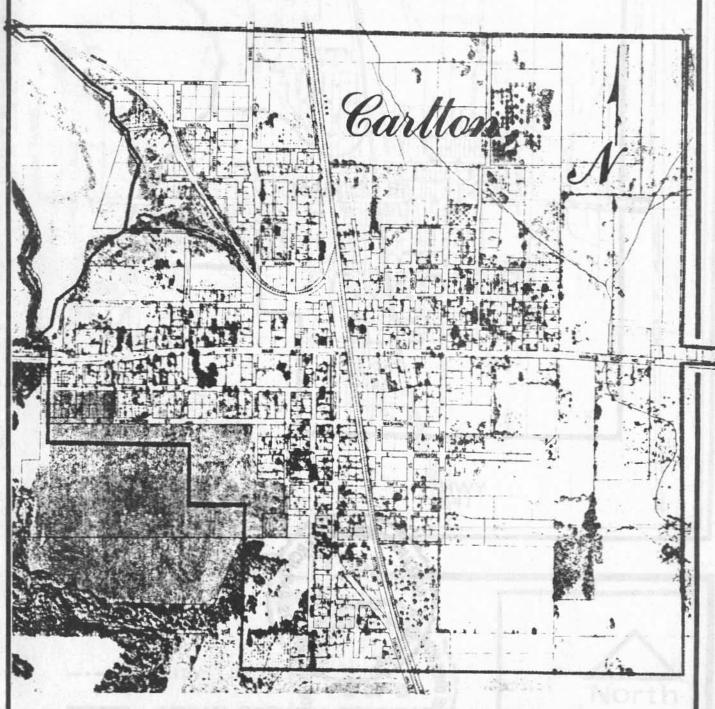
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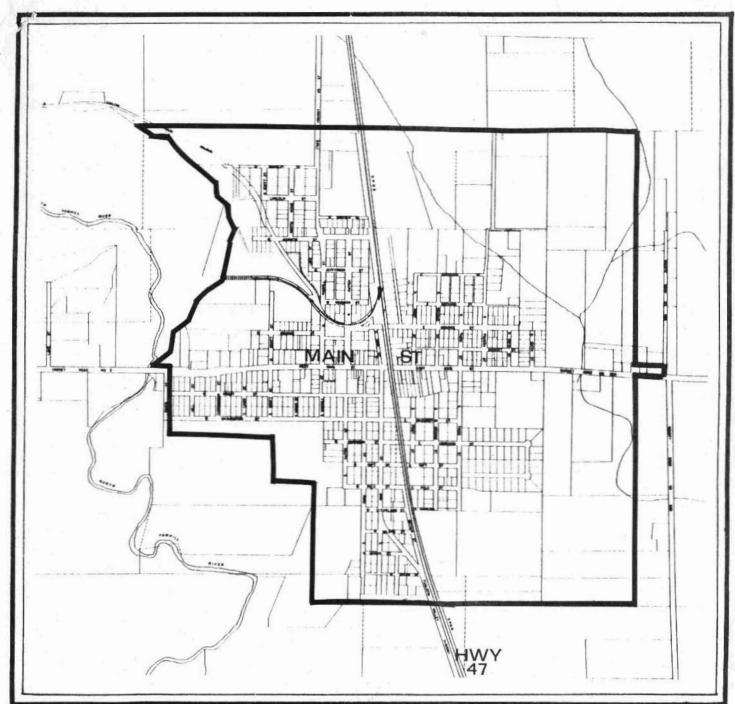
PLAINNING ATLAS

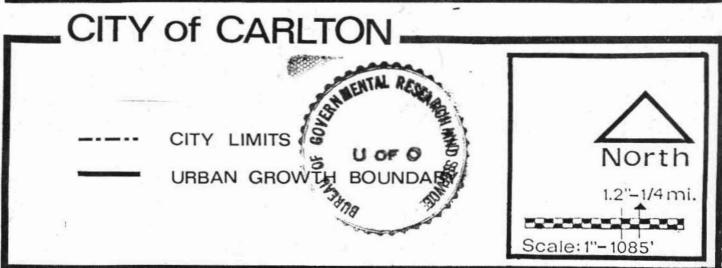


A BACKGROUND DOCUMENT FOR THE CARLTON COMPREHENSIVE LAND USE PLAN

MAY: 1979







INTRODUCTION

The material in this Planning Atlas is a synthesis of the information gathered and discussed during the development of the Carlton Comprehensive Land Use Plan. The goals and policies derived from this material are found in the companion document, Comprehensive Land Use Plan: City of Carlton.

Arranged to show how the Statewide land use goals were considered during development of Carlton's Plan, this material is intended to provide the factual base for those goals and policies upon which the Community decided. It is hoped that the Atlas also will serve as the base for Plan update and revision in the future.

Compilation of Atlas material was done by the Yamhill County Planning Staff, with the willing help of the Carlton City Council, Carlton Planning Commission, Cartlon Citizen Advisory Committee, and numerous State agency representatives, local utility representatives and knowledgeable persons. County staff persons who worked on this atlas include: Ron Bunch, Rich Faith, Mike Brandt, Maggie Collins, Roberta Young, Blaise Edmonds, Gene Williamson, and Tom Cunningham.

The preparation of this document was financed in part through a comprehensive planning grant from the Department of Housing and Urban Development under the provisions of Section 701 of the Housing Act of 1954, as amended. May, 1979, Yamhill County Planning Department.

CITIZEN INVOLVEMENT

Carlton has an adopted Citizen Involvement Program to ensure that the citizens of the City have an opportunity to be involved in all phases of the planning process. With the approval of LCDC, the City has designated its Planning Commission as the Committee for Citizen Involvement (CCI).

The ultimate purpose of the Citizen Involvement Program is to establish effective communication and involvement between governing officials and the citizens of the Community. It is intended specifically to promote awareness of this opportunity and to provide channels of communication so that the public may express their views to appointed and elected officials. It also provides means whereby citizens are guaranteed an open response to those views.

Citizen Involvement Activities

As the designated CCI, the Planning Commission has had the major responsibility for the overall development of the Comprehensive Plan and for the implementation of a citizen involvement program.

To make sure citizens would be involved in the plan development from the outset, the Planning Commission established a Citizen Advisory Committee (CAC) in February of 1978. This group has met regularly with the Planning Commission members, and together these two bodies supplied the direction for plan development.

At its regular meetings, all of which were open to the public, the Planning Commission and CAC reviewed and discussed background information on the numerous topic items which make up the Comprehensive Plan. Several City Council members also were regular attendees of these meetings. The Planning Commission examined specific issues concerning the plan and future growth needs. On the basis of these discussions, the Planning Commission formulated draft goal and policy statements for consideration by the general public and the City Council. A public meeting was held to give all citizens the opportunity to voice their concerns about these statements.

Major methods of communication used by the CCI to solicit widespread citizen involvement in the planning process have been questionaires; news releases and meeting notices in local newspapers; person-to-person contact; and door-to-door distribution of informational material.

Through its citizen involvement program a cross-section of residents have been involved in the development of the plan during all phases of the planning process. This includes data gathering and review, formulating goals and policies, recommending ordinance changes, participating in devleopment, adoption and application of legislation to carry out the Comprehensive Plan and ordinances, and evaluating the final plan. Citizens expressing views during the planning process have received responses to their concerns from the policy makers, making the communication network a two-way street.

To enhance the citizen involvement program, the goals and policies of the proposed plan were distributed to all citizens for their review and comments. Copies of the final plan and supporting documents will be available to the public for review. The availability of the final plan and supporting documents at City Hall will serve as a means of educating and informing the local citizenry about planned future actions and policies by the City of Carlton. This will enable and provide for continued citizen involvement in the future.

Carlton's adopted Citizen Involvement Program is included in the Plan text.

AGRICULTURAL LANDS

Agriculture is widely practiced in the Carlton planning area. Approximately 237 acres, 43 percent of the City's land area, are devoted to agricultural uses. All 237 acres are SCS Agricultural Capability Class II or III soils. These numerals indicate progressively greater limitations and narrower choices for farm use.

Farm crops grown in the planning area range from grains and seed grasses to fruits and nuts. Grazing lands also make up a significant share of the agricultural activity in the area.

Soils

Through weathering and other processes that act on parent material, soil is formed, thereby providing man, animals and plants with life support requirements. The characteristics of the soil depend upon the parent material, climate, plants, animals, and time. Because many variables effect soil formation, soil types are numerous. Different soil types are, of course, suited for different uses. One soil may be highly suited for agriculture but, because of certain properties, it may be totally unsuitable as a building site. A soil may be flood-prone or susceptible to landslides, conditions that can be very costly or even impossible to overcome for building purposes, while posing only slight problems for agricultural uses. By determining the various properties of each soil, it is possible to determine for which use(s) each soil is best suited.

Definitions Agricultural Land Capability

Class II soils have moderate limitations that restrict their use.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class VI soils have very severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.

There are no Class I, IV or V soils present in the Carlton area.

Building Site Limitations

The ratings and limitations are for houses and other buildings that are not more than three stories high. The kind of sewage system is not considered in the evaluation of sites for residences.

Soils that have slight limitations for use as building sites for residences have slopes of less than 12 percent,

are well drained or moderately well drained, and are not subject to flooding. Hard rock is at a depth of more than 40 inches.

Soils that have moderate limitations for this use are somewhat poorly drained and are not subject to flooding. They have a seasonal high water table, fair stability, or moderate shrink-swell potential in the subsoil. They have slopes of 12 to 20 percent. Moderately rated soils have limitations that normally can be overcome with planning, careful design, and good management.

Soils that have severe limitations for this use are poorly drained or are subject to flooding. They have poor stability, high shrink-swell potential, low shear strength, or high slide hazard. They have slopes of more than 20 percent. A severe rating indicates that the particular use of the soil is doubtful and careful planning and above average design and management is required to overcome the soil limitations.

There are seven soil types in the Carlton planning area. The important properties and limitations of each soil type are listed in $\frac{\text{Table 1}}{\text{basis of soil characteristics}}$ to serve as a guide for determining building suitability on the basis of soil characteristics.

About 98% of the Carlton planning area is in Class II and III soils which are considered to be potentially suitable land for agricultural purposes. These lands are generally favorable for building sites, as is evidenced by the existing developments on these soils. The agricultural lands have been determined to be necessary for the future urbanization of the City to the year 2000. Until such times as these lands are needed, agriculture could serve as an interim land use within the urban growth boundary.

Some of these soils have certain limitations for residential development; as is noted above. Applicants for building permits within areas rated as moderate or severe should be directed to the Soil Conservation Service of Yamhill County for additional information regarding soil management and land use.

CARLTON SOIL FACT SHEET

TABLE 1	0.8	SOIL FACT SHEET			
So'l Name	Agricultural Land Capability Class	Building Site	Limiting Soil Characteristics	Percent of Carlton UGB Area	Existing Land Use
Woodburn Silt Loam WuB	MIT	slight	попе	245	Urban Use(60%) Agricultural & Vacant (40%)
Woodburn Silt Loam	IIIe	moderate	s Lope s	ç	Residential(20%) Agricultural & Vacant (80%)
apeto Silty Clay Loam	I + K	severe	rish water table:		Urban Uses(10°.) Agricultural 4 Vacant (90°a)
Amity Silt Loam,	IIs	moderate	seasonal high water table	table 37	Urban Uses(20%) Agricultural & Vacant (80%)
Chehalis Silty Clay Loam Ck	9-4 19-1 2]	severe	flood hazard	71	Agricultural & Vacant
Terrace Escarpments	VI.e	severe	high slide hazard slope of 20-40 percent	DC 27	Vacant
Woodburn 511t Loam WuC	I H ⊕	slight	none	Ħ	Agriculture
l					

Sources: Soil Survey of Yamhill Area, Oregon: U.S. Department of Agriculture, Soil Conservation Service, January, 1974.
Yamhill County Planning Department.

FOREST LANDS

There are no forest lands in the City of Carlton or its immediate environs. There are a few large clusters of fir and oak trees scattered around the planning area. Trees and brush line the Yamhill River which runs along the western edge of the City.

OPEN SPACES, SCENIC AND HISTORIC AREAS, AND NATURAL RESOURCES

Open Spaces

There are areas within the City of Carlton which are desirable to preserve as open spaces. The most notable of these are the agricultural and undeveloped lands surrounding the urban core. However, it should be noted that as a rural community, Carlton is surrounded by scenic farm land and open spaces which lend an overall pastoral setting to the City.

Two small creeks run through the northeast section of the City. These merge and flow out of the southeast corner of the City. The land adjacent to these creeks is primarily used for agriculture, open and wooded space. These areas provide ideal open space settings.

An area that is particularly suited for open space use is the vacant lands in the northwest section of the City. This sloping area once overlooked Carlton Lake which also served as a wildlife refuge. The lake was drained in 1972, but the prospect of it being re-established makes this lakeside area a potential site for park development.

Other existing uses which provide open space in Carlton include school grounds, vacant lots, and the City Park. Scenic views are offered by the number of historic structures in the Community and by the Coast Range mountains to the west of the City

Mineral and Aggregate Resources

An inventory of mineral and aggregate resources for Yamhill County is scheduled to be completed in 1979 by the Department of Geology and Mineral Industries. Until this study is done there is little information as to potential sources and sites. There is no existing quarrying activity in the Carlton planning area at this time.

Energy Resources

The Carlton planning area has no identified reserves of fossil fuels such as petroleum, coal, or natural gas. Nor does it have sufficient water resources for hydroelectric generation.

With respect to energy use as a localized natural resource, there is little data available to identify the importance of local energy resources within the planning area.

Solar energy is a feasible energy source in this area and is presently utilized in other parts of the County. The use of solar energy is growing rapidly, and within the near future it could be fairly common in the planning area.

The topography of some parts of the City lends itself very well to solar energy use. The area from W. Grant Street south to the city limits falls

a total of 60 feet in a linear distance of 500 feet, or a south slope of about 12%. This area would be ideal for solar structures.

The area along the southwestern boundary of the City also has a slope of 12% or greater. Part of this slope extends to the west and part to the south. This area also offers ideal solar access.

The rest of Carlton is also relatively well suited to solar structures. There are no steep north slopes which could cause excessive shadow patterns. The basic block pattern of the City is on a north-south grid so that any street running east-west should have good solar access.

Wind power, like solar, is a potential energy source in the County. However, this source of energy is very site specific and no data has been collected regarding its direct application in Carlton.

Woodburning for heating purposes is the most common form of localized energy presently being used.

Source: Yamhill County Energy Office

Fish and Wildlife Resources

Fish habitats in the Carlton Planning Area are the North Yamhill River and Hawn Creek. The North Yamhill River is a large perennial stream with many long, deep pools interspersed with gravel bars. Hawn Creek often becomes intermittent along certain reaches by late summer. It is typically mud-bottom with limited areas of gravel for trout spawning. Channel alteration has occurred in the streams, resulting in a reduction in fish habitat.

Game fish utilizing the North Yamhill River include: coho salmon, winter steelhead trout, cutthroat trout, and rainbow trout. Because of low summer flows in the Carlton vicinity, the North Yamhill is primarily a migration route for these species. Small population of cutthroat may remain in this stretch of the river through the spring and early summer months. A few hatchery rainbow drift down to the Carlton area from releases made several miles upstream.

A small fishery occurs on the North Yamhill at Carlton for winter steelhead. Trout angling on the river takes place primarily in the spring.

Cutthroat trout from the North Yamhill River move into Hawn Creek during the fall and winter months. Small populations of cutthroat will remain in the stream throughout the year wherever sufficient flow is maintained.

Nongame species found in Hawn Creek include: dace, sculpin, stickleback and redside shiner. All of these species are also found in the North Yamhill River. In addition, carp, longscale sucker, northern squawfish, and Pacific lamprey inhabit the North Yamhill near Carlton.

Wildlife in the planning area consists primarily of small animals such as opposum, rabbits and muskrats. These generally inhabit the riparian edge of the river and creek but can also be found in areas where sufficient vegetative cover exists.

Numerous small birds and several gamebirds, such as pheasant, quail and Hungarian partridge inhabit the planning area. These are most commonly found in open space areas which offer some protective vegetation.

No rare or endangered fish or wildlife species have been identified as living within the Carlton planning area at this time.

Source: Oregon Department of Fish and Wildlife, 1978.

Water Resources

The City of Carlton, located on the North Fork of the Yamhill River, is in the north-central region of Yamhill County. Bordered on the east by the Red Hills of Dundee and on the west by the Coast Range, Carlton lies in the level-to-rolling valley floor between. This "valley floor" provides a major drainage basin for several tributaries of the North Yamhill River. Among these, Panther Creek is the most important to Carlton. Approximately eight miles west of Carlton on Panther Creek, the City maintains a 23 million gallon (MG) impoundment reservoir with a design criteria to meet expected population demands to the year 2000. This is fortunate, as a survey of the surrounding geologic formations reveals that there are no major water bearing aquifers upon which the City could rely for supply. Well logs of the area around Carlton indicate that yields of 5 to 15 gallons per minute (gpm) are the average with a few yielding as high as 35 gpm. The predominant geologic formations of this area are:

Young Alluvium - found mostly along waterways, consisting primarily of alternating layers of sand and gravel. It is generally too thin and of too low permeability to yield large quantities of wells.

Willamette Silts - permeability generally quite low, resulting in slow transition to wells and springs. It may sustain domestic use but is too slow to sustain irrigation.

Yamhill Formation - a complicated mix of shale and basalts of volcanic origins. It has low permeability and low yields.

The North Yamhill River forms Carlton's western boundary and provides water recreational opportunities throughout the year. Canoeing, fishing, and swimming are a few of the activities local residents reportedly enjoy. River flows fluctuate markedly through the year with summer flows averaging 3.8 cubic feet per second (cfs). A record high of 9,350 cfs was posted during the flood of 1955. The Department of Fish and Wildlife has recommended that a minimum river flow of 10 cfs be maintained in the

North Yamhill River to ensure protection of aquatic life. This flow is rarely achieved, however, as irrigation rights of record above Carlton amount to approximately 39.8 cfs.

Carlton seems to be well situated in terms of water resources. Although the area lacks the necessary geologic formations to produce large groundwater supplies, surface water is plentiful and has been developed wisely. The impoundment on Panther Creek should provide an adequate municipal supply to the year 2000. The close proximity of the North Yamhill River provides excellent aquatic recreational opportunities. Care should be taken in all future planning to ensure the continued development and protection of the valuable assets.

Source: Carlton Water Resources Report, Gene Williamson, Yamhill County Watermaster, 1978.

Historic and Cultural Resources

Carlton had its earliest beginnings in 1844 when Peter Smith and his family settled on their land claim where the town of Carlton is now located. Over time the Smith farm became the site of the Methodist Episcopal Church and the Smith Church School, the first in what is now Carlton.

In 1872 the Oregon Central Railroad completed construction of a rail line from Portland to St. Joe through this area. Mr. Wilson Carl, a resident of the area, persuaded the railroad company to make a flag stop in the little settlement. By about 1874 a station was built and the settlement became a regular train stop. Because of his efforts, the stop was at first designated as Carl's Town and later shortened to Carlton. Thus, it was through Mr. Wilson Carl's efforts that the town of Carlton was born.

Once the rail stop had been established, the little village of Carlton began to experience steady growth. Its first post office and general store were set up in 1874. In 1875 Carlton School District No. 11 was formed and the first school was held in the Smith Church school building until the district could build its own school house. The district school was rebuilt or enlarged several times until construction of the present school in the 1950's.

The town of Carlton formally incorporated in 1899. A mayor and city council were elected at that time. This was followed by enactment of ordinances for the protection of the citizens and the municipal concern for the improvement of city roads.

In 1904 a local businessman became interested in the lumber business and built a dam across the North Yamhill River to form the Carlton Lake for log storage. The first mill was built in 1906. To further these logging operations, the Carlton and Coast railroad was constructed to bring logs from the mountains to the mill. The ensuing expansion of the local logging industry brought prosperity to the City.

For many years the state of Carlton's economy was to be dictated by the logging and mill industries. This period saw more businesses open in the area and two large hotels built. Carlton's first City Hall was built in 1913. Following destruction of the local saw mill by fire in 1914, the City's business community experienced a period of recession.

The city of Carlton has continued to experience periods of "boom" and "bust" since the early part of this century. These cycles have usually been affected by activities and events connected with the logging industry. For example, major forest fires in 1933 and 1939 threatened to severely cripple the City's principle lumber operations. Later fires destroyed mills and Carlton Manufacturing Company. These businesses were eventually rebuilt and the City has experienced continued growth and prosperity to the present.

Reminders of Carlton's historic past are still evident in the Community today. In the Statewide Inventory of Historic Sites and Buildings published by the Oregon State Historic Preservation Office, the following structures are included on the register:

Frederick Bunn House, Rt. 1, Box 18 (1861) Charles E. Ladd House, (1912) Log Cabin Tavern, Main St. & Pine St. (1904)

Source: Old Yamhill: The Early History of its Towns and Cities,
Yamhill County Historical Society, 1976.

AIR, WATER AND LAND RESOURCES QUALITY

Climate

Carlton is located in the north central portion of Yamhill County, approximately eight miles northwest of McMinnville.

Because of a shielding effect from the Coast Range to the west, the weather characteristics are those of a modified Marine West Coast climate, with mild, wet winters and generally dry summers.

Precipitation averages between 40-45 inches a year with less than 2% in the form of sleet or snow. Approximately three-quarters of the precipitation falls from November through March. Dry periods of 60 to 90 days in the summer with no measurable precipitation occur frequently.

The monthly temperature mean is 52.1°F. Daily temperatures in January range from 31° to 44°F, and in July they range from 48° to 83°F. Humidity values are not available locally; however for Portland, January's average is 81% and July's is 66%. There is an average growing season of 170 days based on the last occurance in spring and first occurance in fall of a temperature of 32°.

Sources: U.S. Department of Commerce, Weather Bureau
Yamhill County Planning Department
Comprehensive County-Wide Sewer and Water Planning &
Engineering Study, Yamhill Co., OR., Boatwright Engineering,
Inc., 2613 12th St., S.E., Salem, OR.

Geology

The Carlton planning area is predominantly characterized by alluvial deposits of Willamette Silt. This formation includes bedded silt and fine sand with occasional layers of clay, and lenses of pebbly fine to medium sand with locally scattered granite and quartzite cobbles. The formation is approximately 50 feet thick in the center of the valleys and thins toward the valley edges. Generally the formation has a low permeability resulting in a slow transition to wells and springs.

Deposits of a more recent young alluvium are also present in the Carlton area. This includes silt, sand, clay and peat of present floodplains. The average thickness is 20 to 30 feet. The young alluvium formation contains poorly drained swampy areas having a permanently high water table. Young alluvium consists primarily of alternating layers of sand and gravel blanketed by flood plain silts.

Finally, a narrow band of Yamhill formation deposits stretches along the western section of the City. This formation consists of a complicated mix of shale and basalts of volcanic origins. It displays generally low permeability characteristics.

Topography

The terrain within the Carlton planning area is generally flat. Elevations range from 120 feet along the North Yamhill River to 200 feet in the center of the City. Slopes of 0-5 percent occur over about three-fourths of the area. 5-15 percent slopes are found over approximately one-fifth of the area. The remainder of the City has slopes greater than 15 percent. These are predominantly found along the western fringe of the City and along Hawn Creek.

Air and Water Quality

Air quality standards have been adopted by the Federal and State
Government to protect the health and public welfare from known adverse
effects of air pollution. There are two divisions within the standards,
primary and secondary. The primary standards are to protect the public
health and the secondary standards are to protect the public from effects
such as visability reduction, soiling, nuisance and other forms of damage. McMinnville has the nearest air monitoring station and its air
quality is well within the Federal and State standards. It can be
safely assumed that the air quality of Carlton is also will within Federal
and State standards.

Due to topographic and meteorological conditions, this area, as well as the entire Willamette Valley, experiences temperature inversions. Basically inversions prevent the rising of air currents, thus trapping them near the ground; and by preventing airborne materials from escaping, causes air pollution. Without careful observation and monitoring of air pollutant sources in this area, there is a potential for serious short-term pollutant problems to occur.

During certain periods of the year local agricultural activity, particularly open field burning and tilling, generates suspended particulate matter, which, for a period of time can reduce visability and be quite irritating. It also can be hazardous to people suffering from respiratory illnesses. Overall, though, the local agricultural pollutant contribution is rather insignificant.

Industrial activity has the potential of creating localized air pollution problems. However, air pollution problems due to industrial activity in the Carlton area have been historically low. One activity in the planning area that monitors source emissions for the Department of Environmental Quality is Madsen Grain Company, located within the City.

Water quality within the planning area is generally good. Water bodies exhibit no major pollution problems; however, water quality is occasionally impaired by soil erosion, urban storm runoff, and seepage of chemical fertilizers and pesticides from nearby agricultural lands. Water quality is supervised by the Oregon Department of Environmental Quality.

Source: Oregon Department of Environmental Quality, 1978.

NATURAL HAZARDS

The only identifiable natural hazards found in the Yamhill area are due to flooding, soil hazards, and steep slopes. Approximately 11 percent of the planning area is subject to some form of natural hazard. Although some of these areas are presently developed, agriculture and open space are the primary uses of the land. All of this land area has severe building limitations and should be extensively evaluated to adequately plan for future growth.

Flood Plains

Flood plains are those areas which are dry during some seasons of the year but may be covered with water when heavy rain, melting snow, or other conditions cause adjacent rivers, streams, or lakes to overflow their banks. The determination of the extent of this overflow is the first consideration in planning for the use and control of such areas. This overflow area, or flood hazard area of Carlton has been mapped for the National Flood Insurance Administration. By 1980 this map should be refined to include precise elevations and flood insurance rates. Until that time the special flood hazard area map prepared by the Yamhill County Planning Department should serve as the official flood hazard map for the Carlton area.

The flood hazard area within Carlton's city limits occupies only a negligible portion of the land. Most of this is in agricultural or open space use at the present time. Any use of flood hazard area should be carefully evaluated before future development is allowed to occur.

Soil Hazards

Of the seven soil types present within the planning area, two soils, occupying approximately 75 percent of the land, are in the category of "slight building limitations." These soils present little or no problems for urban development. Of the remaining five soil types, two soils, occupying about 14 percent of the land are in the "moderate" category and three soils, occupying 11 percent of the land, are in the "severe" category.

Soil characteristics which severely limit building on approximately 11 percent of the Carlton land area include flooding hazard, seasonal high water table, poor drainage, and excessive slopes.

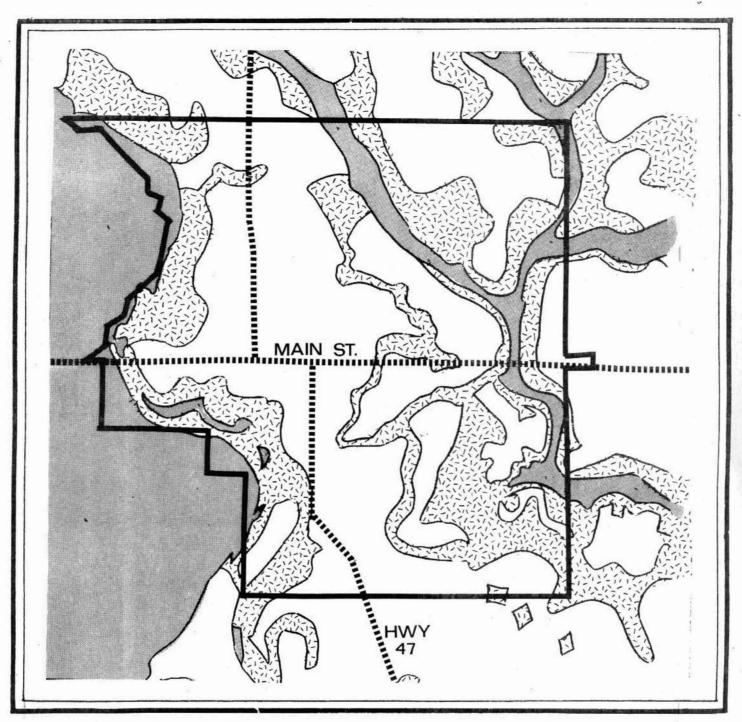
Steep Slopes

The steepest slopes in Carlton are found along the western city limits line near the North Yamhill River and along Hawn Creek. Slopes in excess of 20 percent can be found in both of these areas. Steep slopes, while not necessarily a hazard themselves, are a factor to be considered when combined with other hazards. Soils which have been identified as being slide prone present a higher risk of sliding as the degree or percentage of a slope increase.

Building on steep slopes has implications not only in terms of public safety but of economics as well. Design and construction costs must be taken into account when building on steep slopes. As the percentage of slope increases there is an increase in the construction cost of the structure.

Steep slopes also exhibit soil structure and structural geology problems. There exists a potential for roadway and structure collapse and land-sliding to occur when soil and geologic structure have been modified and weakened by development.

Source: Yamhill County Planning Department, 1978.



CITY of CARLTON -BUILDING LIMITATIONS

SEVERE LIMITATIONS

Flood hazard

Slopes above 20%

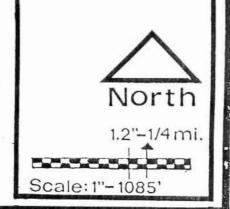
Soils with qualities: high water table; severe shrink/ swell; poor drainage; floor or slide hazard (or a combination of the above)

MODERATE LIMITATIONS

5 to 20% slopes Moderate soils



SLIGHT LIMITATIONS



RECREATION

City Parks

Carlton currently has two city parks. The smaller of these, located in the City center, is 1.5 acres and contains picnic facilities, playground equipment, a tennis court, and the city pool with bathhouse. The pool is open daily during the summer months. A larger 15 acre park (Wenneberg Park) is situated outside the city limits along the banks of the North Yamhill River. It offers river access for swimming and fishing although these activities are rarely practiced. The park contains picnic tables, a softball field and restrooms. Athletic fields around the elementary school are also available for use by the general public.

Other Nearby Parks

There are no county or state parks in the immediate vicinity of Carlton. Haskins Creek Park (1-2 acres) which is maintained by the McMinnville Water and Light Co., is located approximately 8 miles west of the City.

Standards of Need

According to standards released by the Parks and Recreation Branch of the Oregon Department of Transportation, a city-wide park should be $2\frac{1}{2}$ acres per 1,000 people. With an estimated 1977 population of 1,320 Carlton's 15.8 acres of park land easily satisfies this standard. In addition, there is sufficient park land to meet the needs of the City's projected population to the year 2000.

Sources of Funding

Should the City desire to acquire and develop additional park and recreational facilities there are primarily three funding alternatives available to it. The City can either: (1) seek outside agency funding; (2) seek local methods of funding though levies, taxes or other measures; or (3) require additional park lands in future subdivisions.

1. Outside Agency Funding

Yamhill County annually receives Bureau of Outdoor Recreation (B.O.R.) funds to be used for park and recreation projects. These funds are available to local municipalities on a competitive basis. The City of Carlton also has available to it the County's share of state gas tax monies to be used for the construction and maintenance of bicycle paths. This could also serve as a worthwhile recreational project for the City.

Local Measures

Given that the City has sufficient park lands to meet the needs of its present and future population, special tax levies for the acquisition of additional park and/or recreational facilities would not seem to be a likely funding source.

3. Subdivision Requirements

The City may find its best opportunity for setting aside additional park space through its subdivision ordinance.

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Source: Yamhill County Planning Department, 1978.

ECONOMY OF THE CITY

Like most of Yamhill County's small cities, Carlton has served chiefly as a retail and service center supplying goods and services for those living and working in the surrounding area. Agriculture and the lumber industry have always dominated the economy of the area. At one time Carlton itself was the site of several sawmills. Today, these activities are no longer present in the City and the local economy is largely concentrated in retail trade and services.

A recent inventory of the business establishments in the City revealed that nearly half are in the retail sector while about one-third are in the service sector. Other industrial sectors (According to Standard Industrial Classification codes) represented by business establishments are agriculture, manufacturing, transportation-communication, wholesale trade, and finance-insurance-real estate.

Portland Glove Company is the sole manufacuring firm in Carlton but it is very important to the local economy. With 75 persons working for the firm, it is the largest employer in the City. Carlton Elementary School with 32 workers and Madsen Grain Supply with 20 workers are the next major employers in the City. Altogether, the manufacturing and service sectors employ nearly 60 percent of the City's total work force. Figure 1 presents a profile of the City's economic structure through a breakdown of its business establishments and work force.

Half of Carlton's work force is employed in basic industries—that is, in local businesses which produce goods or services for export out of the immediate area. Portland Glove Co. is the principal firm in the basic sector. Its products are marketed throughout the Western United States but chiefly along the West Coast. Although it employs only four persons, Carlton Rose Nursery markets its product in all parts of the United States and Canada. Madsen Grain Supply and Carlton Truck Shop round out the list of basic industries in the local economy. The service area of these businesses is generally limited to the Yamhill County region.

Information on occupational characteristics of the City's labor force and unemployment figures are unavailable for Carlton. It is reasonable to assume, however, that the City closely parallels County trends in this regard. Median family income for the City of Carlton can be derived from a housing survey conducted by the Mid-Willamette Valley COG in 1976. The information from the survey revealed that the City's median family income was \$10,428. This figure ranked well below both the County and State medians which were \$12,872 and \$13,750 respectively. Yet, compared to other small cities in Yamhill County, Carlton's median family income ranked among the highest.

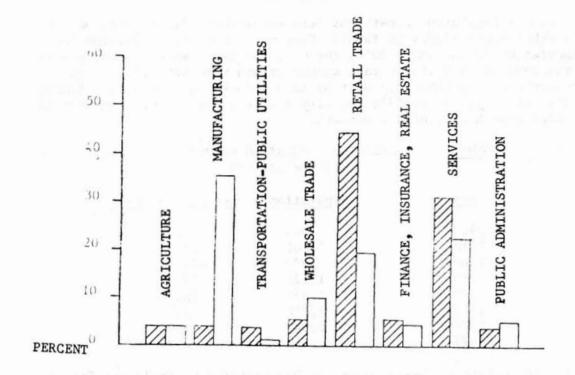
The COG survey also revealed that only 35 percent of the community's principal wage earners work in the City. About 23 percent work in nearby McMinnville while 41 percent are employed in other areas.

Public opinion concerning Carlton's economy can be obtained from a community survey administered in 1977. The survey produced the following responses:

- 53% of respondents thought heavy industry should be discouraged in the City.
- 88% felt light industries should be encouraged.
- 51% believed it should be a residential community for people working elswhere.
- 75% thought Carlton should be a community for people who work there.
- 64% of respondents did not feel that shopping and residential needs in the Community are adequately being met.

Source: Economic Profiles of Yamhill County's Small Cities,
Yamhill County Planning Department, 1978.

Figure 1. Local Economic Structure
CARLTON



Business Establishments
Work Force

Half of Carlton's work force is in the basic sector of its economy. Portland Glove Co. Is the principal firm in this sector. Its products are marketed throughout the Western United States but chiefly along the West Coast. Although employing only four persons, Carlton Rose Nursery markets its product in all parts of the United States and Canada. Madsen Grain Co. and Carlton Truck Shop round out the list of basic industries in the local economy. The service area of these business is generally limited to the Yamhill County region.

Source: Economic Profiles of Yamhill County's Small Cities,
Yamhill County Planning Department, 1978.

POPULATION AND HOUSING

Population

Carlton's population growth has been consistent with population trends in other small cities in Yamhill County. Except for a decline in papulation during the 1950's, the City has experienced steady growth. From 1960 to 1970 its average annual growth rate was 1.7 percent. However, during the early part of this decade the growth rate jumped substantially. Since 1970 the City has been experiencing an average annual growth rate of 3.1 percent.

Table 2	CITY OF CARLTON			
Year		Population	Percent Increase	10
1940		864		
1950		1,081	25.1	
1960	2	959	-11.3	
1970		1,126	17.4	
1974		1,290	14.6	
1975		1,320	2.3	
1976		1,340	1.5	
1977		1,370	2.2	

Source: Decennial Census Data and PSU Center for Population Research and Census, Population Estimates.

The population changes that have occurred over the years can mainly be attributed to net in-migration rather than natural increase. Although such statistics are not available for the City, County trends serve as a good indicator of Carlton's components of population change. These are shown in Table 3. It is assumed that in-migration will continue as the major contributor to future population growth in the County and the City of Cartlon.

Table 3 POPULATION COMPONENTS OF CHANGE Yamhill County - 1950-1977

	NET	NATURAL	INCREASE	M	IGRATION
	POPULATION CHANGE	NET INCREASE	PERCENT CHANGE	NET MIGRATION	PERCENT CHANGE
1950-1960	-1115	3745	11.2%	-4860	-14.5%
1960-1970	7840	1677	5.2%	6167	19.0%
1970-1977	6987	1877	4.7%	5110	12.7%

Source: Derived from Vital Statistics Data, Oregon Department of Human Resources.

Carlton is projected to experience continued population increases to the year 2000. Population projection figures prepared by the Yamhill County Planning Department for the County and its cities estimate there will be an additional 830 people living in Carlton by the year 2000. This represents a 60 percent increase over the present population of 1,370. Thus, the City can expect an average annual growth rate of 2.7 over the next 22 years.

Table	4	PROJECTED POPULATION
	_	CITY OF CARLTON

	Year	Population	Percent Increase
Existing	(1977)	1,370	-
	1980	1,690	23%
	1985	1,842	9%
	1990	1,963	7%
	1995	2,090	6%
	2000	2,200	5%

Carlton's projected rate of population growth is greater than that of the County and most of its cities. The County as a whole is expected to achieve a 55.3 percent population increase by the year 2000. The reason for Carlton's higher projected growth rate can be attributed to its close proximity to McMinnville which is expected to attract much of the County's future population.

Housing

A housing survey conducted in the fall of 1978 revealed that there are a total of 462 housing units in the City of Carlton. Of these, 369 are single-family dwelling units, 46 are mobile homes and 47 are multifamily units. Although the City's existing zoning ordinance does not permit mobile homes on single-family lots inside the City, seven such units do exist. The remaining 39 homes are located in the City's only mobile home park. Multi-family structures are of various types. These include the 16-unit Cartlon Apartments, six duplexes, two quads, and an assortment of converted single-family structures to multi-family use. The 1978 housing survey showed only 5 vacant dwellings among the City's housing stock. This yields a very low vacancy rate of 1.1 percent and indicates a severe limitation in housing choices among residents of the City.

Information concerning the availability of housing in Carlton can be obtained from a community survey which was conducted in early 1977. Regarding the choice of housing available to new residents, 71 percent of the respondents thought there was little or no choice. In determining the type of housing most needed in the Community, the following results were given:

Homes	to	buy under \$30,000	60%
Homes	to	buy over \$30,000	44%
Homes	to	rent	40%

Mobile Homes	upour bergin filito , worth in Held	38%
Apartments	projection flower pro-	33%
Duplexes	of your advocable and the first	26%
Townhouses		9%

Note: Figures depict multiple choices

Citizens were asked what their reaction would be in allowing mobile homes as a viable housing alternative. Only 17 percent responded that mobile homes and mobile home parks should be discrouraged. 78 percent felt that mobile home parks should be allowed in the City but only with high standards regarding parking, landscaping, sanitation and the like,

Housing Trends

Carlton's housing stock has increased by about 21 percent since 1970. As indicated in <u>Table 5</u>, the greatest change in housing types during this period has been in mobile homes. The proliferation of mobile home placements is due to the creation of the City's mobile home park in 1973. Although single-family dwelling units increased by 8 percent over 1970's number, this housing type now comprises about 10 percent less of the total housing stock. Multi-family units increased by one-fourth but make up about the same proportion of the City's housing stock as they did in 1970. The vacancy rate has shown a substantial decline in the past eight years, which reflects a much tighter housing market in the City than before.

Tab	le 5	HOUSING S	TOCK	GROWTH
	197	0		1770
Pull Augh E The The A Special Service S	No.	Percent of Total Housing Stock	No.	1010000 01 1001000 01
Single-Family		89.3	369	08 galmian 79.9
Multi-Family	38	9.9	47	23.7
Mobile Homes	3	0.8	46	9.9 1433.0
TOTAL	382	100.0	462	20.9
Vacant	14	and 11.43.7 dans	V 5	viae here: v1.1 -64.3

Derived from 1970 Census Data, 1st County Summary Tapes

In 1970, 72 percent of Carlton's housing stock was owner occupied, while 28 percent was rented. There is no evidence to indicate that this tenure split has changed significantly since that time. It is therefore assumed that the owner-renter split among the existing housing stock is the same as in 1970. Thus, 333 of Carlton's 462 housing units are assumed to be owner-occupied and the remaining 129 units rented. According to 1976 census data, among all County census divisions Carlton Census Division had the smallest proportion of renter households earning \$5,000 or less who pay 25 percent or more of their income on rent.

Windshell Survey, December, 1978.

Housing Age and Conditions

Housing age information is not available for the City of Carlton. However, 1970 census data for the Carlton Census Division shows almost 70 percent of all housing units in this area built prior to 1940 which gives this division the oldest housing stock in Yamhill County.

Other census data for the Carlton Census Division indicates that 9 percent of all occupied units had 1.01 or more persons per room which suggests overcrowding conditions. In addition, this census division ranked slightly better than average when heating and plumbing conditions are compared with those in the rest of the County. In 1970, substandard heating conditions existed in 20 percent of the units and substandard plumbing conditions were found in 2.8 percent of all housing units.

A more recent assessment of physical conditions of Carlton's housing stock was made through a general windshield survey technique. Four classification types were employed in rating the structures. The ratings used were as follows:

Excellent/Good - Includes new buildings or those that have been generally well maintained. The structure exhibits no defects or signs of deterioration.

Fair

- Includes buildings that have been kept in generally good condition but have one or more of the following defects visible:
- lack of paint
 - cracked windows
 - broken gutters or downspouts
 - small craks in siding or chimney
 - slight damage to porch or steps

Poor

- Includes an older building that has not been recently remodeled but which is economically rehabilitable. These buildings display the following intermediate defects:
 - loose, rotted or missing material in foundation
 - rotted window frames, sills
 - deep wear on door sill or stairs
 - missing material over small area of wall, roof
 - overall appearance of age and wear

Critcal

- Includes buildings that have deteriorated beyond economic repair. These display the following critical defects:
 - sagging walls, roof
 - holes, open cracks, missing material over a large area
 - extensive damage by storm, fire or flood
 - generally dilapidated conditions

The results of this survey are shown in $\underline{\text{Table }^6}$. The information indicates that 19 percent of the City's housing stock is substandard on the basis of physical conditions. Fourteen percent of these substandard structures would be economically suitable to rehabilitate. All other substandard structures have deteriorated beyond economic repair.

HOUSING CONDITIONS CITY OF CARLTON December, 1978

Rating	No. of Units	Percentage of Total
Excellent/Good	246	53%
Fair	128	28%
Poor to law mood a	se was jon63 roat are 1	
Inferior	g _u_i_e	s anote logue gro 5% rotavu

Housing Projection of another paragraphs

The number of additional housing units needed to accommodate Carlton's future population depends to a large extent upon the number of households that will exist. (The total number of households is equal to the number of occupied dwelling units.) To determine the number of households in the future, assumptions about the average future household size must be made.

The overriding assumption about future household size is that past trends will continue. Household size has been decreasing because of delayed marriages, accelerating divorces, lower birth rates and higher survival rates. In 1970, for example, the average household size in Yamhill County was 3.07 persons. By 1977 this figure had declined to 2.85 persons. The same trend has been occurring in the City of Carlton but to a lesser degree. The City's 1970 average household size was 3.05 persons but this figure only declined to 3.03 by 1977. A continued gradual decline in Carlton's average household size is assumed for the future.

In keeping with these trends it is reasonable to assume that the City will experience an average household size of 2.98 persons during the next 22 years. Based on this assumption and a population projection of 2,200, it is estimated that 278 additional dwelling units will be needed in Carlton by the year 2000. This is an average of 12 to 13 additional units annually. The amount of land necessary to accommodate such growth will vary depending on the housing mix and density of development that occurs.

One of the major concerns of the City should be to allow an adequate choice of housing for both its present and future residents. Special attention should be given the housing needs of the elderly, the low income and the handicapped. With the rapidly accelerating costs in the housing market, it is important to establish housing policies that will ensure that future housing needs will be met.

Source: Yamhill County Planning Department, 1978.

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PUBLIC FACILITIES AND SERVICES

Education

Educational services are provided by two separate school districts. Carlton Elementary School District (District #11) operates the City's only grade school. The school services an area encompassing approximately 45 square miles. Besides basic educational skills for grades one through eight, the elementary school also provides special instruction for the physically handicapped, reading disabled, and certain mentally diabled students within the district.

Enrollment for Carlton Elementary in September, 1978 was 314 students. This enrollment figure has not deviated substantially over the past ten years.

CARLTON ELEMENTARY STUDENT ENROLLMENT 1st Quarter Reports

Year	Enrollment
1968	281
1969	326
1970	317
1971	333
1972	338
1973	327
1974	314
1975	319
1976	311
1977	303
1978	314

Source: Carlton Elementary School Records

The school has 13 classrooms and a design capacity of between 350 and 400 students. Recent expansion has resulted in the construction of four new classrooms, additional library and cafeteria space, a resource room for special groups, an outdoor playshed, and new shower facilities. No future expansion is planned until the population indicates the need.

The Yamhill-Carlton School District (District #UH-1) is a special school district which operates Yamhill-Carlton Union High School. The school is located in the neighboring town of Yamhill. It currently has an enrollment of 428 students in grades 9-12. Approximately 40% of the students attending the school are from Carlton. Distribution among the four grades is as follows:

YAMHILL-CARLTON UNION HIGH SCHOOL ENROLLMENT

November, 1978

Grade Level	Warned St. Political and	Number of Students
9		110
10	The state of the s	112
11	the reason of the well-dust the	112
12		94
		428

Union High School has an estimated capacity of 500 students. It is not anticipated to reach this level for quite some time. The school employs 31 full-time teachers and 1 part-time instructor.

Two private Liberal Arts Colleges in the County offer opportunities for continuing higher education for Yamhill residents. These are Linfield College in McMinnville and George Fox College in Newberg. Chemeketa Community College, which is located in Salem, offers a variety of courses throughout the County. A few of these are held in Yamhill. There is a Chemeketa Community College district office in nearby McMinnville.

Sources: Carlton Elementary School, 1978.

Yamhill-Carlton Union High School, 1978.

Solid Waste Disposal

Solid waste disposal for Carlton is provided by City Sanitary Service of McMinnville. Refuse is picked up by truck and transported to the Whiteson landfill site six miles south of McMinnville. The landfill is County owned but operated by a private franchise. It is presently near capacity and a new site will be needed by 1981. Approximately 6 tons of refuse, generated from residential, commercial, industrial and school uses in the planning area are transported to the landfill site each week.

Solid waste management is a regional as well as local responsibility. Yamhill County is part of the Chemeketa Solid Waste Region. In 1978 a region plan was adopted by the Chemeketa Solid Waste Region but has not been adopted by any of the County's local governments. The plan addresses alternatives for regional disposal and recycling systems but has no implementation provisions.

Proposals presented within the Chemeketa Regional Solid Waste Program do not envision a dumping site in the Carlton vicinity. Present plans indicate that the City will continue to depend on commercial garbage haulers for their solid waste removal.

Recycling is becoming more widely practiced throughout the County. Recycling solid waste materials reduces the volume of material to be disposed of, and conserves energy and material resources. Materials generally recycled are glass, ferrous and non-ferrous materials, plastics

and paper. Paper products constitute the largest percentage of solid waste materials. At this time there are two recycling efforts in the County. City Sanitary Service is doing some recycling at the Whiteson landfill site. Cardboard, ferrous and non-ferrous materials are sorted from the incoming refuse. In approximately a year's time, City Sanitary Service hopes to have a separate recycling center and will offer County communities the option of setting up a recycling service with the disposal service.

Yamhill Valley Recycling Center is a non-profit recycling center operating under the Portland Recycling Team. The center opened in June of 1977. Glass, paper, aluminum, tin, motor oil, rare and scrap metals are recovered at the Center. All sorting is done manually and then transported to Portland for recycling or transferred to other destinations.

The Yamhill Valley Recycling Center has quite a substantial amount of support from County residents. In June 1977, 9 tons of material was sorted at the Center and at this time an average of 50 tons of material is being sorted monthly.

Sources: City Sanitary Service of McMinnville, 1978.
Yamhill Valley Recycling Center, 1978.
Chemeketa Region Solid Waste Study

Public Water System

The City of Carlton utilizes the water from Panther Creek for its domestic water supply. In 1970 the City constructed an earthfilled impoundment reservoir ten miles west of Carlton. This facility was designed to accommodate the year 2000 projected population and has a storage capacity of 23 million gallons during the dry weather months. A combination of ten and twelve inch steel and cast iron pipes are used to convey the impounded water to the City. Chlorination is the only treatment provided.

The water distribution system was originally constructed in 1913. It consists of ten-inch and smaller cast-iron pipe arranged as a grid. Improvements were made in 1945 and over 90 percent of the entire system remains in cast-iron pipe. There are a moderate number of dead-end pipes in the system, but these are being looped to adjacent pipe sections as mains are replaced or extended. System pressures average 70 pounds/sq. inch and are maintained by a single 390,000 gallon above-ground concrete reservoir west of the City. This facility is sized large enough to provide the recommended 375,000 gallons of fire flow, but cannot meet the combined fire reserve, emergency provision, and system peaking requirements as recommended in the design criteria.

There have been no significant problems with the water system since the construction of the Panther Creek dam. It is expected that the system should serve the Community capably to the year 2000 with certain minor improvements. The water suppoy system appears both ample and dependable and can provide enough water to adequately meet the water demands at the rates of use that are expected in the next several decades. However,

it will be necessary to undertake a series of improvements to gradually upgrade the distribution system. As funds permit, additional looping should be developed to improve the flow of water within the fire prone areas of the community and additional storage facilities installed to meet potential emergency needs.

Sources: Regional Water and Sewer Study, Phase 1: Inventory and Problem Identification, Mid Willamette Valley Council of Governments, Sept., 1973.

Comprehensive County-Wide Sewer and Water Planning and Engineering Study, Yamhill County, Oregon; Boatwright Engineering, Inc. and Bureau of Governmental Research and Service, 1968.

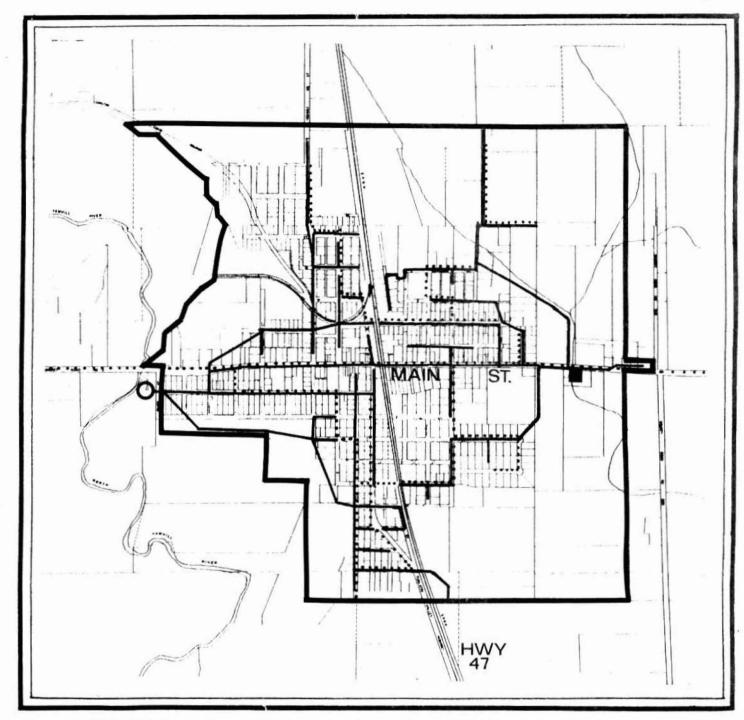
Public Sewer System

Carlton's sewer system was originally constructed in 1911 and has been enlarged several times since then. Approximately half of the existing piping was installed in 1928. The collection system consists of approximately 6.6 miles of 6, 8, 10, 12 and 16 - inch pipe. Except for a single pump station that serves the area east of the Southern Pacific Railroad tracks, the collection system operates entirely by gravity flow.

The Carlton sewage treatment facility was constructed in 1955. Located at the west end of Grant Street on the banks of the North Yamhill River the treatment plant provides secondary treatment with grit collection, primary clarification, a trickling filter, final clarification, sledge digestion and drying beds. The treatment facilities were designed to provide secondary treatment to a population of 1,500 with an average daily flow of 0.3 mgd. The treated effluent is discharged into the North Yamhill River.

The collection system contains serious deficiencies. The downtown and older residential districts are served by a combined sanitary and storm sewer system. The large volume of stormwater entering these sewers, together with severe inflow/infiltration problems, have caused a serious overloading of the treatment plant and some sewage has been allowed to bypass directly to the North Yamhill River. Flow bypass apparently occurs about 10 to 15 times each year during periods of prolonged heavy rainfall.

Because of the deficiencies in the sewage collection and treatment facilities, a moratorium on subdivisions within the City is in effect until the situation is improved. The City has decided to allow only 10 more hookups through the end of the 1978-79 fiscal year. Eight of these would be for single-family residences, one for a multi-family structure and one for a commercial or industrial structure. The City is presently initiating plans to upgrade the sewage system to accommodate a population of 2200 by the year 2000. However, bonding problems make the outcome of this project uncertain. A city-wide bond issue to help pay improvement expenses will be voted upon in early 1979.



CITY of CARLTON SEWER and WATER

····· WATER LINES

--- SEWER LINES

PUMP STATION

O SEWAGE PLANT



Storm Drainage

Carlton does not have an overall city storm drainage system. Storm drains exist in the commercial core area only. Residential areas of the Community rely on surface drainage. Roadside swales assist in the collection of runoff water.

Sources: Sewer System Facilities Planning Report and Sewer System
Evaluation Study, Westech Engineering, Inc., August, 1978.
Regional Water and Sewer Study; Phase 1: Inventory and Problem
Identification, Mid Willamette Valley Council of Governments,
Sept., 1973.

Fire Protection

The Carlton Fire District provides fire protection for the City of Carlton. The district encompasses an area of about 30 square miles. The volunteer fire department consists of a fire chief and about thirty firemen. Equipment includes four pumpers, one tanker, and a rescue truck.

Carlton currently has a fire rating of 6. Water pressure in the downtown area is approximately 75 pounds/sq. inch, which is considered sufficient for fire fighting needs. The fire district is experiencing no problems in providing adequate fire protection for the Community. It is felt that the district can meet the demands of population growth to the year 2000 with an additional pumper and a full-time officer.

Police Protection

Carlton's police department consists of three patrolmen and two squad cars. One patrolman is funded through the City budget, and the other two by CETA. The CETA patrolmen are eligible for one more year of employment until the funds are withdrawn. The City has no jail facilities, but when needed, the McMinnville jail is used. City patrolmen provide 24 hour police protection. There appears to be adequate police services at this time.

Medical Services

There are presently no medical services or facilities in Carlton.

Newberg Community Hospital and McMinnville Community Hospital are the nearest facilities and there are numerous physicians in both cities.

There is also a County Health Department which offers a number of health services to all County residents. These services include home nursing, clinics, conseling, and a mental health program. Emergency ambulance service comes from McMinnville.

City Government

Carlton has an elected mayor-council form of government. The Mayor and six-member Council are the policy making body for the City. A seven-member Planning Commission, which is appointed by the Council, serves as an advisory body to the Council and considers various land use applications.

The City employs a staff of seven. These are: a city administrator, a city recorder, one police office, three public works employees, and a part-time office worker. The City also has two full-time CETA employed policemen and receives additional CETA workers for temporary positions.

Social and Cultural Services

Because of its close proximity to McMinnville, Portland and Salem, Carlton residents are offered a variety of social and cultural activities. Local organizations include the Chamber of Commerce, Civic Club, Boy and Girl Scouts, and several church affilitated groups.

The City Library is owned and operated by the Civic Club. It has over 5,000 volumes. The City is also serviced by the Chemeketa regional library bookmobile every two weeks. It is generally felt that added growth will necessitate changes in the City's committment to library services.

Communications

Carlton has no established communication networks. However, because of its proximity to larger urban centers, it has a good variety of communication facilities available to it. Local news and public information is printed in the News-Register which is published in McMinnville and has county-wide circulation. Other papers commonly subscribed to are: the Oregonian, published in Portland and the Statesman, published in Salem.

There are presently two radio broadcasting stations in McMinnville which provide local news and public information to Carlton residents. A variety of stations in Portland can also be received in the Carlton area. Television transmission comes from the Portland area. Six stations are available to local viewers.

Pacific Northwest Bell supplies telephone service to Carlton. As of September, 1978 there were 740 customer hook-ups in the Carlton area. 671 hook-ups were residential users and 69 were business users. The P.N.B. engineering department feels that telephone service can be expanded in an orderly fashion to meet year 2000 population projections.

Carlton has its own post office. There is no mail delivery service at this time. All residents pick up their mail at post office boxes.

TRANSPORTATION

Automobile

Travel in Carlton is primarily by automobile; consequently the greatest Community demand, in regard to transportation, is for maintenance and improvement of the City's street network. A total of about 8.6 miles of streets exist within the City. There are 18 north-south streets and 17 east-west streets in Carlton. Approximately 1.2 miles (15%) of the streets are unpaved.

Traffic Hazards

There are very few accidents in the City of Carlton each year. The Community averages about 10 accidents per year and the majority of these are non-injury accidents. The intersections of Main and Pine and West Grant and Pine create the most serious traffic hazards in Carlton. Both intersections have visibility problems caused by parking lots at the bank and post office.

The most serious traffic problem in Carlton is related to large trucks which travel through the City on Highway 47. At the present time, trucks must make difficult turns at the intersection of Yamhill and Main streets and at the intersection of Pine and Main streets. The turning radius of these corners are quite short and often times the longer trucks must make very wide turns and/or back up in order to turn these corners successfully. The possibility of creating a truck by-pass has been brought before the State Highway Division but that agency recently reported that State Highway funds and projects affecting Carlton are not likely to be forthcoming in the foreseeable future.

Additional transportation problems that have been identified are these: narrowness of Highway 47; generally narrow streets; too many on-street parking spaces, but lack of sites for off-streets parking; congestion at the bank and post office areas; and congestion at Madsen Grainery.

Street Classifications

1. Arterial Streets

The function of arterial streets is to facilitate traffic movement between communities. Two roadways in the planning area serve this purpose.

Arterial Streets

Highway 47 - Main

The maintenance of Highway 47 is the responsibility of the Oregon Department of Transportation.

2. Collector Streets

The function of collector streets is to collect traffic from

minor streets and distribute it to the arterial street system. The two collector streets classified in Carlton are the most heavily traveled streets next to the arterial street. Their maintenance is the responsibility of the City.

Collector Streets

S. Third-E. Monroe

3. Minor Streets

The basic function of minor streets is to provide access to the fronting property owner. These streets, which are at the bottom of the street hierarchy, generally carry traffic to collector or arterial streets. All streets in Carlton which are not collectors or arterials are classified as minor streets. The City is responsible for their upkeep.

Street construction and maintenance are not budgeted through City funds. Instead, repairs are funded through state tax fund allotment. There is a need to identify other funding sources, City or otherwise, to ensure adequate resources for street construction and maintenance to keep pace with Carlton's growth.

Traffic Load

Traffic flow figures in Carlton are available only for State and County roads. For comparative purposes, 1971 and 1976 traffic counts for selected locations along major roads shown in the following table:

SELECTED TRAFFIC VOLUMES 1971 and 1976

Location Traffi		Traffic(All Vehicles)	Change 1971 to 1976
0.02 Mile West	ET ROAD #2 (WE	EST MAIN STREET)	
of Highway 47	1,600	1,750	+150
West City Limits	1,500	1,650	+150
MARK	ET ROAD #204 (EAST MAIN STREET)	
0.02 Mile East	mm series a mais a	W7 " ."	
of Highway 47	1,900	1,900	0
0.02 Mile East			001
of 3rd Street	1,300	1,300	0
East City Limits	1,100	1,100	0
HIGHW	AY #47 (TUALA	TIN VALLEY)	
North City Limits	2,250	2,500	+250
0.01 Mile North of			
W. Johnson Street	2,300	2,800	+500
0.01 Mile North of			
Main Street	2,450	2,850	+400

0.01 Mile East of		WING DOLE OWN IN F	
Yamhill Street	3,350	3,600	+250
0.01 Mile West of Pine Street	3,450	3,700	+250
0.01 Mile South of E. Main Street	3,100	3,350	+250
0.01 Mile North of Taft Street	2,900	3,150	+250
South of City Limits	2,800	3,050	+250

Source: Oregon State Highway Division, Traffic Volume Tables for 1971 and 1976

Railroad

Southern Pacific Railroad tracks run in a north-south direction through the center of Carlton. Residential, commercial and industrial units are located along much of the rail line. Other adjacent land uses include agricultural and vacant land. Main, Monroe and Polk are the only City streets which cross the railroad tracks. The railway is currently used for freight service only and this situation is likely to continue. The rail line is in adequate condition for the existing level of service.

Airport

There are no airport facilities in the Carlton planning area. The nearest available air service is in the City of McMinnville approximately 10 miles to the south. There are no regularly scheduled flights provided but local charter service is available.

For regularly scheduled commercial flights, Carlton's population generally travels to Portland International Airport, approximately 44 miles away. This airport is served by eight airlines that provide passenger and freight service.

Public Transit

At the present time Yamco Transit is the only form of mass transportation available to the City of Carlton. Yamco Transit is a public transportation system designed to serve citizens of Yamhill County.

In addition to intra-county routes, Yamco Transit provides commuter service to Salem Monday through Friday. The itinerary of this route does not include Carlton, however.

Yamco Transit runs with one 16-passenger bus which is supplied to the County through Hamman Stage Lines, Inc. The transit service is funded through city, county, state and federal (CETA) monies and is a one year experimental project. Due to lack of ridership on the Carlton route, curtailment of service to this community is anticipated by early 1979.

Pedestrian and Bicycle Ways

While walking and bicycling are usually thought of as recreational activities, their potential to serve as alternative city transportation modes should not be overlooked. The increase cost of fuel, the need to conserve dwindling energy resources, and the relatively short distances between Carlton's commercial center and residential areas, make both walking and bicycling attractive transportation choices.

The lack of adequate facilities is a likely deterrent to bicycling and walking at the present time. Sidewalks exist along only a few major streets in the City but a lack of heavy traffic on side streets makes walking a relatively safe, accessible form of city transportation. Streets with low volumes of traffic are also the only facilities for bicycling available within the City. With the provision of safe and convenient walking and bicycling pathways within the planning area, and as a part of a county-wide system, more people might engage in these forms of transportation.

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Source: Oregon State Highway Division. 1978.

ENERGY USE

Electricity, heating oil, propane and wood are the principal fuel types supplying the energy needs for Carlton. The City is not presently served by natural gas. With the exception of wood, these major fuels are imported into the County. Electricity is primarily generated from hydroelectric and thermal plants elsewhere in Oregon. Fuel oil comes from other parts of the United States and from foreign imports.

Electric Power

Carlton's electric power is provided by Portland General Electric. As of July, 1978 P.G.E. supplied electricity to 464 residential customers and 73 non-residential customers in Carlton. Power is supplied by 57,000 volt transmission line running east of the City limits. P.G.E. indicates that there exists no problem with the expansion of the Carlton system to meet expected growth trends.

Electric Consumption (July, 1977 - July, 1978)

Total Residential Consumption $6.826 \times 10^6 \mathrm{kwh}$ Average Residential Consumption $14,711 \mathrm{\,kwh/customer}$ Total Commercial Consumption $1.994 \times 10^6 \mathrm{\,kwh}$ Average Commercial Consumption $27,315 \mathrm{\,kwh/customer}$

Residential customers of Portland General Electric pay \$3.00 per month basic chage plus per kwh rates as follows:

Winter (November-April) 2.477¢/kwh
Summer (May-October) 2.277¢/kwh

Commercial Demand Level #1* customers pay a basic charge of \$5.00 per month for single-phase or \$8.50 per month for three-phase power. In per kwh, rates are as follows:

Vinter: 2.643¢/kwh first 5000 kwh 1.793¢/kwh above 5000 kwh

Summer: 2.443¢/kwh first 5000 kwh 1.593¢/kwh above 5000 kwh

^{*} Commercial demand Level #1 rates apply when demand does not exceed 30 kw more than twice during the previous months, or with 7 months or less of service demand does not exceed 30 kw more than once, Commercial demand Level #2 rates apply when demand exceeds this limit.

Commercial Demand Level #2 customers pay a basic charge of \$10.00 per month for single-phase or \$15.00 per month for three-phase plus 1.189c/kwh plus the following:

Winter: \$2.93/kw of demand in excess of 30 kw

1 15

Summer: \$2.10/kw of demand in excess of 30 kw

As a general rule there are two or three customers in Demand Level #2 in each community. Sewer and water plants, schools, grain elevators, and large manufacturing plants generally fall into this category.

Propane, Heating Oil, Wood

Propane prices vary according to the distributor and also according to the volume purchased. Following are approximate prices averaged from information given by several county propane dealers:

> 1 - 19 gallons 60c/gallon over 20 gallons 53c/gallon

Heating oil prices also vary according to distributor and according to quantity purchased. An average price estimated from information given by several county distributors is about 47¢/gallon.

Wood prices vary so widely - according to distributor, quantity and type of wood - that it is impossible to arrive at an average cost. In addition, many people cut their own wood or burn scrap and pay only the price of a permit and their own labor.

At this time, there is no information regarding the proportion of each energy type usage in the planning area. Local distributors do not keep records broken out by city for propane and heating oil use. It is assumed that propane, heating oil and wood contributes a significant portion to the needs in the community. Propane is commonly used as a cooking fuel, particularly in mobile homes. Heating oils are used as a cooking fuel, particularly in mobile homes. Heating oils are used in many older homes, while many households are turning to the use of wood as a supplementary fuel.

Household Energy Use

Approximately 78% of the household energy use goes for space and water heating. Based on recent fuel price forecasts developed by the Oregon Department of Energy, the costs for home heating will continue to soar in the years ahead. Prices for electricity, natural gas and heating oil are expected to at least quadruple in the period from 1976 to 1996. For Example:

	If you paid in 1976	you can expect to pay in 1996
Electricity	2 shi \$300. basi swanton	\$1372.
Natural Gas	\$300.	\$1768.
Heating Oil	\$300.	\$1235.
	and Institution of the	of the kand area is day and

In addition to heating, households require energy for a variety of other uses. Information from the Oregon Department of Energy presents a breakdown of residential energy use for the typical Oregon household. It is assumed that these figures apply to residences in the City of Carlton as well.

Oregon Residential Direct Energy Use For 1977

Space Heating	62.4%
Water Heating	16.0
Refrigeration	4.4
Cooking	3.9
Lighting	2.5 Abr - 13a
Clothes Dryer	2.2
Television	1.9
Freezing	1.8
Other	5.1

In terms of personal direct energy use, the private automobile is the largest consumer. In Oregon, approximately 56% of personal direct energy use is attributable to the auto. This compares to 27.2% for space heating and 7.0% for water heating. There is no reason to suspect significant variations from these percentages for residents of Carlton.

The soaring cost of energy, coupled with the fact that the majority of our energy comes from nonrenewable sources, necessitates conservation efforts and the investigation of alternative sources of energy. In every facet of urban living, measures should be taken to utilize energy in a most efficient and conserving manner.

Source: Yamhill County Energy Office, 1978.

LAND USE AND URBANIZATION

Existing Land Use

At the present time the predominant land use within the City limits of Carlton is agriculture. Approximately 237 acres, or 43 percent of the City's land area, are devoted to agricultural uses. Residential uses comprise the second largest share of the City. Twenty-eight percent of the land area is developed for residential uses. About 10 percent of the City consists of vacant land. A complete breakdown of existing land uses is presented in Table 7.

Table 7 EXISTING LAND USE

City of Carlton

Land Use	Acreag	<u>e</u>	Percent of Planning Area
Agriculture			
(Intensive, open, wooded)	237		43%
Residential	154		28
Public Facilities (Streets,			
schools, parks, public bldg	s)71		13
Vacant	60		11
Miscellaneous (Railroads,		W. 36,51	
parking, churches, meeting			
halls)	18		3
Industrial	8	and players to	1
Commercial	3	Recently	1
TOTAL	551		

Source: Updated land use survey by Yamhill County Planning Dept., December, 1978.

Industrial development in Carlton occurs mainly along the Southern Pacific Railroad tracks which run through the center of town. Some industrial activities are also concentrated in the area of W. Main and S. Yamhill Streets. Commercial development is largely confined to the downtown core area and along the City's two major arterials. Vacant and agricultural lands are found on all sides of the City core. Some vacant parcels are scattered among residential developments.

Of the 551 acres within the City, about 59 acres, or 11 percent of the total land area, show severe building limitations because of soil characteristics, steep slopes or flood hazards. About one acre of this land is presently developed, leaving 58 acres which are actually vacant or in agriculture. Existing land use data show there is a total of 297 acres of vacant and agricultural land in the City. Thus, excluding those lands which have severe building limitations, there are about 239 acres potentially available for future development. In addition, of the 170 acres which are classified as residential, commercial or industrial on the existing land use map, there is conservatively about 30 acres which could be used for development due to oversized and underdeveloped lots. Of course, development of this land would be contingent upon the

willingness of property owners to partition their land to permit additional development. Should such land divisions occur, there is a possible total of about 269 acres inside the City that is potentially available for future development. These findings are presented in the following table:

Vacant and agricultural land potentially available for future development	297
Such land with severe building limitations	-58
Undeveloped land with less severe building limitations	
	239
Existing "developed" lands potentially available for future development (contingent upon partitioning) Total land area without severe building limitations potentially available for future development	30
	269

Land Use Projections

Land use projections for various uses have been estimated based upon the City's projected growth of 830 additional people by the year 2000. These projections are based upon land averages derived from land use data for the cities of Amity, Carlton, Dayton, Lafayette, Sheridan, Willamina and Yamhill. These averages have been calculated as 0.018 acres/capita (new residents) for industrial use, and 0.003 acres/capita (new residents for commercial use). Based upon these figures the following are estimated commercial and industrial land use projections for Carlton:

	1978 (Existing)	2000 (Projected Need)	Total Land in Use	
Industrial Use	8 acres	15 acres	23 acres	
Commercial Use	3 acres	2.5 acres	5.5 acres	

The existing commercial center of the City does not have enough undeveloped land to accommodate its projected commercial land requirements. There is only about one acre of vacant land in the City's commercial zones. The General-Commercial zone contains approximately .6 acres of this vacant land, while the Commercial-Industrial zone has approximately .4 acres vacant.

The City's General Industrial zone presently has about 6 acres of undeveloped land. Most of this vacant land is in the northern industrial sector between North Yamhill Street and the railroad tracks.

The amount of land which should be designated for future commercial and industrial uses is difficult to determine. Many factors, including the

type of commercial and industrial activities desired by the City, will influence the actual amount of land necessary for each of these uses. The land use projections presented above provide the City with reasonable guidelines for use in the planning process.

Residential land use projections are equally difficult to assess. Numerous factors will affect the actual land needs of the City for accommodating its future residential growth. The most notable of these factors are the housing density and the housing mix. Table presents examples of various residential land projections using selected housing densities and mixes. The projections are based upon the estimated need for 278 additional housing units in Carlton by the year 2000 as well as minimum lot size standards provided in the existing zoning ordinance.

Table 8 CITY OF CARLTON
Alternative Residential Land Needs

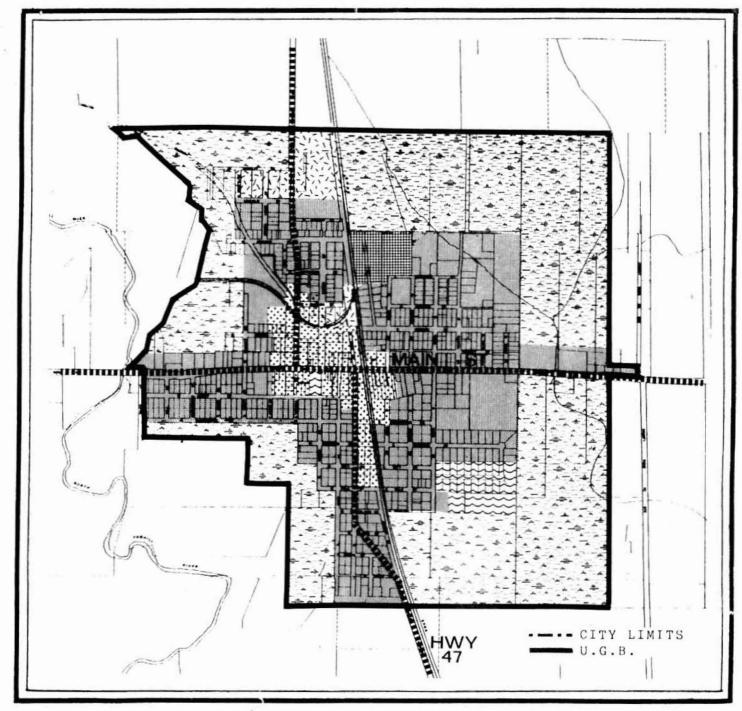
SF 907	DUP MF	Present Mie SF DUP MF 80% 10% 10%	SF DUP MF 70% 10% 20%	SF CUP MF 60% 20% 20%
Acreage needed for Single-family Dwellings. 7.2 du/acre (6,000 sq. ft. min. lot size)	34.5	30.6	26.8	23.0
Acreage needed for Two-family Dwellings. 10.8 du/acre (8,000 sq. ft. min. lot size)	1.3	2.6	2.6	5.1
Acreage needed for Multi-family Dwellings, including mobile homes in trailer parks. 25 du/acre (6,000 sq. ft. lot size with 1,500 sq. ft. min.	Tate 1			
for each additional du)	.5	1.1	2.1	2.1
TOTAL LAND (in acres)	36.3	34.3	31.5	30.2

NOTE: These figures are based upon the assumption that all future residential units will receive City water and sewer service.

Source: Yamhill County Planning Department.

The table shows that future residential land needs could fluctuate by as much as 20 percent (6 acres) depending upon the housing densities and mixes selected. For the City to achieve even the highest projected land need (36.3 acres) would mean that all future housing units would have to be provided with City water and sewer services and all developments would have to occur at the permissable minimum lot size. The likelihood of this happening is remote, and it is expected that considerable more land will actually be utilized for future residential needs.

Land use projections for residential, commercial and industrial uses point to the need for as much as 53.8 acres of developable land by the



CITY of CARLTON PLAN MAP



RESIDENTIAL

MOBILE HOME RESIDENTIAL

FUTURE FA RESIDENTIAL AGRICULTURAL HOLDING



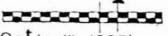
COMMERCIAL

INDUSTRIAL

PUBLIC FACILITY



1.2"-1/4 mi



Scale: 1"- 1085"

year 2000. As noted earlier, the City has nearly 240 acres of undeveloped land which does not have severe building limitations. Much of this developable land consists of vacant and oversized parcels in and around the existing residential area. There appears to be a sufficient amount of this land to accommodate the City's projected needs to the year 2000.

As pointed out in Table 7, agricultural uses constitute a significant amount of land inside the City. For the most part, these areas are located on the outskirts of the City and away from areas of residential development. These lands will be generally more costly to service than areas which are closer to existing residential development and public services. By establishing agricultural holding zones, these farm lands can be preserved until needed for urban uses. This measure will also serve to encourage utilization of vacant lands near existing developments. As additional residential lands are needed, the agricultural zones can be redesignated for urban use. This procedure should result in more orderly and efficient growth by promoting in-filling and maximum utilization of existing public facilities.

In order to better understand the existing land use characteristics within the City of Carlton, selected zone areas have been examined to determine the land use categories within these zones.

Existing Land Use (Excluding Right-of-Ways)	Acreage	Percent of Zone Area
G-C Zone General Commercial		
Residential	3.45	35%
Commercial (Retail,	3000 - 15220.	
Service & Office)	1.75	18
Public	1.72	17
Industrial	1.17	12
Parking	1.08	11
Vacant	.64	7
TOTAL	9.81	all and a second
C-1 Zone Commercial-Industrial		
Industrial	2.89	54%
Miscellaneous (Lodges,		
Parking, Utilities)	.68	13
Commercial	.59	11
Public	.42	8
Vacant	.42	8
Residential	.30	6
TOTAL	5.30	
G-1 Zone General Industrial		
Vacant	5.91	78%
Industrial	1.64	22
TOTAL	7.55	

Urban Growth Boundary

Carlton's city limits presently serve as its adopted Urban Growth Boundary (UGB). At the time of its adoption on January 9, 1978, the findings of fact indicated that there was sufficient buildable lands within the city limits to accommodate the City's projected needs to the year 2000. The updated buildable lands inventory and revised land use projections presented in this section have reconfirmed these findings. There is not a demonstrated need to expand the City's UGB at this time. The city limits will continue to serve as Carlton's recognized Urban Growth Boundary.

