



CITY of RAJNEESHIPURAM  
COMPREHENSIVE PLAN

LAND USE PLAN

VOLUME 2

CITY of RAJNEESH PURAM  
COMPREHENSIVE PLAN

LAND USE PLAN  
VOLUME 2

1982

"The man who loves himself loves others.  
Then there will be a totally different kind of politics;  
it will be based on love.  
The man who loves himself and loves other people,  
loves nature too.  
There is an absolute partnership in existence.  
We are not separate; we are part of one rhythm.  
One has to understand the totality of it;  
and one has to live in such a way  
that no one fact becomes, or pretends to become the whole."

Bhagwan Shree Rajneesh



## RAJNEESHPURAM CITY COUNCIL

September 7, 1982

Dear Residents and Friends of Rajneeshpuram,

Today, the City Council of Rajneeshpuram has adopted this Comprehensive Plan as the official guide for its future development. Written in three volumes, it provides a thorough description and analysis of the present, outlines broad goals and policies for the future, and details a code of standards by which we will build our new City.

Born out of the same love and commitment that created the City itself, the Plan evolved in a few short months into a document that is truly comprehensive - bringing all aspects of community life together into one integrated vision. Recognizing the interrelated nature of the community's economic base, its facilities and services, and its natural environment, the Plan provides a wholistic design for the City's development. The adoption of the Plan initiates an experiment in a balanced way of living - people uniting modern technological efficiency with respect for nature and each other.

The City Council recognizes and applauds the community-wide effort that went into this Plan. Also, the Council thanks all the federal, state, county and private agencies for their review and comments on earlier drafts.

On May 18, 1982, the City of Rajneeshpuram was incorporated. On August 10, the first City Council was elected. Now, we ask you to join us in celebrating the adoption of this Plan and taking the next major step toward making our vision real.

With love,

Rajneeshpuram City Council

CITY OF RAJNEESHPURAM, OREGON

ORDINANCE NO. 82-07

AN ORDINANCE ADOPTING A COMPREHENSIVE PLAN FOR THE CITY OF RAJNEESHPURAM;  
AND DECLARING AN EMERGENCY.

WHEREAS, a comprehensive plan establishing long-range goals and policies for future development, based on findings of fact, is necessary for the health, safety and general welfare of its citizens, and the orderly, efficient and economical growth of Rajneeshpuram and its surroundings; and

WHEREAS, Chapter 197 of the Oregon Revised Statutes requires that a properly prepared, coordinated comprehensive plan for Rajneeshpuram and the surrounding area be formulated and adopted; and

WHEREAS, a series of three public hearings has been held by the Rajneeshpuram City Council to provide adequate opportunity to allow and encourage all interested persons to appear and be heard on the proposed Comprehensive Plan; and

WHEREAS, the City has received extensive input from citizens and residents of the surrounding area and from the Committee for Citizen Involvement on the proposed Comprehensive Plan; and

WHEREAS, the City has received extensive input from coordinating agencies on the proposed Comprehensive Plan;

The City of Rajneeshpuram ordains as follows:

Section 1. "Research and Analysis" and "Land Use Plan."

The Rajneeshpuram "Research and Analysis," Volume 1 of the Comprehensive Plan, and "Land Use Plan," Volume 2 of the Comprehensive Plan, as presented to the Council on this day, are adopted as set out in the documents attached and by reference made a part of this Ordinance.

Section 2. Publication.

The Community Development Director is authorized and directed to prepare for the Council a final publication of the "Research and Analysis" and "Land Use Plan." The final publication will be recorded with the City Recorder and shall be the official document of this adoption Ordinance.

Section 3. Emergency.

As it is necessary for the peace, health and safety of the people of Rajneeshpuram that a complete comprehensive plan be adopted immediately to allow the provision of essential housing, medical services, governmental services and commercial services, an emergency is declared to exist and this Ordinance shall become effective upon its passage by the Council and signing by the Mayor.

PASSED: By 5-0 voted of the City Council this 7th day of September, 1982.

ma sat prabodhi  
City Recorder, City of Rajneeshpuram

APPROVED: This 7th day of September, 1982

Suman Kestima Deva  
Mayor, City of Rajneeshpuram

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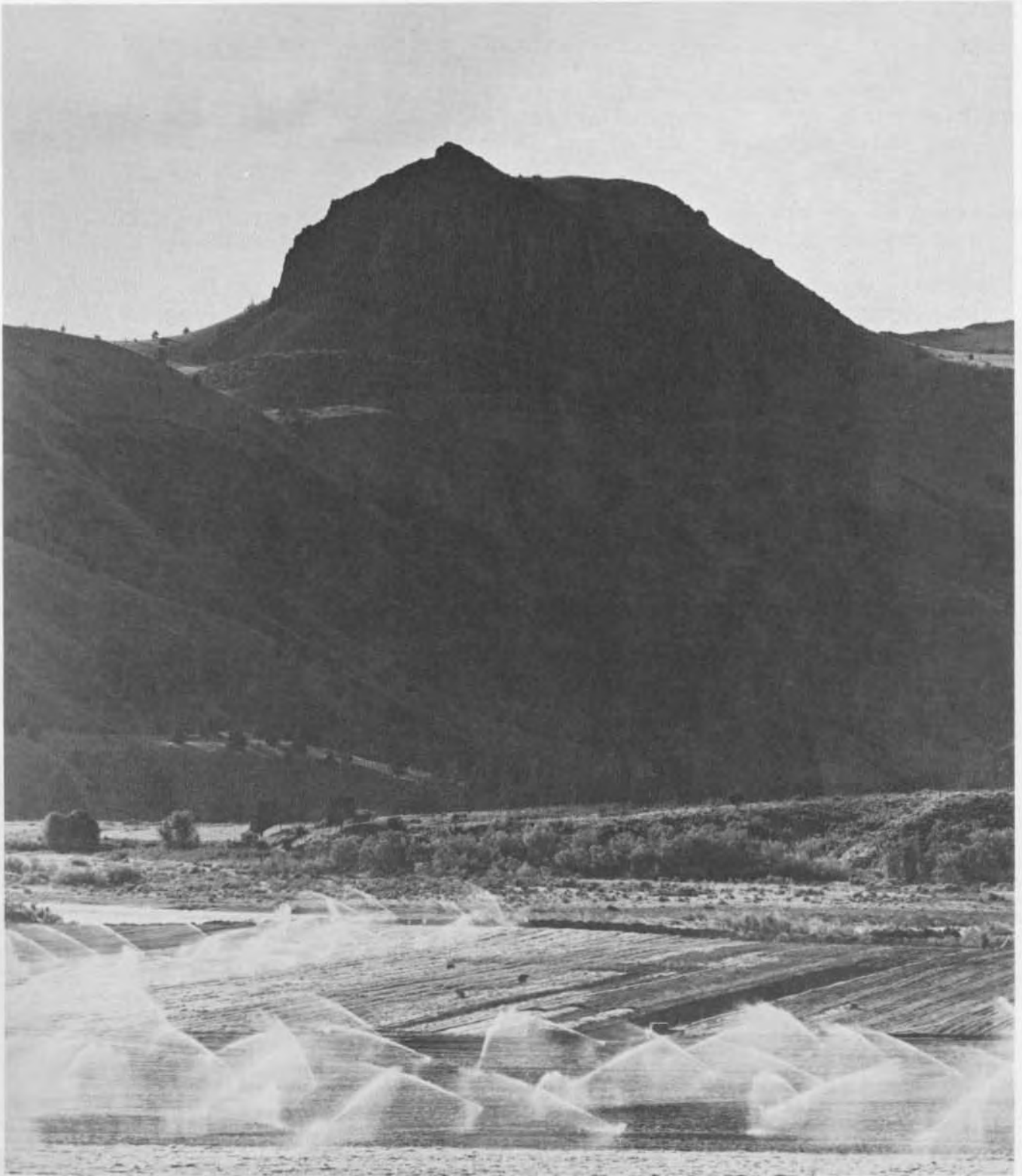


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INTRODUCTION

## INTRODUCTION

### PURPOSE OF THE LAND USE PLAN

Volume 2 of the City of Rajneeshpuram's Comprehensive Plan is entitled "Land Use Plan" and is intended to guide and regulate the growth and development of the City. It synthesizes the research and analysis contained in Volume 1 and reflects the present and future needs of the City. The Land Use Plan contains specific directives called policies and implementation strategies that guide and regulate growth and development.

The policies and strategies of the Land Use Plan are intended to provide a means to accommodate growth and development in a way that is consistent with the physical, social and economic characteristics, legal requirements, and existing resources of the City.

A policy is a generalized statement that provides direction for specific plan elements, regulations, budgets, day-to-day development and administrative decisions.

An implementation strategy is a specific mechanism, action or program designed to implement a policy. All policies are binding on the City, whereas implementation strategies may be either binding or simple guidelines to direct action, depending on the specific language of the strategy. Those strategies that are expressed in "shall" or "will" are clear mandates for action; "should", "can" and "may" indicate strategies that are not obligatory.

The "Discussion" sections found under the implementation strategies in Chapter IV of this Volume, Services and Facilities, are descriptions of the likely manner in which public facilities and services will be provided in the future. However, these descriptions are not intended to be binding upon the City, as changes of conditions and new data may make it desirable in the future to vary from the precise location and means of providing services described in these discussions.

The Land Use Plan maps and the Public Facilities Concept maps contained in this Volume are the graphic forms of the policy framework applied to the actual terrain of the City as an overall development strategy. The Land Use Plan maps are a guide to development or urbanization that is implemented in a site-specific manner through concept plan approvals and the Development Code.

The Public Facilities Concept maps are generalized non-site-specific guides to the type, level and location of services

that will be available over time in the City. There are not, however, site-specific blueprints by which a given proposal of development and the provision of services will be measured.

To ensure that public facilities and services are provided in an orderly and efficient manner, specific implementation measures, including concept plan approval criteria, shall be applied to any given development proposal to ensure that proposed facilities and services are compatible with those found adjacent to and upon the given site.

The variables that affect the achievement of this Plan element cover a broad range of possibilities, such as changes in the economy and changes in the demographic characteristics of the population and the rate of population growth. Therefore, the Land Use Plan should not be regarded as a static rule, but rather as a flexible and dynamic guide capable of directing growth yet also capable of responding to new facts, technology, lifestyles and values.

The planning process allows the periodic review and updating of data, information, goals, policies and implementation measures to reflect changing conditions.

An ongoing Citizen Involvement Program that centers around an active Committee for Citizen Involvement will be an integral part of the review process. In this manner, the Land Use Plan will continue to be a vibrant and alive instrument reflecting the aspirations of the community.

#### APPROACH TO DEVELOPMENT

##### Community

Several ideas are contained in the roots of the word "community." The word refers to "that which is common to all", "that which is not divided", and to the concept of public service. Like other words that share the same base, such as "communication", "commune" and "common", the word "community" implies a sharing and a unity - a direct connection among people. At Rajneeshpuram, community is not just an ideal, but the active reality of everyday life.

Most present residents of Rajneeshpuram are disciples of Bhagwan Shree Rajneesh. They share not so much common beliefs and practices as a common commitment to living with as much aliveness, joy and love as possible. Celebration, cooperation and individual freedom are the cornerstones of life within the community. The individuals share a common awareness of the

need for responsibility - for considering the life of the community as a whole and acting intelligently from that consideration. This creates an almost universal degree of citizen involvement.

All the planning for the City - for its buildings, its administration, its laws and ordinances - must take into account the distinctive nature and strength of the sense of community that exists at Rajneeshpuram. Because of this unique quality, what is needed and what is possible are different at Rajneeshpuram from the needs and possibilities of other cities. Interpretations of this Plan must be made with full understanding and appreciation of the energy and work that can come out of a community that is fundamentally cooperative.

In the demanding and exciting period of development, the residents of Rajneeshpuram share common objectives. To build a city from the ground up requires a tremendous amount of work and alignment of efforts. The rapid growth of Rajneeshpuram has been made possible by the commitment of its residents. The momentum now exists to build the necessary basic infrastructure and to provide for and meet the need for housing, services and facilities.

#### Community Economics

Significant economic advantages arise when a shared underlying attitude of cooperation and commitment pervades a community. Resources can be used more flexibly and efficiently, as the following examples illustrate:

- Food preparation and dining facilities are communal, providing meals for residents in a cost-efficient, energy-saving manner.
- Transportation facilities are shared. For example, a vehicle may be driven to work by one group of people and used during the day by another. Mass transportation happens naturally as car pools form and disappear.
- Buying power is increased. For example, the community can obtain and use specialized pieces of equipment that would not be economically feasible for a family or small farm. Activities such as food preparation, housecleaning, car maintenance, etc., are more efficient at the community level than at the individual level, and the cost per capita is decreased.

- Facilities can be used flexibly. Buildings can be designed to accommodate several different activities. For example, the cafeteria in the Rajneesh community presently serves as a food preparation and meal service hall, a dance floor, a movie theater and a town hall.
- Workers' roles are more flexible. Because of their high degree of cooperation and willingness to adapt, the workers in the community shift jobs easily whenever the community's needs change. Job security is not an issue, since all workers in the commune are guaranteed their living necessities. The flexibility of the work force results in no unemployment or loss of productivity due to specialization.
- The community as a whole becomes more self-sufficient. Residents produce a wide variety of goods and services for their consumption.

Because of the economic advantages of cooperative living, more goods can be exported and fewer imported. Figure 1 on the next page shows the relationship of imports to exports as well as the flow within the community itself. Some important points are illustrated by the diagram:

- The need for imports is lessened by increasing the supply within the community as well as by the decreased demand resulting from shared usage.
- The energy efficiency of a communal economy allows the flow of a greater diversification of resources to economically productive ("export") activities. This produces added income, which is reinvested in export activities or community assets.
- The saving at the community level of assets, such as facilities, equipment, vehicles, manpower and money, allows funds to be invested in the community and more energy to be devoted to export-oriented endeavors. This is an important aspect of communal economy.

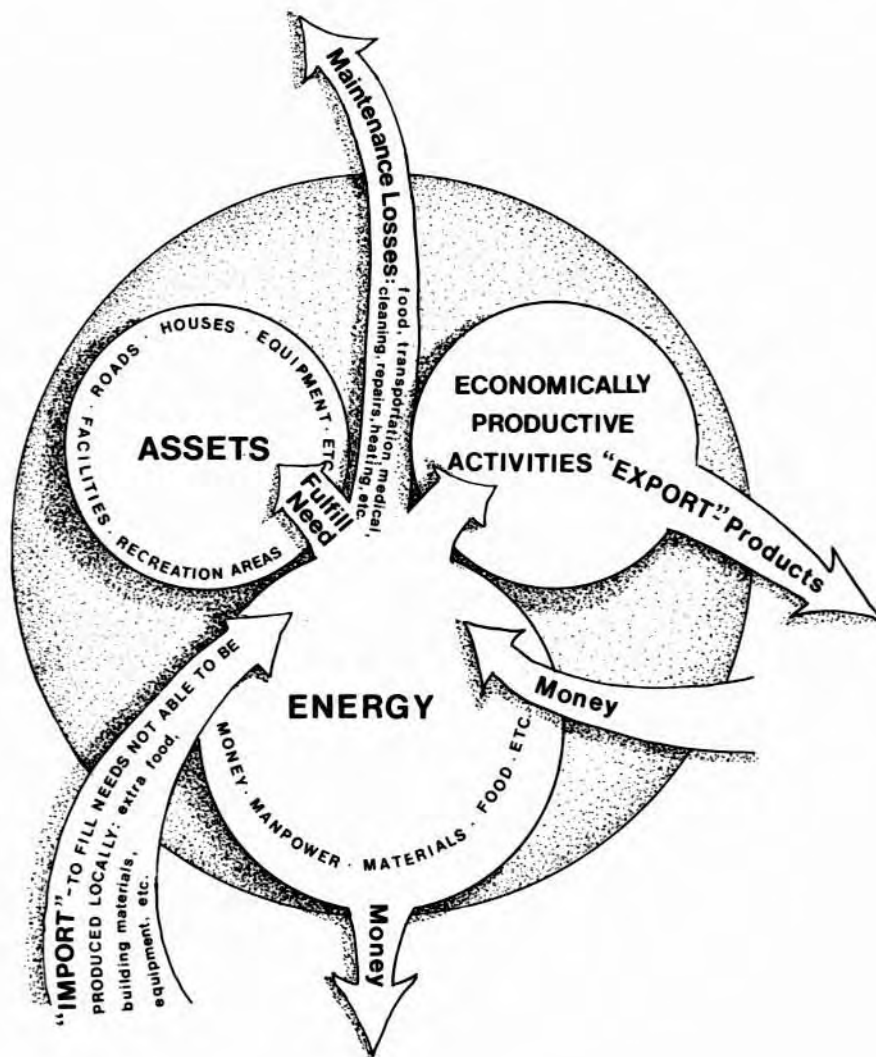
As the community becomes more productive and export activities expand, their definition broadens. As the economic situation becomes more comfortable, energy can be spent on nonprofit activities that the community strongly wishes to undertake. These projects can include the creation or preservation of wildlife habitats, the establishment of bee colonies to pollinate wildflowers, the reseeding of areas with native grasses to slow erosion, the planting of shade trees not native to the areas, and the conducting of experiments to slow runoff

and raise the water table to induce revegetation of stream banks.

Eventually, the hidden becomes visible. The community enhances the surrounding environment intentionally and, in turn, the conserved and enhanced surroundings add to the quality of life of the inhabitants.

Community Flow of Goods and Services

Figure 1





## ECOLOGICAL BALANCES

The individuals who have chosen to live at Rajneeshpuram are seeking harmonious ways of living with themselves, with others and with the environment. Living in harmony with the land is a central concern as the community of Rajneeshpuram attempts to establish large-scale agriculture on land that has been severely depleted. To make this land green and productive, to preserve its natural austere beauty and to provide high quality facilities for residents presents a challenge in finding the right balances. The operation of modern agricultural technology needs as a balance the scientific understanding of the ecology of the region. The power of heavy construction machinery must be balanced with a sensitivity to and love for the surrounding landforms.

The damage to land that can result from shortsightedness and incomplete understanding can be avoided by taking the time and effort to gain comprehensive views. By looking at things from the point of view of the whole, a "systems approach" can account for complex interrelationships and the most harmonious balances can be worked out ahead of time.

In the previous section, an economic system was described and the economies of a communal system of living were discussed in terms of a flow system and a balance between imports and exports. Here a systems approach is used to describe the natural ecology of the land and the impact of agriculture upon it. ✓

### The Land-Water-Vegetation System

Water is the critical ingredient in the land-water-plant system. Water enters Rajneeshpuram and the surrounding ranch primarily in the form of precipitation. As shown in Figure 2 on the following page, it then can be absorbed and held in the system, or it can run off or evaporate and be lost from the system.

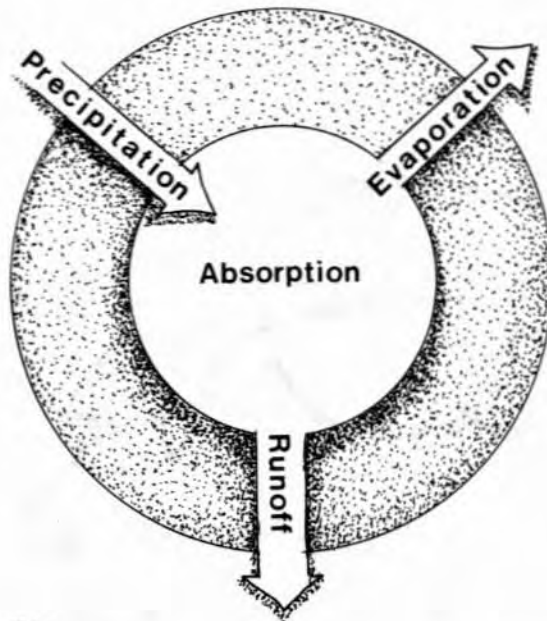
The amount of water retained through absorption depends on the nature and quality of the soil and vegetation in the system. These two factors interact with each other and are also affected by the pressure of livestock grazing on the land. Figure 3 on page viii shows the following relationships between these three factors:

- the land provides nutrients for vegetation and in turn is enriched by their decay;
- animals are fed by the vegetation and in turn enrich the soil with their waste products;

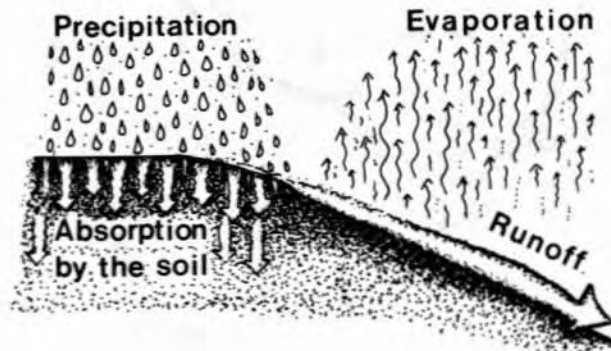
- nutrient losses to the system occur as animals are raised on and then removed from the land, and when the soil is removed through erosion.

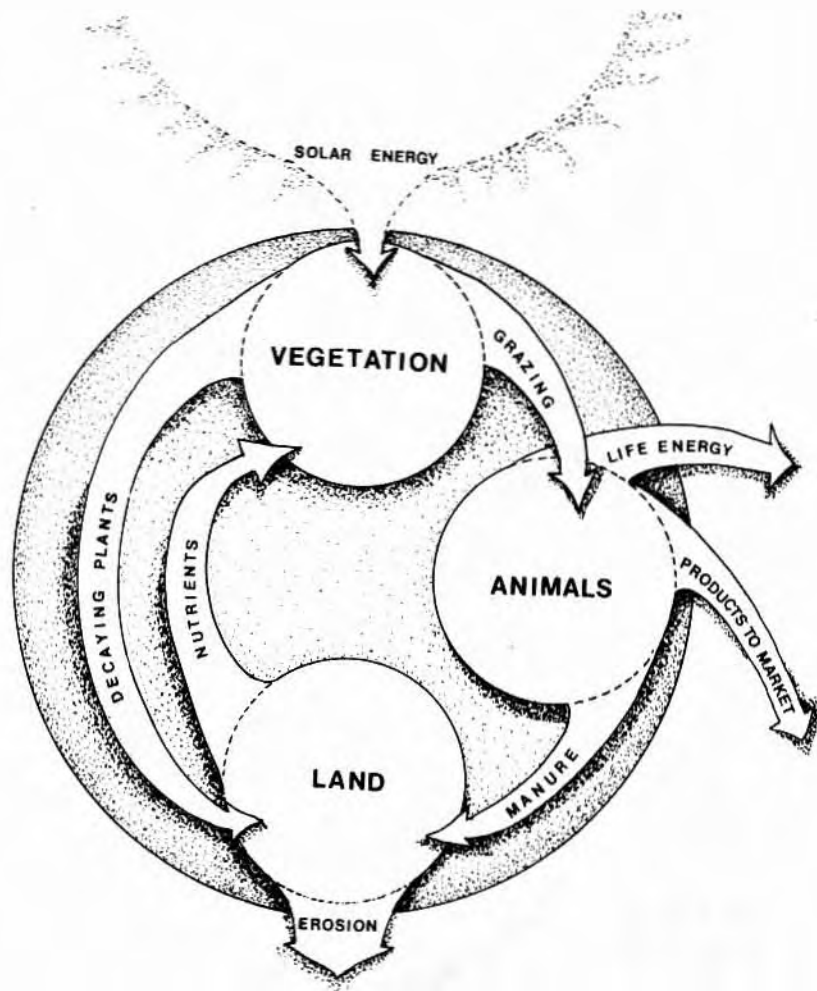
Distribution of Rainfall Diagram

Figure 2



OR:





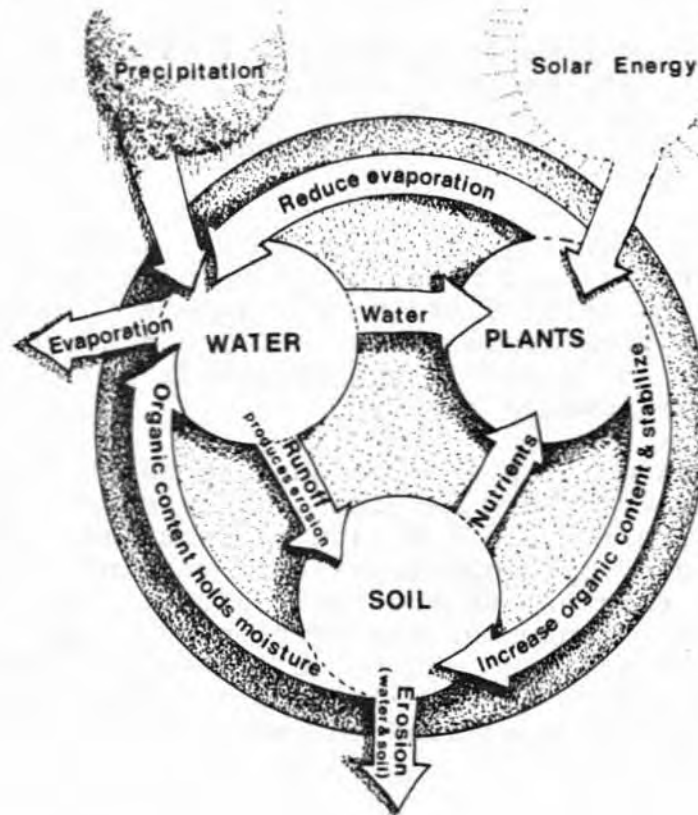
## Desertification - A Result of Imbalance

Over the past 100 years, the land-plant-water system for the land that is now Rancho Rajneesh has been seriously out of balance. Serious nutrient losses have occurred as first cattle, then sheep, were grazed on the land under short-term, maximum profit conditions. The more desirable vegetation had difficulty growing in the depleted soil and was not given adequate opportunity to reseed itself; eventually it was uprooted by the sheep. Close-cropped plants were unable to hold the surface soils in heavy rains. This situation, especially on creek banks, permitted soil erosion, which made it even more difficult for the vegetation to maintain itself. The net result was a continuous cycle of deterioration - a desertification cycle - in the quantity and quality of vegetation.

As soil and vegetation quality deteriorated, runoff and evaporation rates increased as explained by the model shown in Figure 4 below. The whole land-water-vegetation cycle has become unstable: as soil quality decreases, vegetation becomes scarcer and less water is held by either soil or plants. Now

Plant, Soil, Water and Erosion Diagram

Figure 4



the land-plant-water system is left in a state where runoff is unchecked and, over the insufficiently protected earth, it carries away the most valuable soil, i.e., the outermost layer, which is the most capable of supporting plant life and absorbing water. As a result, the landscape now looks like a natural semi-desert or desert. In its proper balanced state, the area would be covered with lush grasslands or even forests with perennial streams.

### Systems Management

With careful management, the land can be brought back to its natural, rich state. The losses - erosion, runoff and evaporation - can be minimized by stabilizing the water, soil and vegetation cycles. Corrective practices include:

- storing water behind irrigation dams and in a series of catchment ponds from which fields can be irrigated during the summer months. This is a direct, cheap and effective way to reduce runoff losses;
- reseeding areas with native grasses and other plants, thereby reversing the desertification cycle by adding water and plants at crucial points in the cycle. New vegetation will hold the runoff, reduce evaporation and enrich the soil, allowing new and more varieties of vegetation to grow;
- creating micro-climates around small catchment basins that will collect silt and hold enough water to initiate an increase in plant life. This plant life, in turn, will shade and stabilize the soil, reducing erosion in a self-renewing cycle;
- increasing or raising the groundwater table. This is a long-term process and comes about through the creation of barriers to runoff. Building stream-check dams, slowing stream flows with juniper bank lays, constructing large holding dams and general replanting all should serve to raise the groundwater table;
- recycling wastes. In an area such as Rancho Rajneesh where nutrient resources are marginal, it is essential that what has been borrowed from the land be returned. Animal wastes can be recycled by composting and spreading. Human wastes can also be returned to the land safely: drainfields can provide some groundwater and nutrients for a lawn or fruit trees; sewage effluent can be collected, treated and used for the irrigation of animal fodder; solids (sludge) can be applied to depleted land to rebuild it. These are the

most conventional ways to reinsert the nutrients into the land and vegetation cycle.

While the City is not directly involved in agricultural production or practices, it can have a large impact on the practices of its developers and residents. With the understanding of the history and ecosystems of the area in which the City is located, proper policies can be made and enforced. Just as it is essential to understand the strong sense of community that prevails among the residents, it is also crucial that the significance of ecological balance and harmony be understood. From zoning, to street design, to providing emergency services, the concept of harmony and balance with the land will be a major factor in the thinking of the City Council and officials. ✓

PLANNING

citizen involvement

planning process

intergovernmental coordination



## I. PLANNING

### 1. CITIZEN INVOLVEMENT

#### SUMMARY OF FINDINGS

Since the Spring of 1982, an operational Interim Committee for Citizen Involvement, consisting of nine men and women, has existed at Rajneeshpuram. The primary work of the committee has been to aid in the development of the City's Comprehensive Plan by educating and involving as many citizens as possible.

The election of the City Council on August 10, 1982 raised the need to create a formal Committee for Citizen Involvement (CCI). At the first City Council meeting on August 12, Ordinance No. 82-04 was adopted, which created a Citizen Involvement Program. Notice was then given that applications were being accepted to serve on the CII, and that appointments were to be made by the City Council. Written notices describing the full appointment procedure were posted.

On August 16 the Council considered the many applications received for CCI membership, and 15 people representing a cross section of geographic locations and work sectors were selected. The first meeting of the CCI was held that evening with 13 people present.

The CCI has been very active and has quickly become involved in the planning process. The Committee's primary activities have been to:

- educate citizens about the Comprehensive Plan, land use issues and the interpretation of technical reports;
- inform and involve interested citizens in the development and revision of the preliminary Comprehensive Plan;
- collect, organize and summarize citizen opinions and feelings on the critical issues;
- present citizen opinion to the City Council and ensure official follow-up.

#### ISSUES

With its incorporation the City will need full citizen input



to successfully meet their needs.

Citizen committees will require support, funding, direction and cooperation from City government in order to function effectively.

The citizens will need effective mechanisms and structures to submit their input to City government.

#### GOAL

To ensure the establishment and continuation of a citizen involvement program that will involve as many citizens as possible in the planning process.

#### POLICIES

- 1 The City shall adopt and maintain an ongoing Citizen Involvement Program (CIP) and appoint a Committee for Citizen Involvement (CCI) to ensure the implementation and evaluation of the adopted program. In appointing members to the CII, the City shall choose individuals representing a broad section of the population and geographic area.
- 2 The City shall, in cooperation with the CCI, provide the opportunity for citizens to be involved in the periodic review and update of the adopted Comprehensive Plan.
- 3 The City shall, in cooperation with the CCI, provide the opportunity for citizens to be involved in the periodic review and update of the adopted Comprehensive Plan, as well as quasi-judicial amendments to the Plan, and to review and make recommendations on proposed changes in the Plan prior to and during public hearings on such changes.
- 4 The City shall, in cooperation with the CCI, provide opportunities for citizens to be involved in the development, adoption, revision and application of implementing measures needed to carry out the Comprehensive Plan.
- 5 The City shall encourage educational programs that inform citizens about land use planning and planning issues.

#### IMPLEMENTATION STRATEGIES

##### 1. Positions on the CCI

Opportunities to serve on the CCI will be announced and publicized throughout the community and citizen appointees

will be officially and immediately notified of their appointments.

## 2. Meetings

The CCI will hold meetings every two months and more often, if necessary.

Discussion: All meetings are open to interested citizens and will be publicized widely. The minutes will be available upon request. Also, the CCI will hold regular town hall meetings at least quarterly to inform and educate citizens and to receive input on land use issues. In addition, various methods will be used to collect information, including questionnaires and surveys.

## 3. The Comprehensive Plan

The citizens, through the various citizen involvement programs, will have the opportunity to develop, review and recommend changes to the proposed comprehensive land use plans prior to the public hearing process for adoption.

Discussion: The CCI will locate interested citizens and organize meetings for people to work on collecting the body of information needed to develop and review the preliminary Comprehensive Plan. Citizens will be invited to participate through newsletters, Sunday night news, and work team meetings. Various methods to collect information will be used including sub-committees, questionnaires, surveys, and written information. Citizens will be involved in distributing and collating the information, and in formulating any recommendations for revisions.

Citizens will be informed and invited to participate in the development, adoption, revision and application of implementing measures needed to carry out the Comprehensive Plan.

Once the Comprehensive Plan has been adopted, a program for publicizing the adopted Plan will be developed using a range of available media (including newspapers, mailings, and meetings).

## 4. Distribution of Information

The CCI will publish information necessary to understand current planning and land use issues.

Discussion: Various communication methods shall include but not be limited to: newspaper articles, posters, mailings, questionnaires, displays, and an orientation pamphlet for newcomers.

Technical information, planning reports, maps and photographs necessary for informed citizen input will be made available to the public upon request.

Information regarding the roles, responsibilities and timelines of agencies that either evaluate or implement public projects or programs (i.e., road, sewer, water, etc.) will be made available to the public upon request. Assistance shall be provided to citizens to interpret and use this technical information.

Information relative to changes in land use planning will be publicized by public notice and postings. A list of persons who request notice of City proceedings will be kept and they will be notified about land use issues. Citizens will have the opportunity to review and make recommendations on proposed changes prior to the formal consideration of such changes.

#### 5. Liaison with City Council

The CCI shall collect information from the citizens of Rajneeshpuram and report summaries of opinions about current land use and planning issues.

Discussion: Using information-gathering techniques such as surveys, questionnaires, or informal residential meetings the members of the CCI will assess the prevailing opinions of the community. They will be responsive to individuals who submit new ideas, suggestions and criticism. It will then be the job of the CCI to collate and summarize this information and report it to the City Council.

#### 6. Follow-up

The CCI will follow up to ensure that an official response is given to affected citizens after making specific recommendations to the Council.

Discussion: Written or verbal response shall be made, if requested, within 30 days of receipt of the specific recommendation. All minutes, as well as the rationale used to make land use decisions, will be filed and available to the public in written, understandable form.

## 7. Annual Review

The CCI will make an annual evaluation of the Citizen Involvement Program in cooperation with the Community Development Department.

Discussion: Information will be solicited from all citizen groups. A process for quantifying and synthesizing citizens' attitudes will be developed and reported to the public, and, if necessary, to the Council in the form of recommendations for change.

## 8. Funding

Adequate funding for the CCI to meet its annual goals will be provided through the City's Community Development Department.



## I. PLANNING

### 2. PLANNING PROCESS

#### SUMMARY OF FINDINGS

This chapter describes the process that emerged in the development of the Comprehensive Plan for Rajneeshpuram, not only as this process relates to mandated requirements but also in terms of the unique human factors the community itself contributed to the planning process. Six steps in the development and implementation stages of the planning process are described and a seventh step includes a description of the review and evaluation phase.

#### ISSUES

The process that evolved in the initial stages of planning for Rajneeshpuram provided an orderly and well thought out base from which to begin developing the City. This base now needs broadening to provide for the coordination, growth and maintenance of the physical and social life of the City's citizens in keeping with statewide planning goals. Since it is a new and unique city, there exists little historical data or precedent to serve as a reference in the planning process.

#### GOAL

To establish a comprehensive, coordinated, ongoing planning process.

#### POLICIES

- 6 The City shall review annually progress in plan implementation to determine whether prescribed land use policies and implementation measures are succeeding in meeting their purpose, and through the Community Development Director report relevant findings to the City Council and Committee for Citizen Involvement. A major review and plan revision process shall be conducted every five years after the Plan's adoption in order to respond to changes in the City's resources, activities and needs.
- 7 The City shall, in developing its plans and programs, seek input from, and coordinate with, affected governmental units, agencies and special districts particularly concerning such issues as:

- environmental quality
- natural resource management
- public facilities and services
- transportation planning
- annexations
- planned unit developments

and other significant development applications as provided by specific intergovernmental agreements. Likewise, the City shall seek to review and comment on applications to and programs of other governmental units that could affect the City.

#### IMPLEMENTATION STRATEGIES

1. The City shall develop standards and initiate programs for accomplishing the directives in the Comprehensive Plan.
2. The City shall develop means for monitoring demographic, economic, public facility, land use and environmental changes to ensure the responsiveness of the Comprehensive Plan to current conditions.
3. A procedure will be provided by which owners, contract purchasers or lessees of land or the planning director, may apply for a quasi-judicial plan amendment.

## I. PLANNING

### 3. INTERGOVERNMENTAL COORDINATION

#### SUMMARY OF FINDINGS

An extensive network of communication and coordination efforts was established in the development of Rajneeshpuram's Comprehensive Plan. Included were governmental units, public agencies and various interest groups. Approximately 80 copies of the initial draft were distributed to coordinating agencies and responses were incorporated into the Plan. Culminating this effort was a series of three public hearings soliciting final input before adoption of the Plan.

#### ISSUE

The formation of government and the effective exercise of governmental responsibilities require a recognition of the interdependency existing between the institutions that man creates, and the consequent need for cooperative effort to achieve mutual and unique goals.

#### GOAL

To establish a sound base of communication, cooperation and coordination with a broad range of governmental units, public agencies and interest groups in order to strengthen the framework that will guide the City's development.

#### POLICY

- 8 The City will develop and maintain cooperative relationships with appropriate governmental units, public agencies and interest groups for the purposes of strengthening the planning process, coordinating the Plan for development with broader requirements and goals where necessary, and effectively implementing and updating the Plan as needed.

#### IMPLEMENTATION STRATEGIES

1. Agencies and governmental units that may be involved in cooperative and coordinated efforts with the City include, but are not limited to, the following:

- Federal Agencies:

- Bonneville Power Administration



Bureau of Census  
Bureau of Land Management  
Federal Aviation Administration  
Federal Communications Commission  
Fish and Wildlife Service  
U.S. Army Corps of Engineers  
Department of Housing and Urban Development  
Soil Conservation Service  
Agricultural Stabilization and Conservation Service

- State Agencies

Oregon Department of Commerce  
Oregon Department of Education  
Oregon Department of Energy  
Oregon Department of Environmental Quality  
Oregon Department of Fish and Wildlife  
Oregon Department of Economic Development  
Oregon Department of Land Conservation and Development  
Oregon Department of Geology and Mineral Industries  
Oregon Department of Human Resources (Health Division)  
Oregon Department of Transportation  
Oregon State Water Resources Department  
Public Utility Commission of Oregon  
State of Oregon Emergency Services Division  
State of Oregon Land Board  
Office of the State Fire Marshal  
Oregon State University Extension Service - Wasco County

- County Agencies

Wasco County Planning Department  
Wasco County Road Department  
Wasco County Watermaster  
Jefferson County Planning Department

- Other public and private agencies

U.S. Postal Service  
Wasco Electric Cooperative

2. Intergovernmental cooperative and coordinated effort between the City and appropriate governmental units may include the exchange of information, cooperative agreements, or active measures concerning, but not limited to, the following issues:

- proposed amendments to the Comprehensive Plan;

- land use actions;
- modifications of the Urban Growth Boundary;
- maintenance and improvement of environmental quality;
- maintenance and improvement of public health and safety;
- the monitoring of population and economic levels;
- the monitoring of natural resource availability and quality;
- the provision of adequate public services and facilities;
- the conservation of energy and use of renewable energy resources;
- fulfillment of resident and visitor recreation needs.



## SETTING AND NATURAL ENVIRONMENT

setting and climate

land

water

hazards

flora and fauna

natural features, historic areas  
and open space

buildable lands

environmental quality

## II. SETTING AND NATURAL ENVIRONMENT

### 1. SETTING AND CLIMATE

#### SUMMARY OF FINDINGS

The City of Rajneeshpuram is situated in the southeastern portion of Wasco County in Central Oregon. It lies east of the Cascade Mountains and is relatively remote from neighboring communities. The City site is divided into three non-adjacent areas that reflect a variety of landforms including rolling hills, steep slopes, deep canyons and wider valleys. The mean elevation is about 2000 feet. Several major stream courses originating in extensive nearby watersheds transect the site. Vegetative cover is sparse, reflecting in part the abuse of past overgrazing and the consequent site deterioration due to erosion. Based on available weather records, the City's climate is classified as dry-subhumid, having characteristics typical of continental highlands in which there is some moisture surplus during the winter months but the rest of the year is characteristically dry. Fourteen weather stations in or near the City are providing needed local weather data.

#### ISSUES

The City is remote and the site is composed of varied landforms.

Ongoing reliable local weather and climatological information is needed.

#### GOAL

To respond to, and utilize intelligently, the unique aspects of setting and climate in planning for the economic and social life of the citizens of Rajneeshpuram. As a major element of the environment, local weather and climatological data will be secured in order to plan adequately for shelter, transportation, communication, drainage systems, water availability, soil conservation, marketing, services, tourism and emergency services.

#### POLICIES

- 9 The City shall provide for the maintenance of relevant and ongoing weather data records.

## IMPLEMENTATION STRATEGIES

1. To secure local weather information the City will cooperate with the Weather Section of the Rancho Rajneesh farm department and/or other agencies, exchanging such technical expertise, information or material as may be appropriate for the procurement of the necessary data. Where weather data from other individuals or agencies proves inadequate to meet its needs, the City may establish its own weather recording facilities and provide for their servicing and maintenance.

## II. SETTING AND NATURAL ENVIRONMENT

### 2. LAND

#### SUMMARY OF FINDINGS

The mountainous highland upon which Rajneeshpuram is situated has a varied topography underlain by rocks of volcanic origin. The surface is presently undergoing geologic change by means of weathering, erosion and the deposition of loose materials. Current reports analyzing the agricultural potential of the three separate City areas indicate a limited amount of tillable soil and a limited potential for grazing because of past overgrazing and physiographic features.

#### ISSUES

The City contains topographic features that constrain the areas available for development.

The City contains no commercial forest land and only limited potential for tree growth.

Past land practices have degraded the land and protective measures are required to prevent continued degradation. Rehabilitation measures will be needed to reverse the process.

The land within the City is fragile and subject to erosion; therefore activities related to development must be approached wisely and with unusual care to avoid further erosion.

#### GOAL

To maintain, conserve and enhance the land resource.

#### POLICIES

- 10 All phases of site planning and land development within the City shall be guided by the following objective: to maximize the unique features offered by the specific site in terms of its natural physiographic features so that the developmental purpose can be met while at the same time minimizing the alteration and impact upon such features.
- 11 The City shall identify mineral and aggregate resources and shall: (1) protect these resources from incompatible uses that preclude development of the resource; and (2) regulate the development of these resources to minimize the impact on the natural environment and surrounding land use activities.

## IMPLEMENTATION STRATEGIES

1. The City will coordinate with private landowners and appropriate local, state and federal agencies in the investigation and implementation of land reclamation projects that:

- minimize soil erosion;
- increase vegetative cover;
- increase soil productivity;
- control undesirable noxious vegetation.

2. The City shall develop standards that require construction and development techniques to minimize erosion and landslide potential.

3. The City will encourage the planting of trees and other vegetation for:

- watershed management;
- wildlife habitat;
- soil conservation and land stabilization;
- maintenance of clean air and water;
- aesthetic purposes.

4. The City will, as part of the ongoing planning process:

- determine those areas containing potential commercial quantities of aggregates or minerals;
- develop criteria for designating aggregate or mineral sites;
- establish extraction and site rehabilitation standards.

## II. SETTING AND NATURAL ENVIRONMENT

### 3. WATER

#### SUMMARY OF FINDINGS

Two major drainage basins are available to supply the water needs of the City of Rajneeshpuram. These basins include some 100 square miles of watershed and collect a gross total of some 32.6 billion gallons of water annually. The 28 existing wells in the City or on adjacent lands of Rancho Rajneesh, with which the City has a cooperative agreement, are producing adequate amounts of good quality water. Present monitoring of this system is providing information necessary for ongoing evaluation of the groundwater resource that will be developed for domestic and industrial use. Surface water from the two drainage basins delivered through their respective riparian systems and available for catchment appears to be the major source for irrigation. It also offers an extensive viable supplement to or replacement for groundwater supplies. The Krishnamurti Dam, with a 1020-acre-foot capacity reservoir, is presently under construction.

#### ISSUES

Although the presently developed water resource is adequate to supply current City needs, further monitoring and development of the resource will be required to meet projected requirements, and means must be provided to readjust projections so that they reflect new findings.

Groundwater supplies are meeting the City's current domestic and farm-related needs. They are expected to meet future short-term needs as well.

The development of known potential surface water supplies is a viable alternative in meeting future demand for domestic and industrial use.

The development of the water resource can be carried out in such a way as to protect and enhance riparian systems and plant and wildlife habitats.

Water quality can deteriorate and quantities can diminish at the source with inadequate protection.

Surface water channels and possibly groundwater aquifers extend across ownership and political boundaries, thus encour-



aging cooperation across these boundaries to achieve effective use, management and conservation of the resource.

#### GOAL

To provide and maintain a water supply of an adequate quantity and quality for all beneficial uses.

#### POLICIES

- 12 The City shall, in cooperation with the Oregon State Water Resource Department, the Department of Environmental Quality, other affected government units, and private landowners, develop and maintain a water management program that will:
  - include initial resource evaluation as well as provision for ongoing monitoring and reporting of the ground and surface water resource;
  - provide for measures to enhance wildlife habitats and riparian vegetation;
  - provide for measures to increase the water retention capabilities of the watershed, stabilize the soil, recharge groundwater supplies and increase the flow of perennial streams and creeks.
- 13 The City shall, in cooperation with private landowners, wherever possible utilize groundwater for domestic, commercial and industrial use.
- 14 The City shall, in cooperation with private landowners, meet the water requirements of the community by the use of surface water resources where groundwater resources are shown to be inadequate or threatened.

#### IMPLEMENTATION STRATEGIES

1. The City shall require that immediate corrective action be taken to rectify any detrimental change in either the quantity or quality of the water resource as determined by the monitoring program.
2. The City will encourage the protection of major stream corridors during all phases of development, including the maintenance of streamside vegetation and the utilization of proper erosion control/anti-runoff measures.

3. The City shall be in compliance with all state and federal regulations for the conservation and protection of surface and groundwater resources from point and non-point source pollution and will cooperate with neighboring landowners and affected governmental units to achieve these ends.

4. The City will cooperate with private landowners in the identification and development of water catchment reservoirs to:

- retain winter runoff for year-round use;
- recharge groundwater supplies;
- enhance vegetative and wildlife habitats;
- serve as a source of irrigation water;
- supplement potable water supplies if needed.

5. The City shall ensure that all water management facilities and activities requiring permits have prior permit approval before commencement and that they conform to state standards and guidelines.

6. The City, in cooperation with private landowners, will have as the object of any further well construction in the Jesus Grove area the procurement of additional geological information or the performance of aquifer capacity tests. If the need arises and groundwater capability is established, production wells will be located with care to spread the drawing load of the aquifer.

7. Future development of shallow bedrock wells in side canyons of the Jesus Grove area will be limited by the City, in cooperation with private landowners, to low production levels unless need and monitoring indicate a greater potential.

8. The City, in cooperation with private landowners, will explore additional potential groundwater resources in upper Desiderata Canyon, Farid Creek and lower Suzuki Canyon for possible development to serve the Desiderata Canyon area.

9. The City, in cooperation with private landowners, will locate and construct additional exploration/production wells in the Gautam the Buddha Grove area to obtain adequate groundwater supplies.



## II. SETTING AND NATURAL ENVIRONMENT

### 4. HAZARDS

#### SUMMARY OF FINDINGS

There is little risk of significant seismic activity at Rajneeshpuram, and associated ash fallout might be the only immediate result expected from volcanic activity. Potential ground movement factors such as soil type and slope stability have been evaluated and engineering recommendations made relating to such factors and their possible effect on development and construction. Estimates of peak flood volumes for 100-year storms have been made for specific sites within the City and recommendations have been included for reducing hazard associated with such storms.

#### ISSUES

Potential natural hazards capable of significantly affecting Rajneeshpuram appear to be limited to ground movement and flooding. Siting for buildings must consider both these risks and include appropriate safeguards as needed.

#### GOAL

To protect life and property from potential natural disasters and hazards.

#### POLICIES

- 15 The City shall permit construction and densities in areas with known flood or geological hazards, or on soils rated severe hazard soils including shrink-swell potential, or on soils that provide weak foundation support, only when such hazards are satisfactorily addressed by the developer in the form of adherence to recommendations made through engineering analysis, review and ordinances.
- 16 The City shall, in cooperation with private landowners, develop a flood control program including streambank stabilization measures and the development of reservoirs, lakes and holding ponds to regulate the flow and volume of water runoff.

#### IMPLEMENTATION STRATEGIES

1. The City shall identify on the plan map the potential natural hazard areas within which site-specific investigations by a qualified engineer shall be required prior to

development approval. See Buildable Land maps in Volume 1, Maps 24, 25 and 26.

2. The City shall not approve development within identified natural hazard areas unless safeguards appropriate to prevent loss of life and property damage are provided.

3. The City shall require that adequate provision be made for surface and groundwater drainage.

4. The City will monitor creek runoff in order to:

- determine maximum flood potential,
- develop design standards to determine size and type of drainage systems and creek crossings.

5. The City shall identify potential flood hazard areas. Buildings shall not be situated in potential flood hazard areas unless appropriate safeguards protecting life and property are provided.

## II. SETTING AND NATURAL ENVIRONMENT

### 5. FLORA AND FAUNA

#### SUMMARY OF FINDINGS

Site degradation resulting from past overgrazing again emerges, in this case seen in its effect on native plant and animal habitats and populations. This effect, or process, when connected with the climatic overlay at Rajneeshpuram, is referred to worldwide as "desertification." Areas once containing climax species of productive annual and perennial grasses and forbs are overgrazed; erosion sets in, surface water supplies diminish, habitats deteriorate, plant and animal populations shrink, and undesirable species encroach. Three measures have been put into effect already in and around the City to stabilize and begin a reversal process: grazing has been limited, riparian systems are undergoing rehabilitation and open space areas have been built into the Plan. An inventory base established in 1982 exists for continuing to monitor plant, mammal, bird, reptile and amphibian populations. One plant species that is on the federal endangered list has been found. Statewide Planning Goal Four (Forest Lands) is not applicable as no commercial forest lands occur within the City.

#### ISSUES

Overgrazing and consequent erosion has depleted the amount of food, water and cover available to wildlife; this is reflected in lower animal and plant populations.

One plant species that is on the federal endangered list has been found.

Undesirable plant species have occupied overgrazed sites.

There presently exists no means of public education concerning the preservation of flora and fauna in and near the City.

Cooperation across boundaries is essential for the coordination of wise plant and wildlife management.

#### GOAL

To protect, maintain and encourage animal and plant life as a necessary component of life in the City and the surrounding area.

## POLICIES

- 17 The City shall protect native plant and animal populations and shall provide for the preservation and enhancement of their respective habitats.

## IMPLEMENTATION STRATEGIES

1. A primary objective of open space designation within the City will be that of preservation of plant and animal habitat.
2. No hunting or fishing shall be permitted within the City limits.
3. The City will continue to study and monitor flora and fauna resources, particularly aimed at those species that may be endangered.
4. The City shall designate as particularly sensitive to human encroachment those sites within the City limits on which Castilleja xanthotrica habitat has been identified and shall, where necessary, further protect the habitat by providing suitable buffers from potentially conflicting land uses and activities.
5. The City will monitor possible nuisances or hazards resulting from overpopulation of any species of plant or wildlife. Appropriate action will be taken in cooperation with local, state and federal agencies as well as adjacent landowners to control such populations effectively, Biological controls rather than chemical controls will be used wherever possible.
6. The City will provide opportunities to inform and educate the public on conservation, nature and wildlife, and the wise and harmonious use of the natural resources.
7. The City shall cooperate with private landowners and local, state and federal agencies to preserve and encourage beneficial plant and animal life.
8. The City shall limit off-road motorized vehicular use to:
  - emergency vehicles;
  - necessary construction vehicles and equipment;

- vehicles on official City business;
  - vehicles having received prior permission from the office of the Community Development Director or other designated City offices.
9. The City shall encourage landscape planting which enhances available supplies of food and shelter for wildlife.
10. The City shall recognize and protect as particularly favorable habitat for wildlife and bird populations the old Kabir Reservoir site in portions of the S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  of Sec.29 and the N $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$  of Sec.32, T8S, R19E W.M.
11. Domestic pets shall be allowed in the City only if under the control of the owner or other responsible person at all times.





## II. SETTING AND NATURAL ENVIRONMENT

### 6. NATURAL FEATURES, HISTORIC AREAS AND OPEN SPACE

#### SUMMARY OF FINDINGS

Lands desirable for open space designation within Rajneeshpuram include those lands that are undevelopable because of topographic severity; native animal and plant habitats; scenic viewsheds and sites and riparian systems. Multiple purposes and benefits are associated with the preservation and protection of open space: improvement of air quality, noise abatement, visual buffering, soil stabilization, natural land rehabilitation and erosion control, educational and scientific study, secondary watershed and groundwater recharge and low impact recreation use. Traces of a stage stop that was once part of The Dalles Military Road extend from non-City lands north of Desiderata Canyon into the road right of way which is within City limits.

#### ISSUES

The intrinsic values associated with certain lands within Rajneeshpuram require that an open space system be created that will preserve and protect such values, thus contributing both to the quality of the environment and to the quality of life of the City's citizens.

#### GOAL

To preserve and protect the integrity of natural features and the environment through the identification and establishment of a system of open space lands.

#### POLICIES

- 18** The City shall establish an open space land system aimed at providing the following benefits: improvement of air quality; noise abatement, visual buffering, soil stability, natural land rehabilitation and erosion control, educational and scientific study, secondary watershed and groundwater recharge and low impact recreation use.

#### IMPLEMENTATION STRATEGIES

1. The City will continue to inventory and locate potential natural, cultural or historical resources requiring protection under open space designation.

2. The City will preserve as open space those lands that are found to be unbuildable.

3. The City will preserve under open space designation the higher elevations along portions of stream corridors, for their visual access to surrounding viewsheds.

4. If during any phase of development within the City archaeological resources are encountered, the City shall require the cessation of ground-disturbing activities and compliance with the guidelines and procedures of the Advisory Council on Historic Preservation (36 CFR Part 800), the provisions of Section 106 of the National Historic Preservation Act (16 USC, Section 47of), and the National Environmental Policy Act (42 USE 4321-4327) in dealing with such resources.

5. The City recognizes the historical significance of the rock retaining wall associated with the old Dalles Military Road stage stop and situated at the edge of the present road right of way in the SE¼ Sec.27, T8S, R18E between Desiderata Canyon and Gautam the Buddha Grove. The portions of these remains that are within the road right of way are within the City limits and will be protected through the application of the City's Open Space designation and zone district.

6. Where conflicting resource values are identified on Open Space lands the economic, social, environmental and energy consequences of the potential various uses shall be determined and prioritized and programs developed to achieve the goal.

## II. SETTING AND NATURAL ENVIRONMENT

### 7. ENVIRONMENTAL QUALITY

#### SUMMARY OF FINDINGS

Recognized in this chapter is the need for ongoing monitoring and evaluation of conditions that might adversely affect environmental quality and harmonious land use. Specific existing and potential influential factors associated with air and water quality as well as present measures aimed at reducing their negative effect are discussed. Noise control is also discussed in the same context. The need for close cooperative effort with governmental and environmental agencies is recognized.

#### ISSUES

Ongoing monitoring and evaluation of factors influencing air, water and land quality are required in order to maintain and/or improve existing levels.

Based on the monitoring and evaluation programs, specific corrective measures are required to abate or control factors negatively influencing air, water or land quality.

All programs aimed at maintaining air, water and land quality most conform to applicable state and federal standards relating thereto.

#### GOAL

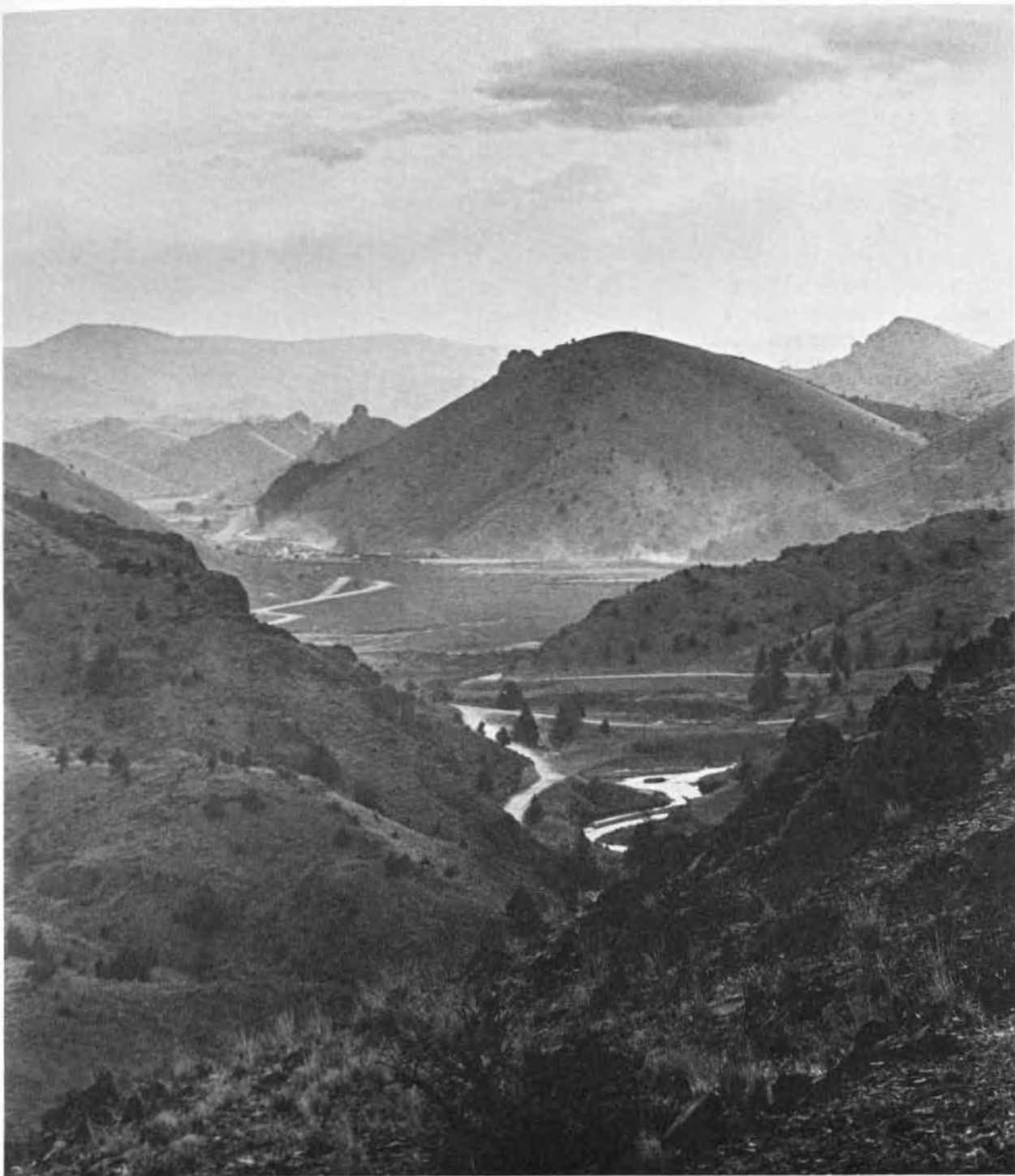
To maintain and improve the quality of the air and water resources of the City and its surrounding environment.

#### POLICIES

- 19 The City shall manage its economic and physical growth in such a manner as to maintain and insofar as possible improve environmental quality.
- 20 The City shall ensure that new developments are designed and sited in a manner that meets DEQ noise standards and that "noise sensitive properties" are not adversely affected by such uses and activities.
- 21 The City shall ensure that air quality is maintained free of excessive dust levels.

## IMPLEMENTATION STRATEGIES

1. The City shall adopt and utilize criteria consistent with state and federal air, water and land quality standards to ensure that land uses and activities comply with such standards and do not exceed the carrying capacity of the local air, water and land resources.
2. The City will cooperate with the State Department of Environmental Quality, the Federal Environmental Protection Agency, and other relevant agencies in maintaining and improving air, water and land resource quality.
3. The City will coordinate with the Department of Environmental Quality in the development of programs that relate to noise control and that are relevant to local conditions.
4. The City shall require that all activities that may generate free-floating dust in sufficient quantities to materially diminish surrounding air quality have adequate planned control measures prior to approval and/or commencement of such activities, and that such measures be utilized during all periods of dust production.
5. The City will control land use adjacent to the airport and aircraft approach surfaces to avoid conflicting use. Additional noise insulation standards may be applied to residential and other development within these areas if monitoring indicates noise impact above moderate levels as defined by the Aeronautics Division of the Oregon State Department of Transportation.



## URBANIZATION

economy and population growth  
urban growth boundary  
land use plan  
growth management  
annexation

### III. URBANIZATION

#### 1. ECONOMY AND POPULATION GROWTH

##### SUMMARY OF FINDINGS

Sheep and cattle ranching has been the traditional major economic activity taking place within the area. However, this form of agriculture could not serve as an economically viable base for the City because of limited agricultural land and the eroded condition of the land. Instead, a diversified form of agriculture that is more intensive and focuses on a wide variety of vegetable, fruit and animal products is being undertaken. For example, greenhouses will be utilized to extend the growing season to twelve months a year.

- ✓ Agricultural products will be processed in the area, used locally and marketed throughout the state, resulting in a more productive use of the land. This will profit the City, the county and the state.

Diversification of the economy will take place through the development of manufactured products, commercial activities and educational programs. The Rajneesh Neo-Sannyas International Commune plans to develop a wide range of businesses and facilities.

The recent First Annual World Celebration, a 25-day religious event, alone brought more than \$3 million into the state economy. In the past year approximately \$27 million worth of equipment, materials and services have been purchased entirely in Oregon. Continuing needs for a growing and affluent community will be a significant benefit to the economic base of Oregon.

A broad human resources base presently exists within the community to provide a wide variety of economic activities. As population increases to the projected 3,713 for the year 2002, the diverse skill levels of residents will be maintained. During the next twenty years, the economic base will shift from construction and capital investment to the provision of services. This is reflected in the projected change in the employment multiplier from 1.7 in 1987 to 2.0 in 2002. Rajneeshpuram's isolated setting and size also influence the establishment of this basic support multiplier.

The communal character of residents living in Rajneeshpuram creates unique opportunities for development of the City and its economic enterprises.

## ISSUES

A major element in the development of a sound economic program for the City of Rajneeshpuram is the rapid and broad diversification of its economic base.

There is no long-term history of settlement in the area upon which to project population estimates unique to Rajneeshpuram. However, current and planned population characteristics in conjunction with the projected economic investment plan provide a base for economic diversification.

The City will need to permit and provide for a full range of economically viable facilities and activities necessary to develop a strong economy.

## GOAL

To encourage economic development of the City and to develop and maintain the strength and diversity of the local economy through the orderly and efficient use of its economic, human, and natural resources while contributing to the general well-being of the regional and state economies.

## POLICIES

- 22 The City shall encourage and promote economic development that is compatible with the resources and goals of the community.
- 23 The City shall monitor, assess and, if necessary, revise its plan to accommodate any changes in projected community growth.

## IMPLEMENTATION STRATEGIES

1. The Comprehensive Plan shall provide land use opportunities for development of a diversified economic base.
2. The City shall require the timely, orderly and efficient provision of public facilities and services in conjunction with private investment decisions.
3. The development approval process shall be designed to minimize delays in the processing of development applications while ensuring protection of the natural resource base and compatibility with the Comprehensive Plan.



### III. URBANIZATION

#### 2. URBAN GROWTH BOUNDARY

##### ANALYSIS

The Urban Growth Boundary (UGB) defines the spatial limits of growth and development to the year 2002. In a sense, the application for incorporation and its subsequent approval by Wasco County has included a tacit analysis and acknowledgement of the extent of the City's capacity for geographic growth.

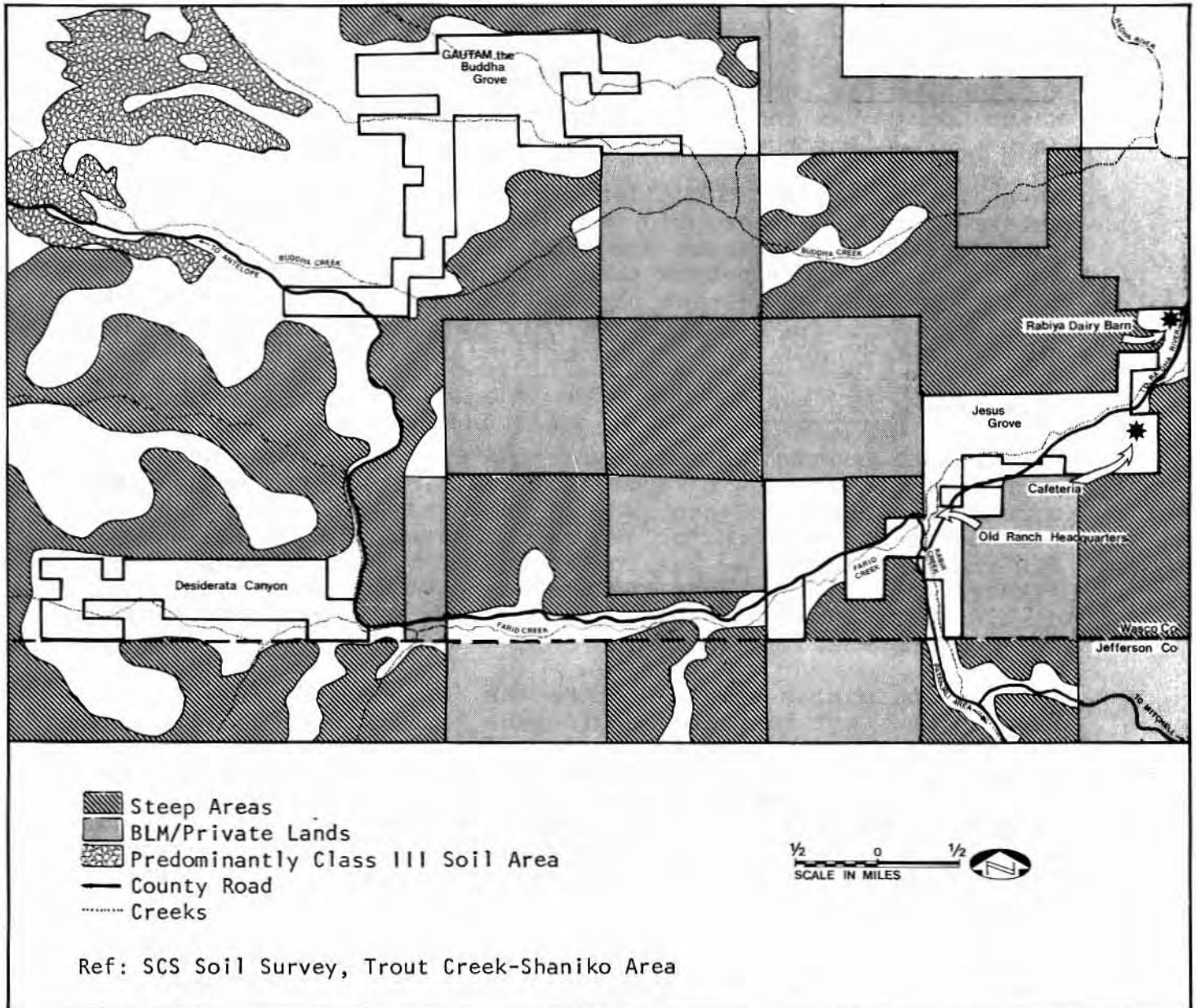
An analysis similar to but less formal and extensive than this determination was made prior to the formulation of the City's incorporated boundaries. The three areas, their shape and extent, were determined on the basis of several site choice factors. (See Map 1, next page.) The area included within the boundary was based on estimated buildable lands required to meet the projected needs and concepts.

##### Site Choice Factors

The unusual boundaries chosen for the City of Rajneeshpuram require explanation. Like most cities, initial growth started around an established center - in this case, the old ranch headquarters consisting of two ranch houses, a barn and a few sheds. Located at the confluence of Kabir and Farid creeks, the old ranch was the obvious site for initial development, as it already offered shelter, water, electricity and telephone service.

Farming activities started to the east of the Jesus Grove area on the fertile fields beside the Radha River. The fields where Rabiya Dairy barn is now located were chosen for a vineyard, a temporary chicken yard and other agricultural uses. The next site chosen was for the cafeteria; it was selected because it was relatively flat (the cafeteria is 100' x 100'), open, and had a beautiful view of high rocky cliffs nearby. This marked the extent of development to the east.

About 3/4 of a mile to the south of the existing ranch buildings, in the Jesus Grove area, the Kabir Creek valley becomes very constricted. The Farid Creek valley narrows about 1/4 miles to the west. This three-legged valley includes bottom land that is 100 - 250 yards wide at the most with narrow shoulders or sloping areas confined by steep hills.



Altogether, the buildable land in the Jesus Grove area totals 298 acres wedged between the steep hills and the bottom land. This land was deemed insufficient for projected needs. The next nearest area to be evaluated for inclusion within the City, considering that the main access road into Jesus Grove is the county road from Antelope (Tao Road) was Desiderata Canyon (Vanderhoof Canyon). This is an open south-facing valley drained by a tributary of Farid Creek. This valley stretches west for some two miles before it gets very steep and rocky. Even within the first two miles it is interlaced with steep slopes and very clayey soils. It appeared that this valley, with 199 buildable acres, was suitable for residential use and perhaps some other scattered uses that required small structures and could complement the serene, isolated quality of this area.

Both Jesus Grove and Desiderata Canyon have use limitations because of terrain and the amount of buildable land. The nearest suitable and available land in this same county road access corridor was found in the Dry Creek area, now known as Gautam the Buddha Grove. 568 acres of buildable land there was open, more gently rolling than either Desiderata or Jesus Grove, and protected on the north from both storm winds and any visual imposition on the neighboring farms. It slopes generally downward to the east with magnificent views over and beyond the Radha River basin. Further to the west, the SCS Trout Creek-Shaniko Soil Survey indicated the presence of some Class III soil that was avoided by staying to the east. On the east, the land narrowed and dropped towards the aggregation of streams leading into Gautam the Buddha Creek itself. The land in Gautam the Buddha Grove area was chosen for its suitability for larger, more concentrated development that was not possible in Desiderata and Jesus Grove.

The three areas, with the connecting road right of way, total 2135.5 acres. Each of the three areas seemed to provide siting and development opportunities, i.e. each will have a function and character of its own that fits into an integrated whole.

The boundaries of each of the three areas were chosen to include land potentially of value to the municipality. The land chosen reflected existing development and avenues of growth and avoided as much as possible any agricultural soils. The boundaries of each of the three areas were intentionally "gerrymandered" to exclude as much Class VI and better soils as possible.

Century West Engineering of Bend, during their geotechnical study of Gautam the Buddha Grove, observed that there were some discrepancies between what was found on-site and what was

indicated on the Soil Conservation Service soil capability map. These SCS maps were not intended to be site specific but were meant to show predominant characteristics in the Trout Creek - Shaniko regional study.

After establishing the City limits, in order to determine more accurately the location and extent of soil types, a registered soil scientist, Terry Rahe from CES, Ltd., was asked to study Gautam the Buddha Grove. The revised soil mapping conclusions appear under the "Natural Environment/Land" section of this Plan. Whereas only Soil Classifications VI, VII and VIII appeared in the SCS maps for the Gautam the Buddha Grove area, Mr. Rahe found more Class VII than expected and also indicated two small pockets of Class II soil (Willowdale Loam).

As an indication of either the overall limited amount of Class I to V soils or the founders' success in limiting its inclusion within the City boundaries, less than 6% of Rajneeshpuram is located on Class I to V soils, and more than two thirds of the entire City is located on soil considered Class VII or VIII.

The location of the City with respect to township and sections is shown on the map on Page M2. The legal description of the area that the City occupies can be found in the appendix to Volume 1.

#### Urban Growth Boundary Determination

To establish the amount of needed land to accommodate projected growth, and thus to make a UGB determination, the seven factors of Goal 14 were followed:

#### Factor 1: The demonstrated need to accommodate long-range urban population growth requirements consistent with LCDC Goals.

The population was projected based on population growth trends in the past year, on the interest expressed by many during the past year to live at Rajneeshpuram because of the unique religious and social lifestyle, and the potential economic growth made possible by the skill levels of existing and potential residents, the agricultural capabilities of the land and the desire of the residents here to flourish and grow as a well-balanced, integrated and economically resourceful community. Based on an eventual population of 3,713 plus an average of perhaps 500 short-term visitors expected to participate in various scientific, educational and religious programs, and perhaps some 200 daily visitors, the required support services and their land needs were projected. The variety of income-oriented shops and businesses, industries, services, offices and facilities were also examined for their land requirements.

The first step in determining the amount of land needed for development was to determine the non-buildable land. All incorporated lands with a 30% slope or greater, or those in a flood hazard zone, or those presently occupied by roadways, creekbeds or reservoirs were assumed to be non-buildable. (See "Buildable Lands" in Volume 1 for an analysis.) Further, all land inhabited by the federally endangered plant species *Castilleja xanthotricha* (yellow-haired Indian Paintbrush) was designated as restricted. However, this plant occurs generally on hillsides and was found to be within lands designated as open space by virtue of steep slope. Those few spots where the plant was found on flatter ground were then, for that reason, designated as "non-buildable" Open Space lands. All non-buildable lands were designated Open Space. A total of 1,070.5 acres of the total incorporated lands was so designated.

The economic activities to take place and the population which will be directly or indirectly engaged in their support have been translated into quantitative and qualitative requirements for land. The results of the analysis and projection methodology demonstrated a need for the following quantities of land by general land use category.

#### Commercial

The methodology used yielded a ratio of two acres (net) per 100 persons, or 88 acres. Most of the commercial activity will occur in Gautam the Buddha Grove, which will serve as the center of the City, but about one-third of the commercial requirements will be located in the other two areas. See calculations below:

Buddha Grove:	$88 \text{ acres} \times \frac{2}{3} \times 1.4 = 82$	gross acres
Jesus Grove & Desiderata Canyon:	$88 \text{ acres} \times \frac{1}{3} \times 2.0 = 57$	
		139 gross acres

where 1.4 and 2.0 are conversion factors to convert net acres to gross acres. (See "Buildable Lands" chapter in Volume 1.) So, 139 acres of gross buildable land will be required for commercial use.

#### Industrial

A process similar to that used in arriving at commercial land requirements was employed to determine industrial land requirements. A total of 130 gross acres have been projected to meet

the City's industrial land use needs.

Community Services

The amount of land for education, health, cultural, domestic services and administrative purposes was projected at 214 gross acres.

Recreation

Total gross acres required to accommodate a range of parks, camping, festival and recreation needs was projected at 145 acres.

The following table summarizes the City's future land use requirements.

CITY OF RAJNEESHPURAM  
FUTURE LAND USE REQUIREMENTS\*

Residential	437 acres
Commercial	139 acres
Industrial	130 acres
Community Services	214 acres
Recreation	145 acres
	<hr/>
	1,065
Open Space	1,070.5
	<hr/>
Total	2,135.5 acres

\* gross acres

Factor 2: Need for housing, employment opportunities and livability.

To house a projected population of 3,713 by the year 2002 will require the addition of 1,076 housing units to the present stock "at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density."  
(LCDC Goal 14)

A more subjective need is that of livability. One indicator is the amount of recreation and open space provided in the City.

In Rajneeshpuram there are 1,070.5 acres of open space and 144 acres of parks, recreation and camping areas. This is 56.9 percent of all land within the City. Another indicator is the educational and cultural opportunities provided and described in the Plan. And finally, livability is indicated by the intentional settlement of the residents and the subsequent incorporation of the City.

Factor 3: Orderly and economic provision for public facilities and services.

The development concepts embodied in the Plan; i.e. the use of Designated Planning Areas, generalized land use, transportation, water and sewer services, energy and communications plans and development phasing are designed to assure orderly and phased growth. Further, the development code specifies standards for providing services and a procedure for assuring compatibility between development proposals and the Comprehensive Plan.

Factor 4: Maximum efficiency of land uses within and on the fringe of the existing urban area.

The area to be urbanized is largely undeveloped and, therefore, does not constitute an "existing urban area". This factor alludes to maximum development of land within urban areas as a measure of whether leap-frog development is occurring. The phased provision of services and other measures provided in the Plan assure efficient use of the land. Further, the Community Development Director will maintain and update an inventory of facilities and services and report to the Council periodically on the state of the Plan.

Factor 5: Environmental, energy, economic and social consequences.

Based upon the information and analyses in the Plan, the carrying capacity of the air, land and water resources are sufficient to accommodate the projected urbanization. The City will plan for and regulate all development in such a manner as to have a minimal impact upon the natural environment while maximizing the economic and social benefits.

The City will be developed in an energy-efficient manner from its inception. Energy-efficient housing design construction techniques and siting to take advantage of such factors as maximum solar exposure will be used. The community is presently exploring the use of alternative forms of energy. In addition, the demonstrated reliance of the community upon bus service and car pooling for inter-City as well as intra-City travel further reduces energy consumption.

The economic consequences of urbanization are great. The City will serve the surrounding rural agricultural area, which will help restore the agricultural potential of Rancho Rajneesh and increase the flow of food products through local as well as state markets. Agricultural production in addition to the projected diversified economic activities will create demand for raw materials, equipment and housing throughout the region and state.

Wasco County will benefit from additional tax revenues generated by the dramatically increased assessed valuation of the area to be urbanized.

Urbanization will also have a positive social impact upon the area as a whole. The economic activities taking place within the City will increase the flow of goods required from local and regional markets, thereby having a positive effect on employment and income at a time when greater unemployment is the rule in most Oregon communities. Also educational, medical, professional, cultural and entertainment facilities within the City will greatly increase these resources for the entire area.

Factor 6: Retention of agricultural land as defined, with Class I being the highest priority for retention and Class VI the lowest priority.

Of the 2,135.5 acres within the City limits, 68% are Class VII and VIII soils, 26% are Class VI and 5% are Class II to V. There are no Class I soils.

Slopes of 20% or greater prevail throughout most of the area. While the incorporation boundaries reflect efforts to preserve the maximum amount of available agricultural land for agricultural production, it was found that a limited amount of Class VI soils was necessary to assure an adequate supply of buildable lands having a slope of less than 20%. In addition, evidence in the record indicates that these Class VI soils have been historically over-grazed and most are in poor to very poor condition, requiring extensive restoration.

In addition, the inclusion of these Class VI soils was necessary to provide housing and other public facilities and services necessary to support the agricultural work force of nearby agricultural activities. By supporting this work force, further reclamation of adjacent farm lands for agricultural production is possible.

These soils, which are the lowest priority of agricultural land, are needed and appropriate for inclusion within the City's Urban Growth Boundary.



Factor 7: Compatibility of the proposed urban uses with nearby agricultural activities.

The City is isolated from the main agricultural production taking place on Rancho Rajneesh. Gautam the Buddha Grove and Desiderata Canyon are completely isolated from farming and are bordered mostly by marginal grazing land that is currently not in use. The Jesus Grove area originally was the center for farm activities. However, agricultural development is currently taking place in the Patanjali Lake area of Rancho Rajneesh and the ranch's farm plan calls for the Lake area to be the most developed agriculturally. Those areas that will continue to be used near Jesus Grove are clearly defined topographically from the areas being considered for development.

✓ Jesus Grove will remain the agricultural service center for the ranch and will have the least intensive development of the three districts. Only 32% of the total acreage of Jesus Grove will be developed compared to 78% in Gautam the Buddha Grove and 45% in Desiderata Canyon.

ISSUES

- To provide orderly growth in a new City, careful monitoring of development will be needed to ensure that projected land use requirements provide a reasonable base to accommodate development.
- Development within the UGB should be sensitive to its relationships to the surrounding agricultural area on Rancho Rajneesh.

GOAL

To define the City's urban growth area and to guide development within that area in an orderly, timely and efficient manner, and to maintain the UGB in a manner consistent with the LCDC goals.

POLICIES

- 24 ✓ The City will establish, adopt and maintain an Urban Growth Boundary to identify and separate urbanizable land from rural land.
- 25 Maintenance of the UGB shall be based upon consideration of the following factors:
  - Demonstrated need to accommodate long-range urban population growth requirements consistent with LCDC goals;
  - Need for housing, employment opportunities and livability;

- Orderly and economic provision for public facilities and services;
- Maximum efficiency of land uses within and on the fringe of the existing urban areas;
- Environmental, energy, economic and social consequences;
- Retention of agricultural potential;
- Compatibility of the proposed urban uses with nearby agricultural activities.

#### IMPLEMENTATION STRATEGIES

1. Establish an Urban Growth Boundary (UGB) based upon the seven factors in Statewide Planning Goal 14.
2. The City shall coordinate the development of all necessary public facilities and services within the Urban Growth Boundary through the process of reviewing and approving a Concept Plan for each DPA, and site plans for major public facility structures, e.g. sewage treatment plants, water reservoirs.
3. Public facilities and services of an urban type and level shall not be extended to serve lands outside the Urban Growth Boundary. However, a public facility (e.g. water reservoir) itself may be located outside the UGB to serve land within the UGB, so long as services are not provided to land outside the UGB.
4. The City shall monitor growth to ensure that the balance of projected land uses is maintained and periodic review shall include an evaluation of the adequacy of the UGB.
5. The City shall follow the procedures and requirements set forth in Statewide Planning Goal 2, Part II, for Goal Exceptions, in amending its Urban Growth Boundary.
6. The UGB will not be extended unless such extension complies with all applicable Statewide Planning Goals.
7. The City shall coordinate with Wasco County all land use planning activities on lands outside the City, abutting the UGB.

### III. URBANIZATION

#### 3. LAND USE PLAN

##### ANALYSIS

##### A. General Concept

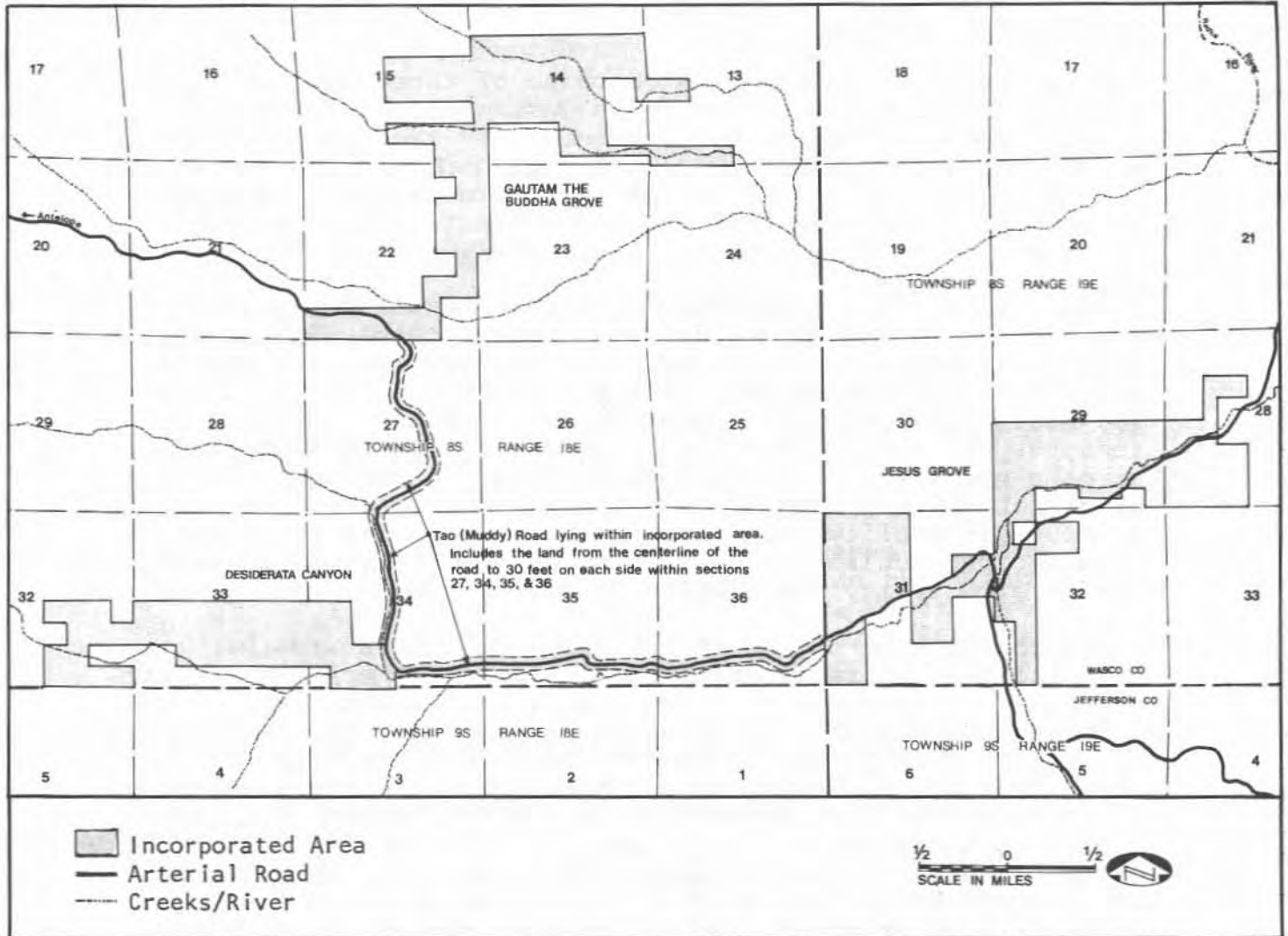
The City of Rajneeshpuram is composed of three distinct geographic districts, referred to as Jesus Grove, Gautam the Buddha Grove and Desiderata Canyon. They are connected by existing Wasco County Road No. 305, now called Tao Road. The three planning areas are physically separated and represent distinct environments, economic functions and aesthetic climates. (See Map 2 on the following page.)

Gautam the Buddha Grove Planning Area, the northernmost of the three planning areas, contains approximately 726 acres. Maximum elevations are in the range of 2600 feet and the area is characterized by gentle slopes of 10 - 30%. Numerous small hillocks with slopes of 20 - 30% are typical features in this planning area. Seasonal and intermittent streams generally drain in a west-to-east direction. The elevation and exposure to southwesterly winds serve to improve air quality; wind moves easily over this terrain, reducing particulate matter, which is the principal component of air quality degradation in this region.

Views to the east and south are spectacular features of this site and the generally northwest-to-southeast orientation of the ridges offers south-facing slopes with significant opportunities to utilize solar energy in building design and siting. The proximity of Gautam the Buddha Grove to the entrance to Rancho Rajneesh and the regional highway system, its more gentle terrain and its higher percentage of buildable land dictated that this planning area should be the principal site for development. Here would be the location of City government and most of the community's non-farming industrial enterprises. A community center and a secondary education building will be located here. A retail area offering a range of shops and services, entertainment and other facilities in a planned multi-use area will be provided at this site. There also will be visitor, guest, tourist and contractor accommodations. Housing for the majority of the projected population and educational program participants will also be located here. In summary, Gautam the Buddha Grove will become the "town center" for Rajneeshpuram. There are 568 gross buildable acres in Gautam the Buddha Grove, and it is presently undeveloped.

CITY OF RAJNEESHPURAM - City Boundary Map

Map 2



Desiderata Canyon is two miles south of Gautam the Buddha Grove and, with 445 acres, it is the smallest of the planning areas. Elevations in this canyon environment range from 2000 to 2300 feet and slopes of 35% and more are common. The canyon has an east-west orientation that funnels prevailing westerly winds through, creating a relatively comfortable summer environment while being somewhat more protected from winter storms than Gautam the Buddha Grove. Available building sites here are smaller and steeper than in either of the other planning areas, and its linear configuration lends itself to low-to-medium density development. Its beauty and isolation dictate uses of a more aesthetic nature.

The economic base of Desiderata Canyon is envisioned as an artists' and craftspersons' working and living space. Here these artisans can practice and perfect their skills and talents in a peaceful environment, producing goods for sale in their shops and in retail outlets elsewhere in the City. Their work also can be exported to more distant markets.

The most remote area, at the west end of the canyon, will be the site of a religious retreat and study center for contemplation in a conducive environment.

There are 199 gross buildable acres in Desiderata Canyon; five single-family dwellings are located near the mouth of the canyon at present.

Jesus Grove is located two and a half miles due east of Desiderata Canyon and is the largest planning area, with 931 acres. Elevations are in the range of 1600 to 1800 feet, with steep rocky slopes of 35 - 85%. These steep slopes, some of them sheer cliffs, create a sheltered valley offering spectacular views of nearby hills. The more north-south orientation of Jesus Grove and the high hills around it shield the lower elevations from prevailing winds. The lower elevations and the more enclosed topography produce temperatures that are hotter in summer and more temperate in winter than those of the surrounding countryside.

✓ Jesus Grove is the center of present farming and farm support operations, and the site of principal development activity to date. The Comprehensive Plan proposes to continue and expand that function, adding to it service areas and a retail area containing shops for the sale of processed farm products such as cheese, wine, ice cream and herbal products as well as fresh vegetables. Residential densities here are the lowest in the City, as the steep slopes, exist-

ing agricultural facilities and narrow tributary valleys leave only scattered pockets suitable for residential use.

There are 298 gross buildable acres in Jesus Grove, on which are sited 27 single-family residences, a cafeteria, a 15,000-square-foot warehouse, an 88,000-square-foot greenhouse, several old farm outbuildings currently used as repair shops, an airstrip, and a 10,000-square-foot office building.

## B. Land Use Designations

The future land use requirements of the City, with due consideration for facilities and services, are aggregated under six generalized land use designations. The distribution of land among these classifications is shown in Figure 5 (page 49). In aggregating the uses within these designations, consideration was given to the quality, the quantity, the compatibility and interrelationships of the uses to the land, to each other, and to the social structure of the residences of the City.

A general description of the purpose and character of uses within each designation is given below. Permitted uses are more specifically listed in the City's Development Code. The designations have been applied to the land with the City's UGB, as shown on the official Land Use Plan Maps, pages 51, 61 and 68.

### a. Residential (R)

The purpose of this designation is to provide for the community's housing needs in a variety of locations, types and densities to include single-family detached and attached units; clusters of attached and detached one-bedroom units surrounding common toilet, shower, living and meditation spaces; and mobile homes and apartment-type units related to educational activities. Community support functions such as eating, laundry, recreation and parks as well as utility facilities would be compatible.

### b. Commercial Use (C)

The purpose of this designation is to provide suitable, well located areas capable of supporting more intense development. Convenience to transportation, population concentrations and availability of utilities are locational criteria of special importance for commercial uses. This classification encompasses retail and wholesale trade, services, finance, entertainment, office uses, communications, utilities, cultural and educational facilities. Overnight accommodations such as motels, hotels and conference facilities would be permitted. Residential use of this area will generally be limited to no more than 10% of

the land and to higher density housing above commercial ground floor space.

This land use designation provides space for multiple use developments centered around commercial activities and is intended to allow flexibility of design, spacing, density and uses in a planned environment, including open spaces, plazas and parks.

c. Industrial Use (I)

The purpose of this designation is to provide suitable, well located land upon which to carry out various economically viable enterprises in the City. The areas on the Land Use Plan Maps shown as Industrial are principally for light manufacturing, processing, assembly and fabricating industries, warehousing, outdoor storage of materials and necessary infrastructure elements to support these activities and the City. This designation provides for planned industrial parks and economic activity areas such as the artisans' colony. Multi-use developments with emphasis on industrial uses but including housing and commercial activities where topography or coordinative uses suggest their inclusion are encouraged as elements of the overall City design.

d. Community Services (CS)

The purpose of this designation is to provide for uses that are oriented to the social, educational and cultural activities of the community.

Facilities for social activities such as community centers with restaurant or eating facilities, a library, reading rooms, health facilities, music and dance studios, lounges, theaters and commercial uses in conjunction with other primary uses are classified as community services. Cultural uses supporting the residents, visitors and guests, such as meditation and religious facilities, parks and playgrounds, education buildings for all levels, child care centers and nursery schools, are included in this classification. Housing for participants in educational or religious programs, as well as staff members, will be permitted. Housing for residents will be allowed only on land unsuitable for large community service buildings. Administrative offices and professional services will be included. The airstrip will receive a land use designation of Community Services. Infrastructure elements providing services and safety to the residents such as utilities and fire stations would be compatible with the purpose of this classification.

e. Recreation (P, PC, PRC)

The overall Recreation category is composed of three recreational use designations: P (Parks - which include necessary servicing facilities, certain education facilities and concessions); PC (Parks and Camping - which include Parks uses as well as campground, RV parks, cabins and necessary facilities); and PRC (Parks, Recreation and Camping - which include PC uses as well as indoor recreation facilities), as shown on the Land Use Plan Maps. The purpose of these designations is to provide an adequate amount of suitable, well located land corresponding to the recreation needs of the City. They are intended to accommodate organized sports and allow facilities for indoor recreation such as swimming, gymnastics, martial arts and basketball. Facilities might also include saunas, baths and exercise rooms, cafe and snack bars for participants and limited convenience shopping. Parks, playgrounds, campgrounds, seasonal festival facilities, recreational vehicle parks, cabins, farm uses and exposition halls are included within this classification.

f. Open Space (OS)

✓ The purpose of this designation is to designate land that is unbuildable because of steep slopes, geotechnical conditions, watercourse or flood hazard zones. Of the remaining land given other designations, site-specific conditions will render a significant percentage unbuildable as well. These conditions are treated as resources, as they help preserve the rural character of the environment and deter overbuilding. Within this designation will be parks and playgrounds, conservation and management of natural resources (water, land, wildlife and vegetation), ✓ wildlife sanctuaries, environmental and wildlife research and observation facilities, corridors for transportation systems, utilities and public services (fire control and security) and utility facilities. However, no habitable or commercial buildings will be allowed under this designation.

See Figures 5 and 6 on the next page for graphic illustrations of land use distribution and requirements in Rajneeshpuram.



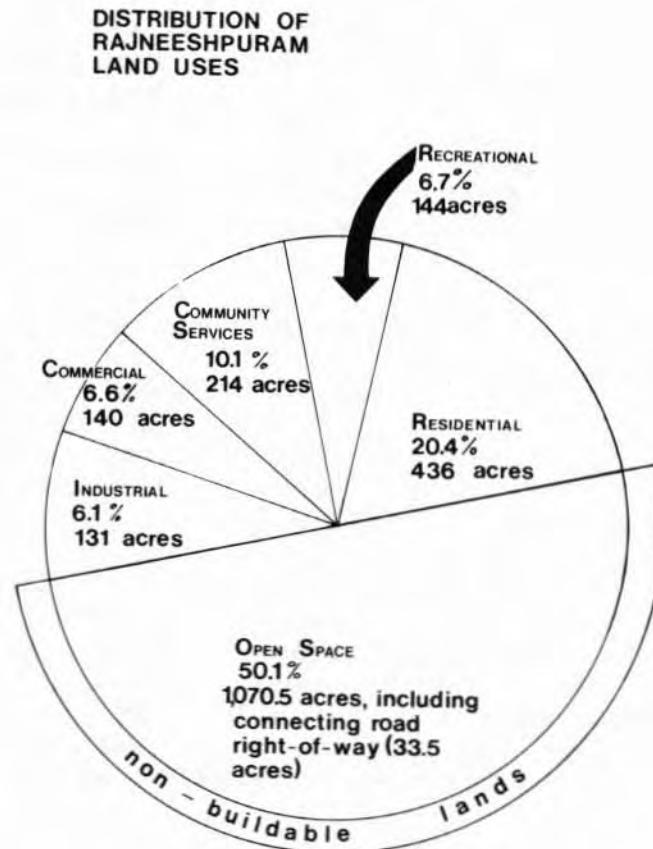
CITY OF RAJNEESHPURAM  
LAND USE DISTRIBUTION AND REQUIREMENTS

LAND USE CLASSIFICATION	DISTRIBUTION			REQUIREMENTS		
	GAUTAM THE BUDDHA GROVE	DESIDERATA CANYON	JESUS GROVE	TOTAL CITY	GROSS ACRES	(DEFICIT) SURPLUS
RESIDENTIAL	168	128	140	436	539	(103)
COMMERCIAL	96	9	35	140	124	16
INDUSTRIAL	71	14	46	131	163	( 32)
COMMUNITY SERVICES	130	43	41	214	235	( 21)
RECREATION (ALL)	103	5	36	144	161	( 17)
TOTAL DEVELOPED LAND	568	199	298	1065	1222	(157)
OPEN SPACE	158	246	663	1037	1037	
SUBTOTAL	726	445	931	2102	2259	(157)
CONNECTING ROAD				33.5	33.5	
TOTAL ACRES IN CITY				2135.5	2292.5	(157)

Note: All figures are gross acres (rounded)

Distribution of Rajneeshpuram Land Uses

Figure 6



TOTAL ACRES: 2,135.5 acres

### C. Designated Planning Areas

The land in the City is largely undeveloped and under single ownership at this time. The fact that the land is not platted requires that some boundaries be established for planning considerations when, for example, a single building or cluster of buildings is to be placed on a hitherto undeveloped or partially developed piece of land. The questions that arise in that case are: how big is the site plan? What is the basis for establishing land use zones? What is the best location for roads and utilities that may later be extended beyond the proposed cluster of buildings? Would such development deny feasible access to other buildable land? Or, what should the capacities of utility mains be if there is a likelihood of later extending them beyond the proposed cluster of buildings? For these reasons, the concept of Designated Planning Areas (DPAs) was developed.

Designated Planning Areas (DPAs) are envelopes of topographically distinct gross buildable land. The purpose of defining and locating DPAs is to establish planning boundaries within the City. These DPAs are generally large enough to provide flexible planning, yet are at the same time small enough to be envisioned conceptually as distinct entities. They serve as a planning tool that is useful in the intermediate planning stage; i.e., the state that lies between the overall land use concepts of this Plan and the decisions faced when reviewing building permit requests for individual buildings.

The DPA boundary is intended to be generalized and to encompass a specific amount of land in each land use category. The specific boundaries will be determined through the concept planning process and shall be based upon the following criteria: (A) the location of roads, sewer and water, and (B) natural features including river and stream beds and contour lines.

Within each DPA, proposed roads, utilities and amenities must be examined with respect to the overall provisions of this Plan, requirements or restrictions of adjacent DPAs, additional requirements of future development in or beyond the area of proposed developed, and overall workability, spatial aesthetics and concept of the DPA.

For each DPA, a Concept Plan that ties the Comprehensive Plan designations to zoning designations will be required to demonstrate that the above considerations have been evaluated and taken into account before individual buildings can be constructed. A Concept Plan must be developed and approved for all of a DPA prior to issuance of a building permit. Once

the Concept Plan has been approved, permits for individual buildings can be issued in accordance with the Concept Plan and the provisions of the Development Code.

The interrelatedness of DPAs is addressed in this Plan by assigning a land use classification to each DPA. Each DPA has been examined to determine its most appropriate use. Factors studied include agricultural soil class, slope, geotechnical suitability, availability to roads, views, adjacency of uses, potential nuisance value of nearby uses, traffic patterns, etc.

DPA boundaries were delineated by the following method:

1. Nonbuildable land was defined and delineated on topographical maps at a scale of 1" = 100', with 5' contour intervals. These maps were prepared for aerial photographs taken by Bend Mapping and Blueprinting Co. In each planning area, the delineation of nonbuildable land is accurate, although small pockets of land with slope greater than 30% were included in DPAs in which they exist as "islands."
2. Areas that support appropriate existing uses, such as the airstrip, the sewage treatment area, the old ranch yard and the maintenance area developed at the end of the airstrip were circumscribed.
3. Certain choice sites were selected for central key buildings or areas such as the school and community center in Gautam the Buddha Grove and the arts and crafts center and the religious retreat center in Desiderata Canyon. These sites were chosen with respect to views, space for integral parks and room for expansion, accessibility or privacy. They were checked against the overall Land Use Plan to avoid conflicting neighboring uses.
4. Remaining buildable land was demarcated into topographically distinct envelopes and assigned use classifications based upon the site choice factors listed below:
  - access;
  - terrain;
  - acreage available compared to that required;
  - scenic view requirements;
  - adjacent use requirements;
  - potential for conflicts such as traffic, noise or visual pollution;

- parking space available;
- compatibility with the overall concept as stated in the beginning of this section;
- suitability of soil, slope and geotechnical conditions to types of structures required by a particular use.

#### D. Land Use Allocations

These parcels, or DPAs, are the building blocks of intermediate planning within the City. Each DPA is identified by a number that has four components; for example, GBG CS 2(A) would mean a DPA in Gautam the Buddha Grove that will have a land classification of Community Services. The number 2 is an identification number, and development may begin in Phase "A" (see "Growth Management" section of this chapter, beginning on page 77). The numbering will begin from 1 for each land use classification in each of the three planning areas of the City, such as CS 1, CS 2, and so forth.

The results of the above analyses are summarized on Maps 4, 6 and 8 on pages 58, 61 and 68, and are described in the remainder of this section. These descriptions are illustrative in nature and may be superseded by more detailed information in Concept Plans for individual DPAs.

## GAUTAM THE BUDDHA GROVE

In Gautam the Buddha Grove there are 568 acres of gross buildable land slated for development. No buildings presently exist in this area. A secondary school and adult education center and a community center building are now being designed for construction under a conditional use permit from Wasco County. See Map 4 on page 58 for DPA designations and acreage for Gautam the Buddha Grove.

The DPAs within each use classification are discussed below.

Residential: There are 13 DPAs in Gautam the Buddha Grove designated for Residential use. They vary in size from 3.2 to 27.6 acres, but are generally between 10 and 20 acres. This is an excellent planning size capable of containing roads that will complement rather than determine housing sites. With the exception of R 7 located south of the county road opposite the entrance to Gautam the Buddha Grove on an even, sloping Day Clay hillside, all the residential areas in Gautam the Buddha Grove are located on the more hilly areas surrounding the Community Service DPAs CS 2 and CS 5. Three residential DPAs (R 5, R 6 and R13) are located on more isolated sections of 10 - 20% slope land. The residential DPAs in Gautam the Buddha Grove are located on generally higher and more difficult terrain with good views. The Residential acreage in Gautam the Buddha Grove totals 168 acres and will house an estimated permanent population of approximately 1,740 people. There will also be some residents living in small pockets of land located in more intense land use classification areas where those more intense uses might not be appropriate.

Commercial: There are six DPAs in Gautam the Buddha Grove designated Commercial. They total 96 gross buildable acres. The first (C 4) is a narrow strip of 14 acres just north of the county road near the entrance to Gautam the Buddha Grove. It is a sloping narrow ridge flattening for a few acres to include the entrance road. Another Commercial DPA of five acres (C 5) is located just south of the county road and opposite the entrance road on a long gently sloping hillside. There are also three adjacent Commercial DPAs of 2.5 acres (C3), 48.6 acres (C1) and 20.5 acres (C2) located on a broad saddle. Views from the higher portions of these DPAs are excellent and they surround a four-acre low wet area that will be set aside as a park. Access to the county road would be direct to minimize vehicular impact on nearby areas. The remaining DPA

(C 6) is slightly less than six acres in size and is sited to provide convenience shopping to the surrounding residential areas.

The projected types of uses within these commercial areas will include commercial shops such as clothing, gift shops, groceries, etc., offices, an information center and a bank. Also included are guest and visitor facilities such as a hotel, conference rooms, a restaurant, overnight motel accommodations, a service station, a coffee shop and contractors' accommodations. Residential use within these areas will be located in pockets of greater than 20% slope, as accessory uses for caretakers or watchmen or as part of a multi-use concept. These will be limited to 10% of the gross area of each DPA.

Industrial: There are three DPAs with a use classification of "industrial" in Gautam the Buddha Grove. They total 71 gross buildable acres. The first, DPA I 3 (2.4 acres), is downhill from the main entry into Gautam the Buddha Grove. It is visually and physically separate and located on relatively flat bottom land in the shadow of the hill directly to its south. There is also a 21.2-acre DPA (I 2) that is somewhat screened from the commercial areas to the north and is isolated by steep ravines on two sides. The 0 - 10% slopes on the west end of this DPA give way to approximately 20% downward slopes towards the east. There is a 47.1-acre DPA (I 1) that contains generally 0 - 10% slopes although it drops off on the northeast corner. It is generally higher and therefore not visible from areas across the ravine to the north. Its flatness precludes the more spectacular views of nearby areas. Fairly direct access from the county road to each of these areas is possible without passing through other developed areas, thus minimizing traffic noise and other impacts.

The projected types of uses within these industrial areas include a light industrial park, a storage yard and warehousing facilities, vehicle repair facilities, a road maintenance yard, a construction materials supply yard and workshops. Accessory residential uses would generally be limited to pockets of land within these Industrial DPAs where slopes greater than 20% or other natural features would preclude other permitted uses. A maximum of 10% of the site could be residential. Appropriate commercial, recreation or other uses would be suitable if accessory to the primary intent of these Industrial DPAs.

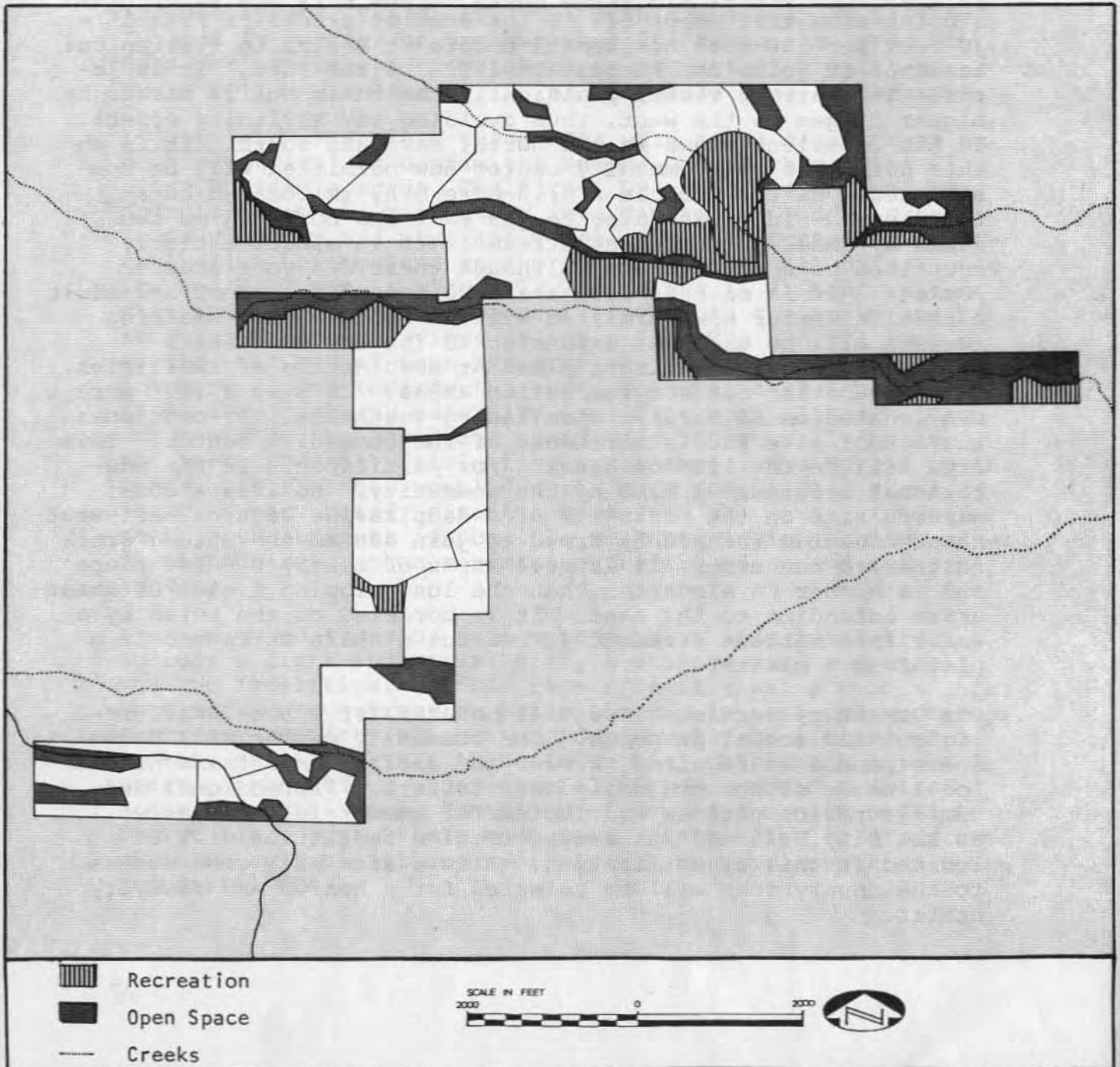
Community Services: There are six DPAs designated for Community Services in Gautam the Buddha Grove. They total approximately 130 gross buildable acres. The first (CS 6) is a hillock located just east of the entrance to Gautam the Buddha Grove. Its 13.2 acres commands excellent views to the northeast and south as it straddles the divide between the Gautam the Buddha Creek drainage system and the Kabir Creek/Farid Creek Drainage System. CS 4 is a 6.6-acre DPA located on part of the saddle, which is predominantly commercial land. It has excellent views to the east and is located generally on 0 - 10% slopes. CS 3 is a 33-acre DPA with a broad knoll on the west end of 0 - 10% sloping area that drops off to the east at a rate of from 15 - 30 feet per 100-foot horizontal before it begins to flatten out again as it joins the Recreational DPA to the east. It is located in a strong visual position in the basin but is backed by higher ridges to the west, thus avoiding any skylining effect. It has excellent views to the north, east and south. It is on this site that the community center now permitted will be constructed. CS 2, which is a 31.3-acre DPA, is located on a flat-topped ridge extending to the east and bordered on two sides by small intermittent streams. It is almost entirely comprised of 0 - 10% slopes although there are some steeper pockets. It is on this site that the secondary school and adult education center now permitted will be built. The remaining acreage will be used for expansion to include additional programs and for creating a pleasant combination of facilities, parks and other outdoor recreation areas. CS 5 is a 26.4-acre DPA located on 10 - 20% slopes facing southeast. It overlooks the school site and is northwest of the community center. This area will be the site of housing for participants in the educational programs offered by the community. CS 1 is a commanding site on the north rim of a deep ravine cutting east-west through Gautam the Buddha Grove to join Gautam the Buddha Creek further to the east. It is 19.4 acres of mostly 0 - 10% slope and is higher in elevation than the long sloping fields of cheat-grass extending to the east. It is bordered on the north by a small intermittent stream that has cut a sharp streambed in a picturesque manner.

The Community Services land will be used for educational, religious and social purposes. The community center will be built and expanded as required to meet the social, entertainment and local needs of the community and visitors. Professional and administration offices and incidental commercial uses as well as the City Hall and its administration facilities will be located in this classification. Also a site with good access to the county road will be selected for a health and recovery center.

Recreation: There are 12 DPAs in Gautam the Buddha Grove designated for recreational, park and camping use. They total 103 acres. (See Map 3 below.) P 1 is a 4.2-acre depression surrounded by commercial land. It is a wet area draining to the south indirectly into Gautam the Buddha Creek. It is intended to be a park for the downtown area. PC 1 is a

GAUTAM THE BUDDHA GROVE - Recreation and Open Space

Map 3





15.7-acre DPA overlooking the steep ravine, but is often 0-10% slope dropping off more sharply on three sides. PRC 3 is among the highest (in elevation) of the DPAs in the City. It faces northeast toward the high ridge that forms the northern horizon and demarcates the northern boundary of adjacent Rancho Rajneesh. PRC 1 (15.7 acres) is located between two Community Services areas on flat ground (0-10% slopes) on the north bank of a steep east-west ravine. It is ideally situated to provide recreational facilities for this northern portion of Gautam the Buddha Grove. PRC 2 (15.2 acres) is an elongated piece of land wrapped around a small open space area and a DPA that will be used for commercial purposes. It is predominantly 0-10% in slope, but this varies. PC 2, PC 3 and PC 4, totalling 9.6 acres, are small pockets of recreational land abutting the City boundary and a long sloping piece of land running to the east. P 5 (4.5 acres), P 3 (4.8 acres) and P 4 (1.2 acres) are isolated on the southern rim of the ravine. These small areas could be developed as scenic overlooks on a trail extending down this ridge. P 2 (25.3 acres) provides land for ball fields, community gardens, and other leisure activity facilities. The 103 acres of recreational land in Gautam the Buddha Grove will be used for neighborhood and town parks, camping areas and recreational vehicle parks, indoor and outdoor recreational facilities and for festival infrastructure facilities for large short-term gatherings.

In conclusion, Gautam the Buddha Grove is basically divided into three areas. One is near the county road and the DPAs there should take advantage of the excellent access. The second or middle section will become the town center with its commercial, industrial and administrative functions. The third is north of the steep ravine and is largely for community services, educational, religious, recreational and residential purposes. For a graphic illustration of land use planning in Gautam the Buddha Grove, see Map 4 on the following page.



City of  
Rajneeshpuram

# LAND USE PLAN

GAUTAM the  
BUDDHA  
GROVE

— City boundary  
- - - D.P.A. boundary  
— Arterial road

Scale 1" = 1,000'

Primary Arterial Access Road →

Warco Co. Road 305 (to Antelope)

City boundary (30 feet from centerline of road, both sides) extends to Desiderata Canyon

R=Residential	C=Commercial	I=Industrial	Community CS=Services	P=Parks	Parks PC=Camping	Parks Recreation PRC=Camping
DPA Acres	DPA Acres	DPA Acres	DPA Acres	DPA Acres	DPA Acres	DPA Acres
R1 17.4 A	C1 48.8 A	I1 47.1 A	CS1 19.4 A	P1 4.2 B	PC1 15.7 A	PRC 1 15.7 A
R2 18.8 A	C2 20.5 A	I2 21.2 A	CS2 31.3 A	P2 25.3 A	PC2 5.3 A	PRC 2 15.2 A
R3 12.4 A	C3 2.5 B	I3 2.4 A	CS3 32.6 A	P3 4.8 C	PC3 2.4 A	PRC 3 7.2 B
R4 15.5 A	C4 13.9 A		CS4 6.6 A	P4 1.2 C	PC4 2.2 A	
R5 15.0 A	C5 5.3 B		CS5 26.4 A	P5 4.5C		
R6 4.7 C	C6 4.8 A		CS6 13.2 A			
R7 27.6 B						
R8 3.2 B						
R9 6.9 A						
R10 10.3 A						
R11 20.3 A						
R12 10.6 A						
R13 5.2 A						
<b>R = 168</b>	<b>C = 96</b>	<b>I = 71</b>	<b>CS = 130</b>	<b>P = 40</b>	<b>PC = 25</b>	<b>PRC = 38</b>
OS = Open Space = 158 Acres			Total = 726 Acres in Gautam the Buddha Grove			

## DESIDERATA CANYON

This area of the City contains approximately 199 gross buildable acres suitable for development. At present, five detached dwellings are the only structures in the Canyon. (See Map 6 on page 61 for DPA designations and acreage for Desiderata Canyon.)

It is here that the artists and craftspeople will build their colony of studios and living spaces. This site might support a restaurant as well as a small number of retail outlets for the display and sale of work produced in the immediate vicinity. The design of the environment here would reflect the creative ability of the residents and the neighborhood atmosphere of a small village. Small pockets of steeper land (20-30% slope) exist where other uses such as residential might be developed. Other industrial uses compatible with the characteristics of the site and its principal development might occur here.

Community Services: There are four DPAs classified as Community Services in Desiderata Canyon. Closest to the entrance are CS 1 and CS 2 rising to the north of the arterial road and some 200 feet higher in elevation. These two DPAs, totaling 19.7 acres, have several steep pockets marking their fairly level and southerly sloping sites. CS 3, a 19.6-acre area, is at the far northwest corner of Desiderata Canyon on a large south-facing slope that rises from 2,800 feet within the City limits to more than 3,000 feet outside the City. Excellent views are offered to the south across the Canyon and to the east past the narrowest section of the Canyon. Directly downhill from this DPA, on the north bank of Desiderata Creek, lies CS 4, a small 3.6-acre site located opposite a park site of equal size.

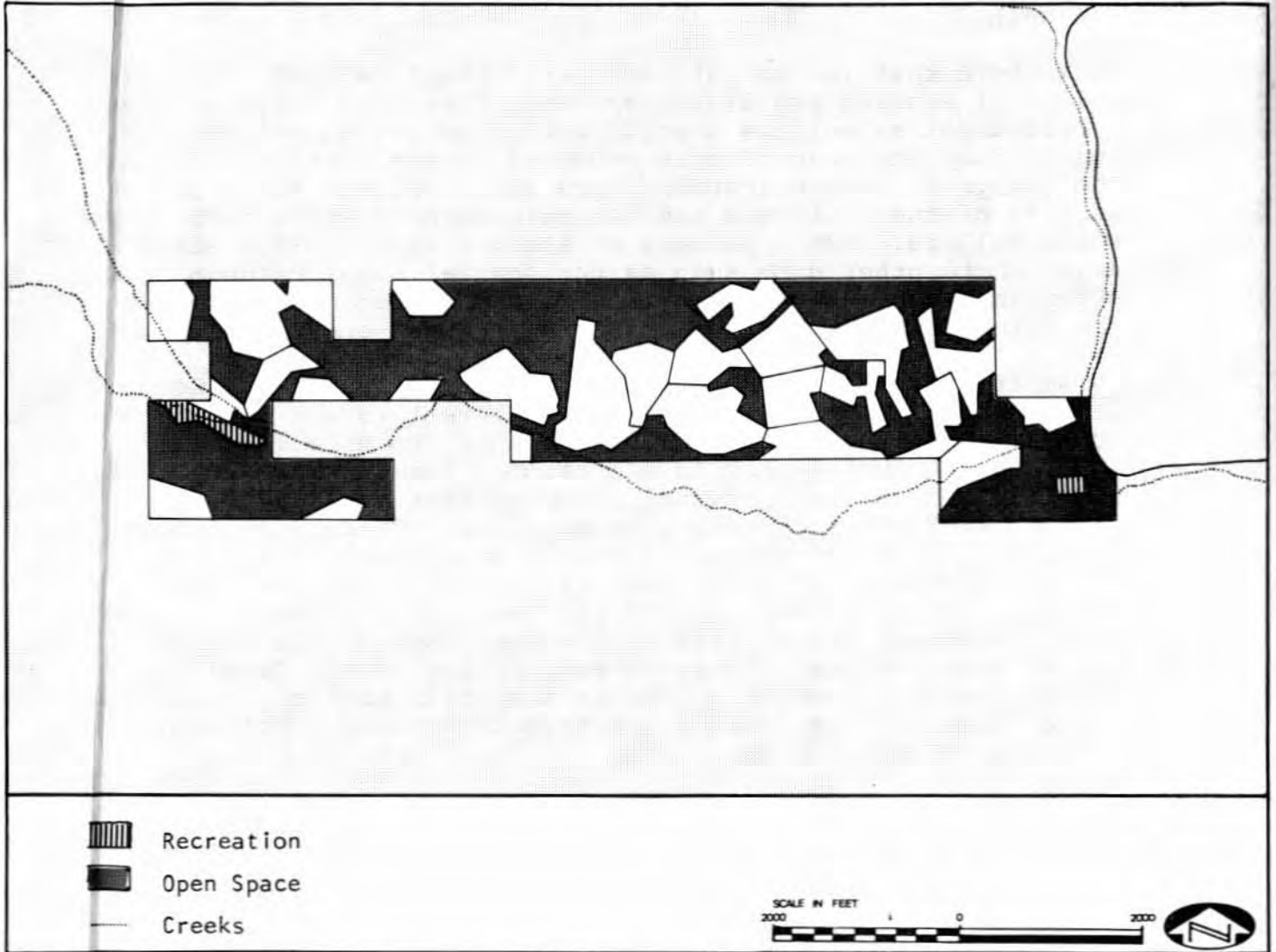
The Community Services classification in Desiderata Canyon can accommodate a religious retreat center with attendant uses such as housing for participants, dining facilities and meditation areas in a secluded, quiet setting. Other uses appropriate in this classification would be a cafeteria, a day care center, visitor facilities, offices and housing.

Recreational: Two DPAs are designated for Recreational Use. They are P 1 at 1.9 acres and P 2 at 3.5 acres. Both of these DPAs are located on Desiderata Creek at opposite ends of the Canyon. (See Map 5 on the next page for Recreation and Open Space in Desiderata Canyon.) They share similar environmental characteristics and provide opportunities for passive recreation, nature study, quiet contemplation and perhaps swimming,

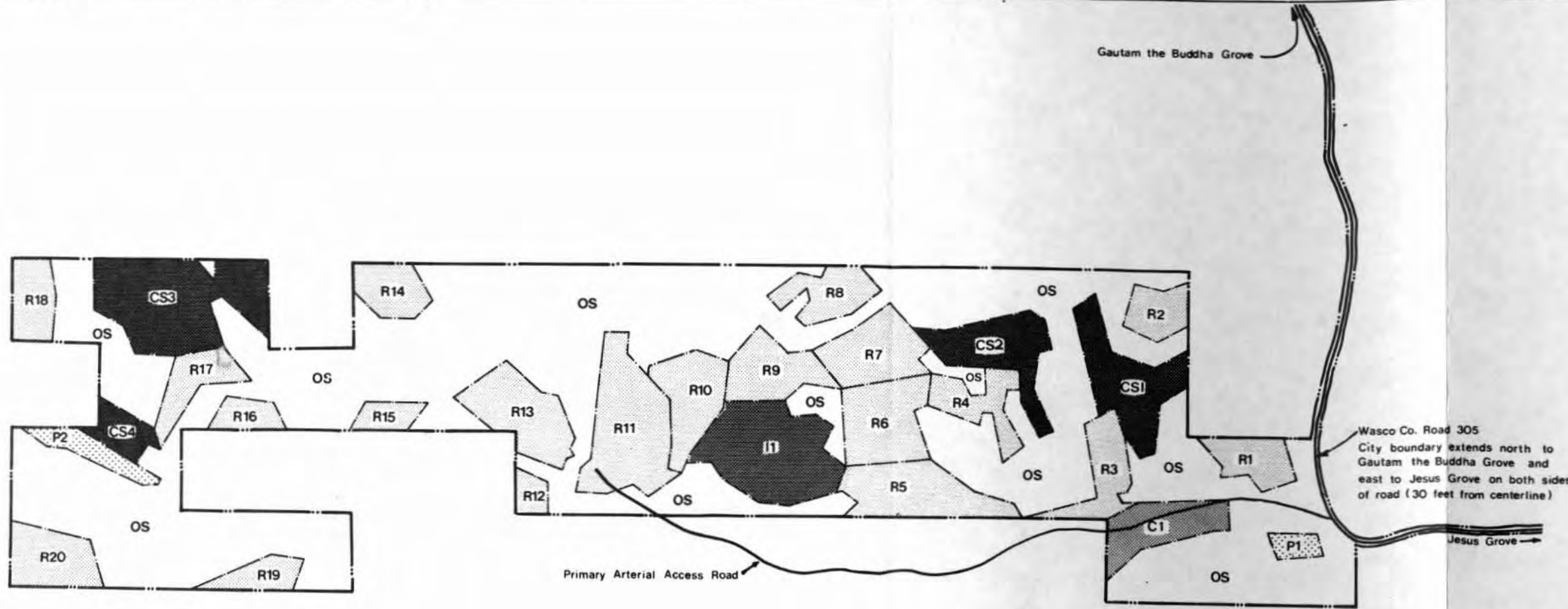
in keeping with the aesthetic nature of the uses in Desiderata Canyon.

DESIDERATA CANYON - Recreation and Open Space

Map 5



For a graphic illustration of land use planning in Desiderata Canyon, see Map 6 on the following page.



City of Rajneeshpuram

# LAND USE PLAN

DESIDERATA CANYON

City boundary  
D.P.A. boundary  
Arterial road

Scale 1" = 1,000'

R=Residential	C=Commercial	I=Industrial	Community CS=Services	P=Parks	Parks PC=Camping	Parks Recreation PRC=Camping
DPA Acres	DPA Acres	DPA Acres	DPA Acres	DPA Acres	DPA Acres	DPA Acres
R1 4.3 B	C1 8.7 A	I1 14.0 A	CS1 7.8 A	P1 1.9 C	—	—
R2 4.3 B			CS2 11.9 B	P2 3.5 B		
R3 7.5 A			CS3 19.6 A			
R4 4.6 C			CS4 3.6 A			
R5 7.6 B						
R6 8.5 B						
R7 9.6 C						
R8 8.0 C						
R9 6.0 A						
R10 8.0 A						
R11 15.5 A						
R12 1.8 A						
R13 12.3 A						
R14 4.8 A						
R15 1.6 C						
R16 2.5 B						
R17 4.9 B						
R18 6.6 B						
R19 2.9 C						
R20 6.5 C						
<b>R = 128</b>	<b>C = 9</b>	<b>I = 14</b>	<b>CS = 43</b>	<b>P = 5</b>		
OS = Open Space = 246 Acres			Total = 445 Acres in Desiderata Canyon			





## JESUS GROVE

Jesus Grove has 298 acres of buildable land available for development. At present, there are 27 double-wide mobile homes, the old ranch headquarters yard, an office building, a warehouse, a machinery repair barn and a cafeteria (see Volume 1, Map 29, page 176). This area is the one that has been developed to the greatest extent so far. It was the original ranch headquarters, and development naturally began there. The area generally consists of flat bottom lands with narrow valleys and occasional alluvial fans of sloping ground. The narrow valleys are the cause of the rather elongated DPAs. Jesus Grove also has the highest proportion of non-buildable land (68%), primarily because of the steep dramatic hills rising above the bottom lands of the Farid and Kabir Creeks. See Map 8 on page 68 for DPA designations and acreage for Jesus Grove.

Residential: There are 19 Residential DPAs totalling 140 acres in Jesus Grove. There are presently 159 residents living in Jesus Grove in 27 single-family detached dwellings. A projected 744 additional residents will be accommodated over the next 18 years, bringing the total population to 900.

R 1 is a 5.2-acre hillside site abutting Tao Road to the south, state lands to the west and rugged hillsides to the north and east. It overlooks Farid Creek valley, the end of the airstrip and DPA I 3. Creative planning will be required to maximize the development potential of this site.

R 2 and R 5 are flatter bits of land set high in the hills. They are included because they are buildable, but they are difficult locations and will be used as sites at a later phase.

R 3 is a narrow strip of 3.5 acres on the northwest bank of the Kabir Reservoir. It is a sloping piece of land between very steep hills and the banks of the reservoir, with a road running through the center. It has limited development potential, but it is a scenic spot close to ranch headquarters. There is one house in this DPA at present.

DPA R 4 is situated on an alluvial strip extending to the confluence of the Farid and Kabir creeks. A detached dwelling unit and several small outbuildings are located in it.

R 6 (11.7 acres) is mostly the upper end of an intermittent stream that passes through R 7. This north-south canyon is rough but quite densely wooded with juniper trees. It is surrounded by steep, broad hills rising 300' - 400' above the valley. The land is 10 - 30% slope and highly variable. There are no buildings in this DPA.

R 7 is a 6.6-acre pocket valley that narrows rapidly to the width of its intermittent stream. To the south it is bounded by the newly constructed east-west road that runs along the north bank of Kabir Creek. In front of R 7 and on the other side of this road is a five-acre piece of ground on the high banks of Kabir Creek which will be a park.

Overlooking one of several orchards (DPA P 4, three acres) is R 8, a 7.5-acre hillside oriented to the west. R 18 is a 2.5-acre site, some 300 feet higher in elevation than the cafeteria with a commanding vista north towards the Radha River.

R 9 and R10 (15.6 acres) are situated in an undeveloped narrow winding canyon opening at its mouth into the Kabir Creek valley. R11 is an 11.7-acre moderately open south-facing canyon, surrounded on three sides by steep high hills. On it is sited a private garage, two houses and an indoor swimming pool with a functioning solar hot water system.

R12 (11.7 acres) is the site of six houses set on the lower slopes of the hills rising to the north and east. The hills to the east come down to the edge of Kabir Creek. The south side of R12 abuts R 15 (14.5 acres) which was planted in the spring of 1982 with fruit trees.

R13 and R19 (16.4 acres) are on a south-facing hillside and are presently the site of six houses. They have relatively flat areas at various elevations and are backed by andesitic outcroppings rising even higher.

DPA 14 and 16 (23 acres) are the sites of seven detached houses. They are relatively open northeasterly sloping areas of generally 5 - 15% slopes with a higher plateau of 10 - 20% slopes. There is a beautiful sheer rock outcrop to the northeast rising some 250' vertically from the bed of Kabir Creek. The narrow and scenic canyon extending southeast behind the cafeteria is the site of the 7.3-acre R17.

In conclusion, there are 140 acres delineated for residential uses in Jesus Grove.

Commercial: There are four DPAs to be used for commercial purposes in Jesus Grove. DPA C 1 (7.8 acres) is a narrow strip at the bottom of a hillside on the south bank of Farid Creek opposite Devateertha Rock and the airstrip. It is bounded on the north by a high-quality gravelled road built in the spring of 1982 from the ranch yard west to I 3 and from there



across Farid Creek to rejoin Tao Road at the west end of the airstrip. DPA C 1 is the site of a two-story, 50' x 100' office building to be used for ranch administration, book-keeping, financial, legal and supervisory functions and meeting rooms. It is also the site of the PABX telephone intercom exchange system. Further commercial development along this north-facing strip of hillside would be in keeping with the intent of this DPA. C 2 is an approximately three-acre ridgetop on the promontory extending out into the bottomlands of the confluence of Farid and Kabir creeks. It is approximately 60' higher in elevation than the ranch yard, tapers to a northerly point and falls off rapidly east and west. DPA C 3 (10.4 acres) includes the existing ranch headquarters area and workshops. These workshops will be phased out and moved to industrial sites elsewhere in the planning area. The present buildings will be rehabilitated for small shops, offices, guest housing and other commercial uses. The last commercial DPA is C 4, a 14.4-acre site surrounding the present cafeteria. There is a total of 35 commercial acres in Jesus Grove.

Industrial: DPA I 3 is a 15-acre rocky alluvial fan that has been graded for initial construction. It presently contains a four-pump gasoline and diesel station and a 60' x 40' recycling building where the waste management program is located. Also permitted but still in the planning stages are a vehicle maintenance building (80' x 113'), a welding shop (60' x 100'), and a materials storage building (40' x 100'). The DPA abuts BLM land to the south and is bounded by hills east and west. A service road forms the northern boundary. DPA I 2 is a 1.5-acre site across Farid Creek and Kabir Road from I 3. I 5 is a 10.3-acre narrow strip on the east bank of Kabir Creek. It is largely reclaimed land between Kabir Creek and the very steep hill to the east. Located within this DPA are a 10,000-square-foot warehouse and a 40' x 100' machinery repair building. The site offers space for further expansion. The two Industrial DPAs (I 3 and I 5) will provide land for workshops and repair buildings, warehousing, some commercial shops, fuel distribution, and other industrial purposes. I 6 is a site for the electric substation that will be built late in 1982. The site has been cut from a sloping hillside and leased to Wasco Electric Cooperative of The Dalles. It was chosen because of its location near the incoming 69 KV line. The site will be landscaped upon completion. I 4 is the opening to a small canyon through which a road travels to the lagoon site, I 1. I 4, which is three acres, will be used primarily for a RV and camper sewage dump station although other compatible Industrial uses would be permitted. DPA I 1 (15.4 acres) is the sewage treatment site. It is an isolated,

elevated (200' above the Farid Creek bottom land), south-facing, protected valley. It is bounded by visually protective hills and has a relatively small drainage basin behind it. The basin extends onto state lease land on the west and an agreement has been reached with the State Lands Department for the use of a corner of the state property for the sewage treatment site. On I 1 there is presently a two-acre sewage treatment lagoon, built in the spring of 1982 under the supervision of Century West Engineering of Bend. The purpose of this site is to serve as the central treatment facility for Jesus Grove and Desiderata Canyon. There is space within I 1 for an additional two-acre treatment cell and a 51-acre-foot holding pond to retain treated water during the winter months. There is a total of 46 acres with the designation of Industrial land in Jesus Grove.

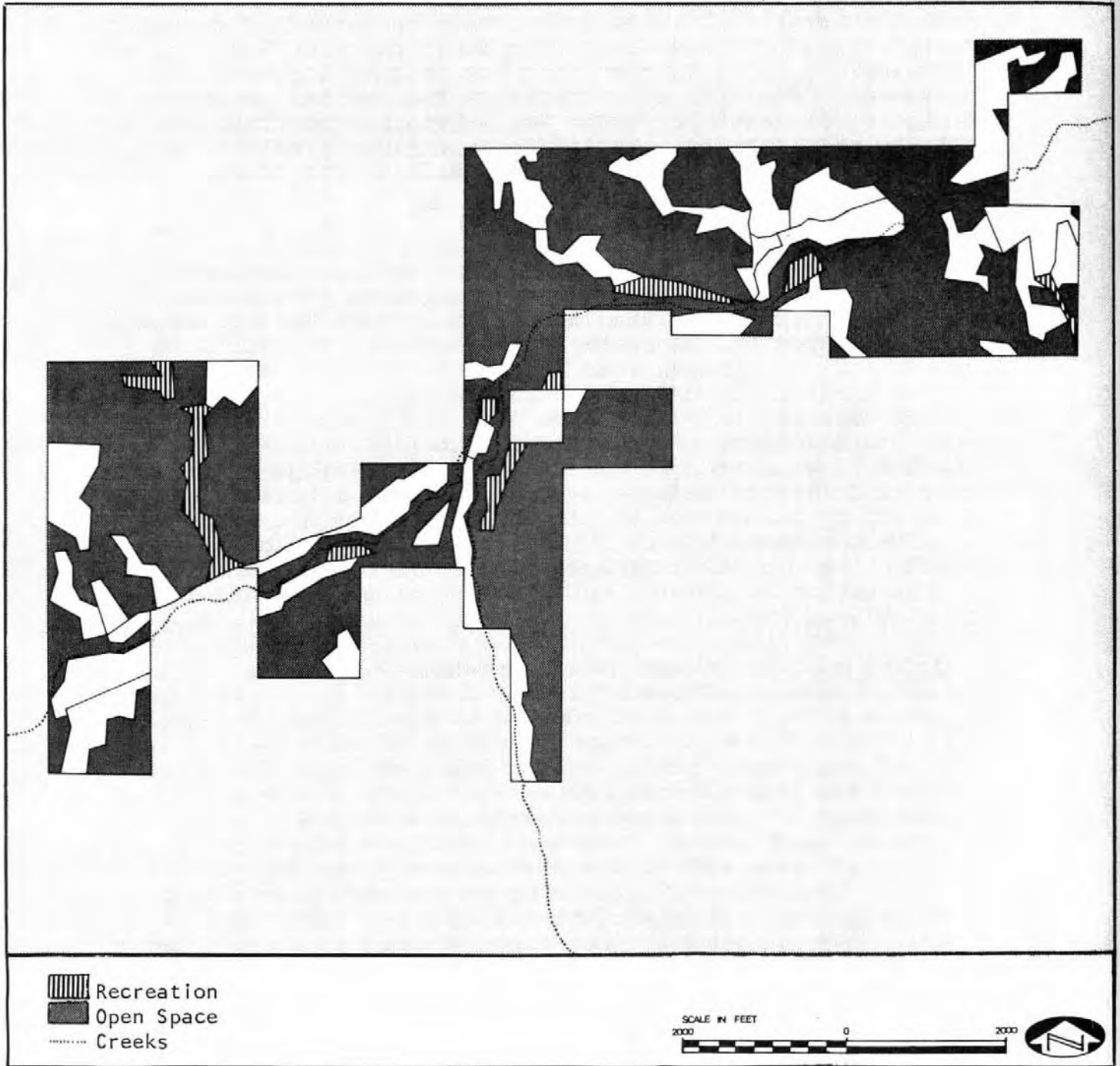
Community Services: There are four Community Services DPAs in Jesus Grove, totalling 41 acres. CS 1 (3.8 acres) and CS 2 (15.8 acres) include the area for the airstrip, which extends 3,800' on the north bank of Farid Creek south of Tao Road. It extends west to the creek crossing from DPA I 3 to the county road. The airstrip is built on an alluvial bottom into which Farid Creek has cut 18 feet deep and in some places 120 feet wide, a gully that threatens the airstrip. There is a permitted 80' x 100' airplane storage building that is in the planning stages and will be located between CS 1 and CS 2 outside the City boundary. The airstrip is privately registered. CS 3 (13.7 acres) is located just south of Tao Road at the entrance to Jesus Grove, providing space for an entrance feature. CS 4 is 7.6 acres, flat and accessible by road.

Recreational: There are nine Recreational Use DPAs totalling 36 acres in Jesus Grove. P 1 is a 2.8-acre site directly across the road from the commercial area C 1 on the southern bank of Farid Creek. This is good land along the undulating bank of the creek, but it is too small to farm. The 15-foot drop to the present creekbed level attests to the erosional instability of this deposited soil. However, this is an excellent park site to complement both the airstrip and the commercial area. P 3 is the five-acre area on the north bank of Kabir Creek located just east of the old reservoir spillway, which falls 20' into the original creekbed. This DPA has a beautiful grove of juniper trees growing in a small swale above the creek bank. The hills that reach the creek just downstream include a small natural rock bridge. This is another excellent park area to be developed in conjunction with the refurbishing of the old ranch headquarters into an attractive

recreational area and a habitat for wildlife. PC 3 is a narrow pretty canyon of 3.3 acres extending behind the cafeteria.  
(See Map 7 below for Recreation and Open Space in Jesus Grove.)

JESUS GROVE - Recreation and Open Space

Map 7



Two additional recreational sites, PC 1 and PC 2, containing a total of 11.7 acres, occupy a narrow but well defined north-south canyon with steep hills to the east and west, and demarcated on the south by Tao Road. These recreational DPAs will be used for camping, recreational vehicle parking and other recreational facilities. DPA R 2 is a 1.7-acre site adjacent to Kabir Reservoir. From here, it is possible to observe the varied habitats that have formed in the silted-in reservoir. P 4 (three acres) has been planted as an orchard and overlooks Kabir Creek. PRC 1 and 2, totalling eight acres, are located adjacent to Zen Road, which parallels Kabir Creek. They are flat areas suitable for a variety of recreational facilities, such as ball fields and sport arenas.

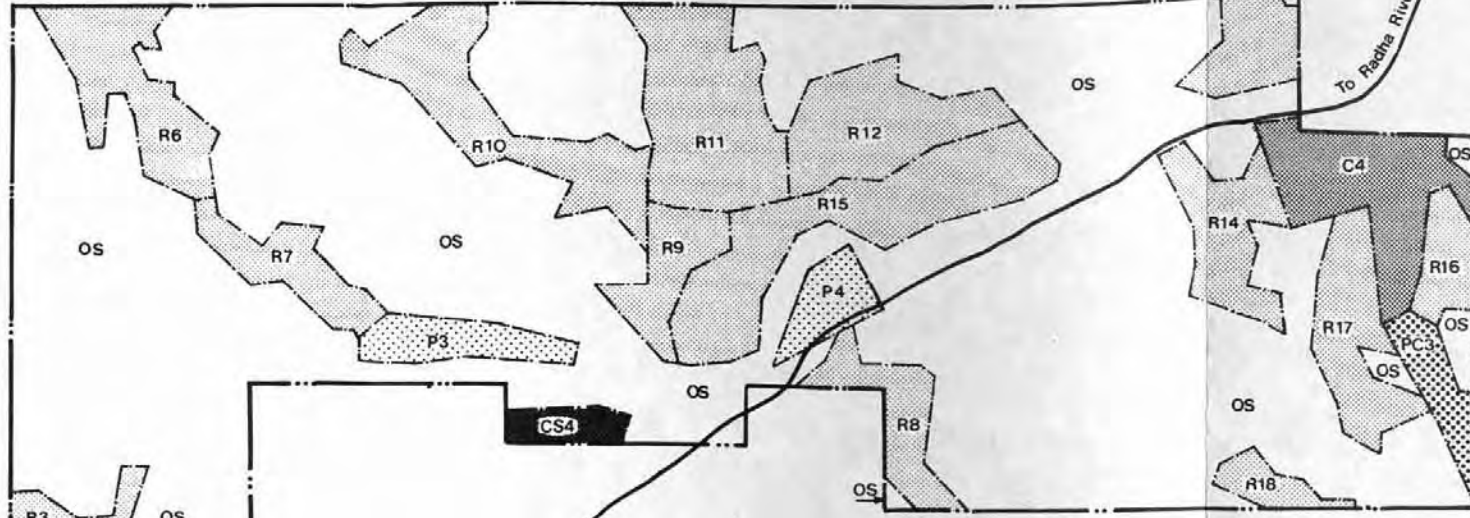
For a graphic illustration of land use planning in Jesus Grove, see Map 8 on the following page.

City of  
Rajneeshpuram  
**LAND  
USE  
PLAN**

JESUS GROVE

- City boundary
- D.P.A. boundary
- Arterial road

Scale 1" = 1,000'



R=Residential	C=Commercial	I=Industrial	Community CS=Services	P=Parks	Parks PC=Camping	Parks PRC=Recreation Camping
DPA Acres	DPA Acres	DPA Acres	DPA Acres	DPA Acres	DPA Acres	DPA Acres
R1 5.2 C	C1 7.8 A	I1 15.4 A	CS1 3.8 A	P1 2.8 B	PC1 7.9 A	PRC 1 A 5.7 A
R2 5.9 C	C2 2.8 B	I2 1.5 A	CS2 15.8 A	P2 1.7 B	PC2 3.8 B	PRC 2 A 1.9 A
R3 3.5 A	C3 10.4 A	I3 14.4 A	CS3 13.7 A	P3 4.9 B	PC3 3.3 A	
R4 2.3 A	C4 14.4 A	I4 3.1 A	CS4 7.6 A	P4 3.0 B		
R5 3.5 C		I5 10.3 A				
R6 11.7 A		I6 1.5 A				
R7 6.6 B						
R8 7.5 C						
R9 3.6 A						
R10 12.0 A						
R11 11.7 A						
R12 11.7 A						
R13 13.4 B						
R14 7.8 A						
R15 14.5 A						
R16 6.5 A						
R17 7.3 A						
R18 2.5 B						
R19 3.0 C						
<b>R = 140</b>	<b>C = 35</b>	<b>I = 46</b>	<b>CS = 41</b>	<b>P = 13</b>	<b>PC = 15</b>	<b>PRC = 8</b>
<b>OS = Open Space = 633 Acres</b>			<b>Total = 931 Acres in Jesus Grove</b>			

## SUMMARY OF FINDINGS

Currently land in Rajneeshpuram is in single ownership and is not partitioned.

In order to provide a reasonable framework for translating the acreage within the City into a definable planning areas, the DPA (Designated Planning Area) concept has been adopted. DPA boundaries are based on analytical factors, and each DPA is assigned a land use designation.

To tie the DPA designations and the infrastructure policies together and relate both to the Development Code, a Concept Plan is required for each DPA prior to issuance of building permits.

Each of the three major areas of Rajneeshpuram - Gautam the Buddha Grove, Desiderata Canyon and Jesus Grove - has unique physical and locational attributes and these are reflected in the land use designation for their DPA's.

### Residential

Planning for the development of buildable residential lands within the City must consider physical constraints imposed by the topography. Existing residential land use been developed largely for the placement of modular housing units. Planning for future residential land development calls for siting suitable for a variety of housing types, densities and locations consistent with objectives for energy efficiency and conservation. Purchase price and rental levels, as these relate to initial land planning, are assumed affordable, as most housing is provided to residents by the community. Future housing needs of City residents as well as those of visitors and guests are considered in estimating residential land acreages.

### Commercial

The ideal qualities of buildable lands for commercial purposes at Rajneeshpuram are seen generally as those that encourage clustering of such facilities in order to: (1) provide ease of access; (2) provide a sense of spatial identity; (3) encourage innovative and qualitative design; (4) create a hub for commercial activity. The unique characteristics of each of the City's three areas must be considered with particular attention paid to compatibility of commercial development with adjacent land use and adaptability to energy conservation measures.

## Industrial

An explicit intent of Rajneeshpuram's economic program, present and projected, is diversification. The industrial base is anticipated to reflect such diversity and be made up primarily of light industry, utilities and warehousing. Cottage industries are seen as particularly adaptable to the unique lifestyle at Rajneeshpuram. The concept of industrial parks is considered in terms of environmental impact and energy efficiency. Specific City areas are evaluated in terms of need, accessibility and services.

## Community Services

- Education: The great distance to local public schools is noted in the existing temporary private school facility in the City is described. Private facilities and programs conforming to local and state requirements are expected to fulfill the community's educational needs. Permits for both an elementary and secondary/adult education facility have been granted. Demographic data is presented for the projection of future needs for educational facilities.
- Health: The City is presently covered only by emergency services. Although a number of qualified medical personnel live in the community, facility limitations and the great distances to adequate care centers impose severe constraints upon local health care.
- Cultural: Presently, no cultural facilities exist and site preparation had begun for a community center. The three principal cultural centers planned for Rajneeshpuram are a community center, a meditation facility and a religious retreat center.
- Food: A communal dining facility exists in Jesus Grove, but it is expected to be inadequate to serve the City's residents by 1983. Separate facilities to accommodate the three City areas are suggested.
- Administration: City Hall is located in a temporary trailer facility, and construction is underway for an emergency services facility (police and fire protection). Provision of land to accommodate City services is set forth in the Plan.

### Recreation

Only limited recreational opportunities presently exist within the City of Rajneeshpuram. To help develop a responsive plan for more extensive facilities and programs, a citizen questionnaire was circulated in June 1982 to determine preferences of both City and neighboring residents in recreational and arts and crafts programs. Local facilities are already meeting some of these expressed preferences and these are described. In addition, plans for the secondary school, the community center and the sports center are expected to meet further recreational needs as well as those for an arts and crafts program and the performing arts.

### Open Space

Non-buildable lands, those with slopes over 30% or with poor soil conditions comprise a large portion of designated Open Space; Open Space accounts for 50.1% of the gross acreage in the incorporated area.



## ISSUES

Single ownership and the fact that land is not presently subdivided require unique approaches to designations of land use and development zones. The DPAs and required Concept Plans provide a mechanism for monitoring land use allocations.

Unique attributes of the City's landscape must be provided for in the development, assessment, and maintenance of the Land Use Plan.

A substantial portion of the City's land is unsuitable for development and will require protection.

Limited opportunities for residential development exist outside the City due to the EFU designations of this land; therefore the City must provide a range of housing opportunities and services to meet the needs of residents and visitors.

The remote location of the City requires the development and provision of a full range of recreation, community and cultural facilities and programs.

The remote location and the inherent attractiveness of the City require a wider range of commercial services than would be anticipated in a similarly sized city in a metropolitan area.

The extreme topography of the City requires a careful delineation and protection of limited existing opportunities for industrial development.

## GOAL

To provide and maintain an adequate amount of suitable well located and serviced urban land to absorb the projected urban growth to the year 2002.

## POLICIES

- 26 The City shall designate suitable and serviceable land adequate to provide for a variety of housing types suited to the needs and lifestyles of the City's residents. The City's monitoring process and Concept Plan reviews will ensure the maintenance of a supply of available, serviceable land to meet these housing needs.
- 27 The City shall designate suitable and serviceable sites to permit the establishment of a diversified industrial base and

for a broad range of commercial facilities for residents and visitors.

- 28 The City shall designate suitable and serviceable land for community, cultural, health, educational and governmental facilities.
- 29 The City shall encourage private and public agencies, associations and corporations to plan for, prepare, identify and maintain recreational sites, facilities and programs to meet the long-range needs of residents and visitors. Where appropriate, the City shall develop and utilize open space for recreational needs.
- 30 The City shall preserve as open space those lands that are unbuildable and develop a system that protects plant and wildlife habitats, air quality, outstanding scenic views and watershed quality.
- 31 The City shall require the development of a Concept Plan for each DPA to ensure an orderly application of the general policies and implementation strategies of the Comprehensive Plan and Development Code to requests for building permits. A Concept Plan also shall set out the location and size of major public facilities and services to be provided in a DPA, and shall serve as a standard for review of site plans and building permit requests.

#### IMPLEMENTATION STRATEGIES

1. The City shall assure that the residential densities allowed by Concept Plans and implementing ordinances are appropriate for site conditions, compatible with the capacities of public services and utilities and consistent with attaining an overall residential density of at least three dwelling units per net acre of buildable, serviceable, residentially designated land.
2. The City shall encourage a wide variety of housing types by allowing all varieties of housing, including multi-family dwellings and mobile homes, in all areas designated for residential use.
3. The City shall allow home occupations in areas designated for residential use.
4. The City shall encourage energy conservation in the design of residential buildings and other developments.

5. The City will consider the following factors in designating DPAs for commercial use: convenience and accessibility for residents and visitors, proximity to major modes of transportation and compatibility with adjacent land uses and environmental considerations.

6. The City will consider the following factors in designating DPAs for industrial use: the City's economic needs; adequate and safe access by workers and servicing equipment; proximity to the work force, energy sources and major modes of transportation, and compatibility with adjacent land uses and environmental considerations.

7. The City will consider several criteria when designating sites for educational facilities. Schools will be served by streets that are safe and provide ease of access. They will be located near parks and recreation areas and will be compatible with surrounding land use. The potential demand for educational programs by both resident and non-resident populations will be considered. Aesthetic and innovative site design that will encourage the use of sound principles of energy efficiency and adaptability in serving other community purposes will be adopted.

8. The City will continue to monitor current populations of residents and visitors involved in educational programs so as to project insofar as possible future levels of need in terms of numbers, types of program desired and facilities required in order to provide suitable sites to meet such needs.

9. The City will coordinate with appropriate local and state agencies in the planning of educational facilities.

10. The City will consider the following factors in designating DPAs for community services, such as health facilities, community cafeteria facilities and municipal government sites; safety and ease of access; compatibility with adjacent land use; aesthetic value and innovative design; and efficient economic provision of facilities and services.

11. The City shall adopt site development standards to ensure well designed recreational facilities. These standards shall include:

- adequate and safe access to transportation facilities and public services
- analysis of site conditions in order to minimize the impact on the natural environment.

12. The City shall encourage innovative site design that provides physical amenities, protects open space, encourages solar access and lowers development costs.

13. DPAs, as portrayed in this Volume of the Comprehensive Plan, are envelopes of topographically distinct buildable land which have been designated for a particular type of future use, and zoned consistently with that designation. Each DPA has also been designated for development during one or more phases of the City's development.

- a. Prior to significant development of a DPA, a Concept Plan covering that entire DPA, as shown on the Land Use Plan Maps, must be approved.
- b. A Concept Plan must include, at a minimum:
  1. the location of the DPA boundaries, and the Land Use Plan Map designations and Zoning Map districts for the DPA;
  2. the location and size of major transportation, water and sewer facilities included in the Land Use Plan, i.e., arterials, trunk lines and collectors, including connections to main trunk lines; and
  3. general locations of developable and unbuildable lands within the DPA based on the standards provided by the Plan and Development Code.
- c. In order to be deemed consistent with the City's Plan and implementing measures, a building permit application, other than one for minor construction (e.g., materials storage facility, expansion or replacement of public facility, temporary structures, etc.), must be found consistent with an approved Concept Plan for the DPA in which the building is located.
- d. Procedures for approval of a Concept Plan are as follows:
  1. Administrative Action by Director. Upon receipt of an application for approval of a Concept Plan, the Planning Department shall review the proposal and determine if it is consistent with applicable land use and facilities policies and maps, and applicable Development Code standards. Upon review, he shall approve, approve with conditions or disapprove the application. Notice of the decision and appeal therefrom shall be as provided in the Development Code for administrative actions of the Director.

2. Consolidated Applications. If the Concept Plan for which approval is requested includes an area different from that of a DPA as shown on the official Land Use Plan Maps, the applicant must concurrently apply for a plan amendment, and for a zone change, as appropriate. Such applications for Concept Plan approval, plan amendment and zone change shall be subject to review as provided for in the Development Code for consolidated applications.
3. Amendment of Approved Concept Plan. A request for approval of an amendment to an approved Concept Plan shall be treated the same as a request for approval of a new Concept Plan.

### III. URBANIZATION

#### 4. GROWTH MANAGEMENT

##### ANALYSIS

The basic tools available to the City for managing growth at a rate that is orderly, efficient and in pace with community facilities and services will be:

- the creation of a three-phase development program described below;
- the ability to regulate the expansion of key elements of both the sewer and water systems;
- the Concept Plan requirement for each DPA prior to issuance of building permits.

##### Three-Phase Development Program

The boundaries and assigned land use designations of each DPA are shown on the official Land Use Plan maps on pages 58, 61 and 68. In order to control geographic growth and to ensure a high degree of efficiency and orderliness in the development of the City, which is beginning from a base of little existing development and few facilities and services in place, a Three-Phase Development Program shall be implemented. Each development phase will be identified by alphabetical and sequential letter, the first three phases being identified as Phases A, B and C. Each DPA for the following land use designations - Residential, Commercial, Industrial, Community Services and Parks - will be assigned a suffix letter to identify the phase in which it may be developed. (See the Land Use Plan maps and table of Urban Areas and Phased Development, following page, for the phasing assigned to each DPA.) DPAs that are identified in phases as yet undevelopable may be crossed by servicing facilities required to serve DPAs under planned or current phased development.

The phased development in each of the City's three areas - Gautam the Buddha Grove, Desiderata Canyon and Jesus Grove - may proceed independently of the others in order to be compatible with the varied site choice factors involved in choosing the separate areas, and to be consistent with proposed economic development as outlined in this Plan. It will be the intent of this program to schedule the preponderance of phased development in Phase A, as the greatest population growth of

that projected until 2002 is anticipated in the first five years. Implementing strategies are required to clearly define when subsequent phased development may be initiated in order to assure, in an efficient and orderly way, an adequate amount of developable land in the marketplace. Such strategies should include criteria establishing at what time B and C phases will be initiated and when the City Council should consider amending the urban growth boundary.

City of Rajneeshpuram  
URBAN AREAS AND PHASED DEVELOPMENT

LAND USE DESIGNATION	GAUTAM THE BUDDHA GROVE				DESIDERATA CANYON				JESUS GROVE			
	Total Acres	Phase A	Phase B	Phase C	Total Acres	Phase A	Phase B	Phase C	Total Acres	Phase A	Phase B	Phase C
Residential	168	132	31	5	128	56	39	33	140	105	16	19
Commercial	96	88	8	-	9	9	-	-	35	35	-	-
Industrial	71	71	-	-	14	14	-	-	46	46	-	-
Community Services	130	130	-	-	43	43	-	-	41	41	-	-
Recreation (all)	103	82	11	10	5	-	3	2	36	23	13	-
TOTALS	568	503	50	15	199	122	42	35	298	250	29	19

Prior to any significant development of a DPA, a Concept Plan for that DPA will be submitted to the City's Community Development Director and checked for conformance with the Comprehensive Plan and Development Code. (See pages 50-52.) The Community Development Director will regularly review the adequacy of the support facilities and will form the City Council if any insufficiency of such services would preclude or postpone any proposed development. (See residential phase chart, next pages.)

### Utility Phasing

Phasing will also be controlled by the availability of services, primarily sewer and water. Because growth will occur concurrently in many of the DPAs, main water and sewer lines and arterial and collector roads will have to be supplied to them in the initial stages of development consistent with an approved Concept Plan, although collector and branch lines will be installed only in conjunction with an approved building permit and site plan. These main sewer and water lines will be sized according to projected needs to avoid costly upgrading.

For example, if the water system is to be used both for drinking and for fire protection, the key element in determining capacity is the size of the reservoir. Since it is important to have an excess or multiplicity of proven groundwater sources with a backup well and pump, then the reservoir becomes the key staging tool. Additional reservoir capacity would be required

RESIDENTIAL LAND AVAILABLE BY PHASES

Buddha Grove:

Residential acreages = 168; people = 1,790

Phase A = 110 acres;  $\frac{110}{168}$  acres x 1,790 people = 1,177

Phase B = 50 acres;  $\frac{49}{168}$  acres x 1,790 people = 527

Phase C =  $\frac{8}{168}$  acres;  $\frac{8}{168}$  acres x 1,790 people =  $\frac{86}{1,790}$  people

Desiderata Canyon:

Residential acreage = 128; people = 650

Phase A = 51 acres;  $\frac{51}{128}$  x 650 = 259 people

Phase B = 39 acres;  $\frac{39}{128}$  x 650 = 198 people

Phase C =  $\frac{38}{128}$  acres;  $\frac{38}{128}$  x 650 =  $\frac{193}{650}$  people

Jesus Grove:

Residential acreage = 140; people = 900

Phase A = 83 acres;  $\frac{83}{140}$  x 900 = 524 people

Phase B = 36 acres;  $\frac{36}{140}$  x 900 = 232 people

Phase C =  $\frac{22}{140}$  acres;  $\frac{22}{140}$  x 900 =  $\frac{141}{900}$  people

(continued on next page)



RESIDENTIAL LAND AVAILABLE BY PHASES (continued)

Matching Residential Land to Phases to Population Growth

By adding the figures on the previous page and referring to the Residential Land Use Requirement Chart in Volume 1 (page 167), the following figures are obtained:

<u>Phase</u>	<u>Gross Residential Acres Available</u>	<u>Average Estimated Population</u>
"A"	234	1,963
"B"	125	957
"C"	68	420
	<u>436</u>	<u>3,340</u>

In addition, the Residential Land Use Requirement Chart shows 300 people living in nonresidential areas of Gautam the Buddha Grove and 60 people living in nonresidential areas of Desiderata Canyon, for a total of 360 people. Using the same phase-weighted average as above, the following figures are obtained:

Phase A	$\frac{1,963}{3,340}$	x	360	=	212 people
Phase B	$\frac{957}{3,340}$	x	360	=	103 people
Phase C	$\frac{420}{3,340}$	x	360	=	45 people

Adding the residents living in nonresidential areas to residents living in residential areas, the figures are:

Phase A	1,963	+	212	=	2,175 people
Phase B	957	+	103	=	1,060 people
Phase C	420	+	45	=	465 people

or, cummulatively:

Phase A	=	2,175 people
Phase A + B	=	3,235 people
Phase A + B + C	=	3,700 people

before additional development could take place. However, the main water lines, as shown in an approved Concept Plan, would be initially sized to provide for projected needs during the planning period.

For the sewer system, the treatment and disposal facilities are the key elements that determine the real capacity of the system. In Gautam the Buddha Grove, sand filtration units are planned with subsurface drainfield disposal. The sand filter units have a capacity expressed in gallons per day, per square foot of surface area of the sand filter. Flows and capacity are easily measured and monitored. The drainfield is sized to the capacity of the filter. Additional dwellings or structures would not be approved unless it could be demonstrated that there existed sufficient sewage treatment capacity to handle the added load. The capacity of sand filters is linear; that is, twice the surface area yields twice the capacity, so change and additions could easily be made when coordinated with the phasing program. The sand filtration unit would then be an instrument of phasing control. However, the main sewer lines, as shown in an approved Concept Plan, would initially be sized to provide for the projected needs of the City during the planning period.

In Jesus Grove and Desiderata Canyon, all sewage effluent will be piped or pumped to a central sewage treatment area located about  $\frac{1}{2}$  mile north of the airstrip. At this sewage treatment area, there is now a single two-acre evaporation lagoon. The capacity of this lagoon as it is set up now is very low - it can serve about 50 persons. Alterations, additions and changes in the permit could increase its capacity. Thus it is another key element in the system because each phase or addition has a finite capacity.

Connection to the City's sewer and water systems will be mandatory when these services are available. However, development may be permitted to occur with on-site water and sewage disposal systems, provided that such development will not preclude the efficient provision of sewer and water services to the DPA; and the development will be required to connect to the sewer and water systems when City services become available.

#### SUMMARY OF FINDINGS

Three means are presented to effect the orderly growth of Rajneeshpuram. They are a staged development program, the ability to regulate sewer and water installations, and the requirement for submission of a Concept Plan before any significant development can take place. The Three-Phase Development Plan is expressed in A, B and C stages with each DPA assigned a phase in which development may begin. Development for any given DPA is concentrated in one phase. A main factor in

utility phasing is that of providing transmission lines and main supply pipes that will have capacities equal to that needed for the greatest anticipated future growth in the planning area. Water storage capacity is a key for controlling the staged development of that utility, as are capacity of sewage treatment and disposal facilities controlling the staged development of sewage service.

### ISSUES

The City must be able to manage its growth in an orderly and efficient manner.

Growth and development will occur at different intensity levels requiring varying completion times.

Future maximum development levels must be programmed for in present planning in order to provide future services in an efficient and cost-effective manner.

Sufficient serviced land for current needs, and serviceable land for projected 20-year requirements, must be provided for Residential, Commercial, Industrial, Parks and Community Service uses.

### GOAL

To plan and develop a timely, orderly and efficient public facility and service system to serve the City's needs and to ensure that adequate amounts of appropriately designated, serviced land are available to meet the City's needs for all land use purposes.

### POLICIES

- 32** The City shall, in planning for public facilities and services for urbanizable areas, require that such services and facilities be of a type, design, location and level necessary and suitable to accommodate projected population growth and land uses as provided in the Comprehensive Plan. The provision for future public facilities and services in these areas shall be based upon: (1) the time required to provide the service; (2) reliability of service; and (3) levels and capacities of service needed.
- 33** The City shall plan for and provide sufficient serviced land for current needs, and serviceable land for projected 20-year requirements, appropriate for Residential, Commercial, Industrial,

Parks and Community Services Land Use designations.

**34** The implementation of subsequent phased development by means of the Zone Map Amendment process shall be based upon the following general criteria:

- orderly, economic provision for public facilities and services;
- availability of sufficient land for various uses to ensure choices in the marketplace;
- LCDC goals;
- development within urban areas before conversion of urbanizable areas.

#### IMPLEMENTATION STRATEGIES

1. Implementation of the Three-Phase Development Program in each of the City's three areas - Gautam the Buddha Grove, Desiderata Canyon and Jesus Grove - may proceed independently of the others and the following criteria will establish the conditions required to initiate subsequent phased development in each of these distinct areas:

- "A" designated DPAs may be developed immediately because the full range of urban facilities and services is being developed or available;
- "B" designated DPAs in a specific land use designation may be developed: (1) after 75% of the "A" DPA acreage for that specific land use designation is under development, or has been developed, in the same City area (Gautam the Buddha Grove, Desiderata Canyon or Jesus Grove), and (2) when the full range of urban facilities and services is being developed or available to the "B" DPAs in that specific land use classification in the same City area;
- the implementation of subsequent DPA phased development may take place independently in each of the City's three distinct areas when development has occurred under each phase, as that described for Phase B above, and when the full range of urban facilities and services is being developed or available to serve the specific DPA land use designation for which phasing is being implemented;
- at such time as 75% of the total City acreage allotment for a specific land use designation is under development

or has been developed, the City shall consider amending the UGB to include land suitable for designation for that specific land use. Consideration of such UGB amendment shall be consistent with LCDC goals and if approved, the lands and DPAs included will be identified for phased development with specific land use designation with alphabetically sequential letters beginning with "D" Phase, and so forth.

2. The City shall develop a conceptual plan for the provision of needed public facilities within the UGB. This plan will illustrate probable future locations of main roads, sewers and water lines, and is not intended to be binding.
3. Urban level development may occur only when the full range of urban facilities and services has been planned and is available.
4. In areas where urban level facilities and services are not available, the following uses shall be permitted:
  - wildlife and other natural resource management activities;
  - utility facilities and services except electric substations, sewage lagoons and sanitary landfills;
  - farm uses.
5. The City shall require that the Public Facilities Concept Map be considered in the development of the Concept Plan for each DPA, and that the Concept Plan establish the location and size of future major transportation, water and sewer lines within the DPA.
6. All development must take place on public sewer and water lines and have adequate transportation access; provided that individual developments may be permitted to proceed with on-site water and/or sewage disposal systems, if urban level services are not available and it is determined that such development will not preclude the subsequent to the DPA. The City shall require that such development be connected to urban services when they become available.
7. The director shall maintain an accurate and updated inventory of existing facilities and services.
8. The City shall require that building permit and Site Plan applications demonstrate that public facilities will be constructed, and adequate storage, treatment and transmission capacities will be available prior to occupancy and use of the building.

### III. URBANIZATION

#### 5. ANNEXATION

##### ANALYSIS

The City has established its land use requirements based on projected needs to the year 2002. This projection considers anticipated local economic diversification and development as well as expected future population growth and the associated requirements of the City's future residents.

Strategies must also be developed that enable the City to annex territory required due to economic and population growth beyond those anticipated in projections, yet within limits imposed by the carrying capacity of the air, water and land resources. The City's unique site characteristics may impose constraints on the proper placement and development of facilities presently planned to serve the City and thus require the annexation of suitable adjacent territory for the establishment of such facilities.

Within the constraints imposed by economics and resource carrying capacity, annexation measures should be considered if:

- the availability of suitable vacant buildable lands within the U.G.B. falls below 25%, or
- necessary facilities to adequately serve the City's needs can be more effectively sited beyond the existing boundary.

##### Summary of Findings

The Comprehensive Plan includes strategies to manage future development and growth in a manner consistent with planning of affected jurisdictions. The need to annex territory may arise, however, to accommodate future economic and population growth or to provide the community with adequate public facilities and services.

##### Issue

The annexation of lands adjacent to the City may be required in the future to accommodate growth to provide for the establishment of needed facilities.

## Goal

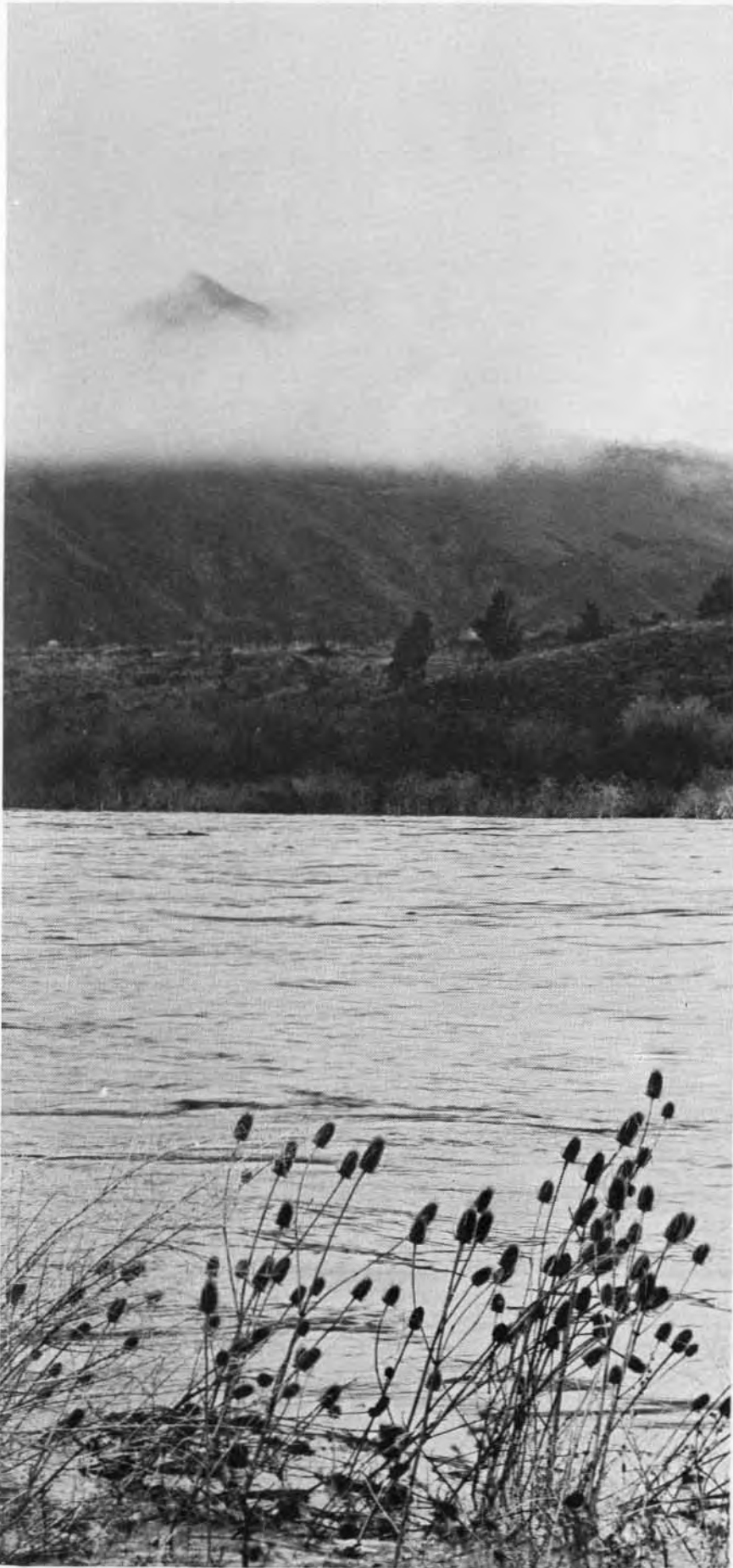
To enable the City to annex land to accommodate future growth in a manner consistent with statewide land use planning of affected jurisdictions and the goals and policies of this Plan.

## Policy

- 35** The City shall consider annexation of suitable adjacent land when required to provide for growth in the economy or population, or when needed to provide adequate services and facilities.

## Implementation Strategies

1. The City will consider annexation of adjacent territory when:
  - the percentage of suitable vacant buildable land for any one of the following purposes falls below 25% of its total allotment: residential, commercial, industrial, community services or parks;
  - when insufficient land exists for the feasible and cost-effective siting of facilities to serve the City's requirements.
2. The City shall coordinate all measures for annexation with affected county jurisdictions and existing or future agreements for the management of urban growth boundaries. The City shall not rezone annexed territory as urban or urbanizable until such land is included within the Urban Growth Boundary.
3. Territory annexed to the City shall remain subject to the land development regulations of the county until changed by the City.
4. The City shall be guided in considering annexation proceedings by its estimated ability to provide timely and adequate services and facilities to the annexed territory if such lands are included within the U.G.B.
5. The City shall be guided in considering annexation proceedings by the carrying capacity of the air, water and land resources of all lands involved.



## SERVICES AND FACILITIES

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transportation  
communications  
water supply  
sewage disposal  
and storm drainage  
electric power  
solid wastes  
safety and emergency



## IV. SERVICES AND FACILITIES

### 1. TRANSPORTATION

#### SUMMARY OF FINDINGS

The City's transportation system includes a road network and related vehicular traffic, air transport and alternate modes of travel including bicycles and pedestrian traffic. The area's road system has a long history, and the existing road network will need upgrading and additions. Surfacing and dust abatement techniques have been developed to create high quality roads.

The public transit system now serving the City consists of a fleet of buses. A system of bikeways and walkways is also planned.

Air transport is accommodated by a 3,900-foot runway that parallels Tao Road, a county road. Plans call for surfacing the runway in 1983 and the construction of a 80 x 100-foot hangar.

#### ISSUES

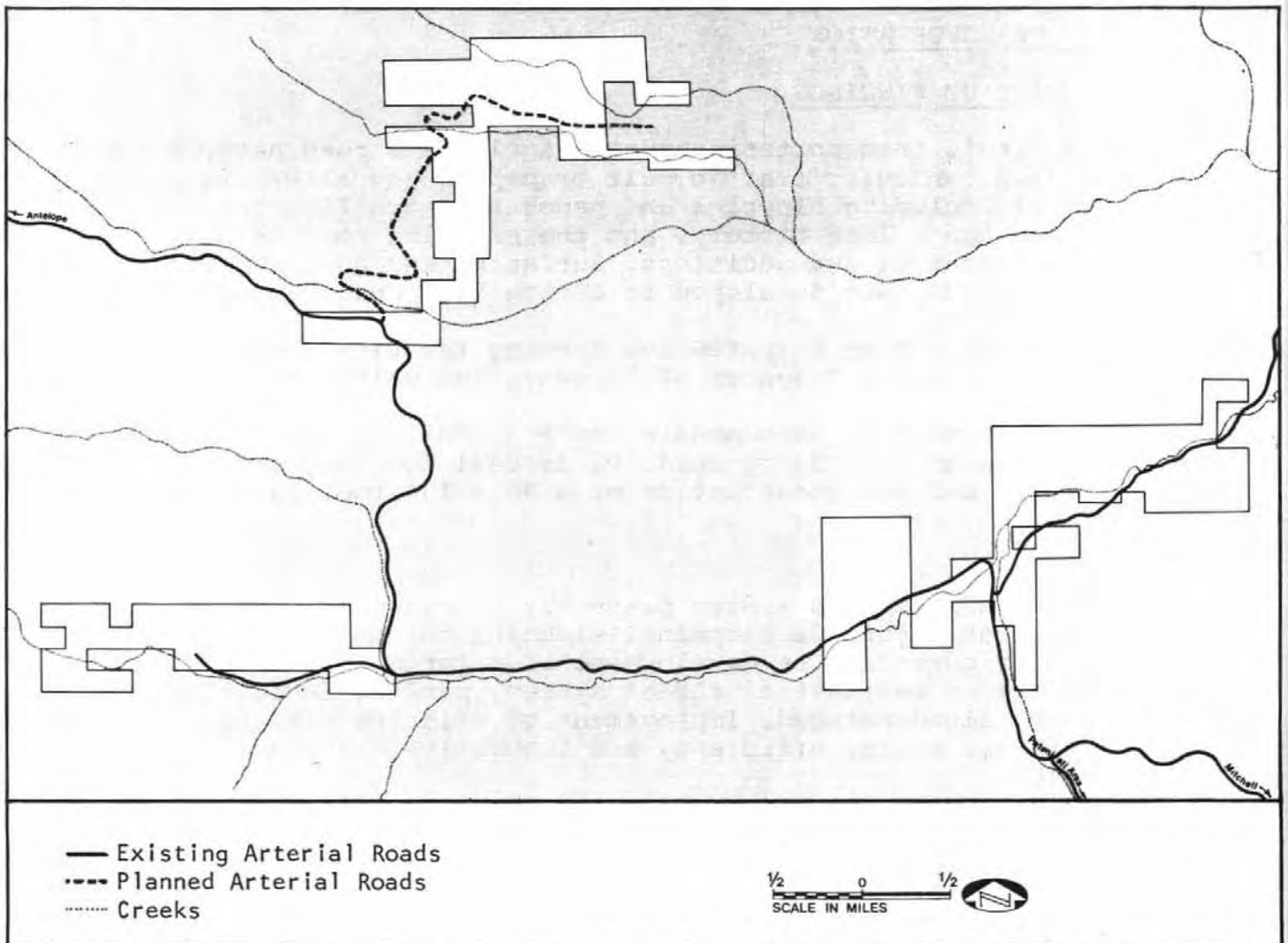
The transportation system presently serving the City is inadequate for future development. Planning for such a system will need to consider the development of arterial and collector streets, a residential street system, parking facilities, use by the disadvantaged, improvement of existing air transport facilities, energy efficiency and innovative, alternate modes of travel.

#### GOAL

To facilitate the efficient and safe movement of people and goods throughout the City as well as to nearby cities.

#### POLICIES

- 36** The City shall ensure that transportation planning will maximize:
- safety and convenience;
  - a variety of transit modes;
  - conformance to applicable state and federal air quality regulations;
  - use of mass transit and car pooling;
  - ease of movement for the disabled;
  - ease of parking and loading;
  - coordination with county and regional transportation plans.
- 37** The City shall ensure that transportation planning minimizes danger, noise, the use of private vehicles and other negative environmental impacts.



IMPLEMENTATION STRATEGIES

1. Roadways

The City shall provide a safe, efficient and convenient street system including local, arterial and collector streets capable of handling projected volumes yet designed to preserve the privacy, safety and peace of neighborhood living.

Discussion: The basic element of the transportation system at Rajneeshpuram is the network of arterial and collector roads that connect and serve the land uses in the three planning areas. See Map 9 above.

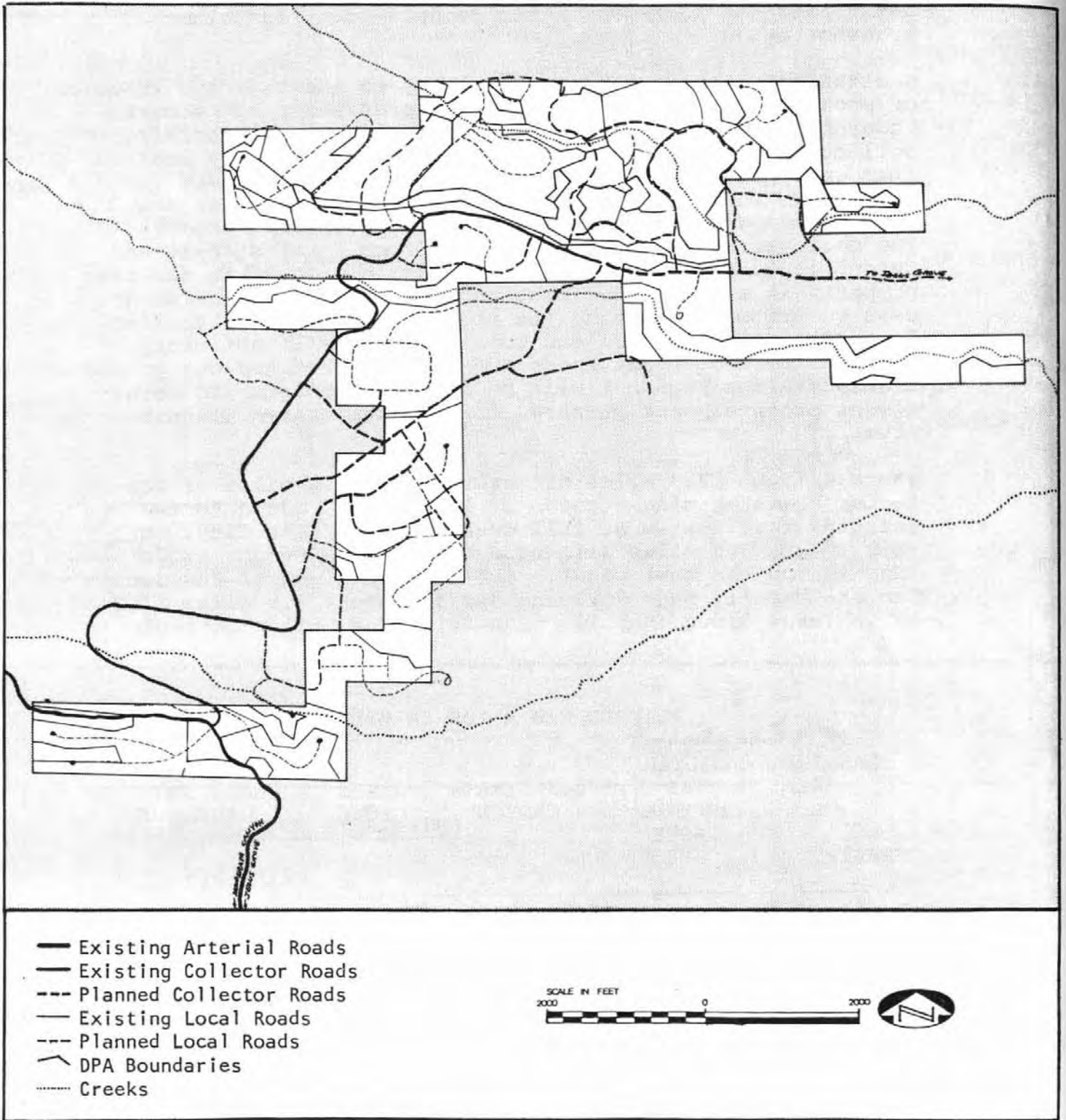
The extent and condition of the present road network and a description of newly completed roads appears in Volume 1, Transportation.

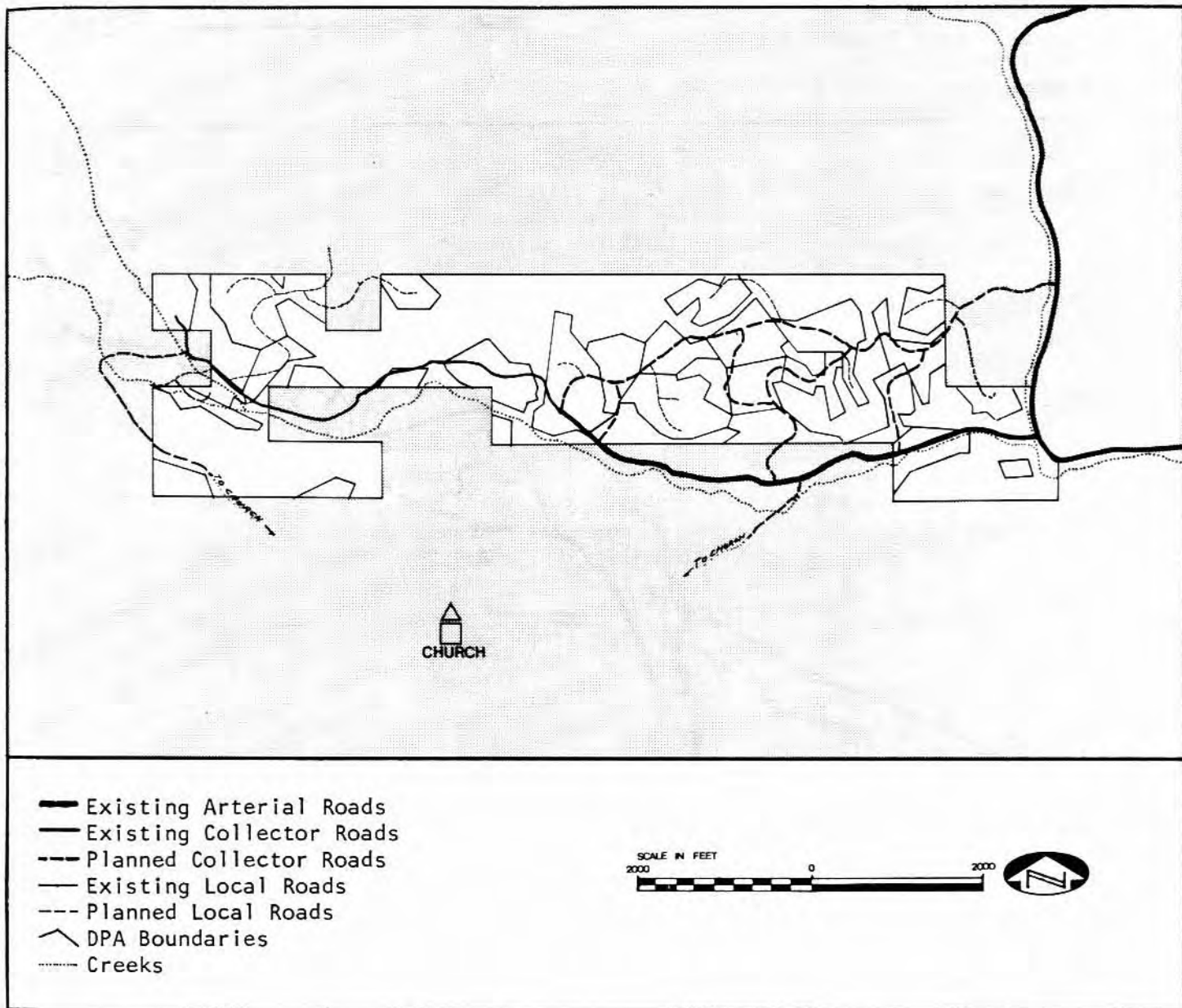
A classification system was developed to identify the function of each segment of the existing and proposed road network. Under this system, all roads are classified as arterials, collectors or local. Arterials are roads that carry traffic from one part of the community to another and through the community. Their primary purpose is to move traffic; they have a secondary function of providing access to property. The collector roads collect traffic from local streets and funnel it to the arterial network. Again, access to abutting property is a secondary function. Local streets provide access to property abutting the right of way. Moving traffic is a secondary function and local streets will not carry through traffic. Local roads are not yet sketched out on the transportation plan but will be detailed as specific development proposals are prepared for the Designated Planning Areas.

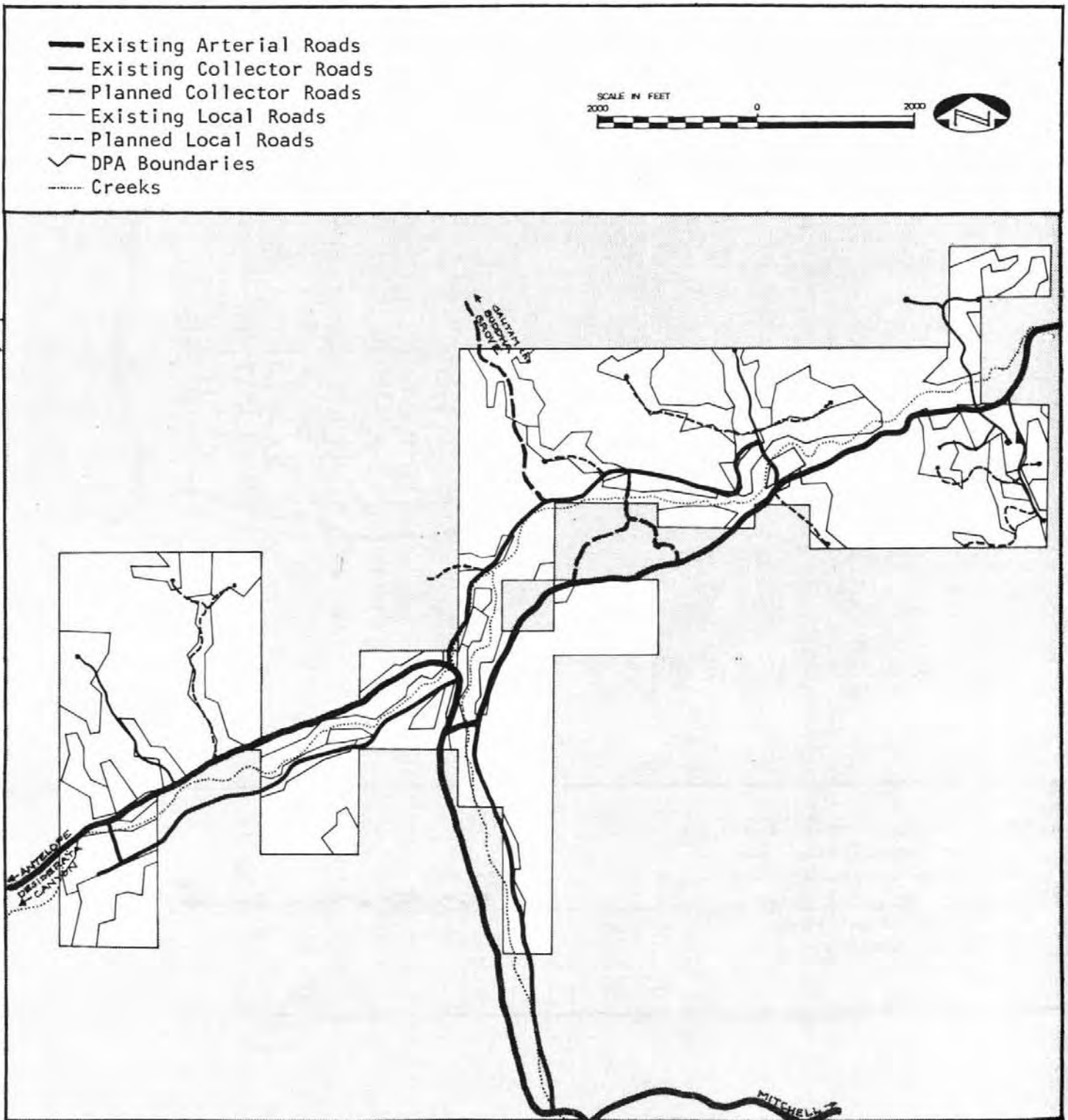
There will be 12.7 miles of arterial and 9.2 miles of collector roads, making a total of 21.9 miles, added to the existing road system at full development of the City. Of this total, 8.6 miles will be in Gautam the Buddha Grove (Map 10, on the next page). 4.4 miles will be in Desiderata Canyon (Map 11, page 91), and approximately 4.9 miles will be in Jesus Grove (Map 12, page 92). See following table.

PLANNED NEW ROADS IN MILES

PLANNING AREA	GAUTAM THE BUDDHA GROVE	DESIDERATA CANYON	JESUS GROVE	CONNECTOR: JESUS GROVE TO GAUTAM THE BUDDHA GROVE
CLASSIF.				
ARTERIAL	4.6	2.5	1.6	4.0
COLLECTOR	4.0	1.9	3.3	
TOTAL	8.6	4.4	4.9	4.0







## 2. Street Design

The City shall develop standards for street design and layout that will maintain a high level of service and ensure that local topography and landscape issues have been adequately addressed.

### Discussion:

a. Road Widths: Rajneeshpuram has adopted a policy of reducing the minimum right of way and surface requirements. Where 50 and 55 feet used to be a desired right of way for local streets, 40 feet will be the standard. And 24- to 28-foot road surfaces will become 20 feet. While collector streets frequently have 60-foot rights of way and 36-foot paving widths, the City Development Code specifies 50 feet and 24 feet respectively for right of way and surface. Arterial rights of way most often are 80 or more feet in width with 48 feet of surface or even divided roadways, depending on traffic volumes. The City has set a 60-foot right of way and 24-foot surface width as its standard.

#### MINIMUM ROAD STANDARDS

CLASSIFICATION	DAILY TRAFFIC	RIGHT OF WAY (IN FEET)	ROAD SURFACE (IN FEET)	SHOULDERS (IN FEET)
ARTERIAL	+ 250	60	24	4
COLLECTOR	51 - 250	50	24	4
LOCAL	0 - 50	40	20	2

Rajneeshpuram, like other cities throughout the United States, is reducing the right of way and surface requirements for local and collector streets to use the land more efficiently, reduce road construction and maintenance costs and to save energy. Also contributing to the decision to reduce both right of way and surface widths is the demonstrated lower traffic volumes that are the direct result of the social preferences of the City's population. Specifically, the combined

use of buses, car and truck pooling, bicycles and walking has significantly reduced the volume of traffic on the City's roads.

b. Surfacing: The City Development Code sets standards for road surfacing that will reduce road and vehicle maintenance costs; reduce energy consumption, improve air quality, improve level of service and travel times, assure all-weather use of roads and generally facilitate movement of people and goods. In addition to surfacing standards, there is a time frame for making these improvements. The developer has two years to bring new roads into conformance; existing arterial roads must be surfaced with asphalt concrete within five years. In either case, if no undue hardship will be incurred by failure to meet the time schedule, the City Engineer may extend the time.

c. Other Standards: The Development Code includes standards for maximum road grades, restrictions on the amount of cut and fill allowed, and the establishment of minimum sight distances.

### 3. Parking

The City shall establish and implement standards for adequate parking and loading facilities within the City.

Discussion: On local roads, particularly in residential areas, on-street parking will be allowed with walkways provided to individual buildings. The construction of driveways to individual buildings will be discouraged except for service drives to certain commercial, industrial or community services facilities. This policy is partly due to topographical considerations, and also to encourage walking and to minimize disruption of the natural terrain and vegetation. Clustering of development and parking areas will foster energy efficiency, reduction of utility runs, reduction of the number of roads, and preservation of site features. The off-street parking standards established in the Development Code have been designed to encourage grouping of these facilities in less visible areas within easy walking distance of destinations. Joint use of off-street parking areas may result in a reduction of the total area required for parking.

### 4. Public Transportation

The City will provide mass transportation through the creation and operation of a city-wide bus system.



Discussion: At present, there is a mass transit fleet of 50 buses, most with a capacity ranging between 36 to 45 persons each. Present scheduling allows a lead time of 20 minutes with service beginning at 6:30 am and ending with a late run at 10:40 pm. An average of 12 buses are in operation during peak hours.

At the recent five-day First Annual World Celebration the more than 5,000 people attending were bused daily to events, meals, tours of the City and Rancho Rajneesh and to the recreational areas at Patanjali Lake and the Radha River. Average daily ridership on the transit system during that time has been estimated at more than 15,000.

As the City expands, bus operations will also grow so that the level of service presently being provided can at least be maintained or, preferably, improved upon.

#### 5. Bikeways and Walkways

The City will encourage and provide for bikeways and pedestrian walkways.

Discussion: The Development Code specifies design criteria for both bikeways and pedestrian walkways. The 13.25 miles of bikeways that will be prepared for the City are shown on Map 13, next page. Four miles are in Gautam the Buddha Grove, four miles in Jesus Grove, two and one-half in Desiderata Canyon and two and three-quarter miles connecting Desiderata Canyon with Jesus Grove. The Development Code specifies that these bikeways be at least seven feet wide with an all-weather surface. They will be designed separately from roadways where possible and preferably located adjacent to creekbeds if consistent with the maintenance of riparian vegetation and prevention of erosion.

#### 6. The Handicapped

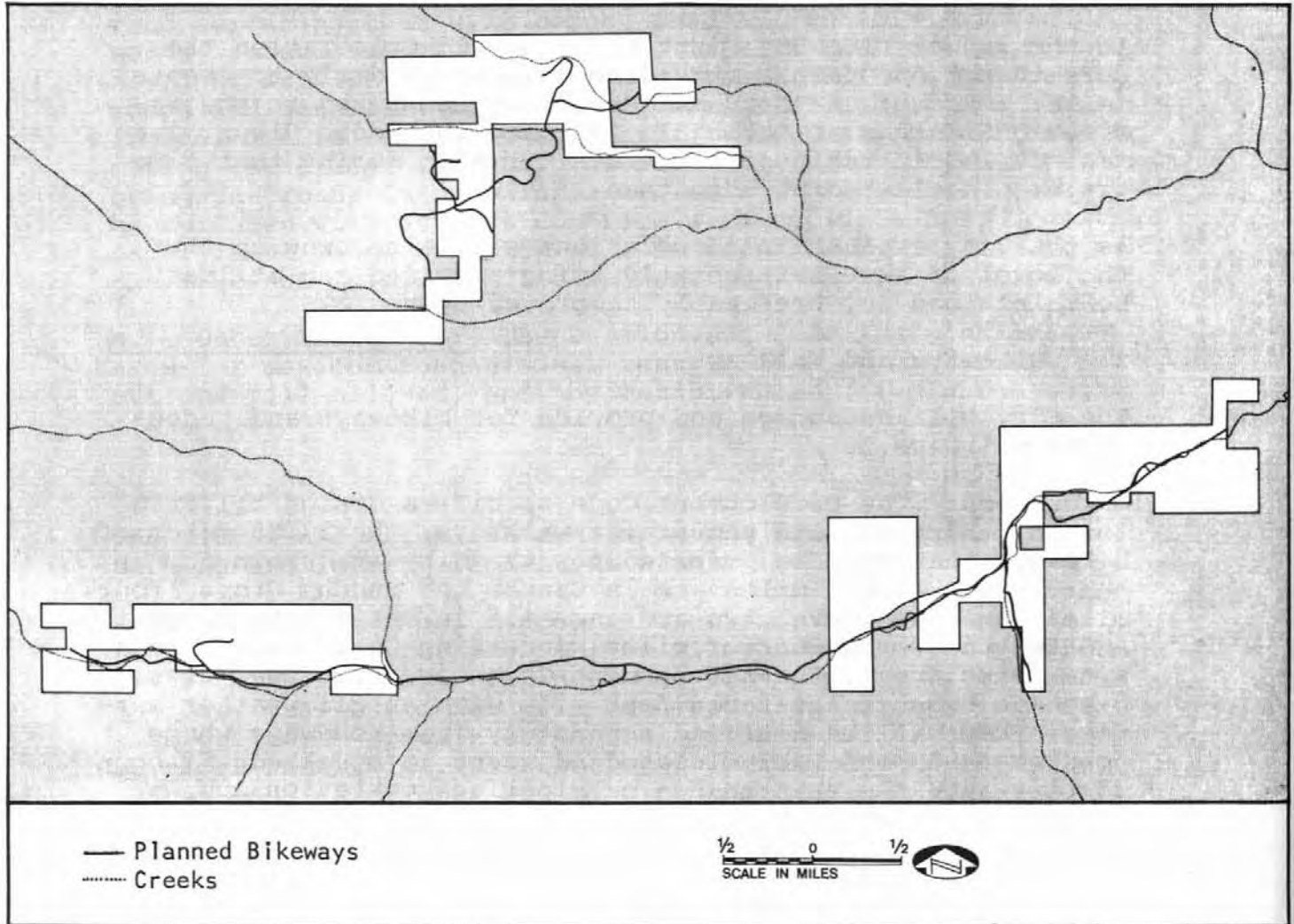
The City shall make possible and facilitate the transportation of the handicapped throughout the City.

Discussion: The Development Code specifies the standards and facilities to accommodate all the transportation needs of handicapped persons.

#### 7. Inter-City Transportation

The City will facilitate travel between Rajneeshpuraam and other cities.

Discussion: Air transportation from the City is described in Volume 1, "Transportation." Transportation will be made available to the closest intercity bus terminal, 53 miles away in Madras. Amtrak provides passenger service at The Dalles, 83 miles north of the City.



8. Airport Standards

To ensure the safe and compatible use of the airport with City lands, the City shall develop appropriate codes and ordinances with respect to zoning, height obstructions and noise.

9. Master Services Alignment Map

The City shall adopt and maintain a public facilities plan including a map identifying existing and proposed roads to serve as a guide to the type, location and capacity of roads serving the City.

## IV. SERVICES AND FACILITIES

### 2. COMMUNICATIONS

#### SUMMARY OF FINDINGS

Telephone service in the City is privately owned. It consists of buried transmission lines and a computer controlled switching system. A four-frequency privately owned radio system consisting of two general frequencies, one restricted frequency, and one emergency frequency is also presently in place in the City. The overall communications system within the City is limited and substantial efforts are being made to improve and upgrade it.

#### ISSUE

Due to the remote setting of the City, its communication system must be reliable and comprehensive enough to serve the ongoing internal needs of the community, to connect the community with the rest of the country and to cope adequately with emergencies.

#### GOAL

To provide orderly, efficient and reliable communication facilities and services.

#### POLICIES

- 38** The City, in cooperation with appropriate public agencies and private concerns, shall assess the potential communication impacts of all development and continually strive toward an effective communication system for the community, especially for the meeting of emergency needs.

#### IMPLEMENTATION STRATEGY

##### 1. Telephones

The City will use the powers available to it to see that telephone facilities are adequately designed and sized to serve the needs of the community.

Discussion: In order to serve the needs of an expanding city, Rajneeshpuram is developing a sophisticated telephone system. The City will utilize a modular system based upon three PABX (Private Automatic Branch Exchange) stations, one station located at each of the main population centers of

the City: Gautam the Buddha Grove, Desiderata Canyon and Jesus Grove. Each exchange will be linked by cable. Through careful planning, the system will incorporate a high degree of redundancy, making possible the rerouting of priority traffic in the event of failure in any isolated area. The City will also require that contingency plans be developed to cover "worst case" hazards, that the limitations of available communication facilities and services in meeting such hazards be identified, and that a program to correct any such service deficiencies be developed.

All station phones, i.e. business and residential phones, will be linked by the cabling system to the central PABX in that area. Gautam the Buddha Grove, with the highest proportion of population, will support the central PABX office, which will be connected with outside trunk lines. The main switching office will interconnect all lines to the incoming trunks supplied by the franchised telephone company in the area. Negotiations are under way with utility companies to supply the necessary trunking facilities to accommodate population growth over the next 20 years.

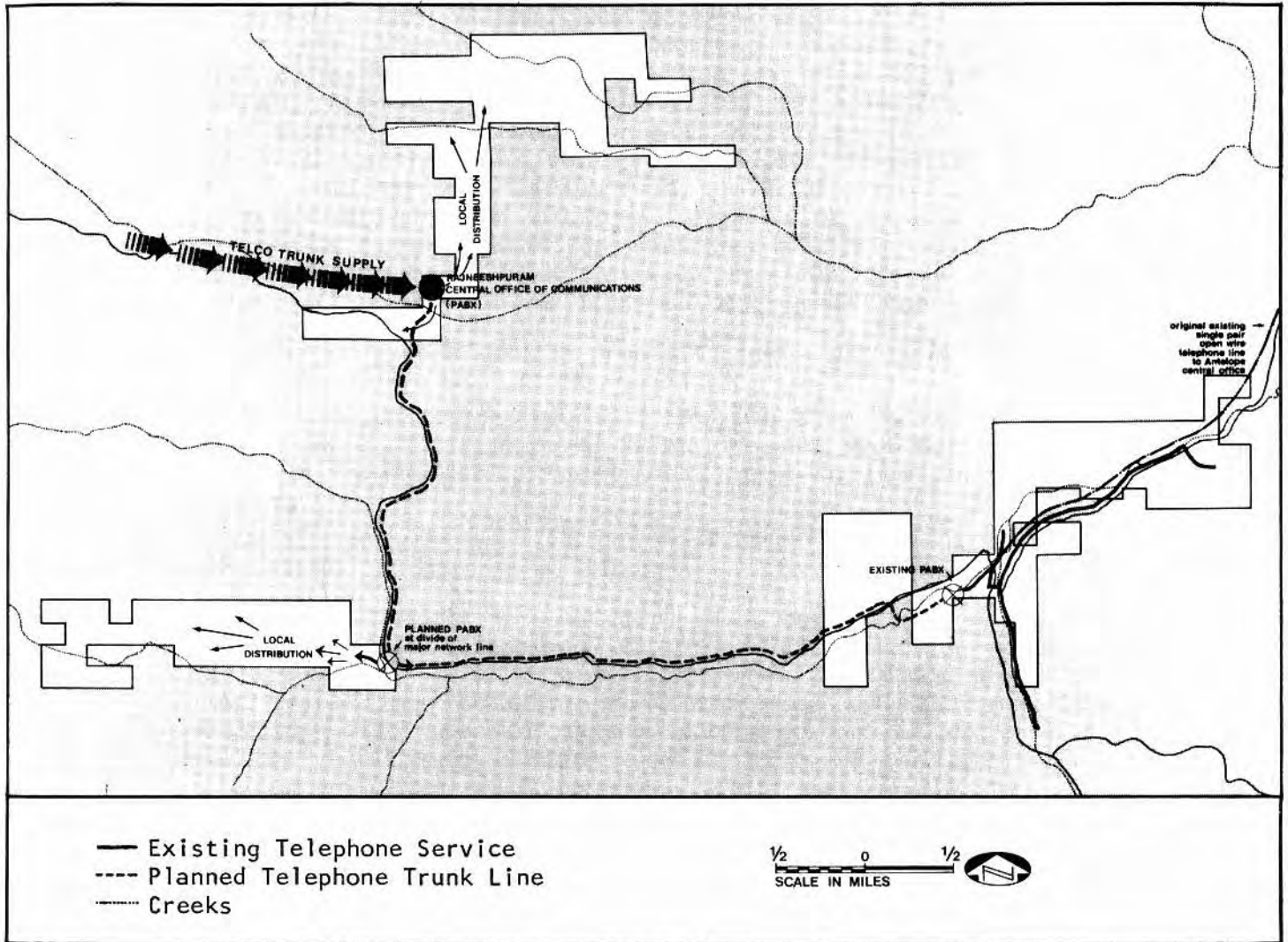
Within five years Rajneeshpuram will have a 4,000-telephone capacity in a modularly expandable system. The system will expand easily to meet the demand for individual station service as the population grows. (See Map 14 on the next page.)

Insofar as possible, all new development should be served by underground telephone lines.

## 2. Emergency Communications Center

In cooperation with the RRFPD, the Public Safety Department of the City will provide for a 24-hour Emergency Services Communication Center capable of serving the entire City.

Discussion: This center will monitor all radio channels and be the coordinating dispatch center for all emergencies. The center will control a radio-alert monitoring system with the capability of paging city services, fire, public safety and medical personnel.





## IV. SERVICES AND FACILITIES

### 3. WATER SUPPLY

#### SUMMARY OF FINDINGS

The development of the City's water supply will serve multiple purposes: agriculture, domestic, industry, construction and firefighting. The City has a major role and responsibility in guiding the development and maintenance of the water system. A number of conservation measures have been taken and substantial benefits reaped. The City's existing service and storage facilities are more than adequate now for residential, agricultural, and firefighting uses. A per capita figure of 80 gallons per person per day has been determined to be a reasonable approximation of water usage. A reserve of 125,000 gallons is available for firefighting.

#### ISSUE

An adequate storage and distribution system is required to deliver water available to meet present and future needs of domestic, commercial, industrial, and agricultural users in the City.

#### GOAL

To provide for the storage and distribution of water in sufficient quantities and of adequate quality to meet the City's needs. In addition, all water systems should be designed for appropriate quantity and quality allocation for specific uses, ease of maintenance and amplification, flexibility, efficiency, ready application of conservation measures and emergency use.

#### POLICIES

- 39** The City shall plan, and require developers to provide for, the development and maintenance of water systems with adequate supply storage and transmission capacity to provide water to all projected development within the City to be served by such facilities.
- 40** The City shall provide water, or ensure such provision through the preferred provider of municipal water, of sufficient quality and quantity at adequate pressures to meet the requirements of all users, including fire flow requirements.

- 41 The City shall ensure that its central water supply system is in conformance with all state and federal standards for water quality.

#### IMPLEMENTATION STRATEGIES

##### 1. Groundwater

The City shall require the development and coordination of adequate groundwater supplies in all parts of the City.

##### Discussion:

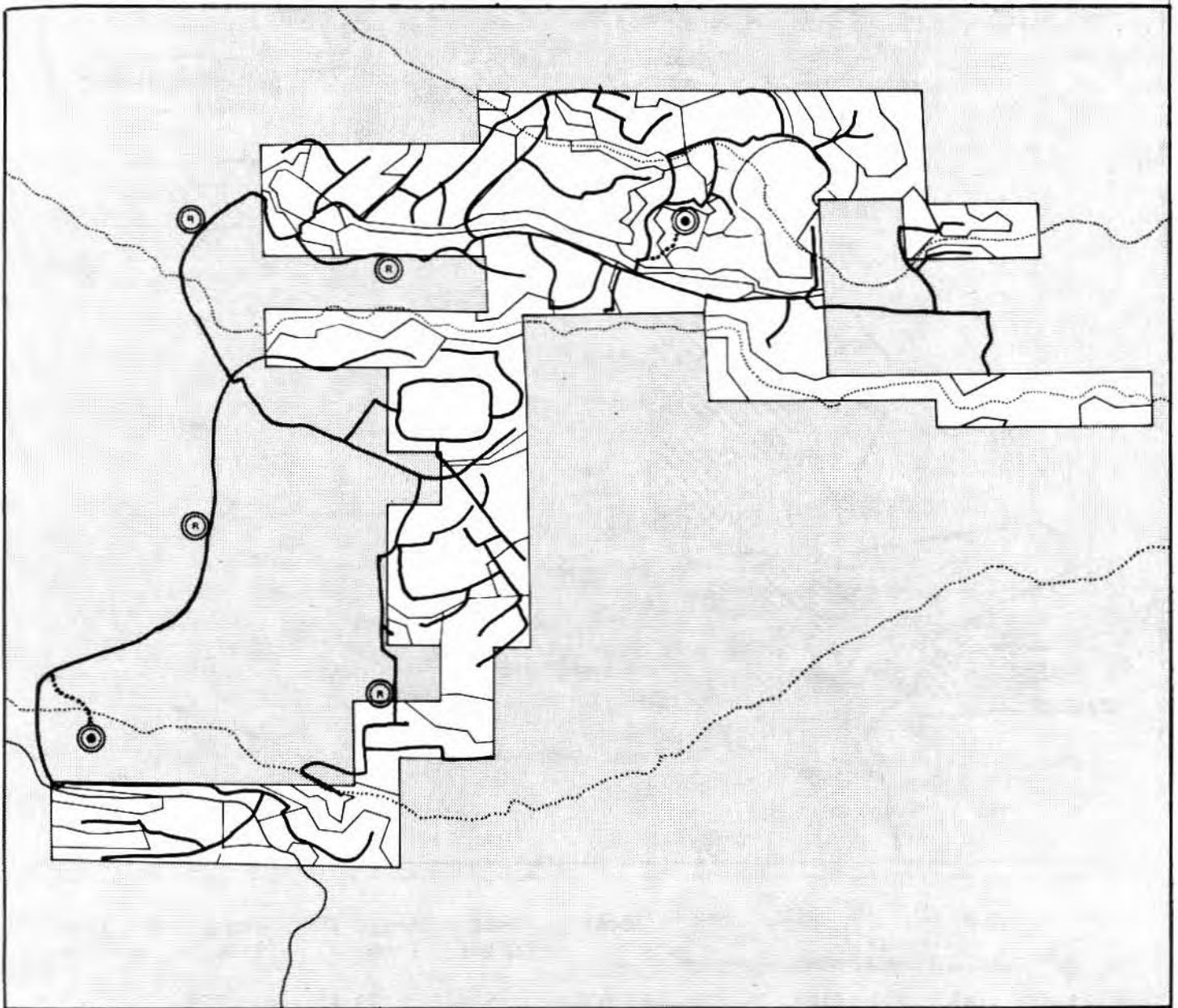
a. Gautam the Buddha Grove: In the Gautam the Buddha Grove area, two wells have recently been drilled. Tests on these wells indicate production capabilities of 25 to 30 gpm. Water from these wells has been submitted to Environmental Protection Agency and Oregon State Health Department water quality tests, and both conform to drinking water standards. A new well has been drilled and preliminary tests indicate substantially higher quantities; a water quality test has been taken, but the results have not yet been received. Based upon initial tests and evaluation of geotechnical surveys and hydrogeological interpretation, a series of properly located and designed low-to-moderate production wells will be located within the several thousand acre drainage basin that surrounds the Gautam the Buddha Grove district. These wells should be capable of supplying the anticipated 1987 needs of the district without overdrawing the groundwater aquifer.

For graphic illustrations of estimated water supply and demand in Gautam the Buddha Grove, see Maps 15 and 16 on pages 103 and 104.

b. Desiderata Canyon: The Desiderata Canyon area will be served by several low producing wells. In addition, a new well is presently being constructed in the Farid Creek drainage basin, approximately one mile downstream from Desiderata Canyon. It is located in a water rich alluvial basin upstream of the future dam and could produce moderate to high yields. If sources prove inadequate for the population in Desiderata Canyon as it grows, water will be piped from the Jesus Grove area, which already has wells that can easily supply the needs of the projected population of 710 for Desiderata Canyon.

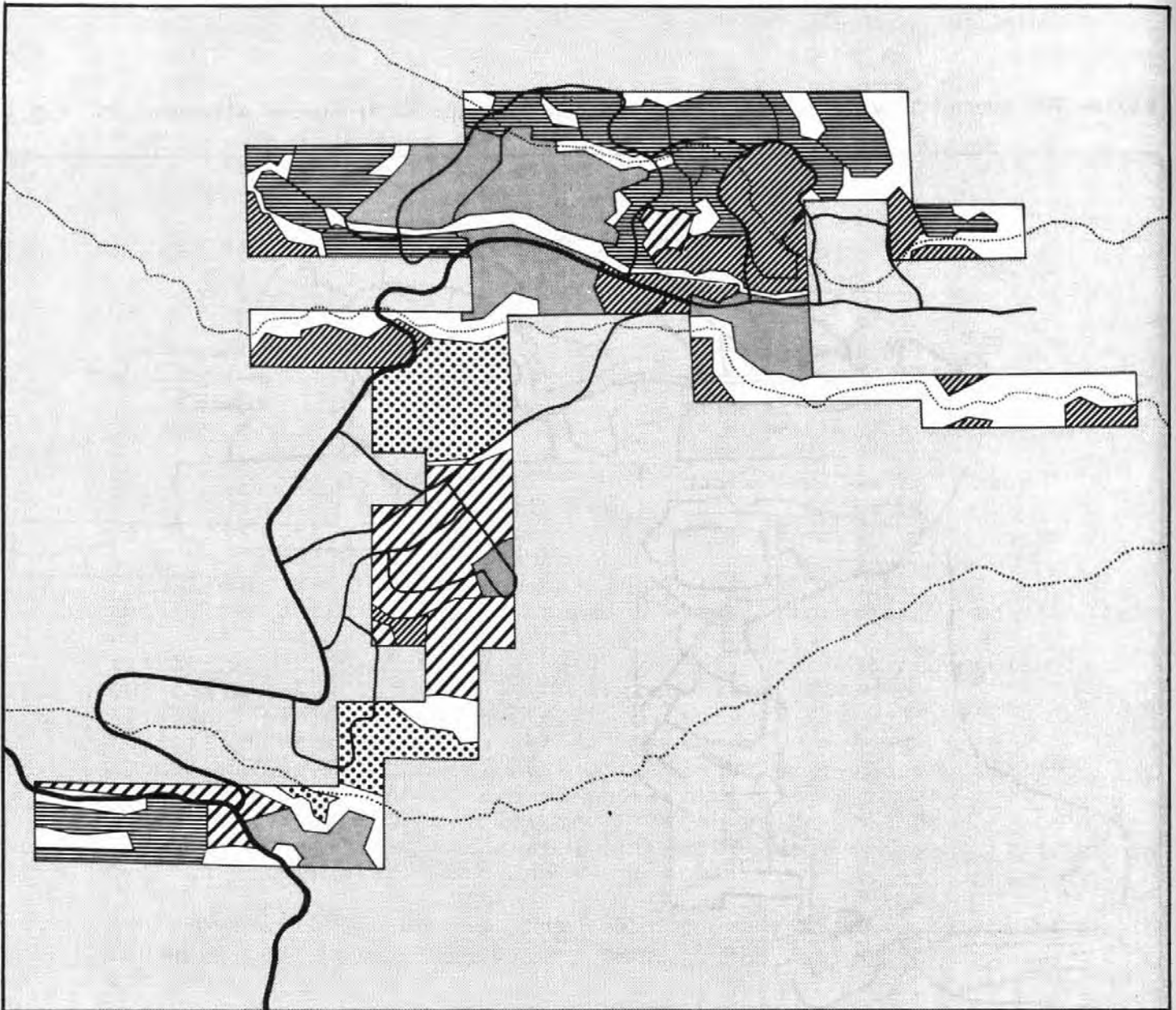
For graphic illustrations of estimated water supply and demand in Desiderata Canyon, see Maps 17 and 18 on pages 105 and 106.














- Planned Gravity Lines
- - - - - Planned Reservoir Feed Line
- ⊙ Well
- Ⓡ Reservoir
- ..... Creeks

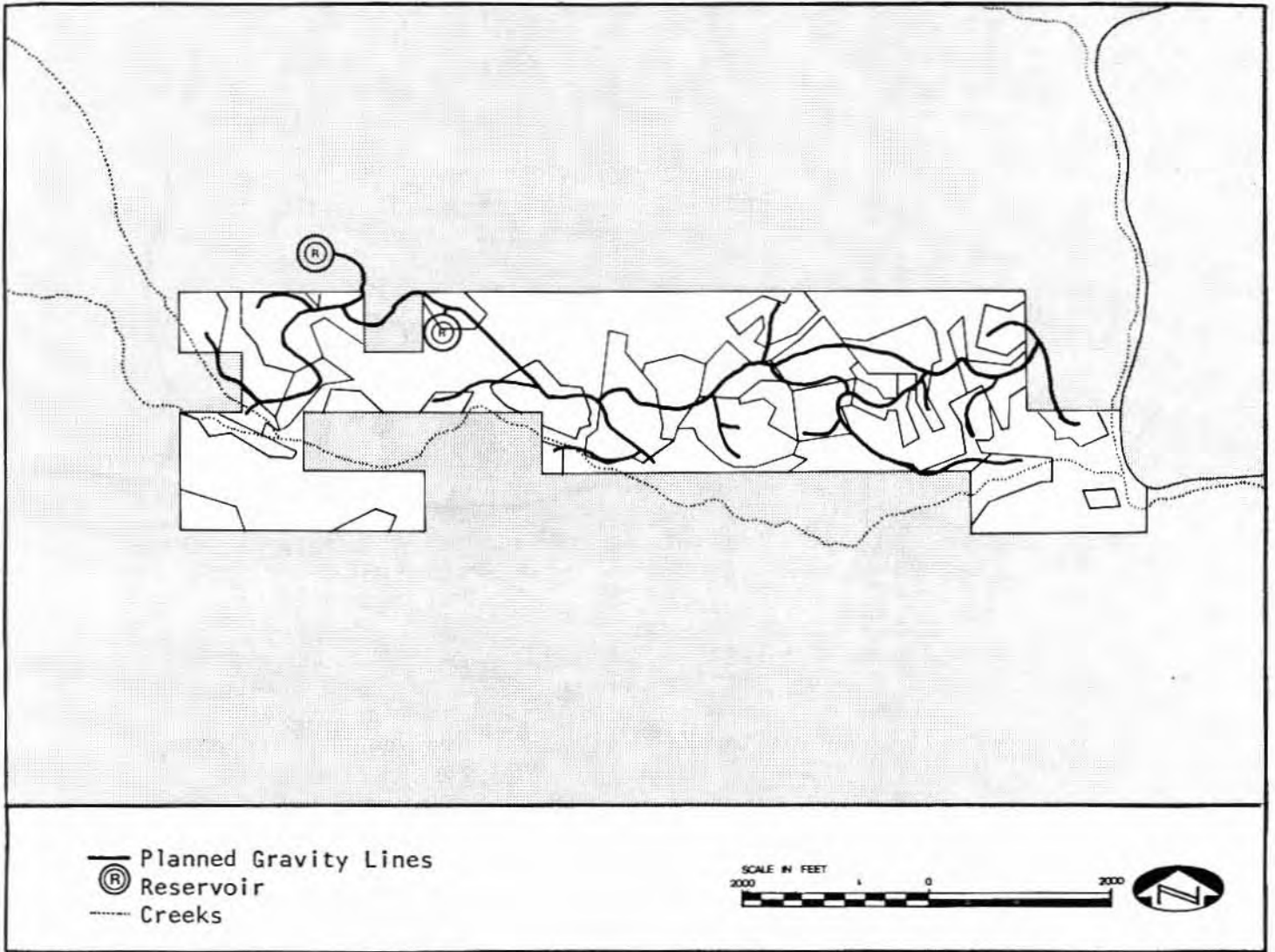


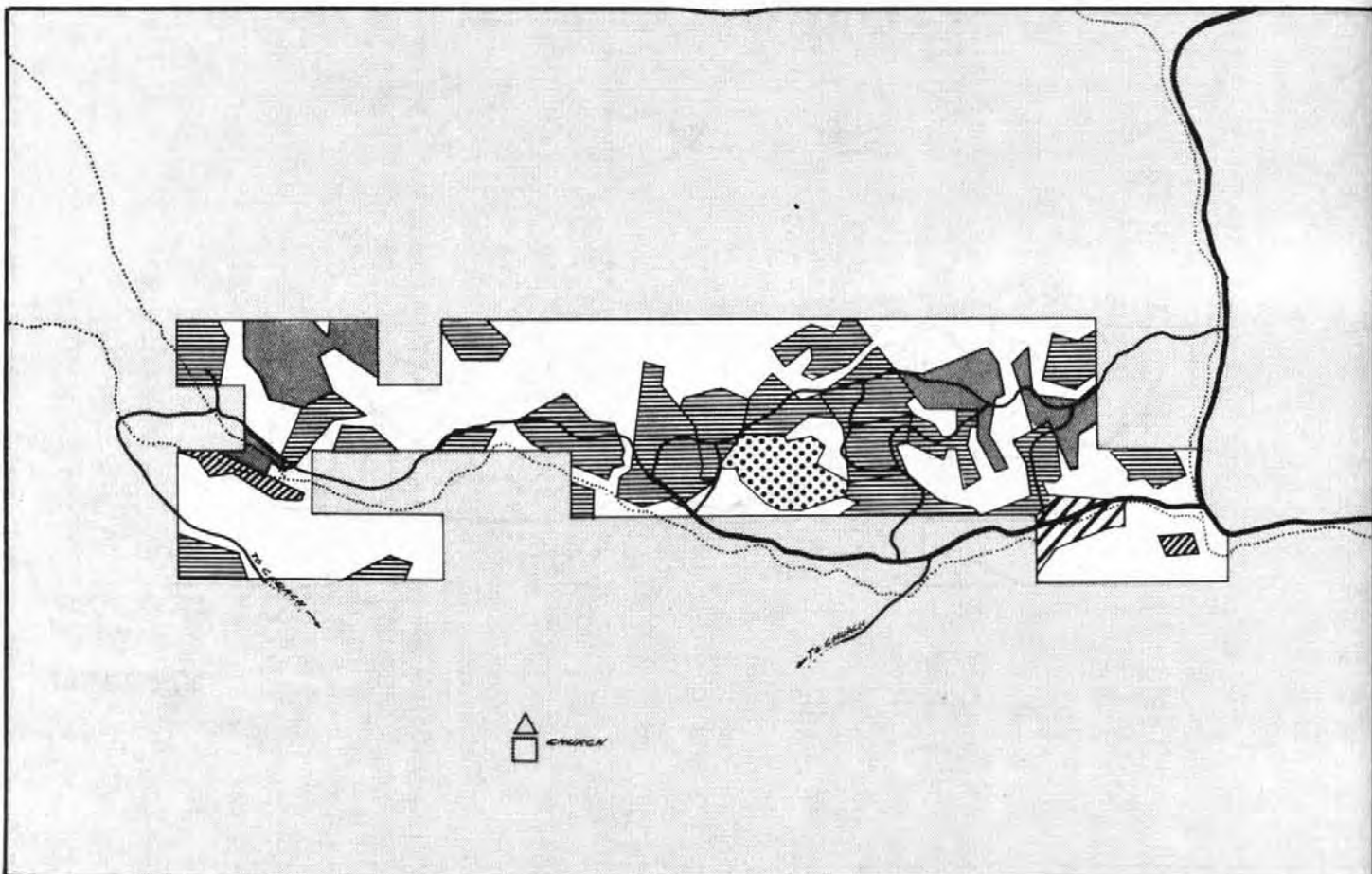







ZONE	Acres	GPA	Total	Peak Factor	Avg. Flow	GPM	Peak Flow	GPM	Fire Flow	GPM
 Residential	140	500	70,000	6	49		292		500	
 Commercial	35	400	14,000	2	10		20		1,000	
 Industrial	46	500	23,000	2	16		32		1,000	
 Community Services	41	500	20,500	4	14		56		1,000	
 Parks	13	100	1,300	2	1		2		500	
 Parks & Camping	15	500	75,000	6	5		30		500	
 Parks, Recreation & Camping	8	700	5,600	4	4		16		500	
			<b>Total</b>							
			141,900 gpd				98 gpm			

Wastewater Flow is assumed to be equal to water flow



SCALE IN FEET  
  






ZONE	Acres	GPA	Total	Peak Factor	Avg. Flow GPM	Peak Flow GPM	Fire GPM Flow
 Residential	128	400	51,200	6	35	210	500
 Commercial	9	400	3,600	2	3	6	1,000
 Industrial	14	500	7,000	2	5	10	1,000
 Community Services	43	500	20,260	4	4	14	500
 Parks	5	100	540	2	1	2	500
Total 82,600 gpd = 57 gpm							

Wastewater Flow is assumed to be equal to water flow.

SCALE IN FEET  
  


c. Jesus Grove: Groundwater supplies are more than adequate in the Jesus Grove area of the City. Two wells presently produce 350 gallons per minute. The Jesus Grove area is not limited to these wells to meet the water needs of residents. Four additional projection wells with a capacity of 20 - 80 gallons per minute are located in the Jesus Grove area and could be connected to the system if needed or used as backup wells.

The well monitoring data collected to date and the available hydrogeological evidence indicates that the aquifer in Jesus Grove can easily support the projected population of 900 for this area and could, if required, supply the needs of the entire City. Pumping to the other areas would be the only additional requirement in such case.

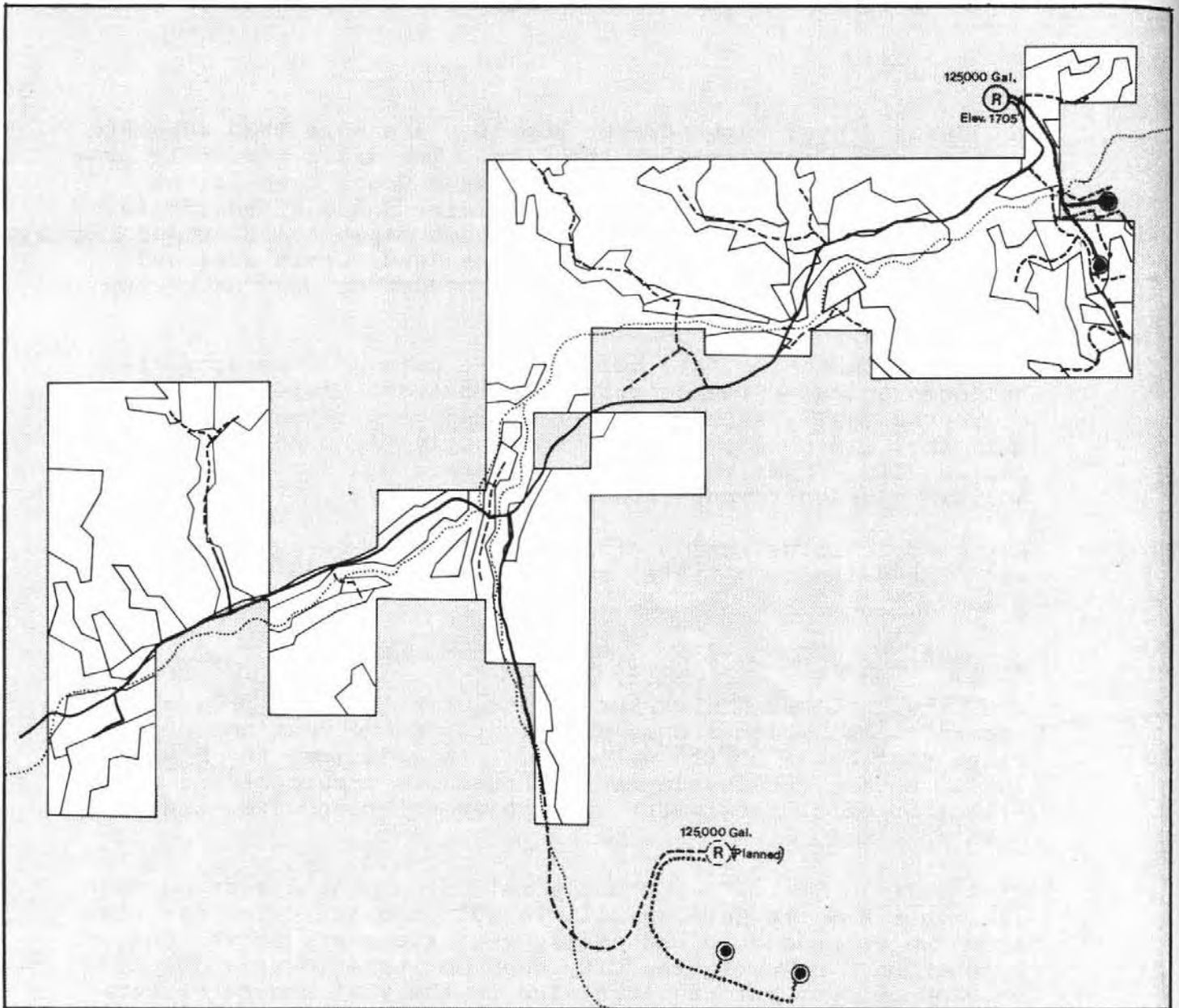
For graphic illustration of present and planned water supply and demand in Jesus Grove, see Maps 19 and 20 on the following pages.

## 2. Surface Water

The City shall establish agreements with the appropriate landowners to gain both access and rights to the vast amount of water that falls on its watershed. In addition, the City shall require the development of storage, treatment and distribution of surface water to supplement groundwater sources when required.

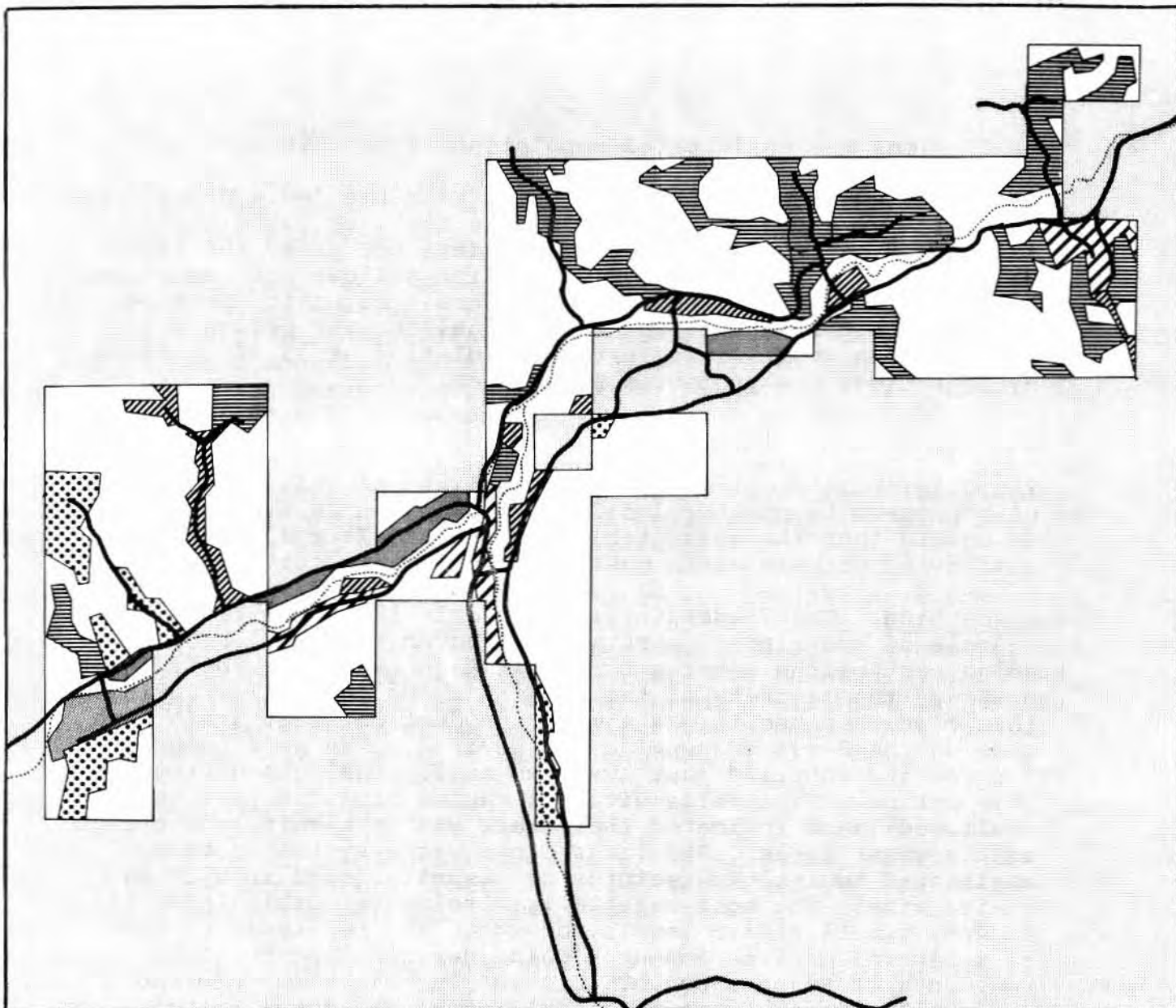
Discussion: The City currently relies on groundwater to meet its needs and, to date, available evidence indicates that the groundwater resources can easily meet the needs of the future population. However, the City does not have to rely solely on groundwater, but can turn also to the vast amount of surface water available to it. The City is located within a 100-square-mile water catchment area, and through cooperative agreements with the leaseholder has access to the water of this entire area.








This water catchment area receives approximately 6.8" of precipitation during the wet season of November through March, the only time when the rainfall is greater than the evaporation rate. Of this amount, approximately 20% or 1.4" will run off as surface drainage, and approximately 1.6" will be lost to evapotranspiration; the remaining 3.8" will be available for potential groundwater recharge. The 1.4" of runoff is 2.43 billion gallons of water, or 6.68 million gallons per day throughout the year. Based upon 80 gallons per person per day, this amount of water would supply 83,500 people, which



- Existing Gravity Line
- - - Planned Gravity Line
- ..... Planned Reservoir Feed Line
- Existing Reservoir Feed Line
- Well
- Ⓡ Reservoir
- ..... Creeks





ZONE	Acres	GPA	Total	Peak Factor	Avg. GPM Flow	Peak GPM Flow	Fire GPM Flow
 Residential	168	850	142,800	6	99	594	500
 Commercial	96	400	38,400	2	27	54	1,000
 Industrial	71	500	35,500	2	25	50	1,000
 Community Services	130	500	65,000	4	45	180	1,000
 Parks	40	100	4,000	2	3	6	500
 Parks & Camping	25	500	12,500	6	9	54	500
 Parks, Recreation & Camping	38	700	26,600	4	18	72	500

Total = 266,300 gpd = 185 gpm

Wastewater Flow is assumed to be equal to water flow.



is 22 times the anticipated population of the City.

A reservoir is currently being built near the Jesus Grove area. It will have a capacity of 1,020 acre feet, or 333 million gallons of water. Based on 265 dry days per year, the reservoir will be able to supply 1.2 million gallons per day throughout the dry months. If this water were treated for potable use using a consumption ratio of 80 gallons per person per day, the reservoir would serve a population of 15,707 persons, or four times the projected population.

### 3. Monitoring

The City shall provide for the establishment and implementation of a program to monitor local water supplies on a regular basis to ensure that the water table remains stable and that the quality of potable water meets all applicable state standards.

Discussion: The 25-day festival in July 1982 provided a recent example of the kind of monitoring program that will be an ongoing part of the water services at Rajneeshpuram. Well No. 25 provided the majority of the water for the festival. During this time, because it was a major production well, tests were made on the Jesus Grove alluvial aquifer. The well pumped 260 gpm and supplied just over two million gallons during this period. Five wells within a radius of 1,200 feet were monitored; data indicated that there was no significant effect on the water table. The Jesus Grove water system is being engineered to include features not usually found in systems of its size. The most notable is a telemeter cable intended to supply well static levels, drawdown and reservoir status to a central on-line computer being designed and built by residents of Rajneeshpuram. Eventually, all water use and production, water treatment, performance and total system status will be evaluated electronically. This will provide optimum reliability and a vast data base that the City can use in evaluating the service and the impact upon the ground-water resources.

In both Desiderata Canyon and Gautam the Buddha Grove, there are ongoing programs of exploratory drilling and well operation testing. These will continue until a complete hydrogeological survey is completed.

The quality of all water supplied by the Jesus Grove water system has to date met EPA and OSHD standards. In the future, the City shall obtain water quality evaluations of all newly developed water sources and provide appropriate state agencies with such information.



#### 4. Fire Protection

The City will provide for the careful evaluation of fire flow needs and assure that all new development within the City is adequately served.

Discussion: Jesus Grove is presently served by a fire protection system that will form the basis for the City water system that will serve the Jesus Grove district. It has been constructed according to community water system standards. This system is presently supplied by two primary wells, Nos. 25 and 3 (see Well Location Map, Volume 1), which provide a total of up to 350 gpm by submersible pumps through a 4" supply line into a 125,000-gallon reservoir at an elevation of 1,705 feet. The main lines forming the backbone of this system are 10" and 9" 200 PSI PVC pipe and they currently connect to six fire standpipes and five AWWA fire hydrants.

In the Desiderata Canyon and Gautam the Buddha Grove areas, wells will be developed as needed and the lines will be interconnected to allow flow distribution. Sizing of water mains will allow for adequate fire protection. Reservoirs supplied by wells and/or surface water catchment areas will be used to store the amounts of water required for adequate fire protection for all structures in the community.

#### 5. Conservation

The City will encourage the use of water-saving devices to the maximum extent practicable and encourage the use of reclaimed water for appropriate uses.

#### 6. Master Services Alignment Map

The City shall adopt and maintain a public facilities plan, including a map identifying existing and proposed water facilities to serve as a guide to the type, location and capacity of these facilities serving the City.



## IV. SERVICES AND FACILITIES

### 4. SEWAGE DISPOSAL AND STORM DRAINAGE

#### SUMMARY OF FINDINGS

City sewage disposal is presently effected through on-site septic tanks and drainage fields. Central treatment of sewage with provisions for wastewater and solids recovery is a major future objective. The City considers the following technical and land use factors important in designing treatment and collection systems: effectiveness, energy efficiency, recycling potential, compatibility with terrain, cost-effectiveness, compatibility with the balances of the natural system, topographic constraints, adaptability to new technology and adaptability to changing needs.

In planning storm drainage systems, accurate determination of precipitation runoff volumes is essential. Ideally, this is accomplished using site-specific information. Lacking long-term local data for Rajneeshpurm, planners have taken the best available regional data and applied it to the local area to determine potential runoff amounts.

#### ISSUES

The transition from present on-site sewage treatment to central treatment is necessary for the continued growth of Rajneeshpuram.

The City's site is divided up into three non-adjacent sections, each of which has its own unique set of topographic features. Each requires proper planning and integration of its own waste disposal and storm drainage system.

The diversified industrial base planned for the City may result in a wide range in the nature of effluents, and the Environmental Protection Agency has required that no toxic industrial materials be flushed into the municipal sewer system after 1982.

New, more effective methods may emerge for the treatment and conservation of sewage effluents.

Planning and development of the City's sewage disposal and storm drainage systems must be sensitive to potential environmental impacts.

Storm drain systems will never be connected with sewage collection and treatment systems.

Drain systems will be presented with the heavy load imposed by exceptional but inevitable storms. Such peak flows must be anticipated in planning the system.

#### GOAL

To provide for the orderly development of an efficient and sanitary sewage disposal system and a storm water drainage system, both of which conform to all state and federal waste disposal regulations.

#### POLICIES

- 42 The City shall plan for and provide sewage disposal and storm drainage, or ensure such disposal and drainage through another supplier of such services, suitable to meet its current and projected needs and conforming with all applicable state and federal regulations.
- 43 In planning for sewage disposal and storm drainage, the City shall ensure that collection and treatment systems contribute to land conservation and resource reuse insofar as possible.

#### IMPLEMENTATION STRATEGIES

##### 1. The Sewage System

In planning sewage disposal systems for its three non-adjacent sites, the City will, insofar as is consistent with the goal and policies of this chapter, provide for the integration of the three separate City systems. Where not feasible, cost effective or consistent with environmental considerations, separate systems will be developed and maintained.

Discussion: The provision of central sewage systems for each of the three areas of the City is desirable because of the lack of adequate permeable soil for individual drainfields. In both Desiderata Canyon and Gautam the Buddha Grove, the soils are quite clayey. In Jesus Grove the rocky hillsides give way to agricultural bottom lands with little transitional land in between. The use of land for drainfields here will require land that could better be used for building sites, especially since the poorer soils require larger drainfields, often larger than the buildings they serve.

Further, using drainfields to dispose of the wastewater in this dry region is a wasteful practice. Wastewater can be collected and reused as the nutrient-rich resource that it is.

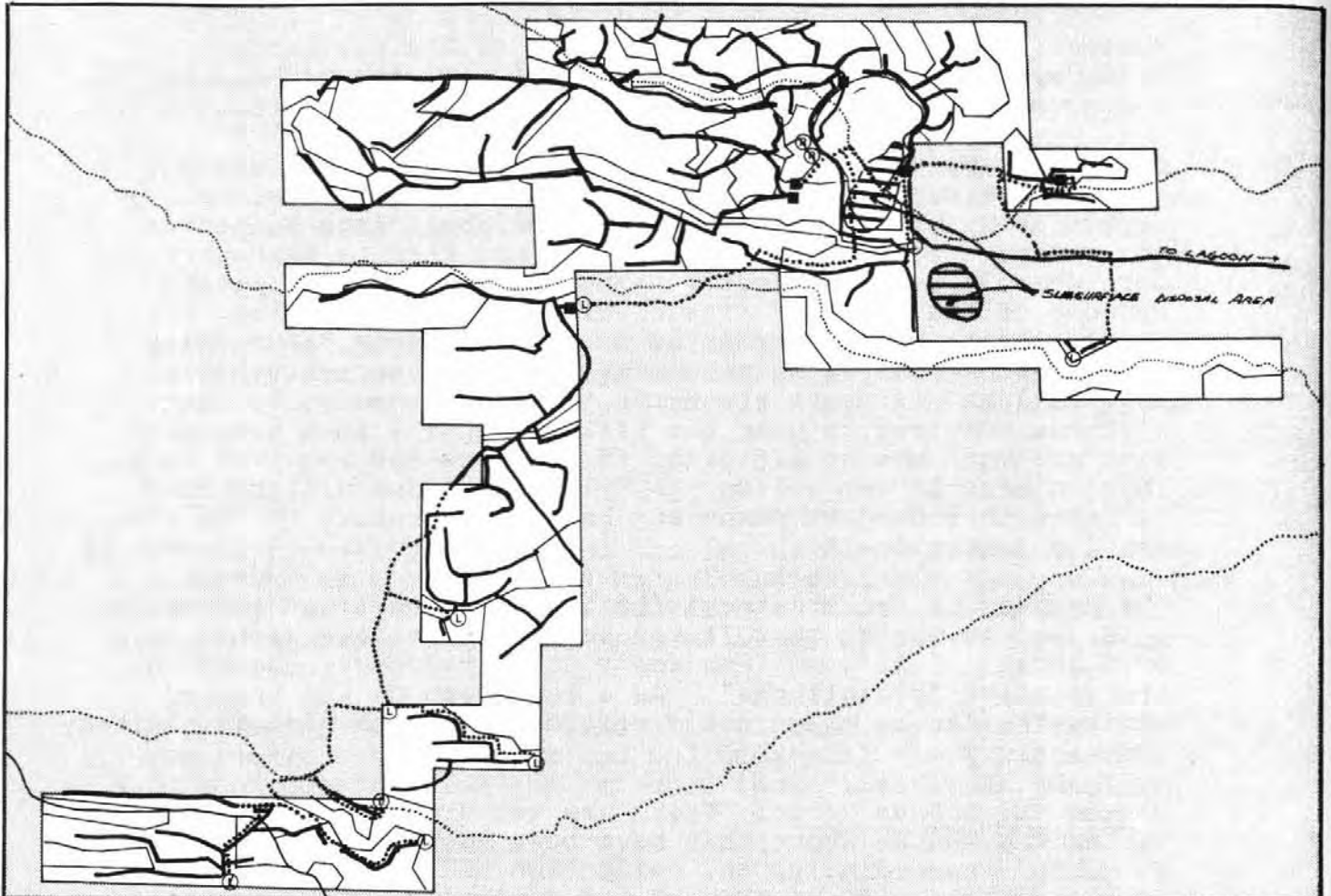
The basic approach used at Rajneeshpuram will be to collect the wastewater and deliver it to central treatment sites. Septic tanks will be used at individual buildings to settle and remove the solids. The effluent can then be transported more cheaply and efficiently using smaller diameter pipes because of the lessened risk of clogging. In addition, the undulating-to-hilly terrain often requires some flexibility in the slope gradient of the pipe, and effluent-only pipes require less stringent standards. Also, the pumps at lift stations required to pump the effluent uphill to a treatment site are more energy efficient if they are not required to be able to pass larger solids. All lift stations will be outfitted with redundant pumps and backup generators to run the station automatically.

The purpose of the treatment facilities is to treat the wastewater to the extent that it can be reused in some useful form or disposed of in some less restrictive procedure, based on its relative "cleanliness". As a last resort, the treated wastewater can be chlorinated before reuse with minimal sanitary restrictions.

Gautam the Buddha Grove: There are two drainfield sites in Gautam the Buddha Grove that have been identified and found suitable. Accordingly, the collection and treatment portions of the systems will be located and designed to feed into these drainfields. Design of a collecting network in this rolling landscape is basically a question of gravity collection wherever possible to points relatively low in elevation where lift stations then pump the effluent toward the treatment facilities.

The treatment facilities being planned for Gautam the Buddha Grove are sand filtration systems: enclosed structures where aerobic treatment takes place in a medium of sand and gravel. The treated water is then piped to the drainfields. The drainfield trench requirements are one-third the normal size that would be required if no sand filtration was used.

For festival gathering and similar short-term periods of heavy loading, sand filter drainfield systems do not have a flexibility of expansion. For such occasions, a lagoon holding facility will be required, and a potential lagoon site is shown on the overall Sewage Disposal Map for Gautam the Buddha Grove on the next page. The same collection system could be used to redirect the effluent to the lagoon instead of to the drainfield for treatment.



- Ⓡ Treated Wastewater Reservoir
- Treatment Facilities
- Ⓛ Lift Station
- Gravity Effluent Line
- ..... Pressure Effluent Line
- ▬ Potential Disposal Drainfield Areas
- ..... Creeks

Needed Treatment Capacities in Gallons Per Day

Residential Areas: Equal to Potable Water Flow  
 Park and Recreation Areas: Equal to Potable Water Flow

Community Services: Based on Specific Projected Building Uses

Commercial Services: Based on Specific Projected Building Uses

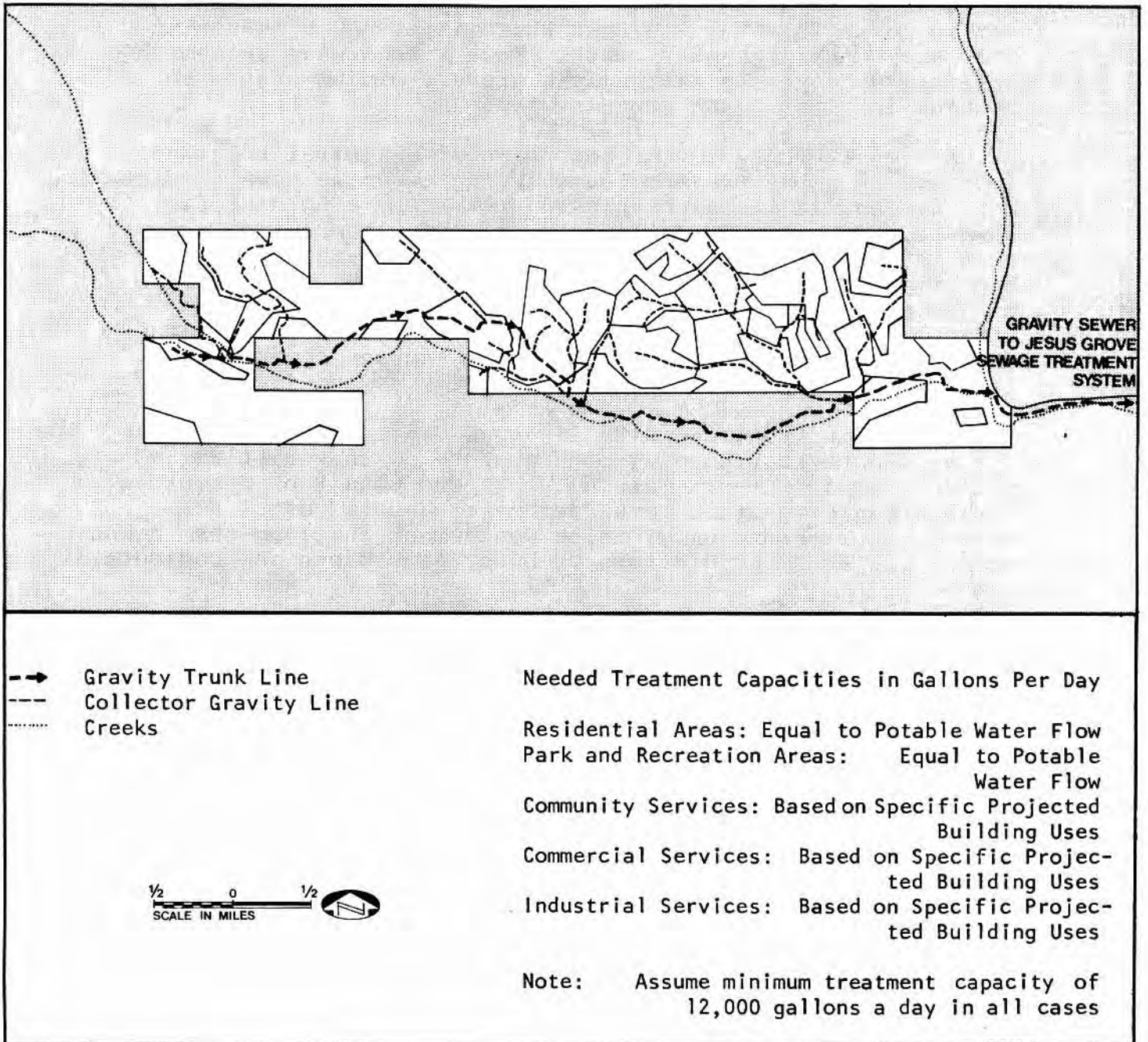
Industrial Services: Based on Specific Projected Building Uses.



Note: Assume minimum treatment capacity of 12,000 gallons a day in all cases.

The sand filter system will also have the capability of bypassing the drainfield and irrigating suitable areas generally lying outside of, and downhill from, the City. Sand filters will be built as phased units, to be added as the need dictates.

Desiderata Canyon: At Desiderata Canyon, a local lagoon system is not possible because of insufficient level areas, soil conditions and lack of an appropriate disposal site. The sewage requirements of Desiderata Canyon can better be met by piping effluent by gravity flow to the main lift station at Jesus Grove. (See Sewage Disposal Map of Desiderata Canyon below.)



Collection lines are easily gravity fed into a mainline that can be placed along the creek and road bed running axially east-west up Desiderata Canyon.

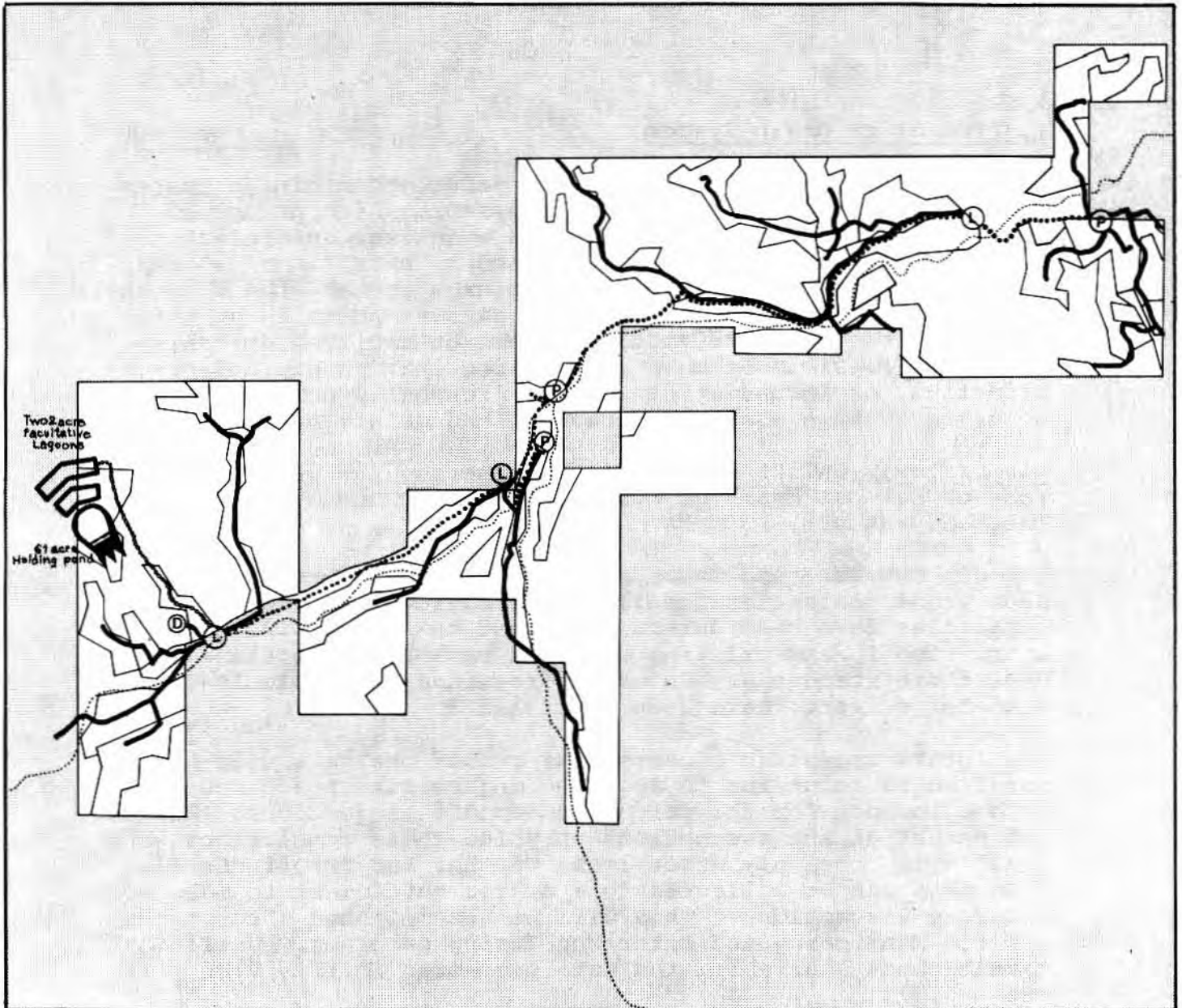
The gravity line to Jesus Grove will be laid parallel to Tao Road, which runs along the north side of Farid Creek between Desiderata Canyon and Jesus Grove. Bypass around Krishnamurti Dam is possible along Tao Road where it is being rebuilt to stay above the high-water mark. Thus, the sewage system in Desiderata Canyon is basically a gravity piping system to connect into the Jesus Grove system.

Jesus Grove: There is the beginning of a central treatment facility in Jesus Grove. The existing two-acre sewage treatment lagoon, as it has been used, is merely a holding facility. However, its capacity is limited by winter storage capacity; that is, by the need to store the wastewater through the approximate 150 days of the wet winter months. For the projected populations of both Jesus Grove and Desiderata Canyon (900 and 710 people, respectively), using 80 gallons of water per person per day, a winter storage capacity of 19.5 million gallons, or 59.1 acre feet, is required.

At the sewage treatment site in Jesus Grove, there is a site for a 51-acre-foot holding pond just below the existing and planned lagoon sites. This holding pond plus the present storage capacity of 16 acre feet makes a total of 67 acre feet of storage capacity, which would meet the long-term needs of the projected populations of both Jesus Grove and Desiderata Canyon.

The planned sewage collection system is shown on the map on the following page. Basically, the effluent to be collected flows by gravity until it reaches the mainline, where it enters a lift station and is then pumped back to the primary lift station located just south of the airstrip opposite DPA I 5. At this location, the existing lift station is 8 feet in diameter and 16 feet deep. (Twin 60 h.p. pumps have been temporarily removed.) A 10-inch pressure line extends approximately one-half mile and 200 feet in elevation from the lift station to its entry point at the bottom of the existing lagoon. All creek crossings will be made in accordance with DEQ regulations and engineered specifications, and the system will be supplied with cleanouts as appropriate.





- Existing Pressure Effluent Line
- ..... Planned Pressure Effluent Line
- Planned Gravity Line
- Ⓛ Lift Station
- Ⓧ Dump Station
- Ⓟ Pump Station
- ..... Creeks

Needed Treatment Capacities in Gallons Per Day

Residential Areas: Equal to Potable Water Flow  
 Park and Recreation Areas: Equal to Potable Water Flow

Community Services: Based on Specific Projected Building Uses

Commercial Services: Based on Specific Projected Building Uses

Industrial Services: Based on Specific Projected Building Uses



## 2. The Storm Drain System

The City shall provide for a storm water and drainage system that is independent of the sewage system, which protects surface and groundwater sources and which has sufficient capacity to handle peak loads imposed by exceptional storms. In planning its storm water and drainage system, the City shall, insofar as is consistent with the goal and policies of this chapter, integrate individual systems on a City-wide basis. Where not feasible from an engineering standpoint, not cost-effective, or inconsistent with environmental considerations, separate systems shall be developed and maintained.

Discussion: Unlike many cities, Rajneeshpuram will be able to rely on natural drainage; that is, letting storm water percolate and run off.

The storm water runoff has been calculated on the basis of agency and professional engineering advice. Required culvert capacities have been determined based on 20-year frequency storm runoff, and existing culverts have been installed to meet those standards. On major crossings, multiple 10-foot-diameter culverts have been installed.

All future crossings of creeks or runoff channels will be constructed according to accepted engineering practices, with allowance for the calculated runoff projections. Further refinement of the assumptions on which these conclusions were based will come only after local weather and runoff correlation data can be collected to a degree sufficient to make more accurate assumptions. This will be accomplished through the Climate Monitoring and Water Monitoring programs. Until that data becomes available, the data presented in this Plan will be used.

## 3. Interim Systems

The City will develop interim sewage and storm drainage systems while the planning, construction and testing of the permanent systems is taking place.

Discussion: Local drainfields or holding tanks will be used while the pipelines and drainfields of the permanent systems are being constructed. Such local systems will be designed to cause minimal environmental impact and to meet state and federal guidelines.

#### 4. Septage Disposal

The City will utilize septage for fertilizer and soil conditioner on a site outside City limits.

Discussion: Septage will be disposed on a land disposal site outside City limits, inspected and approved by the DEQ. The capacity of the site and soil conditions will allow disposal of any and all projected septic tank solids. The septage will be used for fertilizer and soil conditioner in an undeveloped agricultural field.

#### 5. Master Services Alignment Map

The City shall adopt and maintain a public facilities plan, including a map identifying existing and proposed sewage treatment and storm drainage systems facilities to serve as a guide to the type, location and capacity of these facilities serving the City.



## IV. SERVICES AND FACILITIES

### 5. ELECTRIC POWER

#### SUMMARY OF FINDINGS

Present electrical needs are served by a 19-mile, 12,500 volt line from the nearest substation in Antelope. Substantial loss is experienced in delivered power due to the line length and the small size of the conducting system; available power supply is insufficient for the City's projected requirements. Through an agreement with Wasco Electric Cooperative, a 69 KV line is under construction to upgrade the City's power supply; the system is expected to be completed by February 1983.

#### ISSUES

The existing power supply is insufficient to fulfill the City's projected requirements.

#### GOAL

To provide for the timely, orderly and efficient delivery of electric power to serve the needs of the City.

#### POLICIES

- 44 The City shall coordinate with private and/or public suppliers of electric power to provide for such power in sufficient quantities to supply its needs consistent with the goals, policies and land use allocations set forth in the Comprehensive Plan.
- 45 The City shall encourage innovative building design and other measures aimed at the conservation of electric power utilized for lighting, heating and similar purposes.

#### IMPLEMENTATION STRATEGIES

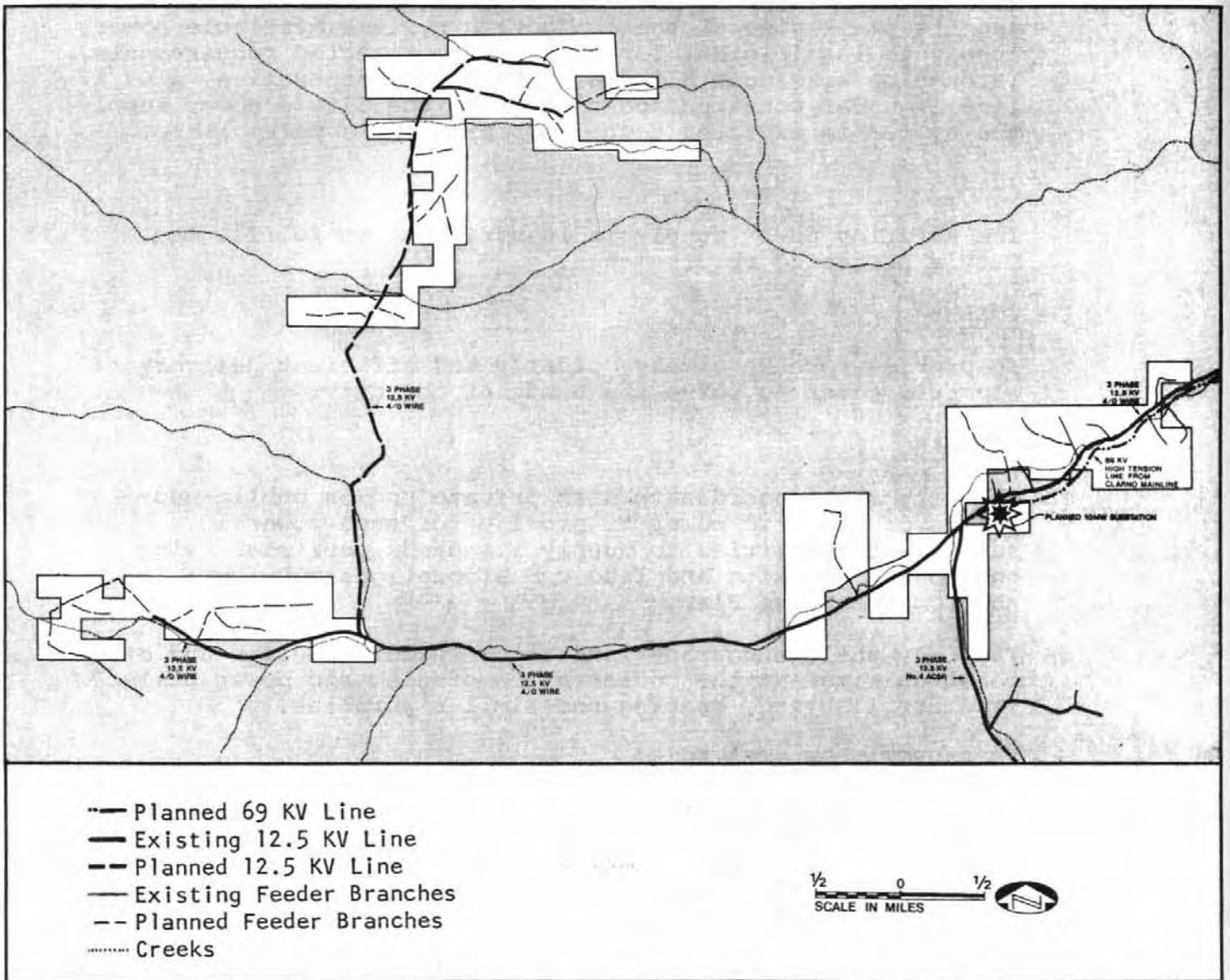
1. The City will periodically update the long range electrical distribution system plan and should consider aesthetics, reliability, long service life, power conservation and minimum visual and physical impact to surrounding areas in the design of new distribution systems.

Discussion: The Wasco Electric Cooperative, the supplier for the City, will construct a 69KV transmission line from the

Clarno vicinity to Rajneeshpuram with a substation facility of ten megawatts (10 MW) capacity. The three phase line from Clarno will be size 266.8 MCM. It will be constructed to 115 KV standards, since the main line at Clarno is expected to be upgraded from 69 KV to 115 KV in the next five to eight years. Rajneeshpuram's substation will be located in the Jesus Grove district, opposite Kabir Reservoir on a cut slope on the south side of the valley. (See map below.)

CITY OF RAJNEESHPURAM - Electrical Distribution

Map 24



The expected completion date of this line and substation is February 1983. The facility will be capable of meeting any electrical needs at Rajneeshpuram in the foreseeable future. A distribution line of 12.5 KV with a 3 MW capacity is already extended from the substation area into Desiderata Canyon. The line will need to be extended approximately one mile further into the Canyon to serve the proposed church and DPAs at the western end of that area. From a point near the junction of Desiderata Canyon and Tao Road, the distribution line will be extended to the Gautam the Buddha Grove area, and feeder lines will be extended to the Designated Planning Areas as they are developed. The Gautam the Buddha Grove main distribution line is expected to be completed by early October 1982.

An additional distribution line will be extended from the substation in Jesus Grove to Patanjali Lake in the southern portion of Rancho Rajneesh. This will serve the agricultural development taking place there. This line is expected to be completed by January 1983.

2. Alternative forms of energy conservation and production will be encouraged or required where feasible by ordinances in Volume 3 of this Plan. In all of its electrical power systems, the City will encourage the designing of electrical distribution systems that have the additional capacity necessary to handle minor plant failures without undue downtime. Also, the City will support the development of preventive maintenance practices for all parts of the electric power system. Finally, the City will encourage underground placement of electrical service lines wherever possible from economic and engineering standpoints.





## IV. SERVICES AND FACILITIES

### 6. SOLID WASTES

#### SUMMARY OF FINDINGS

Modern methods of recycling and processing the community's solid wastes - food wastes, animal manure, packaging wastes, construction or demolition wastes, used oil, chemical wastes, irreparable vehicles and machinery and septic tank pumpings - have already been put in practice. New landfill sites are planned for the future.

#### ISSUES

Domestic, commercial, industrial and agricultural activities within the City will generate solid wastes. Planning will be required to develop systems for disposal, storage and/or the recycling of the useable elements of such wastes. These systems must meet health and safety standards and be compatible with adjacent uses and activities.

#### GOAL

The City will encourage innovative waste management programs that maximize the efficient collection, handling, sorting, recycling, disposal and recovery of solid waste in a manner that maintains health, safety and sanitation.

#### POLICY

- 46 The City shall cooperate with federal, state and local agencies in the development of a solid waste management program in order to ensure that collection and treatment systems conform to all applicable regulations, statutes and ordinances.
- 47 A comprehensive solid waste management plan shall be developed in cooperation with private landowners. The plan shall ensure that all solid waste collection, treatment and storage systems are in accordance with the goals and policies of this Plan and that the full implications of technical decisions be made available to planners, affected agencies and the public.
- 48 The City shall ensure compatibility between landfill sites and surrounding land use.

## IMPLEMENTATION STRATEGIES

### 1. Reclamation

The City will encourage reclamation and reuse of solid waste materials through the recycling of newspaper, corrugated cardboard, glass, metal and any other material that may be economically and/or technologically feasible to recycle.

Discussion: A recycling building is in construction and already there are community-wide systems for separating waste materials into appropriate categories.

A dump site in Jefferson County is presently processing materials effectively.

There already exists within the community a great deal of awareness about the recycling program, and citizens are separating recyclable materials willingly.

### 2. Disposal

The City will consider the feasibility of developing an incineration system for disposal of solid wastes and the production of usable energy.

### 3. DEQ Guidelines

The City shall, in cooperation with the State Department of Environmental Quality, develop a solid waste management program that will establish criteria for choosing and monitoring landfill sites, and meet or exceed DEQ solid waste management guidelines.

Discussion: A landfill site is planned within City limits for the area 300 feet east of the present sewage lagoon. Covering an area of 1½ to 2 acres, the site will hold 29,000 cubic yards of waste. At present rates of per capita waste generation and compaction, this landfill site has a life expectancy of seven years.

## IV. SERVICES AND FACILITIES

### 7. SAFETY AND EMERGENCY

#### SUMMARY OF FINDINGS

The Rajneeshpuram Rural Fire Protection District (RRFPD) is the primary provider of emergency services for the City of Rajneeshpuram. The Jesus Grove area is well served by an emergency services building that houses fire and rescue equipment. Two ambulances, support personnel, and an emergency clinic also serve the Jesus Grove and Desiderata Canyon areas at present. Because of the distances involved, new facilities and equipment will be needed to serve the Gautam the Buddha Grove area. Also, a public safety department is being created to protect residents, visitors and property.

#### ISSUE

The City has no provision for safety and emergency services of its own. The present emergency service capabilities are designed to meet the needs of the existing farming community. As urbanization occurs, existing services will require expansion and improvement.

#### GOAL

To provide for adequate public safety and emergency services to meet the needs of the City.

#### POLICIES

- 49** The City shall coordinate with the Rajneeshpuram Rural Fire Protection District in the provision of adequate fire protection to all structures and lands within the City.
- 50** The City shall ensure that there are adequate police services to protect residents, visitors and property.
- 51** The City shall coordinate with the Rajneeshpuram Rural Fire Protection District to ensure adequate emergency medical transportation coverage to all areas.

## IMPLEMENTATION STRATEGIES

### 1. Risk Assessment and Monitoring

The City, in cooperation with the Rajneeshpuram Rural Fire Protection District, shall continue to assess the potential fire risk and hazard created by all new development, and through the District ensure needed fire protection indicated by such assessment. Similarly, the City will support RRFPD fire prevention and education programs to ensure safe development and construction practices.

Discussion: Presently, a full-time Fire Chief and Fire Marshall serve the RRFPD. Both spend considerable time examining development plans, reviewing NFPA code, inspecting construction sites and practices, and generally monitoring the development process. The RRFPD Chief is empowered and required by state law to bring hazardous situations and practices into compliance with state fire codes. Monitoring by the RRFPD will continue and expand as the development process grows.

### 2. Water Supply and Distribution Systems

The City shall require developers to provide water distribution systems of sufficient size and pressure capacity for fire protection purposes. In addition, the City shall provide, or ensure through any other provider of municipal water, sufficient water supply at all times for fire protection purposes.

Discussion: The existing 125,000-gallon reservoir and 10" water main system of the Jesus Grove area is a good model of the water supply and distribution system to be developed for the Desiderata Canyon and Guatam the Buddha Grove areas. Tank reservoirs filled by wells, and/or surface water catchment, will be positioned above the Desiderata Canyon and Guatam the Buddha Grove developments providing the supply needed in the system. The development code carefully specifies standards for water supplies, flow rates and hydrant placements. Also, Krishnamurti Dam, which will hold 1020 acre feet, will be an excellent reserve source of water for firefighting purposes.

For more information about water supplies and distribution, see "Services and Facilities - Water Supply."

### 3. Access

The City shall ensure that road standards are maintained at an adequate level to provide ready access of fire apparatus

to all structures and facilities, or will provide alternative means of adequate fire protection as approved by the City Engineer in conjunction with the RRFPD.

Discussion: The Development Code specifies minimum standards for road width, surface quality, turnarounds and parking facilities so that access by emergency vehicles is always possible. Where houses are a considerable distance from the road, a hydrant and dry standpipe system will provide another means of supplying water quickly.

#### 4. Emergency Medical Services

The City shall coordinate with the RRFPD and other providers of private medical services to ensure that adequate emergency medical transportation is available to all areas.

Discussion: Two ambulances are presently being operated by the RRFPD. In the event of a critical emergency, two twin-engined planes are available at the airstrip. In addition, a private emergency medical helicopter service is on call from Portland.

#### 5. Police Service

The City shall provide, or ensure through cooperative agreement with other local jurisdictions or providers of private police services, adequate police protection for residents, visitors and property. Additionally, the City shall coordinate with other local jurisdictions in the provision of adequate detention facilities.

Discussion: The City will establish a public safety department which will work in conjunction with the RRFPD and other local authorities. The Rajneeshpuram Public Safety Department will initially develop a team comprised of the following members:

- 1 Public Safety Commissioner appointed by the City Council;
- 1 Deputy Commissioner;
- 6 Officers/Dispatchers;
- 1 Receptionist/Secretary

The training and development program will include staff attendance at a course offered by the State Board on Police Standards and Training. This will be followed by one or two months of on-the-job training at Rajneeshpuram with exper-

perienced Wasco and Jefferson County Sheriffs' Department personnel. If necessary during the training period, experienced public safety officers will be hired to provide safety services as an interim measure.

The major responsibilities of the public safety department will include traffic control and safety, the maintenance of law and order (to be coordinated with county and state law enforcement personnel), emergency management (in cooperation with the Rajneeshpuram Rural Fire Protection District), and civil defense services (related to natural disasters and warfare activities).

The public safety department will provide 24-hour services. An emergency services communications center will be a central component of public safety services. All communications regarding emergencies will be channeled through this center.



## ENERGY RESOURCES AND CONSERVATION

## V. ENERGY RESOURCES AND CONSERVATION

### SUMMARY OF FINDINGS

The electrical supply system is the main energy source for the City and is expected to continue to be so for some time. This is due to the availability of the resource and the lack of extensive cost-effective alternate energy technology. Significant reduction in dependency on electrical energy is being encouraged, achieved, and is expected to accelerate as experience with local conditions and improved technology make alternate energy cost-effective.

End-use matching in which energy quality is considered and matched to appropriate use will be a major tool in achieving energy efficiency. A particularly appropriate sector at which to aim substitution of alternate energy is that of space and water heating which account for large portions of total energy use.

Quantitative projections for energy needs exist for the electrical resource only, with a 500% increase forecast by 1990. Solar energy will be the major alternate source with passive design being the primary mode of solar use until active systems become more cost-effective. Existing construction incorporating appropriate hardware anticipates future active solar systems.

Additional potential renewable resources include: city garbage that is in insufficient quantities at present to support a waste burner, (2) waste vehicular oil and waste construction materials planned for use in providing building heat, (3) hydroelectric resources that will require stream monitoring data to evaluate and (4) geothermal and ground sources both of which require further exploration and evaluation. Neither biomass or wind are expected to be viable alternate forms of energy available to the City.

Conservation is the cheapest and most effective energy "producer". Energy conservation measures presently in effect and developable at Rajneeshpuram are: (1) those available through building site location on optimum sites for this region and building construction which exceeds code requirements and utilizes energy conservation design, (2) the provision for minimal road widths, alternate surfacing materials, and provision for use of natural drainage systems, (3) landscaping to provide windbreaks and summer shading, (4) waste heat recovery systems such as that incorporated in the Socrates office building, and (5) transportation measures encouraging fuel efficient vehicles, trip reduction, transit use and car-pooling, and maximizing load levels.



## ISSUES

1. Outside primary energy supplies are secured at a high cost/risk to the community.
2. Ongoing resource monitoring must be encouraged to ensure the maximization of energy efficiency and conservation.
3. A rational plan is needed to effect an efficient transition from dependency on imported energy to use of local renewable energy resources.

## POLICIES

- 52** The City shall encourage innovative and experimental programs which optimize energy efficiency and minimize the energy used by all community activities.
- 53** The City shall protect and encourage the development of alternate sources of energy such as, but not limited to:
  - solar
  - wind
  - hydro-electric power
  - geothermal power
  - resource recovery (use of solid waste materials).

## IMPLEMENTATION STRATEGIES

1. The City will, in developing land use codes:
  - include provisions which allow for use of alternate energy sources
  - provide and protect solar access
  - encourage the use of active solar systems and/or passive design techniques
  - require energy-efficient development when ownership is to be transferred to the City upon completion.
2. The City will make energy conservation and waste reduction a regular practice in purchasing, operating and maintaining its buildings, vehicles, equipment and facilities as well as take advantage of renewable energy resource opportunities.

3. The City shall identify by means of coordinated agreement with Wasco Electric Cooperative a clear definition of the City's and the Cooperative's respective roles and responsibilities for encouraging energy conservation and appropriate uses of renewable energy resources.

4. The City will adopt an energy program that includes, but is not limited to, provisions for:

- assessing future energy needs
- identifying, quantifying, and evaluating potential uses of local renewable energy resources
- design and performance standards for insulation of structures
- encouraging multi-family housing and the use of common wall and cluster houses
- encouraging siting and design of structures to maximize natural ventilation
- optimizing development layout for solar access
- encouraging resource recovery
- monitoring City energy consumption and expenditures
- energy audits of City buildings to evaluate the need for energy saving measures
- encouraging use of non-vehicular forms of travel for short trips and the use of mass transit
- reducing paved areas
- identifying a local energy coordinator
- developing a local energy contingency plan.

5. The City will cooperate with appropriate federal, state and local agencies to promote energy conservation.



## PROGRAMS

### INTRODUCTION

The City is located within a 64,000 acre tract of land which is owned by the Rajneesh Investment Corporation (RIC) and developed by the Rajneesh Neo-Sannyas International Commune. There are many areas in which cooperative agreements between the City, Commune and RIC would mutually benefit all concerned. Important areas include resource management and monitoring programs. Two cooperative agreements are included in this section of the Comprehensive Plan. One area that the City is cooperating on is a water management program. This includes overall guidelines for the development of water resources. A second cooperative effort is a weather monitoring program.



## PROGRAMS

### 1. CLIMATE MONITORING PROGRAM

The Climate Monitoring Program already in existence is providing valuable data. A full reassessment of the future needs of the City and of Rancho Rajneesh has been made. This included a survey and report on needs by Intra West Weather dated July 8, 1982. For this Plan see Appendices, Volume 1. It is planned to relocate several of the existing stations, and also to install additional stations, to provide a much more comprehensive climatic data collection program. The following is an outline of the proposed program. The attached map shows the location of existing and proposed weather stations.

#### INFORMATION REQUIRED

The following subjects demand accurate meteorological data:

- agriculture needs knowledge about temperature, rainfall, humidity, evaporation, wind speed and cloud cover to calculate the crop water requirements for irrigation, as well as information to combat hazards like extreme temperatures, especially night frost, hail, thunderstorms and droughts.
- erosion and flood control needs facts about hourly and daily amounts of rainfall, snowcover, frost, sudden change of temperatures.
- water resources management needs to know rainfall and evapotranspiration data, as well as runoff data in the different catchment basins.
- aviation needs data and forecasts on the daily weather, especially wind pressure, cloud cover and height, visibility.
- road traffic needs data to predict glaze on roads; runoff information for culvert and crossing design.
- the construction department wants to know about temperatures, maxims of rain, snow and wind for general construction purposes; solar radiation and temperature data for the calculation of the use of wind and solar energy, to insulate buildings and mains; and to construct frost safe roads and runways.
- for various kinds of outdoor recreation activities weather data and forecast is desirable.

## RECORDING EQUIPMENT

On Rancho Rajneesh, there will be the following weather stations which are or will be located as shown on Map 3 in Volume 1, and are or will be equipped as listed.

### Main Station (Station 3)

- rainfall by a non-recording U.S. Weather Bureau-type rain and snow gauge, with daily service of amount and duration of rain and snowfall, with optional observations during heavy rainfall, hail, etc.
- temperature, relative humidity and barometric pressure by a meteorograph on a daily basis.
- windspeed and direction on a monthly basis.
- evaporation with a Class A evaporation pan.
- sunshine duration and variations in solar radiation by a pyoheliograph.
- cloud cover by visual observation.
- humidity by a sling psychrometer to check the hydrographs.
- soil temperature by soil thermometers.

### Station 10

- hygrothermograph.
- heated tipping bucket rain and snow gauge plus recorder.

Both instruments to be serviced on a weekly basis.

### Stations 1, 2 and 4

- hygrothermograph, weekly service.
- rain and snow gauge, daily service.

### Substations 5, 9, 11 and 12

- rain and snow gauge, weekly service.

### Substations 6, 7 and 8

- maximum-minimum thermometer, daily service.

### Station 13

- pressure.
- wind speed and direction.

Both require daily and hourly observation.

### LOCATION OF WEATHER STATIONS

The weather stations are located to provide:

- a cover of the different catchment basins in the whole ranch area
- a cover of the different heights of the land within the ranch.
- typical data of the area in question not disturbed by buildings, irrigation, traffic, etc.

The weather stations will be located as follows:

<u>No. of Station</u>	<u>Name and/or Location/ Special Use</u>	<u>Part of Ranch</u>	<u>Elevation in Feet</u>
1	Kamaal Creek orchard; will provide data for orchard and will give advance warning of cold air drainage toward orchards and vineyards along Kabir Creek downstream.	E	2,000
2	Old Farm House, Jesus Grove	NE	1,590
3	Radha River, main station for agricultural and general	NE	1,360
4	Top of the ranch; rain gauge for erosion and flood control, and water resources management	NW	3,500



<u>No. of Station</u>	<u>Name and/or Location/ Special Use</u>	<u>Part of Ranch</u>	<u>Elevation in Feet</u>
5	Microwave Tower; special use, see 4	W	3,720
6	Low end of vineyard at Rabiya Dairy Barn; night frost and inversion observation	NE	1,420
7	High end of vineyard at Rabiya Dairy Barn	NE	1,480
8	Orchard south of Lao Tzu Grove; special use, see 6	NE	1,500
9	Ridge south of Parshvanath Mountain	E	2,780
10	Radio Repeater Site; special use, see 4	NW	4,000
11	Kaser Butte; special use, see 4	S	3,100
12	Above Henry Thoreau Forest; highest station; data for forestry and special use like 4	S	4,500
13	Rajneesh Airport; serving aviation	NE	1,600

#### DATA PROCESSING

In order to get as much value as possible out of the measuring program, the following has to be considered:

- a trained meteorologist/climatologist and a crew of five helpers (one full-time, four part-time) plus a four-wheel-drive vehicle are necessary to implement the program.
- the data has to be collected continuously and documented so that the information is readily available to the public.
- all measurements on recording charts have to be logged and calculated.
- for the beginning, a manual storage of data is enough; later on with the increase of data, a computer will be very useful.

- the measured data should be compared with the data of surrounding stations and should be evaluated in respect to the daily weather of Oregon and North America. The person in charge will need access to current weather information on telephone and television, and printed weather charts and satellite photos. It will then be possible to provide a (hazard) forecast for several purposes for the whole ranch area as well as for small areas like vineyards.
  
- on the basis of the collected data, maps on the areal distribution of rain and temperature should be drawn. The areal annual precipitation and evapotranspiration should be calculated in order to determine the amount of water available for groundwater recharge.



## PROGRAMS

### 2. WATER MANAGEMENT PROGRAM

A fully developed and integrated water management program is an important part of the overall planning at Rajneeshpuram. The program is designed to ensure that the water resource, which is shared jointly by the residents of the City and of Rancho Rajneesh, will be properly managed.

A thorough study was made of the multiplicity of factors involved in overall water management. The factors include: collection of climatic data; investigation, evaluation and development of water resources; water supply and distribution; monitoring of supply and quality; conservation; and safeguards to protect and enhance the watershed and the water resource in general.

The program set out below contains an overall water management guideline that is designed to be a working list of the topics to be considered by the overall water management body. Some specific programs that have been designed are listed below:

- groundwater data collection and monitoring program;
- water quality monitoring program;
- stream flow measurements;
- watershed management program.

These programs are either currently in operation or are planned. It is expected that the water management planners will draw up and initiate additional programs, and that the programs will be regularly updated.

### OVERALL WATER MANAGEMENT GUIDELINES

An overall water management program must include the following topics:

#### SURFACE WATER RESOURCES

##### 1. Data Collection

Weather - precipitation, evaporation, temperature, sun

Drainage and watersheds - stream flow, runoff, basins, conditions

Potential catchment dams

Erosion

Pollution

Quality

Flooding - hazard potential

Energy potential

Research

## 2. Evaluation

Quantification of resources; potential usage and conservation; overall assessment of surface water situation.

## 3. Surface Management

Usage decisions - who gets what, from where, and how much

Dams and ponds, etc.

Riparian recovery of stream systems

Maintenance of resources, conservation quality/quantity

Pollution control

Watershed management and erosion control

Irrigation

Water rights

Monitoring

## GROUNDWATER RESOURCES

### 1. Data Collection and Exploration

Geologic mapping, stratigraphy, general groundwater con-

ditions, identification of potential aquifers, springs and recharge areas.

Location of well sites

Exploratory geophysics - alluvial thickness  
- potential water-bearing strata

Test drilling - geologic information  
- test for aquifers  
- well location and design

Surface water and stream information

Potential and sites for recharge

Determination of percolation

Springs - location, temperature and flow measurements;  
potential for development

Geothermal potential

## 2. Evaluation of Data

Quantification of resources, guidance for resource usage and conservation

## 3. Well Drilling

Geologic supervision of well driller

Responsibility for coordination (location, plumbing, electrical, pumps, connections, timing, liaison, testing)

Geologic logging and collection of samples, recording rock types, fractures, water horizons, etc.

Geophysical logging if required

Evaluation of data from drilling

Decisions for depth of hole, well construction, screens, casing, abandonment, testing, etc.

4. Well Construction

Research engineering design for best efficiency and recovery (screens, gravel packing, casing, grouting, size of hole, testing, pump types, depth pump setting)

Supervision and coordination of well construction

5. Well and Water Testing

Supervision and design of pump tests

Analysis for quality

Recording and monitoring

6. Aquifer Evaluation and Quantification

Evaluation of data and tests

Design and supervision of quantification program

Test drilling

Pump tests

Geophysics

Monitoring

7. Monitoring Program

Design of tests, collection, recording of data and eventually employing the use of computer studies

Static levels, graphs

Water use records

Well drilling geologic and construction data

Pump and air tests

Quality analyses

Weather data

Pollution control

Aquifer tests

## 8. Recharge

Evaluation of all data collected (1 - 7)

Determination of recharge locations and conditions, i.e. whether natural recharge equals or is less than consumption

Evaluation of artificial recharge (whether necessary or not; design and location and monitoring of artificial recharge systems)

## WATER USAGE

### 1. Coordination, Management and Supervision of Usage

Domestic

Commercial

Irrigation

Construction

Water rights

Conservation

Water use records

### 2. Supply and Services

Water extraction systems (pumps)

Storage systems

Delivery systems

Plumbing and connections

Maintenance

Electrical

### 3. Disposal and Sewage

Design and construction of treatment systems



## Research

### Monitoring of effectiveness of pollution control

#### GROUNDWATER DATA COLLECTION AND MONITORING PROGRAM

The program outlined below is currently in use on Rancho Rajneesh. It will be refined and expanded as part of the ongoing monitoring process. It is hoped to computerize the more important data from wells, such as static levels and water use, to enable more sophisticated and continuous monitoring of the groundwater situation to be made. The evaluation of the data collected from the program is critical to the understanding of the hydrogeologic system in the Rajneeshpuram area; it will also ensure that long-term production does not exceed the available groundwater supply.

A data file is kept for each well constructed. These files contain the following information (samples of the forms that are used appear on pages 159 to 165).

1. Accurate well construction record: A geologist supervises well location and construction. Drill cuttings are logged, labeled and stored. Static levels are recorded whenever a major production zone is encountered and at the completion of the well. The data sheet for each well comprises: well number, descriptive name, water right application number, location, measuring point elevation, aquifer classification, use, and general comments.
2. The Results of a Specific Capacity Test: Specific capacity test procedures:
  - a. Measure and record the static water level.
  - b. Pump the well at a constant and known rate for a period of one to two hours. (The pumping rate should be at or near the expected production rate of the well, and the dynamic water level rate should remain fairly constant.)
  - c. Measure and record the dynamic (pumping) water level in the well following the one to two hour pumping period. The specific capacity can now be expressed as the gallons per minute of water produced per foot of drawdown.

- d. Shut off pump and determine and record the time required for the static water level to return to its original level.
3. The Results of a Sustained Pump Test: All new community wells are subjected to a sustained pump test. The test is similar to the specific capacity test except that the duration is extended to 24 to 72 hours. This test is designed to determine the long-term pumping rate that the well will safely support. Aquifer tests requiring the construction of observation wells will be conducted, in the future, on wells requiring this test.
4. Description of the Well Measuring Point: All measurements on Rajneeshpuram wells are made from the top of the casing. The true elevation of this point is measured by survey.
5. A Hydrograph: A graphical record of the effects of pumping, and of the seasonal static level fluctuations, is maintained for each well. Measurements have been taken at periods ranging from daily to weekly or twice-monthly because of the necessity to generate some initial base data for long-term trends and to monitor controlled heavy-drawing tests. Measurements will gradually be extended to monthly and quarterly.
6. Water Quality Data: Records of any chemical or bacteriological test done on the well water is kept in the file. The frequency or detail of quality tests varies depending on well characteristics and water use. This is outlined in more detail under "Quality Monitoring Program."
7. Water Use Records: Totalizing flow meters have been installed on some of the major wells. Meters will be installed in the future to monitor total water usage.

#### WATER QUALITY MEASURING PROGRAM

Currently, all new community wells are chlorinated on completion of the well, flushed to remove traces of the chlorine, and samples are then taken for tests to ensure the water meets EPA and Oregon State Health Department (OSHD) standards. Routine tests are then made at intervals as determined by the Health Department.

For the City it will be necessary to ensure that agricultural, solid and septic waste disposal from industrial and commercial activities, and well construction practices, do not pollute the water. A comprehensive plan to monitor and provide adequate protection is currently being drawn up with assistance and advice from government departments. The following is a preliminary outline of the proposed Water Quality and Monitoring Program, and testing standards.

1. Groundwater for Potable Use

- a. EPA and OSHD tests: once yearly or as required by OSHD.
- b. Coliform tests: twice monthly or as required.
- c. Quantity pumped.

2. Surface Water for Potable Use

- a. EPA and OSHD tests: once yearly or as required.
- b. Coliform tests: twice monthly or as required.
- c. Turbidity.
- d. Quantity used.

3. Treated Water (for potable use)

- a. Turbidity.
- b. Coliform.
- c. Available chlorine.
- d. Plant operation and chemical dosing details-
- e. Quantity treated.

4. Wastewater

- a. Untreated
  - 1. BOD.
  - 2. COD.
  - 3. Suspended solids.
  - 4. Coliform.
  - 5. Dissolved Oxygen.

- b. Treated
  - 1. BOD.
  - 2. COD.
  - 3. Suspended solids.
  - 4. Coliform.
  - 5. Dissolved Oxygen.
  - 6. Chlorine residue.
  - 7. Plant (lagoon or sandfilter) operation details.

5. Surface Water for Non-Potable Use

The following is a list of tests that may be made on streams to monitor such things as: pollution, the amount of sediment being deposited into reservoirs, and direction of recharge flow:

- a. Temperature.
- b. Specific Conductance.
- c. Turbidity.
- d. Odor.
- e. Color
- f. pH.
- g. Suspended Solids.
- h. Dissolved solids.
- i. Nutrients - nitrogen and phosphorus.
- j. Biological Oxygen Demand (BOD).
- k. Coliforms.
- l. Other microorganisms.
- m. Sediment concentration (suspended).

- n. Particle size (suspended).
- o. Dissolved oxygen.
- p. Visual evidence of aquatic life.

#### STREAM FLOW MEASUREMENTS

Regular stream flow measurements are essential as part of overall water management. Permanent stream gauging stations are planned in strategic locations, and portable methods such as the use of Pygmy Meters will be used for occasional measurements. The flow information has multiple uses:

- to determine runoff quantities and directions;
- for culvert and road crossing design;
- for quantitative measurements of total surface and ground-water resources. In addition to determining the total amount of water available for catchment, gauging stations will be placed upstream and downstream of the Jesus Grove alluvial aquifer to determine the amount of excess water available for recharge;
- for flood control, more accurate peak flow measurements are essential. Early flood warning systems may be employed;
- for location and design of catchment reservoirs;
- for determining erosion potential and siltation potential for catchment reservoirs. The information will assist the design of techniques to combat erosion, and monitor the results of such techniques.

#### WATERSHED MANAGEMENT PROGRAM

The overall aim of the watershed program is to protect and enhance the natural condition of the watershed in such a manner that will improve the quantity and quality of the total water resources. At present the watershed affecting the City, over 100 square miles, is in poor condition, as described in detail in Volume 1 of this Plan. Erosion is a serious problem in streams and on the rangeland; runoff rates are high, topsoil has been eroded from large areas of the ranch, undesirable annual species and junipers have encroached at the expense of more desirable perennial grasses, and wildlife is depleted.

Rancho Rajneesh has been actively engaged in soil stabilization and rehabilitation of riparian systems and rangeland since November 1981. A full-time team of six to eight people is currently tackling this formidable task. To fully combat erosion and restore the watershed to its full potential riparian and range condition could easily occupy two hundred people full-time for one to two years. In order to formulate a management program that will work for the local conditions, advice has been sought from a wide range of experienced people including past owners, local ranchers, private consultants and various government agencies concerned with soil conservation, stabilization and reclamation (see Bibliography in Volume 1). The following is an outline of the current and planned projects.

#### Krishnamurti Reservoir

Siltation of reservoirs has been a serious problem in the past. In order to reduce the siltation, numerous silt ponds are being constructed in the streams that will drain into the reservoir. Figure 3 in Volume 1 on page 71 shows two of the types of silt ponds built from juniper trunks. One is a log type; the other is a screen mesh type of pond. Other types are being experimented with, including rock ponds. Areas subject to sheet erosion are being seeded. The use of overlays of vegetative thinnings is also being tried.

#### Streambank Erosion

In the past the general ranch condition has been allowed to degenerate to the point where streambank undercutting is a severe problem. Much of the agricultural land along the Kabir and Farid creek valleys is being eroded in this manner. Emergency protection methods have included earth and rock fill, rock rip-rap, backfilled heavy pole and mesh fences and staked juniper rip-rapping. Fast-growing trees have been planted along creek banks.

Much of the damage has been caused by uncontrolled flooding which will partly be checked by the buffering effect of the Krishnamurti Dam.

#### Riparian Zone Rehabilitation

The long-term program is to assist the streams to stabilize and return to their full riparian potential. This work is in progress and will continue indefinitely. Proper fencing will be maintained to protect the streams from damage by stock. Assistance to stabilization is being done by selective juni-

per thinning along stream channels, by various experimental forms of juniper check dams and silt ponds, by the construction of silt ponds similar to those protecting the Krishnamurti Dam, and by construction of protective devices in areas of bank undercutting. The demonstrated results of this simple but labor-intensive work, over as short a period as two to three years, are quite remarkable:

- runoff rate is slowed down;
- erosion is reduced;
- water courses silt up;
- a succession of revegetation occurs;
- springs appear (or reappear);
- the water table rises;
- there is an increased groundwater recharge due to increased percolation;
- there is a decrease in turbidity and a general improvement in water quality due to the filtering action of vegetation.

The overall trend is towards established, stabilized, perennial watercourses and back to the fully recovered riparian zones. In these recovered revegetated watercourses there is food, water and cover essential for wildlife, fish and insects. The planting of black cottonwoods in rehabilitated riparian zones has been recommended to provide softwood shelter for cavity-nesting birds.

#### Rangeland Stabilization and Reclamation

The methods currently being experimented with include selective juniper and sagebrush thinning, mechanical tilling, and crop planting. Juniper brush piles are left in selected locations to act as shelter for wildlife.

Future work may include:

- the treatment of medusahead, cheatgrass and other prolific undesirable annual species by such methods as prescribed burning, herbicidal treatment and mechanical treatment;
- reseeding of native plant species;

- development of selected springs to provide water in the dry season for wildlife;
- the building of bird houses.

The encouragement of wildlife diversity and density is an important part of rangeland rehabilitation.

Through the work outlined above, it is expected that the watershed can recover much of its full natural potential; where water is naturally retained on and in the ground, purified and available for conservative, efficient and responsible use.



## DATA SHEETS

The following pages contain samples of typical data sheets kept for each well constructed. The sheets are described below.

Sheet "A" - illustrates the basic information recorded on location, use and general description of the well.

Sheet "B" - shows a typical hydrograph which is a graph of the change in static level with time. Well #4 is an alluvial well located 600 feet upstream from Well #25, the main community well. The static level recorded since November 6, 1981 shows no decline caused by heavy pumping of Well #25 during the recent July festival.

Sheet "C" - gives a summary of the Aquifer Characteristics of a well. Well #25 was chosen because it is the main production well in the Jesus Grove Alluvial Aquifer. During the peak of the festival from July 3 to 8 this well supplied water to 5,000 people at an average of 150,000 gallons per day. This level of production would supply the projected allowance of 75 gpd to 2,000 people.

Sheet "D" - shows graphs of two short-term drawdown tests made during initial evaluation of Well #25.

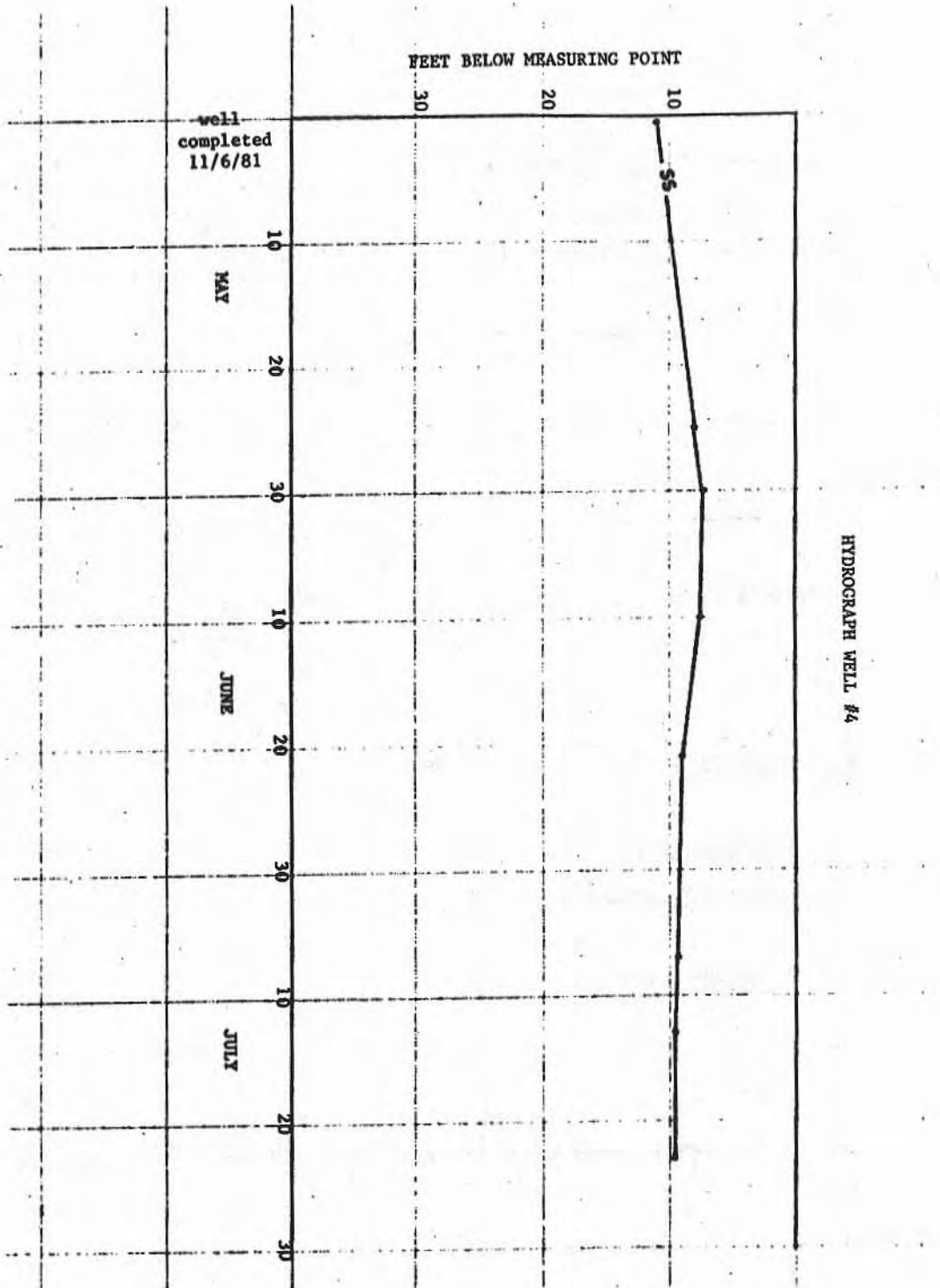
Sheet "E" - shows the results of a 24-hour pump test made to determine whether heavy pumping of well #25 would affect surrounding wells. The results show that the surrounding wells were not affected by the test.

Sheet "F" - is the typical water use record sheet kept for main wells. This particular form shows that Well #25 produced 2,108,000 gallons during the period July 2 to 23.

Sheet "G" - gives typical EPA and coliform tests done on community wells, in this sheet, Well #25.

DATA SHEET

1. Well Number 25
2. Descriptive Name Community Well
3. Water Right Application No. \_\_\_\_\_
4. Location NE $\frac{1}{4}$  SW $\frac{1}{4}$  Sec 28, T8S, R19E  
Descriptive Location at foot of big rock at Sosan crossing  
\_\_\_\_\_
5. Measuring Point Description top of casing  
\_\_\_\_\_
6. Measuring Point Elevation 1458.5'
7. Aquifer Classification alluvial/bedrock  
(rock type or category)
8. Use Community Well  
\_\_\_\_\_
9. General Comments (special construction, history, problems, etc.) \_\_\_\_\_  
\_\_\_\_\_



Well No. 25AQUIFER CHARACTERISTICS

Well Report Production Rate 250 gpm Draw Down 6 feet  
 Air 250 + gpm Bailer \_\_\_\_\_ Pump 250 - 380 gpm

Test Results

Specific Capacity 42 gpm/foot of drawdown

Test Description 250 gpm for 12 hours. Drawdown from 20' to 26' in  
5 minutes. Steady. Recovery to 20' within 5 minutes. Test  
included 5 minutes at 380 gpm; drawdown went from 26' to 29';  
recovered in seconds to 26' when pump rate returned to 250 gpm

Transmissivity not determined

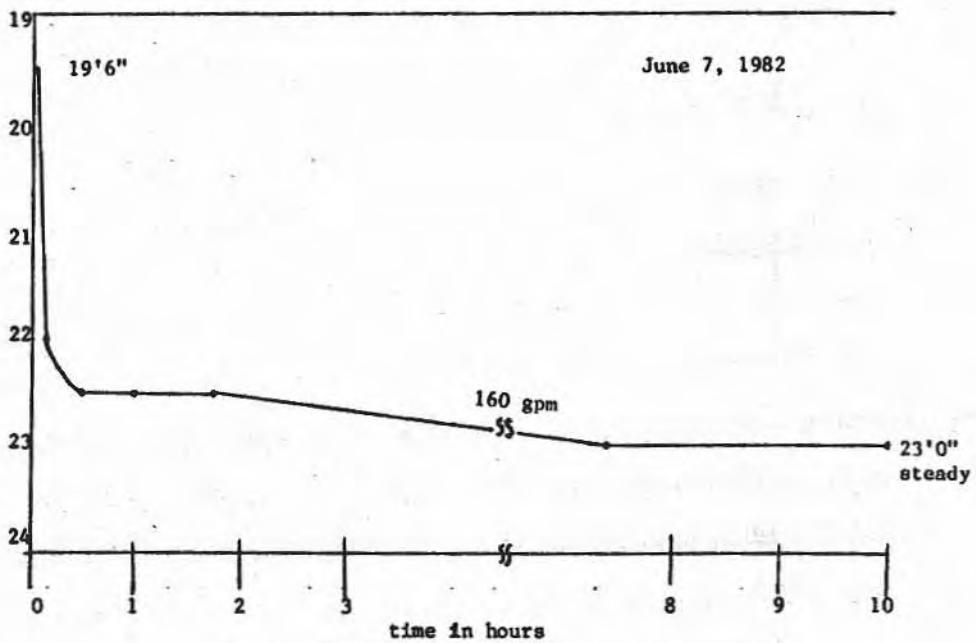
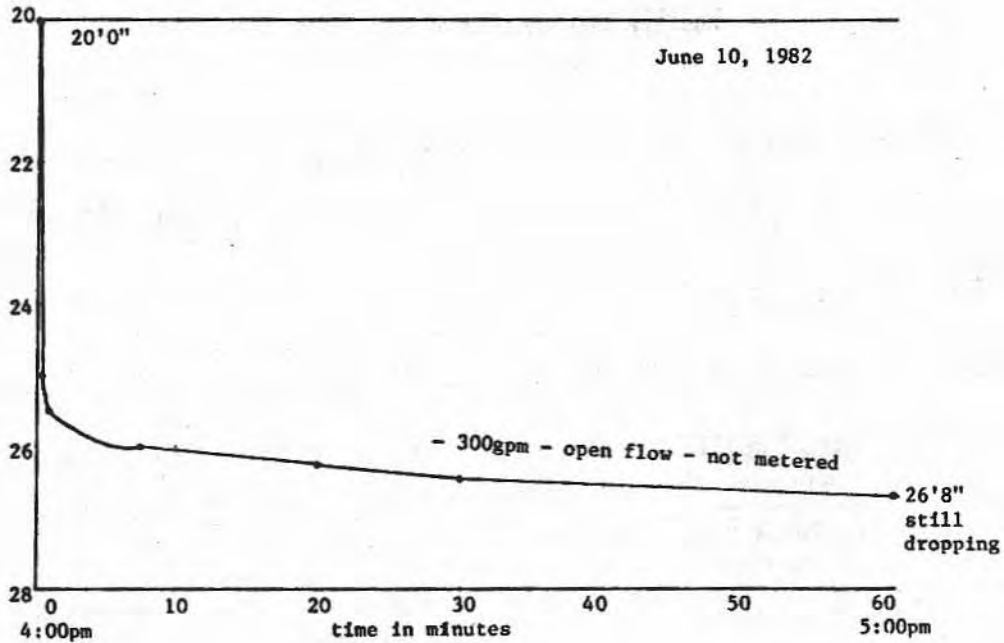
Storativity not determined

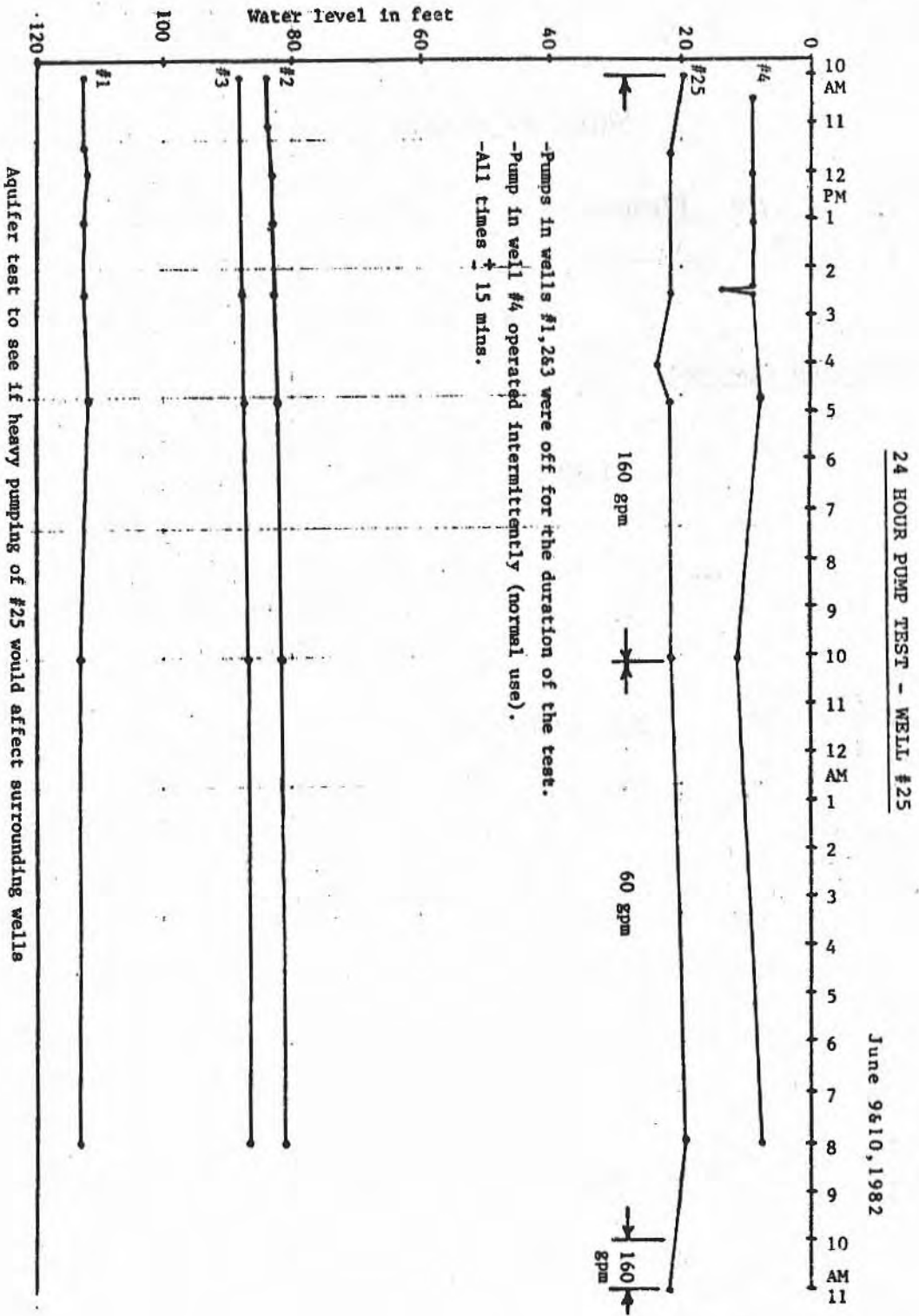
How determined

Comments Several other drawdown tests made including tests at 60 to 150 gpm and  
test at 300 gpm. During Festival, July 3 to 8 1982, pumped at  
250 gpm. for av. 150,000 gpd; drawdown constant, surrounding wells  
unaffected

DRAWDOWN TESTS - WELL # 25

- both tests using 20hp Pioneer pump set at 155' on 4" pipe





Sheet "F"

Well No. 25

WATER USE RECORDS

Pump      Type Pioneer      Depth of setting 150 ft.  
             H.P. 30

Production (gal/mo)

	1982	1983	1984	1985
June				
July	2 - 23	2,108,100		
Aug				
Sept				
Oct				
Nov				
Dec				
Jan				
Feb				
Mar				
Apr				
May				

WATER QUALITYWell No. 25Analysis Date 6/14/82Analyst Umpqua Research Co.

Arsenic	0.017 ppm
Barium	ND @ 0.1
Boron	1
Cadmium	ND @ 0.001
Chromium	ND @ 0.02
Lead	ND @ 0.1
Mercury	ND @ 0.01
Nitrate as N	1.0
Selenium	ND @ 0.002
Silver	ND @ 0.01

Turbidity	0.5
pH	7.6
Fluoride	
Hardness	108
Total Solids	338
Chloride	9.2
Copper	ND @ 0.01
Iron	0.07
Manganese	ND @ 0.01
Sulfate	20
Sodium	84

Microbiological (Coliform):

Test -ve (water conforms to drinking standards)