designed to reduce conflicts between nonforest development activities and forest uses.

4

FINDING:

The economy of Jackson County is, and will continue to be, closely linked to its forest resource. Forestry-related tax revenues and payments in lieu of taxes for public forest lands represent a substantial portion of the County revenue. Projected declines in the amount of industry-owned timber, and the failure to reforest harvested lands, pose a threat to the future timber supply and to the economy of the county.

Increased yields from small woodlands could help maintain a sustained yield of forest products as allowable harvest on federal lands declines. Even though nonindustry-owned woodlands represent a small percentage of the forest land base and harvest, they could, by increasing productivity through intensive management, play a key role in offsetting major economic dislocations by helping to stabilize local sawtimber supplies.

There are, however, several factors which hinder nonindustry small woodland owners from increasing the productivity of their lands through intensive management. The availability of seed and seedlings from proper seed zones and elevations is critical to the success of reforestation efforts; however, because good seed collection years are usually many years apart, seed and seedlings may be unavailable, or very expensive, for small woodland owners. For many owners, the lack of capital for seed, seedlings, and required equipment is the principal obstacle to intensive management. The Oregon Legislature passed the Woodland Management Act of 1979, which authorized the state forester to operate a forest tree seed bank, and established income tax credits for converting under-productive forest land; however, no funds were appropriated to implement the act.

In addition, much of the available research regarding rotation, site quality, and forest management practices is not applicable to the forests of Jackson County because the data was developed for the climates and environs of northwestern Oregon. Research applied specifically to southwestern Oregon forests is greatly needed to assure that forest management decisions

are based on reliable scientific findings. Cooperative research and educational efforts are needed to improve the silvicultural practices of small woodland owners.

POLICY: THE COUNTY SHALL PROMOTE THE ESTABLISHMENT OF A COORDINATED WOODLAND ASSISTANCE PROGRAM IN ORDER TO IMPROVE THE COUNTY'S FUTURE SAWTIMBER SUPPLY THROUGH INCREASED PRODUCTIVITY ON NONINDUSTRY FOREST LANDS.

IMPLEMENTATION STRATEGIES:

A) Promote a woodland assistance program for Jackson County.

B) Coordinate the efforts of the Department of Planning and Development, the Assessor's Office, the Oregon Department of Forestry, Cooperative Extension Service, and the Small Woodlands Association to encourage owners of land zoned Forest Resource to avail themselves of special tax assessments and other incentives designed to help keep land in forest use.

5

FINDING:

Within the county, entire sections of privately owned land are found within the boundaries of national forests, small portions of U. S. Forest Service land are scattered well outside of the national forest boundaries, and Bureau of Land Management properties alternate section by section in a checkerboard pattern. This intermingling of public and private forest lands can create problems for resource managers.

Land exchange among the public and private sector is one recognized means to consolidate ownership patterns for more efficient management of these lands. The Rogue River National Forest alone is involved in an average of 2,000 acres of land offered and selected per year.[18] Jackson County has a legitimate interest in such exchanges, and is routinely asked to review, and comment on, such transfers of ownership by federal agencies. Guidelines for conducting the County's review of proposed land exchanges are needed to assure that such reviews are thoroughly and expeditiously completed.

POLICY: JACKSON COUNTY SHOULD ENCOURAGE A LAND EXCHANGE PROGRAM AMONG PRIVATE INTERESTS AND PUBLIC AGENCIES WHERE CONSOLIDATION OF FOREST OWNERSHIPS CAN BE SHOWN TO RESULT IN MORE EFFICIENT MANAGEMENT, REDUCED CONFLICTS BETWEEN FOREST AND NONFOREST USES, AND CONSERVATION OF FOREST RESOURCES.

IMPLEMENTATION STRATEGIES:

The Jackson County Planning Commission shall review, and comment on, proposed land exchanges in terms of their compatibility with the comprehensive plan. The review

[18]U.S. Forest Service, Rogue River National Forest: Issues and Opportunities, 1980.

should include an evaluation of the short and long-term effects of the proposed land exchange on such factors as:

A) Management of the forest resource;

B) Watershed protection and water quality;

C) County revenues;

D) Wildlife and fisheries habitat;

E) Reduction of conflicts between forest and nonforest uses;

F) Livestock grazing operations;

G) Scenic, recreational, historic, or wilderness resources;

H) Mineral, aggregate, and energy resources; and,

I) Reforestation of cut-over lands.

6

FINDING:

Soils information has been prepared for most of Jackson County. Vast areas of the uplands and mountainous areas under the management of the national forest have also been mapped using procedures separate from those employed by the Soil Conservation Service. However, soils data is needed to complete the cubic foot site class inventory.

POLICY: THE COUNTY SHALL CONTINUE TO UPDATE ITS CUBIC FOOT SITE CLASS INVENTORY FOR ALL FOREST LANDS AS ADDITIONAL DATA IS MADE AVAILABLE BY THE SOIL CONSERVATION SERVICE OR OTHER ACCURATE SOURCES.

IMPLEMENTATION STRATEGY:

The County will continue to update its inventory of forest lands as additional data becomes available.

GOAL EXCEPTIONS

INTRODUCTION AND BACKGROUND:

The Statewide Land Use Planning Goals require each county to inventory and preserve "resource lands." In Oregon, the two leading resource-based industries are timber and agriculture, bringing in over six billion dollars each per year. Thus, resource lands are those which are in farm or forest use, lands which may be needed for such use in the future, and lands which are needed to protect farm and forest uses on adjacent land. The natural beauty of these lands also plays a most important role in another of Oregon's resources, tourism. Out-of-state visitors spend more than a billion dollars annually in Oregon. Clearly, it is in the interest of Jackson County residents to support programs to preserve these resources which contribute significantly to the local economy. The Statewide Goal 3, Agricultural Lands, and State Goal 4, Forest Lands, require that the County develop plans and ordinances to protect agricultural and forest lands. This is done by zoning such lands for the appropriate use.

"The Goal 2 Exceptions process is one method for describing how the land use requirements of certain statewide goals have been balanced against local land use objectives as those local objectives apply to specific properties or situations. The intent of the exceptions process is to permit necessary flexibility in the application of the statewide planning goals. The exceptions process is not to be used to indicate that a jurisdiction disagrees with a goal." (Proposed Goal 2 Exceptions Process, Oregon Administrative Rule, pages 2 and 3.)

Two major types of exception processes have evolved through court decisions, Land Use Board of Appeals (LUBA) decisions, Land Conservation and Development Commission (LCDC) policy papers, appeals rulings, acknowledgment decisions, and most recently proposed Oregon Administrative Rules. The more difficult type of exception to justify is based upon what LUBA terms the "traditional" Goal 2 exception. Such a "need" exception must provide compelling reasons and facts to demonstrate compliance with the standard that it is not possible to apply a particular resource goal to given property or situations based upon the following four factors listed in Goal 2:

1) Why the proposed use should be provided for.

2) What alternative locations within the area could be used for the proposed use.

3) What are the long term environmental, economic, social, and energy consequences to the locality, the region, or the state from not applying the Goal or permitting the proposed use.

4) How the proposed use will be compatible with other adjacent uses.

The Administrative Rule provides good discussion as to what type of evidence satisfies the standards and factors listed above. The requirements are rigorous and are not to be based on market demands, as shown in the Administrative Rule, Section 660-004-0020, LCDC policies and LUBA cases which are listed in the appendix.

LCDC policy also provides a second type of exception:

> "A conclusion, supported by compelling reasons and facts, that land has been physically developed or built upon, or that land has been irrevocably committed to uses not allowed by the application goal can satisfy the Goal 2 standard that it is not possible to apply the goal. If a conclusion that land is built upon or irrevocably committed is supported, the four factors in Goal 2 and OAR 660-004-020(2) need not be addressed." (Proposed OAR 660-004-025(1), pages 13 and 14.)

Jackson County and most other jurisdictions have based their exceptions on the built or committed test. Reasons exceptions generally cannot be justified except for isolated instances, in part because it is impossible to prove a need for rural residential uses when a county as no responsibility to provide for it.

The conclusion that land is built or committed has to be based on substantial findings of fact that address one or more of the following:

1) Adjacent uses;

2) Public facilities and services (water and sewer lines, etc.);

3) Parcel size and ownership patterns;

4) Neighborhood and regional characteristics;

5) Natural boundaries; and

6) Other relevant factors.

Reasons why the facts lead to a conclusion of commitment must also be stated for each such exception area (proposed OAR 660-004-025, pages 14 and 15).

Existing parcel sizes and their ownership have to be considered in relation to the land's actual use. Undeveloped parcels and tax lots under one ownership are to be considered as one unit. Specifically, "the mere fact that small parcels exist does not alone constitute commitment. Whether small parcels in separate ownerships are irrevocably committed will depend upon factors such as whether the parcels are developed or not, whether the parcels stand alone or are clustered in a large group, and the location of the parcels relative to designated resource land." (Proposed OAR 660-004-025,6.)

This principal has been firmly established under ORS Chapter 92, and a variety of decisions by the Land Use Board of Appeals (notably 1000 Friends vs. Benton County - LUBA 80-134, and LCDC).

PREVIOUS GOAL EXCEPTIONS INADEQUATE:

On August 29, 1980, Jackson County adopted exceptions to Statewide Planning Goals 3 and 4, which consisted of a document entitled "Goal Exceptions," and 18 large exceptions maps. This document and the related maps were submitted to the Land Conservation and Development

Commission (LCDC) as one part of the County's request for compliance acknowledgment of its comprehensive plan.

The Goal Exceptions submitted in 1980, were developed in the final weeks prior to adoption of the Comprehensive Plan by the Board. Inadequacy in the 1980 Goal Exceptions was shortly revealed when portions of the County's Comprehensive Plan, notably the Agricultural Lands Element and Goal Exceptions Document were contested in a petition for review to the Land Use Board of Appeals (LUBA).

In February of 1981, LUBA required that deficiencies in the County's approach to exceptions be corrected. Subsequently, in April of 1982, the LCDC, in granting a continuance following its review of Jackson County's Plan, ordered that deficiencies in Goal 2 compliance be corrected.

DEVELOPMENT OF JACKSON COUNTY'S GOAL EXCEPTION PROCESS:

The process of taking exceptions to the State Forest and Agricultural Goals has become complicated because it evolved the past years as a result of opinions of the Courts, Land Use Board of Appeals, County Counsel, LCDC policy refinements, and acknowledgment decisions in other jurisdictions. As a result, many man months were devoted to the development of an acknowledgeable exceptions document by the Planning and Development Department staff, the Planning Commission, and the Board of County Commissioners.

Several steps were involved in preparing the exceptions document:

Step 1 Development of a Data Base

The first step taken was development of a data base. Initially, a set of coded soils maps for the county were prepared which show:

1) Class I—IV agricultural soils.

2) Irrigated and semi-irrigated land.

3) Lands with forest cubic foot site class suitability of 2-6.

4) Soils with both forest and farm suitability.

(Note: These maps are not reproducible.)

These data were then transferred to the countywide zoning base maps. Pending mapping error review requests were transferred to these maps. All Planning Division file numbers and 1977 land use data were transferred to the Assessor's plat books (which were used as base work maps for most exceptions areas) to assure that staff was aware of pertinent previous official actions.

The computer printout of the Assessor's records for each tax lot outside incorporated cities was obtained to assist staff in determining the degree of development, special assessment, and ownership of parcels considered for exception.

(Note: These printouts are also non-reproducible in their entirety.)

Step 2 Preliminary Decisions on Commitment

To determine which parcels would be considered for further study as built or committed to nonresource use, an initial screening was conducted based on:

1) Soil suitability for farm or forest use;

2) Special farm or forestry assessment;

3) Land ownership patterns as evidence by 1979 special assessment maps; and

4) Tax Lot sizes with ten acres as the threshold for initial separation of resource from nonresource land.

The result of this initial screening was to identify lands to be given further study as potentially committed areas and to separate those lands from areas which, according to most recent decisions of LUBA, LCDC, and the Courts, cannot be supported as committed or needed and should most likely be rezoned to resource use. Specifically, lands not zoned for resource use (such as SR-2.5, F-5, RR-5, and OSR) but which have soils, special assessment, land uses, or irrigation indicating farm or forest potential were initially identified for rezoning when parcel sizes were ten or more acres in size. Smaller tax lots were considered potentially committed.

Step 3 Determination of Commitment

The third step was most time-consuming because at this point exceptions criteria were developed and a detailed parcel-by-parcel analysis, against this criteria, was conducted to determine which lands were to be taken as an exception.

As a result of two joint Planning Commission/Board of County Commissioners study sessions (advertised to the public), the criteria were broadened and refined. Consultation with LCDC staff and planning staffs from other Southern Oregon counties confirmed that the changes made still appeared acknowledgeable. Aerial photos and land use data were evaluated, Assessor's printouts were extensively consulted, and findings in support of each exception area were developed.

Planning staff then took completed maps and the criteria to the July meetings of the Committee for Citizen Involvement, to numerous Citizen Advisory Committee meetings, and to an Informational Session attended by staff and the Planning Commission held at the courthouse, following a mailing of the Department's Land Use Planning Newsletter. A new conference was also called by staff to provide additional information to the public prior to public hearings on exceptions held by the Board and Planning Commission in late July and in August.

The end result of the process was a determination of what land was clearly not available for resource use based upon the criteria, Board decisions, and what land was included within urban growth boundaries. Please note that urban growth boundaries were excluded from the exceptions inventory process because properties within UGBs are justified under the separate process established by Statewide Planning Goal 14, Urban Lands. Thus the stage was set for

the distinctly separate process of determining what would be the appropriate zoning for lands inside and outside the exception areas.

ORGANIZATION OF THE GOAL—EXCEPTIONS STUDY DOCUMENTS:

The Jackson County Exceptions Study consists of three major parts. The first of these, the Goal Exceptions Element of the Jackson County Comprehensive Plan (1982 rev.) serves as an overview of the process used by the County as an introduction to the Background Document described below.

Eighteen large Goal Exceptions base maps comprise the second part of the study document. These maps identify each individual exception area and provide a comprehensive view of how the exceptions areas related to one another, as well as to adjacent lands. The exceptions maps also show ownership patterns, special farm or forest assessment, specific Board decisions, urban growth and urban containment boundaries, and Citizen Advisory Committee areas. Additionally, the exceptions maps are of the same scale as soils maps and comprehensive plan and zoning maps. Exceptions areas are organized according to the 18 county base maps.

Within each map specific exception areas are generally organized by township, range, and section where possible. A name has been assigned to each area for ease of reference. An index map superimposed over the CAC boundaries is provided as a key to each section of the Background Document which deals with individual areas described below.

The third part of the Exceptions Study is the Goal Exceptions Background Document, which largely consists of summaries for each exception area and a smaller number of individual decisions by the Board pertaining to exceptions or rezonings which were made by ordinance.

Each Exception Area Data Summary contains an identifying map number, CAC area, and assigned name corresponding to the map, township, range, and section(s). A tabular breakdown of tax lots according to their use and acreage, adjacent land use, soils, and natural hazard data are provided. Findings and conclusions pertaining to the area regarding physical development, parcelization, resource potential, and other pertinent factors are also documented in support of the exception taken.

Appendices to the document contain such items as LCDC policy and recently promulgated Oregon Administrative Rules pertaining to exceptions, selected pertinent memoranda on the subject, an annotated sample page of the printout of the County Assessor's real property master file (a key element of the exceptions data base) and property classification code sheets, and bibliographic data. Referenced in the appendix are various work maps used in the preparation of the exceptions maps, many of which are not reproducible but are available for review.

THE EXCEPTIONS CRITERIA:

The County has two fundamental objectives for the exceptions process: to satisfy the LUBA (80-120) Stipulation for Remand for Jackson County's 1980, Exceptions Document; and most critically, to achieve acknowledgment of compliance with Statewide Planning Goals for the Comprehensive Plan and Land Development Ordinance. Achieving these objectives allows advance planning efforts to focus on more specific areawide problems and issues, and provide greater clarity for current planning and development activities.

In this regard, criteria for taking exceptions to Goals 3 and 4 which are based on development or irrevocable commitment of land to nonresource use, have been designed to avoid problems encountered by this and other counties in achieving compliance with Goal 2. The criteria are considered County policy and are adopted as such. These exceptions criteria are listed below in groups according to parcel size and issues. The underlying assumptions for each group are elaborated following the listing:

CRITERION 1. A developed parcel in separate ownership located on agricultural land which is less than six acres in size and is not in farm use is generally committed.

CRITERION 2. A developed parcel in separate ownership located on forest land, which is less than six acres in size and is not in forest use, is generally committed provided that a minimum of three parcels or about 20 acres is necessary for committing the area.

CRITERION 3. An undeveloped parcel in separate ownership under six acres in size is generally committed if it is adjacent to other developed and committed lands and the subject parcel is not in a farm or forest use.

ASSUMPTIONS:

- Individually owned parcels which are not in contiguous ownership with other tax lots and are less than six acres in size are deemed committed under the circumstances described above. A reasonable person would be compelled to conclude that such separately owned small parcels are no longer available for resource use and individual parcels are extremely unlikely to be aggregated with other such parcels or larger units to create resource management units. The six acre size was established because many areas which were examined for an exception had been zoned for five acre parcels since 1973, and quite often parcels were slightly larger than that minimum. These parcels are thus considered nonfarm and nonforest units of land.

- Oregon Revised Statute 215.215(2) provides that consistent with 215.243, the County may spot zone nonfarm uses in Exclusive Farm Use areas. Such spot zoning authority is not provided for forest lands. For this reason, a minimum acreage of about 20 acres, with at least three developed parcels, is necessary for taking an exception to Goal 4.

- Farm or forest use as used in these criteria means land which can meet the definition under Statewide Planning Goals 3 and 4. Special assessment is one key indicator of resource use or potential. Land use data, irrigation information, and aerial photography have also been used to determine farm or forest use.

CRITERION 4. A parcel in separate ownership in the six to 9.99 acre range is evaluated on a case-by-case basis for commitment. Please note that on forest land, a minimum of three parcels on 20 acres is necessary for committing the area.

1) A developed parcel in this acreage range is generally committed if adjacent to other committed lands unless the subject parcel is in farm or forest use.

2) An undeveloped parcel in this acreage range is generally committed when the predominant land use pattern in the immediate area is developed and committed and the subject parcel is not in farm or forest use.

ASSUMPTION:

- Individually owned parcels less than ten acres in size located on agricultural land have long been viewed by Jackson County as being noncommercial hobby farms at best, a contention that LCDC and the agricultural community undoubtedly agree upon.

- Similarly, LCDC considers parcels less than ten acres in size on forest land to be nonforest units according to their report on Jackson County's acknowledgment request. The Oregon State Department of Forestry will not provide its Woodland Option special tax deferral for parcels less than ten acres in size.

Since parcels in the six to 9.99 acre range are handled on a case-by-case basis, and must either be developed or part of a predominantly committed land use pattern, it is reasonable to conclude that a property in this acreage range may be considered committed according to these criteria.

- Previously stated assumptions pertaining to Criteria 1, 2, and 3, also apply to criterion 4.

CRITERION 5. A parcel in separate ownership ten acres or more in size is not committed except for those isolated instances where the adjacent surrounding land use is developed and committed, and the subject parcel has no apparent resource use, resource potential, or special tax assessment.

ASSUMPTION:

- The converse of the assumptions underlying Criterion 4 above is generally true for parcels greater than ten acres in size. It is difficult to conclude based upon compelling evidence that a parcel of this size has no conceivable resource use and is therefore irrevocably committed to nonfarm or nonforest use, except for the circumstances described in Criterion 5.

CRITERION 6. Existing rural service center uses in such areas as Prospect, Ruch, Applegate, Lincoln, and Wimer may be deemed committed.

ASSUMPTION:

- This criterion only states the obvious—that developed industrial, commercial, public, or residential uses in rural service centers are committed to nonresource use.

CRITERION 7. Land in urban containment boundaries is committed unless a significant resource issue remains to be resolved.

ASSUMPTION:

- Urban containment boundaries (UCBs) were established in 1980, around three unincorporated areas which possess characteristics that conform to the definition of urban in terms of development, densities, uses, and public facilities. These areas are:

A) White City: The White City area is comprised of a broad range of urban residential, commercial, and industrial land uses. The area functions as one of the two major county employment centers, with a vast array of light to heavy manufacturing activities.

B) Highway 99 Area: The area along U.S. 99, between Medford and Phoenix, generally exists as an urban area. Uses found along this corridor span the full range of land use intensity, from agricultural and rural residential to intensive commercial and industrial.

C) Forest/Gibbon Acres Area: An area north of Medford along Table Rock Road, consisting of mainly one-half to two acre developed residential lots.

- These three areas are circumscribed by a boundary line limiting their extent. Policies contained in the Urban Lands Element limit development of these areas to in-fill rather than expansion, according to the capacity of the facility infrastructure to support growth. These areas by definition are irrevocably committed to or developed in nonresource use.

CRITERION 8. A cemetery located on agricultural land is committed.

ASSUMPTION:

- ORS Chapter 215 does not provide for cemeteries as permitted or conditional uses on agricultural land. Existing cemeteries represent a substantial investment in land and facilities. By virtue of their use are for the foreseeable future available for agricultural use.

CRITERION 9. A parcel in separate ownership six acres or larger in size which contains nonresource, commercial, industrial, public facility, or mobile home park uses is generally considered committed unless less than 50 percent of the parcel is built upon. When less than 50 percent of the parcel is developed with such uses, that portion of the parcel which is built upon is considered committed, plus an additional 25 percent of the parcel may also be committed to provide for nonresidential facility and plant expansion. However, the utility of the undeveloped remainder of the parcel for resource use will also be evaluated.

ASSUMPTION:

- Commercial, industrial, public facility, or mobile home park uses on parcels greater than six acres in size should be provided with the opportunity to expand nonresidential and plant facilities to accommodate future growth. A 25 percent contingency was established for that purpose. However, if the remainder of the

property cannot be reasonably used for resource use, then the entire property may also be committed.

- A large parcel which is only developed on a small portion of the property is not considered entirely committed unless other pertinent factors apply to that parcel which prevent its use as resource land.

Finally, Board of Commissioners adopted ordinances or orders pertaining to rezoning or exceptions decisions are considered to be unwritten, but implicit, criteria for taking an exception to Goals 3 and 4. The rationale for each individual decision is contained within the separate ordinances which are contained in the Exceptions Background Document.

SIX GENERAL ASSUMPTIONS USED IN APPLYING THE CRITERIA

The following list of factors or assumptions were also used in applying the criteria. These are as follows:

- Natural or physical barriers are considered in evaluating cases for commitment.

- A basic premise of the exceptions project expressed at the outset is the need to address the LUBA remand and the LCDC Goal 2 compliance issues. Generally, land currently zoned Forest Resource or Woodland Resource is not reexamined for commitment unless an obvious discrepancy is apparent.

- Previously requested but unresolved mapping error requests are evaluated against the exceptions criteria listed above.

- A parcel under contiguous ownership, as used in this project, is as defined in Senate Bill 419 (Lots of Record Bill) and generally means same surname or corporate ownership. Flag lots, small appendages of larger lots or roads, are not obstacles that would prevent parcels from being recognized as contiguous.

- Land zoned Aggregate Resource was justified as committed or needed during the 1980 plan adoption process and generally does not need reevaluation.

- Ownerships will generally not be split according to their use, except as provided in Criterion 9 above.

SUMMARY OF TOTAL ACRES EXCEPTED FROM STATE GOALS 3 AND 4:

The following summarizes by base map the number of acres and tax lots in Jackson County for which exceptions have been taken. Keeping in mind that Jackson County's total land base is just over 1.8 million acres (including approximately 1.2 million acres in public ownership) it can be seen that the total acreage for which exceptions have been taken is relatively small.

TABLE 1

EXCEPTED RURAL LAND

BASE MAP NUMBER/NAME	TOTAL TAX LOTS	TOTAL OWNERS	ACRES	RESIDENTIAL TAX LOTS	COMMERCIAL/ INDUSTRIAL TAX LOTS	OTHER TAX LOTS
1-Ashland	451	380	1411.96	448	0	3
2-Phoenix/Talent	1838	1544	4330.07	1752	64	22
3-Medford	1804	1402	4270.77	1763	19	22
4-White City Seven Oaks	3157	2626	8825.03	2902	218	37
5-Dodge Bridge Modoc	929	760	4234.55	907	14	8
6-Trail-Shady Cove	373	300	1214.85	352	10	11
7-Graves Creek	98	77	435.10	98	0	0
8-Wimer	679	560	2424.32	660	10	9
9-Rogue River-Gold Hill	1591	1467	3340.60	1547	40	4
10-Applegate	697	606	2045.94	661	14	20
11-Copper	50	41	180.10	48	2	0
12-Little Applegate	13	11	80.34	13	0	0
13-Lincoln	72	64	325.14	68	2	2
14-Howard-Hyatt	0	0	0	0	0	0
15-Brownsboro-Lake Creek	178	122	1022.92	175	2	1
16-Big Butte Basin	66	60	198.23	66	0	0
17-Prospect	481	411	917.97	453	9	19
18-Union Creek	0	0	0	0	0	0
TOTALS:	12477	10431	35,257.89	11913	404	158

The above figures, as noted previously, are exclusive of urban growth boundaries, and thus only represent rural lands which are considered to be devoted to nonresource use.

The acreage within the County's incorporated cities and respective urban growth boundaries are also, for the most part, considered committed to or needed for urban uses. Those urban and urbanizable lands acreages are listed below:

TABLE 2

COMMITTED URBAN OR URBANIZABLE LAND

CITY	CITY LIMITS (1980) * ACREAGE		PROJECTED YEAR 2000 URBAN GROWTH BOUNDARY ACRES	
Ashland	3,456	Acres	4,570	Acres
Medford	10,641		14,700	
Gold Hill	435		515	
Butte Falls	260		305	
Central Point	1,116		2,730	
Eagle Point	763		2,685	
Jacksonville	1,203		1,218	
Rogue River	412		1,624	
Talent	544		1,034	
Phoenix	335		1,100	
Shady Cove	471		756	
TOTALS: *	19,636		31,237	

(SOURCE: Rogue Valley Council of Governments)

These figures when added to Rural Lands Exceptions totals from Table 1, provide a clearer picture of the total acreage of the county which is considered to be unavailable for farm or forest use within the scope of this comprehensive plan.

Total Rural Land Exceptions plus total committed Urban and Urbanizable Land equals 63,842 acres. Excluding incorporated cities from this total yields a total of 44,206 acres which are committed to nonfarm or nonforest uses. It should be understood, however, that Statewide Planning Goal 14, Urbanization, establishes a different evaluation process for determining what lands should be included in an urban growth boundary. Thus, inclusion of urban land acreages here are for illustrative purposes only. Justification for land within UGBs are dealt with in the joint land use agreements between the individual cities and the County. Please note, however, that Central Point's Urban Growth Boundary used by the Department is established unilaterally by the Board of County Commissioners, since it most likely represents the minimum area set aside for future urban use by that city.

HOUSING[1]

Recognizing the variety of social needs, attitudes, preferred lifestyles, and financial capabilities of households in Jackson County:

GOAL: TO ASSURE THE PROVISION FOR A RANGE OF HOUSING OPPORTUNITIES FOR ALL HOUSEHOLDS OF THE COUNTY BY LOCATION, TYPE, AND SIZE COMMENSURATE WITH THE FINANCIAL CAPABILITIES OF LOCAL HOUSEHOLDS AND CONSISTENT WITH THE ENVIRONMENTAL POLICIES OF THE STATE AND COUNTY.

INTRODUCTION AND BACKGROUND:

The need for safe, sanitary and affordable housing and the desire to provide a wide range of choice in housing types has long been a concern of Jackson County. Though shelter is a very basic human need, there are many residents of the county who live in substandard housing. Lack of facilities, excessive cost, poor location and overcrowded conditions are all common housing problems. In conjunction with the cities, the County must strive to meet the housing needs and desires of the total population by allowing quality dwellings and living environments of all types, in suitable locations, at affordable prices. The County must further encourage the utilization of alternative energy sources for heating and cooling in an effort to respond to current energy shortages and environmental degradation. With construction costs reaching and exceeding the purchasing power of large segments of the population, and with more stringent construction standards and land use requirements, the task at hand is not a simple undertaking. This is not a problem unique to Jackson County. Throughout the state and the nation the "American Dream" of owning a home has become unattainable to a major segment of the population.

The implications of this situation have not yet been fully understood, but certain conditions and results can be anticipated. For example, the increasing demand for mobile homes and multiple family dwellings and a corresponding rise in demand on the existing housing stock can be assumed. To meet the objectives the County must be willing to openly address the problems and seek solutions in a coordinated and cooperative manner.

Housing problems in Jackson County can be reasonably grouped in the following six categories:

A) Availability;

B) Affordability;

C) Habitability (suitability);

D) Accessibility;

F) Environmental Conservation; and,

[1]Amended by Ordinance m 84-43, adopted 12/26/84, effective 2/24/85.

F) General Housing and Community Development.

The Housing Element policies and related implementation measures attempt to respond to each of these problem areas.

The purpose of the Housing Element is to address, on a practical level, the development of a comprehensive strategy responsive to the housing needs of the county and its communities. As the major housing strategy document, the Housing Element is intended to provide all concerned citizens and public officials with an understanding of housing needs, and, to set forth an integrated set of policies and potential programs aimed at achieving the expressed goals. In doing so, the Housing Element will serve to provide guidance and direction to governmental and private industry decision makers in matters relating to housing. It will also promote closer coordination of city, county, state, and federal housing policies and programs.

The Housing Element, being only one component of the Comprehensive Plan, cannot advocate goals or policies that are not consistent with those of the other elements; conversely, since housing implies people and people require public services, the other elements of the Comprehensive Plan must also be consistent and in conformance with the Housing Element, and with each other. Among the more important elements of the Comprehensive Plan which need to be closely correlated with the Housing Element are: Rural and Suburban Lands, Urban Lands, Energy, Transportation, and Public Facilities and Services. These elements usually are most affected by and have the most effect upon housing in the county. Elements of secondary concern to housing include: Open Space/Natural Resources, Natural Hazards, Recreation, and Environmental Quality.

It should be emphasized that while background data does exist regarding the housing situation in Jackson County, it is too lengthy to be treated in a cursory evaluation within the parameters of the Comprehensive Plan. In addition, inadequate data bases and a lack of updated material hinder a comprehensive analysis and evaluation. Existing background materials are available, and the most salient and representative have been utilized herein to delineate the more outstanding housing problems of the county.

The lack of sufficient up-date material is a result of both an inadequate data base, and the rapid in-migration population increases experienced by Jackson County since the 1970 census. The 1980 census and its resultant information will provide a sufficient base for a more in-depth evaluation. Until such time as the 1980 census is available, other information sources and estimates will have to suffice to identify housing needs. The State Housing Division's report, the Annual Report of the Housing authority of Jackson County, and informed estimates by professionals knowledgeable of local housing conditions provide a substantial portion of the data base used in this element as up-dates of earlier census housing figures, and will serve to help document housing needs throughout the county.

Housing, by its very nature, is a complex issue. Not only does it involve physical land use, but it must also accommodate itself to a variety of social needs which are constantly evolving. Housing for various individuals and family units differ depending upon age, family structure, and particular economic and social needs. These issues, complications, and problems create a challenge to achieve the objective of providing adequate housing for all persons.

While the initial evaluation of housing needs concerns itself with the number of living units needed to accommodate the total projected county population inclusive of cities, it should be

noted that Jackson County is only directly responsible for assuring the provision of the number of housing units needed to accommodate the estimated increased population in unincorporated county areas. The application of urban growth boundaries in the county and the urbanization agreements between these cities and the county are, in essence, policy statements to the effect that the majority of future growth, and therefore, provisions for housing, will occur within the urban and urbanizable portions of the county where public facilities and services, and employment and shopping opportunities are the most favorable and can economically accommodate this growth. In this sense, the County has relinquished a portion of its direct involvement in the provision of housing by delegating that responsibility to municipalities.

Given these factors, the responsibilities of the County regarding housing are threefold: The first responsibility of Jackson County is to monitor all housing elements prepared by the various cities, assuring that all objectives of the County's housing goal, as well as those of the particular municipality are carried out. In this process, the County will take an active role in reviewing and assessing the level of housing goal attainment of the various municipalities. The second responsibility of the County regarding housing is to offer assistance to cities in the preparation and up-date of housing elements, and to offer technical aid and data in determining the particular housing needs of each involved community. Beyond monitoring of housing elements and offering technical assistance and coordination, the County is responsible for taking appropriate action, when necessary, to ensure the implementation of housing programs. This is done by encouraging private sector actions, and through public action and financing, when necessary and deemed in the public interest. the third area of responsibility for the County is to make provision for needed housing units in unincorporated urban containment boundaries (UCBs).

Availability: current housing availability and projected need for future housing are both important considerations when developing strategies of a sufficiently comprehensive nature to meet the housing goal. With current, 1979, total county population estimated at 126,500, and the year 2000 population projected to be 196,000 persons, more housing will obviously be needed. Overall, the housing supply in Jackson County is generally adequate, but rapidly increasing populations, both in-migration and new household formations, indicate housing demand increased at a considerably faster rate than did housing supply, and as a result, the county's reservoir of vacant housing has decreased sharply over the past decade. Table I illustrates the county's housing inventory over a roughly twenty year period, as well as vacancy rates. As is readily evident, the vacancy rate has declined sharply, and when correlated with population growth, reveals a corresponding decline in the difference between availability and demand. Increasing demand and declining supplies of available housing units, high interest rates, a shortage of mortgage investment capital locally, inflated construction costs, and double-digit inflation in general, have all contributed to making home purchase for the average Jackson County family nearly impossible, resulting in a dramatic increase in demand, and price, for rental housing.

TABLE I

JACKSON COUNTY HOUSING INVENTORY AND VACANCY RATES

	1960	1970	1978
TOTAL INVENTORY	26,102	33,562	45,663
TOTAL OCCUPIED	23,411	32,384	43,882

JACKSON COUNTY HOUSING INVENTORY AND VACANCY RATES

	1960	1970	1978
OWNER-OCCUPIED	16,537	21,281	29,345
% OF TOTAL	63.4%	63.4%	64.3%
RENTER-OCCUPIED	6,874	9,903	14,486
% OF TOTAL	26.3%	29.5%	31.7%
VACANCY RATE	10.3%	7.1%	4.0%

SOURCE: 1960 AND 1970 FEDERAL HOUSING CENSUS AND ESTIMATES MADE BY THE STATE HOUSING DIVISION.

Since changes in the housing supply and vacancy rates are principle indicators of availability and need, the following tables present data reflecting such trends. Table II is exemplary of the changes in the housing supply and vacancy rate for the state and county, as well as some local communities from 1960 to 1970.

TABLE II

CHANGE IN HOUSING SUPPLY 1960—1970

	PERCENT INCREASE TOTAL HOUSING UNITS	PERCENT INCREASE OCCUPIED UNITS	PERCENT INCREASE OWNER OCCUPIED	PERCENT INCREASE RENTER OCCUPIED	PERCENT INCREASE VACANT OCCUPIED
OREGON	19.5	23.9	23.6	36.7	-7.8
JACKSON COUNTY	28.6	34.1	29.9	44.1	-29.4
ASHLAND	27.4	38.4	10.6	76.1	N/A
CENTRAL POINT	74.9	78.6	54.2	150.3	N/A
MEDFORD	23.6	24.2	21.5	28.6	+14.3

SOURCE: BUREAU OF GOVERNMENTAL RESEARCH AND SERVICE, UNIVERSITY OF OREGON, 1940-1970 POPULATION AND HOUSING TRENDS CITIES AND COUNTIES OF OREGON, 1971.

Table III depicts housing vacancy in 1970 for owner and renter-occupied units in the county and its major cities, and reveals a relatively high rental vacancy rate at that time.

TABLE III

HOUSING VACANCY 1970

	TOTAL m OF OCCUPIED VACANT UNITS	% OWNER OCCUPIED UNITS	VACANCY RATE	% RENTER OCCUPIED UNITS	VACANCY RATE
OREGON	715,321	66.1	1.11	33.9	7.34
JACKSON COUNTY	32,518	68.4	1.61	31.6	7.32
ASHLAND	4,240	57.7	1.04	42.3	4.96
CENTRAL POINT	1,271	64.4	1.74	35.6	6.01
JACKSONVILLE	609	75.6	2.1*	24.4	2.1*
MEDFORD	10,903	61.4	2.20	38.6	9.34
PHOENIX	483	57.6	5.8*	42.2	5.8*
TALENT	527	70.0	1.9*	30.0	1.9*

* BOTH RENTER AND OWNER.

SOURCE: 1940-1970 POPULATION AND HOUSING TRENDS CITIES AND COUNTIES OF OREGON.

A Postal Vacancy survey from early 1974, as depicted in Table IV, shown overall vacancy rates declining for most major communities. A subsequent survey in mid-1975 largely substantiated these trends, but with some noticeable variations between areas. For example, the 1975 Postal Vacancy Survey revealed that the owner-occupied vacancy rate in Ashland and Central Point decreased roughly 10 to 15 percent since 1970, and by as much as 40 percent in the Medford area during the same period. However, the renter-occupied vacancy rate increased by 100 percent in Ashland and 40 percent in Central Point, but decreased by 50 percent in Medford.

TABLE IV

BREAKDOWN OF HOUSING UNITS AND VACANCY RATE: MARCH, 1974

	TOTAL RESIDENCE	PERCENT VACANT	TOTAL APARTMENTS	PERCENT VACANT	TOTAL MOBILE HOMES	PERCENT VACANT
ASHLAND	4,596	1.1	969	1.2	314	1.3
CENTRAL POINT	4,282	2.3	219	6.8	550	4.0
GRANTS PASS	11,235	1.7	380	5.5	953	4.0
MEDFORD	18,598	2.2	2,252	9.8	1,960	1.9
WHITE CITY	339	3.5	16	0.0	246	0.8

SOURCE: POSTAL VACANCY SURVEY, MARCH 25, 1974, U.S. POSTAL SERVICE.

From these indicators, the vacancy rate trend throughout the county has been declining steadily overall, but with some variation between communities. This trend is further substantiated in Table V, with the most dramatic decline being in the rental vacancy rate.

TABLE V

JACKSON COUNTY VACANCY TRENDS 1960—JULY 1978

	APRIL 1, 1960	APRIL 1, 1970	JULY 1, 1978
TOTAL VACANT	2,691	2,178	1,780
AVAILABLE VACANT	1,178	1,169	910
FOR SALE	364	385	538
SALES VACANCY RATE	2.2%	1.8%	1.8%
FOR RENT	814	784	371
RENTAL VACANCY RATE	10.6%	7.3%	2.5%

SOURCE: STATE DIVISION OF HOUSING MARKET ANALYSIS SITUATION REPORT FOR JACKSON COUNTY, OREGON, 1978.

Examination of this data reveals the following: The county is generally characterized by low vacancy rates in general, although this fluctuates between communities; total vacant units declined by about 259 units between 1970 and 1978. The sales vacancy rate increased from 1.78 percent in 1970 to 1.80 percent in 1978, while the rental rate dropped sharply from 7.34 percent in 1970 to an estimated 2.5 percent in mid-1978. This is indicative of a strong housing need currently, especially concerning the availability of rental units.

As another indicator of the annual countywide demand for housing, Tables VI and VII provide a State Housing Division estimate of the new nonsubsidized units that were anticipated to be needed between 1978 and 1980 in order to meet short-term needs; these estimates are for numbers of single-family dwellings by price range, and for numbers of multiple-family dwellings by rent structure as illustrated in Tables VI and VII respectively; and as such, this data is also of value concerning affordability.

TABLE VI

ESTIMATED ANNUAL DEMAND FOR NONSUBSIDIZED SINGLE-FAMILY HOUSES

PRICE RANGE	NUMBER OF HOUSES	PERCENT OF TOTAL
UNDER $45,000	310	33.4
$45,000 TO $49,999	166	17.8
$50,000 TO $54,999	130	14.0
$55,000 TO $59,999	58	6.2
$60,000 TO $64,999	38	4.1

ESTIMATED ANNUAL DEMAND FOR NONSUBSIDIZED
SINGLE-FAMILY HOUSES

PRICE RANGE	NUMBER OF HOUSES	PERCENT OF TOTAL
$65,000 TO $69,999	58	6.3
$70,000 TO $74,999	58	6.3
$75,000 AND OVER	110	11.9

TABLE VII

ESTIMATED ANNUAL DEMAND FOR NONSUBSIDIZED
MULTI-FAMILY UNITS
JULY 1, 1978 - JULY 1, 1980

GROSS MONTHLY RENT	0 BEDROOM	1 BEDROOM	2 BEDROOM	3 BEDROOM
UNDER $190	20	0	0	0
$190-199	15	0	0	0
200-209	10	0	0	0
210-219	5	130	0	0
220-229	5	80	0	0
230-239	0	50	0	0
240-249	0	35	105	0
250-259	0	20	70	0
260-269	0	15	55	0
270-279	0	10	40	0
280-289	0	5	25	10
290-299	0	5	30	20
300-309	0	5	15	10
310-319	0	0	15	5
320-329	0	0	10	5
330-339	0	0	5	5
340-349	0	0	5	5
350-359	0	0	5	5
360-369	0	0	5	10
370 AND OVER	0	0	0	0
TOTAL:	55	355	385	75

Examination of the data in Tables VI and VII reveals the following: The estimated annual housing demand for the period July 1, 1978, through July 1, 1980, was for 928 single-family units and 870 rental units, for a total estimated annual demand of 1,798 dwelling units in the county inclusive of local municipal needs. Given that roughly 40 percent of the county's total residents presently reside in unincorporated areas and applying this rate to the above estimates, the

estimated total annual housing demand in the unincorporated area for the period evaluated was for 719 dwelling units. Extrapolating this annual attrition rate to the year 2000 would result in a total countywide need of slightly less than 36,000 living units. However, given the estimated population increase of 69,500 persons over the current 1979 population estimate of 126,500 and assuming a continuation of the present 2.84 persons per household average, only 24,472 additional living units would be needed in the year 2000 to accommodate anticipated need for the county as a whole.

The present number of total county households is estimated to be equivalent to the total number of occupied units or 43,882, and when compared to the 1978 estimated population of 124,500 results in an average household size to 2.84 persons per household. Given the year 2000 population projection for unincorporated county areas and assuming a continuing trend of rural to urban environment migration and current household size, it would be anticipated that the County would need to assure for the provision of additional 12,000 persons' housing needs in the unincorporated area or approximately 4,200 additional dwelling units between the present and the turn of the century. Under the provisions of the Statewide Planning goals this "unincorporated portion" of the countywide total must be satisfied within urban growth or urban containment boundaries. It is recognized that some development will occur in conjunction with farm or forest use and on committed lands. Excluding this relatively small increment, the remaining housing needs will be satisfied within urban containment boundaries and urban growth boundaries. In order to absorb this growth some modification in existing urban growth boundaries or the density permitted within urban growth or urban containment boundaries will be required. Amendments of this type will probably not become necessary until late in the 1980's or early 1990's. The present trend in the county is towards a declining household size as a result of lower birth rates, more single-heads-of-households, and increased longevity of citizens. This trend is expected to continue and could result in a slightly higher need for additional living units if such trends do indeed continue.

The type and distribution of residential structures in the county is also an important factor in housing availability. Residential structures in the county are predominantly conventional single-family homes of wood frame construction, although there are an increasing number of duplexes and apartment dwellings occurring in Ashland and Medford. In 1970, mobile homes represented a relatively small percentage in number and general distribution of residential structures by number of units. Since then, mobile homes have increased tremendously as a percentage of new total and single-family homes.

While some communities have traditionally thought of mobile homes as undesirable housing types, and subsequently sought to regulate their numbers to limit them to the most undesirable locations and residential areas, mobile homes have played an increasing role in meeting housing demand. Mobile homes are often the only new housing type that is priced within the income means of lower or moderate income households. The cost desirability of manufactured housing is shown in the following chart illustrating a breakdown of typical mobile homes costs, excluding land:

	TYPICAL PRICE
SINGLE SECTION	$13,000
MULTI-SECTION	20,350
AVERAGE	15,200
COST PER SQUARE FOOT	13.757
AVERAGE PER SQUARE FOOT	11.05

Several indicators are available which provide insights into the statewide and local increase in mobile homes as an affordable and alternative housing opportunity. According to the Federal Census, mobile homes accounted for about 28 percent of the 1960-1970 increase in the total number of single-family housing units statewide. By comparison, increases in the number of conventional single-family homes during this same period was 8.5 percent. As a proportion of all housing units, mobile homes accounted for 2.5 percent of the state's housing inventory in 1960 and about 4.2 percent in 1970.

Locally, mobile homes accounted for nearly 40 percent of all new dwelling units in the county from mid-1970 to December 1972. Table VIII shows information excerpted from the 1977 Rogue Valley Council of Governments (RVCOG), Regional Housing Element relative to the increase in the number of mobile homes in the county's three largest cities from 1970 to 1975.

TABLE VIII

CHANGE IN THE NUMBER OF MOBILE HOMES 1970-1975

CITY	NUMBER IN 1970	NUMBER IN 1973	PERCENT INCREASE	NUMBER IN 1975	PERCENT INCREASE
ASHLAND	90	314	+349	404	+28
CENTRAL POINT	16	550	+3,437	714	+30
MEDFORD	266	1,960	+737	1,363	-30

In July 1978, the State Division of Housing estimated a new gain of 5,054 mobile homes occurred throughout the county between 1970 and the date cited, showing an annual countywide average increase in mobile homes of approximately 673 units. As of February 1979, the Mobile Home Division of the State Department of Commerce indicated there are 108 mobile home parks throughout the county, inclusive of cities, containing 4,149 spaces, representing 8.3 percent of the state's total mobile home parks and 11.3 percent of the total available spaces statewide, respectively. The county's population, for comparative purposes, represents only five percent of the state. A mid-1979 survey by the Rogue Valley Mobile Park Association reported approximately 4,065 mobile home units located in parks throughout Jackson County, including municipalities; at that time, the mobile home park space vacancy rate was roughly 6.4 percent.

These factors indicate that mobile homes have become a major alternative to traditional home ownership. The manufactured housing industry has undergone a transition in recent years that has increased the appearance and quality of most mobile homes, largely as a result of the establishment of federal minimum construction standards in 1976. The Department of Housing and Urban Development's 1976 Mobile Home Construction Code exceeds the Uniform Building Code in many areas.

The following 1974 County Mobile Home Park Report findings regarding the distribution of mobile homes in mobile home parks by planning/Citizen Advisory Committee areas and zoning district. The Medford-Griffin Creek planning area (which included the unincorporated White City urban area) contains almost one-third of the total number of mobile homes in parks in Jackson County, followed by the Phoenix-Talent planning area with 24 percent, the Central Point-Jacksonville planning area with 11 percent. Butte Falls is the only area with no mobile home

parks. Table IX presents a summary from the cited report of mobile home parks by planning/Citizen Advisory Committee area for Jackson County including municipalities.

Regarding the distribution of mobile homes in mobile home parks by zoning district, the county zoning district with the largest number of mobile home parks units is Rural Residential-5 (RR-5), containing 501 units or about 22 percent. The second largest, in terms of percentage of units, is the Farm Residential (F-5) district with 369 units or about 16 percent. Next in descending order are, General Commercial (GC) with 13 percent, Rural Residential-2.5 (RR-2.5) with 12 percent, Urban High Density Residential (UR-H) with 12 percent, and Rural Residential-1 (RR-1) with 11 percent.

There are no mobile home park units in the Forest Resource (FR-160), Open Space Reserve (OSR-20), Urban Residential-10 (UR-10), Urban Residential-8 (UR-8), Urban Residential-6 (UR-6), and General Industrial (GI) districts. the Light Industrial (LI) district contains only one mobile home park with three units which falls within the airport approach overlay district.

Table X presents a summary of mobile home parks by zoning district for the unincorporated areas of Jackson County circa 1974. For comparative purposes, Table XI presents a summary by planning/Citizen Advisory Committee area of conventional and mobile home activity during 1978.

Jackson County does not differentiate between mobile homes and conventionally constructed housing in that a mobile home may be placed on a lot in any residential zone as a permitted use. This nondiscriminatory factor provides ample opportunity for contributing to assuring for the provision of a range of housing types in suitable locations at affordable prices.

TABLE IX

SUMMARY OF MOBILE HOME PARKS, NUMBER OF UNITS AND PERCENTAGES, BY PLANNING AREA FOR ALL OF JACKSON COUNTY INCLUDING THE CITIES

PLANNING AREA	# OF MOBILE HOME PARK UNITS	% OF MOBILE HOME PARK UNITS	# OF MOBILE HOME PARKS	% OF MOBILE HOME PARKS
APPLEGATE-RUCH	91	2	5	5
ASHLAND-PINEHURST	300	8	8	8
BUTTE FALLS	0	0	0	0
CENTRAL PT.-JACKSONVILLE	407	11	9	9
GOLD HILL-SAMS VALLEY	303	8	11	10
EAGLE POINT-LITTLE BUTTE	137	3	4	4
MEDFORD-GRIFFIN CREEK	1,232	32	27	26
PHOENIX-TALENT	930	24	17	16

PLANNING AREA	# OF MOBILE HOME PARK UNITS	% OF MOBILE HOME PARK UNITS	# OF MOBILE HOME PARKS	% OF MOBILE HOME PARKS
ROGUE RIVER-WIMER	144	4	10	9
SHADY COVE	142	4	4	4
UPPER ROGUE	163	4	10	9
TOTAL:	3,849	100	105	100

All cities in the county presently have ordinances which are, to one degree or another, restrictive to either mobile homes, mobile home parks and subdivisions. With demand and need for such units in cities, the role with which mobile homes are playing in, and can contribute to, meeting this housing need and demand must be recognized and accepted by units of local government. Communities should be aware of these needs and of the special requirements of mobile homes and should adopt ordinances and make provision to help assure that they provide sufficient opportunities for such housing in the community.

Special Housing Needs: While the above factors and estimates are indicative of the overall housing availability and future need for living units on a countywide and unincorporated area basis, there are persons within the county's resident population who have special housing needs, including the elderly, the handicapped, large families, and farm workers and seasonal migrant laborers. The following discussion examines these groups and their housing needs.

Elderly: Southern Oregon has a higher proportion of its population in the over 65 age group than does the state as a whole. In 1970, when 10.8 percent of Oregon's population was over 65, 11.9 percent of Jackson County's population were in that age bracket. Even more significant was the fact that in the decade from 1960 to 1970, the percent of growth in this population bracket was 72 percent in the county. These figures, as illustrated in Table XII, indicate that the number of older people in the area will probably become increasingly out of proportion to other age groups, and an increasing need for housing opportunities that reflect the special needs of the elderly. According to the Department of Human Resources in 1978, 14,294 persons or 12.1 percent of the residents of Jackson County are persons aged 65 years and over. The annual increase in the county's elderly population is estimated to be 700 persons. One reason for this higher than normal elderly population in the area is that the small town atmosphere makes the region a popular retirement area.

Elderly people have special housing needs which reduce the number of houses they can select from. The Jackson County Area Agency on Aging has determined that the elderly often find that their homes are too large, too costly, and too difficult to maintain, or lacks the necessary safety and convenience items many seniors desire. Houses with many stairs, with high cupboards, or far from shopping opportunities are usually unsatisfactory. although a home still represents security to the elderly, they often find it economically unfeasible to stay in their homes and difficult, if not impossible, to find suitable alternatives.

TABLE X

SUMMARY OF MOBILE HOME PARKS, NUMBER OF UNITS, PERCENTAGES BY ZONE FOR THE UNINCORPORATED AREAS OF JACKSON COUNTY

ZONING DISTRICTS	# OF MOBILE HOME PARK UNITS	% OF MOBILE HOME PARK UNITS	# OF MOBILE HOME PARKS	% OF MOBILE HOME PARKS
FOREST RESOURCE	0	0	0	0
OPEN SPACE RESERVE-20	0	0	0	0
OPEN SPACE DEVELOPMENT-5	203	9	8	11
FARM RESIDENTIAL	369	16	15	21
RURAL RESIDENTIAL-5	501	22	14	19
RURAL RESIDENTIAL-2.5	271	12	8	11
RURAL RESIDENTIAL-1	256	11	8	11
URBAN RESIDENTIAL-10	0	0	0	0
URBAN RESIDENTIAL-8	0	0	0	0
URBAN RESIDENTIAL-6	0	0	0	0
URBAN HIGH DENSITY	270	12	4	6
INTERCHANGE COMMERCIAL	50	2	2	3
RURAL SERVICE COMMERCIAL	66	3	5	6
GENERAL COMMERCIAL	282	13	8	11
LIGHT INDUSTRIAL	3	0	1	1
GENERAL INDUSTRIAL	0	0	0	0
TOTAL:	2,271	100	73	100

TABLE XI

SUMMARY OF CONVENTIONAL AND MOBILE HOME ACTIVITY BY PLANNING/CITIZEN ADVISORY COMMITTEE AREA DURING 1978

APPLEGATE-RUCH PLANNING AREA
- NEW HOMES 153
- NEW TRAILERS 127
- REMOVED HOMES 99
- REMOVED TRAILERS 67

ASHLAND-PINEHURST PLANNING AREA
- NEW HOMES 260
- NEW TRAILERS 72
- REMOVED HOMES 62
- REMOVED TRAILERS 25

BUTTE FALLS PLANNING AREA
- NEW HOMES 32
- NEW TRAILERS 19
- REMOVED HOMES 7
- REMOVED TRAILERS 6

CENTRAL POINT-JACKSONVILLE PLANNING AREA
- NEW HOMES 227
- NEW TRAILERS 128
- REMOVED HOMES 100
- REMOVED TRAILERS 72

GOLD HILL-SAMS VALLEY PLANNING AREA
- NEW HOMES 288
- NEW TRAILERS 194
- REMOVED HOMES 140
- REMOVED TRAILERS 64

EAGLE POINT-LITTLE BUTTE PLANNING AREA
- NEW HOMES 205
- NEW TRAILERS 63
- REMOVED HOMES 83
- REMOVED TRAILERS 43

MEDFORD-GRIFFIN CREEK PLANNING AREA
- NEW HOMES 487
- NEW TRAILERS 204
- REMOVED HOMES 159
- REMOVED TRAILERS 90

PHOENIX-TALENT PLANNING AREA
- NEW HOMES 165
- NEW TRAILERS 73
- REMOVED HOMES 37
- REMOVED TRAILERS 32

ROGUE RIVER-WIMER PLANNING AREA
- NEW HOMES 369
- NEW TRAILERS 241
- REMOVED HOMES 145
- REMOVED TRAILERS 71

SHADY COVE PLANNING AREA
- NEW HOMES 84
- NEW TRAILERS 30
- REMOVED HOMES 21
- REMOVED TRAILERS 14

UPPER ROGUE PLANNING AREA
- NEW HOMES 201
- NEW TRAILERS 78
- REMOVED HOMES 65
- REMOVED TRAILERS 49

TOTAL:
- **NEW HOMES 2,471**
- **NEW TRAILERS 1,229**
- **TOTAL: 3,700**
- **REMOVED HOMES 918**
- **REMOVED TRAILERS 533**
- **TOTAL: 1,451**

TABLE XII

POPULATION OVER 65

	TOTAL POP. 1970	AND OVER 1970	PERSONS 65 YEARS & OLDER PERCENTAGE 1970 OF TOTAL POP.	% CHANGE IN POP. 1960-70 AGE 65 & OVER	PERSONS 65 YEARS & OLDER PERCENTAGE 1975 OF TOTAL POP.	% CHANGE IN POP. 1970-75 AGE 65 & OVER
OREGON	2,091,385	227,000	10.8			
JACKSON COUNTY	94,533	11,207	11.9	+72.0	11.7	10
ASHLAND	12,342	1,583	12.8	+22.1	12.2	13
CENTRAL POINT	4,004	339	8.5	+54.1	8.8	40
JACKSONVILLE	1,611	279	17.3	N/A	17.3	N/A
MEDFORD	28,454	3,554	12.5	+33.8	12.5	19.2
PHOENIX	1,287	147	11.4	N/A	10.6	N/A
TALENT	1,389	185	13.3	N/A	10.6	N/A
JOSEPHINE COUNTY	35,746	5,541	15.5	+66.1	15.1	23
GRANTS PASS	12,455	2,317	18.6	+53.5	18.6	8

Source: U.S. Bureau of Census, 1970 Census of Population Oregon; Updated estimates by Jackson County area Agency on Aging, reprinted from RVCOG's Regional Housing Element Update, 1977; Page 22

The housing needs of the elderly generally vary according to their health and age status, which usually reflects mobility and need for special medical attention. Generally, these factors typify three stages of aging, which in turn reflect different housing needs: 1) The independent elderly; 2) The partially dependent elderly; and, 3) The dependent elderly. Recognition must be made of the diversity of this age group and the variations in ages, capabilities, needs and desires that occur in people over time and with different lifestyles as they affect housing for the elderly.

The RVCOG's 1973 Housing Study and Regional Housing Element, as updated, also provides some useful insights into the housing dilemma of the elderly locally. The Area Agency on Aging reports that its volunteers frequent many homes in the county where elderly persons do not have adequate plumbing, lighting, or heating. Estimates indicate that from 40 to 50 percent of the older housing units are in need of accommodations and safety items suited to the characteristics of aging persons such as: Easily accessible wall plugs, handles in the shower and bathroom and handrails along stairs. From 12 to 46 percent, the proportion varying with household status, live in housing which is dilapidated and/or without such amenities as hot and cold running water or a private indoor toilet.

Another restraint which limits the elderly's selection of housing is cost. According to the 1970 Census, 24 percent of all households consisting of elderly persons were below the poverty level in the county, compared to 10.1 percent for all households in the state. It is obvious that the difficulty of finding adequate housing on a limited or poverty level in income is increased by the special needs of the elderly. In the past few years, rapidly rising inflation has caused additional problems for elderly people who have set incomes that do not fluctuate with inflation, but instead remain static. From these indicators, it is evident that housing which fits the special physical needs and income levels of elderly people is difficult to find or provide without the use of available subsidy programs such as that offered by the Jackson County Housing Authority. According to the Housing Authority's 1976 Annual Report, some 62 elderly tenants were being housed through this program in two privately-owned apartment complexes. Another 51 seniors are provided with adequate shelter through the Authority's own subsidized houses. As of June, 1977, the Housing Authority had 125 elderly persons or elderly families on their waiting list, and they continue to receive requests daily. However, this is not a true representation of the need for adequate housing for the elderly persons and families in the county, and is probably many times more given the other indicators presented.

Handicapped: Information regarding the housing needs of the handicapped in the county is very limited. However, the following is a summary of the findings of the State Department of Human Resources study concerning housing needs of the handicapped on a statewide basis, and should serve as an overall indicator of the group's housing needs.

1) Five percent of the statewide survey respondents reported the presence of a family member who experienced difficulty entering residential buildings or using facilities within residential buildings.

2) Ninety-one percent of the housing handicapped live in metropolitan areas (within incorporated cities).

3) Eighteen percent of the housing handicapped were interested in purchasing or renting specially designed homes.

4) A number of housing design needs were expressed by the respondents. The items most in demand are: handholds in bathrooms, handrails in hallways, lower cupboards and drainboards, and larger shower stalls for wheelchairs.

5) Over four-fifths of the housing handicapped were over 50 years of age. The greater the age, the larger the percentage with special housing needs.

6) The median income of households containing persons with special housing needs is well below the state median.

7) Seventy percent of the housing handicapped live in single-family units, while 12 percent live in apartments. Less than one-fifth resided in rental units.

Source: Housing Needs of the Handicapped, Housing Division of the Department of Commerce, State Department of Human Resources, October, 1978.

Large Households: Large families, defined as households with four or more persons, also have special housing needs relating to the availability of housing units large enough to accommodate their needs. As indicated by Table XIII, over 30 percent of the county's total households can be considered in this category, although a much smaller number, 3.2 percent, consist of very large households with seven or more persons. Table XIII illustrates the number and size distribution for large households in the county.

TABLE XIII

NUMBER AND SIZE DISTRIBUTION OF 1970 HOUSEHOLDS

	TOTAL NUMBER OF HOUSEHOLDS	1 PERSON	2-3 PERSONS	4-6 PERSONS	7 OR MORE PERSONS	AVERAGE HOUSEHOLD SIZE
OREGON	691,631	19.2%	48.2%	29.9%	3.6%	2.9
JACKSON COUNTY	31,384	18.1%	50.0%	28.7%	3.2%	2.9
ASHLAND	4,124	22.1%	52.1%	23.8%	2.1%	2.7
CENTRAL POINT	1,229	14.7%	45.4%	36.1%	3.7%	3.2
MEDFORD	10,548	23.5%	48.7%	25.2%	2.6%	2.7
JOSEPHINE COUNTY	12,327	18.2%	52.2%	26.1%	3.5%	2.9
GRANTS PASS	4,552	23.7%	50.1%	23.7%	2.5%	2.7

Source: 1940-1970 Population and Housing Trends. Cities and Counties of Oregon; Bureau of Governmental Research and Services, University of Oregon.

Farm Laborers and Migrant Farm Workers: According to the Jackson County Migrant Health Program, there are approximately 4,000 persons (workers and their families) constituting the farm labor force in the Rogue Valley. Of these, 3,000 are estimated to be permanent residents and 1,000 are seasonal workers. There are 36 migrant camp/housing locations in the county,

most of which are located in the general vicinity of Medford. Figure 1 show the distribution of these migrant camps/housing in the county.

Farm labor living accommodations in the valley accommodate approximately 1,000 residents, although many offer only substandard housing from either a size or structural perspective. The remaining farm workers struggle to find housing of any kind and most of what they can afford is again, usually substandard. Units, often overpriced, are often shared among two or three families. This need is further substantiated by the Northwest Seasonal Workers Association, which says it receives 20 to 30 requests per month for emergency services, including housing. According to a spokesman for Northwest Seasonal Workers Association: "People who cannot acquire housing, either because their income is too low or because they have not yet secured a job, live on the streets or out of their cars." Housing conditions for farm laborers and migrant farm workers are generally worse than for any other population segment, and remains a major concern.

The only detailed information of farm labor and migrant farm worker housing in this area is from the records of the Migrant Project Sanitarian who, up until 1973 when funding for this position was eliminated, worked through the County Health Department inspecting housing for farm and migrant households. Through the Oregon Farm Labor Health Code, he had the authority to order improvements of labor camps and other migrant housing. In many cases, if the housing units were substandard they were closed. According to the Migrant Project Sanitarian's 1971 Annual Progress Report: "The range of housing consists of cement blockhouses (one room) to old wooden farm houses. A few camps have trailer hook-ups and a few provide trailers. Most of the housing is structurally sound and about equivalent to summer cottages."

Furthermore, the RVCOG's 1977 Regional Housing Element update provides these insights into farm labor and migrant farm workers housing dilemma in the county:

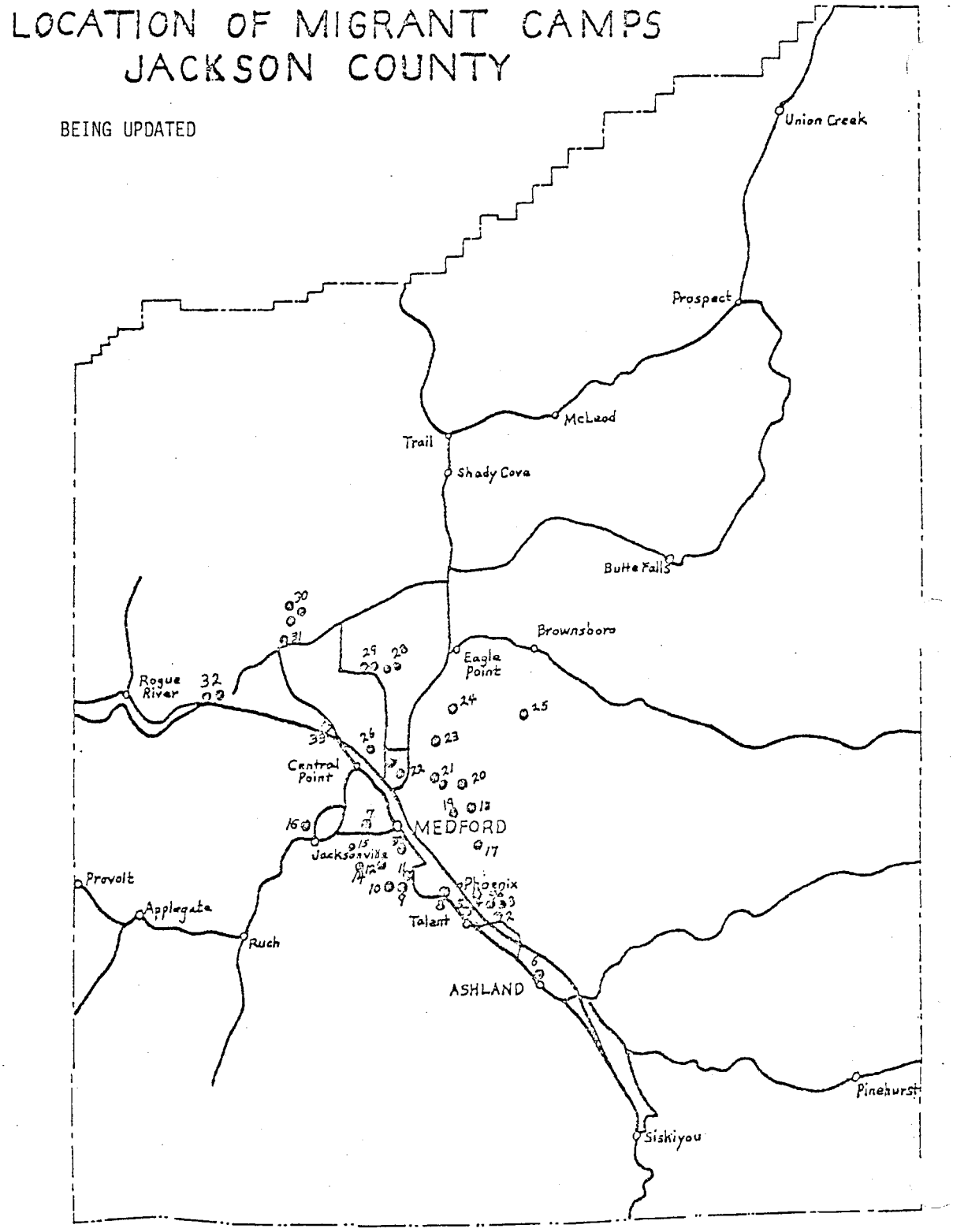
> "Although most of the (farm labor and migrant farm worker[2]) housing is structurally sound, other health factors were considered in the inspections, and in 1971, 18 of the 35 camps inspected were found deficient. However, all but three of these camps improved conditions sufficiently to be opened. The 1972 Progress Report indicates that of the 37 locations inspected, only eight met state standards initially. However, 15 of the remaining 29 were brought into compliance prior to occupancy and four others were temporarily allowed to operate although they did not meet standards (two were later closed)."

Accordingly, even though the number of operating farm labor and migrant farm workers' camps has increased it appears from all indications that there is still insufficient housing available to meet need. There is clear need to improve existing accommodations and to provide other suitable housing units for this population segment. Although the Migrant Project Sanitarian position has been eliminated, inspections of farm labor and migrant farm worker shelter accommodations are periodically carried out by the local Workman's Compensation office.

Affordability: A family or individual's ability to afford adequate housing as related directly to income. Generally, a household should not have to pay more than 25 percent of its gross income for decent and affordable shelter. Households with low or fixed incomes often find it difficult to buy or rent decent housing at the recommended maximum of 25 percent of gross income, and

[2]Added for Clarity.

FIGURE 1


LOCATION OF MIGRANT CAMPS
JACKSON COUNTY
BEING UPDATED
Union Creek
Prospect
McLeod
Trail
Shady Cove
Butte Falls
Brownsboro
Eagle Point
Rogue River
Central Point
MEDFORD
Jacksonville
Phoenix
Talent
Provolt
Applegate
Ruch
ASHLAND
Pinehurst
Siskiyou

households with below-poverty level incomes invariably resort to housing accommodations that are usually substandards and still end up paying more than the recommended limit. In order to obtain a clear understanding of the parameters of housing affordability in the county, the following information presents data relative to local incomes and housing expenditures.

Overall, the economic quality of life improved for the citizens of Jackson County during 1978, primarily the result of increased employment levels and the continuing growth of the local economy. However, according to economic indicators, the median family income of county residents declined in both real dollars (correcting for inflation) and in relation to that of the median family incomes for Oregon on a statewide basis. According to estimates provided by the State Housing Division, the January 1978 median family income in Jackson County was $14,404 and grew to $15,187 in January 1979. This $783 increase, when adjusted by the 1977 and 1978 consumer price indexes, translates into an actual $290 decrease in real dollars. In addition, the percentage of the county's median income dropped relative to the state's median by 1.5 percent, from 85.9 percent in 1978 to 84.4 percent in 1979. Thus, as of January 1979, median family income in the county was 16 percent lower than that for the statewide average, and ranks 27th in the state.

A number of economic indicators reveal various aspects of the income characteristics of county households and residents. For example, Table XIV and XV present 1976 tax data relative to the county and comparisons of income distribution between 1975 and 1976 income tax returns, respectively. Review of the information shows a decrease in those returns claiming an adjusted gross income of $9,000 to $12,000, and a significant increase in the $12,000 and greater range, confirming the continuation of the growing trend in income distribution.

This information can be correlated with that presented in Table XVI, which depicts a 1978 State Department of Human Resources breakdown of adjusted gross household incomes for county residents, and projects the level of rent or mortgage payments households would be capable of meeting without exceeding the 25 percent of gross income guideline for housing expenditures.

Another indicator of housing affordability in the county is afforded by the information presented in Table XVII, which reveals the effective buying income of families and unrelated individuals in the county in 1975. This data reveals that nearly 40 percent of all county households are low income (80 percent of median household income), and can only afford to spend a maximum of $170 per month (in 1975 dollars) for adequate housing without exceeding the 25 percent standard.

Furthermore, the number of households with incomes less than the poverty level is also an indicator of affordability and an area's need for low-cost housing opportunities. This is especially true for elderly persons and single, female heads-of-households as well as the handicapped and farm laborers, for such households cannot consider many of their special housing needs when impacted by such poverty level income. Table XVIII, while somewhat outdated, serves as an overall indicator as to the parameters of income for county residents, circa 1970, with a 1975 update for percent of all families with income less than the poverty level.

TABLE XIV

INCOME DISTRIBUTION

OREGON STATE INCOME TAX RETURNS 1975 - 1976

INCOME	NUMBER OF RETURNS		PERCENT OF TOTAL COUNTY RETURNS		PERCENT OF COUNTY AGI*	
	1975	1976	1975	1976	1975	1976
0-999	2,770	2,432	6.9	5.8	0.4	0.3
1-1,999	3,330	3,281	8.3	7.8	1.2	1
2-2,999	2,977	3,139	7.4	7.5	1.8	1.6
3-3,999	2,615	2,543	6.5	6	2.2	1.9
4-4,999	2,292	2,408	5.7	5.7	2.5	2.3
5-5,999	2,288	2,161	5.7	5.1	3	2.5
6-6,999	2,009	2,052	5	4.9	3.2	2.8
7-7,999	1,746	1,810	4.4	4.3	3.2	2.8
8-8,999	1,661	1,635	4.1	3.9	3.4	1.9
9-9,999	1,728	1,515	4.3	3.6	4	2
10-11,999	3,301	2,996	8.2	7.1	8.8	6.9
12-14,999	4,397	4,485	11	10.7	14.3	12.6
15-24,999	6,942	8,538	17.3	20.3	31.6	34
25-49,999	1,702	2,542	4.2	6	13.2	16.7
50,000 +	370	498	0.9	1.2	7.2	8.8

Source: Oregon State Department of Revenue

Breakdown of 1976 Data: 54.6% of the returns were under $10,000; of that, 42.8% were under $7,000. 45.4% of the returns were over $10,000, with 27.5% over $15,000.

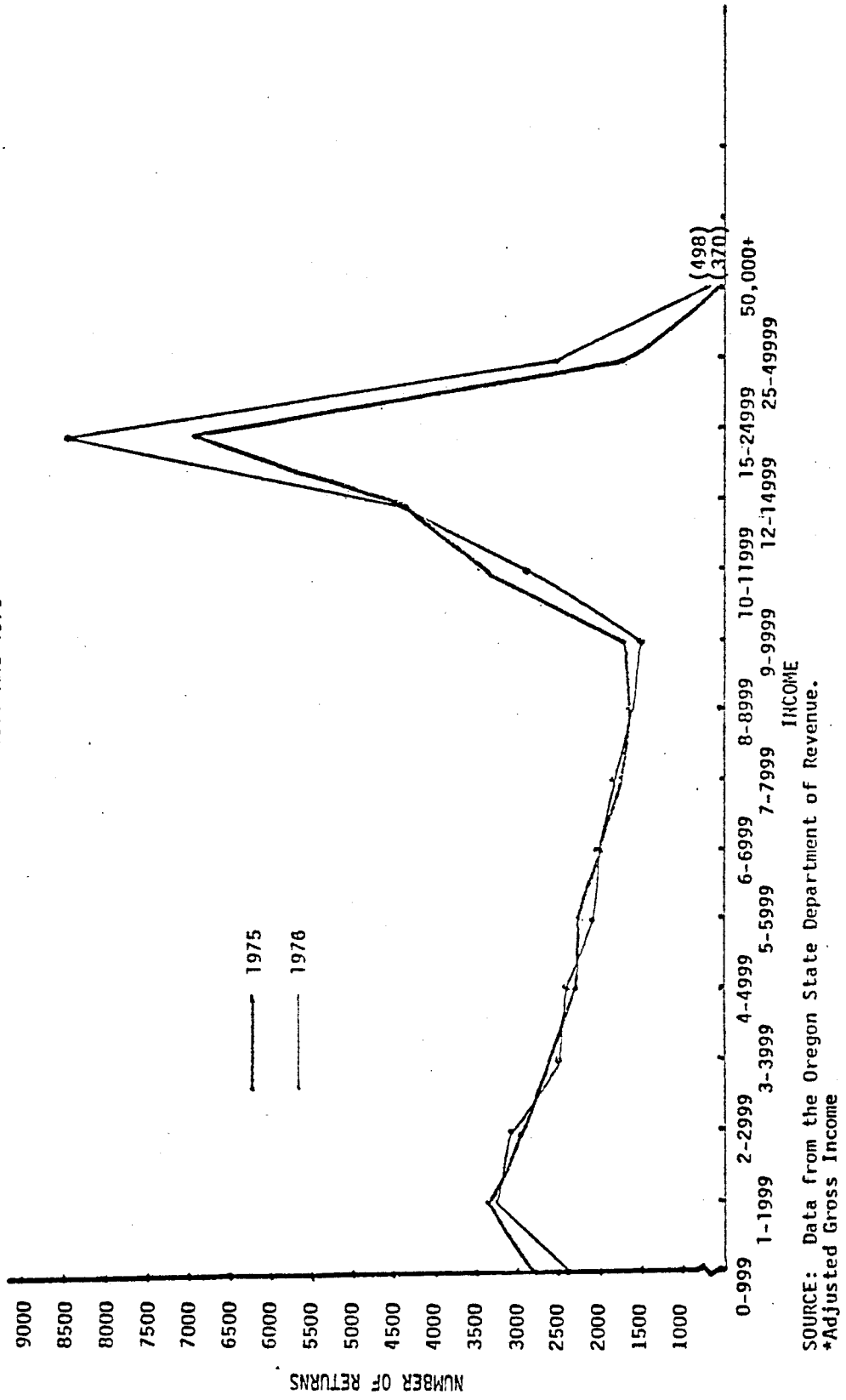
59.5% of the total AGI is found in only 27.5% of the returns (i.e., three-fifths of the income accrues to slightly over one-fourth of the reporting population).

Total Number of 1976 Returns: 42.035

*Adjusted Gross Income

TABLE XV

INCOME DISTRIBUTION*
OREGON STATE INCOME TAX RETURNS
1975 AND 1976



SOURCE: Data from the Oregon State Department of Revenue.
*Adjusted Gross Income

TABLE XVI

HOUSEHOLD INCOME/JACKSON COUNTY HOUSING ACQUISITION/RENT

HOUSEHOLD INCOME* (ADJUSTED GROSS INCOME)	NUMBER OF HOUSEHOLDS*	% HOUSEHOLDS IN COUNTY*	25% RENT OR MORTGAGE**
$0 - $3,999	11,395	27.1	$0 -$83
$4,000 - $7,999	8,432	20.0	$83 - 166
$8,000 - $11,999	6,146	14.6	$167 - $250
$12,000 - $14,999	4,485	10.7	$250 - $312
$15,000 - $24,999	8,538	20.3	$312 - $520
$25,000 - $49,999	2,542	6.0	$520 - $1,042
$50,000 - over	498	1.2	

* Source: Social Accounting for Oregon, 1978 Socio-Economic Indicators. Department of Human Resources, 1978.

TABLE XVII

EFFECTIVE BUYING INCOME OF FAMILIES AND UNRELATED INDIVIDUALS

JACKSON COUNTY, 1975

1975 MEDIAN HOUSEHOLD EBI - $10,208

PERCENT OF HOUSEHOLDS IN EBI GROUPS	
$0 - 7,999	38.6%
$8,000 - 9,999	10.2%
$10,000 - 14,999	26.4%
$15,000 - 24,999	19.7%
$25,000 - Over	5.1%

Source: "Survey of Buying Power", Sales Management Magazine, July 26, 1976

TABLE XVIII

INCOME LESS-THAN-POVERTY LEVEL

	% OF ALL FAMILIES 1970	% OF ALL FAMILIES 1975 *	MEAN FAMILY INCOME	MEAN SIZE OF FAMILY	% OF ALL PERSONS 65 & OVER	% OF ALL HOUSEHOLDS	% OF FAMILIES WITH FEMALE HEAD
OREGON	8.6	11.3	$1,785	3.5	22.2	13.8	29.9
JACKSON COUNTY	10.1	12.3	1,799	3.4	22.0	16.0	26.7
ASHLAND	7.9	13.4	1,948	3.1	15.8	20.8	32.2
CENTRAL POINT	7.8	10.6	2,174	N/A	N/A	N/A	43.4
MEDFORD	7.7	11.8	2,228	3.3	14.5	14.5	40.8

Table XVIII reveals a higher concentration of below-poverty-level incomes for Jackson County than for the state as a whole. More important is the marked rise in the percentage of families with incomes below the poverty level. Both in the county and its three largest incorporated cities, the statistics for 1975 reveal a substantially greater number of families with such incomes. The basic assumption is that these households need some type of housing assistance in order to maintain an affordable dwelling for 25 percent of their income. Housing assistance for elderly citizens with incomes below poverty level is even more critical, for there are high percentages of poverty level elderly persons in the county. It is anticipated that the county's population will continue to increase, resulting in rising demands for affordable housing units at all price ranges and in all types of dwellings. Thus, the need for such accommodations can be expected to increase accordingly and become an even more critical factor for everyone, especially low and fixed-income households.

To get a better idea of how income affects affordability and housing costs, Table XIX presents an analysis of the purchase of an "average" home in Jackson County. Presently, according to the June 1979 Multiple Listing Service Quarterly Report, the cost of purchasing this "average" county home is $50,000.

TABLE XIX

PURCHASING THE "AVERAGE" HOME IN JACKSON COUNTY

PURCHASE PRICE	$50,000	MONTHLY PAYMENT	$428.55
10% DOWN PAYMENT	5,000	TAXES, COUNTY	$49.70-$62.75 (LOW &HIGH)
PRINCIPAL REMAINING	45,000	TAXES, SHADY COVE	$107.25
TERMS	30 YEARS	INSURANCE (COUNTY)	17.25
INTEREST	11%	INSURANCE (MEDFORD)	13.16

TOTAL: $521 - $566/MONTH

SOURCE: HOUSING FOR PEOPLE, CITIZENS PLANNING FOR HOUSING, JULY 1979.

Total monthly payments, with a 30-year mortgage, to acquire this "average" home in Jackson County ranges from $521 to $566 per month, depending on the exact location. Also required is a $5,000 down payment in order to secure an equity position of 10 percent.

In order for total monthly payments for housing not to exceed 25 percent of gross income, a qualifying family would require $2,084 to $2,256 per month, or $25,000 to $27,168 per year income.

A closer examination of local Multiple Listing Service Quarterly Reports reveals the following information regarding housing costs: Between November 1978 and January 1979, 352 homes, both new and existing, were sold at an average sales price of $55,178; during this same period one year later, 356 units were sold at an average price of $62,487, representing a $7,309 increase in the span of one year, approximately a 13 percent increase in the average sales price.

While these factors are only a general indication of local housing costs and affordability, they serve to show that generally, suitable housing at reasonable costs is beyond the financial means of many county residents.

Using the estimates from Tables XVII and XVIII cited earlier, the data from the table on household incomes and 1979 median income, and current housing market indicators, the following conclusions about Jackson County housing affordability may be drawn:

1. Less than eight percent of the households in the county can afford a home mortgage of $45,000 or more;

2. Only about one-fifth of the households in the county can afford a home mortgage in the range of $30,000 to $45,000;

3. Housing market indicators show that in mid-1979, only 80 of 416 homes for sale in the Medford area were in the price range cited above;

4. An additional one-fourth of Jackson County households can afford to purchase manufactured housing;

5. Twenty percent of county households cannot afford to purchase a home without low-income loans;

6. Twenty-seven and one-tenths percent of the households in the county need some form(s) of assisted housing, both to purchase and rent adequate housing;

7. One-third of the demand for new, nonsubsidized single-family housing is in a price range under $45,000, a range generally not available in the local marketplace.

While these figures are not encouraging, it should be kept in mind that in 1978 roughly 64.3 percent of all county housing units were owner-occupied, many of which were purchased prior to the housing crunch of the late 1970s.

Furthermore, an index of the need for assisted housing in Jackson County is provided by the county's Housing Authority's 1978 Annual Report and by the State Department of Human Resources in their 1978 Social Accounting for Oregon: Socio-Economic Indicators. According

to the latter agency, based on the 1970 Census, Jackson County, has 11,515 households below poverty level, while the Housing Authority's Annual Report offers the following analysis of assisted housing needs in the county:

> "While exact figures on housing need are not available, sufficient data exists to support the following conclusions:
>
> A) Approximately 8,000 households in Jackson County are very low-income, that is, their income falls below the poverty level, and are in critical need of housing assistance.
>
> B) Approximately 8,000 additional households are low-income in that their incomes fall between 80 percent of the median income of the community and the poverty level; their housing needs for assistance varies from moderate to serious."
>
> "Households with low incomes generally find it very difficult to obtain decent housing on the open market at rents they can afford, and they find it almost impossible to purchase a modest home in satisfactory condition. Households with below-poverty-level incomes must invariably resort to substandard housing and even then frequently in combination with excessive rents."

The exact number of households which need assistance lies between the Human Resources count (11,515) and the Housing Authority's 1978 estimates (16,000), revealing the seriousness of the housing needs of low-income households of this area. Overall, it is difficult to precisely determine what factors cause housing units to be unaffordable. The cause is most likely a combination of factors, the most apparent of which is inflation. with the inflation rate reaching double-digit proportions over the past few years, and coupled with a general slump in new housing starts related to uncertainty in the marketplace caused by these spiraling inflation trends, housing costs have risen drastically everywhere, often outpacing the growth of personal income. Inflationary trends have also affected construction material and labor costs. Shortages of mortgage capital have also been significant contributors to increasing housing costs beyond the range of affordability for many consumers. The chart below illustrates the impact of a range of home mortgage loan interest rates on the principal costs of a $45,000 dwelling unit, assuming a 30-year term, and excluding insurance and tax costs:

$45,000 principal at	6% = $269.80/Month
	7% = $299.39/Month
	8% = $330.20/Month
	9% = $362.09/Month
	10% = $394.91/Month
	11% = $428.55/Month

Typically, these inflationary costs are passes along to the already economically over-burdened consumer generally resulting in a higher housing costs for both the purchase and rental of adequate shelter. As such, the inflationary factors affecting housing costs are generally beyond the scope of the Comprehensive Plan, this element, or the role of County government. This illustrates that Jackson County has a very limited opportunity to directly influence the financial situation of inflation's impact on housing affordability locally.

Increases in housing costs are also attributable, to some degree, to a steady rise in land and development costs. Many such factors have been identified in a 1978 Federal Department of Housing and Urban Development Task Force on Housing Costs that play a role in contributing to rising land and development costs on a local level. These include constraints in the supply of developable land, increased government regulations, unstable money supply, procedural delays, resistance to innovation in housing and construction technology, and increased site development costs. Regulations by all levels of government are a contributing factor in increasing housing costs through both substantive requirements processing delays. Overly time-consuming review procedures and processing exact a cost in terms of overhead, inflation, reduction in the return on investment and fees, and charges from construction delays. While review procedures are part of the citizen involvement and system of checks and balances inherent in a domestic society, lengthy processing of proposals and plans can create undesirable delays resulting in higher development and housing costs. Excessive standards are also a contributing factor in escalating the costs of financing, land development, housing construction and rehabilitation, and the provision of necessary supporting facilities and amenities. While it would be easy to characterize some local regulations as excessive, many are a response to fiscal and environmental realities. There is a mutual interest in achieving a reasonable balance between necessary fiscal and environmental concerns on the one hand, and adequate housing at a reasonable cost on the other.

Constrictions in the supply of developable land may result from a complex interaction of factors. For example, numerous features of the terrain may naturally limit the supply of potentially buildable parcels. These might include steep slopes, unstable or hazardous geologic/soil conditions, soil properties and behavior (erosion, shrink-swell, cut-bank stability, load bearing capabilities, and so on), drainage, susceptibility to flooding, subsurface sewage disposal suitability, and fire hazard, among others. While the determination of suitability for developing environmentally limiting lands is largely dependent on the amount of environmental risk that the community is willing to allow and the amount of money the developer is willing to spend to mitigate environmental hazards, housing construction in or on undesirable terrain features typically results in higher housing costs for ameliorating such conditions. For example, a 1976 Oregon Home Builders Association report studies how costs are affected when building on various slopes. In this regard, the following excerpt from that study is provided:

> "The cost impact of moving construction from flat land to the 'hills,' is significant.
>
> Three elements create the additional costs: 1) Added construction costs both for the unit (excavation, for example) and for utilities and access; 2) Generally larger unit (daylight basement, for example); and, 3) Special design requirements necessitating designers, architects or engineering and 'customizing;' i.e., you don't build a uniform house plan in hills."

The report presented the estimates illustrated in the chart below in this regard:

% OF SLOPE	ADDED COST OF HOME
0-5%	NO ADDED COST
6-8%	10 TO 12%
8-12%	50%
12-15%	50-75%
18% PLUS	100% AND MORE

Governmental action, through regulation, zoning, limitations in the capacity of public facilities and infrastructure, fiscal capabilities, or other special ordinances can restrict the availability of developable lands. Government regulations regarding site development have also been a contributive component in increasing housing costs. Some standards are outmoded and excessive, particularly concerning unduly wide streets. While many of these regulations have justification in terms of health, safety, and welfare, others are largely for reasons of value or amenity. Many of these site development costs could be reduced through most cost-effective site planning. In a handbook on this subject, the National Association of Home Builders estimates that street pavement would cost $521 per dwelling in a cluster development as compared to $831 per dwelling in a conventional subdivision, while storm sewers would cost $381 per dwelling in a cluster configuration as compared to $659 for their conventional subdivision counterpart. Comparable savings may also be achieved by reducing right-of-way requirements and paving widths in subdivision street standards. Developers and government have a mutual interest and responsibility in reducing excessive regulations and eliminating unnecessary rules.

Discretionary land use and development actions review and processing procedures take time, but are important safeguards for the community; they are part of the democratic system of checks and balances to assure protection of public health, safety, and welfare, equity in application and treatment, and to provide opportunities for citizen involvement, as well as helping to determine if the public's need is best met by a particular action or activity. However, delays or lengthy review and processing procedures become a factor in the cost of affordable housing. Time delays, for whatever reasons, can be expensive. Inflation alone presently adds roughly one and one-half percent per month to the cost of construction. According to a recent 1000 Friends of Oregon publication (A Citizen's Guide to the Housing Cost Dilemma; November 1978, p.5), "A one month delay can add $750 to the price of a $50,000 home." As such, county ordinances and procedures affecting discretionary land use and development actions should be reviewed to identify measures which can reduce or minimize the time needed to review and process such applications.

Information indicates that many Oregonians can no longer afford to purchase a new house, although many people who cannot currently afford new housing already own a home in which they have paid considerable equity. While it is impossible, at this time, to precisely determine the correct percentage of the county population unable to afford new, conventional housing, the figure, whatever it may precisely be, is unquestionably too high.

Several options presently avail themselves as opportunities to lower housing costs locally, and include cooperative/self-help housing, the recent provisions of state Senate Bill 921, and making better use of the Housing Authority's program possibilities. In essence, a cooperative/self-help housing program is one where persons join together and form a private, nonprofit corporation.

This association buys land and builds the needed housing for its members using low-Interest financial and technical assistance provided by various federal housing programs. Such programs are available for low-to-moderate income families, migrant and farm workers, the elderly and other qualifying groups. The Housing Authority of Jackson County could function in a facilitator or coordinator role for the establishment and implementation of such programs locally.

The recent provisions of Senate Bill 921 (ORS Chapter 869), passed by the Oregon Legislature in 1979, gives each county the authority to pass a local ordinance which exempts owner-built dwellings in rural areas from some provisions of the State Structural Code (UGC). The law

applies to dwellings and outbuildings that are built by the owner-applicant or with the unpaid help of friends and relatives. Under this new law, owner-built dwellings must still meet code requirements regarding: 1) Fire egress, fire retardant and smoke detectors; 2) Maximum building stress allowed by the Structural Code for structural members; and, 3) Insulation and energy conservation. Owner-built housing is exempt for all other provisions of the State Structural Code under the authority of Senate Bill 921. Each county may choose in which parts of the county the ordinance will apply, and may set maximum value or size limitations if it wishes. Since government regulations regarding housing may account for 15 to 17 percent of the cost of a home, and materials and labor represent up to almost half under the authority of Senate Bill 921 could substantially reduce overall housing costs for many county residents.

Utilizing the full potentials of the Housing Authority of Jackson County could also reduce housing costs for many county residents, by coordinating overall housing strategies and existing programs available and applicable to the county using the resources afforded by state and federal housing programs. A listing of such programs is provided as an appendix to this element, to give an indication of the potentials available.

Habitability: One of the most important resources a community has with respect to housing is the existing housing stock. Considering the value of this resource, it is imperative that an effective program be established to assure the continued preservation and rehabilitation of these units. Generally, the existing housing stock provides low-cost units for those who cannot afford new construction; it provides the opportunity to secure safe, decent, and sanitary housing without the economic barriers which many families face trying to purchase newly-constructed homes.

There are several factors used to determine whether or not a household is adequately housed. The most visible factor is the physical condition of a dwelling unit, including the adequacy of facilities such as plumbing and heating. A household may live in substandard housing for reasons other than the physical condition of the structure; excessive rent (more than 25 percent of gross income), and over-crowded conditions (more people than rooms) are also important indicators of inadequate housing.

Physical Condition: Conservation of the existing housing stock should be an integral part of any housing program. The general condition of housing in a community often affects the overall appearance and attitude of an area or community.

But, most important is the impact on the individual citizen; many live in substandard housing because the condition of the dwelling units has been allowed to deteriorate. The basic problem with new housing units is that today's inflated costs place them beyond the reach of most families. For example, the median value of a home built before 1939 was $12,150; while the median value of a home built between 1969 and 1970 was $23.450. Based on the 25 percent of income guideline, a family with an annual income of $7,782 could, in theory, afford the older house, but an income of $12,816 should be required for the newer dwelling. by March 1977, the average cost of a new house in Oregon had risen to $39,443. Locally a review of the multiple listing service reveals that the 'average' sales price of a home in Jackson County in late 1978 was $55,178; by the same period one year later, this price had escalated to $62,487.

If older units are to provide adequate housing, two basic programs must be maintained: preservation and rehabilitation. Preservation attempts to keep dwellings in adequate condition, while rehabilitation restores deteriorating or dilapidated units to adequate standards. Some communities have passed housing maintenance and occupancy codes which require housing

conservation by setting minimum standards for all dwellings, regardless of age. Since most communities are reluctant to pass such ordinances, preservation and rehabilitation programs must rely on the initiative of local citizens.

There are several indicators that are used to determine whether or not a housing unit is physically substandard. An often used factor is age, but this is not always a realistic indicator. The Oregon State Housing Division considers a dwelling to be physically substandard if it is placed in one or more of the following categories:

1) No heating.

2) No plumbing system.

3) Heating system which consists solely of room heaters not connected to a flue; wood burning stoves, or fireplaces.

4) A plumbing system lacking one or more of the following: Hot water, indoor toilets, and bathing facilities for the individual household.

Jackson County has a large number of substandard dwelling units based on the above state standards. Table XX shows the number of substandard units in the state, Jackson County, and Medford in 1973, based on the state system for evaluating housing stock conditions.

TABLE XX

PHYSICALLY SUBSTANDARD UNITS—1973

	TOTAL OCCUPIED UNITS	SUBSTANDARD UNITS	% OF TOTAL CLASSED SUBSTANDARD
OREGON	691,631	81,505	12%
JACKSON COUNTY	31,384	6,660	21%
MEDFORD	10,348	1,428	14%

Source: Oregon Statewide Housing Element, June 1973, State of Oregon Housing Division.

According to the 1973 Oregon Statewide Housing Element, there are only nine counties with greater percentages of substandard units than Jackson County, indicating the severity of the problem locally.

The 1970 Federal Census of Housing also included some indicators of substandard housing for Jackson County and local cities. Housing units lacking some or all plumbing facilities and those lacking heating systems were identified. The federal system is much less stringent than the state classifications. For example, only those units without any type of heating system are included. It is also impossible to determine the total number of housing units lacking these facilities for some are included in both categories (lacking plumbing and heating). Table XXI illustrates the

1970 census data relating to substandard housing for the state, the county, and major local cities.

TABLE XXI

HOUSING UNITS LACKING PLUMBING OR HEATING FACILITIES

	TOTAL OCCUPIED UNITS	LACKING SOME OR ALL PLUMBING	NO HEATING SYSTEM	UNITS LACKING ONE OR BOTH	% OF TOTAL LACKING ONE OR BOTH
OREGON	491,631	26,425	660	27,085	3.9
JACKSON COUNTY	31,384	903	83	986	3.1
ASHLAND	4,124	79	11	90	2.2
CENTRAL POINT	1,229	9	--	9	0.7
MEDFORD	10,348	238	43	231	2.7
PHOENIX	444	9	--	9	2.0
TALENT	501	16	--	16	3.2

Source: U.S. Bureau of the Census, 1970 Census of Housing, General Housing Characteristics, Oregon

In addition to plumbing and heating facilities, the general physical condition and appearance of housing units has been used to determine substandardness. This system obviously involves a value judgement of a surveyor who may or may not be trained to analyze the condition of the dwellings. Despite the subjective shortcomings of the survey technique, it does not provide some general indications about the degree and distribution of deteriorating and dilapidated housing. The development and application of specific rating criteria in a standardized weighing system reduces the subjective nature of such surveys and can provide valuable insights as to a structure's or neighborhood's condition.

Excessive Rent: Many Households in the county are inadequately housed because they must pay more than 25 percent of their gross income for housing. According to the Oregon State Housing Division, excessive rent applies to families with less than $5,000 annual income who pay more than 25 percent for rent. The assumption is that households with more than $5,000 income paying excessive rent could find housing for less than 25 percent of income if desired. Excessive rent is a major problem in Jackson County, the extent of which is shown in Table XXII.

TABLE XXII

EXCESSIVE RENT—1973

	TOTAL RENTERS	RENTERS WITH LESS THAN $5,000 INCOMES PAYING OVER 25% FOR RENT	% OF TOTAL
OREGON	206,387	70,635	33%
JACKSON COUNTY	8,471	3,160	37%
MEDFORD	3,862	1,465	38%

Source: Oregon State Housing Division, Oregon Statewide Housing Element, June 1973,

Overcrowded Units: Families living in overcrowded units are also considered to be inadequately housed. Though there are many factors that could be considered in overcrowded housing, the most often used system classifies a unit as overcrowded if it has more than one person per room of livable space. Table XXIII shows overcrowded conditions for the county. Even though the average household size in the county is less than that of the state, Jackson County has a larger percentage of overcrowded units. Talent, Central Point, and Phoenix have high rates of crowded housing.

TABLE XXIII

OVERCROWDED UNITS—1970

	TOTAL UNITS	OWNER OCCUPIED UNITS	RENTER OCCUPIED UNITS	TOTAL CROWDED UNITS 1.01 PERSONS/ROOM OR MORE		
				OWNER	RENTER	BOTH
OREGON	691,631	457,017	234,614	4.6%	7.3%	-
JACKSON COUNTY	31,384	---	---	-	-	6.2%
ASHLAND	4,124	2,379	1,745	3.3	4.9	-
CENTRAL POINT	2,449	1,229	1,220	7.2	7.2	-
MEDFORD	10,048	6,350	3,998	2.8	6.1	-
PHOENIX	444	---	---	-	-	7.6
TALENT	501	---	---	-	-	8.6

Source: U.S. Bureau of the Census, Housing Characteristics for States, Cities, and Counties, 1970.

The Oregon State Housing Division recently ranked the state's cities and counties according to the seriousness of inadequate housing. The two factors used to determine inadequate housing were excessive rent and physically substandard units. The methods used by the state to evaluate these factors were described earlier. Table XXIV shows the state's determination of the seriousness of inadequate housing in the county. Jackson County is one of four in the state classed in the severe problem category.

TABLE XXIV

INADEQUATE HOUSING DETERMINATIONS—1974

SEVERE PROBLEM	SERIOUS PROBLEM	MODERATE PROBLEM
Jackson County (E)	Medford (E) (GTA)	
Ashland (E)	South Medford (GTA)	

SLIGHT PROBLEM	MINIMAL PROBLEM	NO PROBLEM
Central Point (E)		

E - Excessive Rent; GTA - Growth Target Area.
Source: Oregon State Housing Division, Statewide Need Analysis, 1974,

The existing housing stock of the county is not presently inventoried as to the actual quantitative extent of deterioration and dilapidation, other than the indicators presented. As such, in conjunction with that information/data to be supplied by the 1980 Federal Census, the County should undertake an inventory of housing conditions to provide a data baseline from which a rehabilitation program could be developed. With such information on the location and condition of the existing housing stock, and supplemented by census data, the County should develop and implement a comprehensive code enforcement program to assure the preservation and rehabilitation of the existing housing stock. Many times, an existing structure cannot be economically brought into compliance with currently adopted Oregon building codes and standards. In these cases, it is important to recognize such limitations and establish an effective, yet reasonable, rehabilitation code that sets practical standards to meet criteria of decency, safety, and sanitary conditions. Jackson County can independently establish a reasonable housing (rehabilitation) code, subject to the normal notification and adoption process, to achieve these ends.

Such housing codes are similar to, but independent of, current state adopted building codes. Numerous “model” codes are available under such names as Housing and Dangerous Building Code, Housing Occupancy and Maintenance Code, and so on, from a variety of sources such as the U.S. Public Health Service, the American Public Health Association, the State Structural Codes Advisory Board, and the State Housing Division within the Department of Commerce. The processes, procedures, and criteria for code inspections and required renovation of existing housing are usually outlined within such codes. The County would need to adopt an ordinance setting forth these procedures and criteria and authorizing the building official(s) to make inspections, require corrections, and enforce the codes for compliance. The adoption and implementation of such codes and standards for existing dwellings via a continuing code inspection and renovation program can provide a viable and practical incentive to repair and rehabilitate residential units to assure the preservation of the existing housing stock in a decent, safe, and sanitary condition.

Accessibility: Background data and documentation on housing accessibility in Jackson County is, at best, limited. Generally, the limited number and quantity of minority populations in Jackson County most likely result in a lesser overall degree of housing discrimination than in other areas of the state and nation. Discrimination, however, probably does exist for elderly persons, migrant workers, and low income families under certain circumstances. Documented evidence of such practices is difficult to collect and probably will not be forthcoming without a fairly substantial commitment to social planning and related programs. However, limited evidence of discrimination practices does not reduce the need to abate them. It only limits understanding of how pervasive the problem may or may not be.

Currently, the Region X offices of the Federal Department of Housing and Urban Development are working with the Medford-Jackson County area chapter of the Oregon Community Housing Resources Board to establish affirmative marketing agreements with local realtors to promote fair and equal opportunities in housing under the authority of Title VIII, the Fair Housing Law of the Civil Rights Act of 1968 (P.L. 90-284). This mechanism provides protection against the following actions, if they are based on race, color, religion, sex, or nation origin:

1) Refusing to sell or rent to, deal or negotiate with any person;

2) Discrimination in terms or conditions for buying or renting housing;

3) Discrimination by advertising that housing is available only to persons of a certain race, color, religion, sex, or national origin; and,

4) Denying that housing is available for inspection, sale, or rent when it really is available.

Environmental Conservation: Residential energy uses account for a significant portion of energy consumption in the state and Jackson County, in that as much as 80 percent of the total household energy budget is used for space and water heating. A substantial amount of the remainder indirectly is spent for processing drinking water supplies and for sewage disposal. The principle reasons for these excessive energy costs are: inadequate insulation; heat loss or gain through doors and windows; and, housing designs and site orientation that make inadequate use of the available solar energy as a potential low cost source of heat.

While these problems are typical of older homes, the adoption of the Uniform Building Code (UBC) has reduced them to more acceptable levels in new housing. The utilization of energy-efficient performance standards can remedy the situation regarding older houses by requiring that they meet certain heat loss/gain standards before being sold, rerented, or leased. Local governments can have a substantial impact on energy conservation by requiring structures to conform to weatherization standards. Financial incentives offered by the private sector such as no interest weatherization projects, can be a motivating factor when combined with governmental sanctions and available federal and state tax credits.

New housing can best reduce household energy budgets through proper design and site orientation. For example, the city of Eugene has adopted a set of energy efficient building standards that, when optimally utilized in a 1,250 square foot conservation house will cut fuel costs by as much as 80 percent. The home costs between $200—$800 more to build. Proper site orientation to maximize solar energy opportunities can reduce household energy budgets by up to 25 percent without the use of energy-efficient standards.

The four principal design features that provide for energy conservation are:

1) Approximately twice as much insulation in floors, ceilings, and walls.

2) Approximately 45 percent less glass area, especially on west and north facing walls.

3) Double glazing on windows.

4) Outside air infiltration reduced by 60 percent.

If should be emphasized that solar orientation techniques are somewhat different than the principal conservation features, and are only optimally effective when housing is already properly weatherized following the four principle energy conserving design features listed. The main principals of solar orientation are:

1) The largest wall and window areas should fact north and south rather than east and west. The south side of a building at 40 degrees latitude receives three times as much winter sun as the east or west sides.

2) To benefit most from this sunlight/heat, major living areas, such as living room and kitchen should be where the large south-facing windows are located.

3) A large thermal mass located where the winter sun will shine on it provides heat storage within the house, so the sun's heat can be used even after the sun as set, and tends to moderate day/night temperature swings.

4) Shading should be provided to prevent overheating in summer. It can be in the form of shade trees, deciduous if on the south side of the house, or eaves with a sufficient overhang to block the summer sun.

5) Windows on other sides of the house should be kept to a minimum. Particularly on the west side, windows should be eliminated or provided with adequate shading so the late afternoon summer sun won't overheat the house, similarly, north facing windows should be minimized or eliminated.

An often overlooked area of environmental conservation in housing is that of water. Large amounts of energy are used to operate pumps to move water and to pressurize distribution systems and to treat waste waters before discharged back into the natural drainage systems. Increases in water use efficiency can have significant and substantial impact on energy use and thus on air quality. Also, any reductions in the volume of sewage flows would reduce energy requirements for waste treatment, and delay the need to add additional capacity.

For example, about 56 percent of total residential water use is generally for interior use, and of that interior use, 74 percent is used in the bathroom, 22 percent for washing dishes and laundry, and only 4 percent for cooking and drinking. Accordingly, the greatest potential for interior residential water savings will result from lowered water use in the bathroom and from reduced use for dish and clothes washing. Table XXV indicates the possible direct residential interior water settings that might result from various water conservation actions, resulting in indirect energy consumption savings.

TABLE XXV

POTENTIAL RESIDENTIAL INTERIOR WATER SAVINGS

FEATURE	ADDED COST PER UNIT (1975 $)	WATER SAVINGS AS A % OF INTERIOR USE
New Construction:		
▸Low-flush toilets	0-10	18
▸Low-flush showerheads	0-5	12
▸Low-flow kitchen & lavatory faucets	0-5	2
▸Pressure reducing valves	0-25	5
▸Insulated hot water lines	0.50-1.00 (1.65-3.00 per meter)	4
▸Low-water using clothes washers	20-30	5
▸Low-water using dishwashers	0	4
Existing Housing:		
▸Plastic bottles or water dams in toilet reservoir	0-6	18

FEATURE	ADDED COST PER UNIT (1975 $)	WATER SAVINGS AS A % OF INTERIOR USE
▸Replace showerheads with low-flow variety or instake flow restrictors	1-5	12
▸Place low-flow aerators on kitchen and lavatory faucets or replace entire unit	1-5	2
▸Pressure reducing valves	25	5
▸Insulated hot water lines	0.50 or more per foot of line (1.65+ per meter)	1

General Housing and Community Development: While it is not easy to document the magnitude of the relationship between energy use, or waste, and the physical form of a community, the relationship of obvious. New sprawl development lengthens the twice-daily migration of workers from their homes to places of employment and back, increases dependence on energy intensive transportation, uses up precious agricultural land, worsens air pollution, increases noise and makes garbage and other waste disposal more difficult and energy intensive. The result is waste—waste of land and resources, waste of air, water, and other natural resources, waste of energy, waste of time in needless commuting, and a vast waste of money in the long run.

The Real Estate Research Corporation's Study, The Cost of Sprawl, found that high-density land uses might consume only 56 percent as much energy as low-density development, and a 50-50 mix of planned unit developments and low-density development results in a 25 percent energy savings over an equal amount of all low-density type developments. Similar correlations between land use patterns, density, and energy were revealed in the Environmental Law Institute's 1977 study, Using Land to Save Energy. These studies and others have shown that in planned, more compact developments, the cost for each housing unit for sewer, water, streets, and utilities will decrease due to the reduction in length and materials used in such facilities. Slight increases in urban residential densities can result in resource and fiscal savings, and to a point, can also permit labor intensive sources such as police, fire, and garbage collection to be more economically provided. Energy savings are also realized due to reductions in commuting distances, and the more efficient operation of public transit along denser population corridors.

These and the energy savings opportunities of energy efficient housing and land use discussed earlier and in this plan's Energy Conservation Element and background report, can combine to provide substantial increases in the county's environmental quality and conservation efforts.

The broad land use goals of the state cannot be achieved without the coordinated long-range planning of urban and rural growth and the provision of adequate public facilities and services by units of local government and special districts. The comprehensive plans of these groups are to consider long-range needs for development and balance these factors with the preservation of resource lands, the conservation of natural resources, and environmental quality considerations. Coordination and direction for urban and rural development, through appropriate regulations and use of fiscal resources, will assure the appropriate infrastructure of public facilities, transportation, employment, and services for housing development in suitable locations.

Additionally, decisions regarding housing developments are often made without proper regard to the community needs of residents; accessibility to places of employment, shopping, schools, opportunities for recreation and neighbor interaction, availability of public facilities and services, and so on. The statewide planning goals and the County's Comprehensive Plan encourages all decision-makers to consider these factors and take them into account early in the planning process, and are intended to promote coordinated, comprehensive, and orderly growth and conservation in order to maintain satisfying living and housing environments for county residents. The specific objective of the statewide planning goals and the County's Comprehensive Plan is to cause effective interaction and coordination of all economic, environmental, social, and physical resources toward the development of balanced, livable communities without wasteful consumption or pollution of resources.

Regarding housing, the County has a responsibility to ensure that local cities provide sufficient housing at affordable prices, commensurate with local households financial capabilities. But, housing needs transcend jurisdictional boundaries. The need for affordable housing throughout the county has been clearly identified. There has been a continuing problem in allowing for an equitable distribution of both government subsidized (and/or otherwise sponsored housing), and private sector, low income, least cost housing throughout the county. To effectively minimize the impact of undue concentrations of such housing on any one particular community, it is appropriate to consider the responsibility of all political jurisdictions, including cities and the County (within UGBs and UCBs), to absorb a share of such housing.

As such, the County has a responsibility to establish an equitable allocation plan to serve as a guide for the distribution of all housing types reflecting a range of prices throughout the county, and require each unit of local government to provide strategies for providing for all identified housing needs, both current and projected. The easiest and most equitable distribution of housing would be through a combined Housing Opportunity and Fair Share Allocation Plan, formulated on a per capita basis. Each municipality and the County would absorb a share (based on current and projected populations, incomes, and the requirements of the Statewide Planning Goals) of the regional need for lower income least cost housing, both government assisted and nonsubsidized private sector. The County has limited capacity to provide housing opportunities, in that under the Statewide Planning Goals, needed housing refers only to that occurring within urban growth boundaries (and urban containment boundaries).

It is suggested that such a plan be designed by the Rogue Valley council of Governments, in conjunction with Jackson County, the Housing Authority, local offices of the Farmers Home Administration, local cities, and other appropriate agencies, and implemented by the County. Until such time as a combined comprehensive housing opportunity and fair share allocation plan can be developed, Table XXVI provides a rough aggregate estimate of the number and distribution of population and housing units needed for each city and for the county by the year 2000, based on a range of household sizes. This raw distribution breakdown of estimated housing needs for jurisdiction within the county is based on urban growth boundaries and population projections, and provides a tool whereby planning agencies can monitor overall housing needs and provisions; the type, size, and cost of such housing would be addressed by the recommended housing opportunity and fair share allocation plan. Table XXVI includes an allocation to the County based upon the unincorporated area year 2000 population projection. Due to the requirements of Statewide Planning Goal #10, Housing, housing needs must be satisfied within urban growth boundaries (and urban containment boundaries). the 3950 to 4557 housing units "fair share allocation" overstates the existing planned/zoned capacity of the urban containment boundaries. The additional need must be satisfied within the urban growth

boundaries which will require that the existing boundaries by enlarged or the planned and zoned densities within the urban containment boundaries be increased. It is unlikely that these amendments will be necessary before the late 1980's or early 1990's. When the allocation is completed, the identified housing needs for each jurisdiction would be incorporated into the general housing program for that community. A range of household sizes is used in the calculations of overall need in Table XXVI as household size varies between cities, and is in a state of flux.

Barriers to Effective Housing Delivery and Local Problems, Obstacles, and Constraints: All of the previously mentioned factors that affect housing could also prove to be obstacles or constraints, in various degrees and cases, to the provision of a range of housing and living, or in suitable locations and affordable prices. In most instances, they concern the private housing market rather than the efforts of government to affect trends and housing production. There are, however, other major obstacles that are more directly related to government practices and policies. Tables XXVII and XXVIII briefly summarize some of the more apparent problems, obstacles, and constraints as they affect the provision and delivery of housing. A detailed presentation of such factors is provided by the following documents.

Local Government's Role in Housing; Institute for Local Self-Government, Berkeley, California; September 1975;

Final Report of the Task Force on Housing Costs; U.S. Department of Housing and Urban Development, Washington D.C.; May 1978;

Planning for Housing and People in Oregon; Oregon Department of Commerce, Housing Division, Salem, Oregon; July 1975;

Effects of Regulation on Housing Costs: Two Case Studies; Gwen Gruen and Associates, Urban Land Institute (Research Report #27), Washington, D.C.; 1977;

Housing Costs and Government Regulation: Confronting the Regulatory Maze; Stephen R. Seidel; Center for Urban Policy Research, Rutgers University; 1977.

TABLE XXVI

AGGREGATE FAIR SHARE ALLOCATION BY JURISDICTION BY NUMBER OF HOUSEHOLDS **

JURISDICTION	JULY 1, 1979 CERTIFIED POPULATION*	PERCENT OF COUNTY	2000 PROJECTED POPULATION	PERCENT OF COUNTY	ADDED POPULATION	RANGE OF FAIR SHARE NUMBER OF NEW HOUSING UNITS BY RANGE OF HOUSEHOLD SIZE				
						3.0	2.9	2.8	2.7	2.6
JACKSON COUNTY	126,500	100.0	196,000	100.0	69,500	-	-	-	-	-
ASHLAND	15,650	12.4	21,000	10.7	5,350	1,783	1,845	1,911	1,982	2,058
BUTTE FALLS	370	.3	650	.3	280	93	97	100	104	108
CENTRAL POINT	6,250	4.9	22,800	11.6	16,590	5,517	5,707	5,911	6,130	6,366
EAGLE POINT	2,629	2.1	8,000	4.1	5,375	1,792	1,854	1,920	1,991	2,067
GOLD HILL	780	.6	1,600	.3	820	273	283	293	304	315
JACKSONVILLE	2,020	1.6	4,500	2.3	2,480	827	855	886	919	954
MEDFORD	38,550	30.5	50,932	26.0	12,382	4,127	4,270	4,422	4,586	4,762
PHOENIX	2,000	1.6	3,400	1.7	1,400	467	483	500	519	539
ROGUE RIVER	1,330	1.1	7,924	4.0	6,594	2,198	2,274	2,355	2,442	2,536
SHADY COVE	1,090	.9	4,000	2.1	2,910	970	1,004	1,039	1,078	1,119
TALENT	2,490	2.0	6,000	3.1	3,510	1,170	1,210	1,254	1,300	1,350
COUNTY AREA (UNINCORPORATED)	53,345	42.2	65,194	33.3	11,849	3,950	4,086	4,232	4,386	4,557

* POPULATION ESTIMATES: OREGON COUNTIES AND INCORPORATED CITIES JULY 1, 1979; CENTER FOR POPULATION RESEARCH AND CENSUS, PORTLAND STATE UNIVERSITY

** WHILE THE UNINCORPORATED AREA IS INCLUDED WITHIN THE ALLOCATION, THE PRIMARY RESPONSIBILITY TO PROVE THE "NEEDED HOUSING" RESTS WITH THE INCORPORATED CITIES. "HOUSING NEEDS" MUST BE SATISFIED WITHIN URBAN GROWTH AND URBAN CONTAINMENT BOUNDARIES.

TABLE XXVII

BARRIERS TO EFFECTIVE HOUSING DELIVERY

NATIONWIDE

1. Lack of consistent, problem-oriented, national housing priority.
2. Lack of stable housing demand.
3. Poverty and inability to pay market prices for decent housing.
4. Excessive inflation in the costs of housing production resources.
5. A housing delivery system imbalance that favors new production of the conservation of existing resources.

STATEWIDE

6. Statewide demand for mortgage capital exceeding state-generated supply.
7. Lack of coordination between existing, new, and proposed housing activities.
8. Property tax disincentives to housing conservation and improvement.
9. Lack of clear authority and comprehensive state enabling legislation for local government activities in housing.

REGIONAL/SUB-REGIONAL

10. Excessive cost of real estate sale and transfer of existing homes.
11. Lack of political support for solutions of regional housing problems.
12. Lack of housing opportunities for lower-income residents throughout the region.
13. Lack of consumer representatives or advocates for housing that are actively participating in the housing market and delivery system.

LOCAL GOVERNMENT LEVEL

14. Lack of positive, action-oriented local government housing plans and policies.
15. Artificial restrictions on the use of scarce land, labor, and capital resources.
16. Lack of concern for the greatest effective utilization of existing housing resources.
17. Fragmentation of authority and lack of coordination in local housing or housing related activities.
18. Insufficient public participation in housing processes and decision-making.
19. Lack of coordination between adjacent communities within the same housing market areas in providing for unmet housing needs.

This background section of the housing element has provided a descriptive narrative of the housing processes that are taking place throughout the county housing market area, based on the information available. From this summary, it can be seen that the major factors discussed have complex but understandable relationships in the area of housing and in the housing delivery and transfer process. It is clear from this discussion that a home cannot be simply defined as four walls enclosing a space occupied by a household of 2.8 persons. A decent, safe, sanitary and adequate home consists of an environment both internal and outside, which provides the necessities of shelter, privacy, security, and creates in the inhabitants a sense of pride and contentment. The home is therefore more than simply a dwelling unit; it includes the entire neighborhood and all the residents as well. Because of these complex interrelationships, planning for housing needs must be comprehensive in scope. It must assess the total problem and provide solutions where they are most needed and will do the most good. Most of all, planning for housing must include the participation of the community's residents and responsible

action on the part of local government as well as dealing with these existing and potential problems and in undertaking conservation and rehabilitation efforts aimed at eliminating deteriorating conditions before they become uncontrollable problems.

TABLE XXVIII

LOCAL PROBLEMS, OBSTACLES, AND CONSTRAINTS

ADEQUATE PROVISION FOR THE NEEDS OF ALL ECONOMIC SEGMENTS

PROBLEMS:
- Overpaying for Housing.
- Status of the elderly and others living on fixed incomes
- Unemployment and job opportunities.

OBSTACLES:
- Price distribution of new and resale housing.
- Lack of developer interest in the construction of new low-cost housing.
- High housing demand and low vacancy rates.
- Income generation capabilities.

CONSTRAINTS:
- Lack of available land suitable for the development of low-cost housing.
- Inability to effectively deal with the causes and effects of discrimination.
- Relative unavailability of programs to provide housing assistance where needed.

PROVISION OF ADEQUATE SITES FOR NEW HOUSING

PROBLEMS:
- Overcrowding, doubling-up, and families or households without adequate shelter.
- Conflicts between market conditions and community goals and objectives.
- Continuous increase of residential densities.

OBSTACLES:
- Consumer preferences and attitudes.
- Residential development pressures.
- Absence of middle-range plans and programs.
- Availability of suitable land and sites.

CONSTRAINTS:
- Enabling legislation at the state level.
- Inability to influence and control the actions of adjacent communities.

IMPROVEMENTS TO THE EXISTING HOUSING STOCK

PROBLEMS:
- Substandard conditions of the housing stock in certain areas of the community.
- Need for neighborhood conservation, enhancement, and improvement activities.
- Related concerns pertaining to the housing stock and neighborhoods.

OBSTACLES:
- Lack of detailed data pertaining to housing stock characteristics.
- Absence of specific plans and programs.
- Provision of incentives for private property improvements.
- Housing costs versus household income.

CONSTRAINTS:
- Lack of state and federal resources.
- Restrictions on Housing Code Enforcement.
- Landlord-Tenant relations.
- Availability of private financing.

FINDINGS, POLICIES, AND IMPLEMENTATION STRATEGIES:

1

FINDING:

The availability of adequate housing refers to both the amount of land suitable and available for residential development purposes, and the amount of existing housing available to meet current needs. Both represent a physical constraint to the provision of housing availability and affordability affected by a number of public and private sector obstacles such as: availability of appropriately zoned lands, utilities, facilities and services; construction costs; and conventional private financing, to name only a few. Indicators of housing availability include vacancy rates, number of building permits issued, sales and growth trends, existing supply versus demand, and population increases. Generally, these indicators reveal that the number of residential units available is not keeping pace with population growth or household information.

All cities and the County have the responsibility of providing for a wide range of housing opportunities including low and moderate income housing. The County's responsibility can only be met in so far as vacant land exists within urban containment boundaries. The zoning/plan designations within the containment boundaries can be increased to provide additional housing opportunities but the primary area for providing "needed housing," as the term is used within Statewide Planning Goal #10, is within urban growth boundaries. The problem has typically been that most municipalities are unresponsive to these needs. The purpose of fair share allocation plans is to provide localities with a general measure of local responsibility for addressing a fair share of the market area housing need. Fair share allocation can provide each locality with a presumptive identification of housing needs for which adequate provision must be made in each housing element.

POLICY: THE COUNTY SHALL ASSURE THE PROVISION OF AVAILABLE LANDS IN SUITABLE LOCATIONS TO ACCOMMODATE THE NEED OF AN ADEQUATE HOUSING SUPPLY AND CHOICE OF HOUSING OPPORTUNITIES:

IMPLEMENTATION STRATEGIES:

A) At such time as 1980 federal census data is available to enable a comprehensive evaluation, but in a time period prior to January 1, 1983, determine the availability of existing housing supplies, and the need for additional dwellings to accommodate projected population increases by location type, tenure, and price commensurate with the financial capabilities of existing and projected-to-reside residents.

B) Within the context of County codes, Comprehensive Plan, Statewide Planning Goals, and ordinances applicable to land and housing development, provide for a variety and range of housing types and design concepts.

C) Revise, as appropriate, County ordinances applicable to land and housing development to include more definitive design and placement requirements by differentiating and setting forth standards and criteria for urban, suburban, and rural residential land and housing developments.

D) Encourage and support the development and utilization of a variety of new or improved technologies and materials in housing design, construction, and development as a means of increasing livability and choice without increasing housing cost.

E) Assure, and encourage cities to assure, for the provision of a wide variety and availability of lot and parcel sizes, housing types, and price ranges in suitable locations. This would best be accomplished through a 'fair share' housing allocation plan administered through either the County, the Housing Authority of Jackson County, or the Rogue Valley Council of Governments.

2

FINDING:

The need for adequate housing of all types at affordable prices is a primary concern for Jackson County. With housing costs reaching and exceeding the purchasing power of large segments of the population, due mainly to inflation, providing affordable housing for county residents is not a simple task. With the growing number of households in the county having low or fixed incomes, many find it impossible to buy or rent suitable living accommodations at the federally recommended maximum of 25 percent of gross income utilized for housing costs.

According to State Department of Human Resources estimates, as of 1978, a total of 19,827 or 47.1 percent of total county households received an annual income of $8,000 or less. similarly, the State Housing Division estimates that county median household income as of January 1, 1979, was $15,187 compared to $17,993 in the state as a whole; thus, Jackson County median household income in 1978 was 16 percent lower than, or 84 percent of, median household income in the state. Utilizing the 25 percent of gross income guide as compared to 1978, the Department of Human Resources estimates of household incomes, the following chart illustrates the rent/mortgage monies available to various county resident income categories for housing:

HOUSEHOLD INCOME (ADJUSTED GROSS)	NUMBER OF HOUSEHOLDS*	% OF COUNTY HOUSEHOLDS	25% RENT OR MORTGAGE
$0 - $3,999	11,395	27.1	$0 -$83
$4,000 - $7,999	8,432	20.0	$83 - 166
$8,000 - $11,999	6,146	14.6	$167 - $250
$12,000 - $14,999	4,485	10.7	$250 - $312
$15,000 - $24,999	8,538	20.3	$312 - $520
$25,000 - $49,999	2,542	6.0	$520 - $1,042
$50,000 - over	498	1.2	

As this date indicates, almost two-thirds of all county households had a spendable monthly housing income of $250 or less; for the most part, indicators appear to show that adequate housing at these rates is not generally readily available for a majority of these households. Other

factors indicate that over 40 percent of all renter-occupied households in the county pay out in excess of 25 percent of their spendable income for housing, a further identification of need.

Additionally, almost two-thirds of all county households can be considered lower income (80 percent of median income), while almost 20 percent fall below the poverty level. In elderly households, poverty levels approach 50 percent. These indicators make it apparent that if all basic household needs must be met on such incomes, adequate housing standards are frequently not met. Waiting lists for available HUD subsidies have increased substantially in the county, also indicating a growing need for affordable housing. Its 1978 annual report, the Housing Authority noted it was able to provide housing assistance to 346 lower income elderly, disabled, and nonelderly households. Private owned, federally subsidized projects locally provide rental subsidies to another 358 such families. In all, approximately 700 lower income households in Jackson County receive some form of housing assistance through this organization.

As of December 31, 1978, a total of 552 active applications were pending for housing assistance through the Housing Authority. Because the Authority has ceased actively soliciting applications due to the lengthy time it is expected to take to fund adequate shelter for those already on the waiting list, this number of active pending applications understates the actual need.

Furthermore, an examination of local Multiple Listing Service Quarterly Reports reveals the following information relative to single family home costs locally: In the fourth quarter of 1978 (November 1978—January 1979), 352 homes were sold, both new and existing, at an average sales price of $55,178; during the same period one year later, 356 homes were sold at an average sales price of $62,487, representing a $7,309 increase in the average sales price of a home over the course of a one-year time span, or an approximate increase of 13 percent.

POLICY: THE COUNTY SHALL ATTEMPT TO MAINTAIN, OR REDUCE IF POSSIBLE, THE COSTS OF HOUSING AND SHELTER COMMENSURATE WITH THE FINANCIAL CAPABILITIES OF LOCAL HOUSEHOLDS.

IMPLEMENTATION STRATEGIES:

A) Promote the efficient use and reuse of housing construction materials through energy-efficient building standards, life-cycle costing, or other similar mechanisms.

B) Consider transferable development rights (TDR), in conjunction with other techniques and programs such as planned unit developments and cluster configurations, as a means to reduce development costs. (Refer to the general implementation section for a description of TDR.)

C) Investigate innovative housing development and tenure concepts such as density bonus incentives, cooperative and/or self-help housing, common facility utilization, and use of alternative energy systems for elderly, lower income, and farm/migrant worker housing as a means to help lower development and housing costs.

D) Revise and amend the planned unit development section of the County zoning ordinance to encourage the construction of a percent of the total number of units proposed, be for lower income household occupancy by allowing density

bonuses, and to promote innovative concepts of land ownership and maintenance.

E) Evaluate new and review existing planned actions and programs in light of their impact on housing and parcel and lot development costs and identify and amend unnecessary and/or costly requirements.

F) Consider the concept of land banking as a means to effectuate lower land costs and implement this concept by means of capital improvement planning.

G) Encourage cities to reverse the trend toward larger single family lot sizes in favor of high demand, lower cost parcels ranging from 4,500 to 6,000 square feet in area, in suitable locations, and to provide for innovative housing and plot designs and concepts, land ownership and maintenance opportunities, and use of alternative energy systems/devices; allow provisions for such measures within planned unit developments in urban containment boundaries and urban growth boundaries.

H) Establish and adopt under the authority of Senate Bill 921 (1979 Oregon Legislature, ORS Chapter 860), an Owner-Built Rural Housing Ordinance as a means to effectuate lower housing costs; identify in which parts of the rural unincorporated county area the ordinance will apply, and set maximum value and size limitations as per which the state enabling legislation allows in this regard; require that such dwelling file a statement as part of the deed-of-record for that particular structure, disclosing how said structure specifically differs from the provisions of the State Structural Code, exempted under this Act. (Under this new enabling legislative act, owner-built rural dwellings must still meet code requirements regarding: 1) Fire egress, fire retardant, and smoke detectors; 2) Maximum bending stress allowed by the Structural Code for structural members; and 3) Insulation and energy conservation (owner-built rural dwellings are exempt from all other provisions of the State Structural Code under the provision of Senate Bill 921).

I) Actively support the efforts of the Housing Authority of Jackson County to expand its programs to meet the need of lower income households.

J) Authorize and direct the Housing Authority of Jackson County to develop, coordinate, and implement a comprehensive migrant/farm labor housing program in the county, in conjunction and cooperation with the local Farmer's Home Administration, the Workman's Compensation Office, the County Health Department, and other affected and/or appropriate agencies, groups, and citizens to include both new construction and rehabilitation projects at existing facilities.

K) Encourage and promote the appropriate agency to organize, develop, and implement a full-time farm labor Self-Help Housing Program, utilizing available federal and state programs.

3

FINDING:

Historically, the federal government has recognized the need to financially assist local and state agencies in programs to improve the quality of existing housing or to expand the availability of housing to low and moderate income groups. Programs offered by the federal government have included rent subsidies, low interest loans, and grants for a wide variety of purposes.

The Jackson County Housing Authority, for example, has used the federal programs as a means to supply lower cost housing to many qualified families in Jackson County. The 1978 Annual Report, Housing Authority of Jackson County indicates: "It was noted... that the Housing Authority is now able to provide housing assistance to 346 lower income elderly, disabled and non-elderly families. Privately owned, federally subsidized projects provide rental subsidy to another 358 such families." The demand, however, has outpaced the actual supply. The 1978 Annual Report estimates that another 8,000 households in Jackson County are in critical need of housing assistance.

As noted in the background information, the demand for housing for low and moderate income families continues to increase. Inflation, interest rates, and the general increase in housing costs continue to push the costs beyond the reach of many Jackson County residents. The continued use of federal programs to lower costs helps some families. The use of these programs should be continued to expand housing opportunities for more local residents.

POLICY: THE COUNTY SHALL INVESTIGATE AND PARTICIPATE, WHEN APPROPRIATE, IN STATE AND FEDERAL HOUSING PROGRAMS.

IMPLEMENTATION STRATEGY: Participate, where appropriate, through the Housing Authority of Jackson County or other appropriate agencies, in meritorious federal, state, regional, or local housing programs with the objective of reducing housing costs.

4

FINDING:

Part of the solution of providing safe, sanitary, and affordable housing lies in maximizing utilization of the existing housing stock. Often older homes are exceptionally well constructed although their appearance might indicate otherwise. Frequently, basic revitalization or rehabilitation will provide suitable housing for much less than the construction cost of similar new housing.

Approximately 40 percent of the county's entire housing stock was prior to 1950, and represents a very substantial economic investment for many residents. The documentation contained in the Rogue Valley Council of Governments' Housing Study indicates that 85 percent of all Oregonians can no longer afford to buy a new, conventional frame house. The rehabilitation and maintenance of existing housing units provides an economical and practical method for achieving affordability. As such, it is in the best interest and welfare of the county's residents to conserve the existing supply of housing stock and extend the useful life-span of those

structures when economically feasible to do so. Additionally, documentation reveals Jackson County has a larger percentage of overcrowded units than the state, even though the average Jackson County household size is less than that for the state.

Excessive rent is a major problem in the county in that approximately 37 percent of renter households with less than $5,000 incomes were paying in excess of 25 percent of their incomes for rent.

The existing housing stock provides, for the most part, lower-cost units by providing an alternative opportunity to secure adequate housing for those households who cannot afford to purchase newly-constructed houses. Conserving the value of the existing housing stock, it is imperative that an effective, yet reasonable program be established to assure the continued preservation, maintenance, and rehabilitation of this resource in a state that is safe, decent, and sanitary.

POLICY: THE COUNTY SHALL ASSIST AND PROVIDE OPPORTUNITIES AND INCENTIVES FOR THE CONSERVATION AND REHABILITATION OF THE EXISTING HOUSING STOCK.

IMPLEMENTATION STRATEGIES:

A) Inventory the condition of the county's existing housing stock by location and type, and supplement this information with applicable data from the 1980 Federal Census pertaining to conditions, socio-economic indicators and other relevant data; and delineate those areas most in need.

B) In conjunction with affected agencies and citizens develop and implement through any and all appropriate federal, state, regional, or local housing programs, a comprehensive housing maintenance and conservation program which will address and implement the above policy.

C) Establish an efficient and uniform, yet reasonable, code and on-going enforcement program for the inspection and repair or removal of deteriorating or dilapidated housing or unsafe or unsanitary conditions, including mobile homes and multi-family apartments. More specifically this would involve:

   i) In conjunction and cooperation with the County health and building departments, affected agencies, local builders' groups, realtors, citizens, and other interested or appropriate organizations, develop a County Housing Code with appropriate standards to maintain and rehabilitate existing housing units and related properties to a safe, sanitary, and decent condition;

   ii) Adopt an ordinance setting forth the procedures and criteria for such code inspections, and authorizing the County building official(s) to make inspections, require corrections, and enforce the provisions of the proposed Housing Code, and requiring code compliance inspections at the time of sale or exchange of all residential structures;

iii) Establish a revolving (and leveragable loan fund) to guarantee very-low and low interest loans for low and modest income households, respectively, based on their ability to pay, and to provide grants for elderly or poverty-level households for the repair and/or rehabilitation of residential units they occupy.

iv) The revolving loan fund would be established to guarantee loans only; Jackson County should not be direct lender in any circumstances. This process can be financed through local financial institutions, with the County underwriting the loan so that lower income borrowers could qualify for home improvement loans. When appropriate, the County could then take a second mortgage on the property to recover its funds. An option of the County would be to recover its funds. An option of the County would be to deposit a sufficient sum in an interest bearing account and use the proceeds to subsidize a regular home improvement loan so that in effect, it would be a low-interest loan. It is recommended that the Housing Authority of Jackson County be given the administrative jurisdiction for such a program.

Such programs are eligible for funding under the federal government's Housing and Community Development Block Grant Program, and usually pays for the necessary planning to establish a local comprehensive and community development program within the parameters outlined above, as well as for its administration. Furthermore, funding under the HCD program is available to establish the 'seed' money necessary to initiate the proposed revolving loan/grant fund.

D) {Provide necessary public facility improvements to eliminate adverse influences which discourage private reinvestment efforts in targeted areas. (Funding for such is also available under the federal HCD program.)

E) Develop and implement energy-efficient standards for rehabilitated housing structures regarding weatherization, insulation, and reconstruction.

F) Explore alternative means of taxation as an incentive to upgrading the existing housing stock in need of revitalization or conservation.

5

FINDING:

Even when suitable housing opportunities exist, they are often denied to families with special needs or characteristics. Discrimination can occur because of race, sex, physical or mental handicap, age, family size, marital status, ancestry, and other arbitrary factors. Full and equal opportunity for every Jackson County citizen, fair relationships between the parties in buyer-seller and landlord-tenant transactions, adequate information and counseling, active participation of citizens in housing plans and programs are all necessary to strengthen the right and opportunities for all to a satisfactory home.

POLICY: THE COUNTY SHALL PROVIDE FOR EQUAL OPPORTUNITIES FOR ALL CITIZENS TO OBTAIN HOUSING WITHOUT DISCRIMINATION AND WITH FAIR AND EQUITABLE TREATMENT.

IMPLEMENTATION STRATEGIES:

A) Require and utilize citizen participation and community involvement in the development and implementation of housing assistance and community development programs.

B) Encourage housing availability counseling for low and moderate income households.

C) Provide and analyze data relating to housing needs, mortgage lending, and trends in housing costs and residential property values for the use of local government, housing developers, and consumers.

D) Examine other agricultural counties in the state and others that have experience with the migrant worker housing program. Identify those successful programs or features thereof and implement them in Jackson County.

E) Review Jackson County cities' comprehensive plans to ensure compliance with federal laws concerning discrimination.

F) Participate in and support the activities of the greater Medford Community Housing Resource Board.

6

FINDING:

Housing development is integrally related to environmental and energy conservation. The development of the county has been interdependent with automobile-related transportation systems and expanded use of the private automobile. The consequence is increased air pollution and energy consumption. Residential energy uses account for a significant portion of energy consumption in the state and county. Water consumption and sewage disposal are intimately related to residential patterns. Imaginative construction, design, and residential energy systems should be utilized to reduce present resource consumption levels. (Refer to the energy element.) Housing and community development policies must be consistent with overall statewide planning goals and policies, including sound and safe environments and conservation of resources.

Additionally, traditional procedures for VA, FHA, FmHA, HUD, and other federally insured mortgage lending programs will be affected by the passage of the 1976 Energy Conservation and Production Act. The act required the Department of Housing and Urban Development (HUD) to develop performance standards for the construction of all new buildings in the nation and provides tough financial sanctions to enforce the standards. Title III of the act requires the establishment of federal standards for new construction to prevent waste of energy in heating, cooling, ventilating, and providing hot water. The financial sanctions under Title III will probably

result in federal review of local governmental policies and practices regarding housing plans and programs. The review must assure that reasonably energy-efficient construction features will be incorporated into new commercial and residential buildings receiving financial assistance through VA, FHA, FmHA, and other federal programs.

Thus, energy conservation is essential to the conservation of natural resources and to the preservation of a pleasant and healthful residential environment. (Refer to environmental quality and energy elements for additional information.)

POLICY: THE COUNTY SHALL PROMOTE AND PROVIDE OPPORTUNITIES TO ENCOURAGE RESIDENTIAL CONSERVATION AND MAINTENANCE MEASURES, AND SITING AND CONSTRUCTION METHODS, WHICH CREATE ENVIRONMENTALLY SOUND AND SAFE SETTINGS FOR RESIDENTS, CONSISTENT WITH THE ENVIRONMENTAL AND ENERGY POLICIES OF THE STATE AND COUNTY.

IMPLEMENTATION STRATEGIES:

A) Recognize long-term as well as initial housing costs to consumers and encourage revision, amendment, adoption, and enforcement of housing and building codes to minimize unnecessary energy consumption by the imposition of heat-loss standards for the construction of all types of new housing, and the renovation of existing residential dwellings.

B) Encourage land use decisions and development action, including siting of houses, which affirmatively cause healthful living environments including: air and water of high quality, convenient transportation resources such as mass transit and pedestrian/bicycle systems, maximum usable public open space, and minimum energy consumption and exposure to noise.

C) Encourage private lending institutions to provide incentives for energy efficiency such as offering a one-half to three-fourths percent discount on loans involving energy conservation. For example, the Seattle Trust and Savings Bank is offering a 30-year lowered interest rate mortgage for buying existing houses that meet energy-use criteria for such things as insulation, heating system efficiency and energy efficient appliances; they also offer a ten-year, low interest loan for energy related home improvements.

D) Encourage the Jackson County Housing authority to give priority consideration in future housing programs to developments which are designed and sited to conserve natural resources and maximize energy efficiency.

E) Investigate the feasibility of obtaining seed monies from grants, contributions, economic development projects, and so on, to start a short-term program to underwrite conventional mortgage interest rates as an incentive for private lending institution participation. As an alternative, actively promote, via an energy conservation education program, the advantages of lending institution participation, which may include but are not limited to:

    i) Increased loan volumes;

ii) Reduced energy costs;

iii) A greater probability of mortgage payment completions;

iv) Shortages of capital funds are offset; and,

v) Increase in value of energy efficient houses.

F) Adopt and implement appropriate (HUD) standards concerning interior air quality and noise exposure for sensitive receptors; sensitive receptors include nursing, convalescent and retirement homes, senior citizens' housing, hospitals, schools, churches, meeting halls, and other high-occupancy structures of a similar nature.

7

FINDING:

Jackson County land use ordinances do not differentiate between traditional frame dwellings and mobile homes, in that a mobile home is a permitted use in all residential zoning categories/districts. However, many, if not all, similar city ordinances do in fact provide such distinctions. A problem may arise as a result of allowing mobile homes to be located on single family lots within urban growth boundaries, established around incorporated cities. Such continual practices may result in lots and dwellings which are preexisting and nonconforming to city codes once such lands are annexed. Further, such occurrences may serve to delay otherwise desirable annexations when local communities do not wish to deal with a propensity of nonconforming, preexisting dwellings.

POLICY: MOBILE HOMES WITHIN URBAN GROWTH BOUNDARIES AROUND INCORPORATED CITIES SHALL BE LIMITED TO WITHIN APPROVED MOBILE HOME PARKS AND/OR MOBILE HOME SUBDIVISIONS EXCEPT WHERE COMMUNITY STANDARDS ALLOW OTHERWISE.

IMPLEMENTATION STRATEGIES:

A) Revise and amend the Jackson County Zoning and Subdivision Ordinance to set forth the intent of the above policy.

B) The County will attempt to assure that local cities do not unreasonably restrict mobile homes or other similar housing methods as a housing opportunity.

8

FINDING:

The broad land use goals of the state cannot be achieved without the coordinated long-range planning of urban and rural development, and the provision of adequate public facilities and services by units of local government and special districts. The comprehensive plans of these groups are to consider long-range needs for development, and balance these factors with the

preservation of resource lands, the conservation of natural resources, and environmental quality considerations. Coordination and direction for urban and rural development, through appropriate regulations and use of fiscal resources, will assure the appropriate infrastructure of public facilities, transportation, employment, and services for housing development in suitable locations.

In recent years, awareness of the need for coordinated growth policy and management has grown. Land use issues, such as preservation of forest, agricultural and natural resources and the avoidance of uncontrolled urban or rural sprawl and pollution have come to the fore-front at the same time as economic issues and fiscal realities. Many decisions are made by local jurisdictions without adequate consideration of potential consequences for adjacent areas. since approximately 60 percent of the county's population resides in urban areas and is anticipated to increase proportionately to between roughly 70 and 80 percent given long-term trends, most local decisions do affect other jurisdictions, either for good or ill. The Comprehensive Plan encourages the strengthening and coordination of planning between these jurisdictions.

Regarding housing, the County has a responsibility to ensure that local cities provide sufficient housing at affordable prices commensurate with local households' financial capabilities. But housing needs transcend jurisdictional boundaries. The need for affordable housing throughout the county has been clearly identified. There has been a continuing problem in allowing for an equitable distribution of both government subsidized (and/or otherwise sponsored housing) and private sector low income, least-cost housing such as mobile home parks or apartments. To effectively minimize the impact of undue concentrations of such housing on any one particular community, it is appropriate to consider the responsibility of all political jurisdictions, including cities and the County (within UGBs and UCBs), to absorb their share of such housing.

As such, the County has a responsibility to establish an equitable allocation plan to serve as a guide for the distribution of all housing types reflecting a range of prices throughout the county, and require each unit of local government to provide strategies for providing for all identified housing needs, both current and projected. The easiest and most equitable distribution of housing would be through a combined Housing Opportunity and Fair Share Allocation Plan on a per capita basis. Each municipality and the County (to the degree urban containment boundaries can accommodate such development) would absorb a proportionate share (based on current and projected population, incomes, and the Statewide Planning Goals) of the regional need for lower income least-cost housing, both government assisted and nonsubsidized private sector.

POLICY: THE COUNTY HAS NO OBLIGATION UNDER THE STATEWIDE PLANNING GOALS TO PROVIDE URBAN LEVEL HOUSING OUTSIDE OF URBAN GROWTH BOUNDARIES. HOWEVER, THE COUNTY SHALL COORDINATE THE NEEDS AND PROVISIONS FOR EQUITABLE DISTRIBUTION OF ALL TYPES OF HOUSING IN EXISTING RURAL COMMUNITIES, URBAN CONTAINMENT BOUNDARIES, AND INCORPORATED CITIES AND THEIR URBAN GROWTH BOUNDARIES.

IMPLEMENTATION STRATEGIES:

A) Encourage regional and countywide strategies to meet housing needs as follows: Promote and support the development and implementation of a housing

allocation plan which promotes greater choice of housing opportunities, both government subsidized and/or otherwise sponsored housing and private sector nonsubsidized housing, by dispersing needed lower income least-cost housing equitably.

B) Encourage recognition by local governments of the interjurisdictional nature of housing markets and the need for cooperative planning to meet the needs of all households within the region.

C) Examine appropriate use of joint development powers to coordinate development and housing resources.

D) Implementation actions of cities will be monitored by the Jackson County Planning Department. Actions inconsistent with policy will be brought to the attention of the Board of commissioners for necessary corrective action.

Amended by Ordinance 91-1, adopted January 2, 1991; effective March 3, 1991; Planning file 88-3-OA.
Amended by Ordinance 94-120, adopted 7-12-94; acknowledged 10-3-95; effective 10-13-95; Planning file 94-1-OA
Amended by Ordinance 96-33, adopted 7-24-96; acknowledged 8-20-96; effective 8-30-96; Planning file 94-22-OA.

NATURAL AND HISTORIC RESOURCES

GOAL: TO PRESERVE AND CONSERVE VALUED OPEN SPACE LANDS; PROTECT AND MAINTAIN EXISTING, AND ESTABLISH NEW, HISTORIC, SCENIC AND WILDLIFE AREAS AND ENSURE THE WISE UTILIZATION OF NATURAL RESOURCES.

INTRODUCTION/BACKGROUND:

The Natural and Historic Resources element includes a set of findings, policies, and implementation measures for a variety of topics. These topics have been placed under the following general headings: Natural Areas, Scenic Resources, Wildlife, Rivers and Trails, Water Resource Areas, and Historic Areas. Each section includes a brief explanation of the resource's value, problems facing its use, and policies and implementation measures to ensure its wise use. The purposed of this element is to set forth broad policies which will guide the development of more detailed areawide plans.

This element is based on Statewide Planning Goal 5, Open Spaces, Scenic and Historic Areas, and Natural Areas. It is closely related to the Environmental Quality, Energy Conservation, Recreation, Natural Hazards, Agriculture, and Forest Lands elements. These elements are integrally related, demanding a close evaluation during the plan preparation process to ensure the integration and complimentary functioning of each.

Adequate environmental quality is not guaranteed, nor can it be expected to occur, without the careful management of all the county's resources. This element, correlated with the goals and policies of the other Comprehensive Plan sections, is directed specifically at the preservation and wise utilization of all open space resources within the planning area.

This section provides data which may be useful in analyzing and evaluating the potential impact of development proposals. In addition, the data will be useful in the development of programs providing for the conservation, preservation and wise utilization of natural, scenic and historic resources.

NATURAL AREAS:

After several years of research, the Oregon Natural Heritage Program under contract to the State of Oregon, published Oregon Natural Areas, a data summary for Jackson County, Oregon. The report includes an inventory of potential natural areas within the county. The inventory of potential natural areas is contained in the background report for this element.

There are few areas within the county which have not been affected by encroaching civilization. Man has affected the environment by replacing native plant species with agricultural and household plants; altered the genetic make-up of trees through modern silviculture techniques, and encouraged the formation of a more simplified, unstable ecosystem.

There are areas within the county which are largely natural in character, as well as areas that have been altered, but are still important plant or animal habitats. Both types warrant special protection to enable study and appreciation or to preserve their natural diversity. Oregon Natural Areas lists the values of these areas:

> "They are living laboratories for monitoring changes in the environment, for expanding the limited horizons of man's ecological awareness, and for developing new land management principles."
>
> "They are reservoirs of genetic material, tested by time rather than by man, for revitalizing domestic stocks, both plant and animal, and perhaps for repopulating the earth."
>
> "They are outdoor classrooms for learning and recreation sites for those with a naturalist bent."

The backwaters of the Gold Ray Dam, a wetland habitat located in central Jackson County, is a good example of a local environment which has been designated as a natural area and will be included in the Bear Creek Greenway. A portion of the backwaters is already in public ownership. According to the Oregon Natural Areas, the background waters of Gold Ray Dam are in Kelly Slough, and are: "Bayou-like with an intricate maze of channels and sloughs densely clothed with vegetation. There are at least three distinct plant communities or habitat types. This diverse riparian site provides excellent wildlife habitat. The most notable species include nesting osprey and northern bald eagles and a great blue heron colony with 34 active nests."

Another site which may deserve natural area status is an area known as Sams Valley Relic Pine Stand. Oregon Natural Areas states: "Much of the Rogue Valley has been transformed by agriculture and urban growth; few examples of pre-settler plan communities remain. this stand of large, old ponderosa pine with California black oak, Oregon white oak and madrone understory, is reported to be the last old growth valley floor stand in good condition."

Oregon Natural Areas contains a lengthy inventory of potential natural areas within the county. some sites include unique aquatic habitat such as a floating bog, or areas of endangered wildlife or plant life. Four of the 87 inventoried sites are designated as protected areas. The other sites will need further study to determine which should also be designated as natural areas.

SCENIC RESOURCES:

The scenic beauty of Jackson County is obvious to those who have seen it. Although there are some examples of places where man has damaged the scenic quality, the county continues to offer excellent scenic resources.

Other than architecturally and historically significant building, most the county's scenic areas are rural. These include upland timber areas, agricultural and open space areas of valley bottoms, and various narrow drainage basins. Terrain, vegetation, and land use all play major roles is creating the county's scenic quality.

The bureau of Land Management publication, Natural Area Resources, Jackson-Klamath Unit Resource Analysis, divides the county into four distinct physiographic provinces. They are: Klamath Mountain, Western Interior Valley, Western Cascades, and Recent High Cascades.

(See Physiographic Provinces Map.) Descriptions of the four provinces are based upon information contained in the above document. They are provided here to describe the nature of the scenic resources of each.

1) Klamath Mountain Province: This province is characterized by a complex of moderately steep ranges with rugged, deeply dissected slopes, narrow wedge-shaped valleys, and knife-like ridges having no particular orientation. The Klamath Mountains extend westerly to the Pacific Ocean, comprise a portion of Southern Oregon and Northern California, and contain the Siskiyou Range. The mountains are made up largely of volcanic and sedimentary materials that have been folded, faulted, and in place, intruded. The relief ranges from 2,000 to 5,000 feet and mountain peaks range in elevation from 4,000 or 7,500 above sea level. Mount Ashland, 7,530 feet in altitude, is the highest in the Klamth Mountains in Oregon. All major drainages are westward and somewhat circuitous and they flow into the major tributary, the Rogue River. The Bear Creek Valley, near Medford, separates the Klamath Mountain Province and Siskiyou Range from the Western Cascade Province and Cascade Range.

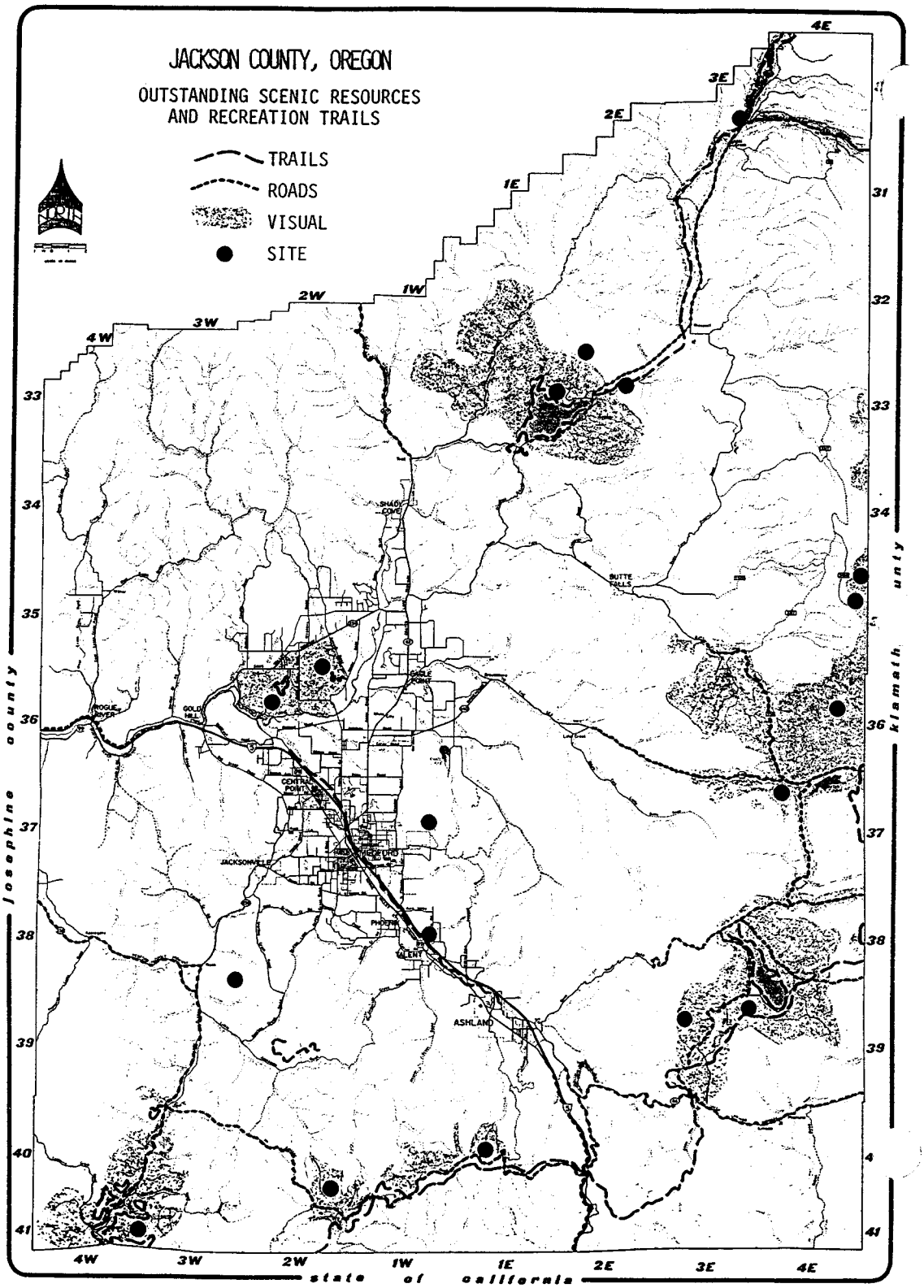
   This province is famous for its ore deposits, primarily gold, nickel and chromium. The pronounced chemical and physical differences in soils, formed on such diverse materials as old marine sediments, granite and serpentine are extremely important in influencing plan distribution and wildlife within the Siskiyou Range. The Klamath Mountains have been continuously vegetated for at lease 65 million years, and the result is a remarkable array of ecosystems and diversity, unequaled elsewhere in the Pacific Northwest.

2) Western Cascades Province: The relief of this province is quite rugged in the eastern portions, but slopes are more gentle in the west. May main ridge crests have an average elevation of 4,500 to 4,800 feet. Elevations higher than this are uncommon, with only a few above 5,000 to 5,500 feet.

   The terrain is generally rugged and characterized by heavy dissected slopes with rounded mountain tops. The higher ridges are generally composed to thick rock, many of which are exposed formations of massive rock outcrops. Areas near these ridges are often characterized by natural openings near or in conjunction with the outcroppings. All major drainages are westward.

   The character of the landscape is typical of lands managed for timber production and of small rural agriculture interests.

3) Western Interior Valley Province: This province includes the valley bottoms enclosed by the cascade Range on the east, and the Klamath/Siskiyou Ranges on the west. The major cities of the county are within the interior valley province including Ashland, Medford, Jacksonville, Gold Hill, Eagle Point, and Shady Cove. The valleys lie in the rain shadow of the Klamath/Siskiyou Ranges. Landform is the valleys of the Rogue River Valley include alluvial fans, terraces, and floodplains. A wide variety of soil types have developed on these deposits, ranging from deep, dark colored prairie-soils on well-drained terrace locations, to rocky, droughty soils such as those of the Agate Desert northeast of Medford.


JACKSON COUNTY, OREGON
OUTSTANDING SCENIC RESOURCES
AND RECREATION TRAILS
TRAILS
ROADS
VISUAL
SITE
4E
3E
2E
1E
1W
2W
3W
4W
31
32
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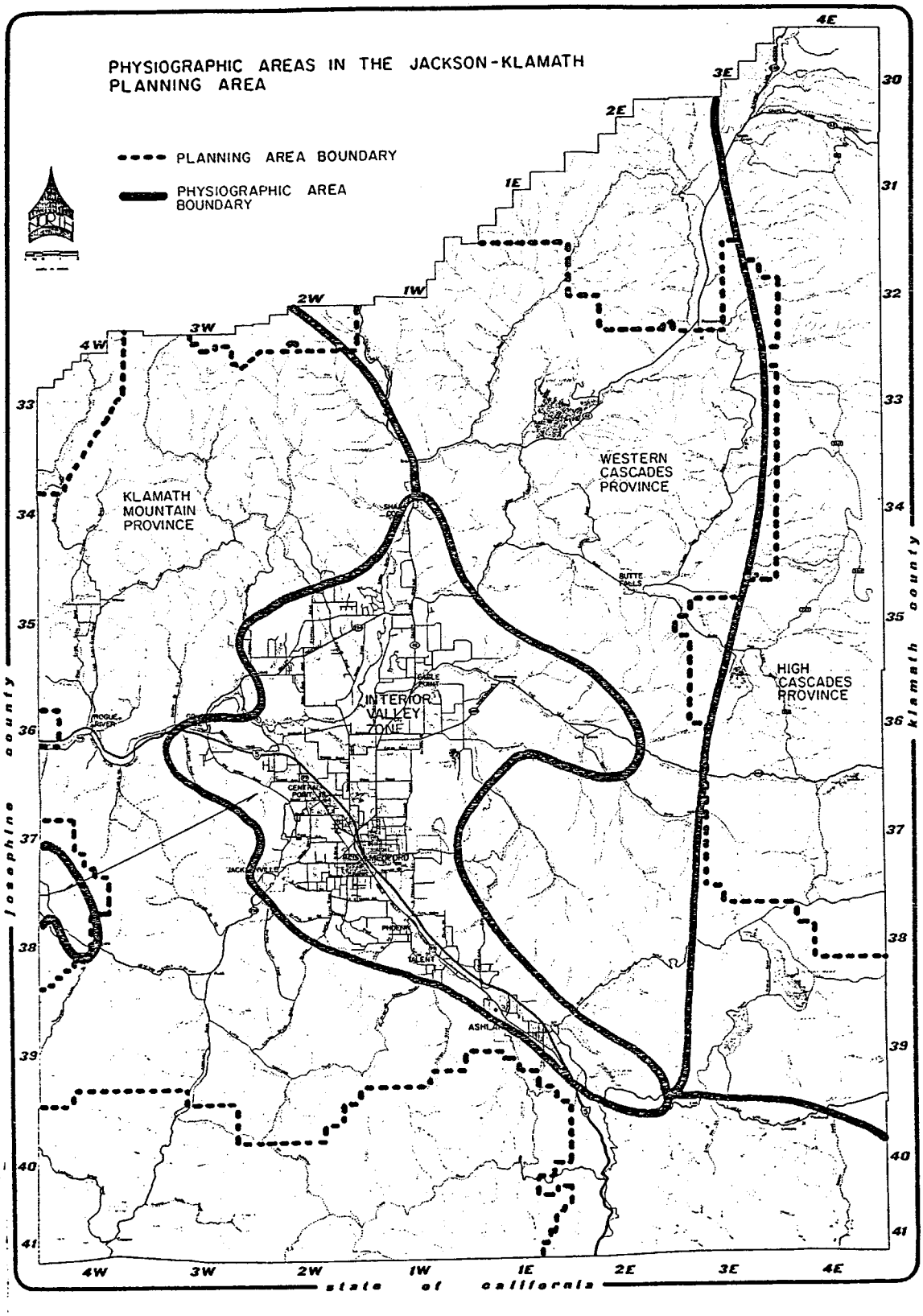
41
4
josephine county
klamath county
state of california
SHADY COVE
BUTTE FALLS
EAGLE POINT
ROGUE RIVER
GOLD HILL
CENTRAL POINT
JACKSONVILLE
MEDFORD
PHOENIX
TALENT
ASHLAND


PHYSIOGRAPHIC AREAS IN THE JACKSON-KLAMATH PLANNING AREA
PLANNING AREA BOUNDARY
PHYSIOGRAPHIC AREA BOUNDARY
KLAMATH MOUNTAIN PROVINCE
WESTERN CASCADES PROVINCE
INTERIOR VALLEY ZONE
HIGH CASCADES PROVINCE
josephine county
klamath county
state of california
4W
3W
2W
1W
1E
2E
3E
4E
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The western interior valley ecosystems have been strongly influenced by human activities. Cities, farms, drainage projects, dams, channelized streams, exotic plant introductions and roads dominate the landscape. Most of Jackson County's population lives in these interior valleys, and the irreversible impacts of development pose a distinct threat to the natural environment and its inherent scenic values.

4) Recent High Cascades Province: This province is an area of gently sloping and rolling high plateau terrain interrupted by glaciated channels, some of which are quite deep carrying westward flowing streams. The province is characterized by scatted volcanic peaks and small cinder cones rising 150 to 6,000 feet above the surrounding portion is approximately 4,500 to 6,000 feet. There are few obvious rock features within the character type with the exception of the dominant snow-capped peaks. Bedrock in some areas has been buried by successive layers of material deposited by melting glaciers or by a mantle of pumice and ash from volcanic eruptions.

Scenic quality has been adversely affected by such activities as timber harvesting,, road construction, and construction of structures. Fortunately, most severe occurrences are out of view from most of the concerned observers. However, some instances occur where exposure is critical and may have long lasting visual effects.

Indications seem to be pointing to an increased awareness of scenic quality. Visual resource values have been recognized as an important element of human environment. Degradation of the visual resource represents an adverse impact to the human environment.

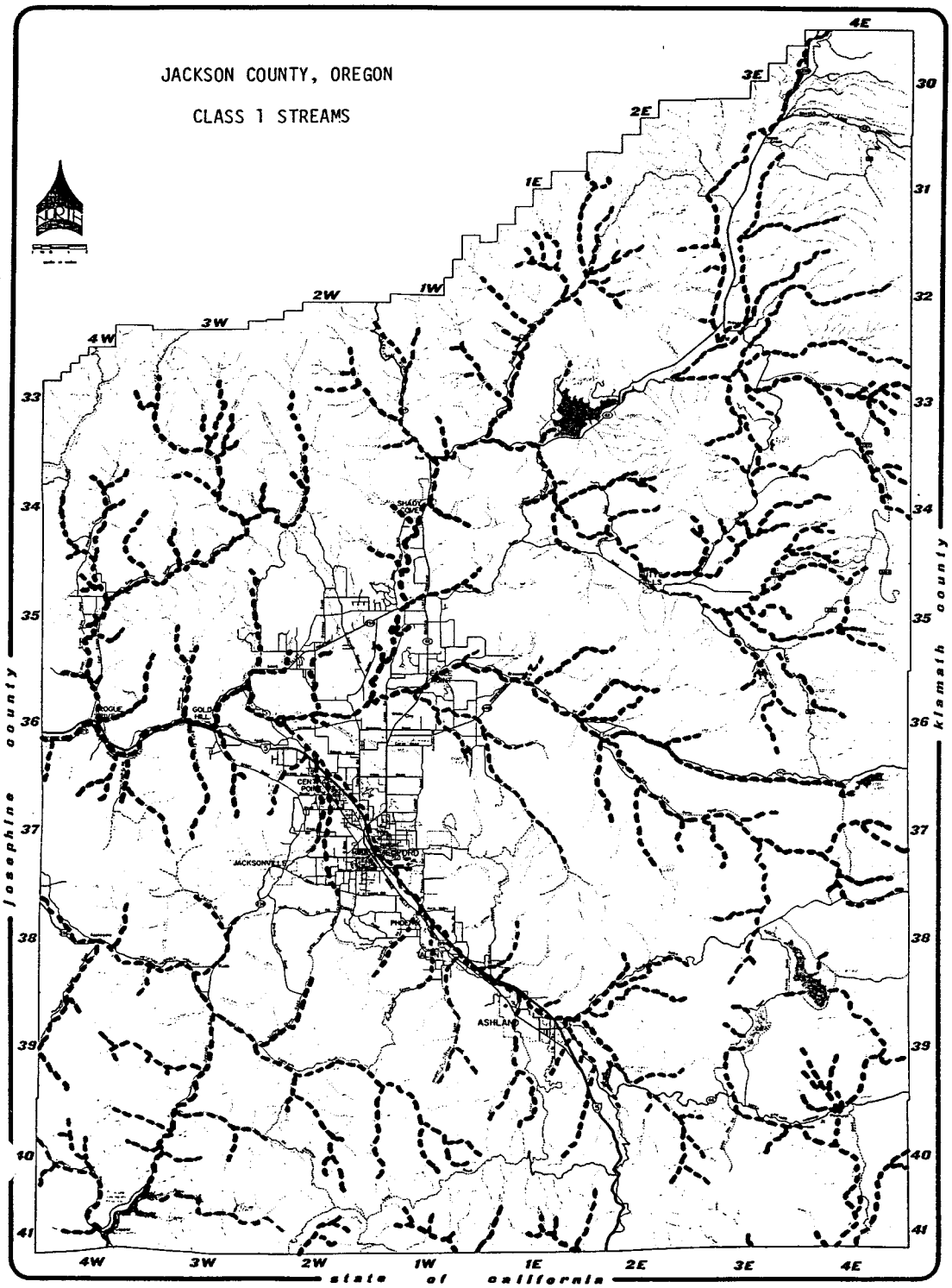
Public law 91-190, of the National Environmental Policy Act of 1969, states that there is a need to "Assure for all Americans safe, healthful, productive and aesthetically and culturally pleasing surrounds." Trends for greater scenic quality, whether by hands-off policies, rehabilitation, or enhancement measures, are likely to increase within the county.

The background report for the scenic element identifies the outstanding scenic resources in Jackson County. These are shown on the Outstanding Scenic Resources Map. The scenic resources were found to generally encompass four major types: scenic road corridors, scenic stream corridors, scenic viewpoints, and scenic sites. A discussion of each follows:

Scenic Road Corridors:

An aggregate of aesthetic elements and human values distinguish a roadway as scenic. Along the reach of a scenic roadway, there are a number of opportunities for viewing natural beauty including specific landscape features or focal points, panoramic views and enclosed landscapes of special interest. Contrasts encountered along a roadway, such as variety and diversity of land and vegetational forms, and freedom from visual encroachment (i.e. minimal residential, commercial or industrial development adjacent to the roadway) were important elements for a scenic designation.

Jurisdiction over the right-of-way of outstanding scenic roadways in the county falls primarily to the State Highway Department and Jackson County; however, some portions are under the jurisdiction of the Rogue River National Forest.


JACKSON COUNTY, OREGON
CLASS 1 STREAMS
4E
3E
2E
1E
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2W
3W
4W
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41
josephine county
klamath county
state of california
ASHLAND
MEDFORD
JACKSONVILLE
GOLD HILL
ROGUE RIVER
CENTRAL POINT
PHOENIX
SHADY COVE
TYLER

Scenic Steam Corridors:

As in scenic roadway corridors, a combination of aesthetic elements distinguishes a stream corridor as being scenic. The pleasant combination of land, water, vegetation, and wildlife is aesthetically valuable. A stream corridor includes both the floodway and the surrounding riparian vegetation. Both public and private interests have jurisdiction over the county's scenic stream corridors which includes all Class 1 streams.

While these meandering stream corridors create a pleasing pattern and add scenic variety to the landscape, relative to other land types, riparian areas have a high species diversity, density, and productivity. This provides contrast and interest in the scenic as well as the biological system.

Scenic Viewpoints and Scenic Sites:

There is a distinction between a scenic viewpoint and a scenic site; however, in some cases, a particular location may be both viewpoint and site. In any case, both elements —the viewpoint and the site—interact: one must be at a particular location to vie the site in total. Mt. Ashland is both a scenic viewpoint providing a panoramic view of the Bear Creek Valley and northern California; and, a scenic site with its high mountain snows apparent from many locations around the Rogue Valley.

FISH AND WILDLIFE RESOURCES:

There is considerable diversity in Jackson County's environment and as a result there is a wide variety of plant and animal species. A brief description of the various types of fish and wildlife resources, and appropriate measures for the protection of such resources follow:

Big Game:

Black-tailed deer, Roosevelt elk, black bear, and mountain lions are big game species present in the county. The type of habitat these species require varies. Deer are found in most brushy and timbered areas, including lowland valley and suburban areas and high mountain environments.

Elk are most commonly found in mountainous forested areas. Bears are found in most forested and brushy habitat areas, and mountain lions may be found in sparsely populated mountainous terrain (Wildlife Resources in Jackson County, pages 3-11).

Upland Game and Waterfowl species present within valley areas are the ring-necked pheasant, found in agricultural areas; mourning doves, the most numerous upland game bird in the country, found in agricultural areas; valley quail, usually found on the periphery of agricultural areas; and, varied species of ducks, found along rivers, streams, and small irrigation ponds (Wildlife Resources in Jackson County, pages 13-20).

Fur Bearing Animals:

These include beaver, river otter, racoon, muskrat, and mink; all of which are associated with rivers, streams, and other water areas.

Non-Game Wildlife:

This category includes eagles, hawks, owls and other predatory birds, and a wide variety of song birds, reptiles and amphibians.

Fish:

Cold-water species found in county rivers and streams include summer and winter steelhead, spring and fall Chinook salmon, Coho salmon, sea-run cutthroat trout, and rainbow trout. Warm-water game fish found in the count's sloughs, reservoirs and ponds include largemouth bass, bluegill, green sunfish and brown bullhead.

Fish and wildlife are important for a number of reasons. A wide variety of species indicates ecological diversity. The more diverse an environment, the more stable that environment is for man and all other living organisms. People generally prefer fish and wildlife in the environment. The existence of fish and wildlife enables serious educational and scientific studies to take place and enhances programs in the schools (Planning for Wildlife in Cities and Suburbs). Fish and wildlife have a beneficial impact on children. Studies document that the interaction of children with their natural environment enhances their physical development and intellectual and social competence.

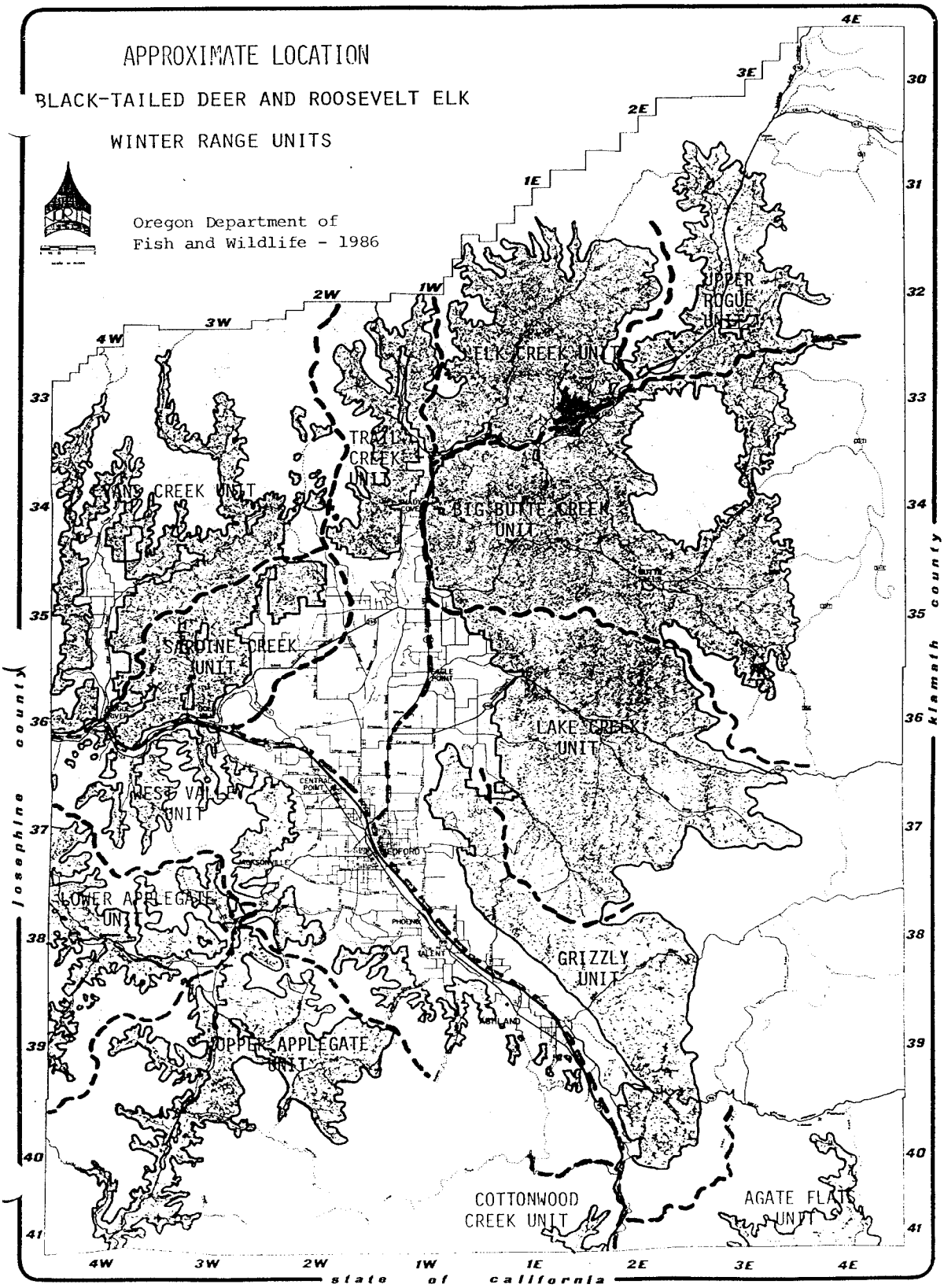
Fish and wildlife are also important to the area's economy. In 1975, the average Jackson County hunter spent $32 daily hunting deer, $42 daily hunting elk, and $53 daily hunting black bear. A total of $4,661,000 was spent hunting these big game species in 1975. Within Jackson County in 1975, upland game and waterfowl hunters spent an average of $11 to $15 each day, for a total expenditure of $662,700. Another $16,053 was received from the harvest of pelts (Wildlife Resources in Jackson County).

Studies indicate that when residential development is compatible with the open space character of the land, a healthy wildlife community will be maintained and property values will increase (Planning for Wildlife in Cities and Suburbs). Land development and land uses often adversely affect fish and wildlife species and their habitat. The placement of a single residence per 40 acres of land, in a high density winter range area for deer will reduce the carrying capacity of that range by 25 to 50 percent.

The loss of winter range does not actually eliminate the deer population in a given area, but reduces the population over a very large area, so the effects of recovering the winter range are less noticeable. Thus, as pieces of winter range are lost, the total deer population gradually declines.

The urbanization of agricultural land surrounding cities reduces pheasant habitat. As a result, the total pheasant population within the county is undergoing a slow decline.

The breeding of ducks within the county is gradually declining because of the destruction of water habitat, like irrigation ponds, pondside vegetation, bogs and swamps, caused in part by development activity (Wildlife Resources of Jackson County, page 21).


APPROXIMATE LOCATION
BLACK-TAILED DEER AND ROOSEVELT ELK
WINTER RANGE UNITS
Oregon Department of
Fish and Wildlife - 1986
UPPER ROGUE UNIT
ELK CREEK UNIT
TRAIL CREEK UNIT
BIG BUTTE CREEK UNIT
SAM'S CREEK UNIT
SARDINE CREEK UNIT
LAKE CREEK UNIT
WEST VALLEY UNIT
LOWER APPLEGATE UNIT
GRIZZLY UNIT
UPPER APPLEGATE UNIT
COTTONWOOD CREEK UNIT
AGATE FLAT UNIT
josephine county
klamath county
state of california
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The American peregrine falcon is considered to be an endangered species. Northern bald eagle, and northern spotted owl and threatened species (Oregon Natural Areas). Land development and uses could directly affect survival of these birds. Virtually all of their nesting habitat is found on federally managed lands.

There has been a large decrease in the native population of fall Chinook salmon, Coho salmon, summer and winter steelhead and trout (Jackson-Klamath Resource Analysis, Aquatic Species, page 14). This decrease can be attributed in a large part to these factors: the over-appropriation of surface water for irrigation purposes, which reduces the water habitat, results in higher temperatures, and lowers the dissolved oxygen; the presence of dams; increased sedimentation and turbidity caused by road construction and logging near streams; damage to riparian vegetation and water quality by livestock; and, an increasing of other types of pollution.

RIVERS AND TRAILS:

In 1964, Congress established the Natural Wilderness Preservation System "to secure for the American people of present and future generations the benefits of an enduring resource of wilderness." As of April 1, 1978, there were 16.6 million acres within the wilderness system (RARE II, page 6), of which approximately one million acres are in Oregon. In 1977, the U.S. Forest Service will be recommended to the Congress to include within the Natural Wilderness Preservation System; which land should be managed for nonwilderness uses; and, which land will required further study before a decision can be made. The U.S. Forest Service has developed criteria to evaluate the desirability of including land within the National Wilderness Preservation System.

Rivers and portions of rivers within Oregon that have outstanding scenic, historic, fish, wildlife, geologic, archaeological or recreational values may be incorporated within the National Wild and Scenic Rivers System or may be designated as a State Scenic Waterway (Oregon Natural Areas). In order to retain a river's exceptional characteristics, both the state and federal programs limit and regulate the type of development and land uses permitted within or along the river.

The Oregon Recreational Trail Systems Program provides for the recognition of existing trails, like the Pacific Crest Trail, and coordinates the development and construction of new trails for hiking, horseback riding and bicycling (Oregon State Parks Systems Plan). A major purpose of the program is to develop trails linking urban areas and recreation areas. There are plans to construct a trail linking the Rogue River and Pacific Crest Trails. Additional information on the state trail system and an inventory of trails and potential trails, which are and may be devloped in Jackson County is found in the Jackson County Recreation Plan.

WATER RESOURCES AREAS:

The Rogue River basin is 5,161 square miles in size and drains five percent of Oregon. This basin encompasses almost all of Jackson County as well as Josephine County and portions of adjacent counties. The Rogue River basin is divided into seven subbasins of which three, the Upper Rogue, Little Bear Creek, and Bear Creek, are almost entirely contained within the boundaries of Jackson County. Two other subbasins, the Middle Rogue and Applegate Valley, are partially contained within the county's boundaries.

The Upper Rogue seciton is the largest of all the subbasins, containing 1,250 square miles, and one-quarter of the Rogue basin, of which 945 square miles are in Jackson County. There are more than 1,200 miles of streams in the Upper Rogue section with the main stem of the Rogue River being the largest artery.

Little Butte Creek subbasin extens from the confluence of the Rogue River and Butte Creek to the creek's headwaters at Fish Lake Reservoir on its North Fork, and near the Cascade Divide on its South Fork. Part of the Little Butte Creek basin is in the Rogue River National Forest. This subbasin is bounded on the north by the Big Butte Creek drainage, andon the east by the Cascade Divide. The Little Butte Creek subbasin has 95 percent of its 374 square miles in Jackson County, constituting about seven percent of the Rogue basin area.

Bear Creek subbasin covers the southeast section of the Rogue basin. Its headwaters are in the extreme southeast corner of the Rogue basin on the western slopes of the Cascade Divide. The western boundary of the subbasin is the ridges separating the Bear Creek drainage from that of the Applegate River, while the separtion of the east is from Little butte Creek drainage.

Bear Creek subbasin is the smallest of the seven subbasins, 341 square miles, which constitutes six and one-half percent of the Rogue basin. The Bear Creek subbasin is treated separately because it has the highest concentration of population and the highest level of development of any region in the Rogue basin. It lies entirely within Jackson County and is the land base of the Jackson County economy. There are 290 miles of streams in the subbasin. Bear Creek is 25 miles long, Emigrant Creek extends an additional 13 miles, and many tributaries of shorter length make up the remainder of the stream system.

Applegate Valley subbasin includes all of the Applegate River and its tributaries, which take in the southern half of the central portion of the Rogue River basin. Major tributaries of the Applegate are Williams Creek, the Little Applegate River, and Carberry Creek. The Applegate River main stem extends to the limits of the Rogue River National Forest located at the summit of 768 square miles, ranks fourth in size among the subbasins; makes up 15 percent of the total Rogue basin, and has 420 square miles in Jackson County, 260 miles in Josephine County, and the remainder in Siskiyou County in California.

The Middle Rogue subbasin is an arbitary subdivision of the Rogue main stem and includes the norther half of the central portion of the Rogue basin which encompasses the drainage areas of Grave, Jumpoff Joe and Evans Creeks. This is the third largest of the subbasins and contains 943 square miles; 18 percent of the Rogue basin, of which 500 square miles are in Josephine County, 440 miles in Jackson County, and three miles in Douglas County.

Stream flows within the Rogue River basin are usually low during the summer months and high during the winter. Low steams flows result in high steam temperatures, concentrations of nutrients, damage to fish and wildlife habitats, and algea growth. High stream flows may result in excess turbidity. Optinum sream flows could be encouraged by an increase of water level during the summer months, and a regulation of water level during the winter.

DAM SITES:

The impoundment of water through the construction of reservoirs can provide many benefits. For example, during the summer there is often an inadequate supply of water for irrigation and other uses. Conversely during the winter, water problems may occur because of flooding. The

impoundment of water can minimize both the problems caused by summer drought and winter rains. Other specific benefits of reservoirs include the production of power, enhanced water quality through the augmentation of low summer water flows, and recreational opportunities afforded by reservoirs.

Natural conditions limit the placement of dams to specific sites along certain streams. The extent of existing development as well as economic considrations further limit the number of potential dam sites. Planning on a county level can help ensure that those high quality dam sites that have good potential for development are protected from incompatible land uses which could prevent the development of a dam and reservoir.

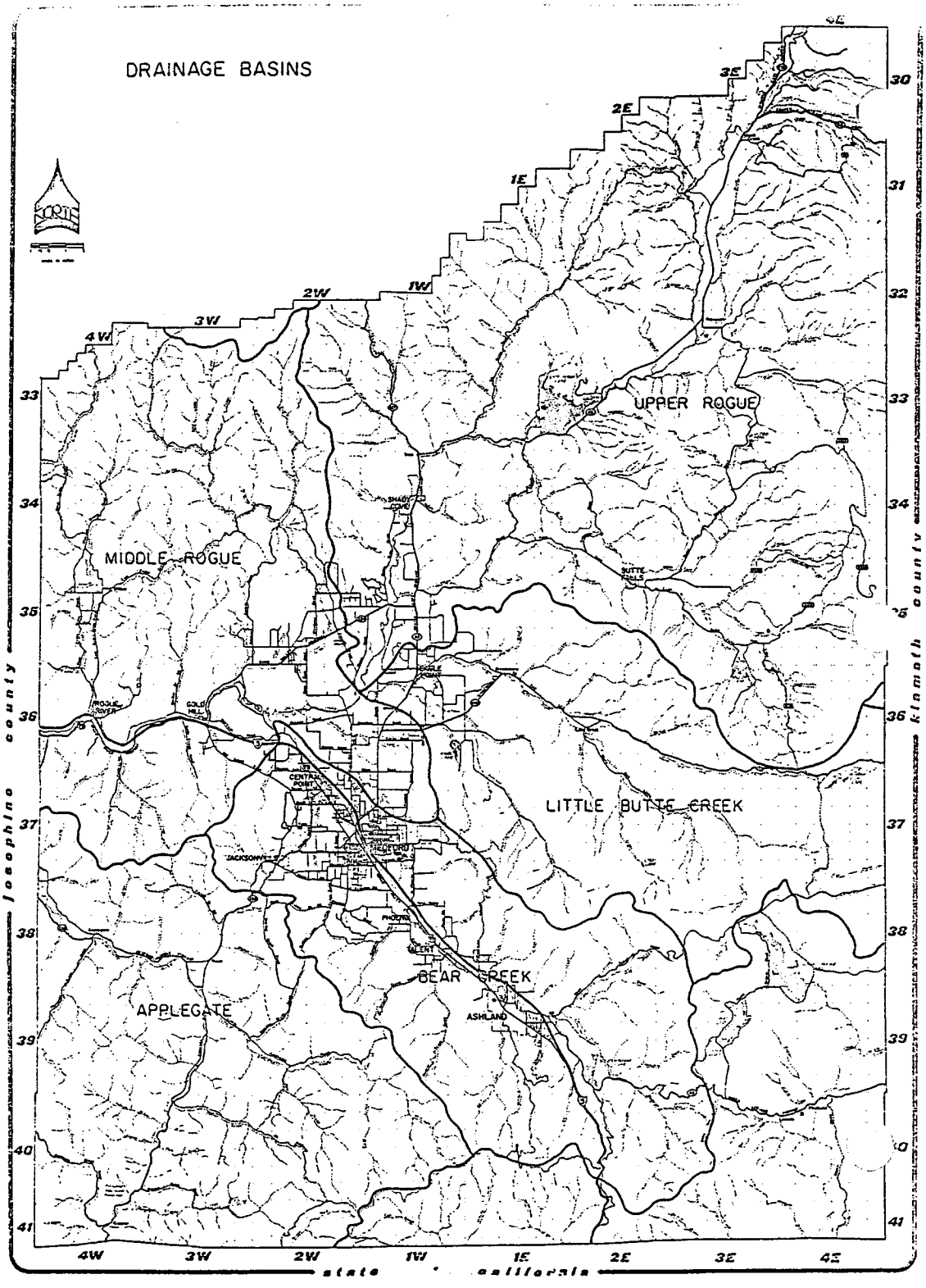
The Oregon State Water Resources Department recently identified numerous locations throughout Jackson County, which are possible dam sites. The Water Resources Department's inventory of possible dam sites includes those sites which have been studied by other agencies such as the Bureau of Reclamation and the U.S. Army Corps of Engineers. These identified sites represent possible places where dams might be placed in order to produce hydro-electric power, provide irrigation water, or for other uses or combinations of uses. By 1981, the Water Resources Department expects to complete a field analysis of the identified sites. The field analysis will provide information as to which of these sites have reasonable potential for dam construction.

HISTORIC RESOURCES:

Jackson County has experienced, and apparently will continue to experience, growth nd change because of rapidly developing technologies and the arrival of new residents. At the same time, public interest in, and commitment to, historic preservation has been increasing. This is at least partly due to recognition that historic resources provide a tangible physical connection with the past and are nonrenewable educational resources. This link provides a sense of permanence, continuity, and perspective to people's lives, as well as providing a context within which change can occur. Historic properties and sites also offer architectural and landscape richness and diversity to the visual envronment and personal enjoyment.

Preservation of historic resources in the rural and unincorporated areas of the county involves both the historic sites and structures for these sites. An inherent relationship exists between a rural area's man-made and natural landscape features because traditionally the site and construction of rural buildings evolved from the type of natural resources in the area. To preserve that relationship, methods to control development in areas that are historically or culturally significant are required. Historic preservation in the unincorporated areas of the county, therefore, is dependent upon preserving the feeling of the surrounding countryside.

Other Comprehensive Plan elements relating to the historic resources element include: Agricultural Lands, Rural and Suburban Lands, and Forest Lands. This is because of the nonurban nature of most of the county's historic resources, such as farmhouses, barns and turn-of-the-century resort hotels, outside those found in incorporated cities. In an urban setting, housing programs are often related to historic preservation and restoration because many historic and architecturally significant buildings are houses. Transportation is related by virtue of some of the historic solutions to transportation problems, including rail service, streetcars, bicycles, pedestrian and equestrian paths, and because of the impact roads can have on historic resources.


DRAINAGE BASINS
NORTH
UPPER ROGUE
MIDDLE ROGUE
LITTLE BUTTE CREEK
BEAR CREEK
APPLEGATE
ASHLAND
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3W
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Josephine county
Klamath county
state of California

Research also points out energy conservation techniques used in early construction before the days of elaborate heating and cooling systems. Windmills were once in widespread use for energy production in the county and still have some potential in the area. Preservation, restoration and rehabilitation of a structure consumes 23 percent less energy in materials used than does new consruction. Historic preservation is resource efficient and is a good answer to contemporary demands for limited resources.

Historic preservation relates to the local economy, as well. Economic factores of historic preservation and restoration are:

1) Lower cost per square foot for adaptive use and rehabilitation than for new construction.

2) Tourist interest in historic areas and related money spent.

3) State or federal grants for both private and public efforts, bring more money into local circulation and stimulate additional private investment.

4) Rehabilitation programs tend to be much more labor-intensive than new construction, although time of construction is generally shorter.

For many years historic preservation has taken the form of placing items into museums and historic village reconstructions. Historic preservation can no longer be addressed as a separate area of interest. Rather, it should become an integral element in all areas of community life, including housing, transportation, agriculture, economy, energy conservation, recreation, education, and public service.

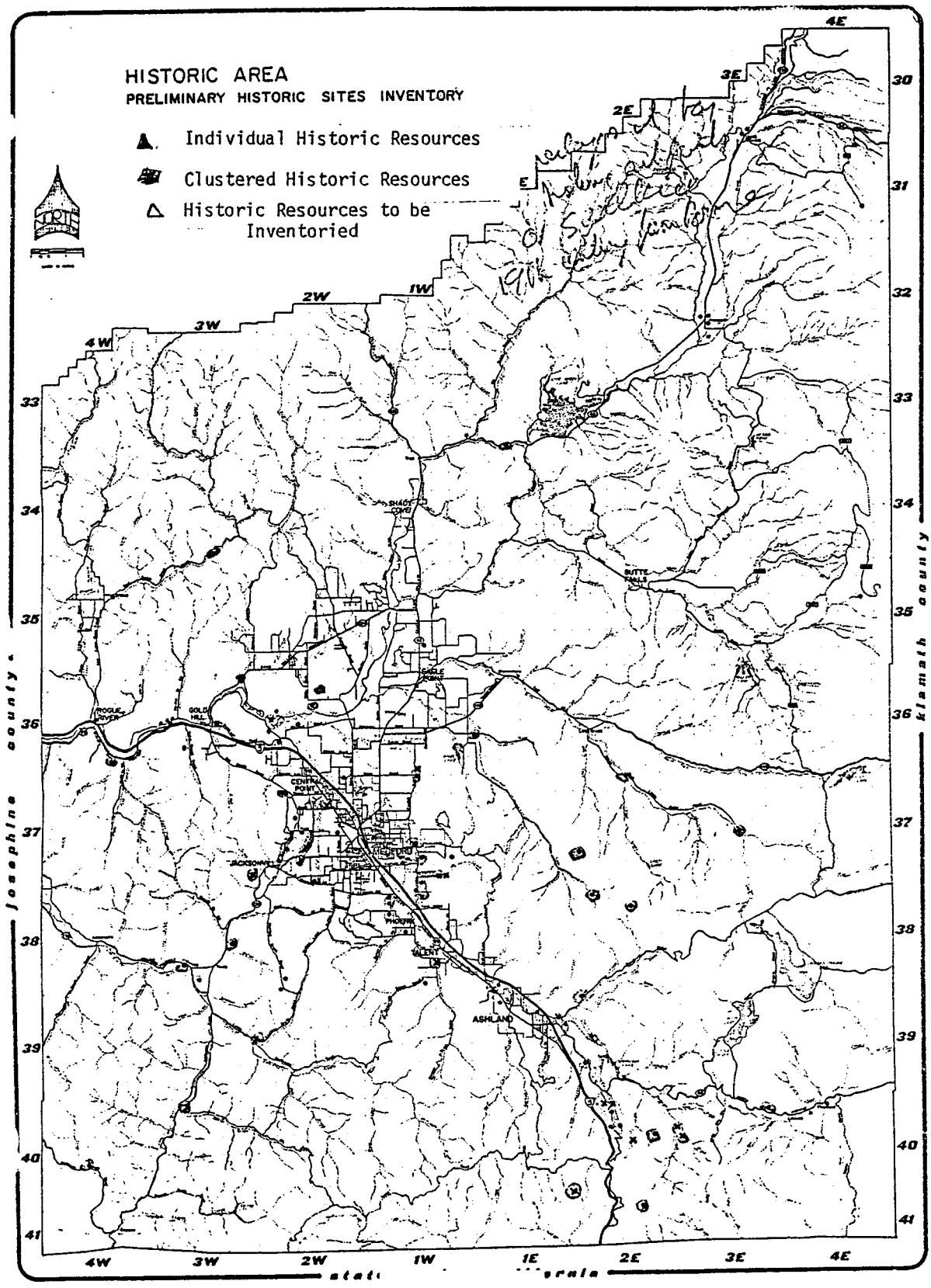
The Jackson County Historical Sites Survey, a cooperative venture by the Jackson County Department of Planning and Development and the Oregon Historic Preservation Office, was conducted between June, 1978 and June, 1979, and resulted in the identification of over 400 features of historical significance on nonfederally owned land, in the unincorporated sections of the county. Future additions will be made to the Jackson County Historical Sites Survey, as explained under the implementation strategies of this element. This survey as amended in August 1982, is adopted as a background document to the Comprehensive Plan.

The Goal 5 Resources Background Document contains specific inventory data on those resources for which an adequate inventory exists. In addition, the document includes the conflicts and evaluates the exonomic, social, environmental and energy consequences of the conflicts. Other resource inventories which are not adequate are also listed. This document is hereby adopted by reference.

1

FINDING:

Determinations of the relative value or significance of various natural areas can only be made after thorough research and analysis. At present, such areas as the backwaters of the Gold Ray


HISTORIC AREA
PRELIMINARY HISTORIC SITES INVENTORY
Individual Historic Resources
Clustered Historic Resources
Historic Resources to be Inventoried
NORTH
4E
3E
2E
1E
1W
2W
3W
4W
30
31
32
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34
35
36
37
38
39
40
41
josephine county
klamath county
SHADY COVE
BUTTE FALLS
EAGLE POINT
ROGUE RIVER
GOLD HILL
CENTRAL POINT
JACKSONVILLE
MEDFORD
PHOENIX
TALENT
ASHLAND

Dam can be cited as bona fide areas of high significance. Other areas, some of which may not yet be identified, may warrant protection from damage or destruction. Areas which are identified as being of high significance will necessitate special programs and protective regulations.

POLICY: THE COUNTY SHALL WORK WITH THE NATURE CONSERVANCY, THE NATURAL HERITAGE ADVISORY COUNCIL, AND OTHER AFFECTED AGENCIES AND ORGANIZATIONS IN ENSURING THAT NATURAL AREAS ARE APPROPRIATELY IDENTIFIED AND PRESERVED. tHE INVENTORY OF SITES ON PRIVATE LAND IDENTIFIED WITHIN THE GOAL 5 BACKGROUND DOCUMENT AS 1C WILL BE COMPLETED TO SATISFY 0AR 660-16-000 AND THE REQUIREMENTS OF STATEWIDE PLANNING GOAL 5 BY DECEMBER, 1983.

IMPLEMENTATION STRATEGIES:

A) In the areawide plan process, select sites for protection based upon the following:

   i) The rarity or endangerment of the elements, determined by the number of known occurrences of the elements;

   ii) The level of their protection elsewhere in the state;

   iii) The relative quality of the natural area (refer to Oregon Natural Areas);

   iv) The relative feasibility of protecting the area, in terms of adjacent land uses, need for open space, and so on; and,

   v) Analysis of current data on the inventoried site as contained within the Natural heritage Data Bank.

B) Limit access to, and use of, natural areas as necessary to preserve valued character.

C) Utilize zoning or other methods of providing adquate buffer areas as needed around natural areas.

2

FINDING:

The natural landscape of Jackson County is a scenic resource that is of value economically, environmentally, and aesthetically. The quality of this resource is dependent on a number of variables including the observer himself. Scenic resources may be adversely affected by development and therefore, it is necessary to develop a methodology which will identify and evaluate the visual attractiveness of scenic resources, and ensure that these scenic values are maintained for present and future generations.

A county designated scenic roadway system should be utilized to enhance the public's access to natural landscape and historical features while simultaneously allowing a reasonable use of private lands within the corridors. As such, the scenic, historic or cultural character of any county

designated scenic roadway are of sufficient interest to be a destination, in and of these roadways there are frequent opportunities for the development of complimentary roadside facilities such as rest areas or viewpoints.

Resource-based uses create contracts in the landscape. These contrasts can enhance the scenic value of the landscape by providing relief and variety to the purely natural. Agricultural views of an undisturbed natural landscape. Silvicultural practices can open upa scenic view where there was none. In both cases, the human and natural order of the landscape interplay, and the diversity of these parts significantly contributes to the aesthetic appeal of the county.

With the recognition that natural resource-based uses are important for a variety of reasons to the county, the policy and implementation approach for outstanding scenic resources allows natural resource-based uses, subject to state and federal regulations, if these are permitted in the zoning district. Other uses, subject to review and approval by ordinance, shall also be reviewed for scenic compatibility in designated scenic areas.

POLICY: THROUGH PROPER MANAGEMENT, THE COUNTY SHALL MAINTAIN OR ENHANCE THE AESTHETIC QUALITIES AND VALUES OF THE SIGNIFICANT NATURAL SCENIC LANDSCAPE RESOURCES OF THE COUNTY.

IMPLEMENTATION STRATEGIES:

A) The overall integrity of the landscape character in Jackson County shall be mantained by maintaining by retaining, through zoning, natural resource lands for resouce related uses.

B) A scenic resource overlay shall be developed setting forth guidelines, performance standards, and site plan review procedures for discretionary land use actions proposed within the boundaries of the district.

C) Guidelines and an interagency response proces and form shall be developed for Jackson County's review and comment on permits filed with state and federal agencies for lands within the scenic resource overlay.

D) Besides the outstanding scenic resources identified in the background report of the scenic element of Goal 5, other significant scenic resources shall be designated for inclusion in the scenic resource overlay, as appropriate.

E) Support and encourage completion of the Bear Creek Greenway.

F) Support and encourage the designation of the Rogue River from its headwaters to Lost Creek Lake for inclusion in the National Wild and Scenic Rivers System.

3

FINDING:

The fish and wildlife resources of Jackson County are valuable for economic, aesthetic, and ecological reasons. the conservation of fish and wildlife resources in of considerable importance

to the county, especially as pressure increases to convert natural habitat areas into developed areas.

POLICY: IN CONJUNCTION WITH THE OREGON DEPARTMENT OF FISH AND WILDLIFE AND OTHER AFFECTED AGENCIES, THE COUNTY SHALL PROVIDE FOR THE PROTECTION OF A PRODUCTIVE AND HEALTHY FISH AND WILDLIFE COMMUNITY AND HABITAT, AND SHALL PROTECT THREATENED OR ENDANGERED SPECIES.

IMPLEMENTATION STRATEGIES:

A) Utilize overlay zoning technique to designate specific habitat areas for special development review.

B) Require clustering of structures where conventional development is likely to have a significant adverse impact upon a valuable fish and wildlife habitat. winter range area for deer or elk could be protected by grouping homesites. If a clustering approach is not used, densities should be limited to one unit per 40 acres in sensitive winter range areas and one unit per 160 acres in especially sensitive deer and elk winter range areas.

C) In conjunction with the Oregon Department of Fish and Wildlife, and other affected agencies, provide for the retention of fish and wildlife habitat by developing programs which would provide for the purchase of donation of such land or the use of conservation easements.

D) Revise and amend the Jackson County Land Development Ordinance or development new ordinances to ensure their compatibility with habitat preservation. One such revision would be the requirement of special riparian vegetation protection for all developments bordering on, or including streams.

4

FINDING:

Studies indicate that outdoor recreation activity, including hiking, fishing and photography, is increasing. Planning programs should be developed to ensure that open space resources, including wilderness areas, wild and scenic rivers, and trail systems are retained in adequate quantity and quality, and wisely managed.

POLICY: THE COUNTY SHALL PROMOTE THE DESIGNATION OF APPROPRIATE AREAS FOR WILDERNESS, RECREATION TRAILS AND SCENIC WATERWAYS.

IMPLEMENTATION STRATEGIES:

A) Work in conjunction with affected agencies, private individuals and organizations in developing data to assess the need for inclusion of additional waterways within national or state river preservation systems, and the development of additional recreation trails.

B) Evaluate proposed inclusions of land in the Wilderness Preservation System, the inclusion of additional rivers within national and state preservation systems, and the development of additional recreation trails, as they conform with the goals and policies of the Comprehensive Plan.

C) Provide date to affected agencies concerning the stability and location of land which may be desirable for inclusion within the national and state river preservation systems or for the development of recreation trails.

D) Revise and amend the Jackson County Zoning Ordinance and other regulatory document as needed to provide ample protection for designated wilderness areas, recreation trails, and scenic waterways.

E) Adopt the Jackson County Recreation Plan as a part of this comprehensive plan.

5

FINDING:

Water is a fundamental and basic resource for the area's continued productivity and the improper or over-utilization of the water resources can adversely impact water's role in ensuring a properly balanced ecosystem. It is important to ensure that the quality and quantity of water resources is retained and where necessary improved.

POLICY: THE COUNTY SHALL ENSURE PROPER MANAGEMENT OF WATER AREAS, WETLANDS, WATERSHEDS AND GROUNDWATER RESOURCES IN ORDER TO FACILITATE THEIR CONSERVATION, PRODUCTIVITY AND WISE UTILIZATION.

IMPLEMENTATION STRATEGIES:

A) Adopt zoning measures to control incompatible land uses along waterways.

B) Require site rehabilitation or reclamation following river aggregate removal operations.

C) Coordinate water resource planning with planning for forestry, wildlife, mineral extraction and so on, which may have an impact on water resources.

D) Support research efforts to determine the carrying capacity of groundwater and surface water sources. If such information becomes available, rural development regulations should be modified to reflect such knowledge.

E) Support the development of the 208 program as it relates to the conservation and wise use of watersheds and groundwater resources.

6

FINDING:

Dam Sites are recognized as valuable natural resources which should be protected from incompatible land uses.

POLICY: THE COUNTY SHALL ENSURE PROPER MANAGEMENT OF WATER AREAS, WETLANDS, WATERSHEDS AND GROUNDWATER RESOURCES IN ORDER TO FACILITATE THEIR CONSERVATION. PRODUCTIVITY AND WISE UTILIZATION.

IMPLEMENTATION STRATEGY:

Within one year after the field analysis of dam sites in Jackson County has been completed, the County shall begin to work with the Oregon State Water Resources Department and other affected agencies in ensuring that the more important dam sites are protected through zoning and other appropriate land use actions.

7

FINDING:

Poor land use patterns in the form of sprawling residential subdivisions, highway construction, commercial and industrial development, along with a lack of understanding by the general public and elected officials on the values of historic resources has resulted in the destruction and loss of much of the cultural and historic heritage in Jackson County. Historic resources should be preserved for their aesthetic, conservational, educational, financial, and historical values.

POLICY: THE COUNTY SHALL ACTIVELY PROMOTE THE IDENTIFICATION AND PRESERVATION OF HISTORIC RESOURCES.

IMPLEMENTATION STRATEGIES:

A) Create an Historic Advisory Commission (the background document contains information on the proposed makeup of this commission and its meeting rules and procedures) which shall:

   i) Review and act upon nomination applications of historic resources to the Jackson County Register of Historic Landmarks;

   ii) Institute and administer a program for revising the Jackson County Historical Sites Survey to provide for additions, corrections, or deletions;

   iii) Remove properties from the Jackson County Register of Historic Landmarks when an historic landmark has deteriorated, has been altered or destroyed, or no longer possesses its historic values;

iv) Research the creation and use of an historic revolving fund to help provide owners improve historic sites.

v) Institute and administer a program to acquire historic easements through the use of an historic revolving fund or by gift. These historic easements should be used to preserve facades, interiors and open space. Also utilize an historic revolving fund to provide grants or low interest loans for the repair or restoration of historic resources.

vi) Institute and support such programs and projects as will help make the citizens of the county, and its visitors aware of the county's origin, development and historic significance (publish brochures, illustrating the county's historic resources; historic preservation policies and programs; and guidelines for repairs and maintenance of historic resources);

vii) Enlist citizen participation and support in continuing programs designed to recognize and preserve county heritage.

B) Amend the Jackson County Zoning Ordinance providing for the protection of historic resources and allowing for compatible adaptive uses for historic resources when the original or present use ceases to be feasible.

C) Supplement the activities of the Jacksonville Museum with the addition of an historic preservation center to provide architectural and structural advice for owners of historic properties; conduct demonstrations, workshops, displays, and other public educational programs on architectural styles, construction and preservation processes. Such a center could serve as a clearinghouse for those doing historical research on the built environment.

D) Encourage cities to support and institute historic preservation policies and programs and encourage cities to cooperate in developing a countywide preservation program.

E) Review the potential use of floating zones or other zoning techniques to establish historic districts. Consider utilizing performance standards, density bonus techniques, plus density transfer systems and site plan review to minimize the adverse impacts of proposed developments on valued historic resources.

F) Require all county owned or administered properties to be reviewed for historic values. If it is determined that the feature does possess historic significance it shall be nominated to both the Jackson County Register of Historic Landmarks and the National Register of Historic Places. County owned or administered historic resources should be maintained under the guidelines as set forth in The Secretary of the Interior's Standards for Historic Preservation Projects with Guidelines for Applying the Standards.

County agencies and departments shall be responsible for being aware of historic resources that may be impacted by their proposed projects.

G) Pursue all possible funding sources for historic preservation, including a County fund per ORS 358.160, private donations or other private funding, Department of Agriculture, Economic Development Administration, Department of Health, Education and Welfare, Department of Housing and Urban Development, Department of the Interior, Department of Labor, National Endowment for the Humanities, Small Business Administration, and Department of Transportation.

H) Support an archaeological resource survey of the county. Provide for the protection and interpretation of archaeological resources by enforcing current laws, drafting a county ordinance and providing incentives through zoning, transfer of development rights, and easements.

8

FINDING:

Many natural resources within Jackson County have not been adequately inventoried. The characteristics of these resources require a complete inventory of the location, quality and quantity of the resource. Without this level of specificity, a determination as to whether a particular resource is "ecologically and scientifically significant", or an open space is "needed" or a scenic area is "outstanding" cannot be made.

The requirements of the Statewide Planning Goal 5, Open Spaces, Scenic and Historic Areas, and Natural Areas, requires that the resources be inventoried. Special studies may have to be undertaken in order to compile the inventories that are not currently available. Jackson County is committed to developing these inventories in an expedient and efficient manner.

POLICY: TO THE EXTENT POSSIBLE, JACKSON COUNTY SHALL ENSURE THAT THE INVENTORIES SPECIFIED BELOW ARE COMPLETED AND THE REQUIREMENTS OF STATEWIDE PLANNING GOAL 5 AND OAR 660-16-000 HAVE BEEN SATISFIED AT COMPLETION OF PERIODIC REVIEW.

A) Any remaining ecologically and scientifically significant natural areas, classified "1B" in the amended Goal 5 background document.

B) Wetlands Areas.

C) Groundwater Resources.

D) Nongame Wildlife habitat, classified "1B" in the amended Goal 5 background document.

E) Archaeological resource sites occurring on private lands classified as "1B" in the Goal 5 Resource Background Document.

F) Archaeological resource sites occurring on public lands classified as "2A" in the Goal 5 Resources Background Document 1990.

IMPLEMENTATION STRATEGY:

A) The Planning Commission shall continue to place Goal 5 compliance on its annual work program in order to complete the work as required by the policy. The Planning Commission encourages citizens and professionals to assist in the development of these inventories.

B) The County shall continue to coordinate the development of sensitive habitat inventories with the Oregon Department of Fish and Wildlife.

C) The County shall continue to coordinate with the Oregon Division of State Lands regarding development on property which is identified on the National Wetland Inventory as having wetlands within its boundaries.

9

FINDING:

The North Fork of the Rogue River, also known as the Upper Rogue River, from the northern boundary of Crater Lake national Park to the Rogue River National Forest boundary in the vicinity of the Prospect Ranger Station, has been designated as a National Wild and Scenic River and an Oregon Scenic Waterway. These designations may have significant land use impacts on lands adjacent to or included within the designated corridor. In acknowledgment of the federal and state designations, Jackson County has established an Area of Special Concern (ASC-90-7) for a section of the river from the Douglas-Jackson County line downstream to the Crater Lake Highway 62 bridge at the upper end of the pool of Lost Creek Lake. The portion of the river from the Rogue River National Forest boundary to the Crater Lake Highway 62 bridge has been identified as a significant stretch by the County and is not a part of the federal or state programs. This stretch does not meet federal qualifications for designation and has not been studied by the state for consideration as a scenic waterway. It is imperative that Jackson County participate in the protection and management of the North Fork of the Rogue River by reviewing development, partitioning and land use activities. In addition to the provisions of the Area of Special Concern 90-7, all land use and land division applications affecting lands within the legal boundaries of the national Wild and Scenic River and Oregon Scenic Waterway designations shall be transmitted to the United States Forest Service and the Oregon State Parks Department or other appropriate state or federal agency.

POLICY: JACKSON COUNTY SHALL CONTINUE TO ADMINISTER THE PROVISIONS OF ASC-90-7 AS THEY APPLY TO SECTIONS OF THE NORTH FORK OF THE ROGUE RIVER, PORTIONS OF WHICH HAVE BEEN CLASSIFIED AS A NATIONAL WILD AND SCENIC RIVER AND AN OREGON SCENIC WATERWAY.

IMPLEMENTATION STRATEGY:

The policy is implemented in and of itself without further implementation strategies.

10

FINDING:

The location of the Bear Creek Greenway between roughly the Gold Ray Dam and Eagle Point has not been specifically determined. When the location of the trail is established Statewide Planning Goal 5 and oar 660-16-000 will have to be applied.

POLICY: JACKSON COUNTY SHALL APPLY THE REQUIREMENTS OF THE STATEWIDE PLANNING GOAL 5 AND OAR 660-16-000 WHEN THE EXTENT OF ACQUISITION ALONG THE ROGUE RIVER BETWEEN GOLD RAY DAM AND EAGLE POINT HAS BEEN DETERMINED.

IMPLEMENTATION STRATEGY:

No specific implementation strategies are necessary.

11[5]

FINDING:

The Applegate Trail is a significant cultural resource in the history of Jackson County and the State of Oregon. Established initially in 1846 the Applegate Trail was to serve as an alternative route to more hazardous sections of the Oregon Trail traveling through the Columbia River George. The Applegate Trail has been designated as a National Historic Trail by the National Park Service. The National Park Service has instituted a program to identify a specific corridor through which the original trail and later routes traveled. While Jackson County recognizes the historic significance of the trail, there is insufficient locational information with which to adequately complete the inventory process. The characteristics of the resource require a complete inventory on the location, quality and quantity of the resource. Without this level of specificity a determination of significance cannot be made nor programs for the protection of the resource implemented.

The requirements of the Statewide Planning Goal 5, Open Space, Scenic and Historic Areas, and Natural Areas, requires that the resources be inventoried. Special studies may have to be undertaken in order to compile the inventories that are not currently available. Jackson County is committed to compiling sufficient historical and locational information to include identifiable segments of the Applegate Trail in the Jackson County Cultural and Historical Resource Survey, and if appropriate nominate those segments to the Jackson County Register of Historic Landmarks.

POLICY: JACKSON COUNTY SHALL ADOPT A 1B POLICY FOR THE APPLEGATE TRAIL PURSUANT TO REQUIREMENTS OF STATEWIDE PLANNING GOAL 5 AND OAR 660-16-000, AND ENCOURAGE ANY ACTIVITY TO SPECIFICALLY IDENTIFY

[5] Amended by Ordinance #94-120; acknowledged by DLCD Order #00469, dated 10-3-95; effective 10-13-95, File #94-1-OA.

THE LOCATION OR GENERAL LOCATION OF INTACT SEGMENTS OF THE TRAIL IN THE COUNTY AND SPECIFICALLY IN THE GREENSPRINGS MOUNTAINS OF SOUTHEASTERN JACKSON COUNTY. ONCE DETAILED SITE-SPECIFIC INVENTORY OF THE TRAIL IS AVAILABLE FROM THE NATIONAL PARK SERVICE, JACKSON COUNTY WILL COMPLETE THE GOAL 5 PROCESS FOR THE APPLEGATE TRAIL.

12[6]

FINDING:

Oregon Revised Statutes (ORS) 196-672 states, in part, that it is the policy of the State of Oregon to promote the protection, conservation and best use of wetland resources and their functions and values through the integration and close coordination of statewide planning goals, local comprehensive plans and state and federal regulatory programs.

The National Wetland Inventory Draft Maps were completed and distributed to Jackson County in 1991, and were finalized in 1995. These maps are used in all land use applications to determine when it is necessary to notify the Oregon Division of State Lands of the specific land use applications, in keeping with ORS Chapter 196.

Although these maps identify the approximate location and the specific type of wetland, the National Wetland Inventory Maps do not include information on the quantity or quality of the resource as required to complete Goal 5 analysis of each site. While it is important for Jackson County to identify, qualify and protect wetland resources, Jackson County does not have the financial resources to hire qualified staff or consultants to develop this quantity and quality information for these many wetland sites.

POLICY: JACKSON COUNTY HEREBY ADOPTS A "AB" POLICY FOR WETLANDS. JACKSON COUNTY SHALL WORK WITH THE PUBLIC AND OTHER JURISDICTIONS AND AGENCIES IN IDENTIFYING WETLAND RESOURCES WITHIN THE COUNTY. JACKSON COUNTY WILL PROCESS A GOAL 5 ANALYSIS FOR EACH IDENTIFIED WETLAND.

IMPLEMENTATION STRATEGY:

A) Jackson County Planning and Development Services will continue to notify the Oregon Division of State Lands of all land use applications on properties which include wetlands within their borders, and will continue to condition those land use decisions with a requirement that the property owner and developer work with the Division of State Lands in mitigating impacts to the wetland resources.

B) The Planning Commission shall continue to place Goal 5 compliance on its annual work program in order to complete the work as required by this policy.

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[6] Amended by Ordinance #95-56; acknowledged by DLCD Order #00558, dated 1-17-96; effective 1-28-96, File #94-2-OA.

NATURAL HAZARDS[1]

GOAL: TO PROTECT LIFE AND PROPERTY FROM NATURAL DISASTERS AND HAZARDS.

INTRODUCTION/BACKGROUND:

Natural hazards are those natural events which may result in a threat to human life, or which endanger the works of man. Although termed "natural" hazards, it is important to note that such occurrences are often induced by people, and by definition, would not exist if not for the presence of past actions of people. In Jackson County the following hazards are documented as major or potential causes of natural disaster and hazard:

- Wildfire
- Stream Flooding
- Stream Erosion and Deposition
- High Groundwater and Ponding
- Slope Erosion
- Mass Land Movement
- Expansive Soils

To a lesser extent Jackson County may also be subject to natural disasters resulting from seismic activity (earthquakes), violent cyclonic weather patterns (large hail and tornadoes), and a remote chance of volcanic activity.

Policies and implementation measures established in this Element of the Comprehensive Plan are directed at minimizing the future loss of life and property damage in the County resulting from natural disasters and hazards. Through the enacting of measures contained in the Natural Hazards Element, all planning and development decisions will be made upon conscious determination of the level of risk entailed. This will necessitate that accurate information on all known hazards be available to decision-makers, and that the density or intensity of development will be limited by the degree of natural hazard present, or conditioned upon mitigation of the hazard. Minimizing risk is an essential focus of public safety planning. Every land use or public facility action taken by local government should be based on a recognition that some risk exists. The level of risk involved then becomes critical in determining when government involvement becomes necessary or desirable. When specific action by government is deemed necessary to protect citizens and property, then the level of risk is unacceptable. If it is not necessary to take a risk because individual or public goals can be achieved at the same time, or with less total cost by other means, without taking the risk, then the risk involved is avoidable.

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[1]*Adopted by Ordinance #80-17 on 8-29-80, effective 10-28-80 (File 80-1-ZOA); replaced by Ordinance #2004-1 adopted 1-12-04, effective 3-12-04 (File 2003-1-OA).*

The purpose of the Natural Hazards Element is to avoid or reduce risk to an acceptable level which balances the cost of incorporating safety measures in planning and development actions with the benefit of protecting life and property. Acceptable risk is the level of hazard below which no specific action by local government is deemed necessary, other than making the risk known. It is the standard around which this Element is designed. Land use and public facility actions taken by the County are presumed to be based on a finding that the risk involved does not exceed any acceptable level.

A philosophical question which often results from discussions of planning for public safety is one of: "How much should a person be protected from his/her own actions?" It is perhaps reasonable to conclude that an individual does not warrant special protection from his or her own personal foolishness or ignorance. Unfortunately, personal safety issues often become public safety issues where natural hazards are concerned. For instance, it may appear to be appropriate to allow a person to build a home in a known floodway, assuming that the person is only threatening himself/herself. In reality, however, such a person may quickly sell the house to some unsuspecting person who inherits the risk. If the house is destroyed and its parts wash away, they may increase the hazards downstream by creating a dam at a bridge or other bottleneck. If the house is not destroyed, it may have the effect of raising the water levels elsewhere. Additionally, flood insurance is publicly subsidized, and measures to protect the public investment are in the best interest of all.

Planning for public safety is based upon various assumptions and probabilities. Terms like "100-year flood" or "100-year storm" are used to describe the probability of such a storm or flood happening once every 100 years. Another way this can be expressed is to say that there is a one percent chance of such an occurrence in any given year. Considering the uncertainties associated with natural events, it is apparent that virtually all of the hazards listed here may occur at any time. Some are likely to occur during certain seasons (wildfires in summer, and floods in winter), and some will occur only at very infrequent intervals (earthquakes). Still, there is always a certain amount of risk associated with developments of any kind.

This Element discusses the various natural hazards which warrant concern in Jackson County. It attempts to indicate the relative severity of risk associated with each type of hazard, and it points out the need for cautious decision-making which assures that acceptable risk will be used as the basic standard against which all projects will be evaluated. Decision-makers may be forced to use incomplete data at times, acting on projects without having detailed information on certain types of natural hazards. This is unavoidable, to a certain extent, pending the completion of more detailed environmental research. Such research may never provide all the information needed though, and decision-makers are forced to use the best information available, combined with common sense, to determine whether any given project remains within the realm of acceptable risk. It should be noted that the goal of the Natural Hazards Element indicates that the term "risk" relates to threats to either life or property. The finding that the level of risk associated with a given project is acceptable or unacceptable may be somewhat of a subjective evaluation of the decision-makers. This may be true for all types of hazards other than flood hazards where federal flood insurance regulations limit the amount of discretion available to the County.

The Natural Hazards Element is directly related to Plan elements dealing with land use, rural and suburban lands, environmental quality, and urban lands. Its relationship to the Housing Element is critical; the housing code proposed in that Element should include measures to reduce the effects of natural hazards. This Element is also related to the Natural and Historic Resources,

Economy, Transportation, Recreation, and Public Facilities and Services portions of the Comprehensive Plan, in that the policies and strategies proposed (or the mitigating measures not taken) will have an impact upon land and financial resources within the County. The primary reference document for this Element is Land Use Geology of Central Oregon, by the State Department of Geology and Mineral Industries (1977 Bulletin 94). Footnotes labeled LUG followed by a page number indicate a specific reference to that document. Other references are cited in the findings to which they pertain.

FINDINGS, POLICIES AND IMPLEMENTATION STRATEGIES:

WILDFIRES

1

FINDING:

Of all natural hazards threatening Jackson County, the potential for serious damage and loss of life from wildfires is second in magnitude only to flooding. Considering the long dry season the County experiences, vegetation patterns, and the distribution of the rural population, this hazard may in fact be the greatest faced by many County residents. According to the Oregon Department of Forestry, there has been an average of 350 forest fires in southwestern Oregon every year for the past ten years. Sixty-seven percent were caused by people, lightning started about thirty percent, with the remainder due to other causes. Prevention of lightning caused fires is virtually impossible, although the spread of such wildfires may be limited by certain positive steps. Both the prevention and suppression of human caused fires can be improved. Wildfires are clearly a public concern because they often threaten valued forest or agricultural lands as well as individual homesites. Beyond the area served by rural fire protection districts, state or federal firefighters provide the only formal fire suppression service. This service does not include the protection of structures, and as a result, many dwellings and structures have no form of fire protection whatsoever.

A number of different physical factors affect wildfires, the amount of damage done, and the difficulty of suppression. These include topography, weather (wind direction and velocity, temperature, and humidity), terrain, fuel loading (such as type of vegetation present), access, fuelbreaks, proximity of water source, distance from fire station, and available firefighting personnel and equipment. (Source: Fire Safety Considerations for Developments in Forested Areas, Northwest Interagency Fire Prevention Group, 1978.) Areas where annual precipitation is less than 30 inches per year are extremely fire susceptible (Curran 1978). All of these things should be considered in the course of legislative and quasi-judicial planning decisions for rural areas.

Development trends in rural Jackson County create some alarming situations in light of the factors listed above. A considerable portion of this development is located outside of rural fire districts where structural fire protection is not provided, or situated so that fire fighting equipment cannot gain access to threatened structures inside fire districts. Such developments often have no accessible stored water. They may be situated so that access by heavy equipment is not possible because of steep grades, poor road surfaces, insufficient road width, flammable or inadequately designed bridges, or because traffic attempting to evacuate the area has blocked the access road. Much of the County's rural and suburban development has occurred in the small valleys and gulches which run along creeks extending out from the valley floors. Unfortunately, these areas tend to have limited access (provided only by a single dead-end

road), little water during the fire season, and severe fuel loading problems such as accumulation of brush, or scrub oak. The location and design of the developments themselves render them a frequent cause of wildfires.

The following maps (major fires; fire insurance ratings/fire protection districts; existing wildfire hazard areas) should give the reader an understanding of the threat of fire in rural areas. The risk is not even limited to the traditional summer fire season because grasses and brush are volatile year-round. Fire protection class numbers assigned to an area are indicative of greater risks and higher insurance premiums. For example, a Class 5 area, such as Jacksonville, would be likely to have a premium cost of less than half that paid for insurance in essentially unprotected Class 10 areas, even though structure values are identical. The existing wildlife hazards map indicates those areas in the rural/wildlands interface where the threat of man-caused fire is most severe due to the mix of existing development and flammable vegetative patterns. As rural areas develop the fire hazard will be extended unless measures are taken to make the development "fire safe."

Jackson County has been fortunate that the historical losses to wildfires have been relatively light when compared to the potential for such losses (Curran 1978). It is sobering to consider, however, that areas which have been less fortunate in recent years (Los Angeles and Santa Barbara Counties in California, for example) share with Jackson County many of the conditions that give rise to wildfire.

POLICY: COUNTY LAND USE ACTIONS SHALL BE BASED UPON A DETERMINATION OF ACCEPTABLE RISK OF WILDFIRE HAZARDS, AND SUCH HAZARDS SHALL BE REDUCED THROUGH POSITIVE COUNTY ACTION IN TERMS OF GUIDING DEVELOPMENT AND IMPROVING FIRE PROTECTION SERVICES.

IMPLEMENTATION STRATEGIES:

A) Unify and expand rural fire districts as discussed in the Public Facilities and Services Element. All developing rural areas should be provided with structural fire protection.

B) Reduce the threat of loss of life and property from wildfire hazards in rural areas where structural fire protection is inadequate or unavailable through adoption of fire safety performance standards based on recommendations of the Rogue Valley Fire Protection Cooperative, the Northwest Interagency Fire Prevention Group (1978), and Curran (1978). The following criteria or standards should be implemented through provisions of the County's Land Development Ordinance, or other special purpose codes and ordinances as deemed necessary. Some of these standards could be satisfied through alternative design solutions and should be keyed to the degree of risk, density/size/type(s) of structures, distance from fire protection/suppression service, and the like:

   i) Discourage intensive residential development outside of rural fire protection districts through zoning until fire service can be provided, or such development can be made "fire safe";

   ii) Consider prohibiting the use of wood roofing shakes in hazardous locations;

iii) Require that access roads to all proposed developments be sufficient to allow for the ingress and egress of heavy-duty firefighting equipment. This could include guaranteed perpetual maintenance, adequate bridge construction, and road design and construction. Unconventional methods of access could be used if basic access needs are met;

iv) Require the undergrounding of electrical utilities to reduce their exposure to fire for all subdivisions and planned unit developments;

v) Support other reasonable strategies and measures recommended by the Fire Prevention Planning Task Force.

C) Develop and adopt an ordinance requiring that potential buyers of property be provided a statement disclosing the level of fire protection/suppression service available, and the fire insurance rating for the subject property, prior to the signing of an earnest money agreement.

D) Develop an ordinance to permit fire protection agencies to enforce continual abatement of fire hazards, including flammable vegetation, within their jurisdiction. Such an ordinance should be written to allow enforcement without formal complaint from property owners adjoining problem area(s).

E) Upgrade and promote efforts to educate the public in fire safety matters. Many of the people moving into rural areas expect a level of fire protection which, in many cases, will not be forthcoming.

F) Encourage the formation of volunteer fire departments and districts outside of rural fire protection districts. Cooperate with and support Rogue Valley Fire Training Association programs for these districts and volunteer groups.

G) As a result of expanded fire safety requirements contained in this Element, consider obtaining the assistance of the Rogue Valley Fire Prevention Cooperative in the review of plans and inspection of subdivisions or buildings for fire code compliance. The County may wish to consider establishing a site plan review committee system which would include fire protection personnel, in addition to planning and development department staff, to assure compliance with fire codes.

STREAM FLOODING

2

FINDING:

Stream flooding in the County destroys structures by the water's current action, siltation, and water damage. Agricultural land is affected by the loss of valuable topsoil, erosion of banks, destruction of crops, and harm to livestock. Flooding has threatened the public health, safety and welfare of the County by destroying or by isolating dwellings, disrupting transportation, polluting water supplies, and destroying basic public facilities and services, such as sewerage facilities and electric services. In the past three decades major floods have occurred in the

County on four occasions 1955, 1962, 1964, and 1974. Flood season in the County is from late October to May. Major floods generally occur as the result of severe periods of rainfall and unseasonably warm weather resulting in the melt of the upland snow pack (LUG, page 60).

Many of the lands adjacent to the watercourses in the County are viewed as aesthetically pleasant settings for development. As such, considerable development currently exists in flood-prone areas in the County. An increase of development in flood hazard areas increases the potential for loss of life, and damage to public and private property. Artificial fill and other obstructions and disruptions in floodways may contribute to the additional increases in flood hazard, particularly to lands not formerly affected. Flood damage in the local area may result in extraordinary public expenditures for flood relief, flood protection, and the replacement of public facilities and services.

The National Flood Insurance Program was enacted by Congress to encourage local governments to adopt sound floodplain management programs and to provide subsidized flood insurance for property in flood hazard areas. A draft flood insurance study has been prepared for the unincorporated areas of Jackson County. Detailed studies have been made along inhabited portions of twenty of the County's streams, creeks and rivers. The Soil Conservation Service has also prepared studies of the Applegate River and lower portions of Forest Creek. These detailed flood insurance studies generally define a regulatory floodway, a 100-year floodway fringe, and a 500-year floodplain. Where less population exists, approximate flood limit maps have been prepared.

To remain in the flood insurance program, the County will have to develop and implement land use controls to require elevation or floodproofing of most new construction within the 100-year floodplain, which is the area that has a one percent chance of flooding in any given year. Development of the floodway, which is the channel of the stream, plus the adjacent area that is required to carry the so-called 100-year flood without substantial increases in flood heights, will be restricted. The policy and strategies proposed below are necessary to minimize future flood hazards.

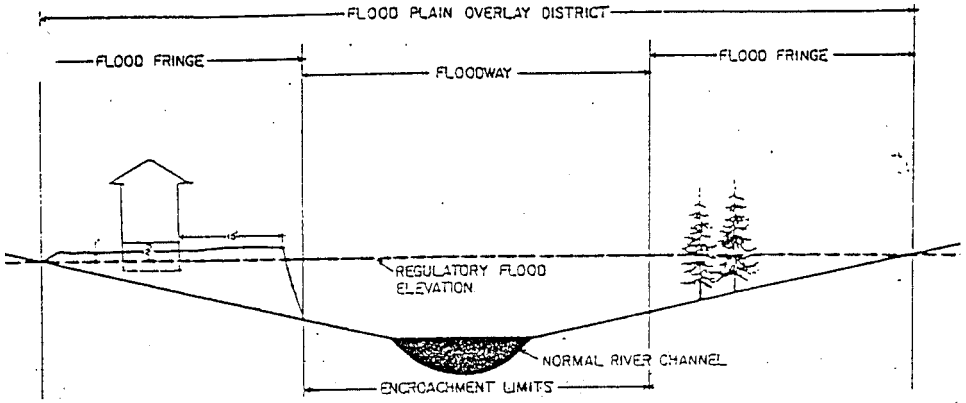
POLICY[2]: THE COUNTY SHALL PROHIBIT THE PLACEMENT OR CONSTRUCTION OF NEW BUILDINGS WITHIN THE FLOODWAY OF RIVERS, AND STREAMS, WITH THE EXCEPTION OF REPLACEMENT OF EXISTING DEVELOPMENT. ALL CONSTRUCTION FOR DEVELOPMENT IN THE 100-YEAR FLOODPLAIN OR FLOODWAY SHALL BE IN COMPLIANCE WITH THE STANDARDS OUTLINED IN THE LAND DEVELOPMENT ORDINANCE.

IMPLEMENTATION STRATEGIES:

A) Revise and amend the County Land Development Ordinance as necessary to assure compliance with the requirements of the Federal Flood Insurance Program. This will also involve updating the mapping of flood prone areas to reflect the most up-to-date information. The following diagram indicates the type of overlays which may be used in flood prone areas. Note the distinction between floodway and flood fringe areas (i.e., 100-year flood plain) as shown in the Federal Flood Insurance Program on the diagram below. Adopted elevation

[2]Board of Commissioner Order No. 247-02 signed July 17, 2002

profiles shall be the controlling factor in determining locations of the floodway and flood fringe. Approximate measures will be required to locate flood hazard boundaries when flood elevations are not available. The owner or developer will bear the burden of proof for showing that his/her property or proposed project is not within the regulatory floodway or flood fringe.



B) ;hould
uld be

C) Encourage the public purchase of extreme flood hazard areas for use as recreation areas and wildlife habitat.

D) Certain channel improvements may be needed to remove impediments to stream flow where flooding of adjacent lands or disastrous channel changes could be caused during floods. Such problem areas are documented for the Rogue River. Stream flow improvements involving any alteration of the waters of the state require a permit from the Division of State Lands prior to commencement of a project (ORS 541.605 to 541.695). All such channel improvement projects should be reviewed with regard to impact on fish and other wildlife habitats, as well as other environmental quality considerations addressed in Policy 1 of the Environmental Quality Element.

E) Conduct detailed public information efforts, and coordinate with other agencies, departments, and CACs to assure common knowledge of applicable regulations.

F) Require preliminary plans of subdivisions and partition maps to clearly show the flood hazard status of individual lots.

G) Require sellers of real property to provide potential buyers with a statement disclosing the flood hazard status of the subject property prior to the signing of an earnest money agreement, as being done by the Bear Creek Greenway.

STREAM EROSION AND DEPOSITION

3

FINDING:

Severe stream erosion and deposition occurs simultaneously with severe stream flooding. Much of the damage that occurred during the major County floods of 1964 and 1974 was, in part, the result of debris and rubble spill, clogged culverts, and channel movement. While some of this damage was probably unavoidable, much of the problem was induced by man-made causes such as undersized stream culverts, land clearing slash, stripped stream banks, and poorly engineered gravel extraction.

The Land Use Geology Study indicates that sediment and debris dislodged upstream is deposited further downstream, and will restrict stream flow creating new erosion problems. Many of the County's valuable natural resources have been impacted by erosion and deposition. The silting in or washing out of anadromous fish spawning beds, and the loss of agricultural soils, are prime examples of damage that occurred along the Rogue and Applegate Rivers in past floods. Small tributary streams are not exempt from erosion and deposition problems. Much of the damage to roads in the County happened as the result of flooding of the small and intermittent streams. Proper land management and the directing of compatible land uses along streams in the County can assist in minimizing future erosion and deposition problems (LUG, page 64).

The Department of Environmental Quality has prepared Oregon's Statewide Assessment of Nonpoint Source Problems, August 1978. Moderate and severe sedimentation and streambank erosion problems in the County, which were identified in the study, are displayed on the accompanying map.

POLICY: THE COUNTY SHALL MINIMIZE THE DAMAGING EFFECTS OF STREAM EROSION AND DEPOSITION THROUGH ENACTMENT OF APPROPRIATE ORDINANCES AND/OR COOPERATIVE EFFORTS WITH THEIR CONCERNED AGENCIES AND ORGANIZATIONS.

IMPLEMENTATION STRATEGIES:

A) The County, through the departments of Planning and Development and Roads and Parks, should work cooperatively with developers, the Oregon Department of Transportation, and other agencies, organizations, or individuals to ensure that torrential flood channels, road fill culverts, channel crossings, and other man-made obstructions are adequate to resist erosion and to minimize future hazards. Development that occurs adjacent to torrential flood channels should be set back at distances where future stream erosion is not likely to occur. Since torrential flood channels rarely have a floodplain, the uses noted above will need to be considered on an individual basis.

B) Land uses that occur adjacent to torrential flood channels should not cause the placement of debris and other refuse in such channels which may increase the potential for damage of downstream property and improvements. Debris and refuse may include such things as land clearing and logging slash, surface mine tailings, aggregate stockpiles, automobile bodies, and similar items.

C) Assure that aggregate removal applications are thoroughly reviewed and expeditiously processed by coordinating the permitting procedures of the County with the State Department of Geology and Mineral Industries, Fish and Wildlife, the Division of State Lands, and other appropriate agencies.

D) Aggregate operations adjacent to or within the floodplain streams need to be designed to protect the stream and the operation from floodwaters and erosion hazard. Mitigation standards may include, but are not limited to the following:

   i) The turbidity of the stream adjacent to the operations should not be increased by more than five Jackson Turbidity Units, or such clearer turbidity required by the Department of Environmental Quality;

   ii) There should be no direct discharge of gravel washing waters into an adjacent stream;

   iii) Operations should be conducted behind dikes which are of sufficient height to control turbidity during low water seasons. Where the dike forms a permanent river bank, the berm of the dike shall be of sufficient width and height to contain floodwaters;

iv) Equipment should not be operated in the flowing streams except to construct or maintain berms, or to make channel improvements, such improvements having been authorized by the County;

v) The river channel should not be diverted from its normal course unless a permanent river channel is developed in conformance with County environmental review procedures; and,

vi) Any necessary permit from the Department of State Lands, should be obtained.

E) Develop and adopt grading and erosion control ordinances utilizing the document entitled Jackson County Erosion and Sediment Control (1976) as a guideline.

F) Use the environmental review process described in Policy 1 of the Environmental Quality Element to assure effective control of streambank erosion and deposition.

G) Field guide to Oregon Forest Properties Rule should be applied to all forest lands receiving tax deferral, to deal with erosion hazards.

HIGH GROUNDWATER AND PONDING

4

FINDING:

The Land Use Geology Study states, "A water table situated high enough to have an adverse effect on selected human activities is termed high groundwater." The impacts of high groundwater and ponding hazard are identified as, "The flooding of basements, underpasses, and other subsurface facilities; flotation and damage to structures such as pipelines, tanks and swimming pools; differential settling of buildings; and, complications in installation of underground facilities." Other problems identified are "shrink-swell damage, liquification during earthquakes, and threats to water quality in areas of waste disposal." (LUG, page 58) The study indicated high groundwater and ponding hazard to be regional in scope in the County. The principal causes are heavy winter rain, groundwater flow and soil water flow, irrigation practices, stream flooding overflow in low-lying areas, and the surfacing of groundwater on flat terrain at the base of certain slopes. General areas with particular groundwater hazard problems are the Central Point-Jacksonville area of the Bear Creek Valley, northern Sams Valley, and the White City area (from ponding).

POLICY: COUNTY LAND USE ACTIONS SHALL BE BASED UPON A DETERMINATION OF ACCEPTABLE RISK TO HIGH GROUNDWATER AND PONDING HAZARDS.

IMPLEMENTATION STRATEGIES:

A) Identify and map general areas of high groundwater and ponding hazards, using the best information available.

B) Engineering investigations for large scale development projects should include an assessment of high groundwater and ponding hazard. Where major developments and structures, underground storage tanks and in-ground swimming pools are proposed in areas of high groundwater hazard, evidence of adequate engineering to mitigate the hazard should be submitted.

C) Effective treatment of the causes of groundwater and ponding hazard should address the problem at the specific site. Examples of mitigation measures may include such things as:

i) Providing and maintaining drainage systems;

ii) Draining level areas;

iii) Intercepting run-off;

iv) Properly draining artificial surface areas such as parking lots;

v) Elimination of surface water flow obstruction; and

vi) Placing structures on elevated fill.

D) Development which could be adversely affected by irrigation run-off should be prevented in or near agricultural areas. Engineering techniques for the proper handling of agricultural run-off will need to be employed as appropriate (reference: Water Quality section of the Environmental Quality Element in the Comprehensive Plan).

E) Support drainage projects needed to minimize ponding problems.

F) Require appropriate maintenance of drainage facilities to prevent the ponding of water in other areas.

SLOPE EROSION

5

FINDING:

The following finding is taken from Land Use Geology of Central Jackson County, Oregon:

> "Severe slope erosion removed valuable topsoil and may form guidelines, damage landscape, and hinder revegetation. When allowed to continue to extreme conditions, it may result in more rapid storm run-off. Soil material that is carried to streams may adversely impact stream ecology and cause greater flooding by raising the stream bed. Although increased turbidity is also an adverse impact of slope erosion, it is largely the result of mass movement and stream bank erosion." (LUG, page 57)

Areas of steep slope, erodible soils and poor ground cover are identified as areas of special slope erosion concern. The clay-rich soils in the east one-half of the County and steeply sloped

granodiontic terrain on the west side of the Bear Creek Valley are identified as areas of extreme concern.

POLICY: COUNTY LAND USE ACTIONS SHALL BE BASED UPON A DETERMINATION OF ACCEPTABLE RISK OF SLOPE EROSION HAZARDS.

IMPLEMENTATION STRATEGIES:

A) Identify and map areas of known slope erosion hazards.

B) Relate lot size and development intensities to slope erosion hazards. When land use actions are proposed to occur on soils known for their erosion potential, the services of staff soil scientists and other knowledgeable persons should be used to determine what types of mitigating measures will be necessary.

C) Develop and implement grading and erosion control regulations. Revise and amend the Land Development Ordinance to include consideration of the following general guidelines for development and land use actions.

   i) Roads in upland areas should be located on benches, ridge tops and gentle slopes, as opposed to steep hillsides and narrow canyon bottoms.

   ii) Vegetation removal and soil disturbances should be kept to necessary minimums on steep slopes and hillsides and, if possible, avoided during the winter months.

   iii) Provisions for handling surface water run-off should be established for all land use actions which will measurably increase run-off rates.

   iv) Techniques that minimize erosion, such as protective ground cover, shall be employed as needed.

D) Use the environmental review process described in Policy 1 of the Environmental Quality Element to assure effective control of slope erosion.

E) Cooperate with and encourage the use of services offered by the U.S. Department of Agriculture, Agricultural Stabilization and Conservation Service, the Jackson County Cooperative Extension Service, the Jackson County Soil and Water Conservation District, and the Oregon State Forestry Department.

MASS MOVEMENT

6

FINDING:

Mass movement has not, thus far, resulted in any loss of life or major damage to private property, primarily because little human settlement currently exists on lands with serious problems. Mass movement has been induced by disruption of the landscape on some forest lands with the damage limited to forest access roads. Excessive siltation due to mass movement is found in the Ashland Creek watershed, Neil Creek watershed, and Sturgis Fork Creek. The potential for mass movement is the greatest when soils are saturated, or when ground shaking, induced by seismic activity occurs. There are no feasible means of preventing mass movement where natural conditions cause its occurrence. Where the actions of man are likely to cause mass movement, such actions must be prevented. (LUG, page 50)

POLICY: IN AREAS OF KNOWN MASS MOVEMENT HAZARDS, DEVELOPMENT SHALL BE RESTRICTED TO THE EXTENT NECESSARY TO ASSURE THAT RISK DOES NOT EXCEED AN ACCEPTABLE LEVEL.

IMPLEMENTATION STRATEGIES:

A) Identify and map areas of known mass movement hazard.

B) Use the services of staff soil scientists and other knowledgeable persons to determine the level of risk of mass movement involved in various development and land use actions. Specific recommendations for mitigation of mass movement hazard to an acceptable level may be required. These may include, but are not limited to the following:

   i) Regulate activities such as road construction to prevent unacceptable risk of mass movement hazard;

   ii) Require a review procedure for major land development activities in known hazard areas;

   iii) Phase the removal of vegetation at large construction sites so a minimum of ground surface is exposed at any one time during construction;

   iv) Stockpile topsoil removed from construction sites for later replacement;

   v) Require review and approval of cuts and fills, and erosion/sedimentation control plans by staff soil scientists.

C) Notify all persons and agencies who are likely to take part in any activity which may induce mass movement of the identified locations of such hazards, and inform them of applicable regulations.

EXPANSIVE SOILS

7

FINDING:

Another hazard which threatens many of the works of man is that of expansive or "shrink-swell" soils. Such soil conditions are found in areas of Jackson County where development has occurred in the past, or is occurring (east Medford, for example). Posing little or no direct threat to human life, these soil conditions can do a great deal of harm to buildings and other structures. Expansive soils expand when wet, and contract when dry, not unlike a sponge. Examples of the force of this expansion and contraction can be seen where homes have been lifted from their foundations. One Medford man found that a leaky outdoor faucet caused a portion of his foundation to raise up as the soil expanded, while the remainder of the foundation stayed in place. Unfortunately, the mitigation of expansive soils defies standardized construction practices. Special engineering is needed for any substantial structure to be placed on expansive soils. Such engineering must be based upon the characteristics of the specific structure proposed.

POLICY: COUNTY LAND USE DECISIONS SHALL BE BASED UPON A DETERMINATION OF ACCEPTABLE RISK OF EXPANSIVE SOILS HAZARDS.

IMPLEMENTATION STRATEGIES:

A) Identify and map known areas of expansive soils hazards.

B) Require an engineering geology analysis which specifies mitigating measures, procedures, and techniques, prior to the approval of any subdivision plat or partition of expansive soils.

C) Issue no building permits for construction on expansive soils without evidence of adequate engineering.

D) Locate public facility structures in areas where the exposure to damage by expansive soils may be minimized, or take appropriate design and engineering steps necessary to ensure that the risk to such facilities is mitigated.

SEISMIC HAZARDS

8

FINDING:

When compared to areas in California, Jackson County's potential for seismic (earthquake) hazards is not great. Historically however, sufficient seismic activity has occurred to warrant concern. Seismic activity is related to the release of energy which occurs as large portions of the earth's surface or subsurface scrape along each other in lines known as faults. When these masses catch against each other rather than moving slowly by, they may store up tremendous amounts of energy which can be released when they break free. The result is shaking of the earth's surface: an earthquake. No "active" faults are known to exist within Jackson County. Although a number of relatively small faults are known, no historical record of seismic activity can be directly tied to faults within the County. The accompanying map identifies those known and suspected faults in the County. As shown on Table II, the most intense earth shaking in this area occurred as a result of the 1906 earthquake off the coast of northern California (itself an

aftermath of the devastating San Francisco earthquake). Thus, it is apparent that even though no active faults exist locally, the damaging effects of earthquakes centered some distance away may be felt in Jackson County.

It is important to note that earth shaking poses far greater risks to human and structural safety than does surface faulting (the opening of the earth's surface in gaping fissures as so graphically shown in Hollywood movies). In fact, there is virtually no threat of surface faulting in this area. Given the historical information which is available on local seismicity, two different forms of hazards relating to earth shaking can be seen:

1) Structural failures from lateral acceleration—the side to side movement of structures when earth shaking occurs; and,

2) Mass land movement triggered by earth shaking, and compounded by such things as unstable soil or geologic conditions, heavy rainfall, and poorly engineered cuts or fills.

What this means in terms of the County planning effort is that we are already moving in the direction of minimizing risks from seismic hazards, but more must be done as the population continues to grow (LUG, page 73).

POLICY: COUNTY LAND USE ACTIONS SHALL BE BASED UPON A DETERMINATION OF ACCEPTABLE RISK TO SEISMIC HAZARDS.

IMPLEMENTATION STRATEGIES:

A) Continue to support design and construction techniques outlined in the Uniform Building Code for structures which may be exposed to ground shaking.

B) Support continued geologic research, particularly relative to known or suspected faults, and areas of high potential for mass movement.

C) Relay any new geologic information which becomes available to the Army Corps of Engineers for a determination of effect, if any, upon existing or proposed dams or other facilities.

D) Use the implementation strategies outlined in the mass movement section of this Element.

E) Allow no construction of critical high occupancy structures in areas of known or suspected seismic faults. Critical structures include hospitals, schools, retirement homes, major apartment complexes, police and fire stations, and other similar types of public facilities.

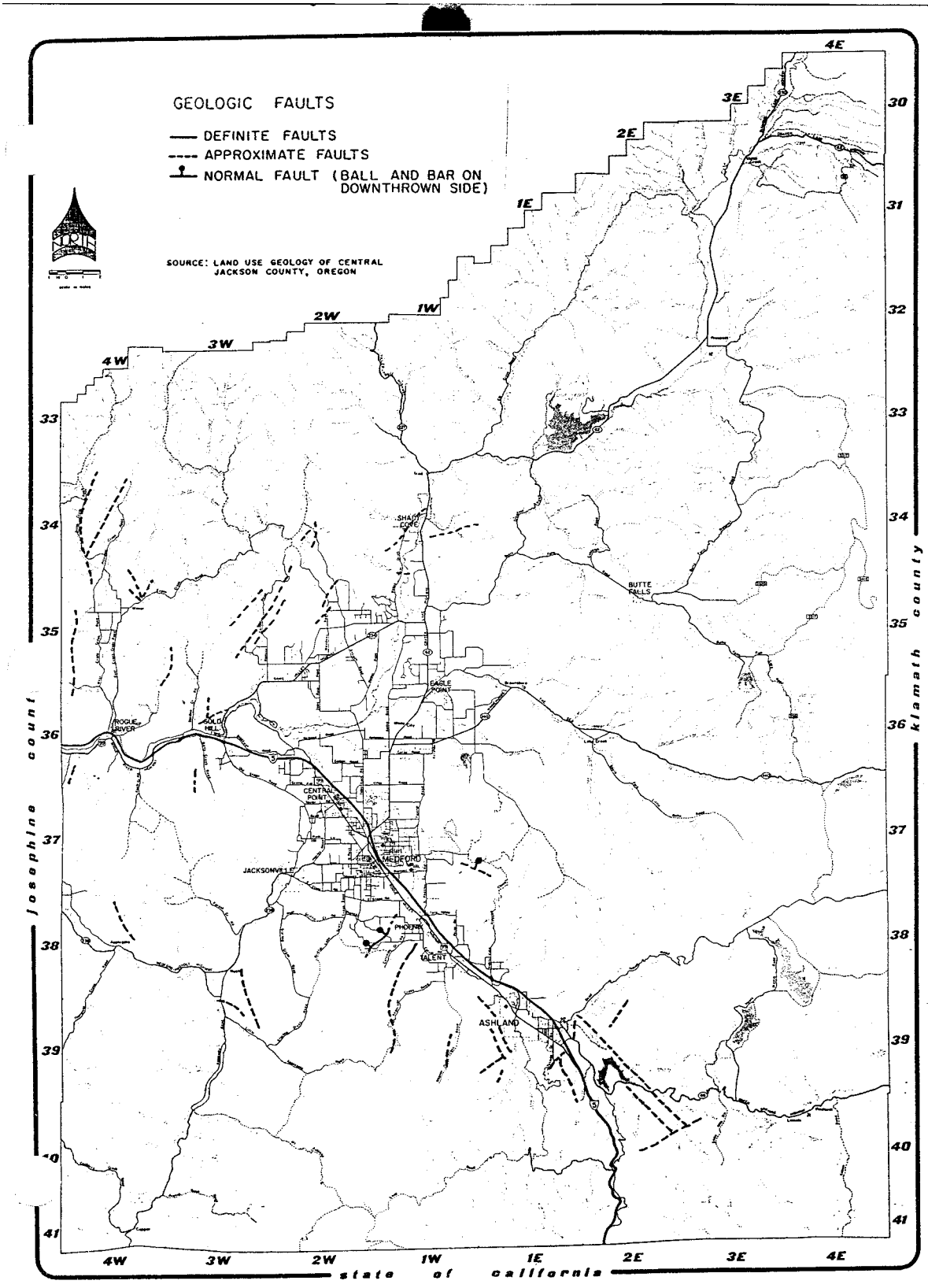

GEOLOGIC FAULTS
DEFINITE FAULTS
APPROXIMATE FAULTS
NORMAL FAULT (BALL AND BAR ON DOWNTHROWN SIDE)
SOURCE: LAND USE GEOLOGY OF CENTRAL JACKSON COUNTY, OREGON
4E
3E
2E
1E
1W
2W
3W
4W
30
31
32
33
34
35
36
37
38
39
40
41
josephine county
klamath county
state of california
SHADY COVE
BUTTE FALLS
EAGLE POINT
ROGUE RIVER
GOLD HILL
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND

TABLE I SCALE OF EARTHQUAKE INTENSITIES AND MAGNITUDES
TAKEN FROM **LAND USE GEOLOGY OF CENTRAL JACKSON COUNTY**
(ADOPTED FROM HOLMES (1965) AND U.S. GEOLOGICAL SURVEY (1974))

MERCALLI INTENSITY	DESCRIPTION OF EFFECTS	EQUIV. RICHTER MAGNITUDE
I	Not felt except by a very few under especially favorable circumstances.	
II	Felt only by a few persons at rest, especially on buildings' upper floors. Delicately suspended objects may swing.	3.5 to
III	Felt quite noticeably indoors, especially on buildings' upper floors, but many do not recognize as an earthquake. Standing cars may rock slightly. Vibration like passing of truck. Duration estimated.	4.2
IV	During the day felt indoors by many, outdoors by few, at night some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building; standing cars rock noticeably.	4.3 to
V	Felt by nearly everyone; many awakened. Some dishes, windows broken. A few instances of cracked plaster; unstable objects overturned. Some disturbance of trees, poles, and other tall objects noticed. Pendulum clocks may stop.	4.8
VI	Felt by all; many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.	4.9 - 5.4
VII	Everyone runs outdoors. Damage negligible in buildings of good design and construction, slight to moderate in well-built structures, considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars.	5.5 - 6.1
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving cars disturbed.	6.2 to
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.	6.9
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.	7.0 - 7.3
XI	Few if any (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.	7.4 - 8.1
XII	Damage total. Waves seen on ground surfaces. Lines of sight and level distorted. Objects thrown upward into the air.	Max. recorded 8.9

TABLE II Earthquakes felt in Jackson County, Oregon
Taken From **Land Use Geology of Central Jackson County**
Information from Couch and Baker (1958); Byerly (1952); Eppley (1965)

DATE	LOCATION	MERCALLI INTENSITY	COMMENTS
1873 November. 22	Off Northern California coast	-	Chimney damage at Jacksonville
1891 Nov. 9	Ashland	IV	A light shock
1906 Apr. 3	Ashland	IV	
1906 Apr. 13	Ashland	-	
1906 Apr. 23	Ferndale, California	VII (est.)	Felt with intensity VI at Grants Pass where furniture moved and windows cracked
1913 Mar. 15	Medford	III	
1931 Aug. 17	Talent	V	Lamp shaken from ceiling, man thrown from chair; felt at Phoenix and Ashland
1931 Sept. 4	Central Point	II	A slight tremor
1941 July 7	Medford	II	Felt by fire lookouts
1949 Apr. 3	Grants Pass	III	

HAZARD MITIGATION PLANNING AND DISCLOSURE

9

FINDING:

Not all natural or man-induced hazards can be adequately addressed as land use problems. For example, occurrences of extensive flooding, violent windstorms, earthquakes, hazardous waste spills, and other major emergencies are probably beyond the scope of traditional land use planning. In such instances, the County should have plans for preventing hazardous conditions from occurring, and for responding to, and minimizing the effects of, hazards or catastrophes when they do occur. While a County emergency operations plan and an air pollution emergency action plan have been prepared, funding for continuous disaster planning and civil preparedness activities has been sporadic. The County could be vulnerable to hazards and disasters that might be prevented or minimized. Where areas of known or potential man-induced or natural hazards have been identified, the risk should be disclosed to ensure that the public is aware of the type and degree of risk involved.

POLICY: THE COUNTY SHALL CONTINUE TO DEVELOP AND MAINTAIN PLANS TO DEAL WITH NATURAL AND MAN-INDUCED HAZARDS OR DISASTERS, AND SHALL TAKE STEPS TO MAKE THE PUBLIC AWARE OF THE MOST RECENT INFORMATION REGARDING THE TYPE AND LOCATION OF THESE HAZARDS.

IMPLEMENTATION STRATEGIES:

A) Retain an emergency preparedness staff to coordinate County contingency plans with other governmental agencies, and/or to develop County responses to such hazards or disasters as:

   i) Major flooding, violent windstorms, earthquakes, and other catastrophic natural events;

   ii) Civil emergencies including air pollution emergencies, oil embargoes, extended power failures, and the like; and,

   iii) Spillages or leakages of hazardous or toxic materials.

B) Apply for grants to support and expand the County's emergency preparedness planning and coordination functions.

C) Develop and implement ordinances requiring that sellers of real property provide a statement disclosing the type and degree of risk of known or potential natural hazards to buyers prior to the signing of an earnest money agreement.

D) Assemble, and make available to the public, information regarding the type and location of potential or known natural or man-induced hazards.

POPULATION

11-17-03: This element is not currently available on-line.

PUBLIC FACILITIES AND SERVICES[1]

GOAL: TO PLAN AND DEVELOP A TIMELY, ORDERLY, AND EFFICIENT ARRANGEMENT OF PUBLIC FACILITIES AND SERVICES TO SERVE AS A FRAMEWORK FOR URBAN AND RURAL DEVELOPMENT.

Planning for the timely provision of public facilities and services is a central issue of comprehensive planning. The location capacity and timing of new facilities will have a direct impact on patterns of land development. Jackson County has an important role to play in coordination of planning for the optimal use of public facilities and services. First, the County shares the responsibility for planning such facilities and services with the cities and special service districts. In addition, the County has a responsibility to avoid or postpone development of projects proposed at a scale that would exceed the capacity of existing facilities and services in a particular area. New and expanding facilities and services for the County's growing population need to be planned in a way that distributes costs equitably, with benefitted parties bearing costs consistent with the benefits to them. Public facilities and services to serve the following needs are considered in this Element:

A) Sewer and Sanitation

B) Water

C) Emergency Services Dispatch and Mutual Aid

D) Police Protection

E) Fire Protection

F) Health Care

G) Schools

H) Energy and Communications Transmission Systems

I) Solid Waste Management

J) Hazardous Waste Management

Changes in the availability of facilities and services are discussed in terms of direct comparison of the data already in this element at the time of review (most of which is dated 1978), and the most recent data available in November, 1994. Unless otherwise noted, dollar amounts have not been adjusted to account for inflation.

Parks and recreation are considered in the Recreation Element. Transportation facilities are considered in the Transportation Element. There is background information on solid waste management in the Environmental Element; solid waste and hazardous waste facilities and services are included here based upon 1994 information. The Energy Element considers

[1]*Adopted by Ordinance 95-31, amended by Ordinance 96-21, and Ordinance 2004-1 adopted on 1-12-04, effective 3-12-04 (File 2003-1-OA).*

aspects of energy needs and transmission other than the actual siting of linear transmission facilities; the inclusion of communications facilities in this section is new in 1994.

SUMMARY OF EXISTING FACILITIES AND SERVICES:

SEWER FACILITIES AND SERVICES:

About 40 percent of the population of Jackson County has its domestic sewer needs met by onsite septic systems. However, the soils, geology and topography of much of the County is not conducive to effective disposal through onsite subsurface treatment systems. For example, the area bounded by Jacksonville, Medford and Central Point has a shallow water table that may fill to the surface several times a year, a condition that can cause the failure of onsite septic systems and may move effluent rapidly through surface and groundwater. The Whetstone Creek area is characterized by shallow loam over clay loam soils, overlying an abrupt hardpan, so permeability is restricted and water quality may be impaired. In many areas in the County, particularly the southern part of the Bear Creek Valley, deep clay soils overlie sandstone. These "black sticky" soils shrink when dry and swell when wet, causing damage to drainfields and pipes, and limiting the soil's ability to absorb septic tank effluent. In urban areas, and unincorporated areas where on-site septic systems are not viable, sewage collection services are, in most cases, provided by either a city-operated system or by the Bear Creek Valley Sanitary Authority.

The Bear Creek Valley Sanitary Authority (BCVSA) was formed and its service district boundaries established by an election held in August, 1966. In December, 1966, the Jackson County Board of Commissioners approved a regional sewage collection and treatment system for the Bear Creek Valley lying north of the Ashland drainage area. In March 1969, an agreement was entered into between Jackson County, Medford, Central Point, Phoenix, and BCVSA prescribing responsibilities for construction, operation and maintenance of the regional system, including the sewage treatment plant and the Bear Creek Interceptor. Later that year, four bond issues were passed simultaneously that provided the necessary funding to construct the interceptor system. The 1969 agreement and several supplemental agreements have been superseded by an agreement entered into by the original participants and Jacksonville, which joined the system in 1979.

The Bear Creek Interceptor (BCI) is the regional collector of the Bear Creek Valley Waste Management System. The upper BCI starts in the Valley View Road area in Talent and terminates at the Vernon Thorp Regional Water Reclamation Facility north of Kirtland Road on the Rogue River. The pipe at the upstream end is twenty-four inches in diameter and increases in size to reach a diameter of sixty-six at the treatment plant. The lower BCI, Medford Section, starts at Table Rock Road west of the I-5 Freeway and southwest of the Rogue Valley-Medford Airport. It terminates at the Kirtland Pump Station on Kirtland Road. The pipe size at the upstream end is eighteen inches in diameter and increases to fifty-four inches at the pump station. The Central Point Section starts in southwest Central Point and ties in with the Medford Section of the lower BCI near the confluence of Griffin Creek with Bear Creek. The Central Point Section is thirty-six inches in diameter over its entire length.

The Kirtland pressure main starts at the Kirtland Pump Station and terminates at the upper BCI. The pressure main and a section of gravity pipe connect the lower BCI to the upper system. The pressure main is twenty-seven inches in diameter and it discharges to a forty-eight inch gravity-flow main at a point 1,559 feet west of the upper BCI. The upper BCI is 88,753 feet, or 16.81

miles in length. The lower BCI is 45,704 feet, or 8.66 miles in length. The Kirtland pressure main is 9,808 feet, or 1.86 miles in length. Total mileage of the interceptor system is 27.33 miles.

The BCI was designed to serve a projected population of 274,000 people in the service area, plus an equivalent population of 100,000 people for commercial and industrial flow capacity. The design capacity was based on the premise that it is not possible to increase sewer capacity without complete replacement of existing lines or construction of parallel lines. Because of the high cost of either such method of enlargement, the system is designed to carry the maximum flow that could occur during a system design life of 75 years. The BCI transports sewage wastes from the cities of Medford, Central Point, Phoenix, Talent and Jacksonville, as well as sewage from residences and commercial and industrial facilities within the BCVSA boundaries in unincorporated areas of the County to the Regional Water Reclamation Facility (RWRF) for treatment and disposal. The BCI is operated and maintained by the Bear Creek Valley Sanitary Authority, with the cities of Medford, Central Point, Jacksonville and Phoenix sharing operation and maintenance costs.

The RWRF was built in 1970 by the City of Medford as a regional facility to treat the sewage from the cities of Central Point, Jacksonville, Medford, Phoenix and Talent and unincorporated areas of the County served by BCVSA. Located on the south side of the Rogue River at the intersection of Kirtland Road and Antelope Road, the RWRF uses a coupled trickling filter - activated sludge process with disinfection to treat the water for discharge into the Rogue River. The sludge is anaerobically digested to reduce its volume and to generate methane gas for heat and power. The digested sludge is then further treated in lagoons and dried on sludge drying bed to produce a high quality product that is applied as an agricultural soil amendment.

Initially, the RWRF had a design capacity of ten million gallons per day (MGD) average dry weather flow (ADWF). In 1980 Medford had a staged expansion plan and contracting strategy to gradually expand the capacity of the facility to 20 MGD ADWF. In 1992 a Comprehensive Wastewater Facilities Plan was prepared that identified incremental capacity expansions and potential water quality upgrades needed to the year 2010 to serve a projected service area population of 122,000. This plan now serves as the basis for an ongoing long-range capital improvement program to meet capacity and water quality requirements. The plan includes an evaluation of wastewater reclamation for agricultural irrigation as a long-term effluent disposal option. The 1995 average daily flow to the plant is about 14.5 MGD. With plant capacity at 20 MGD, there is adequate reserve capacity to serve anticipated growth for the next fifteen years. The following list describes sewage collection and treatment systems currently in use, including the eleven cities in Jackson County:

Ashland: The city operates an activated sludge plant which discharges effluent into Bear Creek. The Ashland City Airport is served by holding tanks and septic systems, but, as of February 1994, connection to the city sewer is planned when funding is available.

Butte Falls: A activated sludge plant began operation in 1978.

Central Point: An original signatory of the March, 1969 BCVSA agreement. The city operates its own collection system and pays a share of the operation and maintenance costs of the regional system.

Eagle Point: A new aeration cell was added to the city lagoon system prior to the last comprehensive plan update, and DEQ allowed 370 new sewer hookups at that time. Plans to

upgrade the Eagle Point system and increase capacity are complete and funding is anticipated for construction of a pressure line from Eagle Point south to the regional treatment plant.

Gold Hill: The city operates an activated sludge plant that discharges effluent to the Rogue River.

Jacksonville: The city operates its own collection system and pays a share of the operation and maintenance costs of the regional system.

Medford: An original signatory of the March, 1969 agreement. The city makes annual contributions to assist in operation and maintenance of the regional system, and operates and maintains the Regional Treatment Plant.

Phoenix: An original signatory of the March, 1969 agreement. The city makes annual contributions to assist in operation and maintenance of the regional system.

Rogue River: The city built an activated sludge treatment plant in 1976. Effluent is discharged to the Rogue River. The system is operating at capacity, and a wastewater facilities plan, required by the Oregon Department of Environmental Quality, is in progress as of February, 1994.

Shady Cove: The city operates an activated sludge treatment plant and discharges effluent into the Rogue River.

Talent: Citizens of Talent voted in 1966 to become part of the Bear Creek Valley Sanitary Authority and the city is now served by the regional system.

Private Systems: There are at least eleven private sewage collection and treatment systems which serve small areas outside of incorporated cities. Shady Vista Mobile Park has a lagoon system, as does Callahan's Restaurant. Emigrant Lake Park has an aeration/activated sludge package plant; Willow Lake Park has an aeration pond package plant; and Howard Prairie Park has a plant utilizing mechanical aeration and a pond. Other private systems include those at Country View Mobile Home Estates in Shady Cove, Frontier Mobile Park off of Highway 99 near the Josephine County line, Applegate Christian Fellowship in Ruch, Cypress Grove RV Park in Gold Hill, Stewart State Park near Lost Creek Lake, and Valley of the Rogue State Park near Gold Hill. The Sycamore properties near Gold Hill are served by a large septic system that is maintained by BCVSA by contract.

White City: The White City Sanitary District (WCSD) is a part of BCVSA. The BCVSA operates and maintains sewers within the White City area, except for the Veterans Administration Domiciliary. The WCSD was connected to the regional treatment plant in 1986. Due to past sewage transmission problems, the lagoons are used to handle major storm flows. A more complete description of the WCSD is contained in the BCVSA Comprehensive Plan.

Trucked Septage: Although not designed to process septic tank wastes, the regional facility can accept and treat up to 2,500,000 gallons per year of trucked septage from domestic systems. It is the intention of facility management to discontinue accepting septic system wastes when an alternative treatment system is developed.

WATER SERVICE:

Potable water service in unincorporated areas of the County is provided by individual sources such as springs and wells, except in the Medford area where several special water service districts purchase and distribute water from the Medford Water Commission. The County's incorporated cities provide water service from independent water supplies or with water purchased from the Water Commission. In addition to the potable/domestic water suppliers, there are nine irrigation districts in the County. Sources of supply for the Medford regional system are Big Butte Springs, with a capacity of 26.4 million gallons per day; and the Rogue River, with a treatment capacity of 30 million gallons a day and permits for up to 65 million gallons per day. In addition, the Medford Water Commission has made application for 40 million gallons per day from Lost Creek Reservoir. If completely utilized, the resource capacity would be 131.4 million gallons per day. In addition the water system holds a 1925 priority date right to all unappropriated waters in Big Butte Creek.

There are two Big Butte Springs transmission lines which serve as the principal delivery system from the Big Butte Springs source. These lines follow different routes and terminate at the Capital Hill reservoirs on Medford's east side. The Rogue transmission mains, the Table Rock Road main and a second main along Antelope Road and Crater Lake Highway, transport water from the Duff Treatment Plant to the city.

The three Capital Hill Reservoirs are the primary distribution storage reservoirs, with a combined capacity of 12.2 million gallons. The Bullis reservoir is filled by gravity flow through the system. Seven smaller reservoirs provide storage for pressure levels above the gravity system. In addition to the Water Commission reservoirs, the City of Central Point has a 1.0 million gallon storage reservoir that can be pumped if needed and a new 2.0 million gallon, gravity flow reservoir; Jacksonville has two gravity reservoirs totaling 1.2 million gallons of capacity; Eagle Point has two gravity reservoirs totaling .54 million gallons; and Phoenix has four reservoirs totaling 2.0 million gallons.

The Water Commission distribution system serves several different pressure zones. The two main zones are the gravity flow area that includes most of the City of Medford, and areas southwest of the city and the low level that supplies North Medford, Central Point and the White City area. Interchange of water between the two zones is through the Conrad, Rossanley and Martin Pressure Control Stations, all of which have both pressure reduction valves and pumps. There are seven pressure levels above the gravity system through which water can be pumped up to 2250 elevation within the city. Each pressure zone above the gravity level is served by one pump, except the Pierce Heights system that has two pumping stations. Each pressure level also has a reservoir, except Cloudcrest which has a pneumatic tank and Charlotte Ann Water District which is run off of a continuously operating, variable speed pump. In early summer of 1995, the Cloudcrest facility will be replaced by the new Stardust facility that will be run off of a continuously operating, variable speed pump. The incorporated cities of Jackson County obtain water from the following sources:

Ashland: Ashland Creek and Talent Irrigation District (TID).

Butte Falls: Ginger Creek.

Central Point: Medford Water Commission.

Eagle Point: Medford Water Commission. The pressure level in the system is controlled by the overflow elevation of the city's reservoirs.

Gold Hill: The Rogue River.
Jacksonville: Medford Water Commission. The city has pumping facilities to serve pressure zones at higher elevations.

Medford: Medford Water Commission (Big Butte Springs, Rogue River).

Phoenix: Medford Water Commission.

Rogue River: City-owned wells.

Shady Cove: No public system, individual wells.

Talent: Wagner Creek, Bear Creek and Talent Irrigation District.

In addition to the municipal water systems listed above, Jackson County Road and Parks Services operates 15 public water supplies and a number of wells that serve mainly parks and public recreation facilities around the County. Most of the systems were built in the 1960's and 1970's, and vary in size and type. Emigrant Lake has a Level II treatment plant and 40,000 gallons storage capacity. Howard Prairie Resort uses a spring that is classified as groundwater, with 12,000 gallons of storage. Some of the wells do not have EPA numbers registered with the State Health Division. These unregistered wells are used for non-potable or non-public uses. There are 260 other small public water systems serving uses such as mobile home parks, subdivisions, motels, restaurants, and schools throughout the County. Most of these systems are supplied by individual wells. County Health and Human Services provides oversight, sanitary surveys and technical support for these systems which serve primarily transient users. Monitoring for various contaminants is conducted regularly.

EMERGENCY SERVICES DISPATCH:

Dispatch of emergency service is handled through three 911 services in the County. City of Medford 911 receives all 911 calls from phones with Medford phone numbers. Medford 911 dispatches police calls inside the city limits and dispatches fire calls throughout the Medford City and Rural Fire Districts. Police calls that come into Medford 911 from outside the city limits are transferred to SORC, Jackson County 911, which dispatches calls to 26 agencies including the County Sheriff, rural fire districts, and emergency medical services. The City of Ashland also has a 911 dispatch center for emergency services within their city limits. In some cases, 911 does not dispatch emergency vehicles directly. Central Point and the Oregon State Police are such “secondary” dispatchers.

Statewide 911 services were mandated by the 1981 legislature, but by that time Jackson County already had 911 services, implemented in the late 1970's. Later state legislation calls for statewide implementation of directed “enhanced” 911 (E-911) by January 1, 2000. That service will provide an immediate display of the 911 caller’s address and phone number to the dispatcher for a quicker, more accurate response. The Jackson County 911 service providers do not yet have E-911 on line. Funded by part of a 5% 911 tax that is currently assessed on all phone bills, E-911 will be implemented statewide one county at a time, and is anticipated in Jackson County in 1996.

MUTUAL AID BETWEEN EMERGENCY SERVICES PROVIDERS:

All emergency service providers including fire districts, police departments, ambulance services and health care providers, enter into mutual aid or similar cooperative agreements with other districts or providers. These agreements allow cooperation between providers in the case of large scale disasters, when a specialized service is needed that is not available from the primary provider, or at any time when one provider is too busy to serve all of its district's needs. Examples include mutual aid agreements between fire districts, the use of special task forces for high level crime investigations, or agreements between health care providers for the shared use of specialized equipment. Consequently, it is accurate to describe the system of emergency and health care services as a network of providers.

Under the Jackson County Code concerning Ambulance Service Areas (ASAs), all ambulance service providers in the County are required to maintain mutual aid agreements with all adjacent ASA providers. In addition, each ASA has mutual aid agreements with adjacent fire protection districts that have patient transport-capable vehicles and emergency medical equipment and staff.

On July 14, 1993, Jackson County adopted an Emergency Operations Plan (EOP) for Emergency/Disaster situations. The situations considered in the plan include accidents involving hazardous materials, major transportation accidents, levee or dam failure, flooding, major fire and earthquake. In any of the listed situations, coordination of many jurisdictions and emergency service providers could be required on short notice. The EOP provides 1) a strategy for mitigating situations that might increase the impacts of a major emergency or disaster; 2) preparedness of citizens and agencies to deal with a disaster; 3) a response plan, and 4) plans for recovery. The plan also delineates a hierarchy of responsibility for handling the logistics of disaster relief and for paying for response and recovery.

POLICE PROTECTION:

Incorporated cities in Jackson County provide their own municipal police protection. The County Sheriff's Department provides law enforcement in unincorporated areas. Other services provided by the Sheriff's Department include operation of the County Jail, a civil process service, search & rescue teams, drug awareness resistance education (DARE), community policing in outlying areas, traffic safety programs, water safety programs including the marine patrol, and participation on interagency task forces such as JACNET (the Jackson County Narcotics Enforcement Team) and the major assault/homicide team. The Sheriff's Department was staffed 13- personnel in 1978 and has 129 positions authorized in 1994. The department had 50 support vehicles in 1978, and that number has also remained about the same. The annual budget in 1978 was 2.88 million, and in 1994 is $8.8 million.

The Oregon State Police supplement the Sheriff's Department and municipal enforcement agencies. Within Jackson County, state troopers are assigned to traffic, fish and game law enforcement, criminal cases, arson, and training. The State Police operate a local crime laboratory and polygraph equipment, but have no contractual agreements with local law enforcement agencies.

FIRE PROTECTION:

Unincorporated areas in the County are served by eight rural fire protection districts responding to calls within their jurisdictional boundaries and outside of incorporated cities that have municipal fire departments. In addition to unincorporated areas, the cities of Shady Cove, Rogue River and portions of Medford and Phoenix also rely upon rural fire districts for protection. Other incorporated cities rely upon their own municipal fire departments, often supplemented by mutual aid agreements with other cities and rural fire district. Timber lands are protected by both the U.S. Forest Service and Oregon State Department of Forestry. These two agencies will not respond to a structural fire unless it appears that there is an impending threat to forest lands.

HEALTH CARE:

A network of professional services and facilities throughout the County provides health care services to County residents. Although this plan only applies to Jackson County, it is understood that health care providers in Grants Pass serve many of the people living in western Jackson County. In 1979 there were four hospitals in the County with a total of 488 beds: Providence Hospital in Medford with 138 beds available; Crater General Hospital in Central Point with 28 beds; Rogue Valley Memorial Hospital in Medford with 264 beds; and Ashland Community Hospital in Ashland with 58 beds. As of February 1994, hospital service capacity in Jackson County can be summarized as follows:

Providence Hospital and Medical Center has increased to 168 beds (plus 21.7%), has plans for a new maternity wing and medical office building and may also add an 18 bed skilled nursing unit if a need for the facility can be certified. Providence provides comprehensive rehabilitation services and home health services in addition to general hospital services.

Crater General Hospital is being converted into Rogue Valley Serenity Lane, an alcohol and substance abuse treatment center.

Rogue Valley Medical Center has increased to 305 beds (plus 15.5%) and the facility operated at approximately 45% of capacity in 1993. Their facilities include the Serenity Lane facility, several medical clinics, a nursing home, home care services and hospice care. The hospital has vacant property near the existing facility available for future expansion.

Ashland Community Hospital has “de-licensed” 9 beds for a current 48 beds (an 18.6% reduction) and the hospital operated at approximately 45% of capacity in 1993. In addition to general hospital services, Ashland Community Hospital operates a radiology laboratory and home health care. The hospital has plans to expand its emergency and surgical services departments.

In addition to the community hospitals, the Veterans Affairs Domiciliary (VA Dom) in White City provides a variety of medical services for veterans. The facility provides 918 beds for residential and outpatient care including physical and vocational rehabilitation, addition therapy, geriatrics, psychiatry and general medicine. As of November, 1994, the facility has plans for expansion of the outpatient clinic and construction of a new infirmary.

In 1979 there were six licensed nursing homes located in the central corridor of the County, with a total licensed capacity of 549. Josephine County had four nursing homes, with a total licensed capacity of 336. According to Rogue Valley Council of Governments, Senior and Disabled Services, in 1991 there were seven facilities with 664 beds in Jackson County, and five facilities in Josephine County with 501 beds. That is a 21% increase of available beds in Jackson County and a 32% increase in capacity for the two county area for the twelve year period. Services

provided by nursing homes range from simple maintenance or supervisory care to intensive nursing or rehabilitative care.

In 1977, Jackson County had 215 physicians and an estimated population of 118,500 for a ratio of one physician to 551 persons. In 1978 there were 1,348 health service professionals, including 83 dentists; 774 registered nurses; 306 licensed practical nurses; and 8 psychologists. In May 1994, the Medford/Jackson County Chamber of Commerce reported that the number of physicians had increased to 315.

In 1978 Jackson County had available 16 state certified ambulances, 11 adequately equipped fire department rescue units, and 186 trained emergency medical technicians, when city, County, private and volunteer personnel were considered. In 1995 there are 22 ambulances and 15 fire department rescue units that are equipped to transport patients. There are as many as 289 certified Emergency Medical Technicians (EMTs) reported in the County, but many EMTs work or volunteer for more than one organization, so that number may be high due to duplication.

SCHOOLS:

In school year 1977-78, ten school districts in Jackson County served approximately 24,000 students in three primary schools, 35 elementary schools, seven junior high schools, two mid-high schools, and eight senior high schools. In the 1992-93 school year the total number of students enrolled was 25,605 up 6.6%, based upon Average Daily Membership (ADMr) figures from the state Department of Education. During the 1977-78 school year, the ten districts had a total general fund expenditure of $41,062,838. General fund expenditures for public schools in the County in 1992-93 were $121,950,892. Table 1, below, shows general fund expenditures for school districts in Jackson County and the change in school populations and expenditures from 1978-79 to 1992-93. In response to requests for comments in February 1994, several school districts supplied the following information on the condition of their facilities and proposed improvements:

Phoenix-Talent District #4, with a 21% increase in student population since 1978, stated that their facilities are not yet operating at full capacity, but are expected to be full in 1997. The district is considering some facilities expansion at this time.

Ashland District #5, with a 17% increase in student population, has all facilities at or near capacity, but does not currently have any plans for facility expansion. The district is working with a demographer to project student population changes and to plan for facility expansion accordingly.

Central Point district #6, with a 9% decrease in student population since 1978, is not yet at capacity, but expects to be full in one to five years.

Eagle Point District #9, with a 26% increase in student population, is operating at full capacity. In 1995, the district, which also serves the Shady Cove and Trail areas, is studying the idea of development of a new Middle School. The district has recently expanded services by getting involved with the High Tech Learning Center at the VA Domiciliary.
Rogue River District #35, notwithstanding a 12% decrease in student population, is operating at full capacity, but does not currently have plans for expansion.

Applegate District #40, in spite of a 40% increase in students, does not anticipate operating at full capacity until the year 2000. The district has plans for facility expansion.

Prospect District #59, with a 36% decrease in student population, is not operating at capacity, and does not have expansion plans.

Butte Falls District #91, with a 6% decrease in student population, is not operating at capacity, and does not have expansion plans.

Pinehurst District #94, which has grown by 147%, is operating at full capacity, but does not currently have plans for expansion.

Medford District #549C, with a 5% population increase over the study period, is operating at full capacity, but does not currently have plans for expansion.

TABLE 1 [1]

SCHOOL DISTRICT	NUMBER OF STUDENTS (ADMR) [2]	TOTAL GENERAL FUND EXPENDITURES	PER STUDENT EXPENDITURES	NET TRANSPORTATION COST	PER STUDENT TRANSPORTATION COST
#4 Phoenix					
1978-79	1,977	3,485,927	1,763	185,838	94
1992-93	2,391	11,215,013	2,391	442,128	185
% change	21%	222%	35%	138%	97%
#5 Ashland					
1978-79	2,870	5,568,215	1,940	117,670	41
1992-93	3,363	17,122,117	5,091	460,337	137
% change	17%	207%	162%	291%	234%
#6 Central Point					
1978-79	4,401	7,060,914	1,604	356,481	81
1992-93	4,011	17,978,069	4,482	838,946	209
% change	-09%	155%	179%	135%	158%
#9 Eagle Point					
1978-79	2,922	4,993,717	1,709	353,562	121
1992-93	3,675	16,396,500	4,461	782,628	213
% change	26%	228%	161%	121%	76%
#35 Rogue River					
1978-79	1,371	2,354,814	1,717	165,891	121
1992-93	1,212	5,405,373	4,461	319,536	264
% change	-12%	130%	160%	93%	118%
#40 Applegate					
1978-79	143	318,131	2,229	26,884	188
1992-93	202	959,051	4,745	67,067	332
% change	40%	210%	113%	149%	77%
#59 Prospect					
1978-79	232	598,103	2,577	16,704	72
1992-93	170	1,120,679	6,600	67,896	399
% change	-36%	87%	156%	306%	455%
#91 Butte Falls					
1978-79	251	564,405	2,246	11,546	46
1992-93	236	1,358,464	5,751	70,468	299
% change	-06%	141%	156%	510%	549%
#94 Pinehurst					
1978-79	17	86,046	5,062	N/A	N/A
1992-93	42	304,557	7,217	N/A	N/A
% change	147%	254%	43%		
#549C Medford					
1978-79	9,792	16,032,566	1,637	548,352	56
1992-93	10,302	50,091,069	4,862	1,581,385	153
% change	05%	212%	197%	188%	174%

[1] 1978 Figures included in this Elements are compared to 1992-93 figures provided by the Oregon Department of Education. All units are whole dollars, except in the Student Population column, or where expressed as a percentage.

[2] ADMr = Average Daily Membership, the Department of Education measurement of student population

In addition to the public schools, there are several private schools in the County. There are seven private elementary schools; two in Ashland and five in Medford. There are also three private secondary schools, one each in Ashland, Medford and Jacksonville.

Rogue Community College (RCC) in Grants Pass (Josephine County) is the nearest community college to serve Jackson County residents. Jackson County is not technically in the RCC service district, but services are still available to County residents. Rogue Community College, Jackson County is an off-campus services division of RCC located in Phoenix. The Jackson County facility offers extension courses and customized training programs for business, agencies and industry.

Southern Oregon State College (SOSC) in Ashland offers three associate degree programs, 33 bachelor's degrees in 60 academic concentrations, and five masters degrees, including a Masters of Business Administration. The college serves about 5,000 full-time, degree program students and as many as 4,000 additional students enrolled in extension and continuing education courses. The campus covers 175 acres and includes 16 academic buildings, 15 residence halls and other multi-use facilities. Southern Oregon State College also operates a Medford campus that offers both academic and non-credit classes.

ENERGY AND COMMUNICATIONS TRANSMISSION SYSTEMS:

This type of public facility has traditionally included telephone, electrical and gas transmission lines. These utilities have established transmission corridors, and have developed local delivery systems incrementally, as needed. Local phone and electrical services are delivered over systems started in the 1890's and early 1900's that have been added to and upgraded many times.

Gas service came later, with a local company delivering manufactured gas starting in the 1920's. Natural gas was not available until the late 1950's when a pipeline was constructed along the west side of the Cascades from British Columbia. Later, the regional system was tied in to a larger natural gas resource base by way of a facility in Stanfield, Oregon that adds natural gas from a U.S. company, Rocky Mountain Gas, and natural gas from Alberta, Canada to the supply from British Columbia. As of November 1994, about half of the natural gas used in Jackson County is from the U.S. and half is from Canada. The utility that operates the existing pipeline system is the Northwest Pipeline Corporation.

In 1994, a second natural gas provider, Pacific Gas Transmission (PGT), is developing a new corridor for a regional gas transmission pipeline from a major gas pipeline east of the Cascades. The regional pipeline will come over the mountains to the Bear Creek Valley by way of the Dead Indian Memorial Road area. The proposed facility is part of a larger, interstate transmission system authorized under the Federal Energy Regulatory Commission (FERC) that will move natural gas from Alberta, Canada to several western states.

Changes in communications technology have added new types of non-linear transmission systems such as microwave and cellular communications relay stations. In the near future, though not yet developed in Southwest Oregon, a hybrid communications system comprising short-range relay stations arrayed along a transmission corridor, may be added to the mix of energy and communications transmission systems.

The Land Development Ordinance provides a procedure for review of proposed transmission facilities, particularly linear facilities, that will be located in more than one zoning district. Any

such new facility must either use an existing transmission corridor or meet the standards in the Ordinance. The exception to this requirement is federally authorized projects for linear transmission facilities. Federally authorized facilities are not subject to the Land Development Ordinance standards, but substations, pressure regulating stations and other site-specific facilities developed in conjunction with such systems may require review, depending upon the proposed use and the zoning designation of the subject property.

SOLID WASTE MANAGEMENT:

In the original and 1982 amended Jackson County Comprehensive Plans, Solid Waste was treated as an "environmental quality" rather than as a "facilities and services" issue. Considerable background on solid waste management practice and policies of that period is included in the Environmental Quality Element of this Plan. In the ensuing decade, solid waste management has been subject to intensive study and revision, and regulations for waste management practices have changed dramatically. Regulations to protect groundwater and otherwise reduce the negative environmental impacts of landfills and other disposal methods have increased the costs of dumping wastes. Market influences that include the increased costs of transporting and dumping waste materials, and increasing limitations on the availability of natural resources have increased the cost-effectiveness of reducing packaging, for instance, and recovering re-usable materials from the waste stream. These changes in regulation and economic factors have resulted in the development of a variety of recycling and resource recovery facilities and recovered materials transportation services that were just beginning to be developed in 1982 in most areas.

The U.S. Resource Conservation and Recovery Act of 1976 (RCRA) was amended in 1991 to include "Subtitle D". Subtitle D implements the direction of the U.S. Congress to the Environmental Protection Agency (EPA) that the agency ensure that "no reasonable probability of adverse impacts on health or the environment" will result from solid waste disposal facilities or practices. Subtitle D prescribes minimum national performance standards for landfill facilities. The performance standards are intended to prevent toxic and pathogenic materials from moving out of landfill areas into groundwater or into other areas where health or environmental impacts may occur. Landfills that cannot be constructed or modified to meet Subtitle D standards must be phased out according to a schedule based upon the climate, geology, hydrology and demographic features of the watershed. Landfills that are subject to closure are also subject to treatment and monitoring to mitigate potential adverse impacts on health and the environment.

In January, 1994, the Oregon Department of Environmental Quality adopted an Integrated Resource and Solid Waste Management Plan for the years 1995 to 2005. That plan establishes objectives for education, materials conservation intended to result in waste prevention, material recovery, residual disposal and system management. The system management objectives include encouraging local decision making processes by helping to facilitate sound local planning, encouraging efficient transportation of recoverable materials and residual waste, assuring convenience in services for minimizing residual waste, and identifying and developing a system to deal with special and problem wastes to minimize adverse impacts on health and the environment. The background document for the plan further implements Subtitle D by describing the applicable performance standards of the landfills in Western and Eastern Oregon. In April of 1994, Jackson County, in cooperation with Josephine County, adopted a Solid Waste Management Plan. The plan discusses current facility capacity and projects the availability of landfill capacity over time based upon historic trends in solid waste disposal. The trend data used for the study was provided by the Portland State University Center for Population Research and Census, based upon census data and Oregon Department of Environmental Quality waste

disposal data. Historic trends indicate a 1 to 2 percent annual increase in the amount of material disposed of in landfills in Southern Oregon. This is a conservative estimate considering the increasing influence of waste reduction, recovery and recycling.

The adopted solid waste plan describes the history of local waste management and the existing waste management facilities and services in the two-county area. It establishes policy for waste reduction, transfer and disposal of recoverable and residual materials, handling of "special" wastes which include potentially hazardous wastes that can be managed locally, and implementation strategies for managing wastes, including implementation of Subtitle D. Five of six landfills in the Jackson/Josephine County region will close in or before 2002. Post-closure treatment requires impermeable covers, surface water diversion systems, leachate and landfill gas collection and treatment systems, and monitoring wells to test and monitor groundwater near the site. Funding for closure and post-closure responsibilities required by Subtitle D will be a significant, ongoing issue in solid waste management in the region.

Jackson County Landfills:

Dry Creek Landfill: Owned and operated by Dry Creek Landfill, Inc., Dry Creek Landfill is on a 560 acre site north of Medford. It receives wastes from Rogue Disposal and Recycling, Inc., and Southern Oregon Sanitation in Jackson and Josephine Counties. The site includes a recycling depot. Based upon the population and waste disposal trend data considered in the 1994 Jackson and Josephine County Solid Waste Management Plan, the Dry Creek site is estimated to have at least 50 years of capacity remaining. A new lined cell will be developed and under operation by 1999. DEQ will require closure plans for the old cell to be submitted with any expansion plans.

South Stage Landfill: Owned and operated by South Stage Landfill, Inc., South Stage Landfill is one half mile southwest of Jacksonville. This site receives a majority of the waste collected by Rogue Disposal, Southern Oregon Sanitation and from self-haulers. The site also includes a recycling depot. Subject to DEQ approval, the site is expected to close around the end of 1998, at a cost approaching $12 million.

Ashland Landfill: Operated by Ashland Sanitary Service Company, Inc., Ashland Landfill is located about 2 miles northeast of I-5 on Valley View Road. The facility receives wastes from Ashland and Talent. The landfill is closed to the public, but a transfer station was established on the site in December 1992 for self-haul waste disposal. The Ashland Landfill site includes a recycling depot. Expected closure date for the landfill is 2002-2003. The proposed closure date would provide time to collect the anticipated closure costs of $8-$9 million. A trust fund to finance closure is being generated by a $27.21 per ton fee, which is approximately half of the total $52.00 per ton fee on dumping (1992 numbers). It is possible that earlier closure will be necessary, in which case closure costs might need to be collected through other means. Ashland has a second recycling depot inside the city, operated by Ashland Sanitary and Recycling Services.

Prospect Landfill: Prospect Landfill is a small community landfill that Jackson County Public Works Department operated on U.S. Forest Service land about one mile north of Prospect. The landfill closed in April 1994 because of the difficulties of complying with Subtitle D, but negotiations are under way to establish a waste transfer station at the site.

Josephine County Landfills: The status of Josephine County's landfills has an impact on solid waste facility planning in Jackson County because closure of these landfills increases the pressure on landfill capacity in Jackson County:

Merlin Landfill: Privately operated by the Tri-Co Corp. On Bureau of Land Management Land, the facility serves most of Josephine County. The facility includes a recycling depot at the landfill and additional recycling facilities at the storage yards of both Grants Pass Sanitation and Southern Oregon Sanitation. The estimated closure date for the Merlin Landfill is 2000, at which time the facility's lease between the City of Grants Pass and BLM ends. The current tipping (dumping) fee includes funds to pay for facility closure. It is possible that DEQ will require early closure of the facility in view of groundwater contamination. The actual closure date will be determined by DEQ action on remediation, operation and closure plans.

Kerby Landfill: Operated by Josephine County, Kerby Landfill was closed in early 1994, but a transfer station and recycling depot continue to operate. The facility may re-open if Subtitle D standards can be met.

Alternatives to Landfill Disposal: Tipping fees vary widely at the area's landfills. Those scheduled for early closure have higher tipping fees to fund closure and post-closure management requirements. Closure of landfills also increases the cost of transportation of wastes. The resulting higher cost to business is one of several market incentives for the development of industries that make use of materials that might otherwise be disposed of in landfills. The following are examples of businesses that have developed in Jackson County to exploit the availability of recyclable or reusable materials:

ABC Recycling Center is a privately owned brokerage service to haulers and facility operators. The facility is located in White City.

Southern Oregon Recycling is a privately owned buy-back center for metals and newsprint, located in Medford.

Sessler Recycling is a privately owned, non-ferrous metal recycler located in White City.

Biomass One is a privately owned business that recycles wood and other organic wastes. Biomass One has an energy recovery generator and produces soil amendments from the energy recovery residue. The facility, located in White City, accepts organic waste from individuals and businesses.

Recycle Solutions, Inc. Is a privately owned processing center in Medford that prepares recyclable materials for market.

In summary, Jackson County has adequate solid waste disposal facility capacity for at least the next 50 years at the Dry Creek Landfill site. This is a conservative estimate of the actual capacity of Dry Creek because of the increasing effectiveness of waste reduction programs such as manufacturing and marketing changes that reduce packaging, business and domestic separation of wastes and recycling, and new industries and markets based on the recovery of materials that would formerly have been landfilled. In addition, technological changes are expected to further extend landfill capacity at the Dry Creek facility.

HAZARDOUS WASTE MANAGEMENT:

Like solid waste, in the original and 1982 amended Jackson County Comprehensive Plan, "Hazardous Waste" was treated as an "environmental quality" rather than as a "facilities and services" issue. Background on hazardous waste issues and the management practices and policies in place at that time are included in the "Hazardous Waste" section of the Environmental Quality Element of this Plan. That section includes discussion of common sources of hazardous waste as well as potential health and environmental impacts. This section includes the background information in the Environmental Element by reference, and will consider the conditions that exist at the time of the 1995 revisions.

According to a 1992 Oregon DEQ study of the composition of municipal solid waste in the State, less than 1% is hazardous materials. That one percent includes household hazardous wastes, "special wastes", medical wastes, and regulated hazardous wastes. Most hazardous waste generated by business and industry is not included in the municipal waste stream, and generally falls into the category of regulated hazardous waste, discussed below.

By definition, all hazardous wastes are solid wastes, but not all solid wastes are hazardous. RCRA defines hazardous waste as a solid waste (including liquids and gases) that may 1) cause or significantly contribute to an increase in mortality or in serious illness; or 2) pose a substantial hazard to human health or the environment when improperly managed. A particular waste is hazardous by definition if it is specifically named as a hazardous waste in state or federal law, or if it exhibits any of four hazardous waste characteristics, as defined in the Environmental Quality element: 1) ignitability, 2) corrosivity, 3) reactivity, or 4) toxicity. Mixtures of a solid waste with a listed hazardous waste are also considered hazardous wastes.

Household Hazardous Wastes are discarded, useless or unwanted materials that are commonly used in and around households that may be hazardous to people or to the environment. Household hazardous wastes include but are not limited to solvents, pesticides, automotive and paint products, and some cleaners. Improper disposal of household hazardous wastes may pose a threat to sanitation workers, water quality and wildlife habitat. Activities aimed at reducing improper disposal of household hazardous waste include public education on non-toxic alternatives and safe disposal, and annual "Collection Events" sponsored by local solid waste service providers in cooperation with the cities and counties. A collection event in Medford in the spring of 1992 collected 40,955 pounds of household hazardous waste from 435 participants. Local landfills do not accept CEG wastes (see below) or household hazardous wastes for disposal.

"Special" Wastes are materials that have unique or toxic characteristics that make it necessary to use special or separate handling in their disposal. Special wastes include household hazardous wastes (see above), medical wastes, bulky wastes such as construction materials and appliances, tires, petroleum contaminated soil, asbestos, animal carcasses and used oil. Bulky wastes such as construction materials and tires may cause vector problems in landfills:

Construction Materials are landfilled in Jackson County.

Appliances that contain refrigerants must be certified to be decommissioned by a licensed service before they are discarded. At least two refrigeration businesses in the County offer decommissioning services. Landfills do not accept appliances for final

disposal. Decommissioned and certified appliances that are dropped off at landfills are periodically hauled to local scrap metal dealers for recycling.

Waste Tires cannot be landfilled, and are not picked up by waste haulers in Jackson County. Auto, truck and heavy equipment tires can be dropped off at landfills for a fee, and then hauled to a private business for reprocessing. Tires dropped off at landfills are stockpiled and a private contractor picks them up periodically for recycling.

Petroleum Contaminated Soils may be landfilled under certain conditions. South Stage Landfill can receive up to 5000 tons of contaminated soils annually. Dry Creek Landfill can receive up to 1000 tons annually. Valley View Landfill does not accept petroleum contaminated soil.

Asbestos is landfilled at South Stage and Dry Creek Landfills after it has been contained according to EPA/DEQ standards. The material is double-bagged in specified heavy gauge plastic bags and other approved containers and labeled before burial. Ashland has discontinued accepting asbestos because of prohibitive program costs.

Animal Carcasses can be buried in landfills in designated pits. Carcasses dumped at Valley View Landfill are moved to South Stage Landfill for burial. Animal carcasses can also be recycled at a rendering plant operated by Southern Oregon Tallow Company, Inc., that is located near Givan Park.

Used Oil may be a hazardous waste unless it is recycled or, under certain conditions, burned as fuel. Small quantities of waste oil are collected through curbside recycling programs and at recycling collection stations. Fuel Processors, Inc., of Portland, and Matt Garris Waste Oil Recovery in Medford pick up larger quantities of waste oil from business locations and accumulated oil from recycling centers and landfill collection sites.

Medical Waste is solid waste that is generated as a result of patient diagnosis, treatment or immunization of humans or animals. Medical waste may be either “special” waste or hazardous waste. If it is not hazardous, medical waste can be incinerated or sterilized, and the residual material can be disposed of at a licensed landfill. Jackson County hospitals have used incinerators to process medical wastes in the past, but new Clean Air Act standards for emissions from incinerators have caused the phase-out of local facilities, with the last of the incinerators expected to be shut down by the middle of March, 1995. Rogue Disposal and Recycling has franchises with Medford and Jackson County to collect medical wastes that are then hauled to Marion County for incineration. Hazardous medical wastes are managed under the same regulations as “regulated” hazardous wastes, discussed below.

Regulated Hazardous Wastes are those wastes defined as hazardous waste by ORS 466.005 (OAR 340-93-0030). This includes federally listed hazardous wastes and some Oregon listed wastes, sometimes referred to as “state-only” wastes. These “state-only” wastes are designated in OAR 340-102-0033, and must be managed in the same way as RCRA regulated wastes.
Acute hazardous Wastes are critically toxic wastes, as specified in federal CFR 261.33(e), that are regulated in very small quantities. Generation or accumulation of more than 2.2 pounds of an acute hazardous waste makes a generator a Large Quantity Generator (see below).

There are no permanent waste disposal sites for regulated hazardous wastes operating in Jackson County. In fact, under Subtitle “D”, as discussed in the Solid Waste section, above, all

municipal solid waste landfills must develop and implement programs for detecting and preventing the disposal of regulated hazardous wastes, specifically including poly-chlorinated biphenyls (PCBs) at their sites. Hazardous wastes generated in Jackson County are hauled to the Arlington, Oregon landfill complex, or may be hauled out of state. Conditional Exempt Generators (see below) can dispose of their hazardous wastes at annual "collection events" sponsored by the local solid waste service providers in cooperation with the cities and counties.

Most regulated hazardous waste is generated by private businesses and most hazardous waste handling is also done privately. Oregon law requires that specific information relating to customer lists and types and quantities of material used by a business be kept confidential. Consequently, the specifics of what materials are generated and how their recovery or disposal is managed is largely proprietary. However, the Oregon Department of Environmental Quality, in the course of implementing the hazardous waste management rules, maintains a list of registered waste generator.

The Oregon Toxic Use Reduction and Hazardous Waste Reduction Act is the legislation that enabled the creation of the Toxic use Reduction program. The program provides business and industry with technical assistance and requires the development of long-term plans to reduce hazardous waste. Table 2, below, summarizes the types of businesses that generate hazardous wastes in Jackson County, based upon those generators registered with the State. Management of hazardous wastes is regulated by the U.S. Resource Conservation and Recovery Act (RCRA). The 1976 version of RCRA placed "cradle to grave" responsibilities on Large Quantity Generators (LQGs) of hazardous wastes. Amendments to RCTA in 1984 added Small Quantity Generators (SQGs) who are subsequently responsible for tracking their hazardous wastes from initial use to ultimate disposal. Whether a hazardous waste generator is a LQF or an SQF is determined based upon either the volume of waste generated in a month or the volume of hazardous waste stored on site at any one time.

> **Conditionally Exempt Generator:** In one calendar month generates 2.2 pounds or less of acute hazardous waste, or 220 pounds or less of hazardous wastes, or 220 pounds or less of spill clean-up debris containing hazardous wastes; or at any time accumulates up to 2,200 pounds of hazardous wastes on-site.
>
> **Small Quantity Generator:** In one calendar month generates more than 220 pounds and less than 2,200 pounds of hazardous wastes, or more than 220 pounds and less than 2,200 pounds of spill clean-up debris containing hazardous wastes; or at any time accumulates more than 2,200 pounds of hazardous wastes on-site.
>
> **Large Quantity Generator:** In one calendar month generates more than 2.2 pounds of acute hazardous waste, or more than 220 pounds of spill clean-up debris containing an acute hazardous waste, or 2,200 pounds or more of hazardous waste, or 2,200 pounds or more of spill clean-up debris containing hazardous waste; or at any time accumulates more than 2.2 pounds of acute hazardous waste on-site.

Large and Small Quantity Generators are required to register with the Environmental Protection Agency. The EPA number that is assigned to a specific generator site is used for all transactions involved in the handling and disposal of hazardous materials at the site. A manifest system is used to track the material until its ultimate disposal. Conditionally Exempt Generators are not required to have an EPA number, but haulers and processors may require a business to have an EPA number before they will handle its wastes.

Hazardous Waste Spills and Releases: Hazardous waste spills and releases are regulated by the federal government through six Acts:

Resource Conservation and Recovery Act (RCRA);
Toxic Substances Control Act (TSCA);
Hazardous Materials Transportation Act (HMTA);
Clean Water Act (CWA);
Comprehensive Environmental Response Compensation and Liability Act (CERCLA or Superfund); and
Superfund Amendment Reauthorization Act (SARA).

The Oregon Small Quality Hazardous Waste Generator Handbook states that U.S. Congressional intent is to have the Reportable Quantity for substances to be the same under all of the acts, but that is not currently the case. Consequently, it is possible to be in compliance with one act and be out of compliance with another. Oregon's spill reporting rules are found in OAR 340-108.

In summary, household hazardous wastes and special waste are managed through the existing solid waste disposal facilities in Jackson County. Our capacity for disposing of such wastes in the future is directly related to available landfill capacity as discussed in the Solid Waste section, above. Medical wastes are collected by a local hauler and incinerated in an existing facility in Marion County. Commercial and industrial hazardous wastes are handled privately, and those that cannot be re-used or recycled are ultimately disposed of at the Arlington facility in Eastern Oregon, or in other special hazardous waste disposal sites outside of the state.

TABLE 2:
HAZARDOUS WASTE SOURCES IN JACKSON COUNTY

	Conditionally Exempt Generators	Small Quantity Generators	Large Quantity Generators	Registered, but Unclassified Generators
Utilities	Hydroelectric facility; Telephone facilities		Electrical generation and distribution facilities	
Industrial	Some millwork; Woodworkers; Some plastics fabrication; Some metal products; Tallow rendering; Other light industrial uses	Mills; Boat building; Food processing; Metal plating	Large scale manufacturing including electrical and wood products; Anodizing; Mineral processing; Recycling industry	Bottling plant
Commercial	Dark room; Paint retailer; Hobby business; Auto & Heavy equipment sales	Auto sales		
Services	Dry cleaners; Funeral homes; Electrical repair; Some construction contractors; Auto body repair; Auto detailers; Vehicle repair; Gas stations; Tire service	Larger auto service shops; Boat manufacture; Larger auto body repair; Airplane finishing operation; Painting service; Logging operation; Services utilizing heavy equipment		Boat building & service; Waste oil recovery business; Schools
Media	Some commercial print shops	Large print shops	Newspaper print shop	Television station
Transportation	Commercial motor pools; Transportation facilities	Railroad facilities and maintenance		
Medical	VA Domiciliary; Rogue Valley Medical	Providence Hospital		
Government	Public agency print shops; USFWS Forensics laboratory; SO State College; Public agency motor pools			Jackson Educational Services District; Existing Truck spill site (USEPA)

FINDINGS, POLICIES AND IMPLEMENTATION STRATEGIES[2]:

1

FINDING:

SEWAGE DISPOSAL SYSTEMS: Many of the rural subdivisions and clusters of small rural parcels in the County were created before zoning laws were implemented. Parcelization and subsequent settlement patterns in many parts of the County have developed independent of the land use planning process. In addition, many early land divisions were made without verification of available potable water supplies or septic waste disposal systems.

The Bear Creek Valley Sanitary Authority was also created before the inception of statewide land use planning and local zoning. Based upon its original plan and existing sewer capacity, BCVSA is prepared to provide sewer services to a large part of the County, but laws passed since the formation of the Sewer Authority restrict the extension of sewer service outside of cities and urban growth boundaries.

The County recognizes four development categories for the provision of sewage disposal services, which establish the different circumstances that affect the availability of sewage disposal systems in various parts of the County.

CATEGORY A: Development within city limits or within an incorporated city's urban growth boundary is subject to "Category A" development standards. The standard level of service for such areas includes conventional sewage collection and treatment that is part of regional or subregional sewerage system designed to accommodate urban level development.

CATEGORY B: Development within an unincorporated urban containment boundary or an approved destination resort, or outside of an incorporated city's urban growth boundary in an area that constitutes a pocket of existing urban or suburban level development. Where a probable health hazard is deemed to exist and the area is geographically located so that connection to a regional or subregional sewerage system is determined to be a reasonable solution after alternatives have been evaluated, then conventional sewage collection and treatment systems designed to accommodate existing development may be provided.

CATEGORY C: Development in an area outside of an incorporated city's urban growth boundary or urban containment boundary that constitutes a pocket of existing urban or suburban level development, but that is geographically located so that connection to a regional or subregional sewerage system is not feasible, is subject to "Category C" development standards. Where a probable health hazard is found to exist, sewer service may be provided by an on-site management district or small community waste disposal system designed to accommodate an appropriate level of development consistent with the Jackson County Comprehensive Plan.

CATEGORY D: Development in an area that is developed to, or designated for, low density development, where all standards can be met for on-site waste disposal, is subject to "Category D" development standards. This standard allows on-site septic waste disposal systems.

[2] Amended by Ordinance #96-21, adopted 6-4-96; effective 8-5-96; Planning File 96-6-OA.

POLICY: RECOGNIZING THE NEED FOR VARIOUS TYPES AND LEVELS OF SANITATION SERVICE, JACKSON COUNTY SHALL STRIVE TO PROVIDE FOR SANITATION SERVICE AT LEVELS APPROPRIATE FOR THE NEEDS OF URBAN, URBANIZABLE, SUBURBAN, RURAL, AND OPEN SPACE LANDS.

IMPLEMENTATION STRATEGIES:

A) Public sewer district should develop service plans identifying location and levels of service which are consistent with the Comprehensive Plan and the criteria identified in the above policy. These service plans, when deemed consistent with the Jackson County Comprehensive Plan, should be adopted by the County as part of said plan.

B) Proposals for sewer collection facility projects shall be reviewed in accordance with, and for consistency with, the Jackson County Land Development Ordinance.

C) The County should create an exception process for circumstances where strict application of the Jackson County Land Development Ordinance may cause an unnecessary public hardship.

2

FINDING:

EXTENSION OF SEWER SYSTEMS BEYOND URBAN GROWTH BOUNDARIES: The policies of the Urban Lands Element support the concept of urban centered growth as a means to mitigate problems which occur with extensive urban and rural growth outside of urban growth boundaries. The extension of an urban facility beyond an urban growth or containment boundary creates the perception that the area near the facility is committed to urban growth. Therefore, it is desirable to avoid potential conflicts by limiting the location of urban level services, such as sewers, to urban growth boundaries and identified health hazard areas.

POLICY: RECOGNIZING THE URBAN GROWTH/CONTAINMENT BOUNDARY AS THE DIVIDING LINE BETWEEN URBAN AND RURAL DEVELOPMENT, THE COUNTY SHALL NOT ALLOW NEW EXTENSIONS OF SEWER PROJECTS BEYOND THESE BOUNDARIES EXCEPT AS ALLOWED IN POLICY 1 AFTER REVIEW BY THE PLANNING COMMISSION AND APPROVAL BY THE BOARD OF COMMISSIONERS OR AS PROVIDED FOR BY STATE LAW, AS DISCUSSED IN POLICY 5 BELOW.

3

FINDING:

FILL-IN DEVELOPMENT IN HEALTH HAZARD AREAS: Throughout Jackson County there are areas that were developed at urban or suburban densities without adequate sewer services. Frequently these areas are not completely developed additionally, they are frequently adjacent to resource lands or other rural lands planned or developed at low rural densities.
Due to the nature of Jackson County soils and groundwater levels, many of these pockets of urban or suburban development are likely health hazard area candidates. Upon designation as

a potential health hazard area, they would become eligible for a conventional or self-contained community collection and treatment system. Due to the high cost of these systems, and the desirability of reducing a health hazard, vacant existing lots within the health hazard area should be allowed to develop to help lower the cost of the system chosen to alleviate the hazard.

POLICY: FILL-IN DEVELOPMENT ON LEGALLY EXISTING LOTS SHOULD BE ALLOWED WITHIN HEALTH HAZARD AREAS AFTER THE HEALTH HAZARD HAS BEEN REMOVED.

IMPLEMENTATION STRATEGY:

Sewer service areas should be clearly defined in service agency plans and should be limited to known and potential health hazard areas. Discovery of additional health hazard or potential health hazard areas will warrant amendments to service agency plans to include such areas in their plans.

4

FINDING:

Within Jackson County water service may be provided through the creation or expansion of a water system as defined in Statewide Planning Goal 11.

POLICY: WITHIN JACKSON COUNTY WATER SERVICE MAY BE PROVIDED THROUGH THE CREATION OR EXPANSION OF A WATER SYSTEM AS DEFINED IN STATEWIDE PLANNING GOAL 11. HOWEVER, THE ESTABLISHMENT OR THE EXPANSION OF A WATER SYSTEM MAY NOT BE USED AS THE BASIS FOR ZONE CHANGES TO INCREASED DENSITIES.

5

FINDING:

RURAL SEWER SERVICE: The existence of a sewer line through a rural area, between an urban area and the health hazard area it serves, creates a potential land use conflict. Land use densities in rural areas are generally low, allowing five-acre rural residential lots or larger farm units. The presence of sewers can create the perception that development of more intensive uses is anticipated or planned, consequently encouraging speculative land sales and pressure for land use or zoning changes. Consequently, construction of new sewer systems or extension of existing sewer systems to serve rural areas located outside acknowledged urban growth boundaries or unincorporated community boundaries is restricted pursuant to Statewide Planning Goal 11 and OAR 660, Division 11 to existing public health hazard areas. The 2003 Oregon State Legislature, through House Bill 2674 (effective January 1, 2004), relaxed the restriction to allow on-site sewer facilities to serve industrial development on old or diminished mill sites as described in the bill. Any other situation would require that an exception to Statewide Planning Goal 11 be justified pursuant to the Goal 2 exceptions process.

POLICY: CONNECTIONS TO SEWER OR WATER LINES IN AREAS LOCATED OUTSIDE ACKNOWLEDGED URBAN GROWTH BOUNDARIES OR UNINCORPORATED COMMUNITY BOUNDARIES MAY BE PERMITTED ONLY PURSUANT TO STATE LAW AND THE JACKSON COUNTY LAND DEVELOPMENT ORDINANCE.

6

FINDING:

MINIMIZING DEVELOPMENT PRESSURES: A large share of Jackson County's agricultural lands that are not desirable for short-or long-range urban development lie near areas that are provided with public service and facility systems. The existence of public facilities and services may cause such lands to be given first consideration for development purposes. It would be counter-productive to develop public policy encouraging the preservation of agricultural lands, then permit the conversion of farmland to urban or suburban uses. Such pressures exist almost everywhere sewer and public street facilities are in place. The County shall direct future sewer facility extensions away from sensitive rural areas and minimize their perceived influence where such facilities presently exist.

POLICY: NEW SEWERAGE LINES SHALL NOT PASS THROUGH LANDS DESIGNATED FOR AGRICULTURAL USE EXCEPT WHEN DEEMED THE MOST REASONABLE ROUTE AFTER THE COUNTY HAS MADE EVERY EFFORT TO MINIMIZE DEVELOPMENT PRESSURE AND PROTECT AGRICULTURAL OPERATIONS.

IMPLEMENTATION STRATEGIES:

A) The preparation and adoption of a review and evaluation procedure, as proposed in Policy 1, Implementation Strategy D, should be used to evaluate various routing options in cases where public sewerage lines must be constructed in unincorporated areas of the County. This mechanism should further be used to review the servicing agency's ability and authority to enforce a limited-service rule on its facility lines that must pass through agricultural lands.

B) As an option, where the agency may not have rules governing limited service, service limitation agreements between the servicing agency and the County may be used.

7

FINDING:

DEFERRAL OF SERVICE DISTRICT ASSESSMENTS ON RESOURCE LANDS: Frequently, sewer facilities must pass through large blocks of open rural and agricultural lands. Service district assessments, if applied to a large or undeveloped parcel could cause an unfair economic burden to property owners. To avoid this, a policy of limiting or deferring assessments should continue to be implemented by agencies providing public facilities and services.

POLICY: LIMITATION OR DEFERRAL OF SERVICE DISTRICT ASSESSMENTS FOR AGRICULTURAL LAND AND OTHER LANDS IDENTIFIED AS RURAL OPEN SPACE IN THE JACKSON COUNTY COMPREHENSIVE PLAN, SHALL BE CONSIDERED A PRIORITY FOR THE PRESERVATION OF THE RESOURCE VALUES OF SUCH LANDS.

IMPLEMENTATION STRATEGY:

In the course of reviewing and facilitating coordinated service agreements with public facilities and services providers, as required by State law and directed by Policy 19, below, the County should review providers' policies on service district assessments for rural open space and resource lands and encourage policies limiting and/or deferring service district assessments on resource and undeveloped lands when services are extended into rural areas.

8

FINDING:

FUTURE URBANIZATION: Frequently the presence of public facilities and services, in particular public streets, sewer, and water service, have a profound effect on how land owners view the development potential of their property. This places development pressure on lands which may for many other reasons not be desirable for development. Other development concerns should receive fair emphasis. Examples of other development concerns which must also receive serious consideration are: 1) preservation of resource lands; 2) impact on adjacent lands; 3) impact on air or water quality; 4) impact on the need for additional public services; or 5) the presence of scenic or historic features or natural hazards.

POLICY: THE ABSENCE OR PRESENCE OF PUBLIC FACILITIES SHOULD BE WEIGHED AND EVALUATED AGAINST OTHER DEVELOPMENT CONCERNS SO IT DOES NOT RECEIVE DISPROPORTIONATE EMPHASIS.

IMPLEMENTATION STRATEGY:

Review legislative and quasi-judicial land use actions in light of the intent of the above policy.

9

FINDING:

MUTUAL AID AGREEMENTS: Mutual aid agreements are a means of increasing service levels through interagency cooperation without additional major capital expenditure. Among many law enforcement and fire protection agencies, such agreements currently exist, if only on an informal basis.

POLICY: MUTUAL AID AGREEMENTS AMONG LAW ENFORCEMENT AND FIRE PROTECTION AGENCIES AND OTHER PUBLIC FACILITIES AND SERVICES PROVIDERS SHALL BE MAINTAINED AND ENCOURAGED.

IMPLEMENTATION STRATEGIES:

A) The Jackson County Sheriff's Department, through the Rogue Valley Council of Governments, should initiate a formal comprehensive mutual aid program with local municipalities and the Oregon State Police.

B) When necessary and appropriate, initiate a comprehensive mutual aid program among local municipalities, rural fire protection districts, and state and federal fire protection agencies.

C) Initiate a comprehensive rural fire protection program through establishment of a Fire Prevention Planning Task Force. A major aim of the program should be the consolidation of some or all rural fire protection districts, and the establishment or reinforcement of voluntary fire protection programs in areas that lie beyond municipal and rural fire protection district.

D) On July 14, 1993, Jackson County adopted an Emergency Operations Plan (EOP) for Emergency/Disaster situations. This interagency agreement is adopted here by reference as the County-wide mutual aid agreement for disasters including accidents involving hazardous materials, major transportation accidents, levee or dam failure, flooding, major fire and earthquake.

E) Encourage and facilitate, where possible, cooperative agreements between local governments and other public facilities and services providers.

10

FINDING:

RURAL SUBSTATIONS: The proximity of sheriff and fire substations to population centers has a direct relationship to police and fire response time, one of the principal measurements of the quality of emergency service protection.

POLICY: WHEN FEASIBLE, SHERIFF SUBSTATIONS AND RURAL FIRE STATIONS SHALL BE LOCATED WITHIN RURAL POPULATION CENTERS TO MINIMIZE RESPONSE TIME TO AS LARGE A SEGMENT OF THE POPULATION AS POSSIBLE.

IMPLEMENTATION STRATEGIES:

A) The location of substations should be based upon existing levels of development and growth trends in rural areas, in an effort to reduce response time as much as possible.

B) The Land Development Ordinance should provide for substation facilities in most rural zone designations.

11

FINDING:

PUBLIC SCHOOLS: The proximity of public schools to urban and rural population centers has a direct relationship to a school district's transportation busing needs. Such needs can and should be minimized by locating new schools as close as possible to population centers where students and faculty can avail themselves of alternative transportation modes.

POLICY: WHENEVER POSSIBLE, NEW PUBLIC SCHOOL SITES SHALL BE LOCATED WITHIN URBAN GROWTH BOUNDARIES OR RURAL POPULATION CENTERS AND WHERE FEASIBLE, COMBINED WITH PARK AND RECREATION SITES, UNLESS SPECIFIC JUSTIFICATION IS PROVIDED FOR LOCATION IN A LESS DEVELOPED AREA.
IMPLEMENTATION STRATEGIES:

A) School districts and recreation agencies should be made aware of the policy and should follow its intent in the acquisition of new sites.

B) Allow public and private schools as a use only in the appropriate non-resource districts.

12

FINDING:

IMPACTS OF SUBDIVISION ON SCHOOL FACILITIES: In recent years, controversy has arisen concerning the adequacy of existing school facilities in relation to local growth trends and housing requirements. Much of the controversy stems from the fact that new development does not normally pay its full share of school district expenses on a household basis. Other longer established residents and commercial and industrial complexes must pay a share of the educational costs of new development under existing methods of taxation.

POLICY: THE NEED FOR ADDITIONAL PUBLIC SCHOOL SITES AND FACILITIES SHALL BE DETERMINED AND CONSIDERED WHEN REVIEWING SUBDIVISION PROPOSALS.

IMPLEMENTATION STRATEGIES:

A) Amend the Land Development Ordinance with provisions for granting approval for new subdivisions based upon a determination that:

i) Existing school facilities can adequately accommodate the increased enrollments anticipated by the new subdivision; or,

ii) The school district has adequately provided or planned for school needs resulting from growth such as that proposed in the subdivision; or,

iii) The school district can reasonably be expected to provide for school needs resulting from growth such as that proposed in the subdivision.

B) A method of system charges should be explored and developed to ensure that funds are always available for the construction of new schools and the expansion of existing ones required as a result of new community or district growth.

13

FINDING:

COMMUNITY COLLEGE: In the future, County population, educational and job training demands may increase both the desirability and feasibility of creating a local junior or community college. Such a facility can be used to help train the existing labor force and may have a positive impact on local unemployment.

POLICY: THE COUNTY SHALL EXPLORE THE LONG-RANGE FEASIBILITY OF DEVELOPING A JUNIOR OR COMMUNITY COLLEGE IN JACKSON COUNTY AS A MEANS TO SERVE JOB TRAINING DEMANDS.

IMPLEMENTATION STRATEGIES:

A) As the County population increases, the desirability of establishing local community college may emerge. The County should keep abreast of this possibility or appoint a citizens' committee to monitor attitudes on a periodic basis.

B) Explore the possibility of expanding Rogue Community College to a two-county system with facilities in both Jackson and Josephine Counties.

14

FINDING:

RURAL MEDICAL FACILITIES: Major medical facilities in Jackson County exist within established urban population centers. There may be stronger demands to provide for more responsible medical facilities in rural areas. County land use ordinances should continue to provide for such facilities within rural population centers.

POLICY: JACKSON COUNTY SHALL ALLOW FOR GENERAL-CARE MEDICAL AND EMERGENCY SERVICES FACILITIES WITHIN RURAL POPULATION CENTERS.

IMPLEMENTATION STRATEGY:

Provision should be made in the Jackson County Land Development Ordinance for small scale medical facilities and ambulance service within rural service centers including consideration of various rural heath care options such as the expanded use of paramedics and nurse practitioners.

15

FINDING:

FUNDING PUBLIC FACILITIES: The necessity of creating a system by which new development more equitably pays for itself has been discussed in various subsections of this element. The issues surrounding this topic are of a fiscal nature; the financing of sewer and water treatment facilities and the construction of new schools or fire stations and other capital costs normally associated with these and other facilities. Existing residents and business and industry partially subsidize the cost of new development. This is one reason why quite often residents of a particular school district express strong disfavor over the granting of approval for new subdivisions. They know from experience that the additional children generated by that new development will generate capital expenses which they, as existing residents and taxpayers, will be asked to share. Such issues become most acute when subdivision approval will generate more students than a particular school is designed to accommodate. When this occurs, taxpayers throughout the school district are often requested to pass a bond issue for the construction of a new school or additions to an existing one.

System charges are a method by which the relative inequity of new development is calculated and the additional fees levied on new construction. The additional fees are then channeled to an ordinary annuity or sinking fund, established for the purpose of accumulating revenue and interest for a future capital expense. If the system is set up properly, by the time a new school is demanded, the amount of revenue in the annuity will have increased adequately to pay for the total cost. In this manner, rapid community growth has less impact on the property taxes of established County residents. Such methods also serve to minimize the number and amount of future bond issues for capital improvements. A trade-off exists between the need for new development to more equitably pay for the increased pressures on schools and other public facilities versus the need to provide for low to moderate income housing, as further discussed in the Housing Element.

POLICY: NEW DEVELOPMENT SHALL MORE EQUITABLY PAY THE COSTS OF NEW OR EXPANDED PUBLIC FACILITIES AND SERVICES DIRECTLY RESULTING FROM SUCH DEVELOPMENT.

IMPLEMENTATION STRATEGIES:

A) Prior to implementation, additional studies should be made to determine the relative amount of system charges for water, sewer, schools, and other services and facilities, balanced with the need to provide low to moderate income housing

and the proper method to levy such charges. The financing of such additional charges is critical to the goal of affordable housing. Therefore, implementation of this policy/strategy should occur through a community development charge paid off early, or separately financed through a low interest loan or Bancroft Bond program, such that the charges not be conventionally financed along with the land and improvements.

B) Jackson County shall seek enabling legislation to uniformly apply systems development categories for all public facilities and services.

16

FINDING:

IMPACTS OF PUBLIC FACILITIES ON OTHER USES: Buildings and other uses of a public works, public service, or public utility, or public education nature often must be located within residential neighborhoods in locations where their existence may affect the character or public welfare of the surrounding area. Steps can and should be taken to minimize these adverse effects whenever possible.

POLICY: BUILDINGS AND USES OF A PUBLIC WORKS, OR PUBLIC SERVICE, PUBLIC UTILITY OR PUBLIC EDUCATION NATURE SHALL BE DESIGNED, SITED AND CONSTRUCTED TO MINIMIZE ANY ADVERSE EFFECTS ON THE CHARACTER OR GENERAL WELFARE OF THE SURROUNDING AREA.

IMPLEMENTATION STRATEGIES:

A) Mitigation measures may include one or more of the following:

i) Land acquisition by public agencies; or

ii) Adjacent areas planned for less intensive uses or densities than normally allowed; or

iii) Use separators, such as setbacks; or

iv) Height and bulk limitations; or

v) Screening; or

vi) Other techniques agreed to by the County and affected public agency(s).

B) Maintain the status of “buildings and uses of a public works, public service, or public utility nature” as a use in all appropriate zoning districts. The policy may be implemented during the quasi-judicial process.

C) Maintain schools as a use in appropriate zoning districts.

17

FINDING:

SITING TRANSMISSION FACILITIES: Existing linear transmission facility corridor provide appropriate sites for new or expanded linear transmission facilities. The use of existing corridors helps to preserve agricultural and forest lands, and minimize impacts on wildlife and scenic resources. Proposed transmission facilities not sited in existing corridors could have impacts inconsistent with state and County land use planning goals and policies. The Jackson County Land Development Ordinance provides a mechanism to review new linear facilities proposed for location outside of existing transmission facility corridors.

POLICY: PROPOSED LINEAR TRANSMISSION FACILITIES SHALL BE ROUTED ALONG EXISTING CORRIDORS, EXCEPT IN THOSE INSTANCES WHERE EXISTING CORRIDORS CANNOT PROVIDE APPROPRIATE ROUTING. ALTERNATIVE SITING MUST COMPLY WITH THE JACKSON COUNTY LAND DEVELOPMENT ORDINANCE. IMPLEMENTATION STRATEGIES:

A) Designate existing 230KV and larger electric power transmission lines and 300 p.s.i. natural gas pipelines on the official Comprehensive Plan and zoning maps.

B) Route new or altered linear transmission facilities along existing corridors. Utilize the review procedures of the Land Development Ordinance when existing corridors cannot be used.

C) Linear transmission facilities not operating under an approved transmission siting facility permit pursuant to the Jackson County Land Development Ordinance will not be allowed to undergo a substantial alteration as defined without receiving a transmission facility siting permit.

D) The exception to this requirement is federally authorized projects for linear transmission facilities. Federally authorized facilities are not subject to the Land Development standards, but substations, pressure regulating stations and other site-specific facilities developed in conjunction with such systems may require review, depending upon the proposed use and the zoning designation of the subject property.

18

FINDING:

SOLID WASTE MANAGEMENT: Sound planning for solid waste disposal is necessary to protect public health and the environment, and to conserve natural resources by reducing, recovering and recycling solid waste to the fullest extent practicable. Improper or inadequate collection, storage, transportation and disposal of solid waste creates nuisance conditions and hazards to public health, safety and welfare, and may cause pollution of land, air and water resources.

POLICY: THE SAFE AND EFFICIENT COLLECTION, RECYCLING, SALVAGE, COMPOSTING AND DISPOSAL OF SOLID WASTE SHALL BE FACILITATED

THROUGH COOPERATIVE EFFORTS AMONG THE COUNTY AND PRIVATE OPERATORS FRANCHISED BY THE COUNTY TO HANDLE SOLID WASTE.

IMPLEMENTATION STRATEGIES:

A) The April, 1994 Solid Waste Management Plan: Jackson and Josephine Counties, adopted by the Board of Commissioners in May of 1994 will serve as the County's primary plan for solid waste management.

B) Revise and amend the County's "Solid Waste Collection and Disposal Ordinance" for consistency with the 1994 management plan. In updating the ordinance, consider improved enforcement to reduce nuisances caused by improperly stored waste material on private property, including putrescible waste stored longer than 7 days.

C) Encourage and support private sector initiative in the development and use of waste reduction, resource recovery, and recycling. Cooperate with new industries what will be collecting, utilizing or marketing recovered materials or developing recycling technologies to facilitate progress through the Site Plan Review process.

D) Allow recyclable material collection sites wherever needed, consistent with the Land Development Ordinance.

E) Map known historic waste disposal sites so that any development of such lands will be conditioned on mitigation of any hazards associated with the old disposal site.

F) Encourage the potential for energy recovery from solid waste when feasible, either by methane collection at landfill sites or by electricity or process heat generation from combustible wastes.

G) Continue to collect and recycle County waste paper and motor oil, and watch for opportunities to recycle other wastes generated by County operations. Continue to encourage other government bodies to include waste recovery and recycling in their daily operations.

H) Explore the feasibility of County purchase of paving and construction materials produced from recovered waste materials.

I) Amend the Land Development Ordinance to establish an overlay zone for use in designating sites for the disposal, recycling, composting and salvage of solid waste as an alternative to the permit review process.

19

FINDING:

HAZARDOUS WASTE MANAGEMENT: Hazardous waste is the component of solid waste that is most likely to cause serious impacts on public health and the environment. The Jackson and Josephine County regional solid waste management system does not include a disposal site committed to disposal of hazardous wastes, and location of such a disposal site is unlikely in the foreseeable future. Safe, responsible management of hazardous wastes is facilitated by the collection of wastes in the County, recovery of some recyclable materials either locally or outside of the area, heat treatment and limited disposal of some contaminated soils in the County, incineration of some materials in Marion County, and ultimate disposal of non-recoverable materials at the Arlington hazardous waste disposal site in eastern Oregon, or other such site outside of the state.

POLICY: JACKSON COUNTY HEREBY ADOPTS THE PRIORITIES FOR HAZARDOUS WASTE MANAGEMENT ADOPTED BY THE STATE, SPECIFICALLY: REDUCTION OF THE USE OF HAZARDOUS MATERIALS: RE-USE OF MATERIALS THAT CAN BE RE-USED; AND RECYCLING OF MATERIALS THAT CAN BE RECYCLED PRIOR TO DISPOSAL OF THOSE MATERIALS AND RESIDUAL MATERIALS THAT MUST BE DISPOSED OF.

IMPLEMENTATION STRATEGIES:

A) Encourage and support private sector initiative in the implementation of hazardous waste reduction, safe collection and transportation of hazardous waste, and hazardous materials recovery and recycling. Cooperate with new industries that will be collecting, utilizing or marketing recovered hazardous materials or developing recycling technologies to facilitate progress through the Site Plan Review process.

B) Preclude new development from any known historic hazardous waste site unless a DEQ approved plan is being implemented and the proposed development will not cause environmental hazard or impede completion of the clean-up.

C) Continue to encourage reduction of the use of hazardous materials in County operations, including integrated pest management in parks and public works projects.

D) When considering a Site Plan Review for a business with a known predisposition to the use of hazardous materials, require applicant to provide discussion of how hazardous wastes will be stored and disposed. Approval of such uses should include conditions, either advisory or compulsory based upon potential risks, addressing the need for compliance with DEQ standards and EPA registration.

20

FINDING:

Oregon Revised Statutes, Chapters 195 and 197 were revised by the 1993 legislature to require coordinated planning between city and county governments and special service districts providing urban services inside urban growth boundaries and to allow for such coordination between counties and other special districts operating within the boundaries of the County.

POLICY: JACKSON COUNTY WILL FACILITATE COORDINATED PLANNING WITH CITY GOVERNMENTS, SPECIAL SERVICE DISTRICTS AND OTHER SERVICE AUTHORITIES, AS REQUIRED BY ORS CHAPTER 197.

IMPLEMENTATION STRATEGIES:

A) The County shall comply with the 1993 amendments to ORS Chapter 197 (SB 122) no later than the next periodic review of the Comprehensive Plan and Land Development Ordinance. The periodic review under which the current amendments are being developed started prior to the effective date of the 1993 amendments.

B) The County shall enter into cooperative agreements or amend existing cooperative agreements with each special service district that provides an urban service within an established Urban Growth Boundary, and may enter into cooperative agreements with other special districts operating within County boundaries. Such agreements shall include the following, at a minimum as prescribed by ORS 197.185(3):

i) Description of how the city or County will involve the special district in comprehensive planning;

ii) Description of the responsibilities of the special district in comprehensive planning;

iii) Definition of the roles and responsibilities of each party to the agreement with respect to County approval of new development;

iv) Definition of the role and responsibilities of the County in respect to district interests;

v) Specification of all units of local government that will be parties to an urban service agreement regarding the particular service under consideration; and

vi) Any other provisions that the Land Conservation and Development Commission may require by rule.

C) Subsequent to adoption of the above-referenced cooperative agreements, for Urban Growth Boundary areas with populations in excess of 2,500, the County shall enter into urban service agreements that include, at a minimum, the following:

i) Specification of who will provide a particular urban service;

ii) Definition of the functional roles of each service provider for future urban services.

iii) Determination of service areas for each service provider

;

iv) Assignment of planning responsibilities for coordination of services; planning construction and maintenance of facilities; and management and administration of service provision to consumers;

v) Terms for transitions in service, ownership of facilities, annexation of service territories, transfer of monies or project responsibilities for facilities, merger of systems or other cost efficiency measure; and

vi) A process of review and modification for urban service agreements.

D) Advance planning for the provision of urban services is a current need in some service districts because of growth pressures in the County and because such planning has become an increasingly important component of the state land use planning system. In light of this need, Jackson County will cooperate with any special district that takes the initiative to create or update cooperative agreements or urban service agreements prior to the next periodic review.

RECREATION

INTRODUCTION AND BACKGROUND:

Recreational activities have long been recognized as an important facet of modern life. The old adage—all work and no play makes for a dull boy—seems to describe quite well the role recreation plays in our lives. Recreational activities, however, are not restricted to activities solely related to the play of an adolescent.

The statewide planning goal dealing with recreation is broadly defined. Recreation areas, facilities and opportunities...to "provide for human development and enrichment, and include but are not limited to: open space and scenic landscapes, recreational lands, history, archeology and natural science resources; scenic roads and travelways, sports and cultural events; camping, picnicking and recreational lodging; tourist facilities and accommodations, trails, waterway use facilities, hunting, angling, winter sports, mineral resources, active and passive games and activities." Jackson County with its diverse ecological environments, historical richness, and cultural offerings provides a wide variety of recreational activities.

RECREATION SUPPLY:

Recreation supply is basically the number of acres per park type and the number of various types of facilities available. Park types are classified as regional, district, community, neighborhood, special use areas, resource areas, and waysides. Each park type has a distinct purpose, is of a certain size, has a particular service area, is located in a particular relationship to urban population centers, has a specific level of development and provides for certain types of uses. A second factor in determining recreation supply is the number of acres of open space not included within the "park total" available for recreation pursuits. In addition, recreation supply is made up of historic and cultural resources; natural and scenic resources; linear recreation areas, such as the Bear Creek Greenway; scenic highways; Rogue River access points; and trail systems. Private recreational developments are also considered as a part of local recreation supply. The following table illustrates the various park types within the county, the number of acres of each park type and the administering agency.

The majority of the areas accounted for within Table I are located within the forested areas, along rivers, and around reservoirs and lakes which are some distance from urban areas of the county (refer to Map A). The existing distribution of recreation facilities is to be expected in light of the agencies and groups which have been involved in the provision of recreational opportunities.

Within the boundaries of Jackson County there are various local businesses, municipalities, and special districts as well as federal agencies, state agencies, and the county involved in the provision of recreational opportunities. The federal government is the largest single landowner in Jackson County. The principle managers of federal lands within Jackson County, The Bureau of Land Management and United States Forest Service, are required to utilize multiple use management techniques and one of the activities which is provided for is recreation uses.

The figure shown on Table I under federal multiple resource area, illustrates the enormous impact these agencies have had on recreation within the county. The location of these land holdings have naturally enough resulted in their recreational facilities and areas being relatively distant from the major concentration of county population and being designed for dispersed recreational opportunities. Other federal agencies which provide recreational opportunities in or near Jackson County are the Army Corps of Engineers and the National Park Service. Water and Power Resources Service (Formerly the Bureau of Reclamation) also contributed to recreation in the county by the construction of reservoirs now managed by the county parks and recreation department. Finally, the Heritage Conservation and Recreation Service is the federal agency which has the single greatest impact upon local and state recreation programs. This agency is charged with coordinating national recreation planning and providing financial assistance to local and state governments.

The Oregon State Parks and Recreation branch maintains several park sites in Jackson County. These facilities were primarily constructed to provide for the camping and picnicking needs of the traveling public. The current trend is toward more emphasis upon primitive camping facilities, historic preservation and interpretation, recreation trails, and scenic rivers. The parks department also is responsible for coordinating the administration of the states apportionment of land and water conservation funds to local governments for recreation projects. Other state agencies which have a direct role in recreation with Jackson County are the Oregon State Fish and Wildlife Department, which administers the Denman Game Refuge, and the Marine Board, who provide funds for water related projects and regulate the use of surface waters.

TABLE I

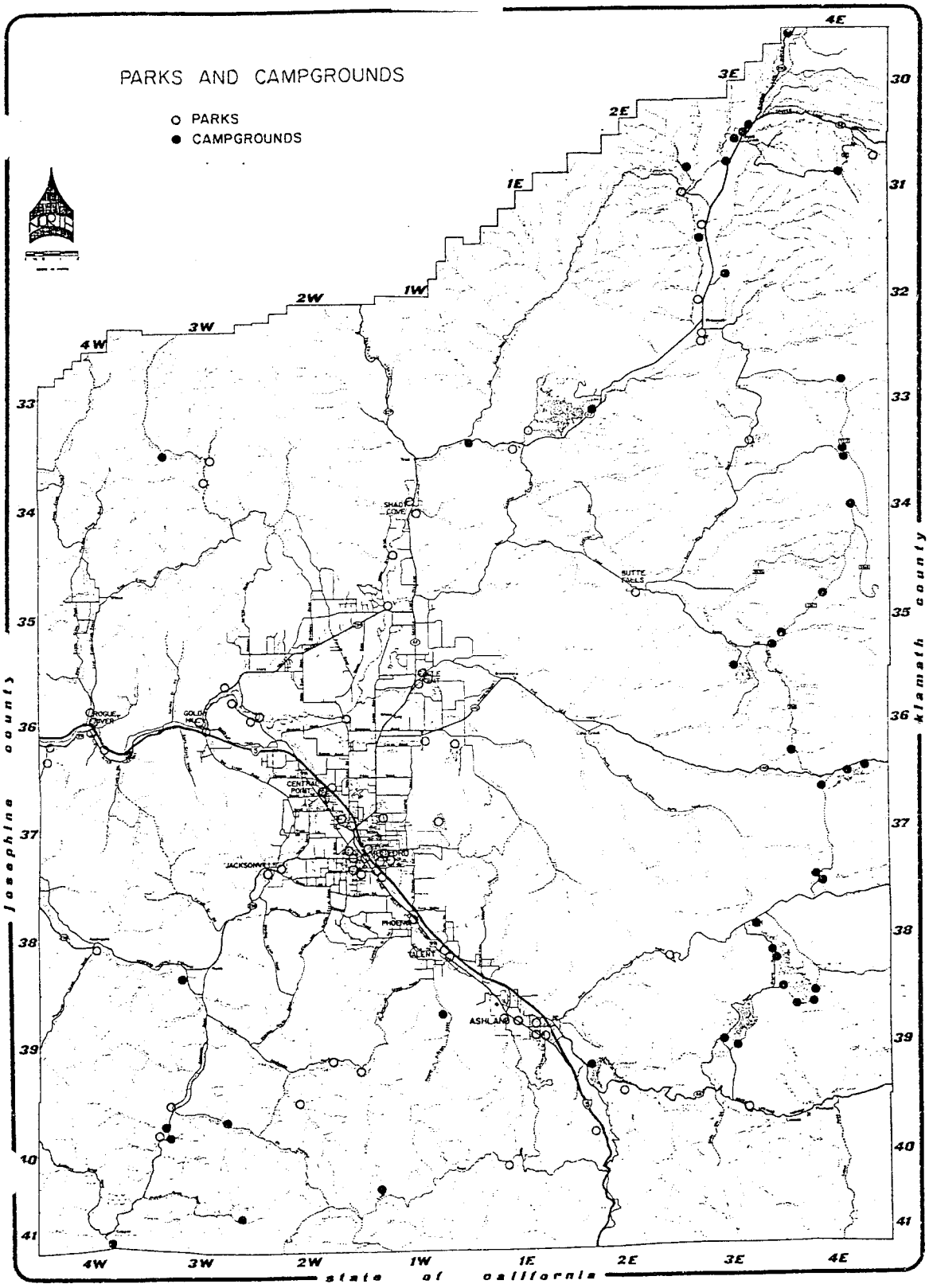
JACKSON COUNTY PARK TYPE BY ADMINISTERING AGENCY (IN ACRES)

AGENCY

PARK TYPE	CITY	COUNTY	STATE	FEDERAL	PRIVATE NON-PROFIT	PRIVATE PROFIT	PARK TYPE TOTAL
Neighborhood Park	72.9	0	0	0	0	0	72.9
Community Park	81.7	0	0	0	0	0	81.7
District Park	158.7	3,087	91	0	0	0	3,336.7
Regional Park	102.5	3,992.6	363	0	0	0	4,458.1
Natural Resource Park	0	73.1	0	0	0	80	153.1
Historical Resource Park	0	13.0	0	0	0	13	26
Multiple Resource Area	0	0	3,033	890,952	0	0	893,985
Multiple Resource Area (Recreation)	0	0	0	501	0	0	501
Multiple Resource Area (Natural)	0	0	438	0	0	0	438
Wayside	0	7.2	71	1	5	0	84.2

Special Purpose Area	3.1	646	0	0	0	3,292	3,941.1
Undeveloped/ Unclassified	1,856.4	654.8					2,511.2
Total:	2,275.3	8,473.7	3,996	891,454	5	3,385	909,589

SOURCE: Oregon Outdoor Recreation Supply bulletin 1976, Table 106, Page 201. Technical Document II of the Statewide Comprehensive Outdoor Recreation Plan. Parks and Recreation Branch, Oregon Department of Transportation 1977, and the Jackson County Parks and Recreation Plan, 1980 (Preliminary Draft).


PARKS AND CAMPGROUNDS
PARKS
CAMPGROUNDS
4E
3E
2E
1E
1W
2W
3W
4W
30
31
32
33
34
35
36
37
38
39
40
41
josephine county
klamath county
state of california
SHADY COVE
BUTTE FALLS
ROGUE RIVER
GOLD HILL
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND

Local governments are the primary providers of recreation services and facilities near the population centers. The group of providers bears the greatest responsibility for urban recreational trails, for bicycling and hiking, and for day use facilities. Cultural resource interpretation is also a very important recreation opportunity which should be provided by local governments.

The private recreation sector is also a provider of recreational opportunities and is the third most important contributor to the local economy (refer to Economic Element). The 1978 Statewide Comprehensive Outdoor Recreation Plan sets forth four specific groups within the private sector which have an interest in recreation. These are:

1) Private nonprofit groups, such as youth, church, and public service groups;

2) Private resource managers, such as timber and power companies;

3) Private commercial recreation providers, such as campground and ski area operators, and;

4) Special interest groups such as associations for recreational activity participants and citizens' groups with environmental or other concerns.

Certain types of facilities, areas, and opportunities seem to be particularly suitable for the private sector to develop. These are: sites serving special interest groups, spectator and participant sporting events, and tourist oriented facilities and services.

Other groups and agencies not listed previously are, at times, involved in the provision of recreational opportunities even though their primary responsibility or interest lies in another area. For instance, federal funding for 201 program projects, like sewerage treatment plants, require that projects be assessed to determine if recreation needs can be met in conjunction with the construction of a public facility. Further, transportation planning and facility construction could be an effective force in supporting recreation facilities such as bicycle routes.

It is evident from the brief description of involved groups and agencies that coordination of their various actions is crucial. In fact, the coordination of the governmental agencies, groups, and businesses is the single greatest task which must be achieved. The benefits of a coordinated recreation program are:

1) Greater diversity of recreation opportunities.

2) Improved identification, preservation, acquisition of, and development of recreation lands.

3) Improved quality of recreational opportunities.

4) Reduced recreational outlays by government, business and individuals.

Table II generally illustrates the responsibilities of the various providers. Only when all agencies, groups and businesses are aware of the needs and plans of one another can a complete recreation system be developed.

A complete description of the responsibilities of various groups and a listing of existing recreational opportunities within the county are set forth within the Jackson County Parks and Recreation Comprehensive Five Year Plan, 1980 (preliminary draft).

RECREATION DEMAND:

Recreation demand is defined as the summation of the desire of all individuals to participate in a given activity. It is difficult to measure desire, and therefore recreation demand is likewise difficult to quantify. five demand indicators for Jackson County are available: Jackson County Recreation Activity Survey; the Oregon State Comprehensive Outdoor Recreation Plan; Statewide Activity Survey; public input sessions; park visitation figures and camper origin data; and, demand projections of the Northwest River Basins Commission. Each of these demand indicators are fully described within the Jackson County Parks and Recreation Five Year Plan. A combination of these information sources has been utilized to develop a demand composite from which Jackson County's recreation needs can be assessed. (Refer to the Jackson County Parks and Recreation Five Year Plan, preliminary draft.)

RECREATION NEEDS ASSESSMENT:

A needs assessment is designed to identify recreational facilities, opportunities and areas which are in inadequate supply. Basically, the existing supply of parks and recreational opportunities is compared with the projected recreation demand. Within the Jackson County Parks and Recreation Five Year Plan an activity by activity assessment has been made in an attempt to determine specific recreation deficiencies.

The assessment shows that of the 21 most popular recreational activities within the county, only seven are specifically identified as being in short supply: camping facilities, hiking trails, bicycling paths, non-pool swimming areas, pool swimming facilities, outdoor game areas, and tennis courts. Out of seven recreational opportunities only camping facilities can clearly be identified as non-urban.

With over 85 percent of Jackson County's 126,000 people living in the Bear Creek region, coupled with emphasis of this plan or urban centered growth, it is expected that the urban facility needs will increase. It is crucial that special programs be developed and implemented which will satisfy the identified shortfall.

SPECIAL PROGRAMS:

The Jackson County Parks and Recreation Department has undertaken two major projects which will significantly expand recreation opportunities; the Bear Creek Greenway, and the Jackson County Comprehensive Bicycle Plan. The Bear Creek Greenway will be a park corridor along the stream, stretching from Emigrant Reservoir on the south to the Rogue River on the north. In January 1980, approximately 58 percent of the land along Bear Creek had been acquired and is part of the Greenway system. Linkages from the corridor to existing parkways and other public ownerships are also part of the system. Park nodes would be developed along the greenway, which would itself remain in a natural state with the only development being pedestrian, bicycle and equestrian trails. The greenway would pass through most of the cities on the valley floor. (Source: Bear Creek Greenway Feasibility Study, William K. Riesland & Associates, 1973.)

The Jackson County Comprehensive Bicycle Plan proposes a bicycle route system along with educational and safety programs, parking areas and other support programs and facilities. The Plan also addresses the feasibility of making bicycling a workable transportation alternative, as well as enhancing opportunities for the safe recreational use of bicycles. The bicycle system is a major element of the countywide recreation plan.

The 1968 Jackson County parks plan entitled, A Plan for Parks and Recreation identified numerous recreational trails within the county. The proposed trails connected many of the urban areas with one another as well as with nearby and more distant recreational facilities and areas. The trails program could provide a recreational opportunity in and around urban population centers which is typically associated exclusively with more remote areas.

Recreation, as defined earlier, encompasses a wide range of activities including human enrichment. The opportunities for enhancing human enrichment programs are great. The county's rich history, pre-history and varied natural environments provide an excellent variety of educational subject matter. These subjects can be the basis for the development of interpretive programs which can integrate recreational and educational experiences.

OTHER PROGRAM CONSIDERATIONS:

The majority of recreational developments within Jackson County were originally designed solely for automobile access. Little consideration has been given to the people who do not own or can't drive an automobile. This deficiency has resulted in many of the county's recreational facilities not being available to the elderly, children, and handicapped individuals.

The Jackson County Parks and Recreation Department has been undertaking efforts to remove barriers within county parks which have limited their use by the transportation disadvantaged. Only through continued awareness of and sensitivity to the needs of these special groups can recreational opportunities within Jackson County be available to everyone.

One of the most important considerations in an individual's selection of a recreational activity is the surroundings in which it takes place. The quality of the recreation activity is sometimes directly related to the quality of the surrounding environment. It is vital that recreation planning ensures for a high quality environment and that subsequent development of recreational areas does not result in environmental degradation.

Energy conservation, as detailed within the Energy Element, is the most effective way to increase the utility of our available energy resources. Recreation facilities and uses can be designed and conducted in a manner that reduces energy consumption. It is necessary that special consideration be given to energy utilization in the design, development, location and utilization of recreation areas.

TABLE II

SUPPLY ROLES OF RECREATION PROVIDERS

		FEDERAL	STATE	COUNTY	CITY	PRIVATE
Facilities	Campground	●	◆	●	■	◆
	Campground (Developed)	◆	●	◆	■	●
	Picnicking Sites	◆	◆	●	●	◆
	Day Use Facilities	◆	◆	●	●	●
	Urban Recreation Facilities	■	◆	●	●	●
	Organization & Group	●	■	●	■	◆
	Trails (Non Motor)	●	◆	●	●	■
	Water Access Sites	●	◆	●	◆	◆
	Swimming Pools	■	■	●	●	●
Park Types	Historic Sites	●	◆	●	●	■
	Regional Parks	◆	●	●	◆	■
	District Parks	■	◆	●	●	■
	Community Parks	■	■	◆	●	■
	Waysides & Rest Areas	◆	●	◆	■	■
Areas	Winter Sports Areas	●	■	■	■	◆
	Natural Areas	●	◆	◆	◆	■
	Natural Areas (Preserves)	●	◆	◆	◆	■
	Greenway	■	●	●	●	■
	Protected Waterway	●	◆	◆	■	■
	Wilderness Areas	●	■	■	■	■
	Viewpoints (Scenic)	◆	●	◆	■	◆
	Off Road Vehicle Areas	●	◆	◆	■	●

Key: ● Primary Supplier
◆ Secondary Supplier
■ Marginal, Or Non Supplier

Source: Jackson County Parks and Recreation Five Year Plan (preliminary draft)

FINDINGS, POLICIES, AND IMPLEMENTATION STRATEGIES:

1

Eighty-five percent of Jackson County residents live in the Bear Creek region, and future population growth will be encouraged to occur within existing urban centers. A local survey and various local recreation agencies have identified the need to provide more recreational opportunities near population centers. As growth continues, this need will become more critical. It is the responsibility of the incorporated cities and the County to provide recreational opportunities to residents living in urban areas.

POLICY: THE COUNTY SHALL COOPERATE WITH CITIES AND ENCOURAGE THE DEVELOPMENT OF RECREATIONAL FACILITIES AND OPPORTUNITIES TO MEET THE RECREATIONAL NEEDS OF URBAN POPULATION CENTERS.

IMPLEMENTATION STRATEGIES:

A) The Jackson County Parks and Recreation Department should continue to coordinate recreational planning and site development with Jackson County. Special efforts should be made to ensure participation by the incorporated cities and federal and state agencies where appropriate. Special emphasis should be placed upon the provision of facilities near urban centers.

B) The County, in cooperation with the incorporated cities, should evaluate future recreation needs within urban growth boundaries and develop programs which will provide for such needs in a timely, economical, and environmentally sound manner. Programs might include: identification; the use of cooperative agreements for purchase; development and maintenance of private recreation sites through the county's or cities' purchase programs, including the capital improvement program(s); and investigate, in cooperation with the cities, the desirability of requiring dedication of recreation lands or payment of funds in lieu of dedication, for all property divisions within urban growth boundaries.

C) The Interagency Advisory Council, composed of the incorporated cities and Jackson County, should place emphasis upon the utilization of state and federal park and recreation grant programs for projects related to urban recreation developments. The issuance of such grants shall be based upon conformance with the applicable comprehensive plan(s).

D) The County park and recreation department should continue to offer technical assistance to the cities.

2

FINDING:

The types of recreational facilities, areas and uses which are pursued by the county citizenry and visitors are diverse. The type of activity which is desirable from one person's viewpoint is based in part upon his/her age, physical condition, income level, family make-up, mood, and mode of transportation. It is not possible for the County to provide or develop recreational opportunities to meet everyone's demand. Several state and federal agencies, cities, nonprofit organizations, and local school districts, as well as the County, provide recreation sites and opportunities for county residents and visitors. Each of these agencies has developed a provider role in Jackson County. The County has a dual role in that it is one of the suppliers of recreation and also the regional coordinator of other suppliers.

POLICY: JACKSON COUNTY WILL COORDINATE RECREATIONAL PLANNING ACTIONS OF PUBLIC RECREATION AGENCIES, PRIVATE SECTOR, AND SPECIAL INTEREST GROUPS TO ACHIEVE A BALANCED SYSTEM OF OUTDOOR RECREATION FACILITIES AND SERVICES.

IMPLEMENTATION STRATEGIES:

A) The County should encourage the management of recreational lands to provide a balance of developed and natural areas to optimize the quality and variety of recreation experiences for users.

B) The County parks and recreation department should continue to coordinate local recreation planning, including site acquisition and development, identification of individual agency's responsibilities, and development of cooperative agreements for plan implementation. The County's fiscal responsibilities regarding site acquisition and development should be set forth within the Capital Improvements Program (refer to the Economy Element).

C) The County parks and recreation department should exchange supply, demand, and design date data with the Forest Service, Bureau of Land Management, Oregon State Parks, and local recreational jurisdiction, and other agencies. Attempts should be made to standardize record keeping, and recreation demand projections.

D) The County parks and recreation department should seek input from all interested agencies on County park development projects.

E) The County should continue to cooperate with the Nature Conservancy and promote cooperation with the Southern Oregon Land Conservancy for other than fee simple protection of open space.

F) The parks and recreation advisory board should continue to actively solicit the participation of the private sector recreation providers in policy formulation.

3

FINDING:

As pointed out in the Economy Element, tourism is an important economic activity in Jackson County; in fact, tourism is one of the top four economic sectors behind the wood products industry. The rich and diverse environmental and cultural resources of the county provide an attractive destination to visitors. Additionally, major transportation routes serve many travelers passing through the area on their way to points north or south. Many of these travelers often require services and overnight accommodations. Jackson County supports the enhancement and diversification of recreational opportunities in the valley through development of destination resorts by the private sector to complement the natural and cultural attraction. It is vital to the economic health of Southern Oregon and Jackson County that the private, as well as the pubic sector, be actively involved in satisfying recreational demands of citizens and visitors alike. Benefits arising from dual involvement are improved services, greater variety of opportunities, and increased private sector contributions to the local economy.

POLICY: PRIVATE ENTERPRISE SHOULD BE ENCOURAGED TO BE AN IMPORTANT FORCE IN DEVELOPMENT AND MANAGEMENT OF RECREATIONAL AREAS; ESPECIALLY THOSE SERVING SPECIAL INTEREST GROUPS, SPECTATOR AND PARTICIPANT SPORTING EVENTS, AND TOURIST ORIENTED FACILITIES AND SERVICES. TO THIS END, JACKSON COUNTY SHALL COOPERATE WITH PRIVATE ENTERPRISE AND OTHER PUBLIC ENTITIES IN THE ENHANCEMENT AND DEVELOPMENT OF RECREATIONAL OPPORTUNITIES WHICH ARE COMPLEMENTARY TO THE NATURAL ENVIRONMENT AND RESOURCE USE OF THE AREA.

IMPLEMENTATION STRATEGIES:

A) Recreational needs, information and background data should be made available to interested groups, organizations, businesses, and other segments of the private sector in an effort to assist in the identification of potentially needed recreational facilities.

B) Subject to availability of private sector site development opportunities, the County should limit its involvement in full hook-up campground facilities designed for tourists, so as to encourage expansion of private development of such facilities.

C) The Jackson County Land Development Ordinance should conditionally allow tourism facilities such as: short-term boarding facilities, campgrounds, and farmhouses used as guest houses in appropriate rural plan and zoning districts.

D) The County parks and recreation department should continue to cooperate with local chambers of commerce and tourist or visitor associations to inform tourists of recreation facilities available within the county.

E) Plan and ordinance provisions shall be adopted to allow for the siting of destination resorts within rural areas of Jackson County.

4

FINDING:

Most of the residents living within the Bear Creek urban region reside within three miles of Bear Creek. Its banks and portions of the floodplain have not been developed and retain much of their natural vegetation. Jackson County, in cooperation with several of the incorporated cities, has been acquiring lands adjacent to Bear Creek through the Greenway Program. Establishment of the Greenway from Emigrant Lake to the Rogue River will conserve an important natural environment and recreation resource located where open space is needed most.

POLICY: JACKSON COUNTY SHALL CONTINUE THE BEAR CREEK GREENWAY PROGRAM.

A) Refine the existing program and develop a greenway plan to establish priorities for future land acquisition and guide development in the greenway.

B) The program shall emphasize nonmotorized recreation, preservation and enhancement of the natural environment, and the provision of pedestrian and bicycle transportation between incorporated cities.

5

FINDING:

Biking, bicycle riding and walking for pleasure are the most popular trail related activities in Jackson County. Though not as popular, jogging, cross country skiing and horse riding also place demand on trail facilities. Most of the existing trail miles in the county are located in remote areas. There are few close-in recreation trails; this had created an access problem. The County recognizes the need for close-in trail miles and connector trails that would not only increase recreation opportunities but, would also provide support for alternative modes of transportation.

POLICY: THE COUNTY PARKS AND RECREATION DEPARTMENT WILL PRIORITIZE AND SEEK FUNDING FOR TRAIL DEVELOPMENT ALONG THE GREENWAY, WITHIN EXISTING PARKS AND AT OTHER SITES WITHIN EASY ACCESS OF URBAN RESIDENTS.

IMPLEMENTATION STRATEGIES:

A) The County parks and recreation department should update the County bicycle plan to include an implementation time frame.

B) The County should place emphasis upon the development of the trail system along the Bear Creek Greenway.

C) The County parks and recreation department should cooperate with public agencies and other land owners in planning an interconnecting trail system between the county's population centers and outlying areas.

D) The parks and recreation advisory board should contact interested groups with the idea of establishing a trail subcommittee for Jackson County.

E) Funding for trail development should be included within the County's Capital Improvements Program (refer to Economic Element).

6

FINDING:

Recreation lands within the county have been acquired to protect, and at the same time make available for the public's use, significant natural, scenic, historic, and cultural resources. The conflict, which sometimes occurs between recreation and preservation, can be bridged through interpretative services which provide both recreational and educational opportunities.

POLICY: WHENEVER POSSIBLE THE COUNTY SHOULD ENCOURAGE THE DEVELOPMENT OF ON-SITE INTERPRETIVE FACILITIES WHICH INCORPORATE ENVIRONMENTAL, AND CULTURAL EDUCATIONAL OPPORTUNITIES.

IMPLEMENTATION STRATEGIES:

A) The County parks and recreation department should encourage the use of park sites for natural and historic research, and artistic study by Southern Oregon State College, Rogue Community College, local school districts, and other groups.

B) Interpretative facilities should illustrate local environmental problems, local prehistoric and historic activities, and broaden the public awareness of such, as well as foster energy conservation awareness whenever possible.

C) The County parks and recreation department should develop a program, based upon the Jackson County Historic Properties inventory which would provide for protection, maintenance, and enhancement of county park facilities which have historic significance. The master plan for Givan Farm, Lily Glen Barn, and the covered bridges should place particular emphasis upon historical enhancement.

7

FINDING:

Few recreation developments within the county were originally designed to provide for the special facilities that are required by senior citizens and handicapped individuals. Further, most of the recreation facilities within the county were originally designed and located to be primarily accessible by automobile. These facts have limited or precluded their use by the "transportation

disadvantaged," which may include the elderly, children, handicapped individuals, and citizens who do not own or have access to an automobile. Special efforts are now being made within existing parks to reduce some of these problems.

POLICY: THE COUNTY SHALL REASONABLY INSURE THAT DEVELOPMENT OF RECREATION FACILITIES AND AREAS PROVIDES FOR THE NEEDS OF PERSONS WITH LIMITED MOBILITY AND FINANCES.

IMPLEMENTATION STRATEGIES:

A) The County parks and recreation department should continue its reduced user fees for senior citizens during weekdays, and investigate other user incentive programs.

B) County parks and recreation department should continue to develop design standards for access to recreation facilities by the handicapped.

C) In the design of county recreation facilities emphasis should be placed upon the use of such facilities by the very young, the elderly and the handicapped.

D) Plan the Bear Creek Greenway trail system so that it can be a useful connecting link for bike, foot, and horse traffic along the valley floor.

E) Incorporate the Jackson County bike trail system into the major transportation arterials by providing frequent, easy, practical, and safe accesses, bike lanes, and paths through urban and commercial areas and secure parking facilities for bikes.

8

FINDING:

Environmental quality is a major determinant of the quality of a recreational experience. Recreation can have either positive or negative impacts on the environment depending on the types of activities, where they are located, and how the activity or facility is planned.

POLICY: THE COUNTY SHALL ENCOURAGE THE DEVELOPMENT OF RECREATIONAL FACILITIES, AREAS, AND USES THAT MINIMIZE ENVIRONMENTAL DETERIORATION.

IMPLEMENTATION STRATEGIES:

A) The County parks and recreation department shall place the protection of the environment as a high priority in master plans and recreation system development. Master plans shall also consider the carrying capacity of the air, land, and water resources. The developments provided for in such plans should not exceed the carrying capacity of the resources.

B) Priority should be given to development of areas and facilities for activities which are not harmful to the environment. In instances where facilities or areas for environmentally harmful activities are developed, they should be designed to minimize the impact, and be isolated from other recreation areas.

C) The County should, in certain instances, encourage the complete separation of motorized and nonmotorized recreational activities.

D) The County should cooperate with other agencies in the development of a countywide management strategy for motorized and off-road vehicle recreational activities.

9

FINDING:

The Board of County Commissioners has publicly supported energy conservation considerations in land use planning. The price of energy and its sometimes questionable availability has changed recreation patterns, resulting in people recreating closer to home. The increasing costs of energy as also resulted in increased outlays for park maintenance and operations.

POLICY: THE COUNTY SHALL ENCOURAGE THE DEVELOPMENT OF OPPORTUNITIES WHICH MEET RECREATION NEEDS WHILE PROVIDING MAXIMUM CONSERVATION OF ENERGY: IN THE TRANSPORTATION OF PERSONS TO THE FACILITY OR AREA; IN THE DESIGN AND OPERATION OF THE FACILITY OR AREA; AS WELL AS, IN THE RECREATION USE ITSELF.

IMPLEMENTATION STRATEGIES:

A) Implement the Jackson County Bicycle Plan, as adopted, and whenever possible link parks to bicycle routes.

B) Encourage the Rogue Valley Transit District to provide park and ride services to recreational and cultural events which are well attended, and to provide regular service, similar to the Mount Ashland route, to high use county parks.

C) Recreational facilities should be designed to minimize energy use through selection of construction materials, utilization of alternative energy forms, especially solar, and provisions for bicycle, mass transit, and pedestrian traffic within park design.

D) Following completion of the existing county park's facilities, development programming should emphasize development of facilities for nonmotorized recreational uses.

E) Provide recreational programs that favor an appreciation, and utilization of low-energy consumptive forms of recreation.

F) The parks and recreation department should evaluate the demand for and feasibility of the provision of minimum service campsites for local bicyclists and hikers on weekend or short-term in-county excursions.

RURAL AND SUBURBAN LANDS[1]

GOAL: TO ALTER THE COURSE OF RURAL AND SUBURBAN LAND DEVELOPMENT THROUGH A PHASED AND ON-GOING PROCESS OF SPECIFIC GEOGRAPHIC AREAWIDE PLANS WHICH WILL CREATE AN ORDERLY AND EFFICIENT RURAL AND SUBURBAN LAND USE PATTERN ON LANDS NOT DESIGNATED FOR URBAN NOR FOR AGRICULTURAL OR FOREST USE. THESE AREAWIDE PLANS WILL GUIDE THE LOCATION AND DESIGN OF SUCH DEVELOPMENTS TO BE CONSISTENT WITH, AND RESPONSIVE TO, THE ATTITUDES AND DESIRES OF AREA RESIDENTS GIVEN THE SOCIAL, ECONOMIC, ENERGY, ENVIRONMENTAL AND PHYSICAL NEEDS, OPPORTUNITIES AND CONSTRAINTS APPLICABLE TO THE PARTICULAR PLANNING AREA.

INTRODUCTION/BACKGROUND:

By definition, the Rural and Suburban Lands Element deals with areas within Jackson County which are not being planned for urbanization, agriculture, open space, or forest uses. The unincorporated area of Jackson County categorized as rural and suburban land in the Plan is roughly 30,652 acres (total lands committed and needed less 4,628 acres which is composed of the acreage included within the urban containment boundaries). The Rural and Suburban Lands Goal refers to a change in the course of development because a considerable portion of the rural area has been, or is being, developed in a sprawling, inefficient, and environmentally detrimental manner. This trend is so thoroughly established that its reversal is one of the most critical and most difficult subjects to be dealt with in the comprehensive planning process. This kind of unstructured development could virtually eliminate the rural character of the County and have negative environmental and economic consequences.

Not all development of rural lands is inappropriate, nor must all population growth somehow be stopped. As discussed in the Existing Land Use Element, there are 20 rural communities and rural service centers located throughout Jackson County. These areas serve as the social and economic centers for rural residents and those traveling through the rural area. The various rural centers acknowledged under Oregon Administrative Rules (OAR) 660-022 are described in more detail at the end of this Element, along with policies to guide development within specific communities and centers. (*Amended by Ordinance 2000-6 on 4-24-00, Acknowledged by DLCD Order 001208 on 5-26-00, Effective 6-5-00, File 96-26-OA-PR)*

The County faces difficult decisions in balancing economic and environmental realities with rapid population growth and increasing development pressures. As vast as the County's rural land area is, it is finite. Within the scope of present and foreseeable technology there are logical limits to the amount of development which can occur before serious Countywide consequences are felt. Fortunately, these limits are variable, depending upon the manner in which the inhabitants are accommodated. It may be possible to accommodate thousands of persons in what is now rural land without destroying the character of the County and not adversely impact or consume resource lands. To do so will require a monumental change in direction and entirely new or substantially modified rural and suburban land use standards.

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[1]*Adopted by Ordinance 80-17 on 8-29-80, effective 10-28-80 (File 80-1-ZOA); Amended by Ordinance 84-43 on 12-26-84 (File 83-16-OA); Amended by Ordinance #2004-1, Adopted on 1-12-04; Effective 3-12-04 (File 2003-1-OA).*

Through clustering in urban areas, the County can enact a density transfer system which can be used to increase allowable densities in certain locations while decreasing densities in other locations. This may be done on a limited scale involving only transfers within a single tax lot, or within several tax lots, or it may be undertaken on a broad scale which covers all rural and suburban lands. By developing a broad scale density transfer system, the County may be able to reduce the density and intensity of development allowed in rural/suburban inappropriate locations while increasing development in appropriate urban locations.

Assuming that a broad scale density transfer system is implemented at some future time, the County must select appropriate locations for receiving the developments which are transferred. Transfers to areas within urban growth boundaries will be necessary, warranting close cooperation with participating cities. If the County is to achieve the goal for rural and suburban lands, it will do so through cautious provision of public facilities and through strong land use planning. A passive approach will clearly allow suburban sprawl to become more widespread, wasting energy and further degrading air and water quality and diminishing the rural character in such areas.

The Rural and Suburban Lands Element is strongly related to many other elements of the Comprehensive Plan. This relationship is strongest with the Agricultural, Forest and Urban Lands Elements because of the locations of the lands involved; with the Public Facilities Element and with the Housing Element because residential developments can be expected to have the most significant affect upon rural lands. Elements dealing with energy, transportation and environmental quality are also related.

Development within the County's rural and suburban lands includes a wide array of densities and intensities. Some areas have urban services such as sewer and water and are quite highly built-up. Note the existing industrial areas outside of Medford and Central Point urban growth boundaries. Other areas are already divided into sprawling tracts of traditional block patterns containing individual and scattered homesites of one to twenty acres. What this means is that some of nearly every conceivable type of conventional development already exists throughout the County and much of it is inappropriate in terms of public services, energy consumption and environmental impacts.

The County clearly intends to stage the implementation of this Element through a phased planning process, reflecting the above parameters and the policies and implementation strategies stated herein. This phasing recognizes the diversity of the County's lands and resources, the variety of social and economic attitudes, needs, capabilities and restraints, and lifestyles prevalent in the citizenry, as well as the energy, environmental and physical development opportunities and constraints these factors present; and also, that planning is a process reflecting all of these influential aspects.

FINDINGS, POLICIES AND IMPLEMENTATION STRATEGIES:

1

FINDING:

Existing residential densities are low with the build-out having been constrained by poor soil conditions and lack of public facilities, but must be expected to show significant increases if not restricted or redirected. It is not appropriate to assume that an area's unsuitability for standard septic systems will indefinitely prevent its development in an area where land use regulations indicate that the area is appropriate for development, unless such development would be jeopardized by natural or man-induced hazards such as steep slopes, highly erosive or severe soil limitations, or would jeopardize the conservation of natural resources with high amenity values. Furthermore, the historic pattern of sprawling rural and suburban land use is well established in some areas. Considerable speculative investment has been made in rural lands and a high percentage of rural residents intend to eventually divide their land and offer it for sale. The courts have generally upheld down-zoning actions in the interest of the public welfare without compensation.

POLICY: IT IS THE POLICY OF JACKSON COUNTY TO REDUCE AND REALLOCATE THE OVERALL ALLOWABLE DENSITY AND INTENSITY OF RURAL AND SUBURBAN LANDS TO THE EXTENT NECESSARY TO MINIMIZE FURTHER DEGRADATION OF AIR QUALITY, REDUCE ENERGY CONSUMPTION AND REDUCE THE LONG-RANGE COST OF PROVIDING PUBLIC FACILITIES AND SERVICES.

IMPLEMENTATION STRATEGIES:

A) Investigate a variety of alternative techniques which could be used to implement the above policy and ensure Goal achievement, and consider which are appropriate to the needs and desires of local area residents, including but not limited to: down-zoning, clustering/planned unit developments in urban areas, density transfer, up-zoning, and other appropriate techniques as may be deemed feasible and applicable. Any density/intensity increases will be emphasized in established communities and/or in areas which are already committed to such densities and uses through existing subdivisions, partitioning or development.

B) Base all proposed rural and suburban land use actions on the following principles:

i) Recognize the diversity of the County's lands and natural resources and the variety of social and economic needs, attitudes and life-styles prevalent in the citizenry, as well as the overall social, economic, energy, environmental and physical opportunities and constraints these factors influence regarding development in rural areas, and also that planning is a process responsible to these factors.

ii) Recognize the location and extent of existing rural and suburban residential development in areas where commitments to such uses and

densities have already been made. *(Adopted by Ordinance 2001-30 on 12-12-01, Effective 2-10-02, File 2001-07-OA*)

iii) Development in such committed areas will be limited to the infilling of vacant land at rural and suburban densities.

iv) Rural and suburban lands and proposed developments beyond the area cited above will:

a) Be appropriately, if not uniquely, suited to the area or site proposed for such development;

b) Promote an orderly and efficient rural and suburban land use pattern; and,

c) Be located and designed so as to:

* Preserve and enhance the rural character, natural resources, scenic values and open spaces of the County;

* Ensure the safety and viability of rural and suburban land uses by limiting development in areas susceptible to natural or man induced hazards;

* Minimize the long-range public costs of providing facilities and services;

* Provide an orderly transition between urban, suburban and rural uses and areas;

* Conserve natural resources with high amenity value;

* Improve patterns of energy consumption; and,

* Minimize the further degradation of air and water quality.

2

FINDING:

The procedures required to develop a subdivision in Jackson County, and the types of improvements required, encourage many individuals to partition land rather than subdivide it. An astute team of developers can create as many as 27 new parcels from a single original lot in three years by partitioning. Such a development is not required to provide any improvements and no permission from the County would be needed provided minimal zoning requirements are met. Another team of developers proposing to subdivide the same piece of property into 27 lots would face public scrutiny, one or more hearings, and improvement expenses, while facing the fact that the subdivision application could be denied.

This double standard for subdivisions as opposed to partitions has a significant bearing upon patterns of rural and suburban property divisions in Jackson County. Four to five times as many new tracts are created by partitioning than by subdividing. The majority of rural and suburban properties are thus created without the types of improvements and overall design review appropriate for land development. Efforts to implement the policies of the Comprehensive Plan by simply amending the subdivision regulations without standards will have minimal effect upon rural and suburban areas where little of the property division activity is actually subdividing.

POLICY: ALL LAND PARTITIONING SHALL BE DESIGNED TO MINIMIZE LONG-RANGE PUBLIC COSTS RESULTING FROM PROPERTY DIVISION OR DEVELOPMENT.

IMPLEMENTATION STRATEGIES:

A) Revise the Land Development Ordinance to include improvement requirements for any property division that would reduce the likelihood of eventual high public costs for the provision of early repair or replacement of public services and facilities.

B) Modify the private road system of property divisions and require County or other public roads to serve most divisions.

C) Consider systems development charges and similar programs to minimize public costs resulting from development.

3

FINDING:

Preexisting, nonconforming mobile home parks in rural and suburban areas will not automatically disappear as a result of any planning action. Some parks have received a poor reputation due to inadequate planning during the original development stages or simply as a result of poor upkeep. Methods and techniques are available to upgrade the livability and general appearance of existing parks through incentives in a manner which will not necessarily place an undue burden on the owner.

POLICY: IT IS THE POLICY OF JACKSON COUNTY TO ENCOURAGE THE UPGRADING OF EXISTING MOBILE HOME PARKS TO CURRENT DEVELOPMENT STANDARDS.

IMPLEMENTATION STRATEGY: Existing mobile home parks which do not meet current development standards or zone density, shall be encouraged to improve by allowing some expansion in trade for a general upgrading of the existing park. Revise and amend the existing Land Development Ordinance to provide for increase densities in mobile home parks, conforming to the above policy through a system of limited density bonus or transfer subject to compliance with stringent development/improvement guidelines and criteria. Expansions should occur only on lands not considered as farm or forest. Specific criteria will be developed in conjunction with the revision of the Land Development Ordinance. Criteria would address spacing, landscaping, paving of streets,

lighting, signing, storage, accessory buildings, provisions for community facilities and other aesthetic or functional characteristics of the park.

4

FINDING:

General Commercial: It is generally understood that most commercial development is considered to be urban in nature, and should therefore be limited to urban or urbanizable areas. The exceptions are those areas which are needed to serve the convenience needs of the rural population. Otherwise the expansion of commercial uses defeats the concept of encouraging urban centered growth; causes further sprawl; increases auto driving; affects air quality; and, potentially impacts rural resource land.

The general commercial category of land use was originally created in 1972, to recognize the wide variety of light to heavy commercial activities that line some of Jackson County's State highways. Frequently areas zoned for this use also contain uses which are industrial in character. Expansion of these areas generates many of the problems mentioned above. Their size is such, however, that they cannot be ignored. Making them nonconforming would also defeat the intent of good land use planning. They would not disappear, but only be hampered in ability to expand or improve, and would eventually tend to become blighted due to neglect. On the other hand, careful access planning and site plan reviews on new fill-in development could substantially improve the quality of these areas creating a more positive impact on the neighborhood in which they are located.

POLICY: EXISTING COMMITTED GENERAL COMMERCIAL AREAS OUTSIDE OF URBAN GROWTH BOUNDARIES SHOULD NOT EXPAND EXCEPT FOR FILL-IN DEVELOPMENT, AND WHERE POSSIBLE SHOULD BE UPGRADED, IMPROVING APPEARANCE, SAFETY AND NEIGHBORHOOD COMPATIBILITY.

IMPLEMENTATION STRATEGY: The existing general commercial district should be applied only to those areas that are considered to be generally committed to such usage. New areas not currently being used for this purpose should not be zoned for this type of activity.

5

FINDING:

Rural Service Commercial Uses: Rural service commercial areas currently exist in numerous locations throughout the County near concentrations of rural population. These centers serve some of the limited daily convenience needs of the rural resident, farming or forest community. Their scattered location in the rural areas saves driving time to larger urban business areas in addition to being more energy efficient. These areas are generally limited in the type of service offered due to the limited population that lives in the service area. Regardless, they should not become so large that they compete with business areas in nearby communities.

POLICY: RURAL SERVICE COMMERCIAL ACTIVITIES SHOULD BE PROVIDED IN EASILY ACCESSIBLE LOCATIONS AND SIZED TO SERVE THE CONVENIENCE NEEDS OF RURAL RESIDENTS.

IMPLEMENTATION STRATEGIES:

A) Maintain the existing rural service commercial zone district and limit the uses permitted only to those necessary to serve the limited commercial needs of rural residents.

B) Zone only those areas actually deemed necessary, keeping in mind the need to maintain the rural environment.

6

FINDING:

Interchange Commercial Uses: Historically, the traveling public has been served by motels, restaurants, gas stations and similar uses located conveniently at freeway interchanges. The traveling public generally expects these conveniences.

POLICY: SELECTED INTERCHANGE COMMERCIAL AREAS SHOULD BE ALLOWED TO SERVE THE NEEDS OF THE TRAVELING PUBLIC AT FREEWAY INTERCHANGE AREAS IF THEY SATISFY THE FOLLOWING CRITERIA:

A) The uses do not conflict with adjacent city business areas;

B) Adjacent land uses are buffered from the commercial area;

C) Resource lands are not materially affected by the use;

D) The operation and effectiveness of the interchange is not impacted by the commercial use;

E) The uses can be provided without requiring the extension of urban level services to the site.

IMPLEMENTATION STRATEGY: Maintain the existing interchange commercial zone and allow only those areas that generally would not compete with the other established business districts.

7

FINDING:

Industrial Land Use: Throughout the unincorporated area of Jackson County, there exists a few isolated locations and concentrations of existing industrial uses. Nearly all of these areas were existing prior to the adoption of Countywide zoning in 1973. Many of these uses are considered to be heavy industrial uses, such as wood products processing, manufacturing, or trucking related. White City, for example, has the largest acreage and concentration of industrial uses in Jackson County. Many of the uses that exist there require an extensive amount of land, and by their nature are best suited to a rural environment. Other industrial activities exist along some of Jackson County's State highways, mixed in with existing commercial uses. These are found on Highway 99, between Medford and Phoenix, and on Crater Lake Highway, between Medford and White City.

Like some commercial activities, most industrial development is considered to be urban in nature, and should therefore, only occur within existing cities or urban growth boundaries. However, since industrial uses currently exist outside of cities and urban growth boundaries in substantial quantity, it is necessary to recognize their existence; contain the development by only allowing fill-in development; and, provide standards to improve their use, appearance, and safety when possible.

POLICY: EXISTING COMMITTED RURAL INDUSTRIAL AREAS OUTSIDE OF URBAN GROWTH BOUNDARIES SHOULD NOT BE EXPANDED EXCEPT FOR FILL-IN DEVELOPMENT AND WHERE POSSIBLE, SHOULD BE UPGRADED, IMPROVING APPEARANCE, SAFETY AND NEIGHBORHOOD COMPATIBILITY.

IMPLEMENTATION STRATEGIES:

A) The existing light and heavy industrial zoning district should be applied only to those areas that are considered to be generally committed to such usage. New areas not currently being used for industrial use should not be zoned for future industrial use.

B) Existing areas should be upgraded when possible, improving appearance, safety and neighborhood compatibility. This could be accomplished through standards in the Land Development Ordinance, or by applying a site plan review procedure to all development proposals.

8

FINDING:

Limited Industrial and Commercial Uses: An extensive area of mixed residential, commercial and industrial use occurs in the vicinity of Table Rock Road, and the north side of the Rogue Valley-Medford Airport. This area is in transition from residential to more intense uses. Due to the nearness of the Airport and its noise impacts on the nearby areas, a combination of commercial and industrial uses tend to allow an option for existing residential uses that are less

impacted by the Airport. Additionally, some industrial uses may desire location near the Airport for the convenience and service it provides.

POLICY: LIMITED INDUSTRIAL AND COMMERCIAL USES ARE DESIRED NEAR THE AIRPORT, IN THE AREA IMPACTED BY NOISE AS AN OPTION TO EXISTING RESIDENTIAL USE, AND AS A MEANS TO SERVE SOME INDUSTRIES DESIRING A LOCATION NEAR THE AIR TRANSPORTATION FACILITY.

9

FINDING:

Rural residential lands abut agricultural and forest lands in many locations throughout the County. Conflicts are likely to result where rural residences are located in close proximity to intensive forestry, aggregate resource, or farming operations. Such conflicts may be mitigated through various means including buffers, but the most effective is physical separation. Due to the particular economic importance of resource producing lands it is important that buffers be provided on the less productive land, if possible, rather than consuming resource land for that purpose.

POLICY: THE COUNTY SHALL MAINTAIN THE VIABILITY AND INTEGRITY OF RESOURCE LANDS BY PROVIDING BUFFER AREAS ON SPARSELY SETTLED PROPERTIES ADJACENT TO SUCH RESOURCE LANDS.

IMPLEMENTATION STRATEGIES:

A) Amend Land Development Ordinance to indicate that agricultural, forestry, and mineral extraction operations may be considered the primary activities of rural areas even though residential uses may be permitted.

B) Identify, through the areawide planning process, those sites where resource/residence conflicts are likely to occur. This process should also be used to analyze various methods of mitigating conflicts.

10

FINDING:

Areawide Plans: Most of the Jackson County Comprehensive Plan addresses the application of State goals and planning policy on a Countywide or issue related basis. As such, it mandates uniformity throughout much of the County. It is recognized, however, that physically and socially many areas of the County differ. Where possible the Comprehensive Plan should have sufficient flexibility to fit the needs and attitudes of diverse areas provided the general philosophy of the Plan and the requirements of the Statewide Planning Goals are not undermined. The concept of developing more detailed, more responsive area plans is a means to fine tune the Comprehensive Plan after acknowledgment by the Land Conservation and Development Commission. As noted in the implementation strategies of many of the Plan policies, detailed area plans are suggested as a means to further study and resolve specific local issues, such as

noise, transportation, public facilities and services, specific land use conflicts, and similar detailed planning issues.

POLICY: GREATER FLEXIBILITY AND DETAIL SHOULD ULTIMATELY BE PROVIDED WITHIN THE INTENT OF THE COMPREHENSIVE PLAN AS A MEANS TO REFLECT THE PHYSICAL AND SOCIAL VARIABLES AND ATTITUDES THAT EXIST THROUGHOUT THE COUNTY.

IMPLEMENTATION STRATEGY: Develop a staged program of detail planning for individual geographic areas of the County. The program would result in the eventual adoption of detailed area plans which would amend this Comprehensive Plan. This would be based on the overall policies of the Plan, yet adjusted to fit specific area's needs or desires.

11

FINDING:

Partitioning and Subdivision Activity: A major form of land development in the rural area of Jackson County occurs through a land partitioning and subdivision process. In 1979, there were 247 minor partition applications, 23 major partition, and 6 subdivision requests. This created approximately 725 parcels during the year. In the rural areas, this form of land use activity commits the land to its ultimate uses. The manner in which this division of land occurs and the standards toward which the land is improved has a long lasting effect on those occupying the land, and the general public, in terms of needed public facilities, services, maintenance, water quality, transportation, and others.

Many of the policies of the Comprehensive Plan cannot be adequately implemented without the review and control of land division in accordance with acceptable standards and guidelines. Partitioning and subdivision regulations are authorized by Oregon Revised Statutes, Chapter 92. The County has had subdivision regulations since 1959; major partition (private road) regulations since 1975; and, minor partition regulations since 1979. The latter was adopted only as a means to apply the agriculture goal on an interim basis until adoption of the updated Comprehensive Plan.

POLICY: THE COUNTY SHALL MAINTAIN LAND PARTITIONING AND SUBDIVISION REGULATIONS IN THE LAND DEVELOPMENT ORDINANCE.

IMPLEMENTATION STRATEGY: The County shall update its partitioning and subdivision regulations as a means to implement numerous Comprehensive Plan policies.

12

FINDING:

Nonconforming Uses: Upon adoption of the 1973 Zoning Ordinance, numerous uses of land were considered to be nonconforming, since the zone district applied did not permit some existing uses. The updated Plan and zoning may also create additional nonconforming uses. Nonconforming uses are generally considered to be undesirable or incompatible; incompatible in the sense that they generate noise, dust, odor, traffic or other characteristics that may negatively affect the neighborhood in which they are located. State law places limitations on nonconforming uses, and how they are handled locally. Oregon Revised Statutes 215.130 states as follows:

> "5) The lawful use of any building, structure or land at the time of the enactment or amendment of any zoning ordinance or regulation may be continued. Alteration of any such use may be permitted subject to subsection (9) of this section. Alteration of any such use shall be permitted when necessary to comply with any lawful requirement for alteration in the use. Except as provided in ORS 215.215, a county shall not place conditions upon the continuation or alteration of a use described under this subsection when necessary to comply with state or local health or safety requirements, or to maintain in good repair the existing structures associated with the use. A change of ownership or occupancy shall be permitted."
>
> "6) Restoration of replacement of any use described in Subsection (5) of this section may be permitted when the restoration is made necessary by fire, other casualty or natural disaster. Restoration or replacement shall be commenced within one year from the occurrence of the fire, casualty, or natural disaster. If restoration or replacement is necessary under this subsection, restoration or replacement shall be done in compliance with ORS 195.260 (1)(c)."

Many uses, currently considered to be nonconforming, may actually have limited negative impact on the neighborhood. Some of these uses provide rural employment opportunities for rural residents. Additionally, some of these uses, if expanded or altered, could, under proper site planning control, actually result in a mitigation of some of the potentially undesirable effects. Other uses are so obnoxious that they should not be expanded, with the view in mind that they will someday be discontinued.

POLICY: MOST NONCONFORMING USES SHOULD ULTIMATELY BE DISCONTINUED AS A MEANS TO IMPROVE THE QUALITY OF THE RURAL ENVIRONMENT. SOME NONCONFORMING USES, HOWEVER, WHICH ARE NOT IMPACTING THE RURAL ENVIRONMENT, SHOULD BE PERMITTED TO CONTINUE AND EVEN EXPAND IF EXISTING NEIGHBORHOOD IMPACTS ARE NOT INCREASED OR ARE IN PART MITIGATED.

IMPLEMENTATION STRATEGIES:

A) Require the discontinuation and altering of nonconforming uses as required by ORS 215.130.

B) During the areawide planning process evaluate in closer detail the types of nonconforming uses in the area. If possible, categorize those which have limited impact on the neighborhood, and amend the Land Development Ordinance to provide for expansion or alteration through a review process.

UNINCORPORATED COMMUNITIES

APPLEGATE RURAL COMMUNITY[2]

The rural unincorporated community of Applegate is located in Jackson County approximately 20 miles northwest of Medford along Highway 238. Applegate is centrally located in the Applegate River Valley, which continues into Josephine County and the unincorporated communities of Wilderville and Murphy to the west. The Applegate River is a tributary of the Rogue River. The population base of the Upper Applegate (including Ruch) is approximately 3,870 people.

The discovery of gold in the 1850's brought a flood of miners into the Applegate Valley watershed. The Donation Land Claim Act of 1850 and the Homestead Act of 1860 encouraged even greater numbers to settle in the area. In the mid-1850's, hostilities between these newcomers and the indigenous peoples of the Applegate watershed resulted in the decimation of Native American groups. Mining activities created a market for supplies which were brought first on pack trains. The completion of the Crescent City to Jacksonville Wagon Road in 1858 allowed freight wagons to supply the miners and made the area accessible to more people. As mining activities declined, agriculture and ranching became the economic mainstay of the area. Grains, vegetables and fruits were grown; dairy herds, cattle and sheep grazed the area. Irrigation diversions, some of which had originated with mining operations, supported the fine family farms of the area. People also engaged in some logging for local use. There was a sawmill on Thompson Creek and another five miles west of Ruch. After World War II, there was more demand for lumber from the housing construction industry.

In the 1950's, residents started seeing changes in their Applegate neighborhoods. The people who were moving into the hills for a rural lifestyle had little interest in farming or ranching. Larger land holdings were divided into smaller homesite parcels. Hobby farms appeared, as did a pattern of workers commuting to the nearby cities of Medford and Grants Pass. Land and home property values rose, as the number of large, expensive homes increased. Homesites were established on the upper valleys and hillsides. Today, the social and institutional setting of the Applegate watershed is remarkable for the degree of formal collaboration and cooperation that exists around issues of environmental concern. The recent history of the area is one of local groups and Federal agencies, namely the Bureau of Land Management and the Forest Service, organizing around ecosystem management, the stewardship of natural resources, and the mutual sustainability of the forests, economies, and communities of the Applegate.

The community of Applegate has a rich history. It was originally named Bridge Point. From there, travelers on the Jacksonville-Crescent City trail crossed the Applegate River via a wooden bridge built around 1860. A local farmer named Orlando Rose built a hall for dances and community events near the crossing. The Bridge Point School District was organized in 1872

[2]*Adopted by Ordinance #2000-6 on 4-24-00, Acknowledged by DLCD Order #001208 on 5-26-00, Effective 6-5-00. File #96-26-OA(PR)*

and the Applegate Post Office opened in 1895. One of the first stores was owned by the Pernoll family and built two miles west of the crossing in 1874. The Pernoll family later built a store at the crossing which housed the post office. Across the road from the Pernoll's store, in 1947, the Kubli family built a store with gas pumps and automobile service. Between their store and the river, the Kublis made a park and picnic area, now called Applegate Wayside, close to the local swimming hole. Across the river from this site, one can still see the creamery building started by the Werth family in 1912. The Valley Pride Creamery served the many area farmers who had fresh milk and cream to be processed. It was operated until the late 1920's; today it serves as a private residence. Other community halls were built in the area, including Grubb Hall and the Herriott Community Hall, where dances and picnics were held. In 1946, the Applegate Community Church was built on a hill overlooking the Pernoll store. The church originally had ties to the Assembly of God, but is now a non-denominational church.

FINDINGS, POLICIES AND IMPLEMENTATION STRATEGIES:

APPLEGATE A1

FINDING: Growth must be based on current zoning and the availability of services. Ensure that new land uses are compatible with the existing environment, rather than establishing new uses that require changes in the rural character of the Core. Proposals to change existing drainage patterns, local loads and the highways, must be evaluated with respect to their affect upon the rural character of the area.

POLICY: COMMUNITY GROWTH SHOULD BE CONTROLLED, MANAGED INTENTIONAL GROWTH.

IMPLEMENTATION STRATEGY: A checklist will be developed to facilitate comment and approval from the relevant County, Federal and State agencies involved in issuance of development permits of the community core area. Residential densities should be maintained at the existing level, and new commercial uses should be kept at a rural scale with restrictions on height and square footage per development site. Specially designed Applegate Residential and Applegate Rural Service Commercial Districts need to be adopted to guide development within the community core.

APPLEGATE A2

FINDING: Applegate residents expressed a need for greater communication between the County and residents on a variety of issues. Notice of land use decisions are made to property owners within a State mandated area. Residents expressed the need for more comprehensive noticing, including non-traditional notice recipients, and public hearings on land use decisions held in the Applegate area.

POLICY: **FACILITATE CITIZEN PARTICIPATION AND COMMUNICATION BETWEEN JACKSON COUNTY AND THE APPLEGATE RESIDENTS.**

IMPLEMENTATION STRATEGIES: To increase community involvement, Jackson County shall:

- Notify up to six community designated businesses or organizations of land use decisions on property within the Applegate core, or on property bordering the Applegate Community Boundary. Organizations to be notified include the Applegator Newsletter, the Local Watershed Council, the local U.S. Post Office, any newly created CAC's, the Mail Tribune and the Grants Pass Courier. Other organizations may be added to the list only when one of the six organizations mentioned either ceases to exist or no longer wishes to receive notifications.

- Encourage the Planning Commission and Board of Commissioners to hold their public hearings in the evening, in the Applegate Community on land use actions that will affect property inside or on property directly adjacent to the Applegate Community Boundary.

- Encourage the Jackson County Hearings Officer to hold evening public hearings in the Applegate Community on all quasi-judicial land use actions on property within or directly adjacent to the Applegate Community Boundary.

APPLEGATE A3

FINDING: Residents expressed concerns that Highway 238 would be widened and improved, thereby destroying the rural quality of life in their community. Residents felt that new land uses which would require the expansion of existing transportation systems should not be allowed.

POLICY: **MAINTAIN THE CURRENT LEVEL OF TRANSPORTATION FACILITIES.**

IMPLEMENTATION STRATEGY: The County shall work with the Oregon Department of Transportation to ensure that development within the Applegate Community Boundary will not result in the need to add travel lanes or expand the existing highway. Additionally, the County will work with the Oregon Department of Transportation to ensure that the highway is safe, potentially reducing the speed limit in the Applegate Community Boundary.

APPLEGATE A4

FINDING: Applegate residents expressed concern about the future commercial development within their commercial core. Residents felt it was important to encourage, support and promote locally owned businesses, while discouraging large commercial and industrial uses which are not in keeping with the rural community environment. Special site design standards should be developed for the Applegate Community Boundary to ensure that development maintains the rural character of Applegate.

POLICY: PROMOTE ECONOMIC DEVELOPMENT ACTIVITIES THAT ARE LOCALLY SUSTAINABLE AND SUPPORT A DISPERSED MODEL OF COMMERCIAL, AGRICULTURAL AND/OR INDUSTRIAL ACTIVITY.

IMPLEMENTATION STRATEGY: Adopt a special Applegate Rural Service Commercial District which will promote the rural commercial environment, allowing farmers' markets and community commercial kitchens to further promote local businesses.

APPLEGATE A5

FINDING: Throughout the public meetings, Applegate residents expressed concerns over the need for better protection of the natural environment, and the need for better coordination between the County, State and Federal agencies responsible for protecting various aspects of the rural environment.

POLICY: FOSTER LOCAL AND STATE SUPPORT FOR STEWARDSHIP OF THE NATURAL ENVIRONMENT.

IMPLEMENTATION STRATEGY: Jackson County shall work to better protect the 100 foot riparian corridor along the Applegate River, thereby enhancing water quality, stormwater runoff and clearing activities. In the Core area, existing public access to the Applegate River should be maintained.

FOOTS CREEK RURAL SERVICE CENTER[3]

The service and residential areas of Foots Creek are located along Old Highway 99, approximately three miles south and east of the City of Rogue River. Early residents of the area were miners and farmers, and the area was named for a prospector, O.G. Foot. Foots Creek covers a large drainage area with its left, right and middle forks. According to Linda Genaw, author of Gold Hill and Its Neighbors Along The River (1988), there was a system of well-used trails among those forks that connected Foots Creek area residents, as well as other trails to nearby mining sites, including a shortcut to Forest Creek in the Jacksonville area, Galls Creek to the east, Birdseye Creek to the west, and Humbug Creek to the south. In 1882, a post office was established on the middle fork at the store of Silas Draper. This post office functioned until 1912. The lives of Foots Creek families were intertwined with those of Rock Point and Gold Hill. The era of steam-powered and then electric gold dredging kept the mining industry alive on Foots Creek up until World War II. The most recent aggregate activity took place during the construction of Interstate Highway 5, when the Oregon Department of Transportation (ODOT) installed a rock crusher on the left fork which was operated by Jackson County. Residents continue to be concerned about the potential for aggregate mining, crushing and batching on Foots Creek as evidenced by organized opposition in 1994 to a proposed aggregate site along Foots Creek Road. While some farming continues on Foots Creek, most people commute to urban centers for work. In the past twenty years, the Foots Creek area has changed with more and more vacant parcels being developed with residences.

Today, the community consists of residentially developed parcels along the Rogue River and Highway 99; and, south throughout the Foots Creek drainage basin along Left Fork, Middle Fork and Right Fork Foots Creek Road. The community core includes one parcel, located along the southwest corner of Old Highway 99 and Foots Creek Road. The land use on this parcel includes a general store, a deli, a small buy-sell trade operation, raft rentals, auto repair, cabins for rent and a residence. Based on the input from residents in the Foots Creek area, the parcel which is currently zoned Rural Service and which has become known as the community core area, will be recognized as the Rural Service Center. At this time, residents chose not to

[3]*Adopted by Ordinance #97-23 on 7-9-97, Effective 9-8-97. File 97-5-OA*

propose any changes in uses or intensity of uses. There are no changes proposed which would provide for increased residential density or industrial uses.

RUCH RURAL COMMUNITY[4]

The rural unincorporated community of Ruch is located in Jackson County, approximately 15 miles west of Medford along Highway 238. Ruch is located on the eastern edge of the Applegate River Valley, which continues westward into Josephine County and contains the unincorporated communities of Applegate, Williams, Murphy and Wilderville. The earliest settlements in the vicinity of what was to become Ruch were Uniontown, Herling and Logtown. Logtown grew from a mining camp located at the confluence of Poorman's Creek and Jackass Creek (now called Forest Creek). Some two miles south from what was to become Ruch, the Cameron family started a settlement with their store, saloon, blacksmith shop and post office. The Herling place was located just one mile east of Logtown on the Jacksonville-Crescent City road. It began as a rest stop for travelers and stages, and later acquired a post office.

By the 1890's, mining activities had declined, trade had decreased and post offices were closed. With the decline of mining activities, agriculture and ranching became the economic mainstays of the area. Grains, vegetables, and fruits were grown; dairy herds, cattle and sheep grazed the area. Irrigation diversions, some of which had originated with mining operations, supported the fine family farms of the area. People also engaged in logging for local use, with a sawmill established five miles west of Ruch.

Caspar (Cap) Ruch, the son of Swiss immigrants who had been drawn by mining, bought land on the Jacksonville-Crescent City road. He set up his blacksmith shop, applied for a post office and started selling goods. He built a store and a large hall, and later installed gasoline pumps. Cap Ruch faced no competition until the late 1920's, when the McDonough family began operation of the Sunnyside Service Station. Electric power came into the area in the 1930's. After World War II, there was an increased demand for lumber for housing construction, which in turn increased the logging activity on private and public lands. Since the 1950's, residents have seen gradual change in the Applegate Valley, with many people moving into the area seeking a rural lifestyle without the need to farm or ranch for a living. Since this time, the larger land holdings have been divided into smaller homesites with many of the residents commuting to nearby cities of Medford and Grants Pass for work.

Many activities and businesses are in Ruch today: a supermarket, beauty shop, video shop, real estate office, café, public library and churches. Other community places of interest near Ruch are the County park and the Upper Applegate Grange. The Ruch Community Bible Church originated in the area in 1956, and in 1986 the Applegate Christian Fellowship purchased land for the construction of a large facility, that currently attracts people from all over the Rogue Valley. Today, the social and institutional setting of the Applegate watershed is remarkable for the degree of collaboration and cooperation that exists concerning environmental, economic and social issues. The recent history of the area features both local groups and Federal agencies like the Bureau of Land Management and the Forest Service, focusing on ecosystem management (Watershed Landscape Design), the stewardship of natural resources, and the mutual sustainability of the forests, economies, and the communities of the Applegate. The

[4]*Adopted by Ordinance #99-25 and 2000-17 on 11-10-99, Acknowledged by DLCD Order 001257 on 9-29-00, Effective 10-9-00. File # 97-3-OA-PR*

valley community revolves around a variety of activities beyond the service center core. The Applegator, a local newspaper, provides information regarding various topics of interest in the valley. The Apple Direct advertises and lists many of the goods, produce, and services that are available locally.

FINDINGS, POLICIES AND IMPLEMENTATION STRATEGIES:

RUCH R1

FINDING: To assure that sufficient water is available to meet the needs of existing and future development in the community area, the availability of water should be determined.

POLICY: DEVELOPMENT IN THIS AREA SHOULD BE DETERMINED BY THE AVAILABILITY OF WATER IN THE RUCH CORE AND IN THE SURROUNDING AREA.

IMPLEMENTATION STRATEGIES:

- The community will work with the County Commissioners and Water Resources Department to obtain hydrological information regarding the carrying capacity of the existing water supply.
- The community will participate in any study/survey process that examines water availability in Ruch. The community will have full access to all water study findings.
- As information on the carrying capacity of the existing water supply is obtained, that information will guide County decision-making regarding the approval of additional housing, business and industrial development.

RUCH R2

FINDING: The rural character of Ruch is an important value to the community, and efforts should be made to enhance and preserve it.

POLICY: THE RURAL CHARACTER OF RUCH SHOULD BE ENHANCED AND PRESERVED.

IMPLEMENTATION STRATEGIES:

- The community will encourage voluntary efforts to enhance the appearance of Ruch.
- The community will work in cooperation with the County and ODOT to provide appropriate trees with adequate setback along roadsides within the community boundary.
- Retain existing zoning to maintain current residential density.

- Restrict existing commercial uses to a rural scale with buildings no higher than two stories from ground level.

RUCH R3

FINDING: Ruch residents expressed a need for more citizen participation in the decision-making process with regard to the issues that affect the community. The need for better communication between the community and Jackson County elected officials was also identified as a priority.

POLICY: FACILITATE CITIZEN PARTICIPATION AND COMMUNICATION BETWEEN THE COMMUNITY AND JACKSON COUNTY ELECTED OFFICIALS.

IMPLEMENTATION STRATEGIES:

- Jackson County Planning and Development shall notify the following community designated organizations of any land use actions taking place in or directly adjacent to the community core boundary; the Applegate Valley Community Forum, the Applegate Partnership and the Ruch Branch Library. In addition to the preceding requirement, the distance for notifications shall be as required by State law.

- Request the County Planning Commission and Board of Commissioners to hold public evening hearings in the Ruch Community on land use actions before them, that affect property inside or adjacent to the community core boundary.

- The Applegate Valley Community Forum in conjunction with other community organizations may review the Ruch Community Plan every three (3) to five (5) years. Funds for this purpose will be obtained from DLCD periodic review or technical assistance monies, or other sources in cooperation with appropriate agencies.

- Prior to application, proposals for amendments to the community plan must be presented to the Applegate Valley Community Forum according to established meeting times and procedures.

RUCH R4

FINDING: Residents expressed concern regarding the maintenance of the current transportation system at a rural level and expressed concern that the County and ODOT work together on turnouts to improve safety.

POLICY: MAINTAIN THE CURRENT LEVEL OF TRANSPORTATION IN SUPPORT OF A RURAL COMMUNITY ENVIRONMENT.

IMPLEMENTATION STRATEGIES:

- New land uses will not require the expansion of the existing transportation system unless the reason for expansion is directly related to providing safe access to the site. The County and the Oregon Department of Transportation will work with the community to ensure that this community goal is met.

- The Oregon Department of Transportation, the County and the community shall work to ensure that the highway is safe, with safe speed limits in the Ruch Community core.

- Encourage local and state authorities to assess the feasibility and safety of bike/pedestrian pathways alongside existing roads and highways. The community will participate in the design and development of a bike path where community interest dictates.

RUCH R5

FINDING: The residents expressed an interest in the development of locally owned, small scale businesses to meet the needs of the community.

POLICY: PROMOTE ECONOMIC DEVELOPMENT ACTIVITIES THAT ARE LOCALLY SUSTAINABLE AND SUPPORT A RURAL ECONOMY BASED ON SMALL BUSINESSES AND WORKING FARMS.

IMPLEMENTATION STRATEGIES:

- Provide adequate commercial space and encourage opportunities for locally owned businesses. These could be home occupations and small-scale businesses such as a laundromat, gas station, general store, community garden area, community center, medical clinic, post office, hardware store, pub, bank, auto repair, bicycle shop, professional office space, recycling center, storage units, and a solid waste transfer station.

- The community supports the development of selected public uses such as outdoor recreational facilities, a village green, an expanded library, and a growers/arts/crafts market.

- Provide some resource-based, low impact industrial zones to facilitate employment opportunities related to ecosystem management.

RUCH R6

FINDING: The residents expressed concern regarding the need to protect the natural environment, particularly with regard to the removal of riparian vegetation along Forest Creek.

POLICY: FOSTER LOCAL AND STATE SUPPORT FOR STEWARDSHIP OF THE NATURAL ENVIRONMENT.

IMPLEMENTATION STRATEGY: The community will encourage participation from and with state and local agencies in providing protection to the 100 foot riparian corridor of Foots Creek.

SAMS VALLEY RURAL SERVICE CENTER[5]

The rural service center of Sams Valley is located in Jackson County, approximately 11 miles north of Medford, at the junction of State Highway 234 and Antioch Road. The earliest settlers in the Valley were Enoch Pelton and Jose Sisemore who arrived in the early 1850s. They owned very large ranches in the area. The James Pankey family, arriving from Tennessee in the 1950s, was another early settler family. The Pankey clan, bolstered by the arrival of John's three brothers and their families in the 1870s, had many children. Many of their progeny are buried in the Pankey or Sams Valley Cemetery. Andrew Moon settled in Sams Valley in the late 1850s. He was the "Founder of Moonville," the first name of the Sams Valley community. Moon started a general store that also housed the drug store of Arad Stanley, the famous local doctor. Apart from the general store and drug store, there was a tinshop, as well as a blacksmith shop.

The original plat for Sams Valley was along what is now called Old Sams Valley Highway. A store, school and post office formed the nucleus of the original hamlet. Old-timers indicate that the boundaries to Sams Valley are Ramsey Road to the west and Table Rock Road or Meadows Road to the east. The town was in its heyday in the 1880s. The rich farmland in the area produced food for the many miners who came to the Rogue River area. While some settlers farmed in the summer and mined in the winter, there were many other miners who came without their families to live in camps. These were dependent upon the produce, grains, livestock and dairy products produced nearby. The first school was Sams Creek School, established in 1861 in a log structure on Sams Valley Road. The next one was the Pankey School, begun in 1877. These schools were consolidated to form one school district which, in 1951, consolidated with the Central Point School District. A newer school that forms part of that district, the Sams Valley Elementary School, is located near the intersection of Table Rock and Highway 234 and serves as a hub for the Sams Valley community.

Bypassed by the railroad in 1883, Sams Valley was eclipsed by the growth seven miles west in Gold Hill which had a railroad depot. Gold Hill became the trading center for the area. Notable families from the Sams Valley area were attracted by the business and banking activities in Gold Hill. The merchant/druggist Stanley moved to Gold Hill and was, for many years, the President of the City Council. The construction of the Gold Ray hydroelectric dam in the early 1900s only increased the influence of Gold Hill in the region.

To the northeast, the historic community of Beagle was Sam Valley's closest neighbor. The community started near Meadows Road and continued eastward to the Dodge Bridge area; its north/south boundaries ranged from Highway 234 up to Evans Creek Road. Little is left of the community, for during World War II, Beagle and other lands to the east were purchased by the Federal government for purposes of constructing Camp White, a training camp for military personnel. Vestiges from that era can still be seen near the intersection of Antioch and Highway 234, where cattle graze among bunkers once used for artillery training. While Sams Valley is still dotted with large ranches, farms, and orchards, the number of working farms has decreased

[5]*Adopted by Ordinance #99-34 on 9-14-99, Acknowledged by DLCD Order #001102 on 10-14-99, Effective 10-24-99. File #97-10-OA(PR)*

dramatically since those early days. Meanwhile, the number of residences has increased significantly and commuting to neighboring urban centers for work is common.

The only commercial center in the Sams Valley area is now Rainey's Corner. Located some 5 miles to the east of the historic center of Sams Valley, Rainey's Corner is much appreciated by convenience shoppers. According to old-time residents, the commercial area at the intersection of Antioch and Highway 234 was first established in the 1960s, when it was called Pruitt Junction after the owner. When it changed hands, it took the name of a new owner. More recently, it has become known as Rainey's Corner since current owner Michael Rainey bought the property. While the Sams Valley Rural Service Commercial District represents an area where business opportunities can continue and grow in order to provide services to the surrounding residents, the heart of the community is represented by area residents.

The community is a much larger area than what the Unincorporated Communities Rule identifies. The actual community area encompasses the whole of Sams Valley. The community recognizes that the Sams Valley Rural Service Commercial District is located at the corner of Highway 234 and Antioch Road, it would like to state that the historical Sams Valley is located on Meadows Road.

POLICIES AND IMPLEMENTATION STRATEGIES:

SAMS VALLEY SV1

FINDING: Sams Valley residents have expressed a need to create a Citizens Advisory Committee which will be notified of all major land use actions and a need for greater communication between the County and residents on a variety of issues. Notice of land use decisions are made to property owners within State mandated areas. Residents expressed the need for more comprehensive noticing, including non-traditional notice recipients, and public hearings on land use decisions held in the Sams Valley area.

POLICY : INCREASE CITIZEN PARTICIPATION IN LAND USE PLANNING.

IMPLEMENTATION STRATEGIES:

- Create a Sams Valley Citizen's Advisory Committee which will represent the Sams Valley region in land use decisions.
- Jackson County Planning and Development shall send notifications of major land use actions within the Sams Valley area to the newly created Sams Valley Citizen's Advisory Committee, Rainey's Market, Sweet's General Store, and the Triple Tree Restaurant.
- Request the County Planning Commission and the Board of Commissioners to hold public evening hearings in Sams Valley on major land use actions before them that affect property within the Sams Valley area.
- Funds for reviewing and amending the Sams Valley Plan may be requested by the Sams Valley Citizen's Advisory Committee, the Department of Land

Conservation and Development, the Oregon Economic Development Department, and other agencies.

SAMS VALLEY SV2

FINDING: Sams Valley residents expressed concerns about the water resources within the area.

POLICY: THE COMMUNITY RECOGNIZES THE NEED TO PROTECT ALL WATER RESOURCES.

IMPLEMENTATION STRATEGIES:

- The Community will work with the Board of Commissioners and Water Resources Department to obtain hydrological information regarding the water supplies.
- As information on community water supplies is obtained, that information will guide County decision-making regarding the approval of additional development in the Sams Valley area.
- The Community will work with the Board of Commissioners and the Health Department to explore the possibility of the development of a community water system.

SAMS VALLEY SV3

FINDING: Growth must be based on the current zoning and the availability of services. Ensure the rural character by maintaining and protecting the resource lands that surround the Core area.

POLICY: ENHANCE AND PRESERVE THE RURAL CHARACTER OF SAMS VALLEY.

IMPLEMENTATION STRATEGIES:

- The Community will endeavor to make planning decisions that respect and retain the rural character of the area.
- Maintain existing rural densities.

SAMS VALLEY SV4

FINDING: Residents of Sams Valley expressed concerns about traffic safety.

POLICY: ENSURE THE SAFETY OF THE TRANSPORTATION FACILITIES.

IMPLEMENTATION STRATEGIES:

- Work with the Oregon Department of Transportation and the County to ensure that public thoroughfares are safe.

- The Citizen Advisory Committee will establish a subcommittee to work on road improvements in the Sams Valley area.

SAMS VALLEY SV5

FINDING: The Community expressed concerns about long-range planning.

POLICY: THE COMMUNITY OF SAMS VALLEY WILL COMMUNICATE WITH JACKSON COUNTY ABOUT CURRENT AND LONG-RANGE PLANNING ISSUES.

IMPLEMENTATION STRATEGIES:

- Encourage the State and the County to enact regulations that simplify the land use application process and ensure equal access and opportunity, by such means as reducing fees and using language intelligible to laymen.

- With the assistance of the County, the Community wishes to reinforce its identity as Sams Valley through the creation of a local post office substation and zip code for the area.

- The Community will explore opportunities for an irrigation project in the Sams Valley area to ensure Sams Valley's future as farmland in the Rogue Valley.

- The Community will work with the Public Utility Commission to have local telephone access within the Sams Valley area.

SAVAGE CREEK RURAL SERVICE CENTER[6]

The service and residential areas of Savage Creek are located along Highway 99 on the south side of the Rogue River. This area, along with Savage Rapids on the Rogue River in Josephine County, was named for a pioneer settler. James Savage came to Oregon from Illinois in 1853 and took up a donation land claim near the geographic features that now bear his name. The community consists of more than a 100 dwelling units spread through the Savage Creek drainage and along the highway on lots ranging in size from approximately 0.3 to 40 acres. The city of Rogue River is approximately 2 miles to the east and Grants Pass is approximately 10 miles to the west along the Rogue River. The services in the community core area consist of a boat ramp and river park between the highway and the Rogue River at the confluence of Savage Creek and the Rogue River. Across from this park, south of the highway, are a tavern, a motel, a hair salon and an automotive repair shop. There is also some vacant office space and a small seasonal grocery store.

[6]*Adopted by Ordinance #97-5 on 3-19-97, Effective 5-19-97. File #97-1-OA*

Based on the input from residents in the Savage Creek area, those parcels which are currently zoned Rural Service and which have become known as the community core area, will be recognized as the Rural Service Center. At this time, residents chose not to propose any changes in uses or intensity of uses. There are no changes proposed which would provide for increased residential density or industrial uses.

TRAIL RURAL SERVICE CENTER[7]

The rural service center of Trail is located in Jackson County, approximately 21 miles north of Medford. Trail is located between Shady Cove and Prospect, at the junction of State Highway 62 and State Highway 227. Local historian Barbara Hegne poetically describes the beginnings of the community of Trail: "An Indian path followed a rushing creek down the mountain, from the Umpqua divide, till it emptied into the Rogue River. From the late 1870's, to the early 1900's, settlers homesteaded on the banks of this creek, and they named it Trail." (Yonder Hills. 1989:64.) Existing services in the community of Trail consist of a post office, a tavern and a grocery store on Highway 62. The central core of Trail is defined by land inside of a triangle created by Highway 62, Old Highway 227, Highway 227 and Old Trail Creek Road. There are also 2 residences within this triangle and a mobile home park with 7 mobile homes and 2 houses. The zoning in this triangle is a Rural Service Commercial (RS) zone. Three other homes border this core on separate properties. Community members are spread out on Rural Residential (RR-5 zone) and resource parcels [either Woodland Resource (WR) , Open Space Reserve (OSR) or Exclusive Farm Use (EFU)] along each of the major roads already identified as well as Ragsdale Road which travels south and east off of the Trail Creek Road. An elementary school and other commercial services of restaurants, lodging and stores exist in the Rogue Elk neighborhood.

Based on the input from the residents in the Trail area, those parcels which are currently zoned Rural Service Commercial and which have become known as the community core area, will be recognized as the Rural Service Center. At this time, residents chose not to propose any changes in uses or intensity of uses. There are no changes proposed which would provide for increased residential density or industrial uses.

[7]*Adopted by Ordinance #97-3 on 3-19-97, Effective 5-19-97. File #97-2-OA*

TRANSPORTATION[1]

GOAL: TO PROVIDE AND ENCOURAGE A SAFE, CONVENIENT, ENERGY EFFICIENT AND ECONOMICAL TRANSPORTATION SYSTEM, BY:

- **PROVIDING CITIZENS OF THE COUNTY AND SURROUNDING AREAS SAFE AND EFFICIENT AIRPORT FACILITIES FOR COMMERCIAL AND GENERAL AVIATION USE;**
- **PROVIDING A ROAD SYSTEM THAT PERMITS SAFE, CONVENIENT, AND ECONOMICAL TRANSPORTATION OF GOODS AND PEOPLE CONSISTENT WITH PLANNED DEVELOPMENT, NATURAL RESOURCE USE AND ENVIRONMENTAL PROTECTION IN COORDINATION WITH OTHER PUBLIC AGENCIES;**
- **IMPROVING THE ROADS THAT CONNECT THE VARIOUS COMMUNITIES AND RESOURCES IN JACKSON COUNTY;**
- **MAINTAINING COUNTY ROADS AND BRIDGES IN AS GOOD OR BETTER CONDITION THAN AS AT PRESENT;**
- **PROVIDING FOR NON-AUTOMOTIVE TRAVEL MODES IN CONJUNCTION WITH THE ROAD SYSTEM; AND,**
- **ENCOURAGING THE STREAMLINING OF PUBLIC AGENCIES AND DEPARTMENTS TO MAXIMIZE THE EFFECT OF LIMITED TAX DOLLARS TO MAINTAIN THE PUBLIC INVESTMENT IN TRANSPORTATION FACILITIES.**

INTRODUCTION:

The Transportation Element of the Jackson County Comprehensive Plan addresses all modes of transportation in the County over a 20 to 25 year planning period. It sets forth policies and implementation measures that include related plans and programs designed to maintain and improve the transportation system. The Element concludes with specific findings, policies and implementation strategies for those policies. This Element of the Jackson County Comprehensive Plan discusses transportation modes and facilities from the most used to the least used in Jackson County. The significant supporting plans and programs for these modes are:

1) **Roads:** Jackson County Road System plan, state highway plans and road and street plans of various cities and the state/federal metropolitan planning organization program.

2) **Transit Services:** Plans of the Rogue Valley Transportation District, state public transit division and Rogue Valley Council of Governments.

[1]*Adopted by Ordinance #94-155 on 12-28-94, effective 2-27-95 (File 94-16-OA); amended by Ordinance #2004-1 on 1-12-04, effective 3-12-04 (File 2003-1-OA).*

3) **Bicycles:** The May, 1996 Jackson County Bicycle Master Plan and Bear Creek Greenway Plan: Ashland to Central Point, along with the Oregon Bicycle Plan and bicycle master plans for each city.

4) **Pedestrian** (trails, sidewalks, crosswalks): See the Transportation Element from the comprehensive plan for each city in Jackson County and the Bear Creek Greenway Plan: Ashland to Central Point.

5) **Air Travel:** Rogue Valley-Medford Airport Master Plan, Ashland Municipal Airport Master Plan and Oregon Aviation System Plan.

6) **Railroads:** See Oregon Rail Plan.

7) **Pipelines and Energy Transmission:** See state plans.

Water is not a means of transportation in Jackson County. The recreational use of waterways is addressed in the Recreation Element of the Plan.

CHALLENGES TO A GROWING COUNTY:

The transportation needs of Jackson County are influenced by several key facts. Jackson County's location on Interstate 5 (I-5) and its role as the region's metropolitan center help to assure continued growth. It is a center for virtually all sectors of the economy in southern Oregon and northern California. A sprawling development pattern intensifies reliance on the private automobile, aggravates air quality problems, and makes it difficult to avoid use of the roads. Local industries such as forest products and agriculture require heavy trucks to transport raw materials from harvest areas to processing plants. The County has limited access to air, rail, and pipeline service that could substitute for road use.

Jackson County has been changing since World War II from a predominantly rural to an urbanized County. After the 1980 Census, Jackson County was recognized as a Metropolitan Statistical Area because the population of the Medford-Central Point urbanized area exceeded 50,000. The Jackson County population has grown from 132,456 in 1980 to 146,400 in 1992 and is projected to approach 200,000 persons by 2010. Serving this growth will require major improvements in roads and other transportation facilities. At the same time road-user demands and maintenance needs will increase.

TRANSPORTATION PLANNING HISTORY:

The history of transportation planning in Jackson County is relatively short. For the first one hundred years or so, the road system simply grew as the settlement of the County produced the need for new roads. Road location in this era tended to follow topography. Routes were needed between towns established in the area, and they tended to follow Donation Land Claim boundaries, section lines and other property boundaries where they did not follow physical features. Since World War II, changes have come about as a result of special purpose projects, such as Camp White during the 1940's; reservoir construction from the 1950's to 1970's, and construction of Interstate 5 in the 1960's.

In the late 1960's and early 1970's the Bear Creek Area Transportation Study (BCATS) produced the first comprehensive study of long-range road improvement needs in Jackson County. This regional cooperative effort culminated in the Bear Creek area Transportation Study (BCATS) report in 1973. The BCATS area is the entire Bear Creek urbanizing region from Ashland to Eagle Point and also includes the cities of Central point, Jacksonville, Medford, Phoenix, Talent, and the unincorporated White City urban area. BCATS produced a list of 51 projects on arterial and collector streets and roads in Jackson County for its target year of 1985.

A major strength of BCATS was its comprehensive, regional approach and evaluation of both local and regional needs, with significant involvement by the Oregon State Highway Division. BCATS major weakness was that it did not have direction for funding for the 51 projects it identified. Still, BCATS was or is a factor in these projects: widening Highway 66 in Ashland; widening East Pine Street in Central Point; improving Agate Road between Antelope Road and Crater Lake Highway; widening McAndrews Road in north Medford; extending Biddle Road from Airport Road to Head Road; widening the Barnett Road overcrossing of Interstate 5; widening Jackson Street bridge; widening Crater Lake Avenue from McAndrews to Roberts Road; extending Black Oak Drive to Barnett Road; constructing West Table Rock Road; and widening Stewart Avenue.

The remaining 40 projects in BCATS were not completed after 20 years partly because growth was not as rapid as projected, and because money was not as abundant as the study apparently presumed. The uncompleted projects are generally still needed in the region, although some will take an alternative form or location because of other plans and projects put in place since BCATS.

In early 1993, the urbanized area within the Rogue Valley began a Regional Transportation Study. The Regional Transportation Study is being completed through the Rogue Valley Metropolitan Planning Organization (RVMPO), which is composed of elected representatives from Jackson County, Medford, Central Point, and Phoenix, as well as representatives of the Rogue Valley Transportation District and the Oregon Department of Transportation. The study area for the Regional Transportation Study is shown on the Accompanying Transportation Boundaries Map. Through this regional transportation study, the transportation needs of the RVMPO will be identified for the next 20-year planning period. The goals and objectives of the RVMPO were adopted by the MPO policy committee on August 18, 1993, and include:

1) Goal 1. Plan for, develop, and maintain a multi-modal transportation system that will address existing and future needs for transportation of people and goods in the region, recognizing the importance of the street network to most surface travel modes.

2) Goal 2. Develop a plan that builds on the character of the community, is sensitive to the environment, and enhances quality of life.

3) Goal 3. Provide an open, objective and credible process for planning and developing a transportation system that complies with state and federal regulations.

4) Goal 4. Develop a plan that can be funded and that reflects responsible stewardship of public funds.

In late 1994, another major transportation planning effort was initiated by the Rogue Valley Council of Governments (RVCOG) to determine the transportation needs throughout the entire County. RVCOG has obtained a Transportation Growth Management (TGM) grant to develop a Countywide transportation plan. Through this study, the transportation needs of the entire County will be identified, and Jackson County's bicycle plan updated.

TRANSPORTATION PLANNING GOAL AND RULE:

Adoption of the State Planning Program and development of Administrative Rules in the 1970's and 1980's focused transportation planning efforts in Oregon. Transportation planning must now consider highway, rail, air, transit, bicycling, pedestrian and pipeline systems. Automobiles and trucks are the primary mode of transportation in Jackson County, because the road system is virtually Countrywide, something that cannot realistically be said of the other modes of transportation. Predominance of the automobile exists, but can lessen throughout the planning period. Facilities that accommodate other transportation modes are becoming more available and feasible as growth continues in and around urban areas. Statewide Planning Goal 12, Transportation, directs local governments to undertake transportation planning that will:

1) Consider all modes of transportation including rapid transit, air, water, rail, highway, bicycle, and pedestrian;

2) Inventory local, regional, and state transportation needs;

3) Consider the social consequences that would result from using different combinations of transportation modes;

4) Avoid total reliance upon any one mode of transportation;

5) Minimize adverse social, economic, and environmental impacts and costs;

6) Conserve energy;

7) Meet the needs of the transportation disadvantaged by improving service;

8) Facilitate the flow of goods and services to strengthen the local and regional economy; and

9) Conform with local and regional comprehensive plans.

These requirements are specifically defined in the Transportation Planning Oregon Administrative Rule adopted on April 26, 1991, by the Land Conservation and Development Commission. The Transportation Rule establishes specific requirements that must be met by the Oregon Department of Transportation (ODOT), Metropolitan Planning Organizations (MPOs), cities, counties, transportation districts and other special districts. A network of facilities and improvements adequate to meet the identified transportation needs of the state, region, and local area over a 20-year planning period will be provided for by the implementation of the rule. The Rogue Valley Metropolitan Planning Organization (RVMPO) is responsible for preparing the regional Transportation Systems Plan (TSP) which includes:

1) A determination of transportation needs;

2) A road plan;

3) A public transportation plan;

4) Bicycle and pedestrian plans;

5) Air, rail, water and pipeline transportation plans;

6) A plan for transportation system management and demand management;

7) Parking plan;

8) Policies and land use regulations; and,

9) A transportation financing program.

This regional TSP fulfills many of the requirements that would otherwise have to be addressed by the County. The Transportation Rule requires Jackson County to adopt findings of compliance with applicable statewide planning goals, acknowledged Comprehensive Plan policies, and land use regulations at the time of its adoption of the TSP. Jackson County is also required to establish the infrastructure to implement the TSP. This element provides policies and implementation strategies to facilitate the coordination of the plans of other agencies throughout the County.

TRANSPORTATION PLANNING ISSUES FOR JACKSON COUNTY:
Jackson County has less congestion and more remaining capacity on its roads than in large metropolitan areas. Due to population growth, there is more capability to pay for needed improvements than in many rural counties, although Oregon's current fiscal structure, with no sales tax and low vehicle registration fees, limits that capability.

The journey to work is no longer American society's number one reason to travel. But the commute to work is primarily by private auto. A small segment of Jackson County citizens do walk, bike or take the bus, and still others commute by flight to other metropolitan areas. Another alternative to conventional work-related travel is telecommunications. Telecommunications is one more use for the public right-of-way and is among our long-range alternatives to transportation of people on roads.

The important link between investments in transportation and economic development is becoming more complex and more essential. The mobility of workers and goods has long been needed for the economy to function. Mobility for citizens and foreign visitors, whether tourists or business travelers, is now becoming a resource in itself. The movement of ideas instead of people grows as the economy becomes more involved with moving services from place to place. Adapting to these trends will determine the ability to provide livable and prosperous communities. In addition to future transportation needs, there are many transportation needs that have been deferred by the failure to require simultaneous placement of appropriate facilities as land development occurred. The many deferred and hidden costs are being paid now by congestion and poor circulation, and the cost to remedy these problems must someday be paid. Local progress on road improvements is dependent at this time on the sharing of revenues collected at the state and federal levels.

Cities have a similar problem and growing need for a network of walkways, bikepaths and transit options as extensive as the road system. In many cases these needs overlap with needed road improvements to urban standards. A program of road improvements, including a range of modes, will be more expensive than any previous program. Multi-modal improvements are essential if we want land use and transportation coordinated for a future that includes attractive and livable communities. Multi-modal design and improvement will not be cost free.

Transportation planning cannot focus solely on facilities plans. For these policies to be implemented, planning for appropriate funding mechanisms is essential, including both local ways to fund improvements, and state and federal funding for infrastructure needs. Jackson County and its cities must see fulfillment of state and federal responsibilities for the state highway system, Interstate 5, and Rogue Valley-Medford Airport, and other transportation facilities that are the link to the outside world to have realistic hope of meeting local and regional transportation needs.

Roads are multi-modal facilities that predate the automobile by thousands of years. One little-recognized aspect of planning for transportation needs outside of incorporated cities is that most of the viable alternatives to automobiles require roads—often better roads than are now used by automobiles. Regular bus service takes a deeper road base that can withstand the greater weight of buses. Bicycles should have a smoother surface than is typically available on macadam, chip-seal or gravel roads. Walkers and bicyclists need wider road shoulders or separated paths that often do not exist. Jackson County's road widening projects annually prepare for future alternative transportation modes, which may become more important, even in rural areas. These improvements also add to the safety and capacity of the road system for automobiles.

Transportation planning in Jackson County needs to focus on maintaining the existing system to serve existing travel demands, improving the existing system to provide capacity for future travel demand and influencing the development and location of the future transportation system to be more efficient, more productive, safer, more energy efficient, and more environmentally sensitive. Roads are emphasized in the text and policies, but roads need more recognition as multi-modal facilities and several policies are directed toward that end.

TRANSPORTATION PLANNING FRAMEWORK:

There are 19 local, regional, state, and federal agencies (including multiple departments and divisions of agencies) in Jackson County with some responsibility for transportation facilities and planning. With the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the 1991 Transportation Planning Rule, the Metropolitan Planning Organization is now responsible for regional transportation planning in cooperation with the state and its local members around the Medford urbanized area. The long-range multi-modal transportation plans and transportation improvement programs must also be coordinated with the State Implementation Plan. Jackson County is obligated by statute to facilitate the coordination of the plans of other agencies throughout the County. This Element sets forth a framework for all aspects of transportation planning in Jackson County.

AGENCIES WITH TRANSPORTATION PLANNING RESPONSIBILITIES:

The following public agencies active in Jackson County have responsibilities for transportation facilities or services. The agencies marked with an asterisk (*) are responsible for planning and maintenance of roads. The agencies (underlined) are members of the MPO for the Medford urbanizing area.

1) Rogue Valley-Medford Airport

2) Jackson County Roads and Parks Service (roads, bikeways and trails)*

3) City of Ashland (streets, including bikes and sidewalks and Municipal Airport)*

4) Town of Butte Falls*

5) City of Central Point*

6) City of Eagle Point*

7) City of Gold Hill*

8) City of Jacksonville*

9) City of Medford*

10) City of Phoenix*

11) City of Rogue River*

12) City of Shady Cove*

13) City of Talent*

14) Rogue Valley Council of Governments (RVCOG) is also the coordinating agency for the Metropolitan Planning Organization (MPO)

15) Rogue Valley Transportation District (RVTD)

16) Oregon Department of Transportation (ODOT)*

17) Oregon Public Utilities Commission

18) United States Forest Service*

19) U.S. Bureau of Land Management*

The United States Department of Transportation has little direct involvement in local planning issues. Most regional and statewide issues and many national concerns are addressed through programs administered by ODOT, although the Federal Highway Administration (FHWA), Federal Transit Administration (FTA formerly UMTA), and Federal Aviation Administration (FAA) are important funding sources for transportation programs.

INTERAGENCY COORDINATION ON TRANSPORTATION ISSUES:

Interagency coordination of transportation is relatively new in Jackson County. The Bear Creek Area Transportation Study (BCATS) from 1965 to 1973 was the first interagency coordination of roads in Jackson County. Coordination resumed when the Metropolitan Planning Organization (MPO) for the Medford Urbanized Area formed in 1982. The MPO is staffed by Rogue Valley Council of Governments and includes the FHWA, ODOT, RVCOG, Jackson County (Planning and Development Services and Roads and Parks Services), the cities of Medford, Central Point, Phoenix, and RVTD. Metropolitan Planning Organizations were created to comply with federal requirements for transportation planning in urbanized metropolitan area. Jackson County became an official metropolitan area after the 1980 census. The MPO planning area boundary was initially the FAU boundary for the Central Point-Medford area, and was expanded to include Phoenix in 1992.

In recognition of broader regional needs affecting urban and rural areas, the Jackson-Josephine Transportation Committee (JJTC) was formed in 1987. This committee consists of roads and parks officials of both counties and all cities in the two-county region that saw a need for a unified, coordinated approach to local requests for projects in the ODOT Four Year Statewide Transportation Improvement Program (STIP). Overlap between the MPO and JJTC is limited by the differing focus of the two organizations and interagency agreement on the advisory nature of JJTC relative to its members and the Council of Governments. The future effectiveness of both the JJTC and MPO may depend to some extent on each expanding beyond its present function. The MPO is focused on urban needs and growth requirements of the largest urbanized area in Jackson County. The JJTC provides a unified local voice to the Oregon Department of Transportation, the largest state agency in Oregon.

JACKSON COUNTY AND REGIONAL TRANSPORTATION PLANNING:

Regional transportation planning focuses on the best utilization of existing facilities and location of new facilities. The universal goal for planning is avoiding short-term crises by giving adequate attention to long-range needs. Transportation needs must be equaled by our means to pay for maintenance and improvements. This Element is a type of regional plan coordinated with other transportation plans in the region.

MULTI-MODAL TRANSPORTATION PLANNING:

Transportation within Jackson County is influenced by our location on Interstate 5 in a growing metropolitan area. The County has limited options for air, rail, port or pipeline services, so Jackson County will depend upon roads for the foreseeable future. The road system is virtually Countywide, which cannot be said of other transportation facilities. The automobile will remain the primary transportation mode on the roads, though this dominance should be reduced as improvements for other transportation modes (transit, bicycles, pedestrians) become more feasible, especially on roads in and near the cities.

Several modes of transportation use roads in Jackson County, but the dominant users demanding attention are drivers of automobiles and trucks. The automobile is preferred and most used because it offers the combination of mobility, speed, traveler control, and relative affordability at a wide range of trip lengths and on a schedule of the travelers choice. The strengths that make the automobile popular also create the basis for its weaknesses. Too many

cars cause traffic jams, air pollution, and undo the mobility, speed, control, and affordability that led to automobile ownership and use in the first place.

Transportation shapes urban form and rural settlement patterns, and we see the tremendous influence the automobile has all around us. We consider it to be a necessity rather than a luxury. Even doubling existing alternative modes in rural Jackson County would only slightly reduce our reliance upon cars. Those alternative modes in rural area also depend upon roads.
Urbanizing areas have more available alternatives to the automobile. Jackson County maintains nearly 213 miles of road within the MPO boundary. A network of walkways, bikepaths and transit options as extensive as the road system is needed to achieve long-term progress; in many cases expanding modal choices overlap with needed road improvements. The alternative in urban areas is an expensive, unaffordable program of road improvements to add travel lanes for automobiles.

ROADS:

The transportation issues facing Jackson County are those of a small metropolitan area serving a larger more rural and somewhat isolated multi-county region. Distances within this region are such that roads are usually the most practical avenues to work, shopping, and all of the other places people travel to and within Jackson County. The pubic roads in Jackson County consist of some 1,562 miles of maintained roads (centerline miles) under state (306 miles), county (923 miles), and city (333 miles) jurisdiction. (1991 Road System Plan).

JACKSON COUNTY ROAD SYSTEM:

The Jackson County Road System Plan is a supporting document for this section. It contains inventory information, describes road maintenance and improvement needs, considers funding alternatives and sets forth a capital improvements program. The Road System Plan includes the publicly-maintained County Road System and the State Highway System (the routes between and through the communities of Jackson County). It addresses the need for major development projects in the countywide road network at this time and until the year 2010; those improvement needs include arterial roads to serve the growth projected in comprehensive plans.

Of the 718 miles of paved County roads maintained by the County's Pavement Management System, 87 percent were in fair or better condition in 1990. The stated goal of the Oregon Department of Transportation is to have 90 percent of their road mileage in fair or better condition. The condition of the State system is below the stated goal. Each year Jackson County uses a Point Management Program, which schedules road maintenance needs in the most cost effective manner. Typically, about 20 miles of overlay and 60 to 80 miles of chip seal are performed each year to maintain the existing system before costly reconstruction is needed.

The Jackson County road system includes 331 structures for carrying traffic over waterways (149 are classified as bridges and the remainder, box culverts). Of the 149 bridges, 99 are constructed of steel reinforced concrete. Reinforced concrete bridges are considered to have a life in excess of 100 years, so it is primarily the 40 timber bridges and 10 all-steel bridges that need to be replaced at an average rate of 2 per year. Nationwide, the bridge system is reported as being in extremely poor condition. In contrast, Jackson County's bridge system is in good condition with a few exceptions. The national system of bridge inspection in 1990 classified 5

bridges on County roads as needing replacement or major rehabilitation under the Highway Bridge Replacement (HBR) program.

The Oregon Department of Transportation (ODOT), in cooperation with the Federal Highway Administration, has established urban boundaries and functional classification for roads. This "functional" classification has three main categories—arterial, collectors, and locals. Arterials provide the greatest mobility at the highest speeds and generally the shortest distances for through traffic. Collectors provide for the mobility of through traffic and for land access. Local roads and streets primarily provide access to land.

Each County maintained road has been functionally classified by Jackson County Roads and Parks Services by considering mobility, land access, existing traffic volumes and connectivity. The functional classification of arterial and collectors defines a network of roads of countywide importance. This network carries most of the traffic and has the greatest economic importance; and it is where the major need for capacity-increasing road improvements exists in Jackson County. By this reference, the functional classification list entitled "Arterial, Collector & Locals", as amended, is hereby incorporated into this Transportation Element.

Road maintenance is the primary purpose of the Jackson County Roads and Parks Services. State Highway Trust Fund monies are spent on maintenance in order to protect the substantial investment that the County road system represents. The County does an extensive annual maintenance (overlaying or sealing approximately 100 miles or one-seventh of the paved mileage and grading virtually all gravel roads) to maintain the surface condition and extend the service life of County roads. Other maintenance activities involve shouldering, patching, signing, snow removal, striping, sweeping and vegetation control within rights-of-way.

The major roads that connect commercial, cultural, educational, governmental, and industrial centers need to be modernized to allow efficient maintenance, modal alternatives, and to handle increased traffic and the growth projected in acknowledged plans. This ability has been limited by two major constraints:

1) Cities and counties have limited resources for making road improvements; and,

2) The present development system requires governments to react to, rather than guide development to where it can be most effectively served by public facilities and services.

The table "Substandard County Roads, Serving Industrial and Commercial Zones", as amended which is also incorporated into this Element, identifies the roads in critical need of improvement because the level of development which has historically occurred adjacent to these roads has generated higher traffic levels than can be adequately handled under the existing road condition.

ROAD MODERNIZATION NEEDS:

Jackson County's roads are generally well located where the need exists in rural areas, so road improvements in Jackson County will consist mostly of modernization rather than new construction. Capacity-increasing road improvements in the road network arise as growth occurs in cities and urbanizing areas; development projects should be concurrent with capital improvements.

In 1991, Jackson County adopted a Countywide road projects Systems Development Charge (SDC) program. New development is now paying for a portion of the costs associated with adding highway capacity which development uses. By codified ordinance, systems development charges are spent exclusively to add capacity to the County's network of arterial and collector roads. SDCs are used in most cases to add roadway width, which improves the multi-modal operations of Jackson County highways. Expenditures of SDC funds are guided by a Capital Improvements Plan (CIP), which is adopted on an annual basis by the Board of Commissioners. Jackson County's CIP is a supporting document of this Element.

Interstate 5: Improved connections to the I-5 corridor are needed to serve the planned growth of Jackson County's urban areas. Seven of the County's 11 incorporated cities are located on I-5. Support of planned growth will require some new interchanges and significant modernization of existing interchanges. A corridor study of I-5 is included in the Six-Year Highway Improvement Program for 1991-96. The study should recommend immediate, mid-range and long-range solutions to land use and transportation needs in the I-5 corridor. Improving the Central Point interchange helped in 1993. The Talent, South Valley View, and north and south Medford interchanges soon need improvements to increase their capacity.

Crater Lake Highway (Highway 62): This is the second most important highway corridor in Jackson County and modernization projects are needed from inside Medford's city limits to Casey State Park. At some locations Highway 62 carries more traffic (34,000 ADT near Fred Meyer) than Interstate 5 (32,000 ADT in north Medford). Access management in this high-volume corridor will be based on a pilot program on access management for the Crater Lake Highway corridor, developed through the cooperative efforts of the Rogue Valley Council of Governments, the Oregon State Highway Division, Jackson County, the City of Medford, and the City of Eagle Point.

Lake of the Woods (Highway 140): The extension of Highway 140 from the current terminus with Crater Lake Highway at White City to I-5 is a current Six-Year Highway Improvement Program project that is needed to complete the primary state highway network in Jackson County.

Highway 99: Highway 99 remains a high volume primary highway, and a main street in five cities, even though I-5 now carries most of the through traffic that once used Highway 99.

Jacksonville Highway (Highway 238): This highway needs modernization, especially from Medford to Jacksonville. The Highway 238 realignment is a current ODOT Four-Year Statewide Transportation Improvement Program under an exchange agreement where Main and Eighth Streets in downtown Medford became city streets and an improved four travel-lane section of McAndrews Road will become the new Highway 238 in west Medford. Evaluation of alternatives for a bypass of California Street in Jacksonville needs analysis by ODOT.

Secondary Highways: These Highways are located throughout Jackson County and have traffic volumes low enough that modernization is not usually needed outside of urban boundaries, although safety improvements, shoulder widening, and bridge replacements may require some realignment or right-of-way acquisition that might result

in added capacity. County roads carrying inter-urban traffic that will need multiple-lane sections outside urban boundaries are Table Rock Road and South Valley View Road.

Scenic Roadways: The Greensprings Highway and the Old Siskiyou Highway above Emigrant Lake are designated as historic and scenic highways by the State. Other roadways are also designated as scenic in the Jackson County Comprehensive Plan Goal 5 Background Document. Highways 234, 62 and 230 are Federal Scenic Byways.

ACCESS MANAGEMENT AND STATE/LOCAL COOPERATION:

The access points or road approaches to the public road system are an important determinant of road safety, the cost of road maintenance, and highway capacity. Access point location and configuration are controlled by road approach permits issued by the Jackson County Roads and Parks Services, the Oregon State Highway Division and by several cities. This generally works well, but problems have arisen in two type of circumstances:

1) Along certain high-volume roads where existing accesses and more intensive use of the accesses have an adverse impact on road capacity; and,

2) Where multiple jurisdictions are involved and developers want access to higher-order roads that already have capacity problems.

In Jackson County the greatest need for access control is in high-volume corridors. Access control is achieved on I-5 because it is a limited access freeway. Highway 62 is the highest volume road in Jackson County, but is not a freeway. A pilot study in 1989-90 by the Rogue Valley Council of Governments and the Systems Studies Unit of the Oregon State Highway Division addressed the Highway 62 corridor from Medford to Eagle Point. The resulting cooperative agreement on the corridor should establish a better coordination mechanism for access control on Highway 62 from Medford to Eagle Point once its provisions are included in state procedures and the comprehensive plans of Jackson County, the City of Medford and City of Eagle Point. The experience with the cooperative agreement approach on Highway 62 should provide a solid basis for access control programs on other roads in Jackson County.

URBAN STREET NEEDS:

The major highway corridors in Jackson County converge in cities. In these cities, modernization primarily means widening roads and streets to handle more traffic or additional modes. City transportation needs range from alternative routes for trucks, bypasses to divert through traffic from main streets, widening collectors, and inspecting construction in local subdivisions. On several urban arterials, there is an eminent need for four travel lanes and improved connections between state highways and County roads. There are both short- and long-term needs to relieve congestion at interchanges with I-5.

MAJOR COUNTY ROADS:

Jackson County's role in the regional road network is to be a connector or link between state highways, the rural areas of the County, and urbanizing areas. The County road system's

primary need is for maintenance and upgrading to current design standards. Very few new major County roads are anticipated in the 20-year planning horizon. Some of the high-volume roads (collectors or arterial) include:

1) Table Rock Road, Jackson County's only direct north-south road north of Medford between Crater Lake Highway and I-5;

2) Antelope Road, the main east-west route in White City, the primary general industrial area of Jackson County; and,

3) Several existing County roads that connect Highway 99 with I-5 and are functionally integrated with the State Highway System.

This last group of roads which should be considered for exchanges between state and local governments include: South Valley View Road; West Valley View Road; Fern Valley Road; and Pine Street.

ROAD FUND AND REVENUES:

The funding for County roads had historically come from two main sources: 1) Jackson County's share of the Oregon Highway Fund Apportionment (which pays for most, but not all, road maintenance); and 2) Jackson County's share of US Forest Service (USFS) receipts (which pay for the remainder of maintenance costs and capital outlay). Through interest-earning carryover accumulated in the late 1980's in response to historic fluctuations in timber receipts, and County restraint in spending these funds, the USFS receipts paid for many capital improvements on County roads. Local needs for roads will remain despite reduced timber harvest, because Jackson County is a regional center for trade, services, health care and education. Increases in the state gasoline tax, weight-mile tax and vehicle registration fees may offset some of the projected decline in forest revenues, specifically the portion spent on road maintenance.

Jackson County's Roads and Parks Services constructed roads with County forces prior to the forest products industry's depression of 1981-82. After the precipitous decline in forest revenues in 1982, employment in the Roads and Parks Services dropped significantly (from 159 employees in 1980-81 to 120 in 1990-91). Jackson County now emphasizes road maintenance rather than road construction by County forces, and regularly contracts out road projects costing $50,000 or more.

Cities' tasks in coordinating land use and transportation are complicated by such things as delays in the state Four-Year Statewide Transportation Improvement Program projects, limited sharing of funds from the State Highway Trust Fund, and inadequate budgets to implement their state mandated roles as growth centers and major providers of public facilities and services. These uncertainties for local governments greatly hamper capital improvement programs, an essential tool for effective implementation of comprehensive plans.

In the late 1980's timber receipts reached their highest levels ever, and state highway trust fund disbursements became the major portion of the road fund. Jackson County made a few major improvements on its high volume roads in the late 1980's, and provided maintenance on others with this income. Most two-lane County roads have reserve capacity. More roads in the city, County and state systems will approach capacity in the next 10 years than ever before, resulting

in increasing needs for major improvements. Existing funding can provide long-term continuity in County road maintenance activities; however, to fully implement all road improvement and modernization needs requires new revenue for the County road fund. The amount of new revenue needed will depend on the amount timber harvest revenues are reduced from their recent levels, the amount of new development that occurs, and the amount of regional needs that can be met by cities and the state.

Revenue increases in the state motor fuels tax, state motor vehicle registration fees, and state weight-mile fees address needs on the State Highway System, and maintenance on the County road system. New local resources that have been investigated include: right-of-way dedications, developer requirements, street utility charges, local improvement districts, special road districts, County property taxes, local option road user taxes and fees, and system development charges (SDCs). Other less-than-Countywide approaches including cost-sharing for gravel road improvements and urban renewal programs are also being investigated.

The argument that new development will produce more revenue for County roads is not valid in Jackson County. Direct revenues from state user taxes are less than the cost of maintaining the County road system. State-shared road fund revenues are currently apportioned to Oregon counties regardless of the location of new development in the counties. Yet, demands on the County road system increases more from new development in unincorporated areas. Many of the impacts of new development occur beyond the road frontage on which new developments are constructed; new development must also contribute to the cost of adding new capacity to the road system, and a consistent means of obtaining the contribution devised. System development charges are the most equitable and effective way to do this. County staff and the County Roads Committee in 1989 and 1990 determined that the most appropriate means of obtaining revenue for off-site modernization development charges are fees assessed on new development for the road improvements that increase capacity. SDCs will help with modernization needs and limit public subsidy of system capacity demands created by new development.

Jackson County's Capital Improvements Program for its road system is the eighth and final chapter of the Road System Plan. The Capital Improvement Program (CIP) will be amended each year to guide SDC expenditures in conjunction with the County budget process. The CIP describes primarily projects on the Jackson County road system, projects that are capacity-increasing, since capacity is the basis for system development charges paid by new development.

ODOT 4-Year Statewide Transportation Improvement Program. The projects included in the Four-Year Statewide Transportation Improvement Program for 1991-1996 are summarized as part of the County Road System Plan. Four-Year Transportation Improvement Program projects will be incorporated in future amendments.

City Capital Improvement Programs. The Capital Improvement Programs of several cities will include improvements to County roads in city limits as well as arterial and collectors that may be in state or city jurisdiction. These projects are encouraged by Jackson County through system development charges and direct developer improvements to streets and roads in urbanizing areas. Additionally, Jackson County provides financial assistance when there is a transfer of jurisdiction.

LAND USE/TRANSPORTATION COORDINATION:

To discuss the improvement of roads in Jackson County some perspective on our future growth needs is valuable. Growth concentrated in and on the fringes of existing cities and in the unincorporated urbanized areas of Jackson County is the current trend. Jackson County's 1988 population of 143,400 has approximately 93,000 living within urban boundaries and 50,000 living in rural areas. The 1992 population of 146,400 has approximately 98,376 living within urban boundaries and 48,024 living in rural areas. There is room to grow within the current urban boundaries by 50 percent. There is also room to grow using existing lots and the existing network of rural County roads, state highways, and other public and private roads in rural areas by 50 percent. A 50 percent increase in Jackson County's population is more than any current projection of growth in the next 20 to 25 years.

The need to create new road rights-of-way to accommodate growth is limited. Arterial and collector roads that connect the commercial, cultural, educational, governmental, and industrial centers of the County will need to be modernized to serve growth. To efficiently serve economic development needs some new roads will be needed. New streets are needed to serve urban fringe areas as the cities grow and develop within their urban growth boundaries. The best way for Jackson County to maintain the existing road system, as well as make the road improvements to serve future growth, is by directly assessing those who create the demand so that improvements follow new development.

ROAD STANDARDS & JURISDICTION:

Jackson County, the cities and the state have adopted standards for the public road system. The standards relate to road and bridge safety, the cost of road maintenance, and highway capacity among other factors. Construction of roads to appropriate standards has these advantages:

1) The road can handle the loads associated with the type of traffic;

2) The road is wide enough to handle anticipated traffic volumes;

3) Proper construction and regular maintenance will prevent excessive maintenance costs or unnecessary road reconstruction costs; and,

4) Accidents are reduced when the road has adequate capacity to handle the traffic volume.

Jackson County accepted roads built to then current standards as County roads on a petition basis prior to 1976. From 1976 to 1982 County standard roads were required for all new subdivisions in Jackson County, and 33 new County standard roads were built during that time period. An experiment to promote private maintenance and allow public roads at less than County road standards was included in the Jackson County Land Development Ordinance in 1982. In the following nine years more than eight miles of “dedicated ways” were created, mostly for large-lot subdivisions in Open Space Reserve and Woodland Resource zoned areas.
The public road dedicated to the public but not accepted for maintenance by a public agency (local access roads) is a long-term problem for residents along these roads. Some 133 miles of these roads (including dedicated ways) exist in unincorporated Jackson County. Many of the local access roads were accepted with explicit restrictions by the Board of County

Commissioners in its order. These restrictions expressly stated that the road would not be maintained at the County's expense. However, in too many cases land uses have intensified beyond the practical limits of landowner maintenance of the local access roads.

Modernization (road widening), and other construction project (traffic signals) are often necessary when the level of service deteriorates and the function of roads is impaired. The many points of conflict between road users prompt the need for changes in and along the roads: wider lanes, wider shoulders, improved sight distances, changes in traffic control, hard-surfacing, road improvements to urban standards, new travel or turn lanes, separate bikepaths, and new sidewalks. Many conflicts can be solved by separating the modes into their own places in the road right-of-way and improving roads as multi-modal facilities.

It is the longstanding policy of Jackson County to require 100 percent developer improvement of new roads. The primary responsibility of developers or adjoining owners for improving road frontages on existing local roads is also required. The County needs to conserve its road funds for projects of benefit to the public at large. Development needs to pay its share for on-site and road frontage improvements. Traffic conditions change as land uses change, so it is most appropriate to upgrade roads to serve the new level of land development as that development occurs. This has been difficult to do with many existing roads and for large-lot developments and series partitioning, but the confirmation that adequate transportation facilities exist or will be provided needs to be a regular part of land use approvals.

TRANSIT:

Transit, an alternative mode of transportation, has been dependent upon the road system in Jackson County since passenger rail service was discontinued in 1955. The need for transit is greatest for those who cannot drive. Cost-effective and affordable transit is difficult to achieve in rural areas and small towns due to the low population density. Consequently, transit is concentrated in the most urbanized parts of the County.

Much of Jackson County's involvement with transit is indirect. Its primary support of transit is by providing a road system in good condition that can be used by buses or other transit vehicles (such as rail commuter cars). The County will also cooperate in coordination with the cities, Rogue Valley Transportation District, Rogue Valley Council of Governments, the Metropolitan Planning Organization, the Oregon Department of Transportation, and private providers of transit and para-transit services to provide adequate services. Non-road forms of transit, such as various forms of passenger rail service, are not likely to be cost-effective in the near future in Jackson County, but several long-range possibilities are being studied.

The primary provider of public transit services in Jackson County is the Rogue Valley Transportation District. The Rogue Valley Transportation District (RVTD) was formed in 1975 and began operating its first buses in 1977. The RVTD boundaries encompass most of Ashland, Talent, Phoenix, Medford, Jacksonville, Central Point and White City. RVTD's boundary is shown on their map along with the Metropolitan Planning Organization boundary. Special planning requirements for urban road and transit planning now apply within these two boundaries. The Rogue Valley Transportation District has adopted their Transit Development Program (TDP) for fiscal years 1992-93 through 1997-98. The TDP is the central planning document of the agency, which identifies and describes the transit needs of the region and its urban areas, and identifies and describes the services required to meet those needs. The TDP describes operating characteristics of RVTD including service area, fixed route service, route

design and service levels, elderly and handicapped service, system coverage and scheduling, passenger facilities and transfer locations, maintenance and office facilities, and the vehicle fleet.

The TDP also addresses other issues including the relationship of RVTD to other transit and para-transit providers as well as transit-oriented development on transit trunk routes. RVTD's goal is to provide “Accessible Transportation”. Planning to meet the goal will be developed by RVTD and the MPO planning process. Most Jackson County residents rely heavily upon their automobiles for transportation, so the number of residents who make use of transit is limited. The apparent ease of private automobile travel helps make the automobile the preferred mode of travel for most people. Developments characterized by large parking lots, drive-up windows, and little provision for pedestrians have reinforced the preference for cars.

A 1991 Transportation Rule requires the definition of transit trunk routes around which transit-oriented development will be required by 1995. The reason for identifying these trunk routes is already identified in the TDP:

> “Service dependability is essential for public acceptance. Public transit, like other services or products, suffers when it is perceived as not being dependable. Users and non-users need confidence that the bus will be there when it is needed.”

Predictability in the funding sources available for transit is discussed in the TDP as it affects both operations and capital expenditures. When the stability of funding for transit has been achieved, reliable transit trunk routes will follow.

The transportation disadvantaged in Jackson County are those people who for reasons of income, age or disability are unable to drive an automobile. The primary program designed to address the needs of the transportation disadvantaged with disabilities is the RVTD Rogue Valley Para-Transit Plan adopted in January, 1992. The growing elderly population in Jackson County will increase the need for transit and para-transit options. The 1985 census update showed Jackson County with an elderly population of 28,218 persons over age 65, and from 11,790 to 14,770 handicapped persons. There is some overlap in these figures; however, from 30 to 40 percent of Jackson County's population is “transportation disadvantaged” by their difficulty in using automobiles.

BICYCLES:

Bicycling is an alternative mode of transportation which relies upon the multimodal aspects of our highways. Bicycling is an increasing popular form of transportation, particularly within the urban environment where trip lengths are not too great. As bicyclists must often share busy roadways with motor vehicles, the needs of cyclists require evaluation. Making roadways within Jackson County more “rider friendly” will increase the numbers of bike commuters, which will help reduce the reliance on automobiles, alleviate congestion, increase air quality, and reduce noise pollution. Increased coordination between transportation users and transportation providers is necessary to ensure maximum public benefit for all modes of transportation (passenger automobiles, trucks, transit, pedestrians, and telecommunication) using the road right-of-way.

As Jackson County performs maintenance and modernization of its roadways, current bicycle friendly design standards will be used. Jackson County shall use the Oregon Department of Transportation's 1995 Oregon Bicycle and Pedestrian Plan and 1991 AASHTO Standards, to

aid in the design of road improvements to facilitate safe and efficient bicycle routes. Through Jackson County's Capital Improvements Program, shared pedestrian and cycling facilities will be annually added to Jackson County's road network. Jackson County supports the Oregon Department of Transportation's 1995 Oregon Bicycle and Pedestrian Plan, hereby included as a supportive document to this Element. *(Amended by Ordinance #96-55, adopted December 11, 1996, effective February 10, 1996, File #96-10-OA.)*

The 1995 Oregon Bicycle and Pedestrian Plan includes basic design standards for bicycle facilities. The plan urges elimination of features that create hazards and conflicts for cyclists such as sidewalk bikepaths, extruded curbs, two-way bike lanes along one side of a road, and reflectors in pavement of bike lanes. Recommended beneficial practices include: 8-inch fog lines to mark bike lanes; paved driveway aprons; and sidewalk ramps on major bridge crossings. *(Amended by Ordinance #96-55, adopted December 11, 1996, effective February 10, 1996, File #96-10-OA.)*

Bicycle Planning in Jackson County

The intent of the May, 1996 Jackson County *Bicycle Master Plan* is to: 1) articulate the County's vision and direction for bicycling, 2) guide future bicycle facility improvements through the identification of needs and deficiencies; 3) provide a framework to coordinate bicycle planning efforts and system improvements among jurisdictions through Jackson County; 4) comply with specific bicycling requirements of the Oregon Transportation Planning Rule; and 5) help start an ongoing public education forum. The plan has a 20-year horizon (2015) for consistency with other plans in the County, including the Regional Transportation Plan for the Rogue Valley Metropolitan Planning Organization (MPO). The *Bicycle Master Plan* discusses funding options available through the one percent gas tax fund, as well as grants, donations, and general fund support. The *Bicycle Master Plan* identifies priorities for bikeway improvement and signing projects that need to be coordinated with road modernization and pavement management projects. Through the development of the MPO's Regional Transportation Plan, several deficiencies were identified. Future roadway improvements should give priority to roads with recommended bicycle facilities. The *Bicycle Master Plan* identifies the primary system improvements needs, by choosing projects that complete connections between destination points. *(Amended by Ordinance #96-55, adopted December 11, 1996, effective February 10, 1996, File #96-10-OA.)*

PEDESTRIANS:

The most common form of transportation is walking. However, in much of rural Jackson County distances make walking difficult and inconvenient. The Bear Creek Greenway Trail will provide a multi-use trail between and within the cities along Bear Creek. Other trails discussed in the Recreation Element include hiking trails and trails for pleasure walking in the remote parts of the County.

There are few sidewalks in unincorporated areas and even many city streets lack sidewalks in Jackson County. This can make it difficult for people who must or choose to travel on foot to get around. Walking serves the transportation needs of many people for short trips, and it helps to conserve energy as well as solve congestion problems on the road. In rural areas of the County, wide road shoulders can provide for pedestrians on low-volume roads. Jackson County can require that sidewalks be provided as development intensifies in urbanizing areas, and that some provision for pedestrians be made near activity centers, such as schools, in rural areas. In cases where street improvements and sidewalks are deferred until annexation, or a local improvement

district is formed, sidewalks remain a need. Even where continuous sidewalks are not feasible in the short-term, the Land Development Ordinance must be amended to address the need.

AIR TRAVEL:

The four Jackson County public airports included in the Oregon Aviation System Plan are shown on the following map. Rogue Valley-Medford Airport serves commercial flights and general aviation. Ashland's Municipal Airport serves general aviation needs. Prospect State Airport and Pinehurst State Airport, both owned and operated by the Oregon Department of Transportation, serve aviation needs of remote forested areas. All other airports in Jackson County are private airstrips or heliports. The primary supporting documents for Jackson County airport planning are the Airport Master Plan and Noise Compatibility Study for Medford/Jackson County Airport (February 1986), the Ashland Municipal Airport Master Plan (draft 1991), and the Oregon Aviation System Plan.

The Rogue Valley-Medford Airport Master Plan addresses the air transportation needs of the Rogue Valley, as well as compatible development in the airport area. The majority of airport users come from within Jackson County, although a larger region, southern Oregon and northern California, is served because of the scheduled commercial air service. The Rogue Valley-Medford Airport is classified as an air carrier facility, but it is also a general aviation airport with three fixed base operators and US Forest Service facilities.

The region needs effective linkages between air travel and surface transportation. The quality of air service depends on the availability of airport services as well as the adequacy of surface transportation serving the airport. The Rogue Valley-Medford Airport is served by several major arterials: Biddle Road is a city and County arterial west of the airport, with four travel lanes; Table Rock Road, northwest of the airport, and Vilas Road, north of the airport, are County roads that currently have two lane sections that will need improvement as multi-lane city arterials; Crater Lake Highway, a state highway, is east of the airport and is a major travel corridor that is approaching capacity.

As plans are updated for aviation-related and airport-compatible development around the airport, traffic generation and road improvements should be evaluated as well as the noise sensitivity of the potential uses. The Rogue Valley-Medford Airport terminal is within two miles of two I-5 interchanges, the Central Point Interchange and North Medford Interchange. Delays at these interchanges are also delays in the total time of an air trip from Medford. Interchange improvements that reduce the total travel time are important to the region.

To prevent safety problems near airport operations, some special overlays have been established. The Jackson County Land Development Ordinance (LDO) establishes an Airport Approach Overlay (AA) to restrict the height of structures or activities that could be a hazard to aircraft taking off or landing. The Airport Concern Overlay (AC) in the LDO, prevents airspace obstructions and requires a restrictive covenant to recognize the airport's preexistence within the 55 decibel noise contour. The AA and AC overlays have been adopted around the Ashland and Medford airports (the cities have comparable zones). The AA and AC overlays still need to be adopted for the Pinehurst and Prospect State Airports.

Several private airstrips in Jackson County could develop into general aviation airports. Airports are a use provided for in several county zoning districts to allow for this possibility, although zoning alone cannot assure land use compatibility between airports and other uses. At small

rural airports, road access issues are not significantly different than for other land uses. A publicly-maintained road and multi-modal connection are necessary. Prospect State Airport gets its access via Red Blanket Road, a County road, and Pinehurst State Airport gets access via Greensprings Highway. The Ashland Airport is on the edge of the Ashland Urban Growth Boundary, one mile from the Highway 66 and I-5 interchange, on Dead Indian Memorial Road, a County road.

RAILROADS:

The Oregon and California Railroad (O&C) was the first, and only, railroad through Jackson County. In 1887, it became the most important connecting route up and down the West Coast when a "Golden Spike" ceremony was held in Ashland. The railroad enters the County from the west along the Rogue River, then follows the Bear Creek Valley to Ashland and crosses the Siskiyou Mountains through tunnels, moving into the Colestin Valley and California. It was on October 11, 1923, in Tunnel 13 that the last United States train robbery occurred.

Because railroads are largely beyond local control and the rails must be protected for possible transportation needs of the future, a greater role is needed by the State of Oregon in planning for rail service, protecting grade crossings, and locating inter-modal terminals and sidings. Southern Pacific Transportation Company owns and operates the main rail line in Jackson County. A spur line from Tolo to White City, serving that major industrial area, is operated by White City Transportation Company. Other rail lines once existed in Jackson County in connection with the lumber industry, including a spur from Medford to Jacksonville and another spur from Medford to Butte Falls, but those rails are now gone. Communities with rail access include White City through a spur line and the seven cities on the old O&C mainline (Ashland, Talent, Phoenix, Medford, Central Point, Gold Hill, and Rogue River). All of these communities have industrially-zoned land adjacent to the railroad tracks.

In 1927 the main passenger route for the Southern Pacific was shifted east of the mountains through Klamath Falls. The last passenger train service through the Rogue Valley was on August 5, 1955. Since that time the primary purpose has been for hauling freight into and out of the region. Concern for the endangered spotted owl has, in effect, diminished the timber supply for harvest and transport, further reducing the need for rail service. When freight is smaller in quantity than a full railcar or when the purchaser has a "just-in-time" inventory system, trucks have been used to deliver the goods. I-5 now fills the role that the O&C Railroad filled in the late 1800's and the early twentieth century, and the Medford area is a significant layover point on that route. The Oregon Transportation Plan The New Oregon Trail Leading into the 21st Century was adopted by the Oregon Transportation Commission on September 15, 1992. It lists Medford as an inter-modal transportation hub. By the year 2012 or sooner the preferred transportation system will also include commuter transit between Ashland and Grants Pass, and as a long-range possibility, Amtrak service. This plan makes the Siskiyou line vital to future planning efforts. It is vital to the economic well being of Oregon and especially Southern Oregon that the existing tracks over the Siskiyou mountains, connecting Oregon to California forever be in place and that the original 1866 O&C (Oregon and California) Land Grant be adhered to. The Oregon Transportation plan does not identify funding sources for these additions to the existing rail system.

PIPELINES:

The geographic isolation and mountainous terrain surrounding the Rogue Valley limit the prospects for utilizing pipelines as an alternative transportation mode. The region is supplied by a natural gas pipeline which does not traverse the County. There are no major petroleum pipelines through Jackson County. Transmission lines are addressed in the Public Facilities Element.

Pipelines have a high degree of compatibility with many land uses. Very little cultivated agricultural land is taken from production since pipelines can be buried deep enough to plow over. However, forest lands are more greatly impacted. Special precautions are necessary to minimize hazards from spills or pipeline breakage where the pipeline is near the ground surface. These problems are still fewer than the problems experienced with overland shipment of the same cargo. The advantage of pipelines in lower operating costs, energy efficiency and land use compatibility are obtained only after a large initial capital investment. There would be long-term advantages to pipeline service in Jackson County. As growth continues and energy costs rise pipeline service may become more feasible. Neighboring counties and the states of Oregon and California should be involved in pursuing the development of new pipelines as an alternative to freight traffic on I-5, and make local energy supplies more secure.

FINDINGS, POLICIES AND IMPLEMENTATION STRATEGIES:

The Comprehensive Plan policies on transportation emphasize land use policies for development and planning. Operational policies are contained in the state statutes governing roads, Board Orders accepting roads, Roads and Parks Services policies and adopted ordinances such as the County Road Standards and Specifications and Chapter 1034 of the Codified Ordinances of Jackson County. As the main transportation facilities throughout the County, roads receive the greatest emphasis in this policy section. Several goals and policies are directed toward greater use of the road network by modes other than automobiles.

To achieve its goals, Jackson County has adopted specific policies and implementation strategies. Completion of any of the implementation strategies may be sufficient action to satisfy the Comprehensive Plan policy. Reference to urban boundaries includes both urban growth boundaries of incorporated cities and urban containment boundaries of unincorporated areas. Sections of the Jackson County Land Development Ordinance (LDO) or other ordinances that implement these policies are cited where appropriate. Some of these measures are not land use actions but, nonetheless, will implement the policies or the goal of providing a safe, convenient, and economic transportation system. Throughout these policies “road” has the same meaning as in Oregon Revised Statutes Chapter 368.

FINDINGS, POLICIES, IMPLEMENTATION STRATEGIES:

1

FINDING:

Transportation affects all residents of Jackson County. It affects air quality and energy consumption; it affects the location, type and intensity of development which occurs in Jackson County; and the future mobility and ease of movement for County residents will be affected by

transportation planning that occurs today. There is coordinated comprehensive transportation planning occurring in Jackson County at this time.

POLICY: THE TRANSPORTATION ELEMENT IS A COUNTYWIDE TRANSPORTATION PLAN SUBJECT TO MODIFICATION BY MORE DETAILED MODAL SYSTEM PLANS, URBAN AREA PLANS, AND REGIONAL OR METROPOLITAN PLANS. JACKSON COUNTY WILL COOPERATE WITH CITIES, SPECIAL DISTRICTS, THE METROPOLITAN PLANNING ORGANIZATION AND THE OREGON DEPARTMENT OF TRANSPORTATION IN DEVELOPMENT AND ADOPTION OF THESE MORE DETAILED PLANS. THE COUNTY SHALL COORDINATE PLANNING FOR LAND USE, TRANSPORTATION NEEDS, AND ENVIRONMENTAL QUALITY IN RURAL AREAS TO MINIMIZE OR MITIGATE EXISTING AND POTENTIAL PROBLEMS.

IMPLEMENTATION STRATEGIES:

A) Coordinate interagency notices for proposed development projects. Participate in the Metropolitan Planning Organization. Coordinate with cities on urban transition issues, such as County roads in cities and development within urban growth boundaries.

B) Review new development to improve land use compatibility, assure adequate road access, and reduce impacts from dust, noise, and rough road surfaces. Require new public roads to meet city, County or state standards, whichever entity is responsible for maintaining the road.

2

FINDING:

Improperly designed transportation and access facilities, including sidewalks, walkways, curbs, stairs, or hallways pose a virtual impasse to a substantial number of handicapped County residents. Removal of such transportation or access barriers is relatively simple in most cases, although it can be costly or difficult to accomplish where entire existing structures have to be redesigned and retro-fitted to accommodate the handicapped.

POLICY: THE COUNTY SHALL WORK TOWARD THE ELIMINATION OF ARCHITECTURAL BARRIERS AS WELL AS OTHER PHYSICAL BARRIERS TO THE HANDICAPPED IN THE TRANSPORTATION FACILITIES UNDER COUNTY JURISDICTION AND CONTROL.

IMPLEMENTATION STRATEGY:

Within urban boundaries or other locations where a sidewalk or walkway is provided, suitable curbcuts for wheelchairs are mandatory for compliance with frontage improvement requirements. These facilities must be in compliance with the standards of the American Disability Act (ADA) concerning access in transportation-related buildings and facilities (new subdivisions, planned unit developments, shopping centers, industrial parks, schools, and parks) under County control.

3

FINDING:

In order to protect the substantial investment that the road system presents, State Highway Trust Fund monies are spent on road maintenance. This costly maintenance extends the surface life of County roads. Annually about 100 miles of Jackson County roads are either overlaid or sealed.

POLICY: JACKSON COUNTY SHALL USE COST-EFFECTIVE, ENERGY AND RESOURCE-SAVING CONSTRUCTION MATERIALS AND TECHNIQUES FOR TRANSPORTATION FACILITIES (INCLUDING ADMINISTRATIVE AND ORGANIZATIONAL TECHNIQUES TO INCREASE EFFICIENCY).

IMPLEMENTATION STRATEGY:

Roads and Parks Services staff will continue to evaluate new or modified County road construction and maintenance methods to use the most cost-effective and resource-efficient technologies. Current examples include: (a) use of asphalt rubber overlays to recycle tires in pavement; (b) use of latex-modified oil on chip seals to retain more rock on the road surface; (c) use of lignin sulfonate rather than oil to reduce dust; and (d) consideration of fleet vehicle conversion to natural gas fuel to improve air quality.

4

FINDING:

The design and siting of safe parking and loading areas can have a significant effect on transportation trends and transportation-related environmental impact.

POLICY: THE COUNTY SHALL PROMOTE THE USE OF APPROPRIATE SAFETY MEASURES AND ENERGY EFFICIENT SITE PLANNING FOR PARKING AND LOADING FACILITIES.

IMPLEMENTATION STRATEGIES:

A) Adopt loading facility standards in the Jackson County Land Development Ordinance (LDO) to assure provision of adequate area for maneuverability while loading and unloading trucks without obstructing traffic on public road rights-of-way at industrial and commercial sites.

B) Require adequate but not excessive on-site (off-street) parking in the LDO, since the County's road standards do not generally provide for on-street parking. Establish a maximum area or number of spaces for on-site parking in the LDO.

C) Develop, in cooperation with cities and the Metropolitan Planning Organization, appropriate standards for conversion of parking lots for more intensive use.

5

FINDING:

State shared road funds are not apportioned with new development. Each county receives its share from state user taxes that are derived from fuel taxes, state vehicle registration fees, and state weight-mile taxes. Developer-paid improvements ensure equity since they prevent development induced costs from being shifted to the populace as a whole. Assessment of the direct and cumulative impact to the public road system must occur before development is approved to assure that adequate transportation facilities exist upon completion of the project.

POLICY: JACKSON COUNTY SHALL REQUIRE DEVELOPMENT PROPOSAL APPLICATIONS TO ASSESS THE DIRECT AND CUMULATIVE IMPACT THAT NEW DEVELOPMENT WILL HAVE ON THE PUBLIC ROAD SYSTEM. LAND DEVELOPMENT WILL NOT BE PERMITTED UNLESS ADEQUATE TRANSPORTATION FACILITIES EXIST OR ARE ASSURED.

IMPLEMENTATION STRATEGIES:

A) Require an assessment of the traffic impact which would result from uses in commercial and industrial zones, new subdivisions and partitions, and development proposed on substandard roads. The assessment can generally be fulfilled where a standard road with adequate capacity exists.

B) Development proposals should recommend mitigation of traffic impact through road improvements or other means. Require that site plans include engineering plans and drawings for the needed road and other transportation improvements on road frontages.

C) Work with cities and the MPO to develop appropriate joint review procedures for roads that are adjacent to urban growth boundaries.

D) Work with the cities, MPO, and Oregon Department of Transportation to provide consistent guidelines for traffic impact analyses.

6

FINDING:

Frontage improvements may consist of such things as curbing, gutter, storm drains, right-of-way dedication, bike lanes, walkways, bus turnouts, shoulders lane widening, turn lanes, traffic signals, and improvements in the road base to carry heavier loads. Frontage improvement requirements are authorized by the Jackson County Land Development Ordinance and the County Road Standards, and are assessed against development at the time the application is approved. Contribution to off-site improvements is also needed for new development. Through

System Development charges (SDCs) “off-site” improvements are assessed proportionally on development. SDCs consider the general public's use that already exists, and assess the share of added capacity that would be required for each new development.

POLICY: JACKSON COUNTY SHALL REQUIRE APPLICANTS FOR NEW OR EXPANDING DEVELOPMENT PROPOSALS TO MAKE ON-SITE OR FRONTAGE IMPROVEMENTS TO APPROPRIATE STANDARDS, OR TO PAY FOR A FAIR SHARE FOR SUCH IMPROVEMENTS, AND TO PAY FOR A FAIR SHARE OF OFF-SITE TRANSPORTATION IMPROVEMENTS IN A TIMELY MANNER. NEW DEVELOPMENT SHALL CONTRIBUTE A PROPORTIONATE SHARE OF THE COST OF THE NEW OR EXPANDED CAPITAL FACILITIES REQUIRED BY NEW DEVELOPMENT. EXISTING SUBSTANDARD ROADS SHOULD BE UPGRADED OR RECONSTRUCTED AND NEW ROADS SHOULD BE PROVIDED AT STANDARDS APPROPRIATE FOR THE LEVEL OF URBAN OR RURAL DEVELOPMENT TO ULTIMATELY BE SERVED. ACCESS VIA A ROAD THAT MEETS COUNTY-APPROVED STANDARDS SHALL BE REQUIRED CONCURRENTLY WITH NEW DEVELOPMENT.

IMPLEMENTATION STRATEGIES:

A) Require a dedication of right-of-way or consent to dedicate right-of-way when development approvals are issued, in compliance with the LDO and the Jackson County Road Standards.

B) System development charges paid by new development (authorized by Chapter 1025 of the Codified Ordinances of Jackson County) shall be dedicated to the cumulative need for capacity-increasing off-site improvements to arterial and collector roads.

C) Where developers are required to make improvements that benefit the general public, such as improvements on arterials and collectors, provide appropriate credits to system development charges.

D) New local road construction shall be entirely at developer expense as required by the LDO, and the County Road Standards.

E) Deferral of frontage improvements is appropriate under these circumstances: (1) the land served by an existing road is zoned for more intensive development; and (2) only a minor part of potential traffic on the road would be generated by the proposed development. In both cases it will be necessary to obtain a binding commitment to make needed road improvements when warranted.

F) Require commercial and industrial developments to locate on roads either; (1) improved to a County “A” standard road (or comparable city or state standards); or (2) to participate in road improvements to meet the “A” standard. (See “Substandard County Roads, Serving Industrial and Commercial Zones” table)

G) Assess the need for a systems development surcharge for the urbanizing area of White City. This assessment will address whether additional dedicated

transportation system funds are necessary to provide for improvements to non-County transportation facilities within the White City Urban Unincorporated Community Boundary and for the development of regionally significant transportation connections outside the White City UUCB that are designated on the White City Transportation Connectivity Plan Map ('Future Study' facilities). *(Amended by Ordinance #2003-19 adopted 9-17-2003, effective 11-17-2003, File 2003-2-OA.)*

7

FINDING:

Jackson County faces the transportation issues of a small metropolitan area serving a larger more rural and somewhat isolated multi-county region. The distances within this region are such that roads are usually the most practical means of travel at this time and for some time to come. A method of preserving and upgrading this vital road network must be created.

POLICY: THE COUNTY SHALL DEVELOP AND IMPLEMENT A COUNTY ROAD SYSTEM PLAN INCLUDING A CAPITAL IMPROVEMENTS PROGRAM TO GUIDE FUTURE IMPROVEMENTS OF THE ROAD NETWORK WITHIN JACKSON COUNTY.

A) The Capital Improvements Program (CIP) included in the Jackson County Road System Plan, developed by County Roads and Parks Services, will be reviewed and considered as part of the annual review of system development charges for arterial and collector roads. Budgeting for capital improvements will be based upon the contents of the Comprehensive Plan, related transportation plans (Road System Plan, Bicycle Master Plan, and Airport Plan), and the funding sources available.

B) System development charges and dedication requirements are the preferred methods to assure that new development bears a proportionate share of the cost of capital facilities necessary to accommodate new development.

8

FINDING:

Urbanizing areas have more alternatives to automobile use, including networks of walkways, sidewalks, bikepaths and various transit options. These alternatives need to be expanded to achieve long-term progress without devaluing neighborhoods. The alternative to expand modal choices overlaps road improvement needs.

POLICY: THE DESIGN AND ROUTING OF NEW OR IMPROVED ROADS SHOULD MAINTAIN OR ENHANCE THE LIVABILITY OF NEIGHBORHOODS. WHERE NEW OR IMPROVED FACILITIES MUST BE LOCATED IN EXISTING NEIGHBORHOODS,

ALTERNATIVES THAT PROMOTE FUTURE LAND USE COMPATIBILITY IN THE NEIGHBORHOOD SHOULD BE FAVORED.

IMPLEMENTATION STRATEGIES:

A) Require the proper integration of new road development to achieve minimal adverse impacts on the neighborhoods. This strategy to lessen impacts may result in a minimal suitability on specific roads.

B) May require public participation in the development of individual road designs for new or improved roads.

9

FINDING:

Roads are an expected and necessary part of land use in any zoning district. Within urban and urbanizing areas, new road systems are necessary to meet urban development demands. Because a generally adequate rural road network exists, new road rights-of-way outside urban and urbanizing areas which extend onto resource land shall require prior approval from the Department. Resource land considerations include economic benefits, public service needs, feasible engineering practices, alternatives to meet transportation needs, and various fiscal and environmental impacts on agricultural and other resource land. New rights-of-way in urban areas do not require prior approval. *(Amended by Ordinance #2000-27 adopted 9-6-00, effective 11-5-00 (File 2000-4-OA))*

POLICY: CREATION OF NEW RIGHTS-OF-WAY THROUGH RESOURCE LAND, AND OUTSIDE CITY LIMITS AND ACKNOWLEDGED URBAN GROWTH BOUNDARIES, REQUIRE BOTH A REASONS EXCEPTION TO THE STATEWIDE PLANNING GOALS AND AN AMENDMENT TO THE JACKSON COUNTY COMPREHENSIVE PLAN.

IMPLEMENTATION STRATEGIES:

Require compliance with the Jackson County Land Development Ordinance in creating rights-of-way once a reasons exception and Comprehensive Plan amendment have been approved for a new right-of-way on resource land, outside city limits and acknowledged urban growth boundaries.

10

FINDING:

Road funds must be retained for projects of benefit to the public-at-large. When development occurs, the cost of road improvements must be assumed by the developer. This has been difficult to assess when new development requires the upgrading of an existing road or when large-lot developments and series partitioning occur. Confirmation that adequate transportation

facilities exist to accommodate the needs of the new development must be assured as part of the conditions of approval of a land use application.

POLICY: THE COUNTY SHALL REGULATE LAND USE MORE EFFECTIVELY BY REQUIRING PRIVATE DEVELOPERS TO IMPROVE OR TO CONTRIBUTE THEIR FAIR SHARE TO IMPROVE EXISTING PUBLIC ROADS. THE IMPROVEMENTS SHALL BE MADE TO THE ROAD STANDARDS NECESSARY TO SERVE THE PROPOSED DEVELOPMENT. APPROVAL OF NEW PUBLIC OR PRIVATE ROADS SHALL BE BASED UPON CONSIDERATION OF OPTIONS TO LIMIT FUTURE PUBLIC AGENCY AND PRIVATE THIRD-PARTY COSTS BY IMPROVING EXISTING ROADS.

IMPLEMENTATION STRATEGIES:

A) Review development proposals with a focus on improvement and use of existing roads and streets, particularly those that encourage urban-centered growth. Adequate roads and bridges should be provided before a development is occupied.

B) Coordinate land use and road plans to assure minimum cost for necessary transportation facilities. For example, require the replatting of old orchard tract subdivision roads rather than developing an impractical road network.

11

FINDING:

Access control on high volume corridors is a major need in Jackson County. The results of the Medford to Eagle Point Highway 62 corridor pilot study in 1989-1990, conducted by the Oregon State Highway Department's Systems Study Unit and the Rogue Valley Council of Governments, established a coordination mechanism that can be applied to other high-traffic roads in Jackson County.

POLICY: A MULTI-JURISDICTIONAL ACCESS MANAGEMENT PLAN SHALL BE IMPLEMENTED FOR EACH SPECIFIED HIGH-TRAFFIC-VOLUME CORRIDOR, SUCH AS HIGHWAY 62, TO PRESERVE THE TRAFFIC CARRYING CAPACITY AND IMPROVE SAFETY ON THESE MAJOR ROADS.

IMPLEMENTATION STRATEGIES:

A) Adopt the coordinated Access Management Plan for Crater Lake Highway prepared by the Rogue Valley Council of Governments in cooperation with the State Highway Division, Jackson County Roads and Parks Services, and the cities of Medford and Eagle Point.

B) Cooperate in the development of Access Management Plans for other highway corridors with ODOT and affected cities.

C) Develop joint agreements with the state and affected cities to assure consistency between access control and development approvals. Control ingress and egress from roads and streets through proper placement of curbcuts, channelized islands and medians, and other appropriate means.

12

FINDING:

The need for transit service is greatest for those who cannot drive an automobile. Cost-effective and affordable transit is difficult to achieve in rural areas and small towns due to low population density. Jackson County supports public transit, through coordination with local cities, Rogue Valley Council of Governments as the Metropolitan Planning Organization, Rogue Valley Transportation District, Oregon Department of Transportation, and private providers of transit and para-transit services.

POLICY: TRANSIT SERVICE WILL BE ENCOURAGED IN URBAN AND URBANIZING AREAS, WHERE IT IS AN ENERGY-EFFICIENT FORM OF TRANSPORTATION, AND IN RURAL AREAS TO MEET SOCIAL SERVICE NEEDS.

IMPLEMENTATION STRATEGIES:

A) Cooperate with the Rogue Valley Transportation District (RVTD) by: (1) incorporating a summary of the Transit Development Program in the Transportation Element and incorporating a Transit Plan consistent with Goal 12 after it is made available to the County; and (2) identifying and jointly developing park-and-ride sites on publicly-owned land such as Expo Park, Miles Field, the Bear Creek Greenway, the Jackson County Sports Park, and libraries.

B) In cooperation with RVTD, cities, and school districts, develop standards to be included in County ordinances for bus turnouts and other features that would facilitate bus use and help increase highway capacity.

C) Encourage transit programs to meet the special needs of the elderly, disabled, and transportation disadvantaged.

D) Cooperate with RVTD and the other members of the MPO in the development of transportation demand management measures.

E) Support efforts by RVTD to expand service to White City, including additional routes, more frequent bus service and enhanced system connectivity. *(Amended by Ordinance #2003-19 adopted 9-17-2003, effective 11-17-2003, File 2003-2-OA.)*

13

FINDING:

Bicycles are valid transportation mechanisms. As with most mechanisms, bicycles have become extremely sophisticated and varied in design and construction. Prompted by energy

conservation concerns, inexpensive purchase price, ease of upkeep and obvious health benefits, bicyclists are becoming a major social and political force. Both Jackson County and the state have recognized the significance of bicycling as a mode of transportation by adopting master plans which establish the infrastructure to promote bicycle use.

POLICY: THE COUNTY SHALL INCLUDE BICYCLE TRANSPORTATION AS AN IMPORTANT PART OF THE OVERALL COUNTY TRANSPORTATION SYSTEM. THE JACKSON COUNTY BICYCLE MASTER PLAN IS INCORPORATED HEREIN BY REFERENCE.

IMPLEMENTATION STRATEGIES:

A) Actively support implementation of the Jackson County Bicycle Master Plan by coordinating road widening projects and road signing with designated bike routes on city, County, and state roads. *(Amended by Ordinance #96-55, adopted December 11, 1996, effective February 10, 1996, File #96-10-OA.)*

B) Support efforts to integrate bicycle and mass transit, and cooperate with cities and the state to create a continuous network of bicycle routes in Jackson County.

C) Jackson County Roads and Parks Services may provide for bicycles on roadways through the provision of at least 4-foot-wide shoulders on road projects where volumes exceed 2,000 ADT, particularity within urban areas.

D) Designate an east-west non-motorized transportation route through White City, as part of the White City Urban Unincorporated Community Plan. Require developments to provide the necessary non-motorized path connections and improvements to any paths designated on the White City Urban Unincorporated Community Plan. *(Amended by Ordinance #96-55, adopted December 11, 1996, effective February 10, 1996, File #96-10-OA.)*

14

FINDING:

Walking, the most common form of transportation, is often difficult and inconvenient in urbanizing areas of rural Jackson County.

POLICY: THE COUNTY SHALL INCLUDE FACILITIES TO ACCOMMODATE PEDESTRIANS AS A PART OF THE OVERALL COUNTY TRANSPORTATION SYSTEM.

IMPLEMENTATION STRATEGIES:

A) Provide wider paved roadway sections including paved shoulders for safer pedestrian use as rural roads are improved.

B) Require construction of sidewalks as a condition of approval on proposed development within urban boundaries. This condition is subject to provisions for deferral of improvements.

C) Jackson County shall require that cross-walks be provided for pedestrians at signalized intersections serving residential areas within urban boundaries and rural communities.

D) Designate an east-west non-motorized transportation route through White City, as part of the White City Urban Unincorporated Community Plan. Require developments to provide the necessary non-motorized path connections and improvements to any paths designated on the White City Urban Unincorporated Community Plan. *(Amended by Ordinance #96-55, adopted December 11, 1996, effective February 10, 1996, File #96-10-OA.)*

15

FINDING:

Air, rail, and truck services to and from Jackson County are necessary to provide convenient and energy efficient service for shipment of locally manufactured goods. These services should be encouraged to continue and expand. However, these transportation modes have characteristics such as noise, which may be offensive, and in severe cases, physically damaging to people. Recognizing that these modes play a critical role in the local economy, appropriate land use actions are needed to buffer the sites of rail and truck facilities from adjacent incompatible land uses.

POLICY: THE COUNTY SHALL COORDINATE ROAD IMPROVEMENTS WITH NEW DEVELOPMENT ESPECIALLY REQUIRING RAIL AND TRUCK FREIGHT SERVICE, ON ARTERIALS AND COLLECTORS IN AREAS PLANNED FOR INDUSTRIAL USES.

IMPLEMENTATION STRATEGIES:

A) Identify and appropriately zone sites for development as rail or truck freight facilities with special emphasis on roads that already have an “A” standard road base.

B) Require upgrading of roads to the County “A” standard or equivalent city standard, as development occurs, for roads listed on “Substandard County Roads”.

C) Coordinate with private carriers to determine the transportation needs of private enterprise. Improve the roads in commercial zones to facilitate the use. Support expansion of the Southern Pacific Railroad tunnel to accommodate large commercial freight cars, such as piggy-back cars, auto cars, and chip cars.

16

FINDING:

The Rogue Valley-Medford Airport, and possibly local airports and airstrips, will continue to play an increasingly significant transportation role as well as providing a center for business and employment. With proper planning, such airports will be dynamic forces influencing the economy, stability, and growth of the surrounding areas. However, the location of airports may result in conflicts with surrounding land uses. For example, the operation of an airport may generate noise and vibration. There are hazards associated with the operation of an airport which could affect adjacent lands, and airports usually generate increased traffic within their vicinity.

POLICY: JACKSON COUNTY SHALL FOLLOW THE POLICIES AND IMPLEMENTATION MEASURES OF THE ROGUE VALLEY-MEDFORD AIRPORT MASTER PLAN AND COORDINATE WITH THE CITIES OF MEDFORD AND CENTRAL POINT TO REDUCE HAZARDS AND LIMIT ADVERSE IMPACTS ON SURROUNDING AREAS. OTHER PUBLIC AIRPORTS AT ASHLAND, PINEHURST, AND PROSPECT SHALL ALSO BE PROTECTED WITH APPROPRIATE ZONING. SMALL PRIVATE AIRSTRIPS MAY BE PERMITTED SUBJECT TO CONFORMANCE WITH APPROPRIATE CRITERIA.

IMPLEMENTATION STRATEGIES:

Maintain the status of airports and airstrips as a use in rural zoning districts, and apply the Airport Approach and Airport Concern Overlays at the four Oregon Aviation System Plan Airports in Jackson County (Prospect and Pinehurst State Airports as well as the Ashland and Medford Airports).

17

FINDING:

Significant issues of safety and compatibility must be addressed by airport overlays with consideration given to actual airport operations. Foresight must be given to plan for future aviation needs allowing lands to be set aside for potential sites.

POLICY: FUTURE AVIATION NEEDS SHALL BE EVALUATED IN JACKSON COUNTY. A COORDINATED EFFORT IN JACKSON COUNTY, BY THE OREGON DEPARTMENT OF AVIATION AND THE FEDERAL AVIATION ADMINISTRATION IS NEEDED TO IDENTIFY REQUIREMENTS, IF ANY, TO PROTECT LARGE OPEN AREAS IN THE COUNTY FOR AIRPORT DEVELOPMENT IN THE NEXT 20 TO 40 YEARS IS ESSENTIAL.

IMPLEMENTATION STRATEGIES:

Maintain current Airport Approach and Airport Concern overlays around the existing airports as a means of reviewing and limiting incompatible development around airports. Work with Jackson County, the Oregon Department of Aviation and the Federal Aviation Administration when they initiate airport expansion and planning in Jackson County.

18

FINDING:

Nonroad forms of transit, such as passenger rail service, are not likely to be cost-effective in the near future in Jackson County, but several long-range possibilities should be studied.

POLICY: RAIL SERVICE SHALL BE ENCOURAGED AS A VIABLE LONG-TERM TRANSPORTATION OPTION FOR THE ROGUE VALLEY.

IMPLEMENTATION STRATEGIES:

Investigate options in cooperation with neighboring counties and the states of Oregon and California to maintain rail service and the railroad right-of-way through Jackson County.

19

FINDING:

Pipeline transportation of products to Jackson County would require a very large initial investment. After the initial investment lower operating costs, energy efficiency and land use compatibility would make this method of transportation more feasible. The geographic isolation and mountainous terrain surrounding Jackson County limits the prospects at this time with our present population base.

POLICY: ENCOURAGE PIPELINE TRANSPORTATION.

IMPLEMENTATION STRATEGIES:

Explore options to extend petroleum pipeline service into Jackson County in cooperation with neighboring counties and the states of Oregon and California.

20

FINDING:

With continued population growth in Jackson County, many cities are expanding their urban growth boundaries and taking roads that were once County roads into their own street system. These boundary exchanges are taking place in all road systems and it is essential that the integrity of the road network be maintained consistently.

POLICY: JACKSON COUNTY SHALL COOPERATE WITH THE OREGON DEPARTMENT OF TRANSPORTATION, INCORPORATED CITIES AND THE UNITED

STATES GOVERNMENT TO IMPROVE THE EFFECTIVE MAINTENANCE OF THE PUBLIC ROAD SYSTEM. ROADS ACCEPTED BY JACKSON COUNTY IN EXCHANGES SHOULD BE PAVED, RURAL ROADS FOR WHICH COUNTY ROAD MAINTENANCE OPERATIONS HAVE DEVELOPED SPECIAL EXPERTISE.

21

FINDING:

For over 30 years the State of Oregon, Jackson County and the City of Jacksonville have sought alternative routes for Highway 238 in order to move the regional traffic outside this National Historic Landmark community. A "Bypass" connection north of the City of Jacksonville was on the ODOT six year development plan in the early l980's, but was removed prior to final design and development. A regional transportation route around the City of Jacksonville is needed to preserve the historic structures and character of Jacksonville, and to provide safe regional transportation between Medford and the Applegate Valley. It is essential that ODOT design and identify funding for an alternate connection around Jacksonville. *(Amended by Ordinance #2000-38 adopted 10-31-00, effective 12-30-00 (File 98-2-CPA))*

POLICY: PROMOTE THE DESIGN AND DEVELOPMENT OF A REGIONAL TRANSPORTATION ROUTE AROUND THE CITY OF JACKSONVILLE.

IMPLEMENTATION STRATEGY:

Jackson County shall cooperate with the Oregon Department of Transportation and the City of Jacksonville in designing and developing an alternate connection around Jacksonville.

22

FINDING:

A survey of buildable lands prepared by Jackson County for the White City area on November 4, 2002, entitled *White City Buildable Lands Analysis*, is included in the Urban Lands Element of the Jackson County Comprehensive Plan. The survey indicates that the average growth trend over the preceding twelve years was over 64 dwelling units per year, far exceeding any growth rate in other areas of unincorporated Jackson County. In 1998, White City was acknowledged under Oregon Administrative Rule Chapter 660, Division 22 as an urban unincorporated community and as a Goal 14 (Urbanization) exception area. The designation permits redevelopment of the existing rural and suburban residential lands within White City to urban residential densities as appropriate public facilities and services are shown to be available.

Over the last several years, the County received many requests to rezone parcels to urban densities and the County required that urban standard transportation facilities be provided in conjunction with these developments. However, adequate policies had not been adopted to provide for street transportation system connectivity within White City, so connectivity is being developed ad hoc. If this chaotic pattern were to continue, the level of service for all

transportation modes would steadily decline. Access management would be difficult because proper functional classification facility spacing could not occur. Without an adequate system-wide plan, the system would have become heavily dependent on existing connections. Many of these existing connections are not designed for alternative modes of transportation, and it was unlikely that the appropriate levels of service for all modes could be maintained. It is critical to provide guidelines and provisions so that proper transportation system connections are assured and will form an efficient transportation network for all transportation modes in White City. *(Amended by Ordinance #2003-19 adopted 9-17-2003, effective 11-17-2003, File 2003-2-OA))*

POLICY: PROMOTE TRANSPORTATION SYSTEM CONNECTIVITY WITHIN THE WHITE CITY URBAN UNINCORPORATED COMMUNITY BOUNDARY THAT SUPPORTS ALL TRANSPORTATION MODES.

IMPLEMENTATION STRATEGIES:

A) Adopt a connectivity plan for the White City Urban Unincorporated Community which displays important local, collector and arterial connections.

B) Adopt standards for alignment of streets, cul-de-sacs, non-motorized pathways, and for proper separation between important transportation facilities within White City.

C) Require streetscape designs that encourage traffic calming on local, collector and arterial streets, while providing an appealing facility for alternative transportation.

D) Identify future study areas to facilitate external transportation connections between White City and nearby urban communities, and enhance access to Interstate freeways.

URBAN LANDS[1]

GOAL: TO PROVIDE FOR AN ORDERLY, EFFICIENT AND ENVIRONMENTALLY SOUND PLAN FOR URBAN LAND USES WITHIN URBAN GROWTH BOUNDARIES.

INTRODUCTION/BACKGROUND:

The Jackson County planning process has placed much emphasis on urban areas, especially incorporated cities. More than two years were spent in the joint city-county establishment of urban growth boundaries, the primary urban growth tool. This effort overlapped and complimented the overriding intent of many other elements of the Comprehensive Plan, including agricultural lands, housing, energy, transportation, public facilities and services, environmental, natural hazards and economy. Together, the sum total of Jackson County's urban lands program, in conjunction with other Plan elements, will serve to strongly reinforce the concept of urban centered growth. This concept is firmly embodied in the statewide planning goals, as well as recent Federal urban programs, in a national effort to revitalize declining urban centers, rather than to encourage a continuation of contemporary sprawling growth patterns. For background and discussion purposes, urban lands in Jackson County can be reasonably segregated into two types, incorporated cities and unincorporated areas.

INCORPORATED URBAN AREAS: Eleven cities in Jackson County presently support a population of 73,155 or approximately 60 percent of the total 1977 County population of 126,500 (certified estimate, Center for Population Research and Census, Portland State University). From 1950 to 1970 there was a one percent change in the ratio expressing the relationship between urban (incorporated) and rural (unincorporated). In 1950 the ratio was 54:46. In 1960 and 1970 the ratio was 55:45. In the period between 1970-77 however, this ratio changed dramatically, increasing to 60:40. By the year 2000 the ratio is expected to continue to shift in favor of an even greater population distribution in the incorporated urban areas. The combined population forecasts for the eleven cities for the year 2000 totals 130,806, compared to the overall County forecast of 196,000. (See Population Element.) This represents an urban to rural ratio of approximately 67:33 or 2:1.

County land use policy relating to each incorporated city is embodied in the urban growth boundary and urbanization plan's adopted ordinances. Each urbanization plan sets forth a mutually agreed to urban growth boundary, amendment procedure, and set of urbanization policies designed to implement urban-centered growth in a manner compatible with the goal. Although precise wording of urbanization policies varies from city to city, the intent is basically the same. Briefly, the policies can be summarized as follows:

1) Establishes that urban growth boundaries will define the limits of urban growth to the year 2000.

2) Establishes that annexation will be the mechanism by which urbanizable lands may be converted from rural to urban uses and urban residential densities.

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[1]*Adopted by Ordinance #82-26 adopted 10-22-82, effective 12-19-82; amended by Ordinance 98-18, adopted 9-2-98, DLCD acknowledged Order #00992, effective 11-1-98; amended by Ordinance #2003-19 adopted 9-17-2003, effective 11-17-2003 (File 2003-2-OA); amended by Ordinance #2004-1, adopted on 1-12-04, effective 3-12-04 (File 2003-1-OA).*

3) Provides that all planning-related matters within urban growth boundaries will be fully coordinated between affected cities and the County.

4) Sets forth jurisdictional responsibilities for lands within urban growth boundaries, in that all unincorporated land will remain under County jurisdiction until annexation to a city.

5) Provides that urban service extensions into the unincorporated urbanizable area will be coordinated with the cities, County and affected servicing agencies.

6) Establishes that all road construction in the urbanizable area will be built to urban standards.

Other urbanization policies were also enacted which address problems and concerns unique to each city. Formulation and establishment of urban growth boundaries around each of the eleven cities began in mid-1976, involving a cooperative eight-step process among the cities, County, citizens advisory groups and affected agencies. The process used is as follows:

1) City-County staff began with preparation of maps and data compilation, including input from affected agencies.

2) Preparation of a joint city-County staff proposal for an urban growth boundary plan including plan map, written explanation, and recommended policies.

3) Report mailed to respective planning commissions and affected agencies.

4) Review process initiated by the planning commissions and affected agencies for review of the staff document, which includes:

   A) Review by committees formed from planning commissions and affected agencies.

   B) Joint meeting(s) (full commissions or boards).

   C) Public hearing(s).

5) Revisions to documents and map per policy body (planning agency) direction and document now becomes city and County proposal, rather than staff proposal.

6) Process initiated to amend Comprehensive Plan maps and texts by County and city as applicable.

7) Planning Commission public hearings:

   A) Adjustments or revisions as determined by the Planning Commission.

   B) Findings and final recommendation entered.

8) Board of Commissioners and city council public hearings.

UNINCORPORATED URBAN AREAS: In addition to the eleven incorporated cities, there also exists unincorporated areas which possess characteristics that conform to the definition of urban. These areas are:

1) White City: The White City area is comprised of a broad range of urban residential, commercial and industrial land uses. The area functions as one of the two major County employment centers, with a vast array of light to heavy manufacturing activities.

2) Highway 99 Area: The area along U.S. Highway 99, between Medford and Phoenix, generally exists as an urban area. Uses found along this corridor span the full range of land use intensity, from agricultural and rural residential to intensive commercial and industrial.

3) Gibbons/Forest Acres Area: An area north of Medford along Table Rock Road, consisting of mainly one-half to two acre developed residential lots.

4) Urban Fringe Areas: Not all the cities in Jackson County have a fringe that conforms to the definition of urban. Most cities, in fact, display a distinct urban/rural break at city limits. On the other hand, the fringe of Medford, Central Point and to a degree, Rogue River, display at least some urban-related characteristics, such as small parcel sizes, intensity of land use and presence of urban facilities and services. Some areas lie within the urban growth boundary of an adjacent city. Other unincorporated urban areas will be addressed specifically in terms of precise land use, within the framework of the area-wide plans.

Existing Facilities and Services: The White City, Highway 99, and Gibbons/Forest Acres areas are all serviced by the Bear Creek Valley Sanitary Authority (BCVSA) sewer lines. The White City and Highway 99 areas also have community water provided to the residents in the areas. Paved through streets (highways) provide urban type transportation services. Densities in these unincorporated urban areas are significantly higher than surrounding areas and other rural County landscapes in general as evidenced by the data in Table 23-1. Adjacent lands to these three areas provide for nonurban land uses; agricultural, rural residential and open space; at significantly lower densities.

FINDINGS, POLICIES AND IMPLEMENTATION STRATEGIES:

1

FINDING:

Goal 14, Urbanization, encourages urban centered growth by requiring that urban growth boundaries be drawn around existing urban areas. Development at urban densities may occur within that urban growth boundary, however, outside the urban growth boundary urban development is prohibited. Zoning, subdivision and other regulations, as well as limitations on the extension of public facilities and services further encourage urban centered growth. The concept of urban centered growth has generally grown from a disenchantment with the sprawling suburban type development patterns that often result in inefficient leap-frog development, a general physical and social decline of established urban centers, massive public capital investments in the automobile transportation network, air quality problems relating, in part, to the over reliance on the private automobile, a general loss of agricultural, forest and open space resource lands, and a general inefficiency in the utilization of energy resources. Urban-centered growth is a principal cornerstone of the comprehensive planning effort and serves to help implement many other major planning concepts spelled out in the Plan.

POLICY: JACKSON COUNTY SHALL MAINTAIN A LONG-RANGE COMMITMENT TO THE IMPLEMENTATION OF URBAN CENTERED GROWTH.

IMPLEMENTATION STRATEGIES: The positive benefits of urban centered growth, implemented through urban growth boundaries, will not be fully recognizable in the short-term. Efforts to maintain this concept should include:

A) Periodic adjustments to existing urban growth boundaries and urbanization policies consistent with adopted review and revision procedures.

B) Techniques to allow the transfer of development rights from rural areas to within urban growth boundaries. (See Rural and Suburban Lands Element.)

C) Upon completion and adoption of Jackson County's Comprehensive Plan, the County will continue its efforts to implement urban centered growth as explained in "Alternative Futures" section of this Comprehensive Plan and Policy #1 in the Rural and Suburban Lands Element.

2

FINDING:

It is difficult to predetermine the effect on land values that may result from the imposition of urban growth boundaries on a map. Also in question is the ability of the County to effectively mitigate such inflationary trends should they in fact materialize. One theory holds that the demand for land in Jackson County is insatiable due to external demands from out-of-state buyers. Therefore, measures taken on a local level to increase the supply of developable land will have no significant positive impact on prices. The other theory maintains that through Comprehensive Plan policy and map revisions, the supply of developable land can be increased to help stabilize land values, should they increase at disproportionately high rates.

POLICY: THE COUNTY SHALL ATTEMPT TO MINIMIZE SIGNIFICANT INCREASES IN VALUE WHICH BEAR A DISTINCT AND DEFINABLE RELATIONSHIP TO URBAN GROWTH MANAGEMENT PROGRAMS.

IMPLEMENTATION STRATEGIES: Develop a monitoring program by which urban and urbanizable land values can be evaluated on an annual basis and measured against past local and state trends of land value increases. Should land values increase at a rate significantly higher than past trends indicate they should, one or more of the following measures can be taken:

A) Selectively expand urban growth boundaries.

B) Increase the supply of developable urban land through the following steps:

i) Amend the Comprehensive Plan and Zoning maps to provide for increased urban level development within acknowledged urban unincorporated communities.

ii) Implement a concept of contract annexation which would allow development to urban uses with a commitment to annex at some later date. This can be implemented Countywide or on a city by city basis. The net result will be an increase in the supply of developable land, which in turn, should have a stabilizing effect on land values.

3

FINDING:

Certain areas in the County developed urban uses and urban residential densities prior to the enactment of Countywide zoning in 1973. These areas, particularly the Gibbons/Forest Acres, White City, and Highway 99 corridor between Medford and Phoenix, have further intensified under past and present planning and zoning regulations. No parameters exist which define the long-range limits of unincorporated urban expansion beyond that which is currently developed or planned for urban uses.

Oregon Statewide Planning Goal #14, Urbanization, indicates that "urban growth boundaries shall be established to identify and separate urbanizable land from rural land." Urban growth boundaries encompass incorporated cities and adjacent land beyond the city limits determined to be needed to provide space for future city growth needs. Statewide planning goals do not specifically address unincorporated areas that have developed over time to an urban-type density. Unless the three unincorporated urban areas are contained in some fashion, pressure for expansion may likely occur on adjacent rural lands.

POLICY: UNINCORPORATED URBAN CONTAINMENT BOUNDARIES (UCB) SHALL BE ESTABLISHED AND MAINTAINED AROUND THE TWO UNINCORPORATED URBAN AREAS (GIBBONS/FOREST ACRES, AND HIGHWAY 99 CORRIDOR BETWEEN MEDFORD AND PHOENIX), AND AN URBAN UNINCORPORATED COMMUNITY BOUNDARY AROUND WHITE CITY. THE COUNTY SHALL ALLOW BOTH FOR THE CONTAINMENT OF EXISTING DEVELOPMENT AND ALLOW FILL-IN DEVELOPMENT AT URBAN DENSITIES WHERE ADEQUATE URBAN LEVEL FACILITIES EXIST. ONCE ESTABLISHED, THESE BOUNDARIES SHALL NOT BE EXPANDED.

IMPLEMENTATION STRATEGY: Establishment of urban containment boundaries around two unincorporated urban areas (Gibbons/Forest Acres, and the Highway 99 corridor between Phoenix and Medford), and an urban unincorporated community boundary around a third unincorporated urban area (White City). These boundaries should be based on the existing extent of urban development, as defined by criteria set forth in the definition of urban land. The densities and land uses within these boundaries should be proposed and evaluated within the framework of the areawide plans.

4

FINDING:

Scattered residential subdivisions, which may have some commercial development, exist at urban densities in various locations throughout Jackson County. Such development, when located outside incorporated cities and established urban growth boundaries, contradict the overall philosophy of the Statewide Planning Goals and this Comprehensive Plan, which is to encourage urban development within incorporated cities. Although such residential subdivisions are usually legitimate because they were developed prior to the development of Statewide Planning Goals and the Comprehensive Plan, their future expansion needs to be prohibited and fill-in development tightly controlled.

POLICY: THE FURTHER ESTABLISHMENT OR EXPANSION OF SUBDIVISIONS AT URBAN DENSITIES SHALL BE PROHIBITED OUTSIDE OF ESTABLISHED URBAN GROWTH OR CONTAINMENT BOUNDARIES.

IMPLEMENTATION STRATEGY: Permit limited fill-in development of urban subdivisions which exist in rural areas when fill-in development is supported by adequate sewer and water facilities, and when such development is compatible with adjacent agricultural and other rural land uses.

5

FINDING:

Integrated urban planning that addresses the relationship between land use and transportation facilities is critical to avoid the problems that may occur as a result of increased development within the White City Urban Unincorporated Community. Through the years, the White City area has emerged as one of the two largest employment centers in Jackson County. More recently, residential populations have increased dramatically, making White City the largest unincorporated population center in the County. From the standpoint of energy efficiency and achieving a jobs-housing balance in the region, this is a desirable circumstance. Populations living in close proximity to employment centers effectively reduce the use of the private automobile, and total vehicle miles traveled, thus increasing the feasibility of more energy efficient and less polluting travel modes. Limited urban residential development of the White City area can be accomplished in an orderly and organized manner while still under County jurisdiction if properly planned.

POLICY: JACKSON COUNTY SHALL SUPPORT THE INCORPORATION OF THE WHITE CITY AREA.

IMPLEMENTATION STRATEGY: Reasonable amounts of planning and legal aid should be offered to help expedite the incorporation process when such an action is justifiable in the context of the Comprehensive Plan and beneficial to Jackson County as a whole.

6

FINDING:

Cities have a vested and definable interest in the County planning process. In 1978, the Oregon Court of Appeals held in "Ruegg et. al. versus Clackamas County," that the City of Sandy had

standing to contest a Clackamas County zone change to allow construction of a shopping center approximately five miles from the city's commercial core. The Court of Appeals agreed with the City of Sandy in that the construction of such a commercial facility would severely undermine the city's efforts to encourage downtown commercial development. The decision is a positive one both for cities and for county governments concerned with the implementation of urban centered growth. It very much relates to the intensity and market area of various unincorporated commercial uses in respect to the proximity of incorporated cities. Therefore, the County should strive to provide for commercial uses which serve only the immediate needs of the rural market area and should avoid uses whose intensity and market areas infringe on neighboring, incorporated commercial centers.

POLICY: COMMERCIAL DEVELOPMENT LOCATED IN UNINCORPORATED URBAN AREAS SHALL BE LIMITED IN SCOPE AND INTENSITY TO SERVE THE NEEDS OF THE SURROUNDING UNINCORPORATED POPULATION.

IMPLEMENTATION STRATEGY: Principal implementation of this policy will occur through the proper location of commercial centers on the Comprehensive Plan map. It may also be necessary to evaluate the types of uses in the commercial zoning districts. Such evaluation should consider the relative size of each potential market area in relation to the location of rural commercial centers and their proximity to cities. Adjustments could then be made as to which uses are permitted outright or require review to retain some measure of control over the types and intensity of uses allowed near incorporated city centers.

7

FINDING:

Neighborhood Commercial Use: In White City, and to some extent, the Medford Urban Growth Boundary, there are existing commercial areas which are designed to provide neighborhood convenience services to an urban population. These centers are typically larger than the rural service commercial centers, and provide a much wider array of goods and services. This is justified since they also serve a larger population within walking or easy driving distance. It is desirable to establish a neighborhood zone category to apply to these limited instances. It is doubtful that a need would even exist to apply this category in any area currently undeveloped. Application of the zone to existing areas would, however, restrict intrusion of noncompatible, more intensive commercial or industrial uses and maintain the intent and character of the area.

POLICY: NEIGHBORHOOD COMMERCIAL USES DESIGNED TO SERVE THE CONVENIENCE NEEDS OF URBAN POPULATIONS SHOULD BE ALLOWED ONLY AS FOLLOWS: I) THE USES CURRENTLY EXIST WITHIN AN URBAN GROWTH OR CONTAINMENT BOUNDARY AND SHOULD BE ALLOWED TO CONTINUE; OR, 2) THERE IS AN IDENTIFIED NEED FOR SUCH NEW USES WITHIN UNINCORPORATED URBAN CONTAINMENT BOUNDARIES OR ACKNOWLEDGED URBAN UNINCORPORATED COMMUNITIES.

IMPLEMENTATION STRATEGIES:

A) Create a new neighborhood zoning district permitting commercial uses serving urban convenience needs and apply the zone only in the White City area, or

within existing urban growth boundaries where existing commercial development already resembles a neighborhood convenience area.

B) Develop standards within the Land Development Ordinance to control the development of neighborhood centers so they will be compatible with adjacent residential uses to the greatest extent possible.

8

FINDING:

The urban growth boundary process for incorporated cities spanned a period of over two years, rendering several different sets of urbanization policies. Although continuity was a primary focal point, the timing of the adoption process and unique needs and desires of each community made absolute continuity an impossible goal. The same problems were also generally encountered in attempting to standardize the urban growth boundary review and revision procedures.

POLICY: RECOGNIZING THE DIVERSE NEEDS AND DESIRES OF EACH INCORPORATED CITY, JACKSON COUNTY SHALL STRIVE FOR THE EQUAL AND CONSISTENT TREATMENT OF ALL JOINT CITY/COUNTY PLANNING MATTERS.

IMPLEMENTATION STRATEGIES:

A) During the first five-year review of the Plan, Jackson County should strive towards greater consistency among urbanization policy sets and review and revision procedures for each of the incorporated cities.

B) Strive for inter-city consistency in all joint planning related matters.

UNINCORPORATED CONTAINMENT BOUNDARIES
For White City, Highway 99, and Gibbons/Forest Acres

In 1975 the Oregon Land Conservation and Development Commission adopted nineteen Statewide Planning Goals. Goal 14 addresses urbanization. Under Goal 14, all cities in the state are required to develop an urban growth boundary which includes all incorporated land and necessary land beyond the city limits that will be sufficient to accommodate projected urban land needs for a period of twenty (20) years. Although Goal 14 does not state whether unincorporated urban areas shall be treated similarly as cities, Goal 14 does state that urban growth boundaries (UGBs) shall separate urbanizable land from rural land. There are three intensively developed unincorporated areas in Jackson County that require special attention. These are: 1) Gibbons/Forest Acres; 2) South Pacific Highway (Highway 99, between Medford and Phoenix; and 3) the White City area. The Comprehensive Plan contains several policies regarding both incorporated and unincorporated urban lands:

A) The County is committed to urban-centered growth.

B) Unincorporated urban areas shall have urban containment boundaries around them, while cities will have urban growth boundaries.

C) The County supports the incorporation of White City.

The commitment then to containment boundaries around unincorporated, urban areas is viewed as a policy to permit limited fill-in development, but otherwise to contain such development. The following provides comparative information regarding the three unincorporated urban areas:

TABLE 23-1 UNINCORPORATED URBAN AREAS

	Gibbons/ Forest Acres	Highway 99 Area	White City
1980 Estimated Population	1,098	3,758	4,333
Urban Containment Boundary Study Area (Acres)	463 Acres	444 Acres	2,611 Acres

Source: Urban Containment Studies (see maps)

The three unincorporated areas developed over time from rural to urban densities, due to a lack of County planning. Jackson County was not completely zoned until 1973. The Comprehensive Plan was adopted in late 1972. By then the three areas in question had already developed urban characteristics. Growth and development since then in these areas has occurred on adjacent parcels, slowly but surely spreading outward and ever encroaching onto the rural landscape. The three boundaries herein reflect the factors below which were used to define urban containment boundary areas.

A) County policy for urban-centered growth.

B) Statewide Goal 14 requirement for urban growth boundaries established to identify and separate urbanizable land from rural land.

C) Existing land usage at or near urban densities.

D) Provision of urban services (jobs, stores, police and fire protection, etc.)

E) Provision of urban facilities (streets, sewer and water systems, parks, etc.)

F) Protection of agricultural lands (Statewide Goal 3).

G) Preservation of open space.

H) Preservation of rural residential areas.

I) Inclusion within urban containment boundaries of adjacent vacant land committed to urban/suburban development.

J) Natural and man-made hazards.

K) Recreational, cultural and social opportunities.

L) Impacts of adjacent land uses on each other (i.e., orchard next to mobile home park).

M) Needs and problems of existing populations in the area (i.e., traffic congestion on Highway 99).

N) Buffer zone between urban and rural lands.

O) Air quality factors.

P) Energy conservation factors.

Q) Local citizen and CAC input.

R) Housing needs.

WHITE CITY

White City is located between the cities of Medford and Eagle Point. The present urban land uses occupy land that was once part of the site of Camp White, a U.S. military base. Camp White at its peak contained 43,485 acres. In May, 1946, it was officially deactivated and declared surplus. Structures and land were sold. The city of Medford claimed 1,000 acres for a sewage disposal area. Only the hospital and barracks remain, which is now used by the Veterans Administration for a 1,105 bed domiciliary. The availability of public facilities from Camp White prompted the residential, commercial and industrial development of the area.

The White City area is comprised of a broad range of urban residential, commercial and industrial land uses. The area functions as one of the two major County employment centers with a vast array of light to heavy manufacturing activities. After Medford, Ashland, and Central Point, White City is the fourth largest population center in the County, with an estimated population of 6,500. Existing lands within the White City Urban Unincorporated Community Boundary would accommodate a population at urban density of approximately 15,000 persons at full buildout.

In 1998, Jackson County adopted the White City Urban Unincorporated Community Boundary (WCUUCB) and the White City Urban Unincorporated Community Plan. A “Committed” exception was taken to Goals 3, 4 and 14 for all lands within the boundary, thus establishing White City as an urban area. The White City Urban Unincorporated Community Plan was established in order to guide development in White City. With its acknowledgment as an urban area, White City will continue to grow at urban densities with urban uses. Table 23-2 on the following page presents and analysis of buildable lands within the White City Urban Unincorporated Community Boundary, including existing and potential dwelling units and population, traffic figures and growth/population trends:

TABLE 23-2

WHITE CITY BUILDABLE LANDS ANALYSIS

Summaries are for lots within White City Study Area. Criteria for White City Study Area are:
1.East of Hwy 62; 2. Within White City UCB; 3. Not Zoned GI, GC, or LI; 4. Not School Property; 5. Not Urban Renewal / Community Center

Dwelling Units

# of Lots	Acres	Current DU's	Potential DU's Based on Current Zone	Adjusted* Potential DU's Based on Current Zone	Potential DU's Based on Re-Zone	Adusted* Potential DU's Based on Re-Zone	Adjusted* Potential DU's Based on Re-Zone & 90% Buildout
1425	732	2123	2598	2523	6415	5213	4692

Current DU per Acre Density	Adjusted* DU Density Current Zone	Adjusted* DU Density Re-Zone	Adjusted* DU Density Re_Zone & 90%
2.9 DU's / Acre	3.5 DU's / Acre	7.1 DU's / Acre	6.4 DU's / Acre

Modified Dwelling Units (Dwelling Units With Assumed 5% Vacancy Rate)

	Current DU's Not Vacant	Potential DU's Based on Current Zone Not Vacant	Adjusted* Potential DU's Based on Current Zone Not Vacant	Potential DU's Based on Re-Zone Not Vacant	Adusted* Potential DU's Based on Re-Zone Not Vacant	Adjusted* Potential DU's Based on Re-Zone & 90% Buildout Not Vacant
Dwelling Unit x .95	2017	2468	2397	6094	4952	4457

Population / Traffic Estimates & Projections For Study Area:

Assumptions for Population and Traffic		Based on Current Development Pattern	Based on Potential DU's Based on Current Zone	Based on Adjusted* Potential DU's Based on Current Zone	Based on Potential DU's Based on Re-Zone	Based on Adusted* Potential DU's Based on Re-Zone	Based on Adjusted* Potential DU's Based on Re-Zone at 90% Buildout
3 persons per household(pph)	Population: (3 x DU)	6369	7797	7569	19245	15639	14076
5% Vacancy Rate	Modified pulation: (3 x Modified DU)	6051	7404	7191	18283	14857	13372
10 trips per day per Non-Vacant household (tpd)	Traffic: (Modified DU x 10)	20170	24680	23970	60940	49520	44570

Summary

	% Based Method	Linear Regression Method
Growth Trend Over Last 12 Years:	4.15% Annually	64.486 DU's per year
Estimated Pop. Forecast Year 2023:	14917 People	10605 People
Estimated Pop. Forecast Year 2023 (Assuming 5% Vacancy Rate):	14171 People	10075 People
Year Which 90% Buildout Will Be Met: (Year that 4692 DU's are projected to be built):	2022	2041
Potential Traffic (tpd) for year 2023 (Assuming 5% Vacancy Rate):	47237 tpd (2023)	33583 tpd (2023)
Potential Traffic (tpd) for year that 4692 DU's are built (Assuming 5% Vacancy Rate):	44570 tpd (2022)	44570 tpd (2041)

* Adjusted: Land Assembly at a block or sub-block level; 25% taken out for roads and infrastructure where appropriate.

Note: Vernal Pools have not been considered; Some land assembly would need to be performed.
GC, GI, LI zoned lots have not been included in above numbers; Community Center and School properties have not been factored in.

Note: All numbers are assumed to be approximate. Improvement Data was compiled using Jackson County GIS and Assessment Data

Date: November 4, 2002

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FINDING:

On September 2, 1998, the Jackson County Board of County Commissioners adopted Ordinance #98-18, which designated the White City Urban Unincorporated Community Boundary (WCUUCB) and adopted the White City Urban Unincorporated Community Plan, Phase 1. The Department of Land Conservation and Development acknowledged Ordinance #98-18 on October 22, 1998 in their Work Order #00992. Ordinance #98-18 became effective on November 1, 1998. The White City Urban Unincorporated Community Plan functions in conjunction with the Jackson County Comprehensive Plan and Jackson County Land Development Ordinance in guiding development in White City. As part of the adoption process, a "Committed" exception was taken to Goals 3, 4 and 14 for all lands within the boundary, thus establishing White City as an urban area. With this status, White City is allowed to grow at urban densities and with urban uses. The White City Urban Unincorporated Community Plan states that "following approval of Phase 1 planning, the Jackson County Urban Renewal Agency...will initiate and undertake detailed urban planning to accomplish White City's second planning phase-Phase 2."

POLICY: THE WHITE CITY URBAN UNINCORPORATED COMMUNITY PLAN, PHASES 1 AND 2, WILL BE THE BASIS FOR BUILDING DEVELOPMENT WITHIN THE WHITE CITY URBAN UNINCORPORATED COMMUNITY BOUNDARY AND ACTS AS PART OF THE JACKSON COUNTY COMPREHENSIVE PLAN.

IMPLEMENTATION STRATEGIES:

A) Adopt Phase 2 of the White City Urban Unincorporated Community Plan, to establish more detailed urban planning for property within White City.

B) Adopt implementing regulations to ensure compliance with the White City Urban Unincorporated Community Plan.

GIBBONS/FOREST ACRES

The Gibbons/Forest Acres area is situated two miles north of Medford, and astride Table Rock Road. Central Point is two miles to the west, and White City is located two miles to the east of Gibbons/Forest Acres. The Unincorporated Containment Boundary includes the least number of parcels possible, while still encompassing the extent of small-lot development. A definite differentiation exists along the unincorporated containment boundary between smaller parcels inside the unincorporated containment boundary versus larger parcels outside the unincorporated containment boundary and reflects County policy for urban-centered growth. Fill-in development is encouraged, but outward expansion is restricted. Adjacent rural lands are preserved for agriculture, open space and rural residential needs and considers noise and accident potential related to the Medford airport.

DATA LIST

A) Population 388 parcels X 2.83 population/parcel equals 1,098 population.

B) Acres 475 acres.

Boundary Considerations:

i) Most clearly separates urban or suburban land from rural lands.

ii) Would allow limited fill-in development, thereby best supporting the state goals and comprehensive plan policy.

iii) Places fewer people in the airport flight approach area.

iv) Contains only areas currently served by sewer.

v) Would have little impact on agricultural land.

Disadvantages:

a) Omits some lands with similar characteristics, but not quite as densely partitioned.

b) There potentially is a demand for suburban sized lots that could be served by a larger boundary.

DATA LIST

A) Population 388 parcels X 2.83 population/parcel equals 1,098 population.

B) Acres 475 acres.

C) Density—1.098/475 equals 2.3 population/acre.

D) Residences—388 housing units; 358 single family dwellings, 30 mobile homes in mobile home parks.

E) Streets—Assorted surfaces on well-developed grid network.

F) Parks—None within boundary. State Park (Touvelle) to north, on the Rogue River. City parks to the west in Central Point, and in Medford.

G) Library—None within boundary; nearest in Central Point, Medford, and White City.

H) Fire Station—Central Point RFPD; stations in White City and Central Point.

I) Police Services/Station—County Sheriff's Department; offices in Medford.

J) Schools—None in boundary; nearest in White City, Central Point, and Medford.

K) Sewer—Area serviced by BCVSA.

L) Water—Individual wells.

M) Medical/Social Services—Full service facilities in Medford; none within boundary.

N) Post Office—Central Point, White City, and Medford.

O) Electricity and Phone—Area served by Pacific Power and Light and Pacific Northwest Bell.

P) Existing Land Use—Mobile Home Park (30 units); Rural Commercial, Suburban Residential.

Q) Existing Comprehensive Plan—Some Rural Service; vast majority is Rural Residential.

R) Existing Zoning—Almost all RR-5; some RS, and UR-1.

S) Future Comprehensive Plan/Zoning—see maps on file.

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FINDING:

The Gibbons/Forest Acres area is serviced by a community sewer system. However, all homes and businesses in the area are serviced by individual wells. Further intense development in this area, while utilizing individual wells, may result in problems regarding both water quantity and quality, and adequate fire protection.

POLICY: THE GIBBONS/FOREST ACRES UNINCORPORATED CONTAINMENT BOUNDARY SHOULD BE MAINTAINED AS A SUBURBAN AREA UNTIL SUCH TIME THAT COMMUNITY WATER SERVICE IS PROVIDED. WHEN SUCH SERVICE IS PROVIDED, URBAN DENSITIES SHOULD NOT EXCEED TWO UNITS PER ACRE.

IMPLEMENTATION STRATEGY: Develop a urban residential zone, which allows one-half acre lots to be applied to this area if and when community water is provided.

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FINDING:

The Gibbons/Forest Acres area lies near and adjacent to the Medford, and potentially, the Central Point Urban Growth Boundary. It may be desirable to include this area within an urban growth boundary, sometime in the future.

POLICY: THE GIBBONS/FOREST ACRES UNINCORPORATED CONTAINMENT BOUNDARY SHOULD ULTIMATELY BE INCLUDED WITHIN AN URBAN GROWTH BOUNDARY OF AN ADJACENT CITY.

IMPLEMENTATION STRATEGY: Consider the possibility of inclusion of this area in an adjacent urban growth boundary major update of the Comprehensive Plan and city urban growth boundaries.

SOUTH PACIFIC HIGHWAY 99 AREA

The Highway 99 area is located between Medford and Phoenix, along Highway 99. A 1977 land use study identified 865 acres in this area. A 1980 land use analysis identified 400 acres of land in the three urban land use categories: residential, commercial, and industrial. The area has many urban level services. The area is serviced by Medford Water Commission through the Charlotte Ann Water District, and the BCVSA. Highway 99 is the only paved street providing through access. The area is served by Phoenix School District #4, Medford RFPD, and the County Sheriff's Department.

The existing zoning and existing land uses in the area are compatible, in most instances. The zoning reflects the land use. A 1978 population count identified 1,328 dwelling units and 3,758 persons (at 2.83 population/unit) in the study area. Surrounding zoning, around the developed properties, is EFU, and RR-5. Existing land uses, beyond the urban density activities, are farming and rural residential to the east and west. To the north and south of the study area, are the urban growth boundaries of the cities of Medford and Phoenix. These two cities are connected by Highway 99, which carries a very high volume of traffic through the densely developed study area. Many orchards are close by.

The urban containment boundary facilitates tight containment of present urban activities. Very little undeveloped land is included. Total acreage is approximately 444 acres. Several larger parcels, between Highway 99 and Interstate 5, are not included within this unincorporated containment boundary. There are parcels presently in the Rural Residential five-acre zoning classification. Similarly, no land west of the Southern Pacific railroad tracks, except for the Harry and David facility, is included within option Number 2 (see Data List).

A possible future action would be to include the northerly half of the Highway 99 area, within the Medford Urban Growth Boundary. Similarly, the southerly half could someday be included within the Phoenix Urban Growth Boundary. From a land use planning perspective, the idea of including developed urban land within an unincorporated containment boundary that is already adjacent to Phoenix and Medford's Urban Growth Boundaries is compatible with sound planning principles, County land use policies, and statewide planning goals. The following data list identifies the various types of services available for the Highway 99.

DATA LIST

A) Population in 1978 (within 1977 study boundary) equals 3,758 population.

B) Acres in boundary equals 444.4 acres.

C) Density 3,758 population/444.4 acres equals 8.5 population/acres.

D) Residences—Existing: 1,328 (Apartments—72 or 5 percent; single family—203 or 15 percent; mobile home parks—1,053 or 80 percent). Total 1,588 units; 463 single family units or 29 percent; apartments—72 or 5 percent; mobile home

parks—1,053 units or 66 percent. Proposed Option 2: 444.4 acres X .8 X 7.3 equals 260 units. 260 units X 2.83 population/unit equals 736 population.

E) Streets: Highway 99 is the only through road in the study area.

F) Parks: None in the area; nearest parks are in Medford and Phoenix.

G) Library: None in area; nearest libraries are in Medford and Phoenix.

H) Fire Station: Medford RFPD/City of Medford; nearest station is in Medford.

I) Police Services/Station: County Sheriff and State Police.

J) Schools: District 4, elementary and high school in Phoenix; junior high in Talent.

K) Sewer: Area services by BCVSA.

L) Water: Charlotte Ann Water District.

M) Medical/Social Services: Doctor's office on Highway 99; full facilities in Medford.

N) Post Office: None in area; nearest are in Medford and Phoenix.

O) Electricity and Phone: Area serviced by Pacific Power and Light and Pacific Northwest Bell.

P) Existing Comprehensive Plan: Industrial, Commercial, Urban Residential, Agriculture, and others.

Q) Existing Land Use: Mixture of industrial, commercial, and urban residential.

R) Existing Zoning: Generally corresponds to present land use.

The boundary reflects the application of the criteria for unincorporated containment boundary areas to the Highway 99 area. Adjacent farm lands are protected. Limited fill-in development is provided. Future traffic problems with Highway 99 are avoided by limiting future development in the area.

The boundary compliments County policy regarding support for urban centered growth around existing cities and enhances the possibility of future inclusion of Highway 99 urban lands within the urban growth boundaries of the cities of Phoenix and Medford. Phoenix, in particular, would not be in a position to annex and administer over an area of land with a population greater than that of the city itself. It appears far better to see Phoenix grow, while limiting development in the adjacent Highway 99 area, to the north. Then, at some time in the future, Phoenix will be capable of including part of the Highway 99 area within its urban growth boundary. Medford is presently capable of including much of the Highway 99 area within the Medford Urban Growth Boundary.

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FINDING:

South Pacific Highway 99 is a major arterial connecting Medford and Phoenix, and other valley cities. Past and continuing development have reduced the effectiveness of Highway 99, between Medford and Phoenix, as a safe inter-city arterial. The multiplicity of uses in conjunction with unlimited and uncontrolled left-hand turns by vehicles off of, and onto Highway 99, has adversely impacted the original purpose of the highway.

POLICY: FUTURE DEVELOPMENT IN THE SOUTH PACIFIC HIGHWAY 99 UNINCORPORATED CONTAINMENT BOUNDARY SHOULD ONLY OCCUR IN A MANNER WHICH WILL NOT FURTHER DEGRADE THE TRAFFIC CAPACITY AND SAFETY OF THE HIGHWAY.

IMPLEMENTATION STRATEGIES:

A) Consider measures to mitigate traffic impacts caused by any new development through the permit review process.

B) Encourage the state to place study and improvements in this area as a high priority on their capital improvement budget.

13

FINDING:

The unincorporated urban containment boundary abuts the Medford Urban Growth Boundary on the north and the Phoenix Urban Growth Boundary on the south. Ideally, these urban lands should ultimately be annexed to either of these two cities to further satisfy the requirements of Goal 14.

POLICY: FUTURE MAJOR AMENDMENTS TO THE MEDFORD OR PHOENIX URBAN GROWTH BOUNDARIES SHOULD CONSIDER THE OPTION OF INCLUDING A PORTION OF THE HIGHWAY 99 AREA IN EACH BOUNDARY.

IMPLEMENTATION STRATEGY: Encourage inclusion of the unincorporated urban containment area into the adjacent urban growth boundaries during any major update process that may occur in the future.

14

FINDING:

The South Pacific Highway Unincorporated Containment Boundary is quite limiting in that it allows for little new development. This may be a problem since some adjacent lands which are currently in farm use may be highly impacted by the existing urban development. Additionally, the entire corridor between the freeway and the railroad has a high priority for inclusion in adjacent urban growth boundaries. It is desirable to study this area in greater detail to determine other options or solutions which may more equitably resolve the existing land use and traffic problems.

POLICY: UNDEVELOPED LANDS IMPACTED BY EXISTING URBAN USE SHOULD BE CONSIDERED FOR EVENTUAL URBANIZATION. SUCH CONSIDERATION SHOULD ONLY OCCUR AFTER DETAILED STUDY AND ASSESSMENT OF OPTIONS AND THEIR IMPACTS.

IMPLEMENTATION STRATEGY: The County should place a detailed study of this area high on the list of program priorities.

SUMMARY

In summary, three unincorporated urban areas have been identified in Jackson County. These three plans, for their best interest and that of Jackson County's as a whole, have unincorporated containment boundaries. The adopted unincorporated containment boundaries for these three unincorporated areas will satisfy County growth policies and statewide land use planning goals, and satisfy the needs of local populations of each of the areas. It should be understood that any approved unincorporated containment boundary is not eligible to change over time as are urban growth boundaries around cities. A containment boundary can change only under unique circumstances such as a mistake made in transcription, or site analysis error.

The set of maps included in these studies show specific boundary locations; utility and street locations, and various land use categories. Each of the three unincorporated areas has maps that identify existing land use, zoning, and comprehensive plan designations. In addition, zoning and comprehensive plan designations are addressed. Taken together, the maps and the text combine to provide the information, facts, and future development policies regarding the three areas in question.

GENERAL IMPLEMENTATION

INTRODUCTION:

State legislative concern for the preservation, conservation, enhancement, and wise utilization of the natural and man-made environment and its component parts for present and future generations has resulted in requirements for comprehensive land use plans. Governments are encouraged to develop reasonable and practical approaches to all of those activities which relate to the general health, safety, welfare, and quality of citizens' lives and their environment. Through planning, action-oriented programs can be designed to avoid, or repair, negative alterations of the natural and man-made environment through a coordinated effort by all those concerned.

It is apparent that improvement of the county's overall environmental quality is not guaranteed, nor can it be expected to occur, without the careful management of all the county's resources. The implementation section therefore, focuses on those techniques and mechanisms potentially available to the county that can be reasonably expected to provide viable means for the long-term preservation, protection, enhancement and wise utilization of the natural and man-made resources within the planning area. Since most resources recognize no arbitrary, jurisdictional boundaries, and often have an impact well beyond the limits of the county line, Jackson County's efforts can impact the state and the region as well.

Private owners cannot be denied the right to develop and use their land for purposes which do not adversely affect the public's health, safety and general welfare as embodied in the Comprehensive Plan and Statewide Planning Goals. The implementations set forth here are designed to allow a reasonable use of privately owned land while ensuring the preservation, conservation, enhancement, and wise utilization of such land resources.

SCOPE AND PURPOSE:

The purpose of this element is to discuss the range of techniques and mechanisms available for implementing the comprehensive plan. More traditional methods of implementation such as zoning, ordinances and review, and building codes, are reviewed. Other nonconventional techniques that are more people oriented and that rely less on the governmental structure to accomplish the desired ends, such as community development corporations, cooperatives, service districts such as rural fire districts, etc., also are reviewed. These techniques and mechanisms are reasonable, economical, legally attainable, practical, and applicable, although some are more so than others.

These devices are complimentary and can be integrated into a program mix. No single device can be expected to accomplish the desired result because of the variety of physical, social, economic, environmental, and political situations. A mix of program strategies responsive to the particular constraints of an area and its population needs should be regarded as a broad base for protecting the general public interest.

Specific implementation strategies and methodologies will occur in the process of developing area plans. By having a variety of potential implementation devices at their disposal, decision makers can determine which particular mix of techniques is best suited and most applicable to

particular situations. The viability of each technique can be weighed against realities and the most practical solution developed.

IMPLEMENTATION GUIDELINES AND GENERALIZED CRITERIA:

To assure consistency and continuity in the application of implementation mechanisms, it is desirable to develop generalized criteria for identifying what types of development and reasonable restrictions are feasible, desirable, or necessary. The methods or techniques best suited for achieving the desired result also must be identified. Such an approach provides broad guidelines for the protection of all lands and gives decision makers an overall strategy. It should be noted that the guidelines in Figure 1, and their generalized criteria are relative, rather than absolute, requirements.

The potential implementation methods and techniques available to Jackson County for the protection, conservation, enhancement, and wise utilization of its open space and natural resource lands are numerous and wide-ranging. A brief discussion of each potential mechanism is provided so that decision makers can better determine which methods/techniques, or mix thereof, are best suited to achieve the desired result in an equitable and reasonable manner. Generally, these methods and techniques can be arranged into five broad categories.

- Acquisition of Fee Simple.
- Acquisition of Less-than-Fee Simple.
- Police Power Regulatory Devices.
- Tax Incentives.
- Non-Conventional Methods.

ACQUISITION OF FEE SIMPLE: Acquisition of title is a method available to all levels of government and may involve purchase, condemnation, gift, or other means of transfer. Methods available to Jackson County to use for the acquisition of fee simple (title) are:

A) Outright Purchase: Although the most costly method of preserving land resources is probably the most effective method of preserving land, when considering current land taxation and pressures for development. Purchase requires the cooperation of the owner, which may or may not be difficult to obtain, given rising land values.

B) Negotiated Purchase: The buyer may arrange terms such as options and installment purchase agreements favorable to the county.

C) Advance Acquisition (Land Banking): Acquisition of land in advance of the time of need is a technique frequently used to obtain public sites to take advantage of lower land costs before development occurs, but not so far in advance of need that the land is taken off the tax rolls without any public benefit. Advance acquisition, in conformity with a long-range plan, is sound from an economic standpoint.

FIGURE 1

RESOURCE AREA	TOLERANCE/SUITABILITY	DEVELOPMENT POTENTIALS & CONSTRAINTS		METHODS AND TECHNIQUES OF IMPLEMENTATION
		PERMITTED ASSOCIATED USES	RESTRICTIONS ON USES	
Aquifer A Water-bearing layer of sand, gravel, or porous rock.	As major source of water, quality must be maintained; removal must not exceed rate of replenish-ment.	Varies depending on permeability of overlaying strat; generally, any use which maintains high water quality and quantity.	No development which will affect the quality and quantity of water or be structurally adverse to the presence or withdrawal of groundwater.	Limitations on groundwater withdrawal.
Aquifer-Recharge Area Area of Interchange between an aquifer and the surface; the point at which precipitation and surface water infiltrate the aquifer.	Intolerant to development because of danger of polluting water supply		No disposal of possible pollutants, specifically no septic tanks; sewers must be sealed to avoid leakage; Investigate effects of any disturbance to area such as channel digging or widening, dredging filling that might permit the intrusion of pollutants.	Subdivision and sanitary controls requiring public sewerage; pollution dis-charge controls; prevention of intrusion of salt or other groundwater contaminants; special sewer construction techniques; limitations on dredging, stream widening, filling, etc.
Floodland The land area adjacent to a water body that is covered by excess water during periods of flooding; may be divided into zones based on frequency, e.g., channel, floodway, floodplain, especially for land-use and development controls.	Essential role in carrying excess water during floods; danger to life and property; provides recreational land; filling, damming or leveeing decrease storage capacity and flood velocity increasing flood potential downstream; solids often very fertile and suitable for agriculture; usually contains substantial groundwater.	Those unharmed or improved by flooding, e.g., those associated with Surface Water and Riparian Land, and forestry, some types of agriculture, exten-ive recreation, institutional open space, open space for housing and other uses, impoundment basins.	Same restrictions as for Surface Water and Riparian Land; Flood-proof develop-ent, filling and diking only where essential and where flow is not seriously restricted.	Same methods as for Surface Water and Riparian lands; zoning controls to exclude structures from the channel and floodway; building code requiring floodproofing of structures, limitations on grading, filling, dredging, and diking.

FIGURE 1 (cont.)

Resource Area	Tolerance/Suitability	Development Potentials & Constraints		Methods and Techniques of Implementation
		Permitted Associated Uses	Restrictions on Uses	
Historical, Archeological, and Paleontological Historical monuments, buildings, archeological and paleontological digs and other sites.	Development may destroy historical character; valuable for educational, recreational, aesthetic reasons.	Preservation in the current state with restoration if warranted.	No development which would interfere with viewing and appreciating the site.	Public purchase or purchase by civic groups; architectural control; historic area zoning; landmarks commission.
Mineral Deposit Site currently used or potentially available for extraction of minerals, including sand, gravel, rock, clay, peat, oil, thermal, metals, etc.	Source of important mineral resources; other development may preclude extractive operations; however, requires special regulations to ensure compatibility with surroundings during and following completion of operations, and prevention of water-supply contamination.	Reservation for extractive operations.	Open-pit operations require appropriate screening and performance standards to reduce noise, dust, etc.; cannot interfere with water quality; planned post-mining reclamation for subsequent reuse.	Natural resource zoning including performance standards to prevent encroachment; performance bond to ensure site rehabilitation; preferential assessment.
Prime Agricultural Land Land especially suited to agricultural use because of soil, topography, and locational characteristics.	Of limited extent in some areas, development renders such land unsuitable for agriculture.	Agricultural or recreation uses. Secondary uses: Institutional development with substantial open area or residential at one dwelling unit per 20 acres.	Where other developable land is abundant, zoning for exclusive agricultural use is justifiable.	Exclusive agricultural zoning; preferential farmland assessment; transferable development rights, transfer fees.
Pasture Land Land used for grazing of domestic animals	Depending on slope, soil and subsurface conditions, this land is often tolerant to and suitable for limited development.	Limited development where land is plentiful; where scarce, it should be retained in open space.	No development in urban areas lacking sufficient open space.	Open space zoning where appropriate.

FIGURE 1 (cont.)

RESOURCE AREA	TOLERANCE/SUITABILITY	DEVELOPMENT POTENTIALS & CONSTRAINTS		METHODS AND TECHNIQUES OF IMPLEMENTATION
		PERMITTED ASSOCIATED USES	RESTRICTIONS ON USES	
Scenic Corridors (Natural Areas) Natural scenic lands traversed by highways, waterways, hiking and biking trails, etc.	Corridor includes such features as lakes, streams, creeks, wetlands; unusual geologic formations, out-standing scenic vistas, exceptional pastoral views or mountain scenes; historical, cultural, recreation features, etc.	Low density recreation; agriculture, low density residential, building heights limit.	No development which would deteriorate the quality of the feature or interfere with viewing the scenic corridor.	Sign restriction ordinance, open space and agriculture zoning, purchase of scenic and conservation easements, planned-unit development controls, architectural control, purchase of fee and leaseback or resale without certain development rights, public purchase of key areas for recreation.
Scenic Vistas An area which has a pleasing aesthetic character; may include both natural and cultural features.	Suitable for limited development if carefully controlled; some areas may be worth maintaining for aesthetic reasons.	Low density recreation; preservation for natural history, ecological, education, and aesthetic purposes.	No development which would deteriorate the quality of the feature.	Purchase of scenic easement or development rights; very low-density zoning; open space or agricultural zoning, architectural controls.
Unique Local Areas or Features Local natural areas or landscape features that have unique qualities such as stands of trees, geological outcrops, etc.	While many have no major ecological role, they should be preserved for historic, recreational, educational, and aesthetic reasons.	Low density recreation; preservation for natural history, ecological, education, and aesthetic purposes.	No development which would deteriorate the quality of the feature.	Public purchase; zoning and other limitations on surrounding areas.

FIGURE 1 (cont.)

Resource Area	Tolerance/Suitability	Development Potentials & Constraints		Methods and Techniques of Implementation
		Permitted Associated Uses	Restrictions on Uses	
Ridge Lines Line separating drainage basins, i.e., where water on either side flows in opposite directions; may be hardly noticeable in flat country but highly pronounced in hilly area.	No particular reasons for restricting development on minor ridge lines. Major ridge lines often can have a visual impact ("skyline") effect).	Any use permitted on minor ridge lines—changes in topography are barely noticeable. Limited development on major ridge lines to preserve scenic beauty.	No restrictions. Height and density restrictions.	None. Height and density restrictions in zoning ordinance.
Steep Slope Slope greater than 25 percent.	Development causes major erosion problems by increasing runoff velocity; major site engineering necessary; difficult to farm; suitable for extensive recreation: often of scenic beauty.	Open space uses; reforestation when necessary; recreation	No development (or highly regulated & engineered development of very low density).	Open space zoning; scenic or other easements; subdivision or special regulations to protect landscape; public purchase in fee with possible resale without certain development rights; grading & filling ordinances.
Moderate Slope Slope generally between 10 and 25 percent.	Very high construction costs; loss of ground cover may cause erosion and frequently land slippage; often of scenic beauty.	Limited development, contour agriculture, forest.	Density of about one house or less per five acres; maintenance of vegetative cover; erosion control; retaining walls; roads turned slightly upslope from contour lines; special hillside development zoning controls to minimize grading and drainage control.	Density zoning; grading ordinance requiring sedimentation control; subdivision ordinance requiring maintenance of vegetation and design standards for streets; these may all be incorporated in special hillside development controls.
Surface Water and Riparian Land Any body of water including lakes, streams, rivers, their shorelines, and 20 meters adjacent to such areas on all sides.	Value for water supply, waste dispersion, transportation, recreation, power generation, source of food, scenic beauty; quality and quantity of water needs to be maintained.	Water/sewerage treatment plants, recreation, small craft, marinas, water-related industry, public access points. Secondary uses: cluster development and institutional development.	No pollutors (including septic tanks); no non-water-related development; no development that will produce undesirable changes in surface or subsurface water quality.	Planned unit development controls; sanitary ordinance prohibiting use of septic tanks; water quality standards to restrict discharge of pollutants; zoning to separate incompatible water users; zoning to restrict shoreline development to water-compatible uses; public works planning.

FIGURE 1 (cont.)

RESOURCE AREA	TOLERANCE/SUITABILITY	DEVELOPMENT POTENTIALS & CONSTRAINTS		METHODS AND TECHNIQUES OF IMPLEMENTATION
		PERMITTED ASSOCIATED USES	RESTRICTIONS ON USES	
Woodland A tract of land dominated by trees but usually also containing woody shrubs, grasses, and other vegetation.	Where extensive, woodlands are intolerant to intensive development because of their role in the water cycle, oxygen replenishment, wildlife support, recreation; also have special aesthetic value in urban areas.	Agriculture, recreation, regulated residential development at densities not higher than one dwelling unit per acre.	Very limited development to maintain vital ecological role and aesthetic appearance; limited tree cutting for development or sustained commercial yield.	Conservation controls, e.g., zoning and subdivision controls limiting intensity of development, limiting destruction of vegetation, and setting standards for improvements; purchase of fee and leaseback or resale without certain development rights.
Wildlife Habitat The natural environment of an animal species; usually associated with other features such as marshes or woodland.	Tolerance to development depends on species, some habitats should be maintained for scientific, recreational and educational purposes; destruction of habitat may affect other parts of the ecosystem.	Passive recreation including limited hunting and fishing, maintenance in a natural state to minimize disruption of animal communities; out-door education laboratory.	In managed habitats, no development except access roads and recreation-associated structures; cabins if widely dispersed.	Public purchase, or purchase of scenic, hunting, fishing easements; zoning limitations on surrounding areas; very low density zoning for seasonal cottages and restrictions on access roads.

D) Installment Purchase: This method is generally more costly than a single payment purchase, but it enables the public agency to adjust its acquisition program to funding limitations and to work out acceptable conditions or transfer in advance of final payment. Frequently there are tax advantages to the seller than can be used to reduce the cost of installment purchase to more reasonable levels.

E) Excess Condemnation: This method involves the purchase of more land than is necessary for a specific public purpose to create a buffer or linkage system. This technique is useful in combining open space resource land with other public uses. There are limits on the amount of excess land a public agency can acquire in this manner.

F) Purchase and Leaseback: This method is often used to keep land from unsuitable or premature development while continuing to derive some revenue from it. This form of advance acquisition, with subsequent leaseback to private parties, is often effective in reducing the net cost. Particularly for agriculture use, the leaseback procedure permits basing the lease terms on agricultural productivity, and frequently results in retention of agricultural uses where market values and taxes would otherwise make agriculture uneconomical. By leasing the land back to the owner, the public agency can keep the land in a desirable use and have it available for future public use while realizing some return on the investment.

G) Donation or Gift: Although not a major source of resource land acquisition, gifts of land are usually made because of tax advantages to the donors, especially inheritance and income tax concessions.

H) Eminent Domain: This method involves the exercise of the police power to acquire land by condemnation for various public purposes including recreation, public safety, watershed and wildlife conservation, and flood protection. This technique is a well-established means for a public agency to purchase land from unwilling owners. It usually requires immediate payment and higher costs than other forms of acquisition of title since juries tend to favor the property owner in condemnation suits.

I) Trade or Land Exchange: This technique is generally used in conjunction with the methods discussed previously to maximize their effectiveness. For example, with this method the public agency acquires land and offers it in exchange for other lands of higher resource value. Basically, such a mechanism utilizes incentive to the seller to further resource land preservation, but it is more difficult to realize in practical terms.

J) Tax Delinquent Lands: Under this method, the public agency purchases desirable tax delinquent properties for less than market values and utilizes them for public purposes, or as resources for lease, trade, or resale with development restrictions. Generally, this technique can be a very effective method to help achieve the desired land resource balance.

ACQUISITION OF LESS-THAN-FEE SIMPLE: Less-than-fee simple interests than can be publicly acquired include easements, leases, covenants, and other property rights. The purchase of a lesser interest in land is often used when the cost of direct acquisition is too great or less extensive control is adequate. Less-than-fee interests are usually called development rights. Some advantages of development rights acquisition include lower cost in some cases, retention of lands on the tax rolls, and the efficiency of private management. In some cases this type of acquisition may prove to be as expensive as full acquisition costs.

A) Scenic Easements: This technique can be an extremely useful device for preserving any desired scenic corridors or vistas. The cost of acquiring easement rights is much lower than outright purchase. In rural areas, the cost may be quite low; this is particularly true when they are acquired over wetlands, floodplains, and other areas where the scenic restrictions do not interfere with the continued use of the land, especially for agricultural purposes, and where development potential for other uses is limited.

Easement acquisition offers several advantages to the public. Open space resources are preserved without having to buy the land outright. The land remains on the local tax rolls, and there is no maintenance burden to the public. The most obvious benefit to the owner is frequently a savings in property taxes. By agreeing not to develop the most scenic portions of his property, the owner may enhance the value of those portions he might develop.

Scenic easement acquisition is quite flexible and there is no single definition. Within limits, the easement's provisions are tailored to the needs of the land-owner and the particular landscape qualities to be preserved. In general, scenic easement agreements commonly used include one or more of the following:

i) A restriction on new farm and residential buildings and structures, or on major alterations to them, plus a specific prohibition of additional non-residential buildings with a saving clause permitting the continuance of existing nonconforming uses.

ii) A prohibition against cutting mature trees and shrubs with a provision authorizing normal maintenance.

iii) A prohibition against dumping of trash, wastes, or unsightly or offensive materials.

iv) A prohibition against outdoor advertising.

v) Restrictions against constructing or altering any private drives or roads.

vi) Restrictions against uses other than residential or agricultural, or public utilities and existing uses.

vii) Other kinds of restrictions consistent with open space resource preservation.

In addition to these restrictions, a scenic easement may also include one or more affirmative privileges, such as a public right of entry to a limited area, or a public right of entry to remove structures or plantings which are in violation of the restrictions, or to repair damage to plantings or other vegetation in violation of the stipulated restrictions.

B) Conservation Easements: A conservation easement is somewhat more difficult to define than a scenic easement, for there is a great deal of over-lap between them. However, the objectives of conservation easements generally are somewhat broader than scenic easements, in that conservation easements may be designed to conserve many kinds of natural resources including water, water areas and watersheds, forests and vegetation, and wildlife as well as scenic landscape values. Moreover, conservation easements may often be coupled with affirmative easements designed to promote public recreational use of private lands. Affirmative easements provide hunting, fishing, hiking, boating, and camping rights to the public. Various state governments including Connecticut, California, New York, Massachusetts, Maryland, Virginia, and Wisconsin, already use conservation easements as a tool to conserve and preserve open space resource lands. The results are encouraging, both as to the lower costs of preserving land by easement and the willingness of landowners to support such programs.

Like scenic easements, the granting of conservation easements should lower the property tax assessment of the grantor's property and hence his or her property taxes. Real property subject to taxation is assessed to full market value, the price at which the property would sell under existing market conditions. The granting of a conservation easement in perpetuity should lower the value of the property, as the value of the land, when assessed, must be considered to be depreciated by easements with which it is burdened. But any reservation in the deed casting doubt on the perpetuity of the easement may cause the tax assessor to disregard the easement in valuating the property. If a conservation easement is donated, the gift may be considered on the grantor's income tax as a charitable deduction. The deduction, as well as an easement depreciation, is dependent on the status of the easement as a valuable property right under law.

C) Purchase and Resale (Without Certain Rights): Although the land is purchased under this technique, it is resold with stipulated deed restrictions and taxed at the market value without those particular development rights. Land would be kept in productive use and returned to the tax rolls with restrictions binding on all future owners.

D) Public Access: Similar to an easement, this method entails the purchase of access rights to private property for purposes of recreational travel or public entry to recreational areas.

E) Lease (With and Without Option to Purchase): This method may prove beneficial when an area is required for temporary use or if the price of acquisition is too high. An option to purchase would allow lease payments to go toward the price of acquisition, either in-fee or less- than-fee. In the long run this is usually not a recommended method of acquiring lands for conservation or public use.

POLICE POWER REGULATORY DEVICES: Development activities on Jackson County's land resource can be controlled through the regulatory device of police power. Such mechanisms have long been recognized, both ethically and legally, as a means of protecting the general public's health, safety, welfare, and convenience. The most widely known and use of such devices including zoning, subdivision ordinances, building codes, specific plan and review criteria, and so on. The popularity of such mechanisms for public agencies lies in the fact that they eliminate the need for large expenditures for acquiring either land or development rights simply by reasonably restricting the use of the land. The basic criticisms of such devices are that they are generally localized in nature, lack consistency, and are negative in character as they restrict or exclude uses. Zoning, for example, has not provided a sufficient basis to adequately assess the ultimate effect or impact of a future land use. Nevertheless, these police power devices are practical mechanisms for regulating the use of property or impairing rights of the private sector when detrimental to the public interest.

There are certain basics which are common, to some degree, to all these regulatory mechanisms. These include: 1) A monitoring of growth rate and potential growth trends, primarily an economic analysis, to ascertain permissible development levels; 2) Review of the service capacity of the community to supply such new developments; 3) Cost-benefit of the development to ensure services are off-set by revenues; and 4) An assessment of socioeconomic and environmental determinants which affect the scope or extent of any development in the public or private sectors. It is becoming more common for the provisions of these separate implementing devices to be combined into a single, comprehensive ordinance, usually called a land development control ordinance. The police power regulatory devices available to Jackson County to ensure implementation of the comprehensive plan include:

A) Zoning: This is the most common method of controlling land use. Through various types of zoning such as floodplain, agricultural, large-lot, planned unit development, open space, and conservation only certain designated uses of land are permitted so that the community may develop in an orderly manner in accordance with a comprehensive plan. In most cases, for zoning ordinances to be valid they must promote the public welfare and be reasonable. Regulation via zoning and eminent domain are often confused. It is usually agreed that eminent domain takes property that is useful to the public and through the police power, regulates the use of property or impairs rights therein because the free experience of these rights is detrimental to the public interest. The application of zoning is often misunderstood when it appears that the right of a property owner to use his land is being restricted. However, there is no foundation in law to support the view that whenever governmental action results in a deprivation of property or a reduction in its value, there is a taking or damaging for which compensation must be paid. Courts will usually allow greater regulatory power when there is some form of consideration to the landowner, such as benefits to which he or she was not legally entitled. Such a benefit could be preferential tax assessments related to the actual use of the land rather than its market value. Even with the past success of zoning, there is doubt about the establishment of this method as an enforceable restriction in order to completely ensure land resource protection or long-range environmental management.

   Essentially, zoning is a means of ensuring that the land uses of an area are properly situated in relation to one another. It provides adequate amounts of space for each type of development. It allows the control of development density

in various areas so that the property can be adequately utilized without causing stress on the natural environment's capacity to support such uses. This allows the directing of new growth into appropriate areas where public facilities and services can be feasiblely provided. Additionally, zoning is designed particularly to control private development, as distinguished from public improvements. It is desirable that zoning be used in a coordinated manner with other devices for implementing comprehensive plans. Zoning is probably the single most commonly used legal device available for implementing comprehensive plans. Most present day zoning enabling legislation is based on the U.S. Department of Commerce 1924 Standard Zoning Enabling Act, which defines zoning as the division of a governmental unit into districts and the regulation within those districts of:

i) The height, bulk, and site orientation of buildings and other accessory structures;

ii) The area of a lot or parcel which may be occupied by structures and the size of required open spaces;

iii) The density of population; and,

iv) The use of buildings and the land for residential, commercial, industrial, institutional, open space or other uses.

Zoning by parcel size restrictions and use is by far the most popular and accepted type of regulatory zoning used. It is thought that by restricting development densities and types of use, such as minimum five-acre residential parcels, the character of an area can be protected. Such zoning does maximize the wisest utilization of available land resources, but when used without other supporting regulatory mechanisms is normally ineffective in maintaining overall character of an area. Another commonly used zoning device is density zoning. It establishes a maximum density for an area, usually in acreage required per dwelling unit, and then allows the alteration of parcel/lot size for each dwelling as long as the total does not exceed the maximum for the district. This zoning device is usually called a planned unit development concept, or cluster zoning. It allows more design flexibility and is a means of maximizing optimal levels of development opportunities while ensuring the integral character of the area. This concept can also be extended to commercial and industrial uses.

There are many advantages to planned unit development or density zoning including:

i) Reducing building costs as only land suited to need is used;

ii) Reducing costs of providing services since fewer streets are needed than for serving scattered sites;

iii) Utilities and facilities are easier to provide and cheaper since routes are shorter;

iv) Preserving larger amounts of open spaces for the use of the neighborhood or community as a whole;

v) Allowing wide and innovative design flexibility;

vi) Allowing the contiguous linking of open space/greenbelt areas of adjacent planned unit developments, forming a linear corridor to serve more citizens; and,

vii) Providing for more compatible land use mixes.

To assure the long-term viability of maintaining the open and rural character of the county, there must be covenants or deed restrictions attached to the land using planned unit development or cluster concepts to prevent any possible future changes resulting from the zoning. When used in conjunction with the advance acquisition, and resale/lease with development rights restrictions concepts, this mix of techniques becomes an extremely viable method of implementing the comprehensive plan.

For natural resource lands requiring more extensive management or environmental conservation, natural resource zoning is a standard technique for open space resource land preservation. This type of zoning may be used to protect floodplains, sources of water supply like rivers, streams, and watersheds, energy sources, forest lands, mineral and aggregate deposits, wildlife habitats of both flora and fauna, and hazardous areas. This implementation device is a reasonable and generally effective means of not only conserving natural resources, but also of providing recreational opportunities.

Unfortunately, natural resource zoning is not an absolute method of preserving open space since it cannot resist private development pressures. When there is a discrepancy between the productive value of the land for conservation purposes, like farming, and its realizable development value, or when a reasonable return cannot be made, then such zoning will be considered an unconstitutional taking of property without just compensation. While natural resource zoning therefore, cannot be counted on to permanently preserve open space and resource lands, it can be highly effective when used in conjunction with acquisition, easement, and development transfer programs.

B) Subdivision Regulations: The earliest communities in this country were laid out by instructions contained in royal directives, charters granted by the colonial assemblies, and after independence, charters issued by the newly-formed state legislatures. A principal ingredient of most such directives was a map of the street system, typically a grid-iron pattern. From these early beginnings grew the U.S. Department of Commerce's 1928 Standard City Planning Enabling Act, which gave birth to the modern subdivision ordinance.

Subdivision regulations are locally adopted laws governing the process of converting raw land into buildable sites. This is normally accomplished through plat (map) review and approval procedures. As a practical matter, much subdivision regulation is treated as a bargaining process between a developer who desires cost effective standards of development between a developer and the governing body which must protect the general public interest.

Subdivision regulations may serve a wide range of purposes. They enable the coordination of otherwise unrelated plans of numerous individual developments, and in this process, assure that provision is made for such major elements of the land use plan as rights-of-way for streets, parks, school sites, water and sewer lines, and so forth. Also, subdivision regulations enable the local public agency to control the internal design of each subdivision, so that its pattern of streets, lots, and other facilities will be safe, convenient, pleasant, and economical to maintain.

To be most effective, subdivision regulations and their administration must be closely coordinated with other governmental policies, ordinances, and activities. Among these, the more important ones are the comprehensive plan and official land use map, the zoning ordinance, health regulations and the building code.

A common requirement for approval of a subdivision plat is the dedication of a certain percent of each subdivision, particularly for permanent open space, or a payment-in-lien of dedication equivalent to the cost of open space, or an alternative somewhere in between. The required dedication is justified on the grounds that each subdivider should provide community open spaces in relation to the demand generated by the development. Extension of this concept to regional areas and open space resource lands would be logical because it is the additional population the subdivision will generate that creates new open space land needs while simultaneously reducing the existing stock of open space resources to make way for development.

Subdivision regulations can also incorporate performance standards to affect the appearance, quality, ecology, energy efficiency, and solar orientation of an area by requiring that specific standards be met. These can include the planting of vegetation, prohibiting the cutting, other than for maintenance, of certain vegetation, or special grading requirements to decrease erosion and sedimentation. By regulating the parcel orientation to take advantage of solar energy, the subdivision regulation mechanism can provide for innovative and energy conserving site design. When integrated with planned unit development zoning, the subdivision ordinance should allow for optimal innovation and design flexibility and thereby becomes a valuable implementation tool to implement the county comprehensive plan.

C) Transferable Development Rights (TDR): As attitudes and economic conditions change, more and more governmental agencies are placing greater emphasis on the protection of the public interest in land through more innovative regulatory techniques. Traditional methods of land use control are being augmented by newer land management techniques such as transferable development rights (TDR). This concept is based on the underlying principle that the development potential of privately owned land is in part a community asset that government may allocate and regulate to enhance the public's general welfare. In concept, TDR severs the traditional development potential from the land and treats it as separate, marketable item. Thus, TDR provides a means of allowing an equitable return on land investment to property owners whose return might otherwise be lessened by normal regulatory activity. Transference of the ownership of development potential, the basic principle of TDR, has analogous

precedents in the areas of air rights, transfer and sale of water rights, and certain oil and gas production regulations, where there is actual transference of the restricted development potential to another more suitable site.

Basically, TDR works in the following manner: A public authority which uses TDR established conservation and transfer zones, usually through an overlay technique. Development is not allowed in conservation zones, such as hazardous areas or wildlife habitat areas, and as the development potential of these parcels is severed, transfer zones are the receiving areas for the development potentials of the conservation zone lands. These transfer zones are normally areas that meet these criteria:

i) Areas suitable for more intense levels of development based on sound planning theory;

ii) Availability of public facilities and utilities; and,

iii) Overall compatibility with both the built and natural environment.

There is an allowed maximum density in transfer zone areas, but that density may be exceeded by the purchase of development rights from conservation zone landowners. This transference allows the market place to compensate the owner of land where development is restricted by allowing him to sell that density to transfer zone landowners. The primary premise is that under TDR, the right to develop is something severable from a specific parcel of land which may be attached to another, more suitable parcel.

TDR is similar to, but an expansion of, the concepts of cluster development and planned unit development. TDR however, involves a type of community planned unit development rather than application to a single parcel. Under TDR, overall community density remains the same but the location of that density within the community changes. The use of TDR as an implementation device has three basic variations: 1) Preservation of historical structures; 2) Agricultural and open space preservation; and 3) An alternative to conventional zoning. These applications of TDR are being used successfully in other parts of the county and a discussion of each is necessary to determine their viability.

i) Historic Preservation: Early utilization of density transfer to preserve historic structures was simply transfers to contiguous properties. What was proposed was that the unused potential floor area from the historic structure be transferred to allow a taller structure to be constructed, or added to, on the adjoining property. By allowing this unused floor area to be transferred to parcels which are not contiguous, this concept can be expanded to protect, with reasonable equity, entire historic communities. After proper evaluation, a historic planning district would be established within which both historic sites and transfer sites are designated. Destruction, or major alterations that would adversely affect the structures' historic character would be prohibited. Landowners could sell on the open market their potential additional density to be applied in the construction of one or more buildings, which could then exceed their

normally allowable floor area ratios by the amount of additional density purchased from the historical site(s).

ii) Agricultural and Open Space Preservation: The use of TDR can also preserve prime agricultural land and natural open space resources like wildlife habitats, waterways and sheds, scenic areas, and ecologically sensitive areas. Sites to be preserved are identified, as well as those sites which have present or future ecological and infrastructure capacity to absorb additional density without significant adverse impacts. Once these parcels are selected, the designated agricultural natural open space resource lands are placed within a natural resource conservation zone, thereby restricting development, but also placing an economic hardship on these landowners. To provide just and reasonable compensation for the loss of the development which would have been permitted, development rights can be sold to owners of transfer zone land to allow them to build at increased density. For clarification, the overall density for the agricultural/natural open space resource lands remains the same; only the potential allowable density is transferred to those areas of the community more suitable and economically serviceable for development.

This implementation mechanism holds much promise for providing economic equity while preserving those attributes desirable in a quality environment. TDR also provides a basic framework for developing a growth management system for coping with the problems associated with increased density nodes, particularly water and sewer availability and transportation capacities. The integral use of a capital improvements planning and programming system is a necessary component of TDR to assure both rural and urban environmental quality and the smooth implementation of the comprehensive plan.

iii) Alternative to Zoning: Unfortunately, conventional zoning has not proved to be the solution to growth and development problems it was held to be during its inception in the 1920s. Conventional Euclidian zoning has evolved into a system that is often inequitable in its application, results in undesirable patterns of development, and creates artificially high land values in the marketplace. The use of a TDR system to replace conventional zoning has been suggested as a means of alleviating these shortcomings. Beginning with a comprehensive planning effort that would determine overall community development, the next procedure would be to specify and map the type of use and density to which land in the planning districts would ultimately be utilized, such as through area plans. Development rights could then be distributed to landholders within the various planning districts on the basis of acreage owned or cubic footage allowed, or perhaps, the market value of the land and other less quantifiable attributes such as scenic quality. The transfer of these development rights would allow complete development of the planning districts in a manner consistent with the intent of the comprehensive plan. It should be noted that although some individuals own completely developed land, they still may receive development rights. The rationale

for this is that development is both a responsibility and an opportunity of the community at large, and that by providing all landowners these development rights, they would have an economic motivation to ensure that the implementation of the comprehensive plan is not frustrated.

The issue of who should get development rights, what kind, and why is perhaps the most difficult question behind how conservation and preservation zones should be chosen. The who, what, and why can only be answered in the context of a specific proposal; however, the one major common concern is that in establishing the allocating system, proper care and due consideration should be taken to identify those who seek only to manipulate the marketplace. This is necessary in order to preserve the integrity of the TDR program.

Past utilization of the TDR concept reveals a number of basic factors necessary for success. These include:

a) Establishing the planning district(s);

b) Determining the nature and number of rights to be issued;

c) How the rights will be allocated;

d) How the rights will be issued and taxed;

e) Merger with the transfer zone;

f) The release of rights from the transfer zone upon subsequent modification of the property;

g) Public retirement of excess rights; and,

h) Means for issuance of additional rights, if needed, at a future time.

A cursory examination of those factors affecting the utilization of TDR as a viable implementation tool is desirable for clarification:

a) Establishing the planning district(s): The general guiding principle here is that the public facilities and services must be of sufficient size to accommodate the potentially available transferable density without putting an undue burden (physical, social, economic, or environmental) on the lands contiguous to the transfer zone(s).

b) Nature and number of rights: Who gets the rights depends upon the type of TDR program used. In historic preservation, only the owners of the designated landmarks receive TDR. When used for agricultural or natural open space resource land preservation, the owners of the parcels to remain undeveloped receive them. When used as an alternative to zoning, the rights may be apportioned to all landowners in the district on the basis of

acreage, natural characteristics, market value, and so forth, or a combination of such factors.

c) Issuance and taxation of rights: Once the nature and number of rights has been determined, these rights could then be evidenced by a certificate similar to a deed of title and recorded in the county clerk's office. When a TDR is sold, the transaction could be recorded with title records in a similar manner as are property titles. Taxation of TDR is a fairly simple procedure. Tax bills would carry two items: An amount assessed against the land in its present use and another against the additional development potential of the land, including the value of transferable development rights. When rights are sold, the purchaser is then the owner of new development rights and he would be taxed, leaving the seller with only the present use value of the subject property.

d) Merger: When transfer rights are sold and applied to construction of building space within a transfer zone, they in effect merge with the property. Though legally a separate entity, the TDR cannot be detached as long as the structure remains.

e) Release: When a structure incorporating TDR is razed either through the occurrence of a natural disaster or through renewal, the rights are released for reuse on the site or possible transfer to another site. Since the rights are not consumed, they simply return to the marketplace.

f) Retirement: In instances where excess transfer rights exist in the marketplace, a mechanism might be used to retire them either temporarily or permanently, to protect both the marketplace for developments and the integrity of the planning process.

g) Issuance of additional rights: The cornerstone to the success of the TDR ordinance is that no other means to increase allowable density exists other than to purchase development rights. If additional allowable development is desired, new rights could be issued. If the ordinance is for historic or natural open space resource land preservation, additional landmarks or conservation zones could be designated. If TDR is used as an alternative to conventional zoning new rights could be issued to landowners of record on the same proportional basis used for initial allocation.

TDR allows more flexibility and economic equity than traditional zoning by separating development rights from other landowners' rights and treating them as a marketable commodity, and guiding development into more appropriate locations.

D) Transfer Fee: The continuing conversion of agricultural lands to other uses is a major problem which has led to a variety of approaches designed to reduce the

loss of an essential resource - the best lands that provide food and fiber. Transfer fee is a method for containing development on prime lands that promises to appeal to those who own the land as well as to those who wish to protect it. Transfer Fee Plan (TFP) is predicated on four essential factors:

i) The creation of prime agricultural land reserves for food and fiber production;

ii) Provision for jurisdiction over the agricultural reserve by a land preservation board;

iii) Discouraging conversion of prime agricultural land to non-farm use by assessment of a substantial transfer fee on the purchaser of land approved for release from the reserve, and a significantly higher penalty in conversion occurs without approval; and,

iv) Distribution of the accrued fees to the current landowners in the reserve as gradual compensation for lost development rights.

The following discusses operational details of each factor:

i) Creation of prime land preserves for food and fiber production. An effective retention effort will take years to develop and will require an enabling ordinance. The enabling ordinance should provide for:

a) The establishment of prime agricultural land reserves in areas suitable for agricultural food and fiber production. This responsibility would be delegated to the appropriate public entity. Noncontiguous units of agricultural land should be permitted. The enabling ordinance should also provide for a maximum of three reserves, and each should encompass agricultural lands with similar properties for eventual conversion to nonfarm use if not protected. Thus, all agricultural lands under high development pressures would be in one reserve, those with moderate pressures in a second, and those with the least in a third.

b) The appointment by county government of a prime land preservation board. Representation on the board should include farmers likely to be in the reserve, Cooperative Extension, Agricultural Conservation and Stabilization Service (ACSS), Soil Conservation Service (SCS), the county planning body and concerned citizens. Those with agricultural affiliation should not exceed 60 percent of the board's membership.

c) A specified figure as a minimum prime land transfer fee for approved release of farmland out of the reserve for uses other than agriculture. This fee should be high enough to encourage development on nearby nonprime lands. The recommended minimum should be no less than $2,000 per acre to be paid by the person seeking permission to convert the land to nonfarm use.

The ordinance should include provisions, following a public hearing, to increase the minimum transfer fee whenever evidence indicates that the current minimum is not serving as a sufficient deterrent. The ordinance should also designate that the collected transfer fees be deposited in a pooled account in the custody of the county treasurer for periodic distribution to the current landowners in the reserve in a manner mutually agreed upon with the prime land preservation board. The ordinance should clearly indicate that the collected fee is not a tax to be used by county government. Using the fee to provide landowner acceptance of the reserve is essential.

d) The minimum penalty for unauthorized conversion of reserve land to other use. This needs to be established to withstand potential litigation. A minimum penalty of three times the minimum transfer fee is suggested. Provision for assessment of a still larger penalty should be placed in the pooled account as if the transfer fee had been paid. The other two- thirds should go to county government to pay the costs of the preservation program and to encourage promptness in guarding against destruction of choice farmlands.

e) No exception for eminent domain. Government is one of the largest destroyers of prime land. The right to take such lands cannot be denied, but the transfer fee should be assessed nevertheless to discourage government land taking. In order to make this principle operative, the county's enabling ordinance must specify that the minimum transfer fee shall be paid by governmental agencies intending to take reserve land. Furthermore, such agencies should be required to justify the intended takings at a special public hearing.

f) Stipulation that removal of the topsoil and subsoil from reserve lands constitutes conversion to nonfarm use. Many acres of good farmland are destroyed by excavating the land for fill-in highway and other construction. Even if topsoil is replaced, the productive capacity of the soil has been destroyed. This provision would apply to some aggregate removal operations as well.

g) Requirement for special hearings prior to enforcement of county and state administrative regulations that could restrict normal agricultural practices in established reserves. The special hearing would deal with the justification for the ruling, examine its potential effect upon farm production and provide opportunity for possible compromise. Specifically, this provision refers to spreading manure on livestock and poultry farms, crossing streams with equipment to gain access to severed farmland, applying approved fertilizers and pesticides and similar customary practices necessary for use of protected farmlands.

h) Protection from local ordinances which restrict or regulate farm structures or farm practices beyond the requirements of health and safety. Farm odors and noises sometimes disturb nearby residents sufficiently to force such regulations. There is little use in protecting the land if restrictions mean it cannot be productive.

i) Assessment of farmland in the reserve on agricultural value, not on the fair market value it would bring if sold for another use. Agricultural value should be designated as the best, highest, and only use of the farmlands as long as they remain in the prime farmland reserve. Taxation on the basis of nonagricultural use is often so exorbitant that profitable farming is impossible. Such taxation procedures may also impede the passing of a farm from one generation to the next because inheritance taxes force the sale of the farm. This stipulation in the enabling ordinance would clearly establish the value of reserve land for real estate and inheritance tax decisions.

ii) Provision for jurisdiction of the reserve by a county prime land preservation board. The responsibilities include:

a) Determining the minimal quality of soil, state of economic well being and critical agricultural mass sufficient to justify the placing of land in the reserve. This determination could be done at the state level, but local agriculturists and farmers will do it adequately and much more easily. Agricultural Extension and Soil Conservation Service personnel have expertise that should be sought.

b) Developing the suggested boundary lines of the reserve, not necessarily in contiguous units (possibly a single farm as a unit) on U.S. Geological Survey or aerial photo maps or equivalent, for use at a public hearing. Only properties with prime cropland should be included in the reserve. The boundaries of the reserve should coincide with farm property lines as much as possible for easy identification. Large areas of wasteland or hilly woodland should be avoided in the interest of keeping the reserve identifiable as prime croplands. Farmlands suggested for inclusion in a reserve should have the approval of the appropriate planning board.

iii) Discourage the transfer of reserve land to nonfarm use by assessment of a substantial transfer fee on the purchaser if the land is approved for release from the reserve and a significantly higher penalty if conversion occurs without approval. The final administrative decision to release farmland from a reserve would rest with the county prime land preservation board as would the fee to be levied in excess of the county minimum if local land value warrants. No release of reserve land could be approved without prior approval of the appropriate planning board.

When the release has been approved by the preservation board and the transfer fee paid by the applicant into the pooled account, the land is then approved for nonfarm use.

The responsibility for unapproved conversion rests with the land owner at the time of conversion. Landowners in the reserve are free to sell farmland to anyone at any price and at any time.

iv) Distribution of the accrued transfer fees to the current landowners in the reserve as gradual compensation for lost development rights. The responsibility for deciding how and when the accrued fees should be distributed is shared by the county prime land preservation board and the county treasurer. Since farmland reserves will vary in percentage and quality of cropland, it would seem appropriate to designate that each reserve share its own pool.

While an enabling ordinance might permit as many as three reserves in the county, administrative costs would be lessened if fewer reserves would be sufficient. Since remuneration will be based on a per acre basis, it is essential to have acceptable acreage data available.

Compensation from TFP can be substantial. Assuming a $2,000 per acre transfer for ten percent of a reserve, the remuneration would be $222 per acre for the remaining 90 percent of the land originally in the reserve. The following table indicates the compensation to land owners at varying levels of transfer fee.

FIGURE 11

COMPENSATION PER ACRE OF LAND REMAINING IN RESERVE

TRANSFER FEE PER ACRE	10% RELEASE	20% RELEASE	30% RELEASE	40% RELEASE
$2,000	$222	$500	$857	$1,333
$3,000	$333	$750	$1,285	$2,000
$4,000	$444	$1,000	$1,714	$2,666
$5,000	$555	$1,250	$2,142	$3,333
$6,000	$666	$1,500	$2,571	$4,000

To assure equitable distribution of accrued transfer fees to landowners in a reserve, four factors are highly important:

a) Avoid the inequity arising from differing dates of release of land from the reserve. Each remaining landowner has an increasing equity in the accrued pool with each successive addition to the pool.

Suggestion: Whenever the pooled account represents a release of two percent or less of the acreage in the reserve, it would be simpler to distribute the pooled fund based on the total acreage in the reserve when the pool was initiated. The effect upon the current landowners would range from twenty cents to one dollar per acre. If the percentage were greater than two percent, equity to former owners of released land would best be achieved by computing the accumulated equity at each successive release from the reserve. Remuneration could then be based on the order of succession from the reserve.

b) Recognize the difference in value between cropland and non-cropland in the reserve. Any compensation should relate directly to the value of the object to be preserved.

Suggestion: A payment on noncropland based on twenty percent of the pool acre average would recognize the difference in land value and would emphasize the preservation of cropland. It would also provide protection for groves, farm woodlots, and grazing lands essential to keep cropland in contiguous units and to provide open space for the community.

c) Recognize the difference in desirability of cropland in the reserve. Compensation for lost development rights should include a premium for the kinds of lands most eagerly sought by developers. Few reserves will contain land so uniform in value that their differences can be ignored.

Suggestion: Allocate the remaining eighty percent of the non-cropland equity to the excellent soil areas -- the deep, well drained, level and highly fertile croplands, irrigated croplands and climatically favored croplands, including orchard lands.

d) Recognize the need for a built-in safeguard to avoid unreasonable payment to any landowner. Varying percentages of noncropland, relative to cropland in different reserves could result in exorbitant compensation.

Suggestion: Limit the additional compensation for the most desirable croplands to sixty percent of the reserve acre average in the pooled fund. The remainder should be added to the remuneration schedule for good croplands.

The following will illustrate the above suggestions in practice:

SITUATION: 10,000 acre reserve:

2,000 acres noncropland.

2,000 acres most desirable cropland.

6,000 acres good cropland.

$400,000 in the pool resulting from the release of 200 acres at $2,000.

The reserve pool acre average is $40 ($400,000 divided by 10,000).

PROCEDURE:

1) Determine compensation for noncropland.

   $40 base X 20% = $8 per acre.

2) Determine compensation for most desirable lands.

   $40 base X 60% - $24 the limit on additional compensation.

3) Determine amount committed for distribution.

   2,000 acres noncropland @$ 8 = $ 16,000

   2,000 acres of most desirable @$64 = $128,000

   6,000 acres of good cropland @$40 = $240,000

Committed	$384,000
Available	$400,000
Uncommitted	$ 16,000

4) Determine compensation for good croplands.

   $16,000 divided by 6,000 acres = $2.66 per acre.

   $40 base plus $2.66 = $42.66 compensation per acre.

The transfer fee plan (TFP) is compatible with the needs and values of our society. Many people want less government, less spending, fewer government employees and more local control. TFP is so devised that it could protect the choice farmlands in the county inexpensively and without additional bureaucracy by utilizing existing public agencies. There would be little need for a separate office as the county planning office, Cooperate Extension, or Soils Conservation Service could well provide the necessary services. The county prime land preservation board is the only new organization at the county level. TFP has the special advantage of local control within the cloak of state sanction. Local control is possible because no state funding is involved except perhaps, for some costs in getting the reserve areas designated and established.

The key to effective protection and simplicity of operation of TFP is to keep the economic sanctions (fees and penalties) in the plan at a level to discourage conversion of prime lands to other use.

> There are only three proposed techniques with land saving qualities that can endure under the pressure of urbanization. They are, outright purchase of development rights, transferable development rights and the transfer fee plan. The outright purchase of development rights is highly effective but the cost to the taxpayer is so high that it will be employed in only a few situations. Transfer fee and transferable development rights are financially feasible and emerge as major prospects for prime land protection because both respect the rights of landowners, yet provide defense against destructive forces.

There are several similarities between TFP and TDR: Both call for establishing agricultural preserves; both protect farmland by removing the right to sell prime land for any purpose, one directly, the other indirectly; and, both should result in farmland being taxed only on its farm value.

Beyond this point they differ. TFP uses economic sanctions to gradually reward the landowner for lost development rights. It assumes that there will be need to release farmland for other use. TFP rewards the landowner equitably in cash.

TDR requires total community planning to provide protection. It assumes that farmland will be locked into agriculture or open space forever. It seeks to force the developer to purchase the farmer's development rights before obtaining permission to build higher density housing nearby. The landowner is rewarded with a certificate of uncertain value.

TDR has limited adaptability. It can survive only in semi-suburbia where community planning can force a market for transferable development rights. TFP is adaptable to many situations, from the fringe of urban expansion to deep within rural areas. The development right in TFP is held in abeyance by government and thus provides a good legal basis for nonassessment or taxation. In contrast, the courts have ruled that the certificates of development rights granted under TDR are subject to taxation until sold.

Drafters of county enabling ordinances or state legislation relative to the transfer fee plan should be aware of the specific definitions of the terms transfer fee and penalty.

Transfer Fee: A sum of money paid for the privilege of authorized release of prime land out of the reserve for nonfarm use. It is not a tax. A privilege is a right enjoyed by a person beyond the advantages of others. In this plan, the privilege is purchased.

Penalty: Financial punishment for violation of a rule, the unauthorized destruction of a protected natural resource. The imposition of a penalty does not imply a criminal offense.

Saving choice farmlands for future generations requires a system that has advantages for both those who own the land and those who seek to preserve it. TFP utilizes non-tax money to protect these finite resources rather than placing dependence entirely upon law. The prime agricultural land transfer fee plan offers an opportunity to contain development on prime lands without undue landowner sacrifice, without massive spending, without costly bureaucracy, and without impenetrable barriers to future space needs.

E) Building Codes: Since the enactment of countywide zoning in 1973, Jackson County has participated in various degrees in a code enforcement program. By visually inventorying Jackson County, the informed observer can immediately identify numerous code

violations. It has generally been county policy to enforce codes only when violations are reported by the public.

Code enforcement can be defined by four different levels of application: Light penalty and intermittent enforcement; light penalty and continuous enforcement; heavy penalty and intermittent enforcement; and, heavy penalty and continuous enforcement.

Generally, code enforcement protects the public health, safety, and welfare by preventing structures from deterioration. Property owners in code violation respond in a variety of ways, depending on the level of enforcement relative to the quality and value of their properties. Code enforcement has varying degrees of equitability, according to its severity and the condition of the structure to which it is applied. For example, to require older homes to meet current codes is often unfeasible, unless the house is of such quality that it has good market value. The value of the improvements needed to bring a solid, but deteriorated home up to current building code standards is approximately 60 percent of the market value, once improved. Unless the structure merits this type of expenditure, such an application of the code is not economically feasible.

The basic impact of code enforcement on the housing supply is double edged. It either lengthens the social life of a building by forcing a modicum of improvements, which usually lengthens the economic life, or it shortens the economic life by forcing unfeasible improvements. In the latter instance, the substandard building is forced out of the market place, and its social life, or use, is also shortened. Enforcing high levels of compliance with the building code, then, forces the owners to renew the property (feasible in some instances), or to pay the penalties and reduce the potential income. The third choice is to let the property deteriorate, which would keep it from the sales market, but possibly retain it in the rental market. Deteriorating housing often is not inspected until it is to be sold.

The following discussion presents four alternative levels of enforcement and the implications of each:

i) Light Penalties and Intermittent Enforcement:

   a) The salary costs for enforcement staff remain low.

   b) Private property owners will operate their rentals with low maintenance costs and maximum profit for the economic life of the structure.

   c) Rental property owners in noncompliance may find it more to their advantage to simply pay the fines, viewing them as an operating expense, especially if the net income after compliance is less than it would be if they did not comply.

   d) In a tight housing market, with consumers unable to demand improved buildings, property owners may choose to let their buildings deteriorate.

   e) Trends in property values and rents would continue.

f) Low-income persons would have a better chance of finding inexpensive housing.

g) The quality of housing and health conditions, would continue to decline.

h) For single-family detached and multiple-family units, home ownership would decrease and renters increase.

i) Owners of slightly and moderately deteriorated properties could improve their buildings somewhat, but let them relapse after the second inspection.

The net effect of this alternative is no improvement in housing conditions, with owners of substandard properties continuing to operate them in that condition. Under such an enforcement program, the economic life of poor housing is quite long.

ii) Light Penalty and Continuous Enforcement:

a) An increased staff would be required.

b) Owners of slightly and moderately deteriorated buildings may improve their buildings for a social life of five to ten years instead of code compliance repair level. This is because frequent enforcement makes it difficult for owners to ignore the annual addition of new violations, and because they may find it cheaper, in many cases, to improve the buildings at one time rather than incrementally. This, also, has the advantage of making possible a claim for sizeable rent increases after improvements.

c) In contrast, owners of property with serious violations of codes may still find it cheaper to pay the low or nominal penalty and may refuse to remove violations. But they find it exceedingly difficult and bothersome to become chronic offenders under the continuous inspections and enforcement; therefore, they cannot prolong the economic life of the building as much as in alternative one.

d) The value of property would tend to decline as fast as in the case of alternative one.

e) It is likely that county officials would occasionally be accused of harassing low-income homeowners, apartment complex owners, and minority groups.

f) The county would continue to decline in terms of housing quality although not as fast as in the case of alternative one.

iii) Heavy Penalty and Intermittent Enforcement:

a) Staff would remain small and salary costs low.

b) When a heavy penalty is imposed for noncompliance, the property owners' net income situation will be more seriously threatened.

c) Again, the owners of less severely deteriorated housing are likely to find that it is more economical to comply with the law and avoid the penalty. But, for severely substandard housing, the owners may find that by complying with the law, they would incur a net loss because the cost of upgrading the property is excessive. At the same time, noncompliance means they would incur losses. At this point, they would consider the alternative of withdrawing the property from the market and would estimate the possible losses from this action. Comparing the possible losses from three alternatives—code compliance without a penalty, noncompliance with a heavy penalty, and abandonment—they would choose the course of action that yields the least loss.

d) it is likely that slightly, and moderately, deteriorated housing could be improved at code compliance level, but could easily slide back to substandard conditions. Severely deteriorated or dilapidated buildings are likely to be abandoned because of very high cost of improving the property.

e) The reduction of deteriorating and substandard housing would have a proportional impact on the supply of low-cost rentals and reduce the ability of low and moderate income families to attain home ownership.

f) Some low-income families would be forced to pay a greater percentage of their incomes for housing.

g) It is likely that this alternative will be somewhat ineffective, because intermittent enforcement programs will never force the owners to improve their buildings beyond the code compliance level, so that buildings relapse into substandard conditions very easily.

h) It is likely that county officials would occasionally be accused of arbitrary enforcement of the code.

iv) Heavy Penalty and Continuous Enforcement:

a) Implementation of this alternative would require an increase in staff to continuously enforce the code. However, the increase would be no greater than in alternative two.

b) Properties with a small number of pending violations are, in general, improved for a five to then year social life standard.

c) Properties with a large number of pending violations are likely to be abandoned immediately.

d) Continuous enforcement, regardless of size of penalty, is likely to be effective only for slightly and moderately deteriorated housing in promoting somewhat more than code compliance level repairs.

e) Both continuous an intermittent programs do not have any sizeable effect on dilapidated or severely deteriorated buildings. Thus, continuous enforcement, as in concentrated code enforcement programs, is generally effective in conservation areas where relatively good buildings are to be found.

f) Severity of penalty is not likely to be a major factor in the improvement of moderately deteriorated housing. But it will affect the economic life of seriously deteriorated buildings; a light penalty shortens the economic life, but at a very slow rate leading to gradual abandonment, whereas a heavy penalty can hasten the death of the buildings or brings about an immediate demise if the owner chooses not to make needed repairs.

g) Severity of penalty is most effective in areas of severely inadequate and substandard housing, in a slum condition. Code enforcement is not likely to be an effective tool to improve severely substandard and deteriorated housing; it merely determines the mortality rate of such properties.

h) Implementation of this alternative may result in a number of properties being withdrawn from the market, abandoned, or demolished.

i) Implementation of this alternative would mean an upgrading of the county's housing stock and displacement of low-income families.

j) It is likely that county officials would find strong support among moderate and high income groups already residing in the area, but would encounter opposition from low income groups that would be forced from their homes.

k) To be successful, this alternative may require loans to low income families to make improvements to their currently substandard housing and income subsidies to families requiring relocation to higher quality dwelling units from units beyond rehabilitation.

F) Capital Improvements Planning and Programming: In addition to being an effective tool for implementing a comprehensive plan and wisely using public dollars, a capital improvements program (CIP) is an effective means for public agencies to indirectly influence the form of overall development in real estate investment of other development programs. The investment of public funds in such facilities as roads, schools, utilities, or buildings clearly has an impact on the pattern of community development. Planning for such public facilities and the announcement of public intentions to acquire properties or schedule construction of new facilities can do much to influence private sector decisions. Since government actions can influence the pattern, timing, and standards of private development, a coordinating mechanism for planning and programming public capital improvements and expenditures is desirable to balance competing pressures for limited funds systematically review project proposals to provide timing, location, and

financing integration, demonstrate to the taxpaying public that fairness and objectivity are being exercised in public expenditures and achieve identified public goals.

With the growing complexities in both financing and development activities, even the smallest units of government need to carefully analyze the way they program funds for various improvements to be sure they maximize available dollars. No agency has enough money to accomplish all its objectives, so it must have a method for determining priorities. The basic reason for a CIP is to ensure that money is being spent wisely and for the most needed projects. An important aspect of the CIP is that it presents the opportunity to schedule projects so that the various steps in the development of an area logically follow one another. It also gives an advance perspective of future needs and development activities.

Essentially the CIP includes scheduling of public physical improvements for a community over a certain period of time, with consideration for priorities and local financial capabilities. This process reveals unmet needs and frequently resolves longstanding problems for which solutions had seemed elusive. The simple discipline of comprehensively evaluating all proposals often reveals interrelationships overlooked by the isolated sponsors of projects. Thus, a CIP often involves a number of integral elements containing relatively standard procedures and terms, such as:

i) Capital Improvement: Any major, nonrecurring expenditure or any expenditure for the physical facilities of government, such as costs for acquisition of lands or other structures (including additions or major alterations); construction of highways or utility lines; fixed equipment; landscaping and similar maintenance expenditures.

ii) Capital Improvement Budget: The lists of projects, together with the amounts and sources of funds for the coming fiscal year; sometimes regarded as the first year of the capital improvement program. It is frequently treated as the capital improvement section of the annual budget.

iii) Capital Improvement Program: The long-range schedule of contemplated projects, with their estimated costs over a period of time, usually five to ten years, with the most common period being six years. Most CIPs are presented in terms of specific calendar or fiscal years, although some are shown in terms of several priority categories with a more flexible time schedule.

It is customary to prepare a capital improvement (CI) budget and CIP annually, revising the entire program and adopting the CI budget each year as part of the regular operating budget. The specific details of this process vary with the site and structure of the governmental entity. The process of CIP will normally include these distinct procedures:

i) An inventory of potential projects, including cost estimates and an initial evaluation of their relative priority;

ii) Analyses of these potential projects;

iii) Investigation of the financing capabilities of the agency and community affected and the relation of these to different project categories.

iv) A schedule of project execution in a long-range program list which considers the projects' relationships to each other and to financial requirements;

v) Selection from this schedule of a slate of projects needing early action; this generally takes the form of the capital budget for the upcoming fiscal year; and,

vi) Formal adoption of the capital budget against the background of the intermediate and long-range recommended program, usually after some form of public review.

It is often desirable to have an indication of priority of need in order to deal effectively with development timing. These categories of priority allow appropriate project scheduling:

Priority 1, Urgent: Projects which cannot be reasonably postponed; these may be needed to complete an essential, partially finished project; to maintain a minimum, present established program, or to meet an emergency situation.

Priority 2, Necessary: Projects which should be carried out within a few years in order to meet anticipated needs of a current program or for replacement of unsatisfactory facilities.

Priority 3, Desirable: Projects needed for a proper expansion of a program; the exact timing of these can be delayed until funds are available.

Priority 4, Deferrable: Projects which would be needed for optimal operation, but which cannot yet be recommended for action; these can be reasonably postponed without detriment to present services.

Those projects which merit an “urgent” priority would ordinarily be implemented in the initial CI budget year, unless there were financial reasons for delay. Those projects classed as “necessary” would tend to occur in the early years of the CI program; some might be undertaken in the initial year if they are funded from specialized sources. “Desirable” projects would tend to be listed in intermediate time frames, and “deferrable” projects would only be shown n the long-range time period. A comprehensive and effective CI program is a fundamental means for implementing and maintaining the equilibrium of the comprehensive plan. It acts as a system for monitoring existing conditions, determining the phasing of the Comprehensive Plan in a reasonable, harmonious, and equitable fashion to ensure the coordination of desires and available funding.

G) Site Plan Review: The site plan review process is a viable method for assuring compliance with the policies of the Jackson County Comprehensive Plan and for ensuring the wise utilization of the County’s land resources. This method applies o those properties where special review of development proposals is warranted because of a unique nature or other conditions of the site, such as scenic corridors, or because of safety factors. The purpose is to allow a reasonable utilization of the land resource while ensuring that the land resource itself is not altered beyond acceptable or desired levels. By means of an overlay zone, the county can determine accurately if the proposed development action should be approved, what modifications are necessary, and what costs and benefits are involved. Basically, the site plan review process should accomplish the following:

i) Specify the important resource features of the site;

ii) Describe the open space natural resources occurring within the site boundaries;

iii) Indicate how the project is integrated with other aspects of land use and the comprehensive plan.

iv) Specify the treatment and protection measures the land resources are to receive, including:

a) Land use and landscaping controls.

b) Construction and performance standards to be met.

c) Land acquisition needs.

v) Establish guidelines and regulations, where applicable, regarding:

a) Building heights and setbacks.

b) Signs and outdoor advertising.

c) Placement of utilities, including roads and public facilities.

d) Cover and screening of earthwork operations.

e) Erosion and sedimentation control.

f) Preservation of the natural conditions of bodies of water.

g) Preservation and restoration of natural plant material

h) Architectural and landscape design.

i) Property maintenance.

j) Public uses, if any.

k) Other items as per Jackson County zoning ordinance, Chapter 282, Site Plan Review Provisions.

H) Physical Impact and Maintenance Codes: The variety of available devices does not necessarily provide mechanisms to ensure appropriate land utilizations as much as providing techniques to ensure the preservation of such areas in their desired state. By ensuring that land resources are maintained, their long-term quality is preserved and enhanced. Such devices include:

i) Litter Control: An anti-litter ordinance controls the dumping of trash and wastes and thus maintains environmental quality.

ii) Weed and Insect Control: Such controls help to eliminate unsightly conditions and avoid the destruction of scenic corridors and native flora.

iii) Erosion Control: This program helps to control erosion and sedimentation, and thus water quality, by protective planting and landscaping.

iv) Grading Controls: While usually included within local building codes, grading controls ensure safety, stability, and preservation through the provision of performance standards. Such standards delineate the minimum and maximum acceptable parameters that will mitigate erosion, vegetative destruction, and so forth, and thus promote overall resource quality preservation.

v) Performance Standards: Originally, this method was developed to control industrial nuisances such as heat, glare, dust, smoke, noise, odors, etc., and has been expanded to include such concerns as erosion, sedimentation, waste and process discharge emissions, etc. Basically, performance standards delineate minimum and maximum standards of performance, and are the basis of most zoning ordinances, building codes, etc. For example, zoning ordinances regulate building height, setbacks, air and sunlight requirements, etc. The expansion of performance standards to include their application to other development activities provides a means for ensuring compliance with community goals and desires, and can be a very viable tool for ensuring open space conservation. Air and water quality standards are the most current applications of the concept of performance standards.

l) Population Growth Management/Control Strategies: A new mood, emerging on a national as well as local scale, has led to a questioning of traditional assumptions about the desirability of urban development. The motivation for such a trend has been people's increasing awareness of humanistic values and livability concerns. This has formed the impetus for many population growth control/management programs throughout the country. The underlying assumption has been that there is a direct, yet difficult to define, relationship between population growth and the quality of life. Measures to mitigate the negative impacts of this relationship have taken several different forms, aside from more traditional and less complex techniques such as zoning, subdivision control, and public acquisition of open space. Though specific programs are broad-ranging and complex, they can essentially be distilled into four basic concepts. These four types of responses can be further divided into growth management and growth control strategies. The distinction is the difference between actually limiting the number of people migrating to an area versus minimizing the impact of such migration. Of the four strategies discussed, two are management-oriented, one is control-oriented, and one is a combination of the two concepts. The four general strategies are:

i) Urban Service Areas: Basically, the designation of urban service areas is a means to identify where growth should occur. This is usually accomplished through the imposition of a boundary line(s) establishing the geographical limits of development. By restricting facilities and services capable of supporting intensive development to the area within the service boundary, urban sprawl is effectively eliminated. Services can then be more economically provided within the designated and planned growth areas.

Often, especially in metropolitan areas, phased growth or sequencing mechanisms are built into the urban service area concept. Generally these actions take the form of concentric phasing boundaries or districts within the

service area, more precisely defining where and how development should occur. Another way of dealing with phasing is to simply ignore it. The theory in this case is that the urban service area itself is the first phase, within which market forces will determine where and when development should occur. Basic economic principles of supply and demand suggest that the overall impact of urban service boundaries is less severe when unencumbered by phasing districts.

Some of the more negative features of the urban service area concept, such as market impact in the form of increased land values, can be somewhat mitigated through a systematic boundary review and amendment process.

This concept of urban service areas is embodied in Goal 14, urbanization, of the Statewide Planning Goals and is currently being implemented by Jackson County. (Refer to urbanization element.)

ii) Adequate Public Facilities Programing: By expanding the subdivision review process, adequate public facilities programing seeks to guide development in a manner consistent with the municipality's ability to accommodate growth. This concept differs from other strategies by emphasizing direction rather than control or retardation of growth. Facilities programming can deal with only one or two of several facilities, a concept called limited phasing mechanisms, or may treat the full range of public facilities, a concept known as expanded phasing mechanisms.

Under the limited phasing mechanism, one or two facilities, such as sewer and water service, act as the conditioning variables. By this method, a developer is required to prove the adequacy of these facilities prior to obtaining development approval often the limited phasing mechanism is selected in response to a temporary service inadequacy. Thus, a detailed elaborate mechanism is designed around a specific, short-range problem. This in turn can create a climate where a project is reviewed and evaluated on the basis of deficiency in one or two areas, rather than on the merits of the entire project.

Expanded phasing mechanisms, on the other hand, specify the full range of public facilities as conditioning variables. In such cases, the developer bears the burden of demonstrating the adequacy of all facilities prior to development approval. These facilities are then financially supported, usually through a capital improvement program, to provide the necessary service structure, over a period of time and at levels commensurate with the community's ability to provide them.

Potential problems that sometimes occur are:

a) Limiting the concept to only residential development instead of more broad based programs aimed at all growth proposals.

b) Disallowing desirable development without the required capacity or a process to remedy shortcomings responsible for project denial.

c) Non-ownership of the affected facility. Often municipalities do not own the services upon which the phasing mechanism is predicted. Schools

and sewer and water services are frequently provided by special districts or other agencies, for example.

iii) Capacity Rates: Capacity rates or "cap rates" are absolute ceilings on population growth. Several municipalities are attempting this approach, which can be very appealing conceptually. However, in practical application, the results have been less impressive than was hoped. First, there has been a basic problem of accurately forecasting population. Typically, this strategy has been based upon a desired, rather than expected, capacity thus leaving the door open for judicial review on the basis that the final capacity decision was an arbitrary one. Second, a significant flaw has been the general absence of any timing device. The assumption has apparently been that growth would occur in a uniform and continuous manner.

To help avert or reduce these problems, the cap rate strategy when used should:

a) Determine the rate on the basis of empirically derived data;

b) Link the system to some form of timing control; and,

c) Provide for a periodic review and amendment procedure to assure continuity and responsiveness to changing requirements.

Capacity rates seem to be most useful when they are used in conjunction with other growth management tools, such as adequate facilities programming or annual permit limitations.

iv) Annual Permit Limitations: The establishment of an annual limitation on building permits is essentially a timing scheme designed to ration a specified number of permits, and therefore, the population increase, on an annual basis. These attempts have normally been linked to permit issuance criteria based upon serviceability and aesthetics, rather than issued on a first-come, first-served basis. As such, the concept is a direct means to control both the capacity and location of growth. The strategy marries the best of cap rates and adequate facilities programming.

The uniqueness of this approach is the manner in which development proposals are evaluated. Unlike the traditional system where applications are acted upon individually, without regard to others, this mechanism generates competition among projects for the allotted permits. The merits of such a system are:

a) It controls growth at a rate deemed desirable and commensurate with the municipality's ability to provide services;

b) The strategy directs growth to desirable areas; and,

c) The competitive nature of the process encourages higher quality development.

Problems can develop with this strategy if conditioning factors are unrealistic or ignore local and regional population dynamics, or if the system becomes a veil for exclusionary practices. In addition, as with other strategies, a municipal financial commitment is necessary to ensure provision of the requisite services. Most communities have also found it necessary to establish an annual review and amendment procedure to maintain firm legal footing. The largest single problem with this system is the difficulty of incorporating a timing mechanism.

The descriptions of the four basic growth control/management strategies highlight the advantages and shortcomings of each. It seems apparent that none of the existing schemes is perfect, each possessing faults that another remedies. A more comprehensively workable solution lies in the intelligent combination of the best elements of each, a solution as yet largely untried.

Population growth management is being implemented in Jackson County in the form of municipal urban growth boundaries. Growth control, on the other hand, has not been integrated into the county planning process. A more detailed discussion of urban growth boundaries is contained within the urbanization element.

TAX INCENTIVES: Another means of maintaining low density development and hence the open space character of the land is tax incentives. Taxation influences development decisions as well as providing incentives for the retention of land resources. Generally, high taxes force the conversion of desired land resources into less desirable development through more cost effective and intensive use. By utilizing a variety of tax incentives, public agencies can accomplish a range of objectives, namely:

A) Reduce economic pressure on landowners so they can keep their land in its present use rather than converting it to a more intensive use;

B) Provide the incentive necessary for voluntary participation of owners;

C) Encourage the conservation of resource lands as an open space asset;

D) Protect the county's prime agricultural land and thereby maintain an important element in the local economy; and,

E) Encourage orderly growth and thereby minimize the high costs of public facilities and services that are characteristic of areas of disorderly growth.

There are three basic types of tax incentives that warrant further discussion and consideration.

A) Tax Exemption: Public lands are usually exempt from property taxes. The partial or full exemption of privately-owned lands is commonly determined by their benefit or use to the general public. These benefits are not just for the users of facilities, but accrue to adjacent areas where amenities and real estate values are often raised.

B) Preferential Assessment: Preferential tax assessment, especially for prime agricultural lands, is a device for keeping land assessed at its current use and value rather than at its development value to encourage the continuation and preservation of such natural

resources. Generally, the high assessments of undeveloped land, especially near urban fringes, are based on its highest development value potential, and have forced landowners to succumb to the tempting offers of speculative developers. However, reduced tax rates by themselves have usually not been enough of an incentive to prevent unwanted development. In order for this method to be a viable device and the land able to qualify for preferential tax treatment, the land must have one of two types of restrictions on its use: 1) A scenic or conservation easement; or 2) A contract or agreement with the landowner that guarantees the existing use for an agreed upon length of time, usually a minimum of ten years. In the latter case a heavy penalty for premature withdrawal adds a further incentive for retaining existing use.

C) Tax Deferral: Another technique for preserving low density uses is a tax deferral system. Under this system, all, or a substantial portion thereof, of the taxes on land located within a planned or an existing site would be deferred as long as it remains in a desired type of land use; taxes on improvements would still be collected. If an owner of such a site decides to develop a less desirable use, than all deferred taxes would have to be paid in full before a subdivision plat or building permits would be issued.

If the property is sold, the tax lien goes with it and the market price should be reduced by the amount of the tax lien for equity. If the land is subdivided and sold, but not developed, the tax lien is proportioned, based on the size of the subdivision parcels. If the public eventually acquires the land, the deferred tax would reduce the market value of the property proportionately and could be considered as installment payments on the property.

On the whole, this tax system will be useful only when tied to other land use controls like zoning and acquisition. By itself, tax deferral will have little impact on preserving desirable resources as it does not impede large scale speculation and development.

Another tax incentive worthy of note is the income tax deductions and capital gains tax savings resulting from the donation of land, discussed in the acquisition of fee section.

The following matrix shows in graphic form the applicability of the various conventional management and implementation techniques and their relation to the general functions of land resources present in the county.

IMPLEMENTATION TECHNIQUES	FUNCTIONS																
	MANAGE RESOURCE PRODUCTION				PRESERVATION OF NATURAL & HUMAN RESOURCES			HEALTH, WELFARE AND WELL-BEING							PUBLIC SAFETY		
	Forestry, Agriculture, Animal Prod.	Mineral Products	Water Supply	Commercial & Recreation Fish &	Ecological Preserves	Geological Features of Note	Historical & Cultural Sites	Water Quality Protection	Disposal (Sewage, Garbage)	Airshed Quality Production	Recreation Areas	Recreation Travel	Visual Amenity	Shaping Urban Development	Geologic Hazards	Airport Flight Path Zones	Fire Zone
Acquisition of Fee:																	
Purchase:																	
Outright Purchase			✱	✱	✱	✱	✱	✱	✱		✱	✱	✱	✱		✱	
Advance Acquisition			✱		✱			✱	✱		✱	✱	✱	✱		✱	
Excess Condemnation						✱					✱	✱	✱	✱		✱	
Purchase & Leaseback Without Certain Rights	✱	✱	✱	✱	✱			✱					✱	✱		✱	
Donation or Gift					✱	✱	✱				✱	✱	✱	✱			
Eminent Domain			✱		✱	✱	✱	✱			✱	✱				✱	
Trade or Land Exchange			✱		✱	✱	✱	✱			✱	✱	✱	✱			
Tax Delinquent Lands			✱	✱	✱	✱	✱	✱			✱	✱	✱	✱			
Transfer			✱		✱	✱	✱	✱			✱	✱	✱	✱			
Acquisition of Less Than Fee:																	
Scenic & Conservation Easements	✱		✱	✱	✱	✱		✱		✱			✱	✱		✱	
Purchase & Resale Without Certain Rights	✱	✱	✱	✱	✱	✱		✱					✱	✱		✱	
Public Access											✱	✱					
Lease																	
Option to Purchase						✱					✱	✱					
No Option to Purchase						✱					✱	✱					
Covenants Deed Restrictions	✱				✱		✱						✱			✱	
Other Development Rights	✱	✱	✱	✱	✱	✱		✱		✱			✱	✱		✱	
Regulation: (Police Power)																	
Subdivision Ordinances											✱	✱	✱	✱	✱		
Building & Physical Impact Codes		✱	✱		✱	✱		✱					✱	✱	✱	✱	
Zoning:																	
Floodplain	✱	✱	✱		✱			✱		✱	✱	✱	✱	✱	✱		
Agriculture	✱		✱	✱				✱		✱			✱	✱	✱	✱	✱
Conservation	✱	✱	✱	✱	✱	✱	✱	✱		✱			✱	✱	✱	✱	✱
Open Space	✱		✱		✱			✱		✱	✱		✱	✱	✱	✱	✱
Large Lot								✱		✱	✱		✱	✱			
Cluster Development						✱				✱	✱		✱	✱			
Tax Incentives:																	
Income Tax Deductions & Capital Gains Tax Savings Resulting From Donation					✱	✱	✱				✱	✱	✱	✱			
Property Tax Reduction	✱		✱		✱			✱		✱	✱		✱	✱			

NON-CONVENTIONAL METHODS: The basic premise underlying the non-conventional implementation concepts is that of participatory, versus representative, democracy, and that the strength of any viable democratic institution relies on informed and active citizen participation. With rapid urbanization since the turn of the century, the individual citizen has often felt isolated, and ineffective in affecting his environment. This dilemma has been recognized by many, but few adequate solutions have been forthcoming. The federal and state governments have attempted to remedy this problem by specifying the need for citizen review and comment. The overall results have left a great deal to be desired, but there have been some notable, though limited, exceptions. The need remains. A democracy becomes weakened when there is no effective or active citizen participation. In brief, people have not been sufficiently involved in the local planning process to embrace the concept of planning "of the people, by the people and for the people", and they must be encouraged more strongly to participate, and given channels through which to do so.

A) Cooperatives: One of the best ingredients of the American way of life has been individual initiative. This involves such concepts as cooperative actions, where a small-scale social unit fosters local initiative and restores democratic participation to levels characterized by the rural grange association. By organizing and mobilizing the potential human resources within a community, the formation of such people-oriented associations can effectively stimulate the free enterprise market to solve many of the contemporary problems which governments have been unable to resolve satisfactorily. In this era of big business, the concept of cooperative community development may still be an effective method of advancing the positive elements of participatory democracy and realizing the responsible implementation of the comprehensive plan.

There are numerous organizational forms a cooperative-based citizenry can take: the grange, homeowners' and neighborhood associations, community development corporations, public utility districts and service districts. Each is based on the concept of using individual human resources in a cooperative atmosphere to merge the best blend of democratic and entrepreneurial ideals into a responsive system which stimulates a working partnership among existing political, economic, and social institutions. The most exemplary examples of such voluntary participation are the rural fire districts and agricultural granges. This concept is a means of organizing an economically sound, politically effective and humanly satisfying social system that enables groups to decentralize, democratize, and humanize the planning, decision-making and implementing actions of all the existing bureaucratic systems that have been ineffective or unresponsive. The overall purpose of a cooperative community development association is to create a self-sufficient, economic, and social force that represents the interests and needs of individuals and families living in a common area like a neighborhood, community, or city. Each association would be a nonprofit corporation owned and controlled democratically by its members. Only individuals living in, or owning property or businesses in the area can qualify as members. No individual has to join, and those that do must rejoin annually by paying a membership fee. This effectively forces the association to either serve its members' needs or lose its members and cease to exist.

The decisions as to how large these districts should be will vary with each situation, but they should be structured so that management can be decentralized or the organization divided before they develop beyond an acceptable human level of complexity. The long-range goal of this effort is to create a contemporary extended family community that will provide individuals and families the social security needed, but on a neighbor-to-neighbor

basis, rather than the impersonal government-to-people system. Its purpose is not to destroy any organization, but to expand the planning and decision-making process in all existing organizations to include the needs of people at the human level. Big organizations to include the needs of people at the human level. Big solutions are not always the best or most effective means of accomplishing an end. Working together, in a cooperative manner, is part of what a community is all about, and this method relies on people resources and grass roots initiative.

The following scenario illustrates the dynamics of such an effort: A rural community realizes the positive economic and ecological benefits of using solar energy as a viable alternative to the continually increasing electric and fuel oil rates, but determines that individual piecemeal attempts to utilize solar energy and maintain individual systems are too costly for their annual incomes, even with government tax credits. In response, the community forms a cooperative non-profit solar utility and improvement district and applies for technical and financial assistance from the U.S. Department of Energy and various private organizations, and to the U.S. Department of Labor for CETA funds to train and employ local personnel to install, manage, and maintain the solar units and district. Some monies come forth, and when combined with initial membership fees, enough capital is generated to qualify the district for a conventional private or Small Business Administration loan in order to develop a seed fund. Being a non-profit organization, the district purchases solar energy collectors in volume reduced prices and proceeds to install and maintain the units at affordable rates to the consuming members. Monthly payments are reduced to affordable levels through group purchase and these payments generate enough profit to continue reinvestment and expansion or high levels of service and maintenance. Local personnel are utilized and trained to install the solar units and operate the district, having a positive impact on local employment. In all, it is an alternative solution that is economically viable to both the public and private sector institutions and businesses which was developed and implemented through local motivation and efforts.

Other organizational efforts could include food co-ops, laundromat cooperatives, sewage district cooperatives, community housing development or rehabilitation corporations, to name but a few examples. An existing local institution, such as a church group, could be a very viable impetus or initiator for such efforts.

B) Community Land Trusts: Another non-conventional implementation device that is a potentially viable alternative to realizing the intent of the comprehensive plan is Community Land Trusts (CLT). CLTs are also non-profit groups formed to help people with the desire but little or no money to acquire the use of land. CLTs consider land a community resource which should be made available to those who will use it wisely. Additionally, CLTs offer a means for the landless poor to find economic independence while preserving land resources intact for future generations. Rural farms and urban gardens, homesteading communities striving toward self-sufficiency, and whole new towns are emerging on land held in trust.

The trust, through individual and private foundation contributions and public grants-in-aid, buys property for a group or family that has the skills and ambition to farm, but not the money. Such a family or group would lease the land from the trust for an annual payment, say 2.5 percent of the trust's purchase costs. Income to the trust would be used to buy more land and to promote the community land trust concept. The lease

arrangement could offer an initial grace period of no payments until the farm got underway. The trust could use its equity to borrow funds for equipment and supplies.

The conceptual basis for CLTs stems from the distinction between property and trusterty. According to this theory, property consists of those things that man creates via his own efforts, while trusterty includes resources like land, the atmosphere, oceans, lakes, and rivers, etc., which came into existence without human intervention. If trusterty is to be held at all, it must be held in public, not private, trust. Advocating community control over such resources, proponents propose the formation of regional trusts to act as stewards, or trustees of land. CLTs do not seek to prevent development altogether, but encourage development which demonstrates how to meet both the economic and social needs of a larger community. The CLT movement seeks land reform as its ultimate goal, but in a noncompulsory way.

Land trust proponents do not advocate government intervention to nationalize land, but prefer to acquire it through gift and purchase. Trusted land is not given outright. It is leased so that the larger community can maintain some control over how it is developed. Land trusts typically contract long-term leases with users to guarantee their rights and security. Often, these leases are automatically renewable and inheritable, and can be terminated only should the lessee vacate the land or violate the agreement.

The idea of diverting land from the open and free marketplace to conserve its resources is not new. Conservation trusts, such as the Nature Conservancy and the Trust for Public Land, have had significant success in protecting some wilderness and natural areas, and tracts of particular ecological importance. A number of cities are currently operating successfully across America, and include such organizations as:

i) New Communities, Incorporated—Lee County, Georgia: Operates a 5,735-acre cooperative farm providing income for 16 families. All of New Communities' 2,000 acres of tillable land are now under cultivation producing vegetables, soybeans, grapes, corn, watermelons, pecans, peanuts, pork and beef, or are in pasture. The remainder is covered with forest and dotted with cypress swamps.

ii) Earth Bridge Land Trust—Vermont: Thirty-five people share 14 leaseholds on five sites in four different towns. Earth Bridge sponsors community gardens and participates in a farmer's market and reports eight new housing starts for trust members.

iii) Samely Community Services Organization—Maine: Operates a 36-acre subsistence farm and a 33-acre model rural subdivision in which four, one- to two-acre homesites are leased and the remaining 20 acres are woodlot or commonly held gardening land leased collectively by the resident families. Two local banks have agreed to consider the leaseholds as sufficient equity for issuing conventional home mortgage loans.

iv) Trust for Public Land (TPL)—California: Although most American trusts are concerned with rural, agricultural land, there is one group which addresses itself solely to urban land issues, the National Urban Land Program of the Trust for public Land. Inner-city vacant lots are the focus of TPL's urban land program.

> In January 1976, TPL organized the Oakland Land Project to acquire unused lots and bring them under community control through neighborhood land trusts. In portions of east Oakland, TPL found 941 vacant lots comprising 250 acres of potentially useful land. Trust workers contacted the owners of the more desirable ones and asked for land donations. In its first year, the project was offered 30 lots free of charge. The gifts netted their donors substantial tax benefits and relief from property taxes.
>
> Before any parcel was accepted, the project staff determined whether the lot had any potential for community use and if its neighbors had interest in taking responsibility for it. Then the trust helped those interested form a committee to plan and implement whatever project they chose. The TPL workers helped physically and financially with foundation grants to get the project going. The neighborhood committees are encouraged to incorporate as autonomous land trust organizations which take title to the donated lots.
>
> So far, eight neighborhood land trusts have been incorporated in Oakland, each controlling three to eight parcels. Most of the lots have been developed as community gardens, a number have become parks, and others have been cleared and planted as open space with community uses yet to be determined.
>
> Following the successes in Oakland, TPL has initiated similar projects in south Florida, Newark, New Jersey, and New York City's south Bronx and lower eastside neighborhoods.

Others include the Northern California Land Trust, Western Virginia's Wartrout Trust, and Oregon's Women's Land Trust, and were organized to provide land access to traditionally have not landless groups; women, sharecroppers, and migrant farm workers.

If there are common themes to these American community land trusts, they are a love of the land, the feeling that too much of it is controlled by too few, a desire to take part in decisions about land use, and a resistence to the idea that the government is going to do something about the diminishing amount of productive land.

The community land trust movement is attempting what it considers to be land reform. Still in its infancy, and with only a small amount of land now held in trust, the movement has yet to have a profound effect on land tenure in this country. What these first community trusts have demonstrated is that the land trust idea lends itself to a broad range of social and economic applications and can be of help to those wanting to earn a livelihood from the land, but who lack the resources to do so.

The non-conventional devices do not attempt to circumvent or replace any existing agencies or duties, but can provide an additional input that optimizes the democratic process. It is obvious that current mechanisms for implementing the comprehensive plan are limited in their ability to accomplish the desired end. A more responsive means that relies on people resources is warranted and valid.