Exhibit 1

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING THE REGIONAL FRAMEWORK PLAN	)))))	ORDINANCE NO 97-715B Introduced by Councilor McLain

WHEREAS, Section 5 of the 1992 Metro Charter requires the Metro Council to adopt a regional framework plan by December 31, 1997; and

WHEREAS, Section 5(2)(b) of the 1992 Metro Charter requires that: "(1) regional transportation and mass transit systems, (2) management and amendment of the urban growth boundary, (3) protection of lands outside the urban growth boundary for natural resource, future urban or other uses; (4) housing densities, (5) urban design and settlement patterns, (6) parks, open spaces and recreational facilities, (7) water sources and storage, (8) coordination, to the extent feasible, of Metro growth management and land use planning policies with those of Clark County, Washington, and (9) planning responsibilities mandated by state law. . . ." be addressed in the plan; and

WHEREAS, Section 4 of the 1992 Metro Charter states that Metro has jurisdiction over matters of metropolitan concern; and

WHEREAS, the Metro Council has adopted Resolution 96-2378 to add Natural Hazards, and Resolution 97-2584 to add Affordable Housing, School Siting, Environmental Education, Economic Vitality, Regional Funding and Fiscal Policies to the matters addressed in the regional framework plan; and

WHEREAS, the regional framework plan describes its relationship to the Future Vision as required by Section 5(c)(1) of the 1992 Metro Charter; and

WHEREAS, ORS 197.015(1), (16) and 197.274 were added to state law in 1993 to authorize the Land Conservation and Development Commission (LCDC) to acknowledge Metro's regional framework plan for compliance with statewide planning goals; and

WHEREAS, 1997 Oregon Laws, Chapter 833 (HB 3638) amended ORS Chapter 268 for greater consistency with the Metro Charter, including amendments to blend functional plan and regional framework plan authorities in ORS 268.390; and

WHEREAS, Section 5(e) of the 1992 Metro Charter requires Metro to adopt implementation ordinances to assure application of the regional framework plan to land use decisions of cities and counties within Metro one year after its acknowledgment by LCDC; and

WHEREAS, a May, 1997 Regional Framework Plan Discussion Draft has been extensively amended based on review by the public and recommendations from the Metro Policy Advisory Committee and its technical advisory committee, the Joint Policy Advisory Committee on Transportation and its technical advisory committee, the Greenspaces Technical Advisory Committee, the Water Resources Policy Advisory Committee, the Community Advisory Committee on Transportation, and the Metro Committee for Citizen Involvement; and

WHEREAS, the regional framework plan has been structured to include all Regional Urban Growth Goals and Objectives (RUGGOs) and to follow Goal I of the RUGGOs by applying the policies in Chapters 1-7 to Metro and identifying requirements for changes in city and county comprehensive plans in Chapter 8 and the appendices in functional plans; and

WHEREAS, the Metro Council has committed to a four to six months refinement review of the Regional Framework Plan language; now, therefore,

THE METRO COUNCIL ORDAINS AS FOLLOWS:

1. That Section 1. The 1997 Regional Framework Plan attached and incorporated herein as Exhibit "A," containing the Regional Urban Growth Goals and Objectives, and provisions addressing urban growth boundary, urban reserves, housing density, protection of agriculture and forest lands, school siting and affordable housing (Chapter 1); regional transportation and transit (Chapter 2); parks, natural areas, open spaces and trails (Chapter 3); water quality and urban water supply (Chapter 4); regional natural hazards (Chapter 5); Clark County coordination (Chapter 6); Management (Chapter 7); Implementation (Chapter 8) Appendices is hereby adopted.

2. The effective date of this ordinance adopting the 1997 Regional Framework Plan shall be ninety days from the date of adoption. Cities and counties shall begin applying the requirements of this Plan to land use decisions one year after its acknowledgment by the Land Conservation and Development Commission (LCDC) for compliance with statewide land use planning goals. City and county comprehensive plans and land use regulations shall comply with this Plan within two years after its acknowledgment by LCDC for compliance with statewide land use planning goals. Requirements of the Urban Growth Management Functional Plan and Metro's acknowledged Urban Growth Boundary and Urban Reserve Procedures which are included as Appendices of the Plan shall retain the effective dates in each of those separately adopted ordinances.

3. The 1997 Regional Framework Plan shall be transmitted to the Land Conservation and Development Commission for acknowledgment of compliance with statewide goals consistent with ORS 197.274(1).

4. The 1997 Regional Framework Plan text shall be reviewed, refined and updated to reflect any functional plan amendments during the next four to six months.

45. That the provisions of this ordinance are separate and severable. The invalidity of any clause, sentence, paragraph, section, subsection, or portion of this ordinance or the invalidity of the application thereof to any city, county, person or circumstance shall not affect the validity of the remaining provisions of this ordinance or its application to other cities, counties, persons or circumstances.

ADOPTED by the Metro Council this _____ day of _____ 1997.

_____
Jon Kvistad, Presiding Officer

ATTEST:

_____
Recording Secretary

Approved as to Form:

_____
Daniel B. Cooper, General Counsel

EXHIBIT A

REGIONAL FRAMEWORK PLAN

December 1997

Introduction

Introduction: Foundations of the Regional Framework Plan

In 1978, voters in Multnomah, Washington and Clackamas counties approved the creation of an elected regional government, defined as a "metropolitan service district" to oversee issues that transcend traditional city and county boundaries. This entity became known as Metro. The state legislation which authorized the creation of Metro described Metro's responsibilities and procedures. Among these are the responsibilities to adopt and amend the regional Urban Growth Boundary (UGB), and adopt "land use planning goals and objectives for the district" that are consistent with state goals.

The Metro Council, in partnership with local governments, adopted land use planning goals and objectives, called the Regional Urban Growth Goals and Objectives (RUGGOs), in September 1991. Through their representatives on Metro advisory committees, the cities and counties indicated that while the directions set in the RUGGOs were appropriate, they were not specific enough. Accordingly, local representatives recommended that additional work be done to further define the goals and objectives.

In 1990, the voters of Oregon approved an amendment to the Oregon Constitution, authorizing a metropolitan service district to have home rule status. Subject to voter approval, Metro would have jurisdiction over all matters of "metropolitan concern" as set forth in a charter. In 1991, the legislature authorized the appointment of a charter committee to draft a charter for Metro and to place it on the ballot. In November, 1992, the voters approved Metro's Charter. The Charter stated that the Regional Planning functions described in Section 5 of the Charter would be Metro's primary functions.

Section 5 of the Charter required that Metro adopt a Future Vision statement before July 1, 1995. This statement was adopted by the Council and a copy is attached in the Appendices of this Plan. In addition, the Charter required Metro to adopt this Regional Framework Plan before December 31, 1997, with the consultation and advice of the Metro Policy Advisory Committee (MPAC). A copy of Section 5 and Section 27 (which creates MPAC) of the Charter are also included in the Appendices of this Plan.

After the adoption of the Charter and the local government recommendation that the RUGGOs needed further refinement, Metro continued to actively pursue its regional planning mission. The Region 2040 Project (begun before adoption of the Charter) was the forum for developing specific land-use and transportation planning policies. In 1995, the RUGGOs were substantially revised to

incorporate the 2040 Growth Concept. A description of the process that led to the adoption of the 2040 Growth Concept is included in the Appendices of this Plan. The Regional Framework Plan is based on the adopted 2040 Growth Concept and the policy statements contained in the RUGGOs and, upon adoption, will consolidate all Metro land-use planning goals and objectives.

Section 5 of the Charter requires that Metro implement the Regional Framework Plan by requiring cities and counties to comply with the Plan. In addition to authorizing Metro to adopt land use planning goals and objectives, the state legislation creating Metro authorized Metro to adopt "Functional Plans" that could contain specific recommendations and requirements for the cities and counties within Metro's boundaries to amend their comprehensive plans and implementing zoning ordinances. Metro also has authority under state law to coordinate local comprehensive plans. Further, Metro is designated as the Metropolitan Planning Organization (MPO) for the purpose of Federal transportation funding. Pursuant to this authority, Metro has adopted, and amended from time to time, a Regional Transportation Plan (the RTP) as a Functional Plan.

After the adoption of the 2040 Growth Concept, MPAC and the Metro Council agreed that early implementation of the Growth Concept was desirable. Accordingly, the Council adopted the Metro Urban Growth Management Functional Plan in November, 1996. A copy of this Functional Plan is included in the Appendices of to this Plan.

The Regional Framework Plan is intended to be the document that unites all of Metro's adopted land use planning policies and requirements. The Charter directs Metro to address the following subject matter in the Plan:

- management and amendment of the Urban Growth Boundary
- protection of lands outside the Urban Growth Boundary for natural resource use and conservation, future urban expansion or other uses
- urban design and settlement patterns
- housing densities
- transportation and mass transit systems
- parks, open spaces and recreational facilities
- water sources and storage
- coordination with Clark County, Washington.
- planning responsibilities mandated by state law
- other issues of metropolitan concern.

This document brings together these elements and the contents of previous regional policies to create a coordinated, integrated Regional Framework Plan to achieve the preferred form of

regional growth and development which is the 2040 Growth Concept. While a new document, the Regional Framework Plan incorporates goals, objectives and policies established in existing Metro legislation, including the Regional Urban Growth Goals and Objectives, the 2040 Growth Concept, the Urban Growth Management Functional Plan, the Metropolitan Greenspaces Master Plan, and the Regional Transportation Plan.

In addressing the subject matters that Metro is required or allowed to address, Metro does not choose to mandate specific requirements for cities and counties for all of these areas. Instead, the Regional Framework Plan remains consistent with previous planning legislation adopted by Metro. The Regional Framework Plan is a combination of broad planning goals and objectives, as well as specific requirements. The goals and objectives intended to be policy statements that will guide future planning activities conducted by Metro are found in Chapters 1-7 of this Plan. The goals and objectives are themselves broad policy statements and future planning activities will need to seek a balance between these sometimes competing planning directives.

Specific requirements are also included in this Framework Plan. Some requirements are applicable to Metro itself, such as the provisions that establish procedures and standards for Urban Growth Boundary Amendments, included in the Appendices of this Plan. Where requirements are directed to cities and counties, these requirements are adopted as Functional Plans, such as the Urban Growth Management Functional Plan and the RTP. These requirements are summarized in Chapter 8 and fully stated in the Appendices of this Plan.

The Oregon Legislature, in 1997, adopted statutory amendments that require Metro to unify all of its planning goals, objectives and requirements into the Regional Framework Plan. This legislation (Oregon Laws 1997, Chapter 833) and 1993 legislation specifically requires compliance acknowledgment of the Regional Framework Plan and its implementing ordinances by the Oregon Land Conservation and Development Commission.

Metro has authority under the Charter and state law to require cities and counties to amend their comprehensive plans and implementing ordinances by requiring compliance and consistency with Metro's adopted Functional Plans and the Regional Framework Plan. In this Regional Framework Plan, Metro has decided to designate clearly any portions of the Plan that are requirements for cities and counties as Functional Plans. Section 7 of the Metro Charter limits Metro's authority to otherwise regulate services currently being provided by local governments. The requirements for cities and counties contained in this Framework Plan as component functional plans are not intended to be considered as regulations of local government services because they are enforceable pursuant to the specific provisions of Section 5 of the Charter.

Relationships with Other Governments

The planning and growth management activities of many jurisdictions affect and are affected by the actions of other jurisdictions in the region. In this region, as in others throughout the country, coordination of planning and management activities is essential if urban growth management efforts are to succeed.

In the Portland metropolitan area, representatives from many governments and agencies play critical roles in urban growth management. Metro's partners in the region's 24 cities, three counties and more than 130 special service districts and school districts, the State of Oregon, Tri-Met, the Port of Portland and the Portland Area Boundary Commission all make decisions that affect and respond to regional urban growth. And from a broader regional perspective, the cities of Southwest Washington and Clark County are partners in addressing growth management issues such as air quality, transportation and regional economy. Metro also works with nearby Oregon cities outside the Metro boundary to develop complementary policies.

While the Metro Council makes decisions about policies, Metro has more than a dozen advisory committees that advise the Executive Officer, Metro Council and staff on matters of Metro's responsibility. Membership of the committees is varied, based on the purpose of each committee, and is structured to promote interagency communication and coordination at several levels, as well as citizen involvement.

The Metro Policy Advisory Committee (MPAC) is a Charter-mandated committee consisting of members of city councils and county commissions and other representatives of local government governing bodies. Three citizen members are appointed by Metro's Executive Officer. As provided for in the Charter, the membership of MPAC has been adjusted and can continue to be adjusted to reflect the desire for broad input from affected governments as well as citizens. MPAC provides advice and consultation to the Metro Council on the land-use matters. The committee may authorize Metro to provide or regulate a local government service. The Metro Technical Advisory Committee (MTAC) is a 24-member committee of planning managers, citizens and business representatives that provides technical support to MPAC.

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation needs in the region to evaluate transportation needs and make recommendations to the Metro Council related to transportation policy. JPACT's discussions usually follow technical assessments by Transportation Policy Alternatives Committee (TPAC), whose membership includes technical staff from the same agencies as JPACT, as well as six citizens appointed at-large by the Metro Council.

Relationships with Metro Citizens

Metro is committed to including meaningful citizen involvement in regional planning and implementation of the Framework Plan. Metro utilizes a wide range of mechanisms to achieve this goal. Metro's commitment to citizen and public involvement is stated in the Metro Citizen Involvement Principals and in Objective 1, Goal 1 of the Regional Urban Growth Goals and Objectives.

Metro believes that effective citizen involvement is essential to good government. Elected officials, staff and citizens all play important roles in governing the region. Cooperation among Metro, local governments and citizens results in the best policy decisions. Therefore, Metro commits to promote and to sustain a responsive citizen involvement environment. To carry out this commitment, Metro adopts these guiding principles:

1. Value active citizen involvement as essential to the future of the Metro region.
2. Respect and consider all citizen input.
3. Encourage opportunities that reflect the rich diversity of the region.
4. Promote participation, based on citizen involvement opportunities, of individuals and of community, business and special interest groups.
5. Provide communications to encourage citizen participation in Metro processes that are understandable, timely and broadly distributed.
6. Provide citizens with an opportunity to be involved early in the process of policy development, planning and projects.
7. Organize involvement activities to make the best use of citizens' time and efforts.
8. Provide financial and staff support to Metro's Office of Citizen Involvement.
9. Sustain ongoing networking among citizens, local governments, Metro officials and staff.
10. Respond to citizens' perspectives and insights in a timely manner.
11. Coordinate interdepartmental and interjurisdictional activities.
12. Evaluate the effectiveness of Metro citizen involvement.

Citizen Participation

Metro shall develop and implement an ongoing program for citizen participation in all aspects of the regional planning program. Such a program shall be coordinated with local programs for supporting citizen involvement in planning processes and shall not duplicate those programs.

Metro Committee for Citizen Involvement (MCCI)

The Metro Charter established a Metro Committee for Citizen Involvement to assist with the development, implementation and evaluation of its citizen involvement program and to advise the MPAC regarding ways to best involve citizens in regional planning activities.

Notification

Metro shall develop programs for public notification, especially for (but not limited to) proposed legislative actions, that ensure a high level of awareness of potential consequences, as well as opportunities for involvement on the part of affected citizens, both inside and outside of its districts' boundaries.

Future Vision

The spirit of the Regional Framework Plan took root in a Charter-mandated document, the Future Vision Report. The first requirement of the Metro Charter, as stated below, was to develop a "Future Vision" that, while not a regulatory document, is:

> "...a conceptual statement that indicates population levels and settlement patterns that the region can accommodate within the carrying capacity of the land, water and air resources of the region, and its educational and economic resources, and that achieves a desired quality of life. The Future Vision is a long-term, visionary outlook for at least a 50-year period."

The Charter also states:

> "The matters addressed by the Future Vision include but are not limited to: (1) use, restoration and preservation of regional land and natural resources for the benefit of present and future generations, (2) how and where to accommodate the population growth of the region while maintaining a desired quality of life for its residents, and (3) how to develop new communities and additions to the existing urban areas in well-planned ways."

The connection between the Future Vision and the Regional Framework Plan, as stated in the Charter, is that the Regional Framework Plan must "describe its relationship to the Future Vision." That is the intent of this section. The full text of the Future Vision, as adopted by the Metro Council by Ordinance 95-604A, is included in the appendix. However, the following excerpts are useful highlights in this Plan.

In the Future Vision report, the Future Vision Commission came to the following conclusion regarding carrying capacity:

> "This metropolitan area, like all others, exceeded its ability to meet the physical needs of its people long ago. Our style of life depends on the importation of energy, materials, capital and brain power from all over the world. We have also found that traditional biological models of population carrying capacity are simply too narrowly drawn to be of much use in a metropolitan setting. Determining the sustainability of even current population levels at our existing quality of life is greatly complicated by uncertainties due to future technological and global economic changes. In addition, there are difficult questions of value which must be addressed first, since values can be the basis for an analysis of carrying capacity but cannot be derived from such a study. For these reasons, it may not be possible to choose a single sustainable population level for the region."

Further on, the report states:

> "Consequently, we have chosen to approach carrying capacity as an issue requiring ongoing discussion and monitoring. We believe that the relevant question is not <u>when</u> carrying capacity will be exceeded, but <u>how</u> we will collectively restore, maintain and/or enhance the qualities of the region central to sustaining our health, the quality of the natural environment and the ability of future generations to take action to meet the needs of their time.
>
> Sustainable communities will come about through the skillful blending of factual data, our values and new ideas in a public discussion occupying a place of honor in this region, not through blind adherence to numerical thresholds that cannot be specified, much less met. Hence, carrying capacity is not a one-time issue, a single number, a simple answer, but an ongoing question for us all."

With regard to accommodating new growth, the Future Vision report includes the following recommendations:

> "This vision does not call specifically for the creation of new communities. We choose instead to focus on the restoration and redevelopment of what already has been committed to non-resource use."
>
> "Direct all regional planning efforts to include equitable economic progress for communities throughout the region as a critical component for modeling and evaluation."
>
> "Address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout the nine-county region in the Regional Framework Plan elements for transportation, rural lands, urban design, housing and water resources."
>
> "Identify needs and solutions to community problems at the neighborhood level, and actively work to enlist all units of government in supporting and acting on these grassroots agenda rather than allowing governmental entities to insulate themselves from participating."
>
> "Continue to encourage a choice of neighborhood types, including new neighborhoods with suburban densities, neighborhoods of traditional (pre-World War II) densities, and mixed-use neighborhoods of a more urban design."

The relationship of the Regional Framework Plan to the Future Vision is as follows:

- The Future Vision statement provides a beginning point from which policy debate and analysis can begin.
- The Future Vision brings a broad, inclusive perspective to the Regional Framework Plan.
- The Future Vision establishes the approach that all of the issues and problems addressed in the Regional Framework Plan will require an ongoing process of monitoring, analysis and reform in order to meet the needs and expectations of this and future generations.

Description of the Regional Framework Plan Structure

This Plan is organized into this Introduction, a broad description of the 2040 Growth Concept which constitutes the "framework" which unifies all of the components of the Regional Framework Plan, and 8 additional chapters. Informational material is included in the Appendices. Chapters 1 through 6 address substantive planning issues. Chapter 7 addresses how Metro will manage the plan, including provisions addressing future amendments to the Plan. These amendments may be in the form of adoption of revisions to existing provisions of the Plan, additions to goals and objectives or additions of new requirements for cities and counties. Chapter 8 incorporates the specific requirements for cities and counties adopted as Functional Plan components of the Regional Framework Plan and identifies the process Metro will follow to adopt implementing ordinances to establish the rules by which Metro will enforce compliance with the Plan.

Each chapter is structured with a format that includes statements of goals and objectives that are intended to apply to Metro's planning efforts. In addition, some of the chapters include references to the specific requirements that are made directly applicable to cities and counties in Chapter 8. Furthermore, the chapters contain background information and policy analysis that describes the subject matter that is addressed.

Any requirements that apply directly to cities or counties are separately referenced in a substantive chapter addressing a specific subject area and summarized in Chapter 8. All requirements of this Regional Framework Plan that are requirements applicable to cities and counties are adopted by functional plans included in the Appendices.

2040 Growth Concept

The 2040 Growth Concept

This chapter of the Framework Plan describes the 2040 Growth Concept which is the unifying concept or "framework" around which this Regional Framework Plan is based. This 2040 Growth Concept contains refinements to the original 2040 Growth Concept that was adopted in the 1995 amendments to RUGGO. This Plan anticipates that the 2040 Growth Concept and the provisions of this Plan will continue to evolve.

The Growth Concept states the preferred form of regional growth and development and includes the Growth Concept map. The preferred form of growth is to contain growth within a carefully managed Urban Growth Boundary. Growth should occur inside the current UGB in the form of infill and redevelopment with higher density being developed in areas where it is appropriate. Expansions of the UGB should be done carefully to allow for the need for additional land. This concept is adopted for the long-term growth management of the region including a general approach to approximately where and how much the UGB should be ultimately expanded, what ranges of density are estimated to accommodate projected growth within the boundary, and which areas should be protected as open space.

The Growth Concept is designed to accommodate approximately 720,000 additional residents and 350,000 additional jobs. The total population served within this concept is approximately 1.8 million residents within the Metro boundary.

The basic philosophy of the Growth Concept is to preserve our access to nature and build better communities for the people who live here today and who will live here in the future. The Growth Concept applies the above policies with the technical analysis to guide growth for a period up to the next 50 years. The Growth Concept is an integrated set of objectives which guide all Regional Framework Plan policies.

The Growth Concept sets the direction for development of implementing policies in Metro's existing functional plans and the Charter-required Regional Framework Plan. This direction will be refined, as well as implemented, in subsequent functional plan amendments and framework plan components. Additional planning will be done to test the Growth Concept and to determine implementation actions. Amendments to the Growth Concept and some Regional Framework Plan policies may be needed to reflect the results of additional planning to maintain the consistency of implementation actions with the stated policies.

Fundamental to the Growth Concept is a multi-modal transportation system that assures continued mobility of more people and goods throughout the region, consistent with transportation policies. By coordinating land uses and this transportation system, the region embraces its existing locational advantage as a relatively uncongested hub for trade.

The basic principles of the Growth Concept directly apply to the Regional Framework Plan policies. An urban to rural transition to reduce sprawl, keeping a clear distinction between urban and rural lands and balancing re-development, is needed. Separation of urbanizable land from rural land shall be accomplished by the UGB for the region's 20-year projected need for urban land. That boundary will be expanded into designated urban reserves areas when a need for additional urban land is demonstrated. About 18,600 acres of lands shown on the Growth Concept map have been designated by the Metro Council as urban reserves. The Growth Concept also assumes that cooperative agreements will be reached with neighboring cities to coordinate planning for the proportion of projected growth in the four county region expected to locate within their urban growth boundaries and urban reserve areas.

The Metro UGB would only expand into urban reserves when need for additional urban land is demonstrated. Rural reserves are intended to assure that Metro and neighboring cities remain separate. The result is intended to be a compact urban form for the region coordinated with nearby cities to retain the region's sense of place.

Mixed-use urban centers inside the UGB are one key to the Growth Concept. Creating higher density centers of employment and housing and transit service with compact development, retail, cultural and recreational activities in a walkable environment is intended to provide efficient access to goods and services, enhance multi-modal transportation and create vital, attractive neighborhoods and communities. The Growth Concept uses interrelated types of centers. The central city is the largest market area, the region's employment and cultural hub. Regional centers serve large market areas outside the central city, connected to it by high-capacity transit and highways. Connected to each regional center, by road and transit, are smaller town centers with local shopping and employment opportunities within a local market area. Planning for all of these centers will seek a balance between jobs, housing and unique blends of urban amenities so that more transportation trips are likely to remain local and become more multi-modal.

In keeping with the jobs-housing balance in centers, a jobs-housing balance by regional sub-areas can and should also be a goal. This would account for the housing and employment outside centers, and direct policy to adjust for better jobs-housing ratios around the region.

Recognition and protection of open spaces both inside the UGB and in rural reserves outside urban reserves are reflected in the Growth Concept. Open spaces, including important natural features and parks, are important to the capacity of the UGB and the ability of the region to accommodate housing and employment, while protecting and promoting livability. Green areas on the Growth Concept map may be designated as regional open space, removing these lands from the inventory of urban land available for development. Rural reserves, already designated for farms, forestry, natural areas or rural-residential use, would remain and be further protected from development pressures by the rural zoning of the counties.

The Concept map shows some transportation facilities to illustrate new concepts, such as "green corridors," and how land-use areas, such as centers, may be served based on agreements with affected agencies and jurisdictions. Neither the current regional system nor final alignment choices for future facilities are intended to be represented on the Concept map.

The percentages and density targets in the Growth Concept are used to describe the relationship between centers and areas. They are estimates based on modeling analysis of one possible configuration of the Growth Concept. Implementation actions that vary from these estimates may indicate a need to balance other parts of the Growth Concept to retain the compact urban form contained in the Growth Concept. Each jurisdiction is encouraged to adopt a unique mix of characteristics to retain the sense of place of each locality consistent with the overall Growth Concept.

Neighbor Cities

The Growth Concept recognizes that neighboring cities outside Metro's boundaries are likely to grow rapidly. There are several such cities proximate to the Metro region. Metro shall pursue discussion of cooperative efforts with neighboring cities. Neighbor city coordination could be achieved with the completion of intergovernmental agreements concerning key concepts. Communities such as Sandy, Canby and Newberg will be affected by Metro, city and county decisions about managing growth within Metro. A significant number of people may be accommodated in these neighboring cities, and cooperation between Metro and these communities is necessary to coordinate planning to address common transportation and land-use issues.

There are four key Metro polices for seeking cooperative agreements with neighbor cities:

1. There shall be a separation of rural land between each neighboring city and the metropolitan area. If the region grows together, the transportation system would suffer and the cities would lose their sense of community identity.

2. There should be a strong balance between jobs and housing in the Metro region and in the neighbor cities. The more a balance of jobs and households is retained, the more trips will remain local.
3. Each neighboring city should retain its own identity through its unique mix of commercial, retail, cultural and recreational opportunities which support the its balance of jobs and housing.
4. There should be consideration of a "green corridor," transportation facility through a rural reserve that serves as a link between the metropolitan area and a neighbor city with limited access to the farms and forests of the rural reserve. Keeping accessibility high encourages employment growth but limits the adverse effect on the surrounding rural areas. Metro will seek limitations in access to these facilities and will seek intergovernmental agreements with ODOT, the appropriate counties and neighbor cities to establish mutually acceptable growth management strategies. Metro will link transportation improvements to neighbor cities to successful implementation of these intergovernmental agreements.

Cooperative planning between a city outside the region and Metro could also be initiated on a more limited basis. These cooperative efforts could be completed to minimize the impact of growth on surrounding agriculture and natural resource lands, maintain a separation between a city and the Metro UGB, minimize the impact on state transportation facilities, match population growth to rural resource job and local urban job growth and coordinate land-use policies. Communities such as North Plains and other communities adjacent to the region such as Estacada and Scappoose may find this more limited approach suitable to their local situation.

Rural Reserves

Some rural lands adjacent to and nearby the regional UGB and not designated as urban reserves may be designated as rural reserves. This designation is intended as a policy statement by Metro to not extend its UGB into these areas and to support neighboring cities' efforts not to expand their urban growth boundaries into these areas. The objectives for rural land planning in the region will be to maintain the rural character of the landscape to support and maintain our agricultural economy, and to avoid or eliminate conflicts with farm and forest practices, help meet regional needs for open space and wildlife habitat, and help to clearly separate urban from rural land. The UGB will not be expanded into these areas. Supporting rural zoning designations will be encouraged. These rural reserves keep adjacent urban areas separate. These rural lands are not needed or planned for development but are more likely to experience development pressures than are areas farther away.

These lands will not be developed in urban uses in the foreseeable future, an idea that requires establishing and maintaining agreement among local, regional and state agencies. They are areas outside the present UGB and along highways that connect the region to neighboring cities.

New rural commercial or industrial development should be restricted. Some areas should receive priority status as potential areas for park and open space acquisition. Zoning should be for resource protection on farm and forestry land, and very low-density residential (no greater average density than one unit for five acres) for exception land.

These rural reserves would support and protect farm and forestry operations. The reserves also would include some purchase of natural areas adjacent to rivers, streams and lakes to ensure that water quality is protected and wildlife habitat enhanced. Large natural features, such as hills and buttes, also would be included as rural reserves because they buffer developed areas and are poor candidates for compact urban development.

Rural reserves are designated in areas that are most threatened by new development, that separate communities, or exist as special resource areas.

Rural reserves also would be retained to separate cities within the Metro boundary. Cornelius, Hillsboro, Tualatin, Sherwood and Wilsonville all have existing areas of rural land that provide a break in urban patterns. Urban reserve study areas that are indicated on the Concept Map are also separated by rural reserves, such as the Damascus-Pleasant Valley areas from Happy Valley.

The primary means of achieving rural reserves would be through the Regional Framework Plan for areas within the Metro boundary, and voluntary agreements among Metro, the counties, neighboring cities and the state for those areas outside the Metro boundary. Metro shall seek agreements which would prohibit extending urban growth into the rural reserves and require that state agency actions be consistent with the rural reserve designation.

Open Spaces and Trail Corridors

The areas designated open space on the Concept map are parks, stream and trail corridors, wetlands and floodplains, largely undeveloped upland areas and areas of compatible very low-density residential development. Many of these natural features already have significant land set aside as open space. The Tualatin Mountains, for example, contain major parks such as Forest Park and Tryon Creek State Park and numerous smaller parks such as Gabriel Park in Portland and Wilderness Park in West Linn. Other areas are oriented toward wetlands and streams, with Fanno Creek in Washington County having one of the best systems of parks and open space in the region.

Local jurisdictions are encouraged to establish acres of open space per capita goals based on rates at least as great as current rates, in order to keep up with current conditions.

Designating these areas as open spaces has several effects. First, it removes these lands from the category of urban land that is available for development. The capacity of the UGB then has to be calculated without these areas, and plans to accommodate housing and employment have to be made without them. Second, these natural areas, along with key rural reserve areas, receive a high priority for purchase as parks and open space, through programs such as Metro's Open Spaces Acquisition program. Finally, regulations should be developed, to protect critical natural areas, that would not conflict with housing and economic goals. This will provide protection of critical creek areas, compatible low-density development of sensitive areas and transfer of development rights from protected natural areas to other lands better suited for development.

About 35,000 acres of land and water inside today's UGB are included as open spaces in the Growth Concept map. Preservation of these open spaces may be achieved by a combination of ways. Some areas could be purchased by public entities, such as Metro through its Open Spaces Acquisition program or local park departments. Others may be donated by private citizens or by developers of adjacent properties to reduce the impact of development. Some could be protected by environmental zoning that allows very low-density residential development through the clustering of housing on portions of the land while leaving important features as common open space.

Centers

Creating higher density centers of employment and housing provides many advantages to communities. These centers provide citizens with access to a variety of goods and services in a relatively small geographic area, creating an intense business climate. Having centers also makes sense from a transportation perspective, since most centers have an accessibility level that is conducive to transit, bicycling and walking. Centers also act as social gathering places and community centers, where people would find the cultural and recreational activities and "small-town atmosphere" they cherish.

The major benefits of centers in the marketplace are accessibility and the ability to concentrate goods and services in a relatively small area. The problem in developing centers, however, is that most of the existing centers are already developed and any increase in the density must be made through redeveloping existing land and buildings. Emphasizing redevelopment in centers over development of new areas of undeveloped land is a key strategy in the Growth Concept. Areas of high unemployment and low property values should be specially considered to encourage reinvestment and redevelopment. Incentives and tools to facilitate redevelopment in centers should be identified.

There are three types of centers, distinguished by size and accessibility. The central city is downtown Portland and is accessible to millions of people. Regional centers are accessible to hundreds of thousands of people and town centers are accessible to tens of thousands.

The Central City

Downtown Portland serves as our major regional center and functions quite well as an employment and cultural hub for the metropolitan area. It provides accessibility to the many businesses that require access to a large market area and also serves as the location for cultural and social functions that draw the region together. It is the center for local, regional, state and federal governments, financial institutions, commerce, the center for arts and culture, and for visitors to the region.

In addition, downtown Portland has a high percentage of travel other than by car -- three times higher than the next most successful area. Jobs and housing are readily available there, without the need for a car. Maintaining and improving upon the strengths of our regional downtown shall remain a high priority.

Today, about 20 percent of all employment in the region is in downtown Portland. Under the Growth Concept, downtown Portland would grow at about the same rate as the rest of the region and would remain the location of about 20 percent of regional employment. To do this, downtown Portland's 1990 density of 150 people per acre would increase to about 250 people per acre. Improvements to the transit system network, development of a multi-modal street system and maintenance of regional through routes (the highway system) would provide additional mobility to and from the city center.

Regional Centers

There are nine regional centers, serving four market areas (outside of the central city market area). Hillsboro serves that western portion of the region and Gresham the eastern. The central city and Gateway serve most of the Portland area as a regional center. Downtown Beaverton and Washington Square serve the east Washington County area, and downtown Oregon City, Clackamas Town Center and Milwaukie together serve Clackamas County and portions of outer south east Portland.

These regional centers would become the focus of compact development, redevelopment and high-quality transit service, multi-modal street networks and act as major nodes along regional through routes. The Growth Concept estimates that about 3 percent of new household growth and

11 percent of new employment growth would be accommodated in these regional centers. From the current 24 people per acre, the Growth Concept would allow for about 60 people per acre.

Transit improvements would include light-rail connecting all regional centers to the central city. A dense network of multi-modal arterial and collector streets would tie regional centers to surrounding neighborhoods and other centers. Regional through-routes would be designed to connect regional centers and ensure that these centers are attractive places to conduct business. The relatively small number of centers reflects not only the limited market for new development at this density but also the limited transportation funding for the high-quality transit and roadway improvements envisioned in these areas. As such, the nine regional centers should be considered candidates and ultimately the number should be reduced or policies established to phase in certain regional centers earlier than others.

Town Centers

Smaller than regional centers and serving populations of tens of thousands of people, town centers are the third type of center with compact development and transit service. Town centers would accommodate about 3 percent of new households and more than 7 percent of new employment. The 1990 density of an average of 23 people per acre would nearly double – to about 40 persons per acre, the current densities of development along Hawthorne Boulevard and in downtown Hillsboro.

Town centers would provide local shopping, employment and cultural and recreational opportunities within a local market area. They are designed to provide local retail and services, at a minimum. They also would vary greatly in character. Some would become traditional town centers, such as Lake Oswego, Oregon City and Forest Grove, while others would change from an auto-oriented development into a more complete community, such as Hillsdale. Many would also have regional specialties, such as office centers envisioned for the Cedar Mill town center. Several new town centers are designated, such as in Happy Valley and Damascus, to accommodate the retail and service needs of a growing population while reducing auto travel. Others would combine a town center within a regional center, offering the amenities and advantages of each type of center.

Corridors

Corridors are not as dense as centers, but also are located along good quality transit lines. They provide a place for densities that are somewhat higher than today and feature a high-quality pedestrian environment and convenient access to transit. Typical new developments would include rowhouses, duplexes and one- to three-story office and retail buildings, and average about

25 persons per acre. While some corridors may be continuous, narrow bands of higher intensity development along arterial roads, others may be more nodal, that is, a series of smaller centers at major intersections or other locations along the arterial that have high quality pedestrian environments, good connections to adjacent neighborhoods and good transit service. As long as the average target densities and uses are allowed and encouraged along the corridor, many different development patterns – nodal or linear – may meet the corridor objective.

Station Communities

Station communities are nodes of development centered around a light-rail or high-capacity transit station that feature a high-quality pedestrian environment. They provide for the highest density outside centers. Station communities would encompass an area approximately one-half mile from a station stop. The densities of new development would average about 45 persons per acre. Zoning ordinances now set minimum densities for most Eastside and Westside MAX station communities. An extensive station community planning program is now under way for each of the Westside station communities; similar work is envisioned for the proposed South/North line. It is expected that the station community planning process will result in specific strategies and plan changes to implement the station communities concept.

Because the Growth Concept calls for many corridors and station communities throughout the region, together they are estimated to accommodate 27 percent of the new households of the region and nearly 15 percent of new employment.

Main Streets and Neighborhood Centers

During the early decades of this century, main streets served by transit and characterized by a strong business and civic community were a major land-use pattern throughout the region. Examples remain in Hillsboro, Milwaukie, Oregon City and Gresham as well as the Westmoreland neighborhood and Hawthorne Boulevard. Today, these areas are undergoing a revival and provide an efficient and effective land-use and transportation alternative. The Growth Concept calls for main streets to grow from 1990 levels of 36 people per acre to about 39 per acre. Main streets would accommodate nearly 2 percent of housing growth.

Main streets typically will serve neighborhoods and may develop a regional specialization – such as antiques, fine dining, entertainment or specialty clothing – that draws people from other parts of the region. Main streets form neighborhood centers as areas that provide the retail and service development at other intersections at the focus of neighborhood areas and around MAX light-rail stations. When several main streets occur within a few blocks of one another, they may also serve

as a dispersed town center, such as the main street areas of Belmont, Hawthorne and Division that form a town center for inner Southeast Portland.

Neighborhoods

Residential neighborhoods would remain a key component of the Growth Concept and would fall into two basic categories. Inner neighborhoods include areas such as Portland, Beaverton, Milwaukie and Lake Oswego, and would include primarily residential areas that are accessible to employment. Lot sizes would be smaller to accommodate densities increasing from 1990 levels of about 11 people per acre to about 14 per acre. Inner neighborhoods would trade smaller lot sizes for better access to jobs and shopping. They would accommodate about 28 percent of new households and 15 percent of new employment (some of the employment would be home occupations and the balance would be neighborhood-based employment such as schools, daycare and some neighborhood businesses).

Outer neighborhoods would be farther away from large employment centers and would have larger lot sizes and lower densities. Examples include cities such as Forest Grove, Sherwood and Oregon City, and any additions to the UGB. From 1990 levels of nearly 10 people per acre, outer neighborhoods would increase to about 13 per acre. These areas would accommodate about 28 percent of new households and 10 percent of new employment.

One of the most significant problems in some newer neighborhoods is the lack of street connections, a recent phenomenon that has occurred in the last 25 years. It is one of the primary causes of increased congestion in new communities. Traditional neighborhoods contained a grid pattern with up to 20 through streets per mile. But in new areas, one to two through streets per mile is the norm. Combined with large-scale single-use zoning and low densities, it is the major cause of increasing auto dependency in neighborhoods. To improve local connectivity throughout the region, all areas shall develop master street plans intended to improve access for all modes of travel. These plans shall include eight to 20 local street connections per mile, except in cases where fewer connections are necessitated by constraints such as natural or constructed features (for example streams, wetlands, steep slopes, freeways, airports, etc.)

Industrial Areas and Employment Areas

The Portland metropolitan area economy is heavily dependent upon wholesale trade and the flow of commodities to national and international markets. The high quality of our freight transportation system and, in particular, our intermodal freight facilities are essential to continued growth in trade. The intermodal facilities (air and marine terminals, freight rail yards and

common carrier truck terminals) are an area of regional concern, and the Regional Framework Plan will identify and protect lands needed to meet their current and projected space requirements.

Industrial areas would be set aside primarily for industrial activities. Other supporting uses, including some retail uses, may be allowed if limited to sizes and locations intended to serve the primary industrial uses. They include land-intensive employers, such as those around the Portland International Airport, the Hillsboro Airport and some areas along Highway 212/224. Areas of high agglomerative economic potential, such as the Sunset Corridor for electronics products and the Northwest industrial sanctuary for metal products, shall be supported with transportation planning and infrastructure development designed to meet their needs. Industrial areas are expected to accommodate 10 percent of regional employment and no households. Retail uses whose market area is substantially larger than the employment area shall not be considered supporting uses.

Other employment centers would be designated as employment areas, mixing various types of employment and including some residential development as well. These employment areas would provide for about 5 percent of new households and 14 percent of new employment within the region. Densities would rise substantially from 1990 levels of about 11 people per acre to about 20 people per acre. Employment areas would be expected to include some limited retail commercial uses primarily to serve the needs of people working or living in the immediate employment areas, not larger market areas outside the employment area. Exceptions to this general policy can be made only for certain areas, indicated in a functional plan.

The siting and development of new industrial areas would consider the proximity of housing for all income ranges provided by employment in the projected industrial center, as well as accessibility to convenient and inexpensive non-auto transportation. The continued development of existing industrial areas would include attention to these two issues as well.

Urban Reserves

One important feature of the Growth Concept is that it would accommodate all 50 years of forecasted growth through a relatively small amount of urban reserves. Urban reserves consist of land set aside outside the present UGB for future growth. The Growth Concept contained approximately 22,000 acres of urban reserve study areas. Less than the full study area, about 18,600 acres was designated as urban reserve areas in March, 1997. More than 75 percent of these lands are currently zoned for rural housing and the remainder are zoned for farm or forestry uses.

Transportation Facilities

Adoption of the 2040 Growth Concept established a new direction for planning in the region by linking urban form to transportation. This new direction reflects a commitment to develop a regional plan that is based on efficient use of land and a safe, efficient and cost-effective transportation system that supports the land uses in the 2040 Growth Concept and accommodates all forms of travel.

In this new relationship, the 2040 Growth Concept provides the desired urban form for the Regional Transportation Plan to support. The 2040 Growth Concept Map identifies one possible regional transportation system. Therefore, the 2040 Growth Concept Map does not prescribe or limit what the adopted regional transportation system will include.

The transportation elements needed to create a successful growth management policy are those that support the 2040 Growth Concept. Traditionally, streets have been defined by their traffic-carrying potential, and transit service according to its ability to draw commuters. Other travel modes have not been viewed as important elements of the transportation system. The Growth Concept establishes a new framework for planning in the region by linking urban form to transportation. In this new relationship, transportation is viewed as a range of travel modes and options that reinforce the region's growth management goals.

In the 2040 Growth Concept, transportation is viewed as a range of travel modes and options that reinforce the region's growth management goals. To implement this vision, the Regional Transportation Plan will define the regional transportation system and prioritize planned transportation improvements to support the 2040 Growth Concept design types and to serve the region's current and future travel needs.

Consistent with the 2040 Growth Concept, the Regional Transportation Plan shall define a regional transportation system integrating intermodal facilities, truck routes, regional through-routes, multi-modal arterials, collectors and local streets, light rail, bus networks and other public transportation, bicycle and pedestrian networks and transportation demand management.

For example, the Regional Transportation Plan will target areas of concentrated development, such as the central city and regional centers such as Gresham and Beaverton, to provide a balance of high quality transit, pedestrian and bicycle projects that complement needed auto and freight improvements. In station communities, town centers, main streets and along mixed-use corridors, the Regional Transportation Plan will emphasize a high quality bicycle and pedestrian environment and improved access to transit, but will also allow for auto access. Industrial areas

need good auto, truck and rail access for freight movement, while allowing employees and customers to commute by auto, transit and, in some instances, bicycles. Improvements within these areas will be largely oriented toward accommodating these needs and improved access to intermodal facilities.

Chapter 2 of this Regional Framework Plan describes the different 2040 Growth Concept land use components and associated transportation policies as defined during the Region 2040 process. Implementation of these transportation policies will occur through the Regional Transportation Plan and the Metro Transportation Improvement Program (MTIP).

Land Use

Chapter 1 Land Use

Overview

This chapter of the Framework Plan addresses regional land use policies, including those relating to the following Charter-mandated Regional Framework Plan components:

- management and amendment of the Urban Growth Boundary
- protection of lands outside the Urban Growth Boundary for natural resources, future urban or other uses
- housing densities
- urban design and settlement patterns

This chapter contains specific goals and objectives adopted to guide Metro in future growth management land use planning. Following the goals and objectives, this chapter refers to specific legal requirements for cities and counties as well as for Metro that are adopted in Chapter 8. These provisions are implemented in the acknowledged Metro Code section governing Urban Growth Boundary Amendments and in the adopted Urban Growth Management Functional Plan.

The Metro Code provisions, Urban Growth Management Functional Plan, and a background discussion and policy analysis for this chapter are all included in the Appendices of this Plan.

Policies (Goals and Objectives)

Following are Regional Framework Plan policies for land use:

1.1 Urban Form

The quality of life and the urban form of our region are closely linked. The Growth Concept is based on the belief that we can continue to grow and enhance livability by making the right choices for how we grow. The region's growth will be balanced by:

- maintaining a compact urban form, with easy access to nature
- preserving existing stable and distinct neighborhoods by focusing commercial and residential growth in mixed-use centers and corridors at a pedestrian scale

- assuring affordability and maintaining a variety of housing choices with good access to jobs and assuring that market-based preferences are not eliminated by regulation
- targeting public investments to reinforce a compact urban form.

1.2 Built Environment

Development in the region should occur in a coordinated and balanced fashion as evidenced by:

- a regional "fair-share" approach to meeting the housing needs of the urban population
- the provision of infrastructure and critical public services concurrent with the pace of urban growth and that supports the 2040 Growth Concept
- the continued growth of regional economic opportunity, balanced so as to provide an equitable distribution of jobs, income, investment and tax capacity throughout the region and to support other regional goals and objectives
- the coordination of public investment with local comprehensive and regional functional plans
- the creation of a balanced transportation system, less dependent on the private automobile, supported by both the use of emerging technology and the location of jobs, housing, commercial activity, parks and open space.

1.3 Housing and Affordable Housing

The Metro Council shall adopt a "fair share" strategy for meeting the housing needs of the urban population in cities and counties based on a subregional analysis that provides for:

- a diverse range of housing types available within cities and counties inside the UGB;
- specific goals for low- and moderate-income and market rate housing to ensure that sufficient and affordable housing is available to households of all income levels that live or have a member working in each jurisdiction;
- housing densities and costs supportive of adopted public policy for the development of the regional transportation system and designated centers and corridors;
- a balance of jobs and housing within the region and subregions.

Metro shall, through the adoption of a functional plan, require that

- before a Goal 10 exception or an exception to a functional plan requirement affecting housing is pursued by a city or county, the effect of the grant of the exception on the need for expansion of the Urban Growth Boundary shall be considered.

The regional "fair share" strategy shall be subject to all of the following policies:

1.3.1 Metro shall link regional transportation funding to affordable housing policy and achievement of affordable housing targets to the extent allowed by law.

1.3.2 Metro shall provide the forum of an Affordable Housing Technical Advisory Committee with representatives of homebuilders, affordable housing advocate groups, major employers, financial institutions, local governments and citizens to identify cooperative approaches, regulatory reforms and incentives to be considered for inclusion in a functional plan to ensure that needed affordable housing gets built.

1.3.3 Numerical "fair share" affordable housing targets for each jurisdiction shall be included in a functional plan performance standard. With assistance from the Affordable Housing Technical Advisory Committee, the "fair share" targets will reflect the current and future affordable housing needs of the region, and are consistent with the affordable housing and jobs-housing balance policies established in this Plan.. The housing needs and the numerical targets will include consideration of existing jurisdictional proportions of affordable and non-affordable housing supply. Metro shall monitor the existing and new supply and delivery of affordable housing in the region as part of the "fair share" performance standard.

1.3.4 The 1996 Urban Growth Management Functional Plan shall be amended, if necessary, to include performance standards and other requirements for the following regionwide affordable housing policies:

1.3.4.1 A minimum density shall be established in all zones allowing residential uses.

1.3.4.2 At least one accessory unit shall be allowed within any detached single family dwelling.

1.3.4.3 Housing densities shall be increased in light rail station communities, centers and corridors, if necessary, to implement the 2040 Growth Concept.

1.3.4.4 A performance standard requiring a density bonus incentive shall be adopted. This incentive shall allow an increase of at least 25% density over the maximum allowable density in mixed use areas as incentive for a percentage of units to be developed as affordable units. The units qualifying for the incentive shall remain affordable for at least 60 years or be subject to a shared equity mortgage program. An exemption process shall be adopted with this performance standard to allow cities and counties an exemption from this requirement if a demonstrated lack of public facilities prevents implementation of this requirement.

1.3.5 An Affordable Housing Functional Plan shall be developed to include requirements for cities and counties to adopt numerical "fair share" targets and any unadopted affordable housing policies required by the Plan.

1.3.5.1 A performance standard requiring replacement ordinances shall be adopted. These ordinances shall ensure that existing affordable housing units which are lost to demolition or non-residential development are replaced with an equal number of new affordable housing units. Metro shall develop a model ordinance for cities and counties which complies with this performance standard.

1.3.5.2 The Functional Plan shall consider the following:

- additional measures to encourage and give incentives to develop affordable housing;
- types and amounts of affordable housing to be accommodated by the jurisdiction consistent with the functional plan targets;
- provisions to remove procedural barriers to current production of affordable housing;
- a variety of tools to ensure that the affordable housing to be accommodated is actually built, such as additional inclusionary zoning incentives, donation of tax foreclosed properties for nonprofit or government development as mixed market affordable housing, transfer of development rights, permit process incentives, fee waivers, property tax exemptions, land banking, linkage programs, expedited review processes, and affordable housing funding programs.
- requirements for maintaining architectural consistency of affordable units;
- long term or permanent affordability requirements;
- provision for affordable housing for seniors and the disabled;
- provision for preferential processing of UGB amendments in First Tier urban reserves when a minimum percentage of affordable units are included.
- support for a real estate transfer tax as a funding source for an affordable housing fund at the state, regional or local level when that option becomes available under state law.

1.3.6 Regionwide mandatory inclusionary zoning, which requires a minimum percentage of moderately-priced dwelling units for all developments over a minimum size, is an important tool of regional affordable housing policy to be used with density bonuses and other incentives.

Metro shall seek immediate increases in production of affordable housing by implementing all of its regional affordable housing policies in this section. Efforts to

immediately increase production of affordable housing shall include the following inclusionary housing policy:

1.3.6.1 The goals of this inclusionary housing policy are that at least 20% of new units in regionwide opportunity areas inside the UGB and in first tier urban reserves are built to be affordable to households at and below the median income without public subsidy and that accessory dwelling units begin to be a significant part of new development in 1998.

1.3.6.2 The urban reserve planning requirement for affordable housing shall include the establishment of requirements for a minimum percentage of affordable units and accessory dwellings. These requirements shall be developed with assistance from the Affordable Housing Technical Advisory Committee.

1.3.6.3 Metro shall develop performance standards and a model ordinance for a density bonus incentive consistent with Policy 1.3.4.5, above.

1.3.6.4 In 1998, Metro will develop a voluntary inclusionary zoning approach consistent with Oregon land use laws and 2040 Growth Concept design types that includes neighborhood architectural consistency.

1.3.6.5 During development of its voluntary inclusionary zoning approach, Metro will use inclusionary housing goals and principles as the basis of a voluntary program for increased production of affordable housing units without regulation.

1.3.6.6 Metro will develop a public-private program as soon as possible to reduce costs of production of new affordable housing and increase the supply of units to non-profit providers for possible subsidy. One part of such a program may be coordination between for profit builders and non profit affordable housing providers to facilitate sales of affordable for profit units to non profit affordable housing providers during the development of these units.

1.3.6.7 Regionwide mandatory inclusionary zoning and other functional plan requirements based on the zoning approach developed by Metro shall be considered for functional plan implementation at the end of 1998, if cooperative programs have not significantly moved the region toward the goals of this policy.

1.3.7 Metro shall inventory publicly owned lands, including the "air rights" above public lands, to identify underutilized public lands, excluding parks and open space, for possible development of affordable housing.

1.3.8 Metro shall be a resource to assist developers of affordable housing and nonprofit charitable organizations to identify underutilized lands owned by nonprofit organizations, including the "air rights" above those lands, for possible development of affordable housing.

1.3.9 Metro shall review all lands designated for residential use inside the UGB in implementation of Urban Growth Management Functional Plan to determine whether additional measures are needed to insure that an adequate supply of land, including opportunities for redevelopment, are zoned appropriately and available for affordable housing.

1.4 Economic Opportunity

Metro should support public policy that maintains a strong economic climate through encouraging the development of a diverse and sufficient supply of jobs, especially family wage jobs, in appropriate locations throughout the region.

In weighing and balancing various values, goals and objectives, the values, needs, choices and desires of consumers should also be taken into account. The values, needs and desires of consumers include:

- low costs for goods and services
- convenience, including nearby and easily accessible stores; quick, safe, and readily available transportation to all modes
- a wide and deep selection of goods and services
- quality service
- safety and security
- comfort, enjoyment and entertainment.

Expansions of the UGB for industrial or commercial purposes shall occur in locations consistent with this plan and where an assessment of the type, mix and wages of existing and anticipated jobs within subregions justifies such expansion. The number and wage level of jobs within each subregion should be balanced with housing cost and availability within that subregion. Strategies should be developed to coordinate the planning and implementation activities of this element with Policy 1.3, Housing and Policy 1.8, Developed Urban Land.

1.5 Economic Vitality

The region's economy is a single dynamic system including the urbanized part of the Portland area and lands beyond the Urban Growth Boundary. The economic welfare of residents throughout the region directly impacts the ability of all citizens in the region to create economic vitality for themselves and their communities.

The region's economic development must include all parts of the region, including areas and neighborhoods which have been experiencing increasing poverty and social needs, even during periods of a booming regional economy. To allow the kinds of social and economic decay in older suburbs and the central city that has occurred in other larger and older metro regions is a threat to our quality of life and the health of the regional economy. All neighborhoods and all people should have access to opportunity and share the benefits, as well as the burdens, of economic and population growth in the region.

To support economic vitality throughout the entire region, Metro shall undertake the following steps, beginning in 1998:

- Monitor regional and subregional indicators of economic vitality, such as the balance of jobs, job compensation and housing availability.

- If Metro's monitoring finds that existing efforts to promote and support economic vitality in all parts of the region are inadequate, Metro shall facilitate collaborative regional approaches which better support economic vitality for all parts of the region.

In cooperation with local governments and community residents, Metro shall promote revitalization of existing city and neighbor hood centers that have experienced disinvestment and/or are currently underutilized and/or populated by a disproportionately high percentage of people living at or below 80% of the region's median income.

1.6 Growth Management

The management of the urban land supply shall occur in a manner that:

- encourages the evolution of an efficient urban growth form
- provides a clear distinction between urban and rural lands
- supports interconnected but distinct communities in the urban region
- recognizes the inter-relationship between development of vacant land and redevelopment objectives in all parts of the urban region
- is consistent with the 2040 Growth Concept and helps attain the region's objectives.

1.7 Urban/Rural Transition

There should be a clear transition between urban and rural land that makes best use of natural and built landscape features and that recognizes the likely long-term prospects for regional urban growth.

- Boundary Features – The Metro UGB should be located using natural and built features, including roads, rivers, creeks, streams, drainage basin boundaries, floodplains, power lines, major topographic features and historic patterns of land use or settlement.
- Sense of Place – Historic, cultural, topographic and biological features of the regional landscape that contribute significantly to this region's identity and "sense of place" shall be identified. Management of the total urban land supply should occur in a manner that supports the preservation of those features, when designated, as growth occurs.
- Urban Reserves – "Urban reserve areas," shall be designated by Metro consistent with state law. Urban reserve designations shall be consistent with the Regional Framework Plan policies and shall be reviewed by Metro at least every 15 years.
    - The priority for inclusion of land within an urban reserve area shall generally be based upon the locational factors of Goal 14. Lands adjacent to the UGB shall be studied for suitability for inclusion within urban reserves as measured by factors 3 through 7 of Goal 14 and by the requirements of OAR 660-04-010. (Copies of Goal 14 and OAR 660-04010 are included in the Appendices for informational purposes.)
    - Lands of lower priority in the LCDC rule priorities may be included in urban reserves if specific types of land needs cannot be reasonably accommodated on higher priority lands, after options inside the UGB have been considered, such as land needed to bring jobs and housing into close proximity to each other.
    - Lands of lower priority in the LCDC rule priorities may be included in urban reserves if higher priority land is needed for physical separation of communities inside or outside the UGB to preserve separate community identities.
    - Expansion of the UGB shall occur consistent with the urban/rural transition, developed urban land, UGB and neighbor city objectives. Where urban land is adjacent to rural lands outside of an urban reserve, Metro will work with affected cities and counties to ensure that urban uses do not significantly affect the use or condition of the rural land. Where urban land is adjacent to lands within an urban reserve that may someday be included within the UGB, Metro will work with affected cities and counties to ensure that rural development does not create obstacles to efficient urbanization in the future.

1.8 Developed Urban Land

Opportunities for and obstacles to the continued development and redevelopment of existing urban land shall be identified and actively addressed. A combination of regulations and incentives shall be employed to ensure that the prospect of living, working and doing business in those locations remains attractive to a wide range of households and employers. In coordination with affected agencies, Metro should encourage the redevelopment and reuse of lands used in the

past or already used for commercial or industrial purposes wherever economically viable and environmentally sound.

Redevelopment and Infill – When Metro examines whether additional urban land is needed within the UGB, it shall assess redevelopment and infill potential in the region. The potential for redevelopment and infill on existing urban land will be included as an element when calculating the buildable land supply in the region, where it can be demonstrated that the infill and redevelopment can be reasonably expected to occur during the next 20 years.

Metro will work with jurisdictions in the region to determine the extent to which redevelopment and infill can be relied on to meet the identified need for additional urban land. After this analysis and review, Metro will initiate an amendment of the UGB to meet that portion of the identified need for land not met through commitments for redevelopment and infill.

1.9 Urban Growth Boundary

The regional UGB, a long-term planning tool, shall separate urbanizable from rural land and be based in aggregate on the region's 20-year projected need for urban land. The UGB shall be located consistent with statewide planning goals and these RUGGOs and adopted Metro Council procedures for UGB amendment. In the location, amendment and management of the regional UGB, Metro shall seek to improve the functional value of the boundary.

1.9.1 Expansion into Urban Reserves – Upon demonstrating a need for additional urban land, major and legislative UGB amendments shall only occur within adopted urban reserves, unless urban reserves are found to be inadequate to accommodate the amount of land needed for one or more of the following reasons:

- Specific types of identified land needs cannot be reasonably accommodated on urban reserve lands
- Future urban services could not reasonably be provided to urban reserves due to topographical or other physical constraints
- Maximum efficiency of land uses within a proposed UGB requires inclusion of lower priority lands other than urban reserves in order to include or provide services to urban reserves.

1.9.2 First Tier Urban Reserves – Some urban reserves adjacent to the UGB shall be designated as first tier urban reserves. First tier urban reserves shall be included in the Metro Urban Growth Boundary prior to other urban reserves unless a special land need is identified which cannot be reasonably accommodated on first tier urban reserves.

1.9.3 Urban Growth Boundary Amendment Process – Criteria for amending the UGB shall be adopted based on statewide planning goals 2 and 14, other applicable state planning goals and relevant portions of the RUGGOs and this Plan:

- Major Amendments. Proposals for major amendment of the UGB may be made through a quasi-judicial or a legislative process using Metro's regional forecasts for population and employment growth. The legislative amendment process will be initiated by a Metro finding of need, and involve local governments, special districts, citizens and other interests.
- Locational Adjustments. Locational adjustments of the UGB shall be brought to Metro by cities, counties and/or property owners based on public facility plans in adopted and acknowledged comprehensive plans.

1.9.4 Urban Reserve Plans – A conceptual land use plan and concept map coordinated among affected jurisdictions shall be required for all quasi-judicial and legislative amendments of the Urban Growth Boundary which add more than twenty net acres to the UGB. The Metro Council shall establish criteria for urban reserve plans coordinated among affected local governments and districts which shall address the following issues:

- Annexation to a city prior to development whenever feasible.
- Establishment of a minimum average residential density to ensure efficient use of land.
- Requirements to ensure a diversity of housing stock and meet needs for affordable housing.
- Ensure sufficient commercial and industrial land to meet the needs of the area to be developed and the needs of adjacent land inside the Urban Growth Boundary consistent with 2040 Growth Concept design types.
- A conceptual transportation plan to identify large scale problems and establish performance standards for city and county comprehensive plans.
- Identification of natural resource areas for protection from development.
- A conceptual public facilities and services plan including rough cost estimates and a financing strategy for the provision of sewer, water, storm drainage, parks, transportation, fire and police protection.
- A conceptual plan estimating the amount of land and improvements needed for school facilities.
- A concept map showing the general locations of major roadways, unbuildable lands, commercial and industrial lands, single and multi-family housing, open space and established or alternative locations for any needed school, park and fire hall sites.

The actual specific criteria will be adopted as part of the Metro Code.

1.10 Urban Design

The identity and functioning of communities in the region shall be supported through:

- the recognition and protection of critical open space features in the region
- public policies that encourage diversity and excellence in the design and development of settlement patterns, landscapes and structures
- ensuring that incentives and regulations guiding the development and redevelopment of the urban area promote a settlement pattern that:
    - link any public incentives to a commensurate public benefit received or expected and evidence of private needs
    - is pedestrian "friendly," encourages transit use and reduces auto dependence
    - provides access to neighborhood and community parks, trails and walkways, and other recreation and cultural areas and public facilities
    - reinforces nodal, mixed-use, neighborhood-oriented design
    - includes concentrated, high-density, mixed-use urban centers developed in relation to the region's transit system
    - is responsive to needs for privacy, community, sense of place and personal safety in an urban setting
    - facilitates the development and preservation of affordable mixed-income neighborhoods.

Pedestrian- and transit-supportive building patterns will be encouraged in order to minimize the need for auto trips and to create a development pattern conducive to face-to-face community interaction.

1.11 Neighbor Cities

Growth in cities outside the Metro UGB, occurring in conjunction with the overall population and employment growth in the region, should be coordinated with Metro's growth management activities through cooperative agreements which provide for:

Separation – The communities within the Metro UGB, in neighbor cities and in the rural areas in between will all benefit from maintaining the separation between these places as growth occurs. Coordination between neighboring cities, counties and Metro about the location of rural reserves and policies to maintain separation should be pursued.

Jobs Housing Balance – To minimize the generation of new automobile trips, a balance of sufficient number of jobs at wages consistent with housing prices in communities both within the Metro UGB and in neighboring cities should be pursued.

Green Corridors – The "green corridor" is a transportation facility through a rural reserve that serves as a link between the metropolitan area and a neighbor city which also limits access to the farms and forests of the rural reserve. The intent is to keep urban to urban accessibility high to encourage a balance of jobs and housing, but limit any adverse effect on the surrounding rural areas.

1.12 Protection of Agriculture and Forest Resource Lands

Agricultural and forest resource land outside the UGB shall be protected from urbanization, and accounted for in regional economic and development plans, consistent with this Plan. However, Metro recognizes that all the statewide goals, including Statewide Goal 10, Housing and Goal 14, Urbanization, are of equal importance to Goals 3 and 4 which protect agriculture and forest resource lands. These goals represent competing and, some times, conflicting policy interests which need to be balanced.

Rural Resource Lands – Rural resource lands outside the UGB that have significant resource value should actively be protected from urbanization. However, not all land zoned for exclusive farm use is of equal agricultural value.

Urban Expansion – Expansion of the UGB shall occur in urban reserves, established consistent with the urban rural transition objective. All urban reserves should be planned for future urbanization even if they contain resource lands.

Farm and Forest Practices – Protect and support the ability for farm and forest practices to continue. The designation and management of rural reserves by the Metro Council may help establish this support, consistent with the Growth Concept. Agriculture and forestry require long term certainty of protection from adverse impacts of urbanization in order to promote needed investments.

1.13 Participation of Citizens

The following policies relate to participation of Citizens:

1.13.1 Metro will encourage public participation in Metro land use planning.

1.13.2 Metro will follow and promote the citizen participation values inherent in RUGGO Goal 1, Objective 1 and the Metro Citizen Involvement Principles.

1.13.3 Local governments are encouraged to provide opportunities for public involvement in land use planning and delivery of recreational facilities and services.

1.14 School Siting

1.14.1 School and Local Government Plan and Policy Coordination – Metro shall coordinate plans among local governments, including cities, counties, special districts and school districts for adequate school facilities for already developed and urbanizing areas.

1.14.2 Metro Review of Public Facility Plans to Include Schools – Metro, in its review of city and county comprehensive plans for compliance with the Regional Framework Plan, shall consider school facilities to be "public facilities." School facility plans are required to be developed through the Urban Reserve Plans as specified by Metro Code 3.01.012(e)(11). Additions to the Urban Growth Boundary may only be approved by Metro following completion of conceptual school plans which provide for adequate land for school facilities in addition to other requirements.

1.14.3 Resolution of School Facility Funding in the Region – Metro will use the appropriate means, including, but not limited to, public forums, open houses, symposiums, dialogues with state and local government officials, school district representatives, and the general public in order to identify funding sources necessary to acquire future school sites and commensurate capital construction to accommodate anticipated growth in school populations.

1.14.4 Functional Plan –A school siting and facilities functional plan shall be prepared with the advice of MPAC to implement the policies of this Plan. Chapter 8, Implementation, lists the issues to be considered in the development of the functional plan.

Requirements

In order to immediately implement the land use portion of the Regional Framework Plan, Metro has adopted Metro Code Chapter 3.01, Urban Growth Boundary Amendments and Urban Growth Management Functional Plan. These documents are incorporated as components of the Regional Framework Plan in Chapter 8 and are included in the Appendices. The Urban Growth Management Functional Plan contains requirements for cities and counties. Any additional land use planning requirements for cities and counties adopted by Metro should be incorporated into the Urban Growth Management Functional Plan structure.

Background

Future Vision

As noted above, the Future Vision statement is the broadest set of declarations about our region. The Regional Framework Plan is required to describe its relationship to the Future Vision. With regard to land-use, the Future Vision notes many values including the following:

> "We value natural systems for their intrinsic value, and recognize our responsibility to be stewards of the region's natural resources."
>
> "Widespread land restoration and redevelopment must precede any conversion of land to urban uses to meet our present and future needs."
>
> "We value economic development because of the opportunities it affords us all, but recognize that there can be true economic development only with unimpaired and sustainable natural ecosystems, and suitable social mechanisms to ensure dignity and equity for all and compassion for those in need."
>
> "We value our regional identity, sense of place and unique reputation among metropolitan areas, and celebrate the identity and accomplishments of our urban neighborhoods and suburban and rural communities."
>
> "We value a life close to the beauty and inspiration of nature, incorporated into urban development in a manner that remains a model for metropolitan areas into the next century."
>
> "We value vibrant cites that are both an inspiration and a crucial resource for commerce, cultural activities, politics and community building."
>
> "Direct all regional planning efforts to include equitable economic progress for communities throughout the region as a critical component for modeling and evaluation."
>
> "Address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout...the region in the Regional Framework Plan elements for transportation, rural lands, urban design, housing and water resources."
>
> "Focus public policy and investment on the creation of mixed-use communities that include dedicated public space and a broad-range of housing types affordable to all."
>
> "Incorporate specific expectations for a basic standard of living for all citizens in Regional Framework Plan elements concerned with urban design, housing, transportation, and parks and open space."
>
> "Specifically incorporate historic preservation and landscape ecology in Regional Framework Plan elements concerned with transportation, housing, urban design, rural lands and the UGB, parks and open space, and bi-state governance."

Regional Framework Plan relationships to these statements will be described in the discussion following.

Urban Growth Boundary

State law assigns Metro responsibility for managing the region's Urban Growth Boundary, one tool for managing growth, which separates urbanizable land from rural land. The boundary was established in 1979 and included 24 cities (Beaverton, Cornelius, Durham, Fairview, Forest Grove, Gladstone, Gresham, Happy Valley, Hillsboro, Johnson City, King City, Lake Oswego, Maywood Park, Milwaukie, Oregon City, Portland, Rivergrove, Sherwood, Tigard, Troutdale, Tualatin, West Linn, Wilsonville and Wood Village) and the urban metropolitan portions of Clackamas, Multnomah and Washington counties. The UGB has been reevaluated about every five to seven years to assess whether capacity for the next 20 years is available. Since the UGB's inception, fewer than 3,000 acres of land have been added. As of the first quarter of 1997, the UGB contained 232,667 acres. Expansion of the UGB from 1978-1997 was only a little more than 1.2 percent increase. In 1997, the Metro Council concluded that there was not a 20 year land supply and that additional lands would need to be added to the Metro Urban Growth Boundary.

Approximately every five years, Metro revisits the region's urban land needs for the next 20 years and estimates the growth capacity within the UGB. A state law now requires Metro to demonstrate that there is a sufficient 20-year future capacity, which, if previous forecasts were not higher than actual growth, must be remedied by more efficiently using the land within the current UGB or by expanding it.

Urban Reserves

The Oregon Land Conservation and Development Commission (LCDC) mandated that Metro designate urban reserves adjacent to the Urban Growth Boundary as a means of managing long-term regional growth. Designating urban reserves allows communities and the region to more cost-effectively plan and phase in public infrastructure (sewer, water, streets, schools, etc.) and enables private interests to plan development with more certainty. Careful development of urban reserves also may allow communities to plan more livable communities and conserve natural resources.

LCDC's Urban Reserve Area Rule (especially Goal 14, Factors 3 – 7) and the requirements of OAR 660-04-010 are the basis for considering urban reserves.

Compiling the state criteria and using data available or created to address state criteria, the region's selection criteria for urban reserves include:

Factor 3: utility feasibility, road network, traffic congestion and schools

Factor 4: efficiency of land and buildable land

Factor 5: environmental constraints, access to centers, jobs/housing balance

Factor 6: agricultural retention

Factor 7: agricultural compatibility

Metro designated urban reserve areas in March, 1997, to meet projected urban land needs to the year 2040. Counties are required by the Urban Reserve Area Rule to adopt rural zoning to preserve designated urban reserves for future urban use.

As the Metro Council considered possible urban reserve areas, they concluded that establishing priorities for bringing in urban reserve lands would be helpful to property owners, service providers and citizens. Accordingly, the Metro Council, with the advice of local jurisdictions, established "First Tier" lands within the urban reserves. These First Tier lands are those thought to be most easily served with urban services and for which adjacent cities or the county have indicated capacity to serve. About 4,100 acres of land are designated as First Tier of the 18,579 total acres designated as Urban Reserves. The designation establishes, as a formal Metro policy, which lands would be brought in first. The Metro Council is expected to move the Urban Growth Boundary into the Tier 1 lands consistent with its decision in 1997 that there was not a 20 year land supply.

Housing

The state's Metropolitan Housing Rule (OAR 660, Division 7) requires local jurisdictions to "plan for local residential housing densities that support net residential housing density assumptions underlying the Urban Growth Boundary."

In addition, ORS 197.303 states that cities' and counties' needed housing means "...housing types determined to meet the need shown for housing within an Urban Growth Boundary at particular price ranges and rent levels. "It also "...includes, but is not limited to attached and detached single-family housing and multiple family housing for both owner and renter occupancy; (b) government assisted housing; (c) mobile home or manufactured dwelling parks... (d) manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions."

In addition to these requirements, the state requires that cities and the urban portions of counties in the region must "....provide the opportunity for at least 50 percent of new residential units to be attached single family or multiple family housing..." and provide an "...overall density of six, ...eight...or ten or more dwelling units per net buildable acre..." Relatively small cities with some growth potential of less than 8,000 persons for the active planning area were required to

provide zoning for at least six dwelling units. This applied to the cities of Cornelius, Durham, Fairview, Happy Valley and Sherwood. The urban portions of Clackamas and Washington counties and the cities of Forest Grove, Gladstone, Milwaukie, Oregon City, Troutdale, Tualatin, West Linn and Wilsonville were to provide at least eight dwelling units per acre. The urban portion of Multnomah county and the cities of Portland, Gresham, Beaverton, Hillsboro, Lake Oswego and Tigard were to provide 10 dwelling units per acre.

Analysis

The Urban Growth Boundary is one of the primary tools available to the region for managing urban form. In turn, the capacity of the boundary to accommodate growth is of critical importance to managing the UGB. Assessment of the current UGB capacity includes analysis of nine variables. These are:

- a forecast of population and jobs for the next 20 year period
- an estimate of the amount of unbuildable land (land over 25 percent slope, etc.);
- reductions to remaining buildable land for streets, parks, etc.
- reductions for the probable difference between zoning maximum densities and actual built densities
- consideration of time to allow local jurisdictions to make zoning changes if higher densities are to be allowed and required
- reductions for buildable parcels with full buildout obstacles (e.g., land with 8-24 percent slopes, etc)
- an estimate of the probable amount of additional redevelopment
- projections of probable infill on built land
- evaluation of the amount of farm tax assessment lands within the current UGB that are likely to be urbanized.

The Metro Council has concluded that capacity for the additional dwelling units needed to accommodate the year 2017 forecasted need is not totally available within the current Urban Growth Boundary. The following table provides a step-by-step description of the process, assumption and initial conclusions about the current capacity of the region's Urban Growth Boundary.

It is important to note that the variables include several new factors never before measured or considered when the capacity of the UGB was calculated. These include assessing the amount of infill and redevelopment capacity within the current UGB and assuming implementation of the 2040 Growth Concept. Estimating infill and redevelopment potential increased the total

estimated potential capacity of the UGB significantly. About 40 percent of the jobs and almost 30 percent of the demand for housing is estimated to be accommodated through infill and redevelopment. These forecasts are based on actual rates occurring now in the region. This responds to statements in the Future Vision about land restoration and redevelopment as well as recognizing what is actually happening in the market.

Assuming that the Growth Concept will be implemented in UGB capacity calculations also responds to issues raised in the Future Vision. The Growth Concept includes "mixed-use communities" and a "broad range of housing types" by including regional centers, town centers, main streets, station communities and employment areas. These are all design types which encourage mixed-use development. The Growth Concept also is designed to protect existing neighborhoods by directing the higher density development to these mixed-use areas where transit service is most frequent. Assuming that this zoning will be applied and that the market will respond remains a supposition based on the requirements of Metro's Urban Growth Management Functional Plan. However, recent data concerning the past few years indicates that job growth is more than 100 percent of the Growth Concept goal and that residential growth is up to 83 percent of goal. Activity in the next few years will provide verification of these trends and will demonstrate the extent that the Growth Concept is achievable.

Table 1.1 Calculation of Current Urban Growth Boundary Capacity

	Dwelling Units	*Employment*
Demand Calculations:		
1994 History	633,600	956,000
2017 Regional Forecast	990,500	1,536,500
Regional Need (1994 – 2017)	356,900	580,500
UGB Need (1994 – 2017)	**249,800**	**476,000**
	(70% of Region)	(82% of Region)
Supply Calculations:		
Metro UGB Supply Capacity (net buildable vacant land today)	22,420	22,420
Capacity using 2040 Growth Concept densities	175,430	291,870
- Underbuild	(36,850)	(22,330)
- Ramp-up (1994 to 1999)	(6,430)	(2,650)
+ Net Redevelopment	46,990	162,510
+ Infill and Absorption	24,200	43,700
+ Platted Lots not counted as vacant	10,900	0
+ Development rights on "unbuildable land"	3,190	0
UGB Capacity	**217,430**	**473,100**
Result:	**(32,370)**	**(2,900)**
	(deficit)	(deficit)

Housing

Table 1.1 included estimates of needed urban housing for the region to the year 2017. In order to ensure that housing choice is provided, more detailed data about housing needs of the region are necessary.

Table 1.2 is from the Housing Needs Analysis, describing the region's housing needs to the year 2017.

Table 1.2 Regional Housing Need 1994 - 2017 - Based on the Metro 2040 Growth Concept (Urban Metro Area Only - Includes Vacancy Rate)

Monthly Rental Cost	Approximate Equivalent Ownership Price	Number of New Housing Units Needed[1]	Housing Type Distribution					
			Detached Homes		Attached Homes			
			Detached Single Family & Manufactured Homes on Individual Lots	Detached Small Lot Single Family & Mobile Homes and Manufactured Housing in Parks	Attached Single Family & Rowhouses	Multiple Family Low Rise	Multiple Family Mid Rise	Multiple Family High Rise
0-299	< 49,999	2,381	n/a[2]	n/a	n/a	A,R	A,R	A,R
300-399	50-59,999	10,340	n/a	n/a	n/a	A,R	A,R	A,R
400-499	60-74,999	25,859	n/a	n/a	A,R	A,R	A,R	A,R
500-599	75-89,999	32,993	O[3]	O	A,R	A,O,R	A,O,R	A,O,R
600-749	90-114,999	38,823	O	O	O,R	O,R	O,R	O,R
750-999	115-149,999	51,823	O	O	O,R	O,R	O,R	O,R
1,000-1,165	150-174,999	39,082	O	O	O,R	O,R	O,R	O,R
1,166-1,330	175-199,999	12,693	O	O	O,R	O,R	O,R	O,R
1,331+	200,000 +	35,806	O	O	O,R	O,R	O,R	O,R
Total Units[4]:		249,800[5]	SF Units Range: 105,077 - 137,993[6]		Rowhouse Units:20,787-53,732	Multi-Family Units: 86, -97,526		
Single Family/Rowhouse/Multi-Family Split[7]: 42/19/39 - 5/10/35					Assisted Housing Units[8] : 48,000[9] - 66,000[10]			

[1] To calculate the total number of housing units needed, you must add the high end of the detached single family range to the low end of the attached home range, or vice-versa. Total demand for housing units is not assumed to change, but actual housing preferences could range within the estimates of the ranges cited.

[2] n/a means not available in the cost/price range. Ownership tenancy within the lower range of prices is a rough estimate.

[3] O means that the new housing is expected to be owner occupied; "R" means that the housing is expected to be renter occupied. "A" means assisted housing.

[4] Housing demand and supply analysis is based on a "baseline projection" assuming that no new single family dwelling units are produced on the private market below $110,000 and no new multifamily rental units are produced below $550 per month rent. Dollar estimates are in 1995 dollars.

[5] Housing needs projected in this chart are cited to the level of individual units in order to be consistent with model results. However, these forecasts should be considered to be accurate to the nearest 1,000 units.

[6] of this between 5,750 and 25,062 manufactured homes would be needed.

[7] Assumes 35 % to 50 % of assisted housing will be multifamily; conversely, we assume 65% or 50% will be single family of which ½ will be detached and ½ will be attached.

[8] Assisted Housing means housing provided through Government Assisted Housing programs, non-profit organizations or households paying more than 30 percent of income for housing. Additional assisted housing for larger households also may be provided on a limited basis in other categories than those listed above.

[9] Estimate for UGB. Low estimate preserves current % of income spent on housing. High estimate derived from separate analysis where share of household income spent on housing was 30%. Low estimate is calculated consistently with the other data used in the Table is used to calculate housing needs.

[10] Based on UGB receiving 70% of the 4 county regional total (94,000 affordable units) of housing demand and supply; model run on 8/20/97.

As can be seen, a wide variety of housing types will be needed to meet expected future demand in the region. Differing construction types, including manufactured housing, stick built and some high-rise structures are included. Ownership and rental options are also included, as are varieties in housing density. No one housing type can supply the varying needs of the region.

It is also important to consider the dynamics of residential development in the region. The regional economy is cyclical and the region is likely to continue to have times of high and low growth rates. The importance of these cycles is that there is a correlation between high growth rates and high housing prices/low affordability. In the late 1970s, we had high growth rates and low affordability at rates comparable to current conditions.

Housing prices in the region are high and housing affordability is lower than some times in the region's past. In particular, this causes those who rent or first-time homebuyers to get less housing or pay much more of their household income than recommended. However, housing prices are only slightly higher than those in other metropolitan regions in the nation and are lower than most metropolitan areas in the West.

Interestingly, the region is at historic highs with regard to the number of units being built. Accordingly, an unchanging or slowly increasing supply does not seem to be the primary obstacle to lowering housing prices.

Limitations to increased production include:

- home builders can "ramp-up" production only so quickly
- the increasing cost of land and labor
- lack of urban infrastructure to vacant buildable lands
- local government zoning inflexibility can limit development options and reduce the capacity of the region to accommodate growth. This results in more expensive housing.
- higher standards including those for stormwater management, seismic standards, energy conservation, etc. (However, these costs existed before the regulations, they were simply paid for in a different way – homes were flooded, residents paid more for heating costs, etc. These "extra" costs may also be thought of as cost shifts rather than increased cost.)

It is estimated that about 2/3 of the forecast growth is from people moving to the region. In addition, the demographic characteristics of the total population is expected to change. The future population is expected to be on average older, have more years of education, have fewer people per household and be more racially diverse. Inherent in these forecasts is that continuing in-migration will be attracted by a continuing robust economy and preeminent livability. Also of note, a smaller average household size means a demand for more housing units even if total population did not change.

Another finding of the technical analysis of housing market dynamics of this region is that the demand for land is much more elastic than previously thought. That is, most people are not willing to pay much more for a larger lot. Therefore, the market is likely to adjust if higher densities are allowed. In fact, the market has already adjusted to 83 percent of Growth Concept residential densities during the 1993 to 1995 period. The biggest obstacle to accommodating this density of development seems to be existing zoning regulations, which may limit change in some area. As building size has much more influence on total housing cost than the cost of raw land, unless average house size built drops dramatically, expanding the Urban Growth Boundary greatly could likely only result in lower densities, not lower housing costs.

Another dynamic of our region can be illustrated by comparison with other metropolitan areas. For example, in most regions in the country, a deteriorating inner urban core is the source of affordable, if less desirable, housing. However, in this region, the value of close-in housing has not depreciated, rather, it has appreciated substantially from values in the early 1980s even adjusting for inflation. In some cases, appreciation in inner urban areas has outstripped the appreciation in more suburban locations. As long as these areas retain a high quality of life, they will remain desirable and not be a source of affordable housing.

It is also important to note that as new lands are added to the Urban Growth Boundary, they will not effectively increase the supply of buildable land until infrastructure (roads, sewer, water, etc.) is available or provided. If the public is not willing to fiscally support these services in a timely manner, either standards must be lowered or new property owners (through the housing price passed on by the developer or builder) must be able to pay for these services. Alternatively, very large tracts of buildable lands must be made available (e.g., 500-1,000 acre pieces of flat farmlands) so that economies of scale can be realized.

Another factor in housing dynamics is that housing expectations have been rising. If the average house built in 1950 were built today, the result would likely be affordable housing. The average house built in 1950 was about 800 square feet (with a much larger average household size than today). In contrast, the average home built today is about 1,900 square feet. Simply put, one way to produce affordable housing is to build small homes on small lots.

A substantial number of today's households (currently about 12 percent) are subsidized or assisted housing. Subject to very major changes to the regional housing market and/or state and federal government policy changes, it is likely that this percentage of assisted housing will be needed in the future.

Housing costs are likely to be high and unaffordable in the future when high rates of growth occur. There is only so much that can be done to address affordability during these times. If the inner core housing remains desirable, high growth rates continue, low public interest in substantial urban expansion on farmlands persists and low public support for substantial public infrastructure extensions remains, then public policy initiatives to encourage affordable housing will be needed if additional affordable housing is to be provided.

Consistent with the analysis above and concerns stated in the Future Vision statement regarding "....a broad range of housing affordable to all." The Housing Needs Analysis includes three examples of how fair share can be calculated. However, additional discussion of fair share calculations and methods will be needed before fair share targets for each jurisdiction in the region can be determined.

Urban Reserves

Urban reserve areas are lands designated for future expansion of the Urban Growth Boundary when needed. Recognizing that accommodation of future growth within the current UGB is only one way to address future growth, more than 23,000 acres of lands adjacent to the current Urban Growth Boundary were analyzed for suitability as urban reserves. These urban reserve study areas were determined by the Metro Council after consideration of public testimony and technical analysis. The technical analysis included consideration of land forms and the landscape ecology of the region. Land forms such as the Boring Lava domes and water features such as streams, floodplains and wetlands were mapped and considered along with avoidance of lands protected as exclusive farm and forest lands all around the current UGB. Avoidance of most of these features was directed by the Metro Council as it determined which areas to study as urban reserves. This direction relates to the Future Vision statement that suggests that "...specifically incorporate...landscape ecology in Regional Framework Plan elements concerned with transportation, housing, urban design, rural lands and the UGB. . ."

During a period of more than two years, a technical analysis of the study areas was completed, and discussion and public testimony was heard and considered by the Metro Council. On March 6, 1997, the Metro Council designated 18,579 acres of urban reserves. The location of these urban reserves is shown on the Metro 2040 Growth Concept Map.

The adopted urban reserves provide an estimated 23-year inventory of land beyond the 20-year supply to be maintained within the Urban Growth Boundary. From these reserves, the region can expand as needs are unable to be met within the current Urban Growth Boundary.

In addition, a "First Tier" of urban reserves lands – lands to be brought into the Urban Growth Boundary first – has been designated. A set of requirements to be met prior to development also has been added to the Metro Code (see Appendix B, Metro Code Chapter 3.01 for more details) to ensure that the transition from rural to urban within the First Tier and other urban reserves addresses critical issues including governance, land-use planning, provision and funding of needed public facilities, conservation of natural resources and affordable housing.

While there are direct connections between the Urban Growth Boundary and urban reserves, it should be noted that one of the fundamental aspects of urban growth boundaries is that they are intended to expand as needed to provide capacity for projected growth. Urban reserves, whether there is an immediate demand, provide clear policy direction about where the boundary will move over time and allow both private and public sectors to anticipate and act accordingly.

Economic Opportunity

The regional economy, like all economies, is subject to cycles – periods of faster growth and slower growth. Currently the region has very low unemployment and relatively high rates of construction. Some of these conditions may be the result of local policies, but, as much of the country as a whole is experiencing similar conditions, other factors, outside the region, clearly also play a role. It seems likely that these conditions will not continue indefinitely, and economic circumstances will change. When change does occur, interest in addressing future unemployment is likely to increase. However, the results of any corrective actions may take time to take hold. Accordingly, actions to address economic conditions must consider that there is a time lag between action and outcome. There may be few short-term regional economic fixes.

The region has effectively used several strategies to maintain economic activity. One strategy has been to maintain the region's livability. This includes conservation of and access to the natural landscape as well as more traditional considerations such as attention to the transportation system, public infrastructure, etc. A second strategy has been to encourage efficient use of land within the region. While housing at prices or rents consistent with jobs could be improved in some areas, the region is relatively compact, making jobs and housing reasonably close. As long as sufficient land for housing and jobs are provided and sufficient natural areas are conserved, these strategies can continue to keep the region attractive and provide a competitive advantage when compared with other metropolitan areas of the country. A third strategy has been to designate large amounts of industrial land such as the sunset corridor, Columbia south shore and in Tualatin.

Analysis of employment growth in the region has found that about 40 percent of new jobs are on lands considered "developed." Second shifts are added, office space per person is reduced or other measures are taken to accommodate more workers within existing buildings. Redevelopment of existing buildings or removal and replacement also constitute means of securing additional density. Another means of adding capacity is that additional building space may be added to lands assumed to be fully developed. While either of these methods are not as noticeable as new buildings built on vacant lands, this job capacity is significant.

Another economic consideration is diversification of the region's economy. The bulk of new jobs come from small businesses. Many small businesses provide a diversified and stable economy when compared to an alternative of reliance on a relatively few large businesses. Having more small businesses also provides more opportunities for people to own their own businesses and likely provides more business interest in community affairs.

The Future Vision states that the Regional Framework Plan should "address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout...the region in the Regional Framework Plan elements for transportation, rural lands, urban design, housing and water resources." In addition, it recommends the Regional Framework Plan "incorporate specific expectations for a basic standard of living for all citizens in Regional Framework Plan elements concerned with urban design, housing, transportation, and parks and open space."

The Growth Concept provides access to most areas of the region via many different modes, especially transit service. This is in contrast to some metropolitan areas which have urban inner cores with difficult transit access to suburban jobs. The region apparently does have some attractiveness to smaller businesses, as the region has been named two years running as the No. 1 large "city" ("Portland, OR/Vancouver, WA") for entrepreneurs ("The Nations Entrepreneurial Hot Spots," October 1995 and October 1996 Entrepreneur Magazine).

Accordingly, policies that encourage smaller businesses to form, expand and prosper would seem to be more effective than other methods of maintaining a stable economy.

Urban/rural Transition

The concept of separating urban areas, or rural reserves, emerged during the Region 2040 planning process. Rural reserves would serve to separate and protect rural lands from lands within the Urban Growth Boundary over a 50-year period.

Rural reserves would include land used for farms, forestry, natural preserves and very low-density rural residential development and might receive priority status for new park and open space acquisitions. New commercial or industrial development would be restricted, and highway interchanges, other highway access to the rural road system and extensions of urban services would be prohibited.

Rural reserves might also be used to separate cities and break urban patterns within the Urban Growth Boundary. Rural lands already create separation between Cornelius and Hillsboro, and Tualatin, Sherwood and Wilsonville.

Neighbor Cities

The future of the region is closely linked to our neighbor cities. Their growth will affect us, as ours will affect them. By coordinating planning efforts, we can help ensure livability inside and outside our borders.

Based on projections, Sandy, Canby and Newberg will grow the most. And as a result of strong transportation connections, Woodburn, Scappoose and North Plains will also experience growth pressure. Conversely, with poor transportation connections, Estacada will probably experience less growth.

Based on analysis done in Concepts for Growth, developing an effective neighbor cities strategy could help contain traffic congestion by keeping 65 percent of work traffic and 90 percent of non-work traffic within neighbor cities. This strategy relies on using rural reserves to separate neighbor cities from urban areas, working cooperatively with neighbor cities to balance jobs and housing within their communities and directing transportation through green corridors.

Protection of Agriculture and Forest Lands

More than 233,000 acres of rural resource lands (zoned exclusive farm and forest) exist within the tri-county area. With the Metro Council decision on Urban Reserves, 3,085 acres of resource lands were designated as urban reserves, leaving more than 230,000 acres of remaining resource lands in the tri-county area. The Future Vision states that "rural lands shape our sense of place by keeping our cities separate from one another, supporting viable farm and forest resource enterprises and keeping our citizens close to nature, farm, forest..." Further, it states that the Regional Framework Plan should "actively reinforce the protection of land currently reserved for farm and forest uses for those purposes." While not all rural resource lands were protected, less than 2 percent were affected by the urban reserve decision – a decision that is estimated to provide a 23 year supply of buildable land beyond the capacity within the current UGB.

Schools

Overview

Our region faces many challenges in accommodating growth while still maintaining a high level of amenities and sustaining the quality of life standards that the people of this region cherish. One of these challenges is to provide a quality education for the growing number of school-age children[11] in this region. This chapter focuses on the challenges faced by public schools today and in the future.

Current population estimates (1995) show about 223,000 children[12] living inside the Urban Growth Boundary. This represents a sharp increase of nearly 11 percent growth in school-age children in just the last five years. By the year 2015, Metro expects the total number of school-age children to increase by another 35 percent to about 300,000. According to current school enrollment estimates, about 90 percent of the region's school-age population attends public schools[13]. If this school enrollment ratio continues, an increase of around 70,000 children can be expected to attend public schools when compared with today's enrollment estimates.

New schools are needed in areas with growing populations, but sufficient land for school siting is becoming more difficult to locate as large parcels are becoming more scarce and expensive within the Urban Growth Boundary. Planning in the region has always attempted to encourage the establishment of schools, especially elementary schools, as the major focus of neighborhoods. However, school districts are usually unable to establish long-term site acquisition plans. They have only been able to address more immediate facility needs, in the 1-4 year range, and usually two years or less. This does not lend itself to acquisition of sites well in advance of need. In addition, schools have a cash flow problem. Even if able to locate an appropriate site, the district must raise the capital, usually through a bond measure. By the time the district is in a position to purchase the land, the land price is much higher than what is was when growth in the area began, or the property may no longer be available for purchase.

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[11] We define school-age children to be between the ages of 5 and 18, inclusively. Elementary school-age children are assumed to be between 5 and 10 years old, inclusive. Middle school children are between ages 11 and 13, inclusive.

[12] The school-age population estimate for the tri-county area (Multnomah, Clackamas and Washington counties) in 1995 is 247,000. In order to get a UGB estimate of school-age children, we assume about 90% of the tri-county population figure. The school-age population estimate for the tri-county area (Multnomah, Clackamas and Washington counties) in 1995 is 247,000. In order to get a UGB estimate of school-age children, we assume about 90% of the tri-county population figure.

[13] The other 10 percent of eligible school-age children attend private or parochial schools or are home-schooled.

The basic philosophy of the 2040 Growth Concept is to preserve our access to nature and to build better communities for the residents living here today and who will live here in the future. The Growth Concept calls for a more compact urban form, and for providing for all modes of transportation, including walking. Design of residential areas, especially street connectivity, can be critical in providing alternatives to only driving school children to school. School siting and design can also play a role in assuring that walking and biking are an alternative and viable means of transportation. School site size may also be an issue as most other public and private uses are looking for ways to more efficiently (and more cheaply) accommodate uses on smaller sites.

Schools provide a valuable service to our communities and serve a variety of functions: education center, meeting center, sporting events and open space. Land needs will need to reflect the variety of uses and needs that a school site may serve. Better communities may also be enhanced if planning for schools is done in coordination with planning for other public facilities such as parks, libraries, etc.

The needs of schools and children and the families they serve must be recognized in the growth equation of this region. Together we must address the challenges faced by school districts. We must strive to discover creative solutions and tools that address issues of school siting and design, capital costs and funding strategies, and collaborative community partnerships relative to at least the land use, transportation and parks elements of this framework plan.

Background

This section gives an overview of existing state and regional policies governing school districts in regards to planning for school needs.

State Requirements

ORS 195.110 addresses planning for schools districts with high growth. A city or county with a "high growth school district," must include in its comprehensive plan a school facility plan prepared by the district in cooperation with the city or county. A "high growth school district" is one that has "an enrollment of over 5,000 student and had an increase in student enrollment of six percent or more during the three most recent school years, based on certified enrollment numbers submitted to the Department of Education during the first quarter of each new school year." As can be seen, the school districts of Beaverton, Tigard-Tualatin and West Linn meet the requirements of a high growth school district.

Table 1.3 **Enrollments in School Districts Larger than 5,000 Pupils in the Metro Area**

School District	1994-1995	1995-1996	1996-1997	Increase in Enrollment 1994-1997
Beaverton	28,341	29,320	30,210	6.6%
Centennial	5,595	5,631	5,881	5.1%
David Douglas	7,092	7,237	7,369	3.9%
Gresham-Barlow	11,022	11,060	11,242	2.0%
Hillsboro	15,220	15,564	15,898	4.5%
Lake Oswego	6,938	7,026	7,272	4.8%
North Clackamas	13,817	13,964	14,339	3.8%
Oregon City	6,905	6,966	7,199	4.3%
Portland	53,339	53,527	54,408	2.0%
Reynolds	7,959	7,955	8,142	2.3%
Tigard-Tualatin	10,302	10,645	10,917	6.0%
West Linn/Wilsonville	6,711	6,975	7,182	7.0%

Source: Oregon Department of Education, Hillsboro School District 1J

In addition to ORS 195.110, Goal 11 of the Statewide Planning Goals and Guidelines addresses public facilities and services. The goal is to "plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development." However, for urban facilities and services, "key facilities" does not include schools, nor does the goal require public facilities plans to include schools.

Regional Policies

Future Vision

The Future Vision statement is the broadest set of declarations about our region. The Regional Framework Plan is required to describe its relationship to the Future Vision. With regard to schools, the Future Vision notes many values, including that the region should:

> "Create and enhance cooperative ventures linking public and private enterprises to ensure that:
>
> > Community arts and performance centers, community libraries and schools, colleges and universities, concert halls, galleries, museums, nature centers and theaters are each vital links in the integrated educational system for all residents, and

Opportunities exist for all children and community residents, regardless of income, to engage in the visual, literary and performing arts in community centers closest to their homes."

Metro Policies

The Regional Urban Growth Goals and Objectives (RUGGO), originally adopted in 1991 and are now wholly incorporated within this document (see Chapter 8, Management, especially section 8.7, Implementation) defined implementation roles including school districts.

In addition, in February 1997, Metro Council adopted approximately 18, 500 acres of urban reserves, areas where future Urban Growth Boundary expansion will occur. Chapter 3.01 of the Metro Code addresses the Urban Growth Boundary and urban reserve procedures. The chapter was amended after the adoption of urban reserves to reflect procedural changes to the Urban Growth Boundary amendment process and establishment and management of urban reserves. Objectives of the urban reserve, which are outlined in 3.01.005(c), include one that specifically relates to schools: urban reserves are to "provide for coordination between cities, counties, school districts and special districts for planning for the urban reserve areas."

Section 3.01.012(e) of the Code requires a conceptual land use plan and concept map that demonstrates compliance with the 2040 Growth Concept for any major amendment applications and legislative amendments of the Urban Growth Boundary. A conceptual school plan is one of the required components of urban reserve plan that "provides for the amount of land and improvements needed for schools facilities. Estimates of the need shall be coordinated among affected school districts, the affected city or county, and affected special districts consistent with the procedures in ORS 195.110(3), (4) and (7)." An urban reserve plan map must show the "general locations or alternative locations for any needed school, park or fire hall sites.

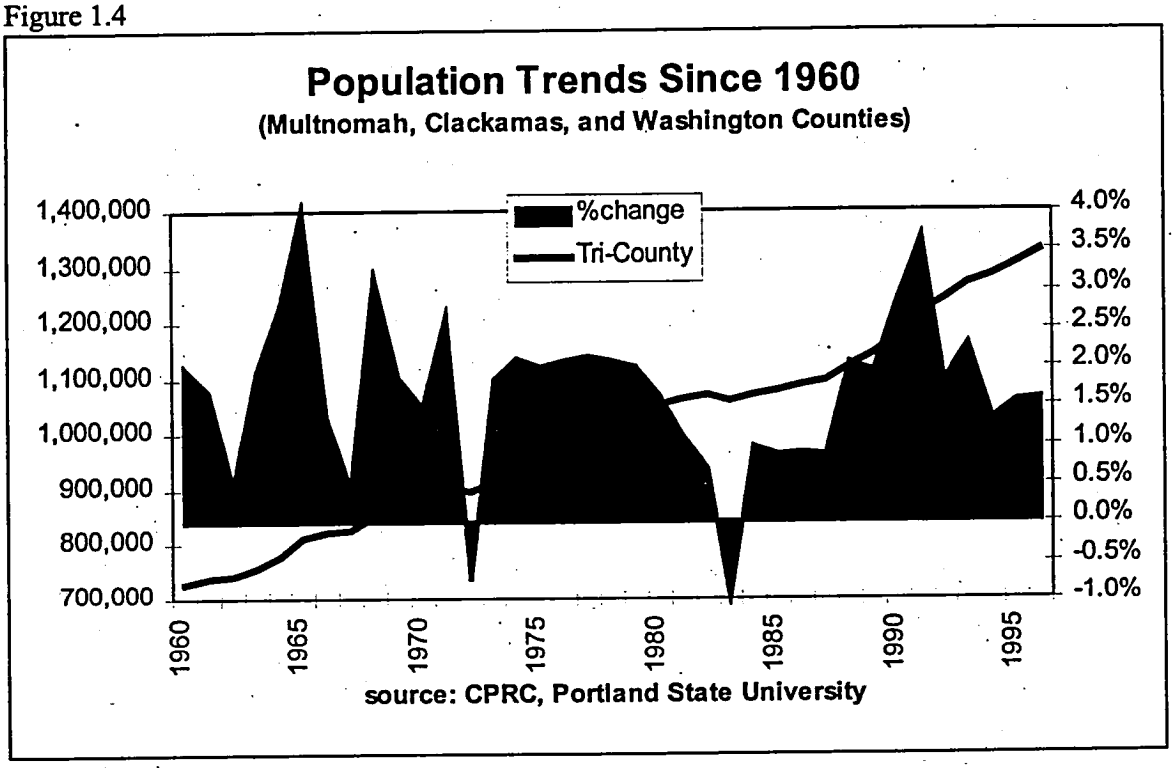
Analysis

The Metro Urban Growth Boundary added over 500,000 new residents[14] between 1960 and 1995. In 1960, there were about 730,00 people living in the tri-county area (Multnomah, Clackamas, and Washington counties). The share of school-age children then was 24.8 percent of the total population, or about 181,000 children between the ages of 5 and 18, inclusive. Today,

[14] The net change in population inside the present Metro UGB for the period 1960 to 1995 is a very rough estimate because the first Urban Growth Boundary was not drawn until 1979. Therefore, any estimate of population inside the UGB prior to 1979 is, at best, an educated guess. The U.S. Census in 1960 estimated 728,088 residents in the tri-county area. By 1995, Portland State University (CPRC) estimated 1,305,100 residents living in the tri-county area, an increase of about 575,000 during this 35 year span.

the number of residents in the tri-county area has grown to over 1.3 million in all – of which 247,000 are school-age children. However, there are now proportionally fewer school-age children in the tri-county area – only 18.9 percent of the total. The overall demographic characteristics of the entire population have also changed. As a population, the people living in the region today are somewhat older and are less likely to have as many children during their lifetime. Fertility rates and the average household sizes across the region have steadily declined during this period. A summary statistic in 1960 showed that the median age in the region was 32.8 years; today the median age has edged up to over 34.8 years of age.

Figure 1.4



Between 1960 and 1995, the number of school-age children for the tri-county population increased by approximately 66,000 children. However, this single statistic does not describe the entire story. During this 35-year period, a number of demographic changes occurred. In 1964, the "baby-boom" generation ended, and with the end of this generation began almost two decades of virtually no change in the number of school-age children in this region even while the overall total population was still increasing at a rapid pace. During this period, the region's population grew at an average annual rate of 1.7 percent a year (the national average during this same period was 1.08%), but the total regional number of children did not appreciably change. In 1970, the decade began with about 230,000 school-age children; twenty-five years later, the number of children in the same age group increased only slightly to 247,000, an average growth rate of only 0.3 percent per year.

In the 1990's, we saw a remarkable turnaround in the number of school-age children in the tri-county area. From about 223,000 in 1990, the number of children between 5 and 18, inclusive, rose to about 247,000, an increase of 10.8 percent or 2.1 percent growth per year (see table: *Change in the Number of School Age Children*). After 20 years of virtually no increase in the school-age population, clearly, the so called "baby-bust" generation has come to an end and a second wave of births had begun in the late 1980's and is now appearing in elementary school enrollment in the 1990's.

Table 1.5 **Change in the Number of School Age Children**

Year	Change	% Change
1960-70	49,143	27.2 %
1970-80	11,152	4.8
1980-90	3,753	1.7
1990-95	24,246	10.9
1995-00	24,120	9.8
2000-05	16,338	6.0
2005-10	15,275	5.3
2010-15	15,715	5.2

It has become apparent that the baby-boom generation, which was once thought to have forsaken the path of parenthood, has temporarily reversed the downward spiral of child births and is now giving birth to a "baby-boomlet" – an echo of the first baby boom.[15] Demographers now believe that women have only delayed childbirth to a later age. Instead of bearing children in their early 20's, many women of the previous generation (1965-1985) put off having children until their late 20's and early 30's. Some have even waited until their late 30's and early 40's to have their first child.

This shift in demographics is now starting to show up in the number of school-age children growing up in this region. An increase of nearly 25,000 additional children of school age within a span of five years (1990-95) is a sharp increase not seen since the last baby boom. However, we are less sanguine about the peak and duration of the current baby-boomlet. It is our belief that because of the delay in female pregnancy combined with slowly declining fertility rates, the baby-boomlet will be shorter in length and less robust. By 2000-05, we anticipate the current baby-boomlet will begin to falter and slow.

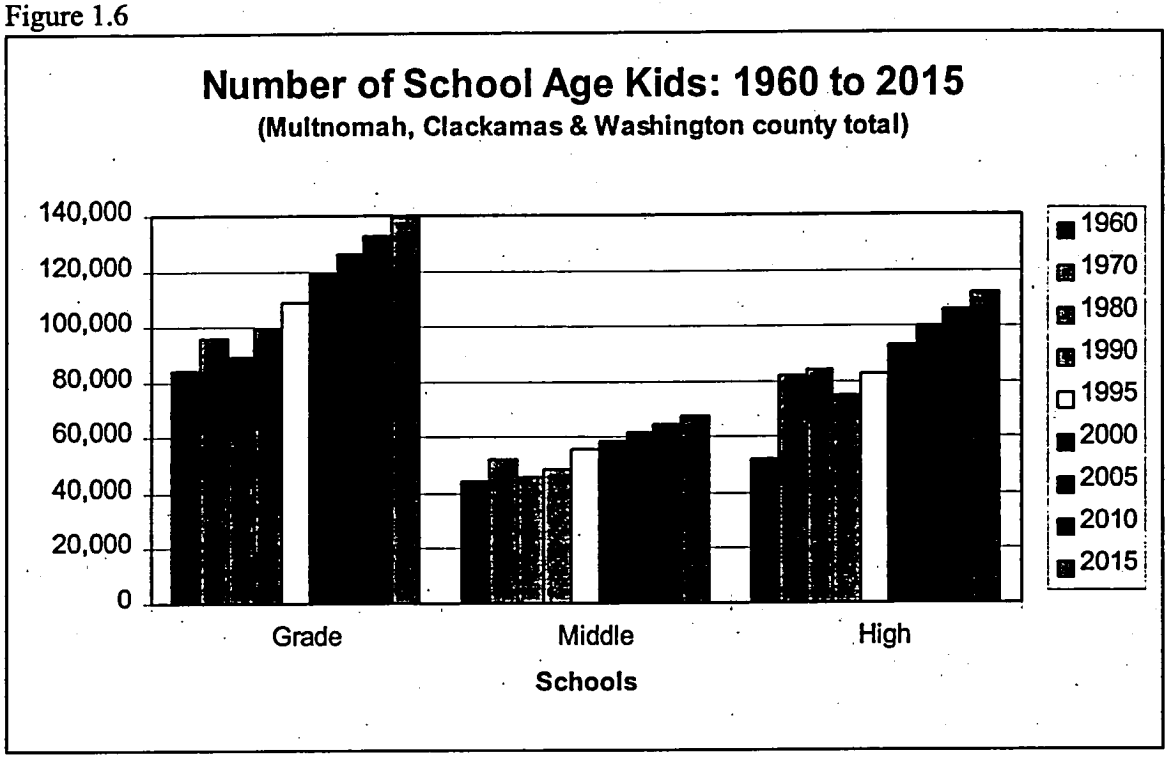
[15] Shifting socio-economic behavior (e.g., greater number of women entering the workforce, higher female labor force participation, birth control, higher costs involved in raising children, slower wage and productivity growth) have occurred which have combined to create the "baby-bust" which began in the late 1960's and extended through the early 1980's.

Meanwhile, direct migration of families with school-age children and working-age couples will tend to prop up and boost the number of children. Migrants tend to be younger and eventually more likely to begin families after they have settled into the region. The Metro Regional Forecast anticipates a steady stream of migrants flowing into this region – about 10,000 per year. About 20 percent are assumed to be in the school-age population group. Therefore, migration not only directly adds about 2,000 school-age children each year, but also contributes through additional births derived from newly transplanted Oregonians.

However, despite continuing gains projected in school-age population numbers, the overall population will continue to age and the share of school-age children will slowly decrease. The median age today is estimated to be about 34.8 years; by 2015 the median age is projected to increase to 36.9 years old. In other words, the fastest growing segment of the population will still be weighted in favor of the baby-boomers, but these baby-boomers will be much grayer than they are today. The second-baby boom wave, the baby-boomlet, will be like an echo – much fainter than the original wave but still audible.

In the forecast for the next 20 years, we anticipate an increase in the number of school-age children from 247,000 in 1995 to approximately 318,000 – an increase of another 71,000. This is a potential increase of about 29 percent more children than in today's student enrollment.

Figure 1.6



The conclusion that is reached from reviewing this data is that the next decade or so is likely to experience much greater growth of school-age children than that experienced in the last two decades. While there may be some additional capacity available within existing school infrastructures, it is likely that substantial increases in school capacities will be needed in order to accommodate expected growth.[16]

[16] The scope of this analysis was limited to the entire tri-county region. Any interpolation or extrapolation of the data or information from this analysis to smaller areas or specifically to individual school districts or attendance areas should NOT be made. Each school district in the region should analyze its own population and enrollment projections based on its own population forecast, attendance and school district specific data sets. It would be inappropriate to use regional data to estimate individual school district enrollment trends.

Transportation

Chapter 2 Transportation

Overview

In 1992, the region's voters approved a charter for Metro that formally gave responsibility for regional land use planning to the agency, and requires adoption of a Regional Framework Plan that integrates land use, transportation and other regional planning mandates. The combined policies of this framework plan establish a new framework for planning in the region by linking land use and transportation plans. Fundamental to this plan is a transportation system that integrates goods and people movement with the surrounding land uses.

This chapter of the Regional Framework Plan presents the overall policy framework for the specific transportation goals, objectives and actions contained in the Regional Transportation Plan (RTP). It also sets a direction for future transportation planning and decision-making by the Metro Council and the implementing agencies, counties and cities.

Policy highlights of this chapter include:

- Ensuring efficient access to jobs, housing, cultural and recreational opportunities, shopping in and throughout the region and providing transportation facilities that support a balance of jobs and housing.
- Reducing reliance on any single mode of travel and increasing the use of alternative modes, such as transit, bicycling and walking.
- Integrating land use, automobile, bicycle, pedestrian, freight and public transportation needs in regional and local street designs.
- Providing efficient transportation systems that accommodate motor vehicles, public transportation, pedestrian transportation, bicycle transportation and freight movement.
- Reducing vehicle miles of travel per capita and related parking spaces.
- Providing transportation demand management and system management strategies.
- Minimizing impact of urban travel on rural land through use of green corridors.
- Protecting water and air quality and reducing energy consumption.

Policies[17] (Goals and Objectives)

The following section contains the policies for regional transportation. It should be noted that implementation of these policies is through the Regional Transportation Plan, a Metro functional plan that includes both recommendations and requirements for cities and counties of the region. The RTP is now being revised and as the Metro Council considers potential changes to the existing RTP, the Regional Framework Plan may be revised.

2.1 Intergovernmental Coordination

Coordinate among the local, regional and state jurisdictions that own and operate the region's transportation system to better provide for state and regional transportation needs. These partners include the cities and counties of the region, Metro, the Oregon Department of Transportation (ODOT), the Oregon Department of Environmental Quality, the Port of Portland and Tri-Met. Metro also coordinates with RTC, C-Tran, the Washington Department of Transportation (Wash-DOT), the Southwest Washington Air Pollution Control Authority (SWWAPCA) and other Clark County Governments on bi-state issues.

2.2 Consistency between Land Use and Transportation Planning

Ensure the identified function, capacity and level of service of transportation facilities are consistent with applicable regional land use and transportation policies as well as the adjacent land use patterns.

2.3 Public Involvement

2.3.1. Provide complete information, timely public notice, full public access to key decisions and support broad-based, early and continuing involvement of the public in all aspects of the transportation planning process that is consistent with Metro's adopted regional Public Involvement Policy and Local Public Involvement Policy for transportation planning. This includes involving individuals traditionally under-served by the existing

[17] The following policies result from integration of the air quality and transportation objectives in the adopted Regional Urban Growth Goals and Objectives (RUGGO) and policies approved by resolution by the Metro Council in July 1996 as part of the Regional Transportation Plan (RTP) update. These policies comply with and replace the air quality and transportation objectives adopted in the RUGGOs. They also comply with the 2040 Growth Concept, the federal Intermodal Surface Transportation Efficiency Act (ISTEA), Clean Air Act Amendments (CAAA) and Americans with Disabilities Act (ADA), the Oregon Transportation Planning Rule (TPR) and the Oregon Transportation Plan (OTP). These mandates are described in the Background section of this chapter. The RTP, which will be updated in early 1998, will continue to provide specific transportation information, including project identification and funding criteria.

system, individuals traditionally under-represented in the transportation planning process, the general public and local, regional and state jurisdictions that own and operate the region's transportation system in all aspects of the transportation planning process.

2.3.2. Develop a detailed public involvement work plan consistent with the regional Public Involvement Policy for each transportation plan, program or project.

2.3.3. Provide opportunities for the public to supply input. Revise work scopes, plans and programs to reflect public comment, as appropriate. Create a record of public comment received and agency response regarding draft transportation plans and programs at the regional level.

2.4 System Objectives

In developing new transportation system infrastructure, the highest priority should be providing accessibility and mobility to and from central city, regional centers and industrial areas and intermodal facilities. Specific needs, associated with ensuring access to jobs, housing, cultural and recreational opportunities and shopping within and among those centers, should be assessed and met through a combination of intensifying land uses and increasing transportation system capacity so as to mitigate negative impacts on environmental quality and where and how people live, work and play. The region's system-wide policies are:

2.4.1. Implement a transportation system that serves the region's current and future travel needs and implements the 2040 Growth Concept.

2.4.2. Provide a cost-effective transportation system.

2.4.3. Protect the region's livability.

2.4.4. Protect the region's natural environment.

2.4.5. Improve the safety of the transportation system.

2.4.6. Provide for statewide, national and international connections to and from the region, consistent with the Oregon Transportation Plan.

2.4.7. Provide for the movement of people and goods through an interconnected system of road, air and rail systems, including passenger and freight intermodal facilities, major distribution facilities and air and water terminals.

2.5 Transportation Finance

2.5.1. Implement a regional transportation system that supports the 2040 Growth Concept through the selection of complementary transportation projects and programs.

2.5.2. Emphasize the maintenance, preservation and effective use of transportation infrastructure in the selection of the RTP projects and programs.

2.5.3. Anticipate and address system deficiencies that threaten the safety of the traveling public in the implementation of the RTP.

2.5.4. Recognize financial constraints and provide public investment guidance for achieving the desired urban form.

2.6 Urban Form

2.6.1. Support and maintain a compact urban form with specific strategies that address mobility and accessibility needs and use transportation investments to leverage desired land use patterns.

2.6.2. Serve new development with interconnected public streets which provide safe and convenient pedestrian, bicycle and motor vehicle access.

2.6.3. Provide street, bicycle and pedestrian connections to transit routes within and between new and existing residential, commercial and employment areas and other activity centers.

2.6.4. Encourage development consistent with desired land use patterns that supports increased mobility and accessibility, particularly by transit, walking and bicycling.

2.7 Jobs/Housing Balance

Support a balance of jobs and housing in each subarea of the region to reduce the need for additional transportation facilities. Provide housing that is easily accessible to jobs and that is affordable to all members of the workforce.

2.8 Transportation Education

Encourage bicyclists, motorists and pedestrians to share the road safely. Expand the amount of information available about alternative modes of travel to encourage their use.

2.9 Barrier-free Transportation

2.9.1. Provide transportation facilities that comply with the Americans with Disabilities Act of 1990 (ADA).

2.9.2. Continue to work with Tri-Met and local jurisdictions to identify and assess structural barriers to mobility for transportation disadvantaged populations in the current and planned regional transportation system .

2.9.3. Continue to work with Tri-Met and local jurisdictions to make public transportation stops and walkway approaches accessible.

2.10 Transportation Balance

Provide a multi-modal regional transportation system that reduces reliance on any single mode of travel and increases the use of alternative modes of travel.

2.11 Street Design

Regional street design policies address federal, state and regional transportation planning mandates with street design elements intended to link land use and transportation planning These street design policies are intended to support individual 2040 Growth Concept land use design types, reduce reliance on any single mode of travel and increase the use of alternative modes of travel. These design concepts reflect the fact that streets perform many, often conflicting functions, and that there is a need to reconcile conflicts among travel modes. The regional street design map (see Figure 2.1) will work in tandem with the modal system maps (Figures 2.2 through 2.7). The region's street design policies are:

2.11.1. Provide regional street design concepts to guide local implementation of the 2040 Growth Concept.

2.11.2. Support local implementation of regional street design concepts in local transportation system plans (TSPs).

2.11.3. Manage the regional street system to achieve the access and mobility needs of each of the 2040 design types.

2.11.4. Although focused on motor vehicle travel, the system is multi-modal, with street design criteria intended to limit the impact of motor vehicles on bicyclists, pedestrians, public transportation and pedestrian and transit-oriented districts.

2.11.5. To implement regional street design policies, Metro shall consider non-binding guidelines contained in "Creating Livable Streets: Street Design Guidelines for 2040" (1997) and other non-binding resources.

2.12 Motor Vehicle Transportation

The motor vehicle system provides access to the central city, regional centers, industrial areas and intermodal facilities, with an emphasis on mobility between these destinations. The regional motor vehicle system is shown in Figure 2.2. This plan recognizes the need to accommodate a variety of trip types on the regional motor vehicle system that include shopping, recreation, personal errands, commuting to work or school, commerce, freight movement and public transportation. Although focused on motor vehicle travel, the system described in this section is multi-modal, with design criteria intended to serve motor vehicle mobility needs, while reinforcing the urban form of the 2040 Growth Concept. While the motor vehicle system usually serves bicycle and pedestrian travel, the system is designed to limit impacts of motor vehicles on pedestrian and transit-oriented districts. The region's motor vehicle system policies are:

2.12.1. Provide a regional motor vehicle system of arterials and collectors that connect the central city, regional centers, industrial areas and intermodal facilities, and other regional destinations, and provide regional accessibility and mobility.

2.12.2. Implement a congestion management system to identify and evaluate low cost strategies to mitigate and manage congestion in the metropolitan region.

2.13 Public Transportation

The regional public transportation system is a key component in providing access to the region's most important activity centers, and for 25 years has been the centerpiece to the region's strategies for improving air quality and reducing reliance on the automobile as a principal mode of travel. Public transportation service is also prominent in Metro's 2040 Growth Concept, such that key elements of the concept, including regional centers, town centers, corridors, main streets and station communities, are strongly oriented toward existing and planned public transportation service. The regional public transportation system map is shown in Figure 2.3. Public transportation ridership is highly dependent on pedestrian access and adjacent land use. Therefore, the overarching goal of the public transportation system, within the context of the 2040 Growth Concept, is to provide an appropriate level of access to regional activities for everyone residing within the Urban Growth Boundary (UGB). An important aspect of this goal is promoting public transportation amenities and connections to serve the region's major activity centers. Providing amenities that make walking to or waiting for transit safer and more pleasant

(e.g., street lights, benches, bus shelters and improved street crossings) can benefit other elements of the region's transportation system and complement the region's urban form and growth management goals. The region's public transportation policies are:

2.13.1. Develop a public transportation system that provides a primary transit level of service to central city, regional centers and a primary or secondary transit level of service to industrial areas, intermodal facilities and special regional destinations (such as major colleges or entertainment facilities).

2.13.2. Develop a public transportation system that provides a primary transit level of service to station communities, town centers, main streets, corridors and special community destinations (such as local colleges or entertainment facilities).

2.13.3. Develop a public transportation system that provides a secondary transit level of service to employment areas, outer neighborhoods and inner- neighborhoods).

2.13.4. Continue to develop fixed-route service and complementary paratransit services which comply with the Americans with Disabilities Act of 1990 (ADA).

2.13.5. Continue efforts to maintain transit as the safest form of motorized transportation in the region.

2.13.6. Expand the amount of information available about public transportation to encourage more people to use the system.

2.13.7. Continue efforts to make public transportation an environmentally friendly form of motorized transportation.

2.13.8. Increase use of transit through making public transportation competitive with the private automobile.

2.14 Pedestrian Transportation

Walking is the most basic form of transportation and links most other trip types. All bicycle, bus, light rail, car and truck trips being and end in a walk. By providing dedicated space for those on foot or using mobility devices, pedestrian facilities are recognized as an important incentive that promotes walking as a mode of travel. Walking for short distances is an attractive option for most people when safe and convenient pedestrian facilities are available. Combined with adequate sidewalks and curb ramps, amenities such as benches, curb extensions, marked street crossings, landscaping and wide planting strips make walking a safe, attractive and convenient mode of travel. This benefits other elements of the region's transportation system

and complements the region's urban form and growth management goals. For example, both bus users and motorists benefit from an improved pedestrian environment. Improved street crossings, street lighting, bus shelters, benches and wide planting strips that create a buffer for pedestrians between the curb and sidewalk are examples of pedestrian improvements that make waiting for a bus safer and more appealing. For motorists, where there are sidewalks and street crossing opportunities, a person can park a car once to access several destinations. The focus of the regional pedestrian system is identifying areas of high, or potentially high, pedestrian activity in order to target infrastructure improvements that can be made with regional funds. The regional pedestrian system map is shown in Figure 2.4. The region's pedestrian system policies are:

2.14.1. Increase the walk mode share for short trips, including walking to public transportation within the central city, regional centers, town centers, main streets, corridors and LRT station communities and as access to regionally significant parks, open spaces and recreational facilities.

2.14.2. Increase walking for short trips and improve access to the region's public transportation system through pedestrian improvements and changes in land use patterns, designs and densities.

2.14.3. Make the pedestrian environment safe, convenient, attractive and accessible for all users.

2.14.4. Provide for pedestrian access, appropriate to existing and planned land uses, street classification and public transportation, as a part of all transportation projects.

2.14.5. Encourage motorists, bicyclists and pedestrians to share the roadway safely.

2.15 Bicycle Transportation

The bicycle is an important component in the region's strategy to provide a multi-modal transportation system. The regional bicycle system map is shown in Figure 2.5. The 2040 growth concept focuses growth in the central city and regional centers, station communities, town centers and main streets. One way to meet the region's travel needs is to provide greater opportunity to use bicycles for shorter trips and to access regionally significant parks, open spaces and recreational facilities. The region's bicycle system policies are:

2.15.1. Provide a continuous regional network of safe and convenient bikeways integrated with other transportation modes and local bikeway systems.

2.15.2. Increase the modal share of bicycle trips.

2.15.3. Ensure that all transportation projects include bicycle facilities using established design standards appropriate to regional land use and street classifications.

2.15.4. Encourage bicyclists and motorists to share the road safely.

2.16 Freight Movement

Developing and adopting the Regional Freight System and associated system goals acknowledges that the movement of goods and services makes a significant contribution to the region's economy and wealth, and that it contributes to our quality of life. The region's relative number of jobs in transportation and wholesale trade exceeds the national average. The regional economy has historically, and continues to be closely tied to the transportation and distribution sectors. This trend is projected to increase. Freight volume is projected (by the 2040 Commodity Flow Analysis) to grow two to three times by 2040 - a rate faster than population growth. The significant growth in freight projected by the 2040 Commodity Flow Analysis indicates the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities, and to continue maintaining and enhancing the freight transportation network. The 2040 Growth Concept identifies industrial sanctuaries for distribution and manufacturing activities. The RTP freight system identifies the transportation infrastructure and intermodal facilities that serve these land uses and commodities flowing through the region to national and international markets. The regional freight system map is shown in Figure 2.6. The region's freight system policies are:

2.16.1. Provide efficient, cost-effective and safe movement of freight in and through the region.

2.16.2. Maintain and enhance the region's competitive advantage in freight distribution through efficient use of a flexible, continuous, multi-modal transportation network that offers competitive choices for freight movement.

2.16.3. Protect and enhance public and private investments in the freight network.

2.16.4. Promote the safe operation of the freight system.

2.17 Parking Management

The Oregon Transportation Planning Rule requires that the Regional Transportation Plan include methods to reduce non-residential parking spaces per capita by 10 percent over the next 20 years (by 2015). The requirement is one aspect of the rule's overall objective to reduce per-capita vehicle miles traveled (VMT), promote alternative modes and encourage pedestrian and bicycle friendly development.

The mode of travel is directly influenced by the convenience and cost of parking. As auto parking in densely developed areas becomes less convenient and more costly, alternative modes of travel (e.g., public transportation, bicycle, walk and telecommute) become relatively more attractive. In addition, as alternative modes of travel are used more for work and non-work trips, the demand for scarce parking decreases. The reduction in demand will allow the region to develop more compactly and provide the opportunity for redevelopment of existing parking into other important and higher end uses. The region's parking management policies are:

2.17.1. Reduce the demand for parking by increasing the use of alternative modes for accessing the central city, regional centers, town centers, main streets and employment areas.

2.17.2. Reduce the number of off-street parking spaces per capita.

2.17.3. Provide regional support for implementation of the voluntary parking provisions of the Portland region's Ozone Maintenance Plan.

2.17.4. Manage and optimize the efficient use of public and commercial parking in the central city, regional centers, town centers, main streets and employment centers to support the 2040 Growth Concept and related RTP goals and objectives.

2.17.5. Establish minimum and maximum parking ratios no greater than those listed in Regional Parking Ratios Table and as illustrated in the Parking Maximum Map in Title 2 of the Urban Growth Management Functional Plan. The designation of A and B zones on the Parking Maximum Map should be reviewed after the completion of the Regional Transportation Plan update and every three years thereafter.

2.18 Transportation Demand Management

Transportation demand management (TDM) is not one action, but rather a series of actions to promote shared ride and the use of alternative modes, especially during the most congested times of the day. The term TDM encompasses the strategies, techniques and supporting actions that encourage non–single occupant vehicle travel (i.e., transit, walk, bike, carpool and telecommute), as well as measures to reduce per-capita vehicle miles traveled (VMT).

The primary benefit of managing travel demand is to minimize the need to expand the capacity of the region's transportation system (i.e., building new highways or adding lanes to existing highways) and make more efficient use of non–SOV modes (transit, walk, bike, carpool and telecommute) of travel. Managing travel demand will also help the region reduce overall per-capita vehicle travel, reduce air pollution and maximize energy conservation in a relatively low–cost manner. Regional TDM policies are intended to complement city and county efforts to

assist employers in implementing measures to meet the Department of Environmental Quality Employee Commute Options (ECO) rule. Regional TDM policies also help the region achieve its 2040 Growth Concept land use accessibility goals. The region's transportation demand management policies are:

2.18.1. Enhance mobility and support the use of alternative transportation modes by improving regional accessibility to public transportation, carpooling, telecommuting, bicycling and walking options.

2.18.2. Promote policies and strategies that reduce travel by single occupant vehicles (SOV) in order to help the region achieve the 10 percent reduction in vehicle miles traveled (VMT) per capita as required by the Transportation Planning Rule (TPR) over the Regional Transportation Plan planning period, and that improve air quality.

2.18.3. Provide incentives for employers and developers to build/locate in the 2040 Growth Concept central city, regional centers, town centers, station communities and transit corridors to promote more compact land use.

2.18.4. Continue to coordinate efforts to promote TDM at the regional and local level.

2.18.5. Implement TDM support programs to reduce the need to travel, and to make it more convenient for people to use alternative modes for all trips throughout the region.

2.18.6. Increase public knowledge and understanding about TDM as a tool to reduce congestion, reduce air pollution, implement the 2040 Growth Concept and to help the region meet the TPR VMT per capita and parking per capita reduction targets.

2.18.7. Mode split will be used as the key regional measure for transportation effectiveness in this region. Metro shall establish an alternative mode split target (defined as non-Single Occupancy Vehicle person trips as a percentage of all person trips for all modes of transportation) for each of the 2040 Design Types identified in Table 3, below.

The alternative mode split targets shall be evaluated for each 2040 Design Type based on their ability to help the region meet the Transportation Planning Rule 10 percent VMT reduction requirement. Metro will develop additional guidance in the Regional Transportation Plan on methods to implement these regional mode split targets.

Table 2.1 Regional Non-SOV Mode Split Targets
Needed To Achieve State Transportation Planning Rule 10% VMT/Capita Reduction Requirement
(for trips to and within each 2040 Design Type)

2040 Design Type	Non-SOV* Mode Split Target
Central City	60-70%
Regional Centers, Town Centers, Main Streets, Station Communities and Corridors	45-55%
Industrial Areas and Intermodal Facilities, Employment Areas and Inner and Outer Neighborhoods	40-45%

*Non-SOV includes shared ride, bike, walk and transit.

2.19 Transportation System Management

Use transportation system management techniques (e.g., signal improvements, intersection channelization, access management, HOV lanes, ramp metering, incident response and programs that smooth transit operations) to optimize performance of the region's transportation systems. Mobility will be emphasized on corridor segments between high priority land use designations. Access and livability will be emphasized within such designations. Selection of appropriate TSM techniques will be according to the functional classification of corridor segments.

2.20 Right-of-Way Opportunities

Where appropriate, plan for the preservation of rights-of-way for future transportation projects, including future transportation corridors.

2.21 Adequacy of Transportation Facilities

Ensure that changes to land use patterns are consistent with the identified function, capacity and level of service (see Policy 2.28 which defines motor vehicle level of service) of the facility.

2.22 Urban to Urban Travel on Rural Routes

Minimize the impact of urban travel on rural land uses. Limit access to and minimize urban development pressure on resource lands adjacent to transportation corridors that link neighboring towns to the nearest regional center by designating urban connectors between these destinations as "green corridors", with exceptions identified in the motor vehicle system map (see Figure 2.2).

2.23 Recreational Travel and Tourism

Provide reasonable and convenient access to regional cultural, historic or natural area sites for passive and active recreational or tourism purposes.

2.24 Natural Environment

2.24.1 Place a priority on protecting the region's natural environment in all aspects of the transportation planning process.

2.24.2. Minimize the environmental impacts of system development, operations and maintenance.

2.24.3. Reduce negative impacts on parks, public open space, natural areas, wetlands and rural reserves arising from noise, visual impacts, physical segmentation and volume and pollutants of storm water runoff from transportation facilities.

2.25 Water Quality

Protect the region's water quality by meeting applicable state and federal water quality standards and supporting local jurisdiction efforts to reduce impervious surface coverage in the development review and street design process.

2.26 Clean Air

2.26.1 Protect and enhance air quality so that as growth occurs, human health and visibility of the Cascades and the Coast Range from within the region is maintained.

2.26.2 Encourage use of all modes of travel (e.g., transit, telecommuting, zero-emissions vehicles, ridesharing, bicycles and walking) that contribute to clean air.

2.26.3 Include strategies for planning and managing air quality in the regional airshed in the State Implementation Plan for the Portland-Vancouver air quality maintenance areas as required by the federal Clean Air Act Amendments.

2.26.4 Develop new regional strategies to comply with federal Clean Air Act Amendments requirements and provide capacity for future growth.

2.26.5 Work with the state to pursue close collaboration of the Oregon and Clark County Air Quality Management Areas.

2.27 Energy Efficiency

Reduce the region's transportation-related energy consumption through increased use of transit, telecommuting, zero-emissions vehicles, ridesharing, bicycles and walking and through increasing efficiency of transportation network to diminish delay and corresponding fuel consumption.

2.28 Motor Vehicle Level of Service

Establish acceptable motor vehicle level of service thresholds that balance the regional accessibility and mobility policies with the region's growth management objectives. Exceeding an acceptable threshold identifies a system deficiency or need. The appropriate motor vehicle level-of-service shall correspond to categories of design types defined in the 2040 Growth Concept and will be balanced against the alternative mode split target established for the various design types. A variable motor vehicle level-of-service will also enable the region to ensure that:

- limited resources are allocated to the most critical motor vehicle projects in the most critical areas
- limited resources remain to fund alternative mode projects and projects that best leverage the 2040 Growth Concept
- when road projects are recommended, they are sized consistent with the availability of limited resources, appropriate to the applicable 2040 design type and consistent with alternative mode split targets.

A transportation need is identified when a particular transportation standard or threshold has been exceeded either through a land use action or projected travel demand. Subsequent to the identification of a need, an appropriate transportation strategy or solution is generally identified through a two-phased multi-modal planning and project development process. The first phase is multi-modal system-level planning that examines a number of transportation alternatives over a larger geographic area such as a corridor or sub-area, or through a local or regional Transportation System Plan (TSP). The purpose of the TSP step is to determine the best mode and corridor to pursue in addressing an identified need after considering alternative modes and corridors. The second phase is project-level planning (also referred to as project development). The purpose of project-level planning is to develop design details and consider potential environmental impacts for the recommended mode and corridor identified during multi-modal system-level planning.

The Regional Transportation Plan shall provide specific thresholds, as appropriate, to ensure that the economic vitality and livability of any given area is protected from unacceptable levels-of-service occurring outside of normal peak periods of congestion.

One-hour of significant congestion is expected in both the a.m. peak-hour of the day and the p.m. peak-hour of the day within the Central City, Regional Centers, Main Streets and Station Communities because of the level of activity expected to occur in these areas. This level of congestion is acceptable in these 2040 Design Types because the opportunity to use alternative modes of travel is greatest in these areas. However, more than one-hour of significant congestion in either the a.m. peak-hour of the day or p.m. peak-hour of the day is unacceptable, with the preference being that these areas remain substantially uncongested for the remainder of the day.

Less congestion will be tolerated in the less concentrated Corridors, Industrial Areas, Intermodal Facilities, Employment Areas and Inner and Outer Neighborhoods.

Acceptable levels of congestion for Regional Highway Corridors will be determined on a case-by-case basis in the Regional Transportation Plan, consistent with Policies 2.11, 2.12 and 2.16 of this chapter. Regional Highway Corridors are defined as I-84, I-205, I-5, I-405, US 26, OR 217, OR 224, 99E, 99W connecting to I-5 in Tualatin, the Sunrise Corridor, US 26 entering the eastern edge of the UGB, US 30 entering NW Portland, the Mount Hood Parkway, Marine Drive from I-5 to T-6 terminal, Going Street from I-5 to Swan Island and Airport Way from I-205 to Portland International Airport. (See Regional Highway Corridors map in Figure 2.7.)

Level of Service definitions adopted in the Urban Growth Management Functional Plan are summarized in Table 2.4 at the end of this chapter.

2.29 Transit Level of Service

Establish transit level of service thresholds that balance the regional accessibility and mobility policies with the region's growth management objectives. Exceeding an acceptable threshold identifies a transit system deficiency or need. The Regional Transportation Plan shall define specific thresholds for each 2040 Design Type, as appropriate, to ensure that the highest quality transit service (in terms of coverage, speed and frequency) is available to the areas with the highest population and employment densities.

Within the Central City and Regional Centers, the regional public transportation system shall provide full coverage to high-quality transit service for all households and jobs within ¼-mile of that service, including routes competitive with the automobile and frequent service to its full market area.

Within Town Centers, Main Streets, Station Communities and Corridors, the regional public transportation system shall provide full coverage to high-quality transit service for all households and jobs within ¼-mile of that service, including routes competitive with the automobile.

Within Industrial Areas and Intermodal Facilities, Employment Areas and Inner and Outer Neighborhoods, the regional public transportation system shall provide an appropriate level of transit service, if densities in those Design Types exceeds 10 persons per acre.

2.30 Local Street Connectivity

Establish 10 to 16 street intersections per mile as a minimum range for local street connectivity, except where topography, barriers such as railroads or freeways, or environmental constraints such as major streams and rivers, prevent full street connections. The number of street intersections should be greatest in the highest density mixed-use centers. Consider bicycle, pedestrian and emergency accessway connections on public easements or right-of-way when full street connections are not possible, with spacing between auto connections of at least 16 connections per mile in the highest density mixed-use centers, except where topography, barriers such as railroads or freeways, or environmental constraints such as major streams and rivers, prevent street extension.

Regional System Maps

The Regional System Maps referred to as Figures 2.1 through 2.7 are included in the Appendices of this Regional Framework Plan.

Background

A number of federal, state and regional mandates form the basis for the policies contained in this chapter of the Regional Framework Plan.

Federal Mandates

At the federal level, the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) emphasizes expanding public participation in the transportation planning process and increasing cooperation among the jurisdictions that own and operate the regional transportation system. These partners include the region's cities and counties, Metro, Oregon Department of Transportation (ODOT), Oregon Department of Environmental Quality (DEQ), Port of Portland, Tri-Met, Washington Regional Transportation Council (RTC), Washington Department of

Transportation (Wash-DOT), Southwest Washington Air Pollution Control Authority (SWWAPCA) and other Clark County governments.

As the federally designated Metropolitan Planning Organization (MPO) for the region, Metro must coordinate metropolitan transportation planning efforts in partnership with these multiple jurisdictions and citizens to help develop statewide and regional transportation plans. These plans must forecast future growth, identify needed transportation investments to meet this growth and ensure the maintenance and efficient operation of existing transportation systems over a 20-year period. The Oregon Transportation Plan guides the transportation system statewide, and the Regional Transportation Plan (a Metro functional plan) is the transportation plan for this region.

ISTEA also requires the establishment of a National Highway System to provide an interconnected system of principal arterial routes that will serve major population centers, public transportation facilities, airports, and intermodal facilities, and serve interstate and inter-regional travel.

In addition to the Federal requirements of ISTEA, Federal 1990 Clean Air Act Amendments (CAAA) establish air quality standards for key air pollutants, including carbon monoxide, ozone and particulate matter. Areas that do not meet the standards are designated in varying degrees of nonattainment, from "marginal" to "extreme." States must submit implementation plans (SIP) showing how these areas will meet the standards and maintain compliance over a ten-year period. Areas that do not meet SIP requirements may face sanctions, including potential loss of highway funds and limits on industrial expansion.

The Portland-Vancouver Interstate Air Quality Maintenance Area (AQMA) was designated as a marginal nonattainment area for ozone and moderate nonattainment area for carbon monoxide in 1991. By the end of 1991, the area began to meet the federal ozone and carbon monoxide standards on a consistent basis. As a result, the region began to work on ten-year maintenance plans and attainment redesignation requests for both pollutants. These plans were finalized in 1996 and submitted to the U.S. Environmental Protection Agency (EPA) as revisions to the Oregon State Implementation Plan (SIP). EPA approved the maintenance plans and also redesignated the Portland-Vancouver Interstate AQMA to attainment status in 1997.

The maintenance plans were developed on the basis of Metro's long-range population and employment forecasts. Control strategies, including transportation control measures (TCMs) were developed to reduce automobile emissions to show standards maintenance through the ten-year plan period. These measures include projects to provide facilities for alternative modes,

demand management programs to encourage use of alternative modes and implementation of the 2040 Growth Concept to produce more transportation efficient land use patterns. The goal of these measures is to manage travel demand and improve traffic flow in order to reduce the number of vehicle trips made and the number of vehicle miles traveled. The SIP recognizes that land use patterns that shorten trips and increase opportunities for transit, bicycling and walking also help reduce emissions.

The Oregon Department of Environmental Quality monitors three locations for the ozone standard and four locations for the carbon monoxide standard for the Portland-Vancouver AQMA, as shown in Table 2.2, below.

Table 2.2 Oregon Department of Environmental Quality Air Quality Monitoring Locations

Ozone Monitoring Locations	Carbon Monoxide Monitoring Locations
• Milwaukie High School • Sauvie Island • Carus (approximately 5 miles south of Oregon City on Highway 213)	• 4th/Alder Street - downtown Portland • Postal Building - downtown Portland • SE 82nd Avenue/Division Street - Portland • SE 58th Avenue/Lafayette Street - Portland

In 1996, the AQMA area exceeded the summer ozone standard twice at one monitoring location (Milwaukie High School). There was no violation of the summer ozone standard in 1997. A fourth exceedance, at one monitoring location over a three-year period, would violate federal air quality standards and trigger the SIP contingency plan for ozone. The contingency plan provides for a rule development process to reduce emissions from industry and other sources.. Any TCMs identified as control strategies in the SIP are to be included in Metro's Transportation Improvement Program and the Regional Transportation Plan within twelve months after the violation is recorded.

Additional federal requirements include the 1990 Americans with Disabilities Act (ADA) which mandates that transportation plans address equal access and opportunity for disabled people. An ADA transportation plan has been developed by Tri-Met. In addition, state and local jurisdictions must design and construct pedestrian facilities in compliance with ADA requirements.

State Mandates

The Oregon Transportation Planning Rule (TPR) focuses on the link between land use and transportation. It intends to ensure that planned transportation systems support land use plans and travel patterns to achieve the state goal of compact, highly livable urban areas. The TPR contains requirements designed to reduce reliance on the automobile and requires consideration of land-use policies when developing transportation plans. Cities and counties are required to revise development standards to promote public transportation, pedestrian and bicycle travel, orient new buildings toward major transit stops and design local streets that require less right-of-way width and improve pedestrian circulation. The TPR also requires that city and county transportation plans include policies that promote completion of local street networks. The rule also requires that local and regional transportation system plans target the following goals:

- a 10 percent reduction in vehicle miles of travel per capita during the next 20 years and 20 percent during the next 30 years
- less reliance on the automobile and a reduction in the number of people driving alone
- a 10 percent reduction in the number of parking spaces per capita during the next 20 years
- a stronger connection between land use and transportation planning

Local and regional transportation system plans must also examine possible land-use solutions to transportation problems and identify multi-modal, system management and demand management strategies to address transportation needs.

Regional Mandates

With adoption of the 1992 Metro Charter by voters in the region, Metro was directed to complete a Future Vision. The fifty-year Future Vision includes many references as to the importance of transportation. These references include:

> "Address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout...the region in the Regional Framework Plan elements for transportation, rural lands, urban design, housing and water resources."
>
> "Incorporate specific expectations for a basic standard of living for all citizens in Regional Framework Plan elements concerned with urban design, housing, transportation, and parks and open space."
>
> "Identify and address public and personal safety issues in the Regional Framework Plan elements dealing with transportation, urban design and bi-state coordination."

Other regional statements of existing transportation policy are included in the Regional Urban Growth Goals and Objectives (RUGGOs), the Urban Growth Management Functional Plan (see Appendix A) and the 1992 Regional Transportation Plan (RTP). The Regional Urban Growth

Goals and Objectives (RUGGOs) are Metro's regional goals and objectives required by state law. First adopted in 1991, revised in 1995 and acknowledged by the Land Conservation Development Commission in 1996, the RUGGOs establish a process for coordinating planning in the metropolitan area in an effort to preserve regional livability. The RUGGO goal and objectives, including the 2040 Growth Concept, also provide the policy framework for guiding Metro's regional planning program, including development of functional plans and management of the region's Urban Growth Boundary.

RUGGOs policies related to transportation include Objective 14 (Air Quality) and Objective 19 (Transportation). Transportation policies contained in this chapter of the Regional Framework Plan integrate existing RUGGOs policies and Chapter 1 policies developed as part of the current Regional Transportation Plan update to become Chapter 1 of the 1998 RTP. Many of these new policies were created for the Regional Framework plan to address mandates in ISTEA, ADA, CAAA, the Oregon Transportation Planning Rule and the Oregon Transportation Plan.

Likewise, the 1998 Regional Transportation Plan will respond to the same federal and state requirements and define a balanced, multi-modal transportation system that supports the Region 2040 Growth Concept. New Regional Transportation Plan policies were approved by the Metro Council in July 1996 and reflect extensive public comment. These new policies, as amended with the adoption of the Regional Framework Plan will be used to direct and define specific improvements to the regional transportation system for the next 20 years. The plan update is expected to be completed in June 1998.

The relationship of Regional Transportation Plan (RTP) policies to Regional Framework Plan policies is that the RTP implements this Chapter of the Regional Framework Plan. Separate functional plans, like the RTP, will clearly identify the role that cities and counties will play in implementing this Regional Framework Plan.

To ensure consistency between the two plans, the policy statements in the updated Regional Transportation Plan will be identical to the policy statements in this chapter of the Regional Framework Plan. However, the Regional Framework Plan will not include the same level of detail as the Regional Transportation Plan, where policy statements will be accompanied by objectives and performance measures that will guide implementation of individual policies. This chapter of the Regional Framework Plan will not include objectives and performance measures.

This chapter of the Regional Framework Plan will be implemented through the 1998 Regional Transportation Plan, a Metro functional plan, once the current update is complete. In the interim, Title 2 and Title 6 of the Urban Growth Management Functional Plan will be amended at the

time the Regional Framework Plan is adopted to clearly identify the role that cities and counties will play in implementing transportation policies reflected in this chapter.

Analysis

Metro and its regional partners initiated the Region 2040 planning process to better evaluate how different growth management strategies could accommodate expected growth in this region and to analyze the possible consequences of such policies (see Chapter 1). In undertaking the Region 2040 process, the region has shown a strong commitment to developing a regional plan that is based on more efficient use of land and a balanced, multi-modal transportation system. The adopted and acknowledged 2040 Growth Concept resulted from this process. The 2040 Growth Concept integrates transportation, land use, water and open space elements to reinforce the region's growth management goals. The success of this land use concept, in large part, hinges on regional transportation policy. The following section includes general descriptions of the 2040 Growth Concept land-use components, called "design types," and associated transportation elements as defined during the Region 2040 process. In general, each of the land use components will be served with a multi-modal transportation system tailored to its specific needs. The land use components are ordered according to their relative significance in the region.

The central city, regional centers, industrial areas and intermodal facilities are key design types of the 2040 Growth Concept. Implementation of the overall growth concept is largely dependent on the success of these areas. For this reason, these areas are the primary focus of transportation implementation policies and infrastructure investments defined in the 1998 Regional Transportation Plan.

Central City and Regional Centers

Portland's central city already forms the hub of the regional economy. Regional centers in suburban locations such as Gresham, Beaverton and Hillsboro in the 2040 Growth Concept are complementary centers of regional economic activity. These areas are planned for region's highest development densities, the most diverse mix of land uses and the greatest concentration of commerce, offices and cultural amenities. They are planned to be the most accessible areas in the region by both auto and public transportation, and have very pedestrian-oriented streets.

In the 2040 Growth Concept, the central city is highly accessible by a high-quality public transportation system, multi-modal street network and a regional freeway system of through-routes. Light-rail lines radiate from the central city, connecting to each regional center. The

street system within the central city is designed to encourage public transportation, bicycle and pedestrian travel, but also accommodate auto and freight movement. Of special importance are the bridges that connect the east and west sides of the central city and serve as critical links in the regional system.

Regional centers are also planned to feature a high-quality radial transit system serving their individual trade areas and connecting to other centers, as well as light-rail connections to the central city. In addition, a fully improved network of multi-modal streets are intended to link regional centers to surrounding neighborhoods and nearby town centers, while regional through-routes will be designed to connect regional centers with one another and points outside the region. The street design within regional centers is planned to encourage public transportation, bicycle and pedestrian travel while also accommodating auto and freight movement.

Industrial Areas and Intermodal Facilities

Industrial areas are planned to serve as "sanctuaries" for long-term industrial activity. These areas are primarily served by a network of major street connections to both the regional freeway system and intermodal facilities. Many industrial areas are also served by freight rail, and have good access to intermodal facilities. Freight intermodal facilities, including air and marine terminals, freight rail yards and common carrier truck terminals, are an area of regional concern. Access to these areas is centered on rail, the regional freeway system, public transportation, bikeways and key roadway connections. While industrial activities often benefit from roadway improvements largely aimed at auto travel, there are roadway needs unique to freight movement that are critical to the continued vitality of industrial areas and intermodal facilities.

Town Centers, Station Communities, Main Streets and Corridors

While more locally oriented than the primary components of the 2040 Growth Concept, town centers, station communities, main streets and corridors are significant centers of urban activity. Because of their density and pedestrian-oriented design, they play a key role in promoting public transportation, bicycling and walking as viable alternatives to the automobile as well as conveniently close services for surrounding neighborhoods. As such, these secondary components are an important part of the region's strategy for reducing per-capita automobile travel.

Station communities are located along light-rail corridors. They are planned to feature a high-quality pedestrian and bicycle environment. These communities are designed around the transportation system to best benefit from the public infrastructure. While they include some

local services and employment, they are mostly residential developments that are oriented toward the central city, regional centers and other areas that can be accessed by rail for most services and employment.

Town centers function as local activity areas that provide close access to a full range of local retail and service offerings within a few miles of most residents. While town centers are not planned to compete with regional centers in scale or economic diversity, they will offer some specialty attractions of regional interest. Though the character of these centers varies greatly, each will function as strong business and civic communities excellent multi-modal arterial street access and high-quality public transportation with strong connections to regional centers and other major destinations. Main streets feature mixed-use, storefront style development that serve the same urban function as town centers, but are located in a linear pattern along a limited number of bus corridors. Main streets feature street designs that emphasize pedestrian, public transportation and bicycle travel.

Corridors will not be as intensively planned as station communities, but similarly emphasize a high-quality bicycle and pedestrian environment and convenient access to public transportation. Transportation improvements in corridors will focus on nodes of activity - often at major street intersections - where transit and pedestrian improvements are especially important. Corridors can include auto-oriented land uses between nodes of activity, but such uses are carefully planned to preserve the pedestrian orientation and scale of the overall corridor design.

Employment Centers and Neighborhoods

Some design types in the 2040 Growth Concept are primarily of local significance, including employment centers and neighborhoods. Urban activities in these areas often impact the regional transportation system, but are best addressed through the local planning process.

Employment centers allow mixed commercial and industrial uses, including some residential development. These areas are primarily served by a network of arterial connections to both the regional freeway system and intermodal facilities. Some employment centers are also be served by freight rail. Employment centers are often located near industrial areas, and thus may benefit from freight improvements primarily directed toward industrial areas and intermodal facilities.

In recent decades, the newest neighborhoods have become the most congested largely due to a lack of street connections. A lack of street connections discourages walking and bicycling for local trips in these areas, and forces local auto trips onto the regional multi-modal arterial network. The 2040 Growth Concept envisions master street plans in all areas to increase the

number of local street connections to the regional roadway network. However, new connections must be designed to discourage through-travel on local neighborhood streets.

Urban Reserves

Urban reserves, which are currently located outside the Urban Growth Boundary (UGB), are relatively undeveloped with limited transportation facilities. Urban reserves are intended to accommodate future growth and will eventually require multi-modal access to the rest of the region. Because they may be added to the urban area during the 20-year Regional Transportation Plan (RTP) planning period, they are included in the RTP functional classification scheme. General street and public transportation planning is completed prior to urbanization, as part of the RTP process, and based on specific 2040 Growth Concept land use policies for these areas. Once urban reserves are brought within the UGB, more detailed transportation system planning at the regional and local level occurs in conjunction with detailed land use planning.

Areas Outside the Region's Urban Areas

Rural reserves are undeveloped areas located outside the UGB and have very limited transportation facilities. Roadways in these areas are intended to serve rural industry and needs, and urban travel on these routes is accommodated with designs that are sensitive to their basic rural function. Rural reserves are planned to be protected from urbanization for the foreseeable future through state statutes and administrative rules, county land use ordinances, intergovernmental agreements and by limiting rural access to urban through-routes whenever possible. Urban-to-urban travel is generally discouraged on most rural routes, with the exception of a limited number of designated urban connector roads identified in the RTP. All other rural roads should serve rural purposes.

Neighboring cities are separated from the main urban area by rural reserves, but are connected to regional centers within the metropolitan area by limited-access green corridor transportation routes. In addition to highway access, green corridor routes will include bicycle and public transportation service to neighboring cities. Neighboring cities will be encouraged, through intergovernmental agreements, to balance jobs and households in order to limit travel demand on these connectors. The region also has an interest in maintaining reasonable levels of through-travel on major routes that pass through neighbor cities and function as freight corridors. Growth of neighboring cities will ultimately affect through-travel and could create a need for bypass routes. Such impacts will also be addressed through coordination with county and state agencies, as well as individual neighboring cities.

The 2040 Commodity Flow Study

As part of the Region 2040 process, the region also conducted a Commodity Flow Study. The study was designed to determine how freight moves through the region, understand the linkage between the regional economy and the transportation system and assess the implications of future freight volumes on the regional transportation system. The study concluded with these key findings:

- Goods movement has historically sparked the region's economic growth. Our region's freight market can be segmented into three distinct but complementary components: goods movement that supports local consumption, goods movement that is generated by local industries and goods movement throughout the region that is tied to a successful distribution system. Each of these depends on access to an efficient transportation network.
- The existing transportation system is adequate to support current goods movement requirements, although there are specific points of congestion, particularly within rail facilities and at some highway crossings.
- Employment in the construction, manufacturing, transportation and utilities and trade sectors of the economy account for approximately one-half of the region's jobs. Traditionally well-paid, these jobs depend on the successful movement of goods on the region's transportation system. In addition, the transportation system affects the ability of the region to maintain its competitive advantage as a warehousing and distribution center. Portland outranks similarly sized cities in its role in wholesale trade.
- Truck is the predominant mode for goods movement in the region. One out of ten vehicles on roadways in the region is a truck involved in moving freight. In 1991, 60 percent of all freight tonnage moved on trucks, and an additional portion of the rail and air traffic relied on truck for pickup and delivery.
- By the year 2040, freight volume is expected to grow by two to three times to approximately 19 million twenty-foot equivalent container units, which is faster than population growth. Of this, 80 percent is expected to be due to the region's market economy or goods that simply move through the Portland area to other destinations.
- Continued emphasis on maintaining and enhancing the transportation system is necessary to continue Portland's strong freight economy. Quick transfer between ship, rail, truck and air service is increasingly a competitive strength of any freight economy.

In conclusion, the projected growth in the flow of goods in this region is an important consideration in the region's land-use and transportation planning efforts. This significant growth points to the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities and to continue maintaining and enhancing the freight transportation network. To this end, the 2040 Growth Concept identifies industrial sanctuaries for distribution and manufacturing activities as critical in terms of their significance to the regional economy. Policies contained in this element of the framework plan recognize the importance of protecting freight movement and the road, rail, air, shipping and pipeline facilities needed to facilitate this movement.

1994 Travel Behavior/Activity Survey

In 1994, Metro also conducted a travel behavior survey within the four-county boundary of Clackamas, Multnomah and Washington Counties in Oregon and Clark County, Washington. As part of this survey, approximately 6,000 households kept a diary of activities performed over a two-day period, including identification of how individuals traveled to those activities. The study was designed to focus on the relationship between an activity type and the need for travel and highlighted the importance of all activities, whether "big" or "small." Results from the study are summarized in Table 2.3 below.

Table 2.3 Summary of 1994 Metro Travel Behavior/Activity Survey Results (for all trip purposes)

	Mode Share					Vehicle Miles per Capita	Auto Ownership per Household
Land Use Type	% Auto	% Walk	% Transit	% Bike	% Other		
Areas with Good Transit/ Mixed Use In Multnomah County	58.1%	27.0%	11.5%	1.9%	1.5%	9.80	0.93
Areas With Good Transit Only In Multnomah County	74.4%	15.2%	7.9%	1.4%	1.1%	13.28	1.50
Remainder of Multnomah County	81.5%	9.7%	3.5%	1.6%	3.7%	17.34	1.74
Remainder of Region	87.3%	6.1%	1.2%	0.8%	4.6%	21.79	1.93

Areas with good transit service and a good mix of land uses showed the highest percentage of alternative mode use (41.9 percent combined). Conversely, the remainder of the region showed the highest percentage of automobile use (87.3 percent). This indicates that individuals are likely to use the automobile when no other choices exist, but may choose other alternatives when they are available. The results of this study support this region's effort to link land use and transportation planning as a means to provide a balanced, multi-modal transportation system.

Conclusions

Assessment of federal, state and regional mandates and analysis of data from the Region 2040 process produced the following conclusions:

Transportation Implications

- The transportation system must serve the urban form established in the 2040 Growth Concept if the region is to be successful in managing expected growth.

- In addition to supporting implementation of the 2040 Growth Concept, policy implementation must give top priority to projects or programs that maintain or preserve existing transportation infrastructure and address safety-related deficiencies, including the safety of pedestrians and cyclists.
- Transportation investment should be a priority in key target areas, particularly the central city, regional centers, industrial areas, transit corridors and station areas.
- The density of the regional street network must be expanded to accommodate planned population and employment growth, particularly in areas where significant increases in density are planned, such as regional centers. Portions of the existing street network also warrant expansion to meet new demands. These new or expanded streets must be designed as multi-modal facilities, reflecting the variety of travel demands that accompany each land-use component.
- Higher-density, mixed-use locations should be tied to the highest quality transit and should provide improved pedestrian and bicycling environments.
- Improved transit, pedestrian and bicycle travel, parking limits and other transportation demand management actions complement higher-density land use designations and will help achieve mandated 10 percent reduction in VMT per capita in the UGB by 2015 and a 20 percent reduction by 2025.
- Local governments should implement code changes that address building orientation and pedestrian access to transit, particularly in higher-density centers and corridors, consistent with requirements contained in the Oregon Transportation Planning Rule.
- Access to highway corridors that connect the region to neighboring towns must be limited to reduce urban development pressure on adjacent rural lands.
- Specific urban connector routes through rural areas outside the Metro UGB should be designated as such and designed to ensure safe, efficient travel while discouraging urban development. Other rural routes should be limited to serve only rural needs to reduce urban development pressure.
- Parking limitations, pedestrian amenities and compact, more densely developed urban areas should be implemented to reduce vehicle miles traveled and to increase transit ridership.
- Local street connectivity must be improved for more direct local access to reduce excess demand on regional routes and to promote alternative modes.
- A balance between jobs and housing within the market areas of regional centers can minimize travel needs for both shorter commutes and closer access to retail and other commercial services.
- The projected growth in the flow of goods in this region is an important consideration in the region's land-use and transportation planning efforts. This significant growth points to the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities and to continue maintaining and enhancing the freight transportation network.

Air Quality Implications

- Metro must establish minimum and maximum parking ratios consistent with air quality maintenance plans. In areas where transit is provided or other non-auto modes are

convenient, less parking should be provided while allowing accessibility and mobility for all modes, including autos. See Table 2 of the Urban Growth Management Functional Plan.

- Regional transportation investment should maintain compliance with air quality standards. Investment should support regional transit service hours increases averaging at least 1.5 percent annually, completion of the west-side light rail transit facility and completion of the light rail transit facility in the South/North corridor by the year 2007.
- If greater reduction of transportation-related pollutant emissions becomes necessary to assure maintenance of the ozone standard, federal transportation funding may increasingly be diverted to trip reduction programs and transit, bike and pedestrian capital projects. Accordingly, all major roadway expansion, construction or reconstruction projects must include pedestrian and bicycle facilities.

Water Quality Implications

Impervious surfaces are hard surfaces that do not allow water to soak into the ground, and increase the amount of storm water running off into the storm water drainage system. The majority of total impervious surfaces is from roads, sidewalks, parking lots and driveways. Storm water runoff from these impervious surfaces reduces the amount of recharge of water to ground water and increases the capacity requirements of the storm water drainage system. Higher impervious surface coverage has been linked to dramatic changes in the shape of streams, water quality, water temperature and the health of the flora and fauna that live in the natural waterways. Examples of impervious surface reduction techniques include:

- consider use of open channels and swales on smaller streets and roads, as long as runoff velocities are low enough to prevent erosion;
- grade sidewalks so that storm water runs off into adjacent unpaved areas such as planting strips or landscaped private property;
- encourage the use of shared parking to reduce the size and number of parking lots;
- consider reducing commercial, industrial and multi-family use parking requirements to reduce impervious surface coverage;
- encourage shared driveways between adjacent development projects;
- follow guidelines for erosion control techniques during construction of regional streets and adjacent development projects.

Table 2. 4 Level-of-Service (LOS) Definitions for Freeways, Arterials and Signalized Intersections

LOS	Freeways (average travel speed assuming 70 mph design speed)	Arterials (average travel speed assuming a typical free flow speed of 40 mph)	Signalized Intersections (stopped delay per vehicle)	Traffic Flow Characteristics
A	Greater than 60 mph Average spacing: 22 car-lengths	Greater than 35 mph	Less than 5 seconds; most vehicles do not stop at all	Virtually free flow; completely unimpeded Volume/capacity ratio less than or equal to .60
B	57 to 60 mph Average spacing: 13 car-lengths	28 to 35 mph	5.1 to 15 seconds; more vehicles stop than for LOS A	Stable flow with slight delays; reasonably unimpeded Volume/capacity ratio .61 to .70
C	54 to 57 mph Average spacing: 9 car-lengths	22 to 28 mph	15.1 to 25 seconds; individual cycle failures may begin to appear	Stable flow with delays; less freedom to maneuver Volume/capacity ratio of .71 to .80
D	46 to 54 mph Average spacing: 6 car-lengths	17 to 22 mph	25.1 to 40 seconds; individual cycle failures are noticeable	High density, but stable flow Volume/capacity ratio of .81 to .90
E	30 to 46 mph Average spacing: 4 car-lengths	13 to 17 mph	40.1 to 60 seconds; individual cycle failures are frequent; poor progression	Operating conditions at or near capacity; unstable flow Volume/capacity ratio of .91 to 1.00
F	Less than 30 mph Average spacing: bumper-to-bumper	Less than 13 mph	Greater than 60 seconds; not acceptable for most drivers	Forced flow, breakdown conditions Volume/capacity ratio of greater than 1.00
>F	Demand exceeds roadway capacity, limiting volume that can be carried, forcing excess demand onto parallel routes and extending the peak period			Demand/capacity ratios of greater than 1.10

Source: 1985 Highway Capacity Manual (A through F descriptions)
Metro (>F description)

Parks & Openspaces

Chapter 3 Parks, Natural Areas, Open Spaces And Recreational Facilities

Overview

Parks, natural areas, open space, trails, greenways and associated recreational services provide important benefits to the visitors and citizens of the Portland metropolitan region including:

- Personal health benefits from leisure and fitness activities in local parks and open spaces (e.g., hiking, biking, field sports, playgrounds, swimming, picnicking, fishing, wildlife viewing). Recreational pursuits are vital to the social development of youth and the mental and emotional health of adults.
- Community benefits such as park access close to home, environmental education opportunities and community involvement in the planning and management of facilities. Parks and natural areas also provide unique landscape characteristics in the community.
- Economic benefits related to tourism and recreation industries and enhanced property values.
- Environmental benefits helping to maintain air and water resources, providing flood control and protecting fish and wildlife habitat.

Citizens throughout the region have demonstrated the importance of parks, natural areas and recreation services through their support in elections, opinion surveys, recreational activities and volunteer community service. Today, over 700 publicly-owned parks exist within and adjacent to the metropolitan region ranging from Mill End Park (18-inches in diameter) to Forest Park (4,683 acres). These facilities are managed by over 25 public park and recreation service providers. Metro currently manages more than 6,500 acres of land at more than 40 locations.

With increasing growth in the region, the demand for park facilities and recreational services has also increased. But the supply of facilities and services has not kept pace. The ability of parks providers to maintain existing parks is increasingly strained. Resources to acquire, develop, operate and maintain new parks are scarce. This is due to a variety of factors including an exclusive dedication of gas tax revenues to highway needs, significant reductions in federal appropriations for federal, state and local parks programs (e.g., Land and Water Conservation Fund), reductions in federal timber harvest receipts to counties, and property tax reduction measures.

Metro recognizes the desire of citizens to have quality natural areas and parks close to home. Metro is working with federal, state, and local governments to address and meet the park and

recreation needs of the Portland metropolitan area. The Metro Charter, approved by voters of the region in 1992, authorizes Metro to acquire, develop, maintain, and operate a system of parks, open space, and recreational facilities of metropolitan concern.

The policies and implementation of the parks, open spaces and recreation component of the Regional Framework Plan is based upon the Metropolitan Greenspaces Master Plan, adopted by Metro Council in 1992. The Greenspaces Master Plan describes goals and policies related to establishing an interconnected system of natural areas, open space, trails, and greenways for wildlife and people throughout the metropolitan area. The master plan relates to a number of Regional Urban Growth Goals and Objectives (RUGGOs), particularly Objective 15 which calls for protection of natural areas, parks and fish and wildlife habitat.

This chapter of the Regional Framework Plan outlines the policies that guide Metro in providing services related to the provision of parks, open spaces, and recreational services. The policies reflect the importance of parks, natural areas and recreational facilities in the urban fabric of communities throughout the region, and offer measures to ensure that natural resources are protected and citizens are provided appropriate recreational opportunities and facilities, close to where they live. This chapter also directs Metro to develop a functional plan that will provide specific requirements for cities and counties related to the need for specific comprehensive plans and implementing ordinances that recognize the need for park and open space planning.

Policies (Goals and Objectives)

Metro policies related to parks, open spaces, and recreational services address inventory, protection, management and use of these resources at the regional and local levels. These policies have been derived from the Greenspaces Master Plan, the RUGGOs, the Future Vision Report, and recommendations from MPAC, the Greenspaces Technical Advisory Committee, and from citizens of the region.

3.1 Inventory of Park Facilities and Identification and Inventory of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways.

3.1.1. Metro will inventory and identify regionally significant parks, natural areas, open spaces, vacant lands, trails and greenways at the watershed level using topographical, geologic and biologic functions and features, i.e., "landscape ecology," to ensure coordinated protection and enhancement of natural functions such as water quality and wildlife habitat across jurisdictional boundaries.

3.1.2. Metro will identify natural corridors that connect regionally significant parks, natural areas, open spaces, trails and greenways. River and stream corridors, utility corridors, abandoned roads, and railroad rights-of-way will provide primary linkages.

3.1.3. Metro will inventory lands outside the Urban Growth Boundary and Metro's jurisdictional boundary and identify them as prospective components of the Regional System when protection of these lands are determined to be of direct benefit to the region.

3.1.4 Metro shall identify urban areas which are deficient in natural areas and identify opportunities for acquisition and restoration.

3.1.5 Metro, with the assistance of local governments shall update the parks inventory which was completed in 1988. The inventory shall include acreage, facilities, environmental education programs, cultural resources, existing school sites and other information as determined by Metro and the Greenspaces Technical Advisory Committee. This inventory should be updated at five (5) year intervals.

3.1.6 Using appropriate landscape level techniques, such as remote sensing or aerial photo interpretation, Metro will inventory the urban forestry canopy on a periodic basis and will provide inventory information to local jurisdictions.

3.2 Protection of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways

3.2.1 Metro will continue to develop a Regional System of Parks, Natural Areas, Open Spaces, Trails, and Greenways (the Regional System) to achieve the following objectives:

a) protect the region's biodiversity;

b) provide citizens opportunities for, primarily, natural resource dependent recreation and education;

c) contribute to the protection of air and water quality; and

d) provide natural buffers and connections between communities.

3.2.2. Metro, upon the advice of citizens, and in coordination with local governments and state and federal resource agencies and appropriate non-profit organizations, will finance and coordinate protection and management of the Regional System across jurisdictional boundaries.

3.2.3. Strategies to protect and manage the Regional System and regional Goal 5 resources will include, but not be limited to, acquisition, education, incentives, land use and environmental regulations.

3.2.4. Lands inside and outside the Urban Growth Boundary and Metro's jurisdiction will be included in the Regional System when protection of these lands are determined to be of direct benefit to the region.

3.2.5. Metro shall collect and evaluate baseline data related to natural resource values of the regional system to identify trends and to guide management decisions.

3.2.6. New transportation and utility projects shall seek to avoid fragmentation and degradation of components of the Regional System. If avoidance is infeasible, impacts shall be minimized and mitigated.

3.2.7. Metro, in conjunction with affected local governments will work with the State to update, reinvigorate and implement a Willamette River Greenway Plan for the metropolitan region.

3.3 Management of the Publicly-Owned Portion of the Regional System of Parks, Natural Areas, Open Spaces, Trails and Greenways

3.3.1. Metro will assume management responsibility for elements of the publicly owned portion of the Regional System, as outlined in a functional plan to be developed.

3.3.2. Metro will assume financial responsibility related to those portions of the publicly owned system which are managed by Metro.

3.3.3. Local governments shall be given an opportunity to transfer existing publicly owned components of the Regional System to Metro and to acquire components of the Regional System with local resources.

3.3.4. The publicly owned portion of the Regional System shall be managed to protect fish, wildlife, and botanic values and to provide, primarily, natural resource dependent recreational and educational opportunities.

3.3.5. Metro will acquire portions of the Regional System as financial resources allow. Metro will negotiate acquisition agreements primarily with willing sellers. Power of eminent domain will be used only in extraordinary circumstances.

3.3.6 Master/Management plans shall be developed for each component of the Regional system to insure public use is compatible with natural and cultural resource protection. Master/Management plans shall be completed prior to formal public use.

3.3.7. Metro and local government cooperators in the Regional System shall be responsive to recreation demands and trends identified in the State Comprehensive Outdoor Recreation Plan (SCORP).

3.3.8 Metro shall develop master planning guidelines to assure consistency in the management of the Regional System.

3.3.9 From time to time, or in conjunction with the periodic up-date of the region wide parks inventory, Metro shall convene local government park providers to share information, review and analyze issues, and if appropriate develop recommendations related to:

1. roles and responsibilities
2. funding
3. levels of service
4. information needs
5. user trends and preferences
6. technical assistance
7. interagency coordination
8. public involvement
9. other topics as determined by Metro and local park providers

3.3.10 Metro, in cooperation with local governments, shall pursue the identification and implementation of a long term, stable funding source to support the planning, acquisition, development, management and maintenance of the Regional System.

3.4 Protection, Establishment and Management of a Regional Trails System.

3.4.1. Metro will identify a Regional Trails System which shall be included in the Regional Transportation Plan.

3.4.2. The Regional Trail System shall provide access to publicly owned parks, natural areas, open spaces, and greenways, where appropriate.

3.4.3. Metro will coordinate planning for the Regional Trail System with local governments, federal and state agencies, utility providers, and appropriate non-profit organizations

3.4.4. Metro will cooperate with citizens and other trail providers to identify and secure funding for development and operation of the Regional Trails System.

3.4.5. Metro shall encourage local governments to integrate local and neighborhood trail systems with the Regional Trail System.

3.5 Provision of Community and Neighborhood Parks, Open Spaces, Natural Areas, Trails and Recreation Programs

3.5.1. Metro shall recognize that local governments shall remain responsible for the planning and provision of community and neighborhood parks, local open spaces, natural areas, sports fields, recreational centers, trails, and associated programs within their jurisdictions.

3.5.2. Pending adoption and implementation of the functional plan referenced in section 3.5.8, Metro shall encourage local governments to (I) adopt level of service standards for provision of parks, natural areas, trails, and recreational facilities in their local comprehensive plans and (II) locate and orient such parks, open spaces, natural areas, trails, etc., to the extent practical, in a manner which promotes non-vehicular access. "Level of service standards" means: a formally adopted, measurable goal or set of goals related to the provision of parks and recreation services, based on community need that could include but not be limited to: 1) park acreage per 1,000 population; 2) park facility type per 1,000 population; 3) percentage of total land base, dedicated to parks, trails and open spaces; 4) spatial distribution of park facilities.

3.5.3. Metro shall encourage local governments to be responsive to recreation demand trends identified in the State Comprehensive Outdoor Recreation Plan (SCORP).

3.5.4. Metro shall encourage local governments to develop, adopt and implement Master Plans for local parks and trail systems, natural areas, and recreational programs.

3.5.5. Metro, in cooperation with local governments, state government, and private industry shall work to establish a supplemental funding source for parks and open space acquisition, operations and maintenance.

3.5.6 Metro shall encourage local governments to identify opportunities for cooperation and cost efficiencies with non-profit organizations, other governmental entities, and local school districts.

3.5.7 Urban Reserve master plans shall demonstrate that planning requirements for the acquisition and protection of adequate land to meet or exceed locally adopted levels of service standards for the provision of public parks, natural areas, trails, and recreational facilities, will be adopted in the local comprehensive plans. Lands which are undevelopable due to natural

hazards or environmental protection purposes (i.e., steep slopes, floodways, riparian corridors, wetlands, etc.) shall not be considered to meet the natural area level of service standards unless the land will be preserved in perpetuity for public benefit. Proposed public parks, open spaces, natural areas, trails, etc. shall be located in a manner which promotes non-vehicular traffic. No urban reserve area shall be brought within the Urban Growth Boundary unless the requirements set out in this subsection 3.5.7 are met.

3.5.8 Metro, in cooperation with local governments shall develop a functional plan which establishes the criteria which local governments shall address in adopting a locally determined "level of service standard." The functional plan shall also establish region-wide goals for the provision of parks and open space in various urban design types identified in the 2040 regional growth concept. The functional plan shall apply to the portion of the region within the Urban Growth Boundary and the urban reserves within Metro's jurisdiction when urban reserve conceptual plans are approved.

3.5.9 Metro will work with local governments to promote a broader understanding of the importance of open space to the success of the 2040 Growth Concept and to develop tools to assess open space on a parity with jobs, housing, and transportation targets in the Regional Framework Plan.

3.6 Participation of Citizens in Environmental Education, Planning, Stewardship Activities, and Recreational Services.

3.6.1. Metro will encourage public participation in natural, cultural and recreation resource management decisions related to the Regional System.

3.6.2. Metro will provide educational opportunities to enhance understanding, enjoyment and informed use of natural, cultural, and recreational resources.

3.6.3. Metro will provide and promote opportunities for the public to engage in stewardship activities on publicly owned natural resource lands. Cooperative efforts between Metro and private non-profit groups, community groups, schools and other public agencies should be encouraged.

3.6.4 Metro should provide opportunities for technical assistance to private owners for stewardship of components of the Regional System.

3.6.5 Metro and local governments should work with state, federal, non-profit and private partners to facilitate stewardship and educational opportunities on publicly owned natural resource lands.

3.6.6 Metro shall encourage local governments to provide opportunities for public involvement in the planning and delivery of recreational facilities and services.

3.6.7 Metro will follow and promote the citizen participation values inherent in RUGGO Goal 1, Objective 1 and the Metro Citizen Involvement Principles.

Requirements

This Regional Framework Plan requires Metro in conjunction with local governments to develop a functional plan that will address land use planning requirements that:

- identify and delineate an interconnected regional system of parks, natural areas, open spaces, trails and greenways (the Regional System);
- identify implementation measures to protect and manage the Regional System; and
- establish local government land use planning criteria and goals for parks consistent with policy 3.5.8.

Background

For decades, parks have played a vital role in the quality of life in the metropolitan region. In 1903, visiting landscape architects Frederick Law Olmsted, Jr. and John Charles Olmsted discussed a newly-emerging American notion of making nature urbane and, thus, naturalizing the city. In their report to the Portland Parks Board, the Olmsteds noted, "While there are many things, both small and great, which may contribute to the beauty of a great city, unquestionably one of the greatest is a comprehensive system of parks and parkways."

From the time of the Olmsteds' report through the 1960s, the city of Portland was the primary population center and primary parks provider in the region. With continuing urban growth through the 1970s, suburban communities outside the central city established new and expanded parks and recreation programs. A primary emphasis of these programs was, and continues to be, the provision of facilities for active recreation such as sports fields, swimming pools, playgrounds and associated recreation programs.

In 1974, the State of Oregon issued the Willamette River Greenway Plan outlining protection and acquisition proposals for the Willamette River from Cottage Grove to its confluence with the Columbia River. The Plan directs development away from the river, establishes a greenway setback line, requires inventories be completed and requires protection of significant fish and wildlife habitats, vegetative fringe, scenic qualities and viewpoints.

The State of Oregon requires all cities and counties to develop comprehensive plans. These comprehensive plans must address State Land Use Planning Goals including: Goal 5, Open Spaces, Scenic and Historic Areas and Natural Resources; Goal 6, Air, Water and Land Resources Quality; Goal 8, Recreational needs and Goal 15, the Willamette River Greenway. Metro, as well as the cities and counties, must show that land use plans are consistent with these goals.

In 1989, Metro published the Metro Recreation Resource Study in a cooperative effort with other park providers in the region. The purpose of the study was to:

- identify existing public parks, natural areas and other recreational resources in the region;
- describe the general issues, problems, and opportunities relating to these resources;
- identify needed actions to provide adequate park facilities and services in the Portland metropolitan region.

The study identified the need to increase the inventory of park facilities and services and address the need for additional natural area park facilities in the metropolitan region, in response to the growing demand for natural resource-based recreational opportunities (e.g., hiking, biking, fishing, boating, camping, wildlife watching) close to home. Publicly-owned and managed natural areas were found to be limited to, primarily, Forest Park, Oxbow Park and Tryon Creek State Park. A regional, cooperative planning approach was recommended to address this issue.

In 1990, the Metro Council established two advisory committees to coordinate development of a regional natural areas master plan to guide protection and management of regionally significant natural areas in the region. The Greenspaces Technical Advisory Committee is composed of parks and natural resource professionals in local jurisdictions, state and federal agencies and representatives of nonprofit advocacy groups for parks, natural areas, open spaces, trails and greenways.

A Greenspaces Policy Advisory Committee consisting of elected officials from local jurisdictions in the region, including Clark County, oversaw development of the Metropolitan Greenspaces Master Plan, which the Metro Council adopted in 1992. The Greenspaces Policy Advisory Committee was replaced by a citizen-based Regional Parks and Greenspaces Advisory Committee in 1995 to advise the Metro Council, Metro Executive Officer and the Metro Regional Parks and Greenspaces Department on a variety of issues affecting regional parks and natural area facilities and services.

In 1993, Multnomah County approached Metro concerning the possible consolidation of its Parks Services Division with Metro's Greenspaces Program. The consolidation was consistent with each agency's desire to support its own mission (e.g., growth management for Metro; social services for

Multnomah County) and was expected to further the regional vision embodied in the Metropolitan Greenspaces Master Plan. In December 1993, Metro Council approved the merger of the Multnomah County Parks Division with Metro's Greenspaces program, creating the Metro Regional Parks and Greenspaces Department.

The new department began operations in January 1994. Combining Metro's planning experience with park management experience greatly enhanced Metro's ability to acquire, develop, maintain, and operate a system of parks, natural areas, and recreational facilities of regional significance. It also put Metro in a position to better support local parks providers in coordination and planning activities. The parks merger allowed Metro to address and coordinate issues common to all local park providers. For example, Metro coordinated the identification of 90 local park acquisition and improvement projects which were included in the 1995 open space, parks, and streams bond measure.

In 1995, Metro referred a $135.6 million bond measure to voters of the region that identified 14 regional acquisition target areas, 6 regional greenway and trail projects and 90 local natural area acquisition and development projects that supported the goals of the Metropolitan Greenspaces Master Plan. Voters of the Portland metropolitan region approved Measure 26-26 in May 1995. Metro's goal is to acquire approximately 6,000 acres within the 14 regional target acquisition areas and corridors.

The Future Vision Report (1995) required by the Metro Charter also identifies parks and natural areas as valuable components of a livable community. The report states that:

- "We value a life close to nature incorporated in the urban landscape."
- "We value nature for its own sake, and recognize our responsibility as stewards of the region's natural resources."
- "...this region is recognized as a unique ecosystem...which seeks to:
    - improve air and water quality, and increase biodiversity;
    - protect views of Mt. Hood, Mt. St. Helens, Mt. Rainier, Mt. Adams, Mt. Jefferson, and other Cascade and coastal peaks;
    - provide greenspaces and parks within walking distance of every household;
    - assure a close and supportive relationship among natural resources, landscape, the built environment, and the economy of the region; and
    - restore ecosystems, complemented by planning and development initiatives that preserve the fruits of those labors."

In addition, the RUGGOs state under Objective 15 that:

> "Sufficient open space in the urban region shall be acquired, or otherwise protected, and managed to provide reasonable and convenient access to sites for

passive and active recreation. An open space system capable of sustaining or enhancing native wildlife and plant populations should be established."

"15.1 Quantifiable targets for setting aside certain amounts and types of open space should be identified.

15.2 Corridor Systems- The regional planning process shall be used to coordinate the development of interconnected recreational and wildlife corridors within the metropolitan region

15.2.1 A region-wide system of trails should be developed to link public and private open space resources within and between jurisdictions.

15.2.2 A region-wide system of linked significant wildlife habitats should be developed. This system should be preserved, restored where appropriate, and managed to maintain the region's biodiversity (number of species and plants and animals).

15.2.3 A Willamette River Greenway Plan for the region should be implemented by the turn of the century."

The policies in this chapter capture the intent of the RUGGOs, Future Vision and Metropolitan Greenspaces Master Plan related to providing an adequate and viable system of parks, natural areas, trails, greenways and recreational programs and services in the Portland metropolitan region.

Analysis

A key element of the 2040 Growth Concept for accommodating future urban growth in the region includes encouraging a compact urban design. This means smaller lots in much of the new development and where transit service levels are high, such as in regional and town centers, mainstreets and station communities, residential development types including rowhouses and multi-family development.

New neighborhoods and communities should include adequate parks and open spaces. Planning for the acquisition and protection of land for parks and open spaces should be included in planning for future urbanization inside and outside the Urban Growth Boundary. A crucial issue related to parks, natural areas and recreation in the region is how communities will work together to plan for the provision of these important public facilities and services.

Identification and Inventory of the Regional System

The development of the Metropolitan Greenspaces Master Plan required the systematic, scientific identification, inventory and assessment of natural area features in the metropolitan region. A consultant team was assembled by Metro in 1989 to conduct the inventory and analysis of the

Portland metropolitan region to identify regionally significant natural areas and corridors for fish, wildlife and natural resource dependent recreation.

The natural areas inventory was based on aerial photography of the total study area (372,682 acres) with biological field checks of seven percent of the natural areas mapped. Periodic updates of the inventory will be necessary to assess the status of regionally significant natural areas, monitor trends and to support future planning and management efforts. Future work will be based on systematic and scientific methods of identifying and delineating natural resource lands and maintaining and managing links between them on a landscape level.

New inventories are needed in order to accomplish the following:

- Reevaluate protection priorities established in the Metropolitan Greenspaces Master Plan. Some sites identified may no longer be considered regionally significant. New sites may be added to the regionally significant inventory once updated data are available.
- Delineate regionally significant natural areas; research and document the natural resources values for which protection should be justified and supported.
- Delineate and conduct field assessments of biological corridors that interconnect regionally significant sites.
- Assure that the regional system of parks, natural areas, open spaces, trails and greenways contributes to the maximum extent, based on scientific data, to the protection of water quality, fish, wildlife and botanic diversity within the region.
- Inventory existing park facilities, recreational capacity and analysis of park service needs and consistency with the 2040 Growth Concept.

Protection of the Regional System

Ecological principles are important in establishing protection priorities including:

- Maintaining biological diversity by protecting and enhancing a variety of habitats such as wetlands, riparian corridors, forests, and agricultural lands distributed throughout the metropolitan area;
- Consolidating natural areas to create or maintain relatively large contiguous acreages connected to natural habitats outside the urban environment to avoid habitat fragmentation and species isolation;
- Protecting, restoring, and recreating stream corridor vegetation by replacing riparian vegetation where it is lacking or dominated by exotic species and removing barriers, where possible, to maintain connections with adjacent upland habitats;
- Protecting or restoring naturally vegetated connections between watersheds at headwaters or other appropriate locations; and
- Planning for capital improvements to provide appropriate access and use of parks and natural areas.

A variety of strategies will be used to protect and manage the regional system of parks, natural areas, trails and greenways to support fish and wildlife populations as well as provide a variety of recreational opportunities. These include:

1. Acquisition;
2. Environmental education, stewardship and landowner incentives;
3. Land use and environmental regulations.

Acquisition

One effective means of natural resource protection is public acquisition from willing sellers. The Open Spaces Parks and Streams Bond Measure 26-26, approved by voters in 1995, provided funds for the acquisition of open space in 14 regional areas and 6 regional greenway and trail corridors. The measure also provided funds for up to 90 local greenspace projects which support or complement the Metropolitan Greenspaces Master Plan.

Since 1990, voters in Gresham, Lake Oswego, Portland, Tualatin, Tualatin Hills Park and Recreation District and other jurisdictions have approved general obligation bond issues which support, in part, elements of the Metropolitan Greenspaces Master Plan and other active recreation facilities and services needs.

More than $6 million in federal transportation funding under the Intermodal Surface Transportation Efficiency Act of 1991 has been invested in trail projects in the region. Land acquisition can also be supported through donations of land, conservation easements and dedication of land as open space.

Environmental education and incentive programs

Environmental education and incentive programs have the capacity to provide a level of protection for park and natural areas. Building an increased understanding and awareness of metropolitan natural resource values and the benefits of parks in general leads to informed management decisions and increased public participation in volunteer stewardship activities. An informed public uses parks and natural areas in ways that help reduce maintenance costs. Incentive programs (e.g., grants, tax reductions, technical support) provide public agencies and private parties support in the restoration, enhancement, and management of natural areas.

Land Use and Environmental Regulations

Oregon land use policies and regulations provide limited protection of natural resources in the metropolitan region. Local governments can use the comprehensive land use planning process to

establish protective zoning standards to protect natural resources within their jurisdictions, but often apply them inconsistently. Natural resource management on a regional basis offers the opportunity for uniform standards to protect these resource values. Coordinated local planning efforts are needed to assure that an adequate supply of park land is available to meet the future demand for community and neighborhoods parks, sports fields, recreation centers and locally significant open space trails and greenways.

Title 3 of Metro's Urban Growth Management Functional Plan is a first step towards protecting water quality and water features such as streams and wetlands from human disturbances by requiring vegetated buffers. Title 3 also requires Metro to conduct a regional assessment for identification and protection of Goal 5 resources (see section under Goal 5).

A combination of strategies will be required to protect and connect a regional system of parks, natural areas, trails and greenways for fish, wildlife and people. Metro will work with local governments, state and federal agencies, conservation organizations, businesses and citizens to review, refine and further implement these protection strategies.

Management of the Regional System

The Metro Charter provides for Metro to serve as a regional provider of parks, natural areas, and recreational facilities. The 1994 City Club of Portland report, Portland Metropolitan Area Parks, cites the value of a regional parks authority. A cooperative, regional management approach can result in equitable distribution of facilities, funding equity, consistency in planning, management and operation of facilities and user benefits.

Currently, regionally significant parks, natural areas and trails are managed by a variety of public entities with a variety of financial resources. There is little consistency in development, operation and management standards and little or no integration regarding funding, user fees, or visitor services. Tax reform initiatives may have serious implications for local and state agencies' abilities to operate and maintain existing parks for the region's growing population. Local governments, in particular, may at some point wish to transfer management of regionally significant facilities to Metro, to address funding equity issues and allow local providers to focus on community and neighborhood parks and other facilities and programs related to active recreation.

Site specific management begins with the preparation of master/management plans. The primary purpose of a master plan is to articulate management, development and operation guidelines. Master/management plans should be prepared for the system of regional parks, natural areas, open

spaces, trails and greenways. Metro will prepare guidelines for master planning to ensure consistency in management of the Regional System.. Sites which lack master/management plans will be "landbanked" and public use limited until appropriate facilities and services can be planned, developed and maintained.

Metro should provide the forum for addressing issues related to the coordination and integration of management, and of service delivery related to parks, open spaces and recreation. Metro should lead an effort to study and evaluate how park and recreation services are provided and recommend actions which will improve funding stability and equity, operational efficiency, customer service, management integration, coordination, and continuity.

Regional Trail and Greenway System

In their report to the Portland Parks Board in 1903, the Olmsted brothers observed that a system of interconnected parks serves the public far better than a collection of isolated pieces of land. Trails and greenways provide the connective network necessary to link the region's parks and natural areas, while providing public access and corridors to support movement of fish and wildlife. Trails and greenways also link communities and connect the Metro urban area to the Pacific Coast, Cascade Mountains and Washington state.

Since 1988, Metro has staffed a Regional Trails and Greenways Working Group composed of parks/trails/bike planners from local, regional, state and federal agencies, and nonprofit trail organizations. The working group assisted Metro in developing the trails and greenways component of the Greenspaces Master Plan. Thirty-five trail and greenway corridors are identified in the master plan.

Refinement of the trails and greenways component has been ongoing since the Greenspaces Master Plan was adopted in 1992. Citizen involvement plays an important role in trail planning. For example, the Peninsula Crossing Trail was added to the Regional Trail System in 1993 at the request of residents of North Portland. Many of the trails and greenways segments support local comprehensive plans and/or local parks and trails master plans.

In 1996, Metro commissioned a Rails and Trails Strategic Plan which inventoried rail right-of-ways throughout the region and identified those having trail potential, should abandonment occur. Abandoned rail lines provide outstanding trail opportunities. The Springwater Corridor Trail, for example, was envisioned to link the metropolitan area with Mt. Hood National Forest. Constructed segments now link S.E. McLoughlin in Portland with the city of Gresham and provide 16.8 miles of trail, utilized by an estimated 500-600 thousand people per year.

Public planning and transportation agencies incorporate elements of the Regional Trails Plan into state, regional, and local transportation projects and urban development projects (e.g., Mt. Hood Parkway, Sunrise Corridor, Hwy. 30 Corridor Study; Multnomah County West Hills Study).

Provision of Community and Neighborhood Parks, Open Spaces, Trails and Recreation Programs

Cities and two special districts (i.e., Tualatin Park and Recreation District; North Clackamas Park and Recreation District) in the region are responsible for community and neighborhood parks, open spaces, trails, and recreation programs. The 1994 City Club of Portland report, Portland Metropolitan Area Parks, assessed and considered a vision for parks in the region. The report concluded that the size and configuration of the current parks and recreation system is inadequate to meet current and future demand. In order to address this perceived inadequacy, the "completion ... of the core system" was envisioned.

In essence, a core system of parks would ensure that a "minimum level of parks and recreation facilities ... be available to all citizens regardless of income or geography in the metro area." The approach was based on assessing local community values and making adjustments to reflect "separate social goals... held by a specific community." Not surprisingly, neighborhood and community parks were the first element of this system.

The City Club report recommended the provision of parks be coordinated with other basic services including schools, public safety, land use and transportation planning, and watershed management. Citing Portland as an example, the survey concluded that a "multi-generational community center at each middle school" should provide local communities in the region with a place of education, recreation, and congregation.

Local governments and park and recreation districts have been and will continue to be the primary providers of community and neighborhood parks, open space, trails, sports fields, recreation centers and recreation programs. These facilities and programs provide important opportunities for active and passive recreation in closest proximity to where citizens live.

Local governments should be encouraged to prepare park and recreation master plans which provide a framework for community level park and recreation facilities, trails and recreation programs. Master plans should:

- Identify parks deficient areas and include strategies for addressing these deficiencies;
- Integrate local trail systems with the regional trails system;
- Identify opportunities for cooperation and cost efficiencies between communities, schools, and quasi-public organizations such as the YMCA;

- Provide for citizen involvement in the development and implementation of master plans;
- Identify funding strategies and implementation schedules;
- Be responsive to the State Comprehensive Outdoor Recreation Plan (SCORP);
- Complement the Regional System.

Metro should identify and evaluate opportunities to assist local governments and park and recreation districts with development and implementation of master plans. Potential opportunities include:

- Develop a functional plan, in conjunction with local governments which will address needed land use planning for parks, open spaces, natural areas, trails and recreation programs. Land use planning should reflect that locally chosen "levels of service" in terms of parks per population or per acre should be used to guide the need for additional resources;
- Provide mapping and information services through the agency's Data Resources Center to support local planning efforts;
- Provide forums for the exchange of ideas, information, strategies and development of partnerships between providers, schools, and quasi-public organizations;
- Provide funding support by incorporating local parks components in regional funding strategies and continuing the restoration and education grants program;
- Advocate for the identification and implementation of state and federal funding sources which provide financial resources to supplement local investments in parks, open spaces, trails, recreation facilities and programs;

Participation of Citizens in Planning, Stewardship, Environmental Education and Recreational Activities

> "*What is not understood is not valued, what is not valued will not be protected, what is not protected will be lost.*" Charles Jordan, Portland Bureau of Parks and Recreation.

Public understanding and participation in the planning and protection of the region's parks, natural areas, open spaces, trails, greenways and recreational facilities are the foundation of successful parks and recreation services. Meaningful citizen involvement is fundamental to an effective response to community needs, it results in more responsive management through identification of appropriate priorities, and enhances financial and volunteer support. Metro, local governments, businesses and citizens working together must build a stewardship ethic and provide meaningful opportunities for public participation to assure parks and recreational services meet the needs of the metropolitan region and ensure the protection of natural resources.

As members of the public gain a comprehensive understanding of parks and natural area needs and opportunities, they will become active partners in efforts to determine future planning choices, and

conduct periodic public review of local master plans and other related plans. Citizens can provide guidance through forums, participation on advisory committees, and in various other capacities.

Goal 5

In Oregon, local governments carry out planning to protect natural areas consistent with the State Land Use Planning Program. This land use program requires local governments to conform with up to nineteen statewide planning goals. Goal 5, Open Spaces, Scenic and Historic Area and Natural Resources is one of the key goals which can result in tools for protecting urban natural areas at the local level in the metropolitan region. A study, To Save or to Pave; Planning for the Protection of Urban Natural Areas, by the Portland Audubon Society and 1000 Friends of Oregon (1994), analyzed and evaluated the implementation of Goal 5 in the metropolitan region in protecting urban natural resources during the last decade. Some of the important findings from the study are listed below:

- Over three-fourths of local decisions examined allowed degradation of natural and scenic resources.
- Goal 5's rules were site specific and did not protect resources on an ecosystem or landscape level.
- Local governments employed a variety of regulatory and non-regulatory techniques with no overall consistency in an area.
- Goal 5 does not require standardized inventories or methods of data collection. As a result, important areas were omitted from consideration for protection, and inventories did not contain enough information to guide local planning decisions.
- Enforcement of local Goal 5 programs is difficult, inadequate and too reliant on citizen efforts.
- Upland forests are the least protected resource, and are vulnerable to destruction.

Metro has addressed natural resource issues in three policy documents: 1) the Metropolitan Greenspaces Master Plan (1992), 2) the Regional Urban Growth Goals and Objectives (RUGGOs) (1995), and 3) Title 3 of the Urban Growth Management Functional Plan (1996).

The Greenspaces Master Plan, adopted in 1992, through a mapping and public process, identified 57 sites in our metropolitan area that retained significant natural biological characteristics. Seventeen of these 57 sites are in the process of been acquired through the Open Spaces Parks and Streams Bond Measure 26-26. The remaining 40 sites are in private ownership, and are being lost to development at the rate of 6 percent per year. These sites are all Goal 5 areas and effective land use regulations under the Goal 5 rule help protect these regionally significant sites.

Title 3 of the Urban Growth Management Functional Plan (Water Quality and Floodplain Management Conservation) could set performance standards to protect streams, wetlands and

floodplains by limiting or mitigating the impacts of development activities. Title 3 addresses Goal 6 and 7 and does not currently address Goal 5. Title 3 (Section 5 Fish and Wildlife Conservation Area) recommends local governments to address fish and wildlife habitat, but does not mandate any protection of these resources at this time. Title 3 does, however, require that Metro conduct a regional assessment of regionally significant Goal 5 resources and evaluate the protection of these resources. Based on this analysis, Metro will develop a strategy and action plan to address inadequacies in the protection of regional Goal 5 resources. This plan will be carried out by Metro. Local jurisdictions may be required to also adopt protective measures through amendments to the Functional Plan.

Water Management

Chapter 4 Water

This Chapter is divided into two sections: Part 1, Urban Water Supply and Part 2, Watershed Management and Water Quality.

Part 1 Urban Water Supply

Overview

Clean and sufficient quantities of water are essential to the people of the region, as well as their commerce, agriculture and economic viability. It is not only important, however, to have adequate supply, but that supply must be able to reach where people are living throughout the region. How water is supplied to the region can also have impacts on the natural environment, including whether there is sufficient water for fish and wildlife habitats. This highlights the important linkage between growth management planning and planning for the provision of water supply and its related infrastructure.

This section of the Regional Framework Plan sets out the policies, their background and analysis implications, and the implementation plan and regulations concerning urban water supply and storage.

Policies (Goals and Objectives)

4.1 General Policy Direction

The Metro Council has communicated to the region's water providers that its main interests in water supply planning and implementation focus on water conservation and the link between land use and water supply. Metro has not assumed any function related to transmission, storage and distribution of drinking water. Based on this, future Metro policies will primarily concentrate on:

- promoting and achieving regional water conservation and demand management goals as defined in the Regional Water Supply Plan;
- promoting the coordination between regional growth management programs and water supply planning;
- promoting the coordination between land use planning and achieving the goals of the Regional Water Supply Plan; and

- setting benchmarks and evaluating achievement of the targets and goals established in the Regional Water Supply Plan in coordination with the region's water providers.

4.2 Process

The regional planning process shall be used to continue coordination with the implementation of the adopted RWSP and any future updates of that plan to ensure that future needs for water supply are appropriately met.

A regional strategy and plan for the Regional Framework Plan element linking demand management, water supply sources and storage shall be developed to address future growth in cooperation with the Regional Water Providers Consortium and the region's water providers.

The regional strategy and plan element shall be based upon the adopted 1996 Regional Water Supply Plan, which contain integrated regional strategies for demand management, new water sources and storage/transmission linkages. Metro shall evaluate its future role in encouraging conservation on a regional basis to promote the efficient use of water resources and develop any necessary regional plans/programs to address Metro's future role in coordination with the region's water providers.

Participants in the RWSP as members of the Regional Water Providers Consortium have endorsed the following policy objectives to guide their cooperative efforts in regional water supply planning. These same policy objectives appear in the RWSP where they are intended to provide guidance for weighing and balancing the strategies contained in the plan and for any future updates of the plan. All Consortium participants have agreed to collaborate and coordinate on regional water supply planning; however, the regional water providers have reserved the power to make their own determinations of how to carry out these policies.

Specific policy directions identified in the RWSP include the following:

4.3 Efficient Use of Water

- Maximize the efficient use of water resources, taking in to account current and emerging conservation opportunities, availability of supplies, practicality, and relative cost-effectiveness of the options.

- Make the best use of available supplies before developing new ones.

4.4 Water Supply Shortages

- Minimize the frequency, magnitude, and duration of water shortages through a variety of methods including development and operation of efficient water supply systems, watershed protection and water conservation.
- Ensure that the frequency, duration and magnitude of shortages can be managed.
- Ensure that decision makers retain the flexibility to select appropriate risk levels for peak event water shortages given applicable future conditions, constraints, and community values.

4.5 Impacts of Catastrophic Events

- Minimize the magnitude, frequency, and duration of service interruptions due to natural or human-caused catastrophes, such as earthquakes, landslides, volcanic eruptions, floods, spills, fires, sabotages, etc.

4.6 Water Quality

- Meet or surpass all current federal and state water quality standards for finished water.
- Utilize sources with the highest raw water quality.
- Maximize the ability to protect water quality in the future, including support for and participation in watershed-protection and pollution-prevention based approaches.
- Maximize the ability to deal with aesthetic factors, such as taste, color, hardness and odor.

4.7 Economic Costs and Cost Equity

- Minimize the economic impact of capital and operating costs of new water resources on customers.
- Ensure the ability to allocate capital and operating costs (e.g., rate impacts) for new water supply, related infrastructure, and conservation water savings, among existing customers, future customers, and other customer groups, proportional to benefits derived by the respective customer group(s).
- Maximize cooperative partnerships to co-sponsor projects and programs that provide mutual and multiple benefits.

4.8 Environmental Stewardship

- Minimize (i.e., avoid, reduce and/or mitigate) the impact of water resource development on the natural and human environments.
- Foster protection of environmental values through water source protection and enhancement efforts, and conservation.

4.9 Growth and Land Use Planning

- Be consistent with Metro's regional growth strategy and local land-use plans.
- Facilitate and promote effective Regional Water Supply Plan implementation through local and regional land use planning and growth management programs.

4.10 Flexibility to Deal with Future Uncertainty

- Maximize the ability to anticipate and respond to unforeseen future events and changes in forecasted trends. All potential water supplies will be kept as potential sources, including the Willamette River.

4.11 Ease of Implementation

- Maximize the ability to address current and future local, state, and federal legislative and regulatory requirements in a timely manner.

4.12 Operational Flexibility

- Maximize operational flexibility to best meet the needs of the region, including the ability to move water around the region and to rely on backup sources as necessary.

Ensure that the plan includes flexible strategies for meeting both sub-regional and regional water demands in the near-term and beyond

Background

Metro's involvement in regional water resource planning extends back to the 1960's and 1970's when Metro's predecessor, the Columbia Regional Area Government (CRAG) compiled water and sewer infrastructure needs, and met federal reporting mandates. This work coincided, in part, with a rapid surge of suburban growth in Oregon dating back to the 1950's. During the decade of the

1960's, residents in the Willamette Valley began to regard higher costs for services imposed on governments and urban development patterns with concern. Combined with an outspoken and environmentally-minded governor, Tom McCall, the late-1960's direction in Oregon was to protect the state from the "grasping wastrels of the land." The state established the Oregon Department of Environmental Quality (DEQ) in 1969 to administer and monitor statewide environmental standards associated with existing federal mandates.

In 1973, the Legislature passed Senate Bill 100, calling for the formation of the Land Conservation and Development Commission (LCDC) to monitor compliance of local plans with state goals. State planning goals were written to link concerns about urban development with environmental protection measures. Goal 14 established the concept of urban growth boundaries (UGB) to separate urban from rural lands. The establishment of the UGB was considered not only a tool to reduce land extensive development, but also as a way to help minimize costs of extending public services and facilities, such as water and its transmission piping.

At the national level there was a parallel course of events that led to the of the enactment of the Clean Water Act (CWA) in 1972, and the formation of the Environmental Protection Agency (EPA) to track progress towards the goals of the CWA.

During the early 1970's, CRAG was designated by DEQ as the region's Areawide Water Quality Planning Agency (1974), an effort that culminated in the Metro Council's adoption of the Regional Wastewater Management Plan (1980) and the Regional Stormwater Plan (1982).

The Metro Water Resources Policy Advisory Committee (WRPAC) was formed in the early 1980's to provide technical advice to the Metro Council on the development of Metro's functional plans for areawide wastewater and stormwater management. WRPAC, whose membership consisted of technical staff representing water providers and wastewater managers from around the region, extended the scope of its purview and membership to include matters related to "multi-objective watershed management" and policies and plans related to growth management planning.

Early Plans: Defining Roles and Responsibilities

In 1989, Metro began to evaluate regional water resource needs and to clarify its role, as described in a Water Quality Issues Report (July 1989). The following year, the Metro Council Planning Committee approved the Water Resources Work Plan (1990), which emphasized stormwater management, water quality modeling and participation in other regional water initiatives.

In late 1989 and early 1990, the region's water providers formally organized a Regional Providers Advisory Group and started to discuss future water supply issues. It was agreed that the region was facing future supply shortfalls based on current supplies, use patterns, and growth projections.

Over the next two years, including one summer of record drought (1992), the Portland Water Bureau, in coordination with other providers, sponsored a series of Phase I studies concerning future regional water demands, potential water source options and water conservation opportunities (Water Source Options Study, 1992; Water System Demand Study, 1992; and City of Portland Conservation Study, 1992).

An evaluation of Phase I results concluded that six regionally significant source options to meet population growth forecasts over a 50 year-horizon were worthy of further analysis. A Phase II scope of work was developed that focused on the development of an integrated water supply plan for the region. Twenty-six of the region's water providers signed an intergovernmental agreement in April 1993, to fund and manage the Regional Water Supply Planning Study. In 1994, Metro became the 27th project participant.

More Recent Regional Policies

In assessing how the region's growth should be managed, the Metro Council adopted the Regional Growth Goals and Objectives (RUGGOs). These goals identify both water quality and water quantity issues of regional significance in Metro's growth management planning. The RUGGOs also instruct Metro to work with all relevant jurisdictions to comply with state and federal requirements for drinking water, to sustain beneficial water uses and to accommodate growth.

Another source of regional policy, the 1992 Metro Charter, was approved by the region's voters in November, 1992. The Charter recognized the important linkage between planning for the region's growth and planning for water supply needs, and directed Metro, in its Regional Framework Plan, to address ". . . water sources and storage.."

In response to requirements of the Metro Charter, the Future Vision document was adopted by the Metro Council in 1995. It states that there should be: "...intelligent integration of urban and rural development which seeks to: improve air and water quality..."

The Greenspaces Master Plan called for the protection and enhancement of open space and natural areas, and directly linked their "survival" with water resources planning and management (see also Chapter 4). The Master Plan identified the need to protect and enhance waterways and floodplains as a strategy to protect and manage parks and open spaces. The plan recognized the value of

watershed planning and, further, used watersheds as the basis for ecological planning and protection of resources.

The Region 2040 Growth Concept, adopted by the Metro Council as an ordinance in 1995, addressed land use, transportation, open space and livability for the region. The growth concept relied on a number of key elements, including population projections and projected land use densities and employment assumptions. It also analyzed the different water supply infrastructure needs and implications associated with three growth concepts. (Concepts for Growth, 1994). Metro worked closely with the region's water providers to rank each growth concept and compare the concepts based on various factors related to water supply. This work is summarized in Metro's Water Descriptive Indicators Report (1994) which also identified the relative cost differences between the three growth concepts.

The intent was to ensure that the eventual growth concept adopted by the Metro Council took into full consideration the implications of providing drinking water to future populations. The Region 2040 project and the Regional Water Supply Planning Study clearly identified how growth affects water supply and the need for coordinated planning to meet future water supply demands.

The Metro FY 1994-99 Water Resources Work Plan builds on the successes of the 1990 Water Resources Work Plan and on the water resources policies contained in the RUGGOs, Metro Charter, Metropolitan Greenspaces Master Plan, and Metro's Regional Wastewater and Stormwater Management Plans. These policies identified the water quality and water supply issues of regional concern that Metro should address in its planning functions.

The five-year work plan proposes work elements in the subject areas of water supply and water quality. The work plan sets out to accomplish the following:

- ensure sufficient quantity of surface water and groundwater is available to the region;
- protect and enhance water quality through coordinated growth management planning, emphasizing integrated watershed management, technical assistance and public education;
- adopt water resource elements in the Regional Framework Plan;
- develop a watershed program, including water conservation program and public education and technical materials for the region's water providers;
- recertify the annual wastewater management plan.

Other Region-wide Work

As previously discussed, the scope for the Regional Water Supply Plan came about as a result of the Phase I studies: Water Source Options Study; Water System Demand Study, and City of Portland Conservation Study, all completed in 1992. The Phase I study results pointed to the

value of examining issues in a regional context, integrating available technical information and growth projections, and identifying strategies to develop water options for the future. The Regional Water Supply Planning Study was initiated in 1993; Metro formally joined the study in 1994. The final draft of the Regional Water Supply Plan was endorsed by the Metro Council on November 21, 1996. The resolution endorsing the Regional Water Supply Plan also authorized Metro to join the Regional Water Providers Consortium.

The 27-member Regional Water Providers Consortium, formed at the end of 1996, was created to promote voluntary coordination of individual and collective actions of those parties implementing the Regional Water Supply Plan. In addition, the Consortium's general purposes include the following:

- serve as the central custodian for plan documents, including computer models;
- review and recommend revisions of the Plan, as appropriate;
- provide a forum for the study and discussion of water supply issues of mutual interest which could apply to statewide land use goals, comprehensive plans, regional plans or land use regulations;
- establish an avenue for public participation in water supply issues;
- promote the voluntary coordination of individual and collective actions of Participants implementing the Plan;
- provide a forum for the study and discussion of water supply issues of mutual interest to Participants and to coordinate the responses of Participants to such issues.

The RWSP is intended to provide guidance to each of the individual participants, however, each Participant that endorsed the RWSP and joined the Consortium also remains responsible for determining and adopting appropriate policies as permitted by law. Each regional water provider retains its own decision making powers to plan, construct and operate its own water system.

Metro is not bound by any federal or state regulatory requirements regarding water supply or drinking water quality, because it is not a water provider. Although Metro does not have direct authority over water supply provision or transmission, its land use decisions have significant implications for drinking water quality, quantity and protection of current and future drinking water sources.

The tri-county region has high quality drinking water from numerous surface water and groundwater sources. Future development and expected population increases, however, will place new demands on these resources. The region's water suppliers predict regional mid-range and high-range average annual demand increases of 1.5 percent and 2.1 percent between 1990 and

2050, respectively. Comprehensive regional water supply planning is necessary to meet these future demands. The region's water providers also included low and high range water demand forecasts in their water supply planning process.

Serving future growth will have inherent opportunities and challenges. The more planning is coordinated, the better chance water providers will have to serve future growth.

The 1992 summer drought caused residents to realize that climatic drought cycles are a reality in this region and water conservation must be integrated into how we use water. Potential water shortages due to droughts, increased demands on water consumption due to population increases, and increasing state emphasis on instream water rights all highlight the crucial need for proactive regional planning to meet future demands.

Inappropriate land use activities also have an effect on water supply. Examples of industrial contamination of groundwater used for drinking water are found in the Portland metropolitan region. Land use planning and growth management, therefore, play a significant role in ensuring adequate future water supplies.

From the beginning of the Region 2040 program, it has been recognized that the future location of the Urban Growth Boundary is very important to public agencies and water providers. These agencies and providers plan for water facilities that have useful lifetimes of 50 years or more and they need to know where they will be expected to provide these services.

As a result of this need for coordinated planning, there has been close coordination between the Region 2040 program and the Regional Water Supply Planning Study. The Region 2040 and concepts for growth studies relied on the region's water providers to provide technical expertise and best professional judgment in evaluating the associated implications and costs.

Now that Metro has endorsed the 1996 Regional Water Supply Plan and will be participating in the Regional Water Providers Consortium, there are several tasks on which WRPAC must make recommendations and, ultimately, the Metro Council may consider taking action. These could include:

- identify a strategy for coordination with the water providers and the Regional Water Providers Consortium to foster the implementation of the Regional Water Supply Plan (RWSP) and Metro Regional Framework Plan objectives;
- identify what activities Metro will carry out to implement the Regional Water Supply Plan;
- determine the relationship between the implementation of the Regional Water Supply Plan and achievement of goals in this chapter.

Metro has endorsed the Regional Water Supply Plan and the Metro Council has stated that this plan will be the basis for future Metro water supply planning and coordination throughout the Region. There is no immediate need for Metro to adopt regulations or codes to implement the RWSP. If such regulations and codes are considered in the future they will be adopted according to procedures specified by Section 7 of the Charter. Consistency with the RWSP shall also be considered in the adoption of any such regulations or codes. However, the land use planning aspects of water supply and storage decision making within the region will be bound by the growth management policies of Metro and the adopted Framework Plan, to the extent required by any adopted functional plan.

Accordingly as the regional water providers and the Regional Water Providers Consortium work toward implementation of the RWSP, the following actions will be needed for coordination to ensure that the Framework Plan and the RWSP are compatible:

- identify the future resource needs of the region for municipal and industrial water supply;
- identify the transmission and storage needs and capabilities for water supply to accommodate future growth;
- identify water conservation technologies, practices and incentives for demand management as part of the regional water supply planning activities;
- identify water supply and storage policies based on the results of the RWSP that provide for the development of new sources, efficient transfer and storage of water, including water conservation strategies, which allow for the efficient and economical use of water to meet future growth.

Additionally, Metro should work cooperatively with the water providers to:

- determine how the Regional Water Supply Plan will be updated in relation to the Regional Framework Plan chapter dealing with water supply and storage;
- determine how the activities of the Regional Water Supply Plan will be monitored for compliance with Regional Framework Plan water supply element;
- determine how Metro will monitor the implementation of the 2040 growth concept for implications to water supply issues (e.g., ensure that future land use practices do not contaminate groundwater or degrade run-of- river sources of drinking water).

Part 2 · Watershed Management and Water Quality

Overview

Watershed management and clean water are essential as habitat for fish and wildlife. They are also keys to a region's livability and future growth, as well as to ensure the quality of drinking water. The provisions of the 1996 reauthorization of the Federal Safe Drinking Water Act calls for source water protection activities which will be implemented by the Oregon Health Division in concert with DEQ. The interconnected web of rivers and streams, which have played an important role in the region's history and economic success are also important to the commerce, agriculture and economic vitality of the region.

Tremendous advances have been made in the last 25 years to improve regional water quality and protect natural resources and open space. Future growth and development, however, will place increasing demands on the region's natural resources and affect water quality. Metro recognizes this inherent conflict and strives to implement policies which protect natural resources and water quality while the region grows. This conflict, however, will need to be continually monitored and new challenges met.

Watershed management is a planning tool which recognizes the dynamic connectivity between different components of a watershed. It identifies land use and management activities which protect the functions of natural systems while achieving desired land use patterns.

Metro recognizes that citizens are concerned about protecting resources and maintaining open space to enhance the region's livability. It acknowledges the importance of different components of a watershed and recommends that these lands be removed from the inventory of urban land available for development and that some are acquired for purchase as parks and open space. Finally, it recommends development of positive incentives and regulations to protect these critical natural resources.

Policies (Goals and Objectives)

These policies strive to address the inherent conflict between the function of natural systems and the effects of growth and development in the region. In order to meet the challenge of formulating policy in coordination with local jurisdictions and citizens, it is essential to acknowledge the dynamic process whereby such policies will continue to be developed and refined.

4.13 Overall Watershed Management

Planning and management of water resources should be coordinated in order to improve the quality and provide sufficient quantity of surface water and groundwater available to the region.

Metro will develop a long-term regional strategy for comprehensive water resource management, created in partnership with the jurisdictions and agencies charged with planning and managing groundwater resources and aquatic habitats. The regional strategy shall meet state and federal water quality standards and complement, but not duplicate, local integrated watershed plans. It shall:

- manage watersheds to protect, restore and ensure to the maximum extent practicable the integrity of streams, wetlands and floodplains, and their multiple biological, physical and social values;
- comply with state and federal water quality requirements;
- protect designated beneficial water uses;
- promote multi-objective management of the region's watershed to the maximum extent practicable; and
- encourage the use of techniques relying on natural processes to address flood control, stormwater management, abnormally high winter and low summer stream flows and nonpoint pollution reduction. (Note: Even though these techniques are encouraged, emphasis is still placed on maintaining intact naturally functioning systems, i.e., wetlands, riparian and floodplain. These natural systems should not be used as stormwater treatment facilities.)

4.14 Water Quality Goals

Metro should protect and enhance the water quality of the region by:

- establishing vegetative corridors along streams;
- encouraging urban development which minimize soil erosion;
- implementing best management practices (BMPs);
- maintain vegetation buffers along riparian areas.

4.15 Stormwater Management

Management of stormwater as the region grows is crucial to the protection of urban water resources. Stormwater is both a valuable resource and a management problem. As a resource, it is potentially beneficial to critical fish and wildlife habitat, recharges groundwater, and may contribute to cooler water to urban waterways during hotter, low flow summer months. As a management challenge, it can add to flooding, destroy fish and wildlife habitat, and pollute

groundwater and surface waters. Metro shall encourage the following regional policies for stormwater management:

- ensure that as development and redevelopment occurs that increases in stormwater runoff is avoided to the maximum extent practicable;
- stormwater should be managed as close as practicable to the site at which development or redevelopment occurs, in a manner which avoids negative quality and quantity impacts on adjacent streams, wetlands, groundwater and other water bodies;
- to the maximum extent practicable, the quality of stormwater leaving a site after development has occurred should be equal to or better than the quality of stormwater leaving a site prior to development;
- to the maximum extent practicable, the quantity of stormwater leaving a site after development has occurred should be equal to or less than the quantity of stormwater leaving a site prior to development. (Note: The flow rate of run-off is important and should also be considered);
- require integration of local and regional transportation projects to ensure issues of quality and quantity are addressed during design of transportation facilities.

4.16 Urban Planning and Natural Systems

Urban planning within the region should:

- promote the incorporation of natural watershed systems into future planning and design processes and balance their contributions to environmental improvement with recreational and other uses, and
- address the interrelatedness of greenspace protection, land use, transportation and water resources management issues.

4.17 Water Quality Protection

The water quality of the region should be protected and restored by:

- implementing watershed wide planning;
- implementing erosion control practices;
- promoting the protection of natural areas along waterways and encourage continuous improvement of water quantity and quality through liaison with agencies that influence changes along streams and rivers in the metropolitan area.

4.18 Fish and Wildlife Habitat Conservation Area

Metro should establish standards to conserve, protect, and enhance fish and wildlife habitat within the fish and wildlife habitat conservation areas to be identified on the fish and wildlife habitat map

produced as a result of carrying out Section 5 of Title 3 work by determining performance standards and promoting coordination of regional watershed planning.

Background

Federal Mandates

The Clean Water Act (1972) was established amid a growing tide of environmentalism that swept over the United States concerning the extent of water pollution in our rivers, lakes and oceans and the public's demand that these waters be cleaned up and protected. The goal of the Clean Water Act (CWA) was to ensure clean water for beneficial uses, such as drinking, swimming, fishing and to protect fish and wildlife.

This federally-mandated law created a system regulating direct and indirect discharges of pollutants in the country's waters (the National Pollutant Discharge Elimination System, or NPDES) that heralded a fundamental shift in approach to dealing with water quality issues. The act introduced two types of regulatory controls: water quality-based and technology-based effluent standards. It also introduced areawide water quality planning and recognized the link between land use and water quality.

Under provisions of the act, the Environmental Protection Agency was formed to administer the federal program. The Department of Environmental Quality (DEQ) took on the role of the state agency responsible for protecting water quality in Oregon.

The basis for DEQ's monitoring of Oregon's water quality program is the preparation of a routine water quality report describing and documenting monitoring and sampling programs at established river and estuary stations. These reports, developed by DEQ, are submitted to the EPA every two years, as required in Section 305(b) of the Clean Water Act. In this fashion, EPA has been able to compile a national summary of water quality conditions for the Congress in order to track progress on the goals of the CWA.

State Requirements

The DEQ, under guidance from the state Environmental Quality Commission, is the agency responsible for administering environmental laws in Oregon. The water quality program managed by DEQ is based on the protection of recognized "beneficial uses," such as water supply, fisheries, aquatic life and wildlife, recreation, and navigation. Water quality criteria, designed to protect these "beneficial uses," provide the basis for DEQ's evaluation of the status of water quality.

The Oregon Legislature declared the following to be beneficial uses for the waters of Oregon: public water supplies, propagation of wildlife, fish and aquatic life, and domestic, agricultural, industrial, municipal, recreational, and other legitimate beneficial uses of such waters.

The Clean Water Act, Section 303(d) requires each state to identify those waters for which existing required pollution controls are not stringent enough to achieve that state's water quality standards. As a result of this requirement, in 1996, DEQ published its 303(d) list of Water Quality Limited Waterbodies which includes many stream segments in the metropolitan region.

Another set of state requirements come form the Oregon Statewide Planning Goals, adopted by the Legislature in 1969 through the passage of Senate Bill 100 in 1974, address water quality and human health and safety in the context of land use planning. Goal 5 addresses open spaces, scenic and historic areas, and natural resources; Goal 6 pertains to air, water and land use resources and Goal 7 to areas subject to natural disasters and hazards.

Goal 5 is intended to protect natural resources to "...promote a healthy environment and natural landscape that contributes to Oregon's livability." Comprehensive plans of cities and counties are to demonstrate consistency with this goal, as are such Metro policies as its regional goals and objectives and this Regional Framework Plan.

Goal 6 objective is "to maintain and improve the quality of the air, water and land resources of the state." The goal states that local comprehensive land use plans should provide for the maintenance and improvement of air, land and water resources, including the carrying capacity of such resources of the planning area. The goal also states that, with regard to river basins, pollutant discharges should (1) not exceed the carrying capacity of such resources, consider long range needs; (2) degrade such resources; or (3) threaten the availability of such resources.

The objective of Goal 7 is "to protect life and property from natural disasters and hazards." This goal strives to ensure that development will not be located in areas known to be prone to natural disasters and hazards without appropriate safeguards. Areas that are known to result in death or to endanger development include such things as stream flooding, groundwater contamination, erosion and deposition, landslides, earthquakes and weak foundation soils. Goals 6 and 7 are closely linked through the connection between the carrying capacity of land and water resources, and natural disasters and hazards associated with exceeding the carrying capacity of such resources.

Regarding agricultural water quality, Senate Bill 1010, passed in the 1993 legislative session, provided the Oregon Department of Agriculture (ODA) with the authority to develop, implement and enforce agricultural water quality management programs where required by state or federal

law (e.g., TMDL basins, groundwater management areas, coastal zone management area). In 1995, the Legislature passed SB 502, which gave ODA exclusive authority to develop any program or rules that directly regulate farming practices for the purposes of protecting water quality.

With this authority, ODA established the Water Quality Program (SB 1010 Program), which provides a structure through which a local water quality management plan can be developed and implemented to prevent and control water pollution resulting from agricultural activities and soil erosion. SB 1010 directs ODA to work with farmers and ranchers by developing Agricultural Water Quality Management Area Plans for listed watersheds. The plans identify problems in the watershed that need to be addressed and outline ways to correct those problems. The intent of SB 1010 is to provide a role for ODA to assist producers in addressing those agricultural activities in watershed known to have the most problems with water quality, to prevent pollution problems wherever possible, and to alleviate any existing problems.

In addition, with the enabling legislation that created Metro in the late 1970's, the state statutes were amended to include a chapter on metropolitan service districts. These statutes provide the authority for Metro to:

> "Define and apply a planning procedure which identifies and designated areas and activities having significant impact upon the orderly and responsible development of the metropolitan area, including, but not limited to, impact on:...water quality..."
>
> Further, it states that Metro may "Prepare and adopt functional plans for those areas designated under subsection (1) of this section to control metropolitan areas impact on air and water quality...."

Regional Policies

Metro's involvement in regional water resource planning dates back to the 1970s when CRAG compiled reports documenting water and sewer infrastructure needs. These efforts culminated in the Metro Council adoption of the Regional Wastewater Management Plan (1980), which provides for regional coordination and staging for construction of wastewater treatment facilities, and the Regional Stormwater Management Plan (1982), which identifies eight major watersheds in the region and policies to reduce soil erosion and protect streams from degradation.

In 1989, Metro published its Water Quality Issues Report, followed by an Areawide Water Quality Report (1992) which identified the following water quality issues of regional concern: stormwater management, water quality- limited streams, wetlands and groundwater. The 1992 report also considered Metro's role in addressing the region's water quality problems, and suggested that Metro take on the following responsibilities: land use planning, watershed planning and technical assistance to local governments in addressing regional water quality issues.

The Regional Growth Goals and Objectives (RUGGOs), adopted by the Metro Council in 1991, and most recently revised in 1995, and the Metro Charter, adopted in 1992, identified the specific components Metro must address. In addition to water source and storage planning, Metro has "planning responsibilities mandated by state law" and "other growth management and land use planning matters which the Council... determines are of metropolitan concern and will benefit from regional planning."

In response to the charter mandate, a Future Vision was completed. This document states, in part:

> "Our place sits at the confluence of great rivers – the Columbia...Willamette and its tributaries..." To achieve this vision:
>
> ...Manage watersheds to protect, restore and maintain the integrity of streams, wetlands and floodplains, and their multiple biological, physical and social values."

In addition, as part of implementation of the Growth Concept, Metro is developing plans in relation to floodplains, stream corridors, wetlands and steep slopes (see Appendices) in an effort to protect the function and values of these resources, protect human health and safety, and maintain or enhance the quality of life in the region.

Analysis

Water Quality

Water quality has declined throughout the Portland metropolitan region as development has occurred. Over 213 miles of streams and rivers within the Metro boundary have been cited by the State as not meeting current water quality standards. Pollutants include dioxin, sediment, or fecal coliform and such conditions as lack of dissolved oxygen or high temperatures which greatly reduce its ability to support fish and wildlife. The State has indicated that more miles of streams and rivers within the Metro boundary also may not meet State standards, but insufficient monitoring equipment is available to confirm this.

Degraded water quality has reduced the beneficial uses of the region's streams, rivers and wetlands. Uses that depend on clean surface waters include domestic, fish life, industrial, irrigation, mining, municipal, pollution abatement, recreation, stockwater and wildlife uses. Clean water is essential to the quality of life in the region and the protection and enhancement of this resource is essential to achieving Metro's regional goals. As noted in a recent paper, "As long as the region is able to provide a quality of life that many people find attractive, it should continue to

prosper". (Economic Well-Being and Environmental Protection in the Pacific Northwest, 1995, T.M. Power)

Riparian and Wetland Areas

The natural areas along rivers and streams as well as wetlands and the actual bodies of water provide fish and wildlife habitat. That is, space for spawning, nesting and rearing; feeding; migrating and other life cycle needs of the region's fauna is provided by these areas. Protection and management of these resource areas will ensure that habitat is available for current and future fish and wildlife populations which may depend on these areas for some or all stages in their life cycles. For humankind, these areas provide a place for active recreation and scenic views and vistas which can help maintain a region's quality of life even as the region grows.

These areas can be protected by avoiding, limiting and managing development which adversely impact fish and wildlife habitat. These actions need not reduce the development potential of a property, although, in some circumstances, public acquisition or transfer of development rights may be the only equitable solution to properties wholly within such areas. A project alternatives analysis would be an effective tool under specific circumstances. In addition, establishing performance standards and promoting coordination by Metro of regional urban watersheds would help to address the issue.

Impacts of Urbanization on Watersheds and Biodiversity

Urban runoff, or "stormwater," has garnered concern focused on flooding and its potential threat to property and human life in rapidly developing areas of the region. More recently, however, concern about stormwater has focused on affects to the water quality of receiving streams. Based on national water quality studies in urban areas, it is clear that past efforts to improve water quality problems have not achieved set goals. Nonpoint sources of pollution are the principal problem behind the failure of rivers and other water bodies to support their designated uses. Consequently, control of nonpoint pollution is a new national focus as it becomes increasingly clear that water quality will not improve if nonpoint sources remain uncontrolled. For example, analysis of the literature (King County Surface Water Report, Johnson, 1992) shows that the wider the riparian buffer, the more impacts that can be addressed. The narrowest buffer widths can control nutrients, water temperature and stormwater runoff, while much wider buffers are needed to control for fecal coliform (primarily from nonperforming septic tanks in urban areas or livestock in rural areas) and sediment control (from soil erosion). The widest buffers are needed if wildlife habitat is to be maintained. In addition, urban development design can greatly impact the amount, if not quality of stormwater. In an analysis of potential strategies in the Olympia,

Washington area, reduction of commercial parking was the most effective strategy assessed followed by reduction of commercial, industrial and multifamily roof areas, followed by reductions in public street widths.

Within this region, discharges from combined sewer overflows (CSOs) and storm sewers are also a major public health concern. As do numerous cities across the country, the City of Portland violates standards due to CSO discharges into rivers at times of high stormwater runoff. Extensive reconstruction of the system is now under way. In addition, many storm sewers receive illicit discharges. These range from individuals dumping used motor oil into storm drains, to spills from transportation accidents, to improper commercial disposal of large amounts of unwanted liquid materials. Control of these discharges will greatly reduce stormwater pollution and improve water quality. Public education, source reduction and monitoring are essential to successful abatement or prevention of pollution.

Watershed-based Management and Planning

Biodiversity is also impacted by urbanization. Habitat is lost or becomes so fragmented that species survival and mobility is threatened. Wildlife movement corridors have been designed as a result of the Metropolitan Greenspaces Master Plan throughout the region to facilitate movement of animals and to connect isolated parks.

The impacts of urbanization on watersheds and biodiversity has been researched and documented within the metropolitan region. Our local streams, tributaries of the Willamette, Columbia, Clackamas, Sandy and Tualatin rivers, have suffered from the region's dramatic growth. The Columbia Slough and the Tualatin River have been designated water-quality limited by DEQ. Increasing urbanization and poor land use practices threaten the water quality of surface and groundwater in the metropolitan area. Water quality has diminished, groundwater has become contaminated, water supplies are threatened, water recreation is restricted in certain areas during rain events, and fish and wildlife habitat has been degraded.

Watershed analyses are being carried out in selected locations in the Portland metropolitan region. Though these analyses are primarily used by water resource managers, the goal is that they would also guide land use and transportation planning to foster a more comprehensive and integrated approach to land use planning.

Clearly, a regional comprehensive, integrated and multi-disciplinary watershed-based approach is needed to address these complex and far-reaching impacts. This will require a "big picture"

perspective at the landscape scale where protection, restoration, enhancement, planning and implementation of urban projects must take natural resources and biodiversity into consideration.

The Growth Concept places strong emphasis on the protection and management of natural resources within the Urban Growth Boundary and surrounding the metropolitan region. It acknowledges public concern and appreciation for environmental quality, open space and the scenic beauty provided by the region's natural resources. The Growth Concept identifies key natural features within the landscape for protection as greenspaces. These areas may be used as parks, open spaces, protected areas (such as wetlands and floodplains), or low-density residential development. Many of these areas have been set aside as park areas or may be acquired by Metro or local jurisdictions through implementation of the Metropolitan Greenspaces Master Plan. The Growth Concept identifies three strategies for their protection: 1) remove these lands from the inventory of urban land available for development; 2) these natural areas will receive high priority for purchase as parks and open space; and finally, 3) regulations could be developed to protect these critical natural areas that would not conflict with housing and economic goals. Transfer of development rights is one strategy or "tool" available to local governments to achieve this goal. Other areas will be protected through local zoning changes as a result of implementation of the Growth Concept (see Appendices).

The Metro Council has adopted regional stream protection and floodplain management performance standards. (see Appendices). This includes a model ordinance and maps of the protection areas within the region. Policies for implementation and regulation of regional watershed planning and regional Goal 5 planning has yet to be developed (see Appendices).

In addition, Metro must develop, test and monitor innovative ways to manage land use and protect receiving streams within the context of the Growth Concept. There must be encouragement to implement and monitor projects that use best management practices, innovate urban site design and landscaping to eliminate, reduce and manage nonpoint source pollution, manage stormwater, and prevent stream and floodplain degradation within the context of the Growth Concept land use densities. There is a need for documentation and dissemination of information about best management practices and nonpoint source pollution control.

Water quality protection and management can be achieved by managing how and where development and land use activities occur within the region. There are several ways in which this can be achieved. First, riparian areas along the region's rivers and streams can be protected from development by establishing riparian protection zones. Development and land use activities can be prohibited, limited or managed within these zones to protect riparian functions and values. Second, soil disturbing activities and soil erosion can be eliminated, managed or minimized in

order to reduce sediment entering receiving streams. This can be achieved through the identification, use and enforcement of specific best management practices when development occurs. Third, vegetation within this zone can be maintained and protected and where removal is unavoidable, vegetation can be re-established in a timely manner to maintain the functions and values of the riparian corridor in order to protect water quality.

Finally, partnerships can be encouraged between jurisdictions, developers and "friends" groups to test innovative water pollution control techniques.

Federal and State implications

There are several federal and state initiatives that will influence how Metro and local jurisdictions plan and manage water resources and watersheds within our region. At the federal level there is the potential listing of fish and wildlife species through the Endangered Species Act which will potentially affect activities on selected rivers and streams within the Metro region. For example, the steelhead trout is currently nominated for listing on the Clackamas and Sandy rivers within our region. A decision on any potential federal action is expected in mid-1997. At the state level, the Oregon Plan describes the voluntary efforts that numerous stakeholders and local jurisdictions will carry out to restore coastal salmon and steelhead populations and fisheries to productive and sustainable levels.

Additional federal implications for our region include revisions and reauthorization of the Clean Water Act and any expansion of the National Pollutant Discharge Elimination System (NPDES) program to include smaller cities in the region. Changes to federally-mandated programs will have a ripple effect on state water quality standards and regional water resources policies and planning. Any revisions to or expansion of such programs will require coordination by regional partners to respond accordingly.

Other Outstanding Issues

There are other issues that will need to be addressed in the future, including:

- impervious surface standards to minimize the impact of stormwater run-off in watersheds;
- regional watershed management with particular emphasis on the linkage between riparian areas and upland areas;
- a plan to create a regional fish and wildlife conservation area management and implementation strategy.

Critical technical work that remains includes:

- identification of the future resource needs for designated beneficial uses of water resources that recognizes the multiple values of rural and urban watersheds;
- monitoring of regional water quality and quantity trends vis-à-vis beneficial use standards adopted by federal, state, regional and local governments for specific water resources important to the region, and using the results to change water planning activities to accomplish the watershed management and regional water quality objectives;
- assessment of integration methods for urban and rural watershed management in coordination with local water quality agencies;

evaluation of the cost-effectiveness of alternative water resource management practices, including conservation.

Natural Hazards

Chapter 5 Regional Natural Hazards

Overview

Natural hazards provide a "reality check" to growth in any region, a yardstick against which we can ask, "Has the region's future been built on solid ground?"

In the past few years, natural disasters have impacted many local communities. Two examples include the Scott Mills earthquake in 1993, and the 1996 floods. For the three-county area, the cost of flooding and landslides from the February, 1996 event has been estimated at almost $60 million – some 200 households were within the area of inundation. Figure 5.1 depicts the frequency of flooding in the region. Reminders of the power that natural hazards can unleash on communities include distant more powerful events, such as the Loma Prieta (1989) and Northridge (1994) earthquakes in California; and the widespread Midwest floods in 1993. We know that major disaster can strike this region.

Flood Date	Flood Inundation Level[18] Willamette at Portland	Flood Inundation Level Columbia at Vancouver
February 1996	30.2 ft.	28.8 ft.
December 1977	17.6 ft.	Not available
January 1974	25.7 ft.	25.0 ft.
December 1964	29.8 ft.	29.5 ft.
June 1956	26.4 ft.	26.8 ft.
May 1951	Not available	21.5 ft.
June 1950	Not available	25.1 ft.
June 1948	31.6 ft.	32.8 ft.
January 1943	21.8 ft.	Not available
June 1894	35.1 ft.	36.0 ft.

Figure 5.1 Columbia and Willamette River Flooding[19]

Hazard mitigation planning, part of a new comprehensive approach to emergency management, can be instrumental in reducing the region's vulnerability to disasters. Hazard mitigation requires a partnership between emergency managers who are experts in emergency response needs, and experts in other professions such as land use planning, engineering and economics.

[18] River heights are measured by National Geodetic Vertical Datum.
[19] Table information from the City of Portland Hazard Mitigation Plan for the February 1996 flood.

Growth expected to occur as estimated in Metro population growth forecasts will require Metro, local governments and private partners to balance many policy considerations. Failure to address natural hazard management issues in the community planning and development stages can lead to amplification of future losses.

This chapter of the Regional Framework Plan outlines the background, analysis and policies concerning regional natural hazard mitigation planning. It addresses known regional natural hazards, and offers policy guidance for a comprehensive planning process that will help minimize the risks associated with such hazards to communities.

Policies (Goals and Objectives)

Policies concerning hazard mitigation, emergency preparedness, disaster response and recovery should be adopted and implemented. Policies addressing natural hazards mitigation and response are as follows:

5.1 Earthquake Hazard Mitigation Measures

The risk of loss or damage from an earthquake depends on: 1) the presence of seismically-hazardous land (land subject to failure or strong effects from an earthquake); and, 2) land use (structures by type and occupancy or use characteristics).

5.1.1 Metro will use the relative earthquake hazard maps for a variety of planning purposes, including:

- Urban Growth Boundary selection;
- public facility plans;
- transportation planning;
- solid waste management plans;
- natural hazard mitigation programs;
- parks and greenspaces planning.

5.1.2 Metro will encourage local governments to utilize the relative earthquake hazard maps in developed and undeveloped areas as they undertake planning actions, including:

- comprehensive land use plans updates;
- redevelopment plans updates;
- subdivision reviews;
- zoning;
- infrastructure plans updates;
- siting of new public facilities;

- siting of new public and private utility facilities;
- public and private facility emergency plan updates;
- developing retrofit and other mitigation programs;
- emergency response planning.

In planning for seismic hazards, land use classifications were identified as shown in Figure 5.2, grouping land uses according to a common tolerance for risk. Representatives of the public and private sectors participated through the Metro Advisory Committee on Earthquake Damages (MACMED) in reviewing and approving the land use groups in this figure. Each land use classification is comprised of uses recommended as having roughly equivalent ability to withstand earthquake damage. Metro encourages local governments to consider these land use classifications for seismic hazard mitigation planning and actions. Many land uses could be placed into more than one category. The table begins with land uses that should be most protected from earthquake damage and ending with land uses that need minimal protection.

Land Uses with Potentially Catastrophic Consequences if Damaged

- Large dams
- Nuclear facilities
- Facilities using/ storing large quantities of hazardous materials (defined by Oregon State law)

High-Occupancy Land Uses with Involuntary or Dependent Occupants

- Day care centers < 250 children
- Day care centers > 250 children
- Schools K-12 <300 students
- Schools K-12 > 300 students
- Convalescent homes < 50 persons
- Convalescent homes > 50 persons
- Jails and retention facilities

Land Uses Essential for Emergency Response

- Fire and police stations
- Garages for emergency vehicles
- Water tanks
- Structures housing fire suppressants
- Government communications centers
- Emergency response centers
- Hospitals
- Medical buildings with surgical services

Land Uses Critical to the Functioning of the Metro Region

- Large power plants
- Power intertie
- Sewage treatment plants
- Water storage/treatment facilities
- Regional highways, bridges & tunnels
- Regional rail lines
- Port facilities
- Major communications facilities
- Telephone exchanges
- Radio and TV stations

Land Uses with High-Occupancy

- Buildings > 10 stories
- Public & private colleges < 500 occupants
- Public & private colleges > 500 occupants
- Public assembly places w/ > 300 capacity
- Hotels & motels > 50 rooms >60,000 sq. ft. > 10 stories
- Major industries & employers
- Apartments > 25 units
- Buildings w/ > 150 employees

Land Uses with Important Local Impacts if Damaged

- Facilities using/storing small quantities of hazardous materials
- Small dams that could cause flooding
- Gas stations
- Highways, streets & bridges
- Utility lines, substations, & gas mains
- Water & sewer mains
- Industries & businesses important to economy
- Health care clinics
- Co-generation plants

Land Uses with Moderate-Occupancy

- Buildings w/4 to 10 stories
- Apartments 9 to 25 units
- Buildings w/ 50 to 150 employees
- Buildings w/ 50 to 150 employees >60,000 sq. ft. >10 stories
- Public assembly places: 50 to 300 capacity
- Hotels & motels <50 rooms <60,000 sq. ft. <10 stories

Land Uses with Low-Occupancy

- Apartments w/ 2 to 8 units
- Buildings w/ < 50 employees
- Buildings w/ 1 to 3 stories
- Public assembly places w/ < 50 capacity
- Single-family houses in a subdivision
- Single-family houses
- Mobile homes in a subdivision
- Mobile homes

Figure 5.2 Land Uses Grouped By Seismic Risk

Adoption or use of earthquake hazard maps and land use mitigation goals and policies will not, however, provide any "bright line" for determining risks, given the current level of scientific knowledge. MACMED suggested one method of determining which land uses should require site-specific studies and which land uses should not require such studies. The MACMED table is attached in the Appendices.

5.1.3 Metro will encourage local governments to use the table in the Appendices to set requirements for where site-specific seismic hazard evaluation is needed .

5.2 Flood Hazard Mitigation Measures

The surest and safest flood hazard mitigation measure is to build outside areas that can be flooded. However, the FEMA designated floodplains have been shown to be insufficient in protecting property from much less than catastrophic events. Many areas that were outside the FEMA 100 year floodplain flooded in 1996. Acquisition of vulnerable property and relocation of structures can convert a flood hazard area into a community asset. Title 3 of the Urban Growth Management Functional Plan (see Appendices) will restrict development in many of these flood hazard areas.

5.2.1 Metro will collaborate with federal agencies and local governments in using the February 1996 flood elevations and other relevant data to update the existing 100-year floodplain map.

5.2.2 Metro will encourage local governments to implement approaches for mitigating flood hazards such as the following:

- acquisition, relocation or flood proofing of vulnerable facilities;
- changing local development ordinances related to height requirement above base flood elevation;
- allowing cluster or planned unit development that keep buildings out of floodplains;
- overlay zoning that sets public health, safety or welfare requirements;
- subdivision development requirements for locating public utilities and facilities (such as sewer and water systems) to minimize flood damage;
- construction of levees and flood walls to mitigate flood hazards, particularly in densely developed urban areas, but should only be utilized when potential upstream and downstream damage is expected to be minimal;
- plans to leverage federal, state and local disaster assistance and hazard mitigation funds that may become available following a flood event;
- long-term capital improvement plans should be prepared and include provisions to elevate above the floodplain essential buildings for public health, safety and welfare services;
- flood threat recognition and/or warning systems should be investigated for cost-effectiveness.

5.2.3 Avoidance of floodplain development and other non-structure flood mitigation measures shall be favored over levee and dike construction and other structural flood mitigation techniques. The use of dikes and levees should only be used for protection of developed urban areas, and should not be used to reclaim vacant floodplain lands for development.

5.3 Landslide Hazard Mitigation Measures

Exposure to landslide hazard is a function of site geology , type of construction, surrounding development and events that trigger landslides. The effect of landslides on public safety, welfare and recovery cost can be minimized by measures that focus on mitigation. Land use policies and regulations are often the most effective measures for mitigating or minimizing exposure of lives and property to landslides.

5.3.1 Metro will encourage local governments to adopt landslide mitigation measures including:

- Logging regulations on steep slopes
- Landscape requirements
- Drainage controls
- Pre-development geotechnical studies

5.3.2 Metro will encourage local governments to limit development in the areas of greatest landslide hazard, except where development contributes to mitigation of the hazard. Such development should include appropriate safeguards and facilitate disaster response in the event it becomes necessary.

5.3.3 Metro will encourage local governments to investigate and take part in Federal Emergency Management Agency "mudslide" and "mudflow" insurance programs through the National Flood Insurance Program.

5.4 Volcanic Hazard Mitigation Measures

Mitigation of volcanic eruptive events is particularly relevant to development of the Clackamas River valley and Sandy River valley. Those areas are subject to periodic mudflows and pyroclastic flows from Mount Hood. Mudflow and flooding events are secondary to volcanism and should be addressed under the mudflow/mudslide and flooding policies.

5.4.1 Metro will collaborate with federal, state and local agencies to evaluate the regional risks of pyroclastic events, and encourage local governments to adopt appropriate hazard mitigation measures.

5.5 Wildland-Urban Interface Fire Mitigation Measures

The wildland-urban interface is defined as the area where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuel. In certain weather conditions, small fires in the interface areas can grow quickly to create extremely dangerous firestorms that are virtually impossible to control.

5.5.1 Metro will collaborate with federal, state and local agencies to evaluate the regional risks of wildland-urban interface fires, and encourage state and local governments to adopt appropriate hazard mitigation measures which may include:

- Collecting data related to fuel load and mapping vulnerable areas;
- Identifying areas of steep slopes with limited year-around water availability;
- Regulation of highly flammable material on structures, for example wooden roof shingles;
- Adequate roadway requirements to assure response by fire protection agencies;
- Adequate placement of fire suppression water hydrants;
- Landscaping regulation to improve fire resistance.

5.6 Severe Weather Hazard Mitigation Measures

Severe weather events may include windstorm, winter weather (snow, ice, prolonged cold), thunderstorms, tornadoes, drought, prolonged extreme heat and other weather events that disrupt vital regional systems.

5.6.1 Metro will collaborate with federal, state and local agencies to evaluate the regional risks of severe weather events, and encourage local governments and private organizations to adopt appropriate hazard mitigation measures which may include:

- Encouraging replanting with wind-resistant trees near power lines and other sensitive facilities.
- Incentives to retain larger stands of trees in newly developed areas, rather than preserve widely separated trees which are more vulnerable to wind fall.
- Incentives for drought-resistant landscaping.
- Improving public understanding of severe weather warnings and improving implementation of protective actions by governments, businesses and individuals.
- Encouraging vegetation management programs by utilities and local jurisdictions to reduce potential damages from the effects of severe weather events.

5.7 Biological Hazard Mitigation Measures

As development occurs around wetlands, greenbelts and open spaces, and as natural areas are set aside for environmental protection in previously developed areas, contact between humans and wildlife and insect populations is likely to increase. Death or injury to humans and loss of habitat for species can result from this contact.

5.7.1 Metro will collaborate with federal, state and local agencies to evaluate the regional risks of biological hazards, and encourage local governments to adopt appropriate hazard mitigation measures which may include:

- Support for existing insect and vector control programs to reduce the population of mosquitoes, flies, rats, etc., for disease prevention.
- Regulatory structure to create or preserve habitat for appropriate urban wildlife, while discouraging inappropriate urban wildlife such as large predators.

5.8 Other Hazard Mitigation Measures

Metro will collaborate with federal, state and local agencies to evaluate the regional risks of other natural hazards, and encourage local governments to adopt appropriate hazard mitigation measures.

5.9 Natural Disaster Response Coordination

Natural disasters such as a major earthquake will cause significant loss of life, injury and property damage. While vulnerability to hazards cannot be eliminated, implementation of the hazard mitigation policies described in this chapter will reduce human misery and property loss following a natural disaster. Metro has played an important role in assisting local emergency management agencies with disaster planning related to regional functions, such as disaster debris management and emergency transportation route designation.

5.9.1 Metro will provide leadership and support to the Regional Emergency Management Group (REMG) and encourage local governments to participate in the existing intergovernmental agreement and to provide the resources required to develop a regional disaster response plan.

5.9.2 Metro will collaborate with federal, state and local agencies, businesses and individuals to utilize the resources of Metro's Regional Land Information System and Natural Hazards Program data in developing a region-wide emergency management information system to improve disaster response coordination.

Relationship to Future Vision

In response to Section 5(1) of the Metro Charter, a Future Vision statement was created and adopted by the Metro Council in 1995. This document states the importance of safety and that:

> "...personal safety within communities and throughout the region is commonly expected as well as a shared responsibility involving citizens and all government agencies. Our definition of personal safety extends from the elimination of prejudice to the physical protection of life and property from criminal harm, *to mitigation and preparation for and response to natural disasters*." (Emphasis added.)

Metro's Growth Management Services department has played a pivotal role in initiating coordination of regional growth management and natural disaster planning responsibilities among local emergency management agencies in the region. This Chapter continues the department's efforts in mitigation and

preparation for response to natural disasters by development of the Regional Hazard Mitigation Plan and policies 5.1 to 5.9 above.

Background

In the past decade, local, state and federal agencies have launched initiatives to improve our knowledge of natural hazards. Understanding natural hazards and the risks they create is the starting point for the long and costly process of improving the safety of communities in relation to natural disasters. Only recently has the concept of hazard mitigation become the cornerstone for developing strategies to reduce the billions of dollars spent on response and recovery operations following natural disasters. The general natural hazard information outlined in this plan will be described in greater detail in the Metro Regional Natural Hazards Mitigation Plan currently being developed in coordination with local governments in the region, the State of Oregon and private sector organizations. That plan will describe hazard-specific risk reduction strategies. It is not intended to include functional plan requirements for changes in city and county comprehensive plans.

National Mitigation Planning

The Federal Emergency Management Agency (FEMA) coordinates all federal resources in support of state and local government activities in all phases of the emergency management process: emergency preparedness, mitigation, response and recovery. Congress stated its intention in the Robert T. Stafford Disaster Relief and Emergency Assistance Act to "...provide an orderly and continuing means of assistance...to local governments in carrying out their responsibilities by...encouraging hazard mitigation measures to reduce losses from disasters, including development of land use and construction regulations."

FEMA has recently adopted a national strategy to carry out the intent of Congress to reduce the cost of natural hazards through hazard mitigation programs. FEMA administers a post-disaster hazard mitigation grant program that is currently the only source of funds for encouraging state and local adoption of hazard mitigation measures. Pending federal legislation is intended to provide FEMA additional funding to encourage states to create pre-disaster mitigation programs.

State Mitigation Planning

Several state agencies are responsible for a variety of natural hazard management programs which address mitigation planning and response and recovery strategies. For example, the Oregon Department of Geology and Mineral Industries is responsible for assessing and characterizing geologic hazard and identifying earthquake mitigation measures in the state. The Office of Emergency Management, a

division of the Oregon State Police, is responsible for the state's emergency management program, including the all-hazard mitigation planning process. Other state agencies also share hazard mitigation responsibility for various functions including, but not limited to, the state Department of Environmental Quality, the Oregon Department of Transportation, the state Fire Marshal, the state Health Division of the Human Resources Department and the state Department of Water Resources.

State land use planning goals were adopted in 1969 by the Oregon Legislature requiring counties and cities to prepare comprehensive land use plans. In 1973, Senate Bill 100 established the Land Conservation and Development Commission to monitor compliance of local plans with state goals which, through passage of the bill, were rewritten to link concerns about urban sprawl with environmental protection measures. Goal 7, Areas Subject to Natural Disaster and Hazards, establishes the goal that developments shall not be planned or located in areas of natural disasters and hazards without appropriate safeguards. Goal 7 defines "Areas of Natural Disaster and Hazards" as "areas that are subject to natural events that are known to result in death or endanger the works of man..."

This Regional Framework Plan, as well as local plans, must comply with applicable state land use planning goals. This chapter and Title 3 of the Urban Growth Management Functional Plan (See Appendices) address aspects of statewide Goal 7.

Regional Mitigation Planning

The 1992 Metro Charter was adopted by a popular vote of the citizens of the region. It authorizes Metro to focus on guiding the region in how and where it will grow. The Charter, Section 6(3), also authorizes Metro to exercise authority related to the "Metropolitan aspects of natural disaster planning and response coordination" function. The Charter did not include natural disaster planning as one of the required components of the Regional Framework Plan. However, the Metro Council directed in Resolution No. 96-2378 that natural disaster planning should become a part of the plan as recommended by the Metro Policy Advisory Committee.

The Metro Data Resource Center (DRC) has collected and maintained demographic and geographic information, including databases for emergency 9-1-1 purposes and flood hazard data that can assist in the mitigation process. The information is an essential component of the urban growth process. Through its centralized database server, the Regional Land Information System (RLIS) can spatially depict land use records, zoning, urban development patterns and natural resource information. RLIS has become a tool for planning programs, including natural hazards mitigation.

Since 1992, the Oregon Department of Geology and Mineral Industries (DOGAMI) and Metro have produced earthquake hazard maps showing areas of the region where geologic conditions are more likely to contribute to damage in an earthquake. As part of the project, the City of Portland, Portland State

University and Metro have evaluated buildings for seismic risk, and identified vital systems and key facilities. With hazards and risks identified, Metro's geographic information system can be used to assess the region's vulnerability to earthquake hazards. As the seismic hazard maps produced by DOGAMI and Metro became available, a gathering of emergency management professionals from throughout the region began informal review sessions. More recently, the membership of the once "informal" gathering (including Metro), signed an intergovernmental agreement to form the Regional Emergency Management Group to develop a work plan for emergency management planning activities related to regional disaster issues.

As Metro worked to develop plans for how the region will grow, it became obvious that the region's ability to mitigate and respond to natural hazards needed to be considered. In response to this need, Metro's natural hazards mitigation program was created. The program provides regional coordination, outreach, data management services and technical assistance in developing regional strategies for mitigating natural hazards and preparing communities and residents for disasters.

Metro's Natural Hazards Program has collaborated with Metro's Regional Environmental Management Department and local and state emergency management agencies to develop a Regional Disaster Debris Management Plan. Metro's Natural Hazards Program has also collaborated with local and state transportation and emergency management agencies to produce a Regional Emergency Transportation Route Report.

Currently, a Regional Natural Hazards Mitigation Plan is being developed. The Natural Hazards Technical Advisory Committee created by the Metro Council will play an oversight role in the development of the plan.

Local Mitigation Planning

Local governments are required, in city and county comprehensive plans, to respond to state land use planning goals and, specifically, to develop and inventory known hazards.

Metro also conducted a survey of local governments in an attempt to identify policies, ordinances and administrative rules or codes for mitigating natural hazards. The results of the survey shed light on the status of the region's mitigation efforts. In addition, the Metro Council approved the formation of a Natural Hazards Technical Advisory Committee to consider measures that local governments, businesses and residents can take to reduce damage from natural disasters.

As a result of the February 1996 flood many local governments in the region have initiated or completed flood and landslide hazard mitigation plans. State and local government agencies and private

organizations have also undertaken a range of hazard mitigation planning initiatives related to improving the seismic performance of infrastructure and buildings.

The 1996 flood demonstrated that natural disasters do not respect jurisdictional boundaries. The regional impact of a major disaster argues for the coordination of hazard mitigation, disaster response and recovery planning with Clark County, Washington, as well as the Portland metropolitan counties in Oregon. Regional planning issues in relation to Clark County are addressed in chapter six of this plan.

Analysis

Natural hazard issues create implications for the regional planning process and the regional urban form in the 2040 Growth Concept and the form of the regional and town centers. Over time, implementing natural hazards planning measures can reduce the disaster vulnerability of the people of the region and the structures they build.

There are generally two categories of natural hazard mitigation measures related to land use planning: (1) hazard mitigation measures that may be applied to *undeveloped* areas; and (2) hazard mitigation measures that may be applied to *developed areas*.

Local governments, businesses and individuals must also plan to respond appropriately to the damage created by natural hazard events because no hazard mitigation program can totally eliminate societal vulnerability to natural disaster.

Following are categories of metropolitan features that could be affected by natural disasters.

Housing

Regional objectives for housing related to specific goals for low-income and median-income housing can be thwarted by a disaster if the desired housing is located on less expensive land that may include hazardous ground, or if the housing is not sufficiently engineered to survive an event. Natural hazard considerations can encourage the location of different housing types on different hazard zones.

For example, concentrations of lower income housing at greater risk from natural hazards can create significant housing shortages after a natural disaster. A regional policy of more evenly distributing low and median-income housing throughout the region may improve the performance of the housing stock in a natural hazard event by distributing the population across a variety of soil and slope conditions.

Public Services and Facilities

Natural hazards considerations will play a key role in the development and redevelopment of public services and facilities. Public safety structures, schools and other key facilities must be built to standards that provide some assurance that they will survive a natural hazard event and be available to provide service when most needed. Natural hazard events can cause expensive and prolonged disruption of a community's vital systems (e.g., water, sewer, telecommunications and other utility services). Identification of system segments that cross hazardous ground can offer opportunities to engineer system components to respond better in an event, or relocate an especially fragile component to safer ground.

Transportation

Transportation infrastructure can be severely disrupted by natural events, hampering response and delaying recovery. Priority routes for response and recovery resource movement can be identified. Intermodal transfer points can be especially important after a natural hazards event. Engineering strategies to improve transportation infrastructure performance can be developed. Alternative routes can be designated to improve resource movement in the event of failure to a priority route. Natural hazards considerations can be incorporated in the public involvement process to establish transportation funding priorities.

Economic Opportunity

Natural hazard events can severely disrupt the local, regional and state economy. For example, hard hit areas may lose many stores, requiring neighborhood residents to travel to distant stores, thereby placing additional burdens on transportation systems in the disaster recovery phase.

To the extent that long-term economic development plans describe the types of industrial and commercial development appropriate to designated areas, consideration of the relationship of development to the location of natural hazards should be incorporated.

Urban/Rural Transition

Natural hazards can play a role in defining the most effective Urban Growth Boundary (UGB) to provide a clear transition between urban and rural land. Located along natural and built features (e.g., roads, rivers, floodplains or other major topographic features), the UGB may help define the types of natural hazards to be mitigated in the land use and emergency planning process.

Developed Urban Land

One key objective of growth management is to encourage the development and redevelopment of existing urban land. Development in areas known or newly discovered to be susceptible to natural hazards is especially appropriate for carefully planned redevelopment which reduces the vulnerability of the people who live in the area. In coordination with land use, economic development, redevelopment and financing agencies, a combination of regulations and incentives may be employed to encourage people to continue to live, work and shop in already developed areas that are susceptible to natural hazards.

For example, unreinforced masonry buildings (URMs) can pose significant earthquake risks to inhabitants and passersby. Neighborhoods that contain many URMs may become candidates for targeted regulation and assistance, perhaps requiring life safety retrofit of URMs by a specified date, and developing the bonding authority to provide low-interest loans to building owners for that work.

Urban Design

Natural hazard considerations can assist in the design of settlement patterns, structures and landscapes to improve the feeling of personal safety in an urban setting.

Other Implications

The natural hazards management planning process also has close ties to watershed management and water quality and supply measures. Natural hazards considerations may also create multi-objective watershed management opportunities and encourage reliance on natural processes to address flood control, storm water management and abnormally high winter and low summer stream flows.

Hazard factors can influence which natural areas may be identified for preservation. For example, land susceptible to flooding may be appropriate for fish and wildlife habitat, development into parks for periodically intensive or moderate human use, parking areas, or appropriate constructed environments. However, land that is susceptible to flooding which is also susceptible to strong seismic damage may be more appropriate for fish and wildlife habitat and human use open space, including parking areas, and less appropriate for constructed environments. Such multiple hazard factors should be taken into account when determining open space designations or any other designation based upon an evaluation of economic, social and environmental factors.

Although the potential for water quality degradation resulting from flood has been addressed in the Watershed Management and Regional Water Quality chapter of this plan, other growth management planning measures remain to be discussed in relation to:

Life protection;

Personal and public property loss reduction;

Business recovery policies.

Consideration of natural hazards as a major factor or constraint in all aspects of the regional planning process will produce realistic information that can be used in developing procedures and standards for achieving Metro's 2040 Growth Concept. This has direct implications on the development of comprehensive land-use plans by cities and counties, and in the development of comprehensive emergency management plans to address issues related to hazard mitigation, emergency preparedness, disaster response and recovery.

Clark County

Chapter 6: Clark County

Overview

Clark County is located in southwest Washington, just across the Columbia River from the Metro area. The County is approximately 660 square miles and has seven incorporated cities: Vancouver, Camas, Washougal, Ridgefield, Battle Ground, LaCenter, and the Town of Yacolt. It is the fastest growing county in the State of Washington. Vancouver is the fourth largest city in the State of Washington.

Coordination between the Metro region and Clark County is important as there are issues of common concern to be addressed. Metropolitan-wide aspects of transportation, air quality, land use and economic development issues have been raised from time to time and bi-state coordination can aid resolution of such issues.

The Metro Charter, adopted by the voters within the Metro boundary (Clackamas, Multnomah and Washington counties only) includes the requirement that the Regional Framework Plan shall address:

> "....(8) coordination, to the extent feasible, of Metro growth management and land use planning policies with those of Clark County, Washington..."

Such coordination, if it is to be achieved, should not take the form of unilateral actions by Metro. Rather, it can only come about with the consent of the jurisdictions on both sides of the River. The Future Vision Commission recognized that decisions made in the Metro area could have a much wider impact. The Future Vision Commission concluded that:

> "The bi-state metropolitan area has effects on, and is affected by, a much bigger region than the land inside Metro's boundaries. Our ecologic and economic region stretches from the Cascades to the Coastal Range, from Longview to Salem."

The Future Vision Commission, required by the Metro Charter to complete a broad vision statement about the region, also included the Chair of the Clark County Commissioners, John Magnano. He stated:

> "Future Vision recognizes that we are irreversibly linked. It will help bring our communities together to create something greater than the sum of our individual parts."

This chapter documents existing policies and coordination efforts, to date. To address bi-state issues and answers, it is important to extend and enhance dialogue between Metro and Clark County. This chapter

is not meant as an endpoint. It describes the background and challenges to the Metro region and Clark County communities. Only after review and discussion with representatives from Clark County can new actions, if any, be considered. This Regional Framework Plan shares Metro's existing and contemplated policies for the Metro area with Clark County. It also provides for consideration of new policies that might be beneficial to the communities on each side of the Columbia River. Additions or revisions to this chapter may occur after these discussions with representatives from the jurisdictions of Southwest Washington.

Policies (Goals and Objectives)

6.1 Metro shall coordinate with land use and transportation planners in Clark County to ensure the closest coordination possible regarding growth management issues.

6.1.1 Metro, Clark County and its cities shall communicate on a regular basis to ensure coordination regarding growth management issues.

6.1.2 Metro shall work with Clark County governments and agencies to involve citizen groups and promote public outreach and education with respect to regional growth management.

6.1.3 Metro Regional Parks and Greenspaces Program staff shall include Clark County and its cities parks departments and citizen groups in an ongoing parks forum to develop a regional bi-state natural areas system.

6.1.4 Metro and Clark County governments and agencies shall continue and strengthen their coordination and cooperation in regional transportation planning.

6.1.5 Metro should encourage cooperative efforts to promote business location throughout the region, including Clark County, in order to improve the job/housing balance in the metropolitan area.

6.1.6 Metro should include Clark County and its cities in all emergency preparedness planning and coordination strategies for the region.

6.1.7 Metro shall involve citizen groups and promote public outreach and education in Clark County with respect to growth management.

6.1.8 Metro Regional Parks and Greenspaces shall develop an ongoing regional parks forum which includes park providers and citizen groups from Clark County to continue the development of a bi-state, regional natural areas system.

Background

The State of Washington passed the Growth Management Act (GMA) in 1990. Under the Act, Clark County adopted the Community Framework Plan on May 26, 1993, which served as the basis for development of a comprehensive growth management plan. Clark County adopted a Comprehensive Growth Management Plan in December, 1994. The county's cities also adopted their Comprehensive

Plans during the timeframe. An extensive effort was made to do partnership planning. These plans established Urban Growth Areas (UGA's) and policies to guide the county's and cities growth through the year 2012. Cooperative efforts were made with 9 school districts, fire, utility and Port districts to ensure coordination of plans.

Though there are separate aspects to Clark County and Metro's plans, there are common ones as well. Many of the goals and policies, most notably those related to the environment, housing, economic development and transportation, address issues of joint interest and concern to the metropolitan area.

Job/Housing Imbalance

Clark County has an estimated 1996 population of 303,500 people. When compared with growth in Clackamas, Multnomah and Washington counties during the period 1980 - 1996, Clark County had the fastest growth rate.

Table 6.1 Population Change by County 1980-1996

County	*1980*	*1996*	*Percent Change*	*Added Population*
Clackamas	241,900	313,200	23%	71,300
Clark	192,000	303,500	37%	111,500
Multnomah	562,600	636,000	12%	73,400
Washington	245,800	376,500	35%	130,700
Total	1,242,300	1,629,200	31%	386,900

A little more than half (52 percent) of the county's population is located within unincorporated areas of the county, but the county also includes the cities of Camas, Battleground, La Center, Ridgefield, Vancouver, Washougal, Yacolt and a portion of Woodland, Washington. The fastest population growth has been observed within unincorporated urban growth areas. However, the city of Battle Ground has experienced a 20 percent increase over the time period above. Vancouver, which recently completed a large annexation, has a population of 128,453 and is now is the fourth most populous city in the State of Washington.

The majority of Clark County's residents both live and work in the County. However, a significant number commute to Oregon for employment, about 34 percent of the Clark County workforce. Clark County is attracting a growing number of Oregonians who retain their employment in Oregon but reside in the county.

Clark County has captured more residential than employment growth in the metropolitan region as shown in Table 6.2. There is no expectation that jobs and housing will ever perfectly balance in any particular locale. However, a greater effort at business recruitment and incentives such as those included in Clark County's Comprehensive Plan, can aid in achieving a closer balance over time.

Table 6.2 Clark County's Capture of Population and Housing Growth

Year	Housing Permits			Nonfarm Employment				
	Total	Clark Co	Clark %	Total		Clark Co		Clark
1984	5,368	1,120	21%	548,750	(growth)	57,700	(growth)	
1985	9,409	2,358	25%	562,030	13,280	59,380	1,680	13%
1986	8,290	1,775	21%	580,380	18,350	62,240	2,860	16%
1987	9,871	2,389	24%	603,080	22,700	66,500	4,260	19%
1988	10,739	3,238	30%	634,220	31,140	71,600	5,100	16%
1989	16,348	2,917	18%	667,230	33,010	76,300	4,700	14%
1990	14,473	3,029	21%	695,010	27,780	80,700	4,400	16%
1991	9,573	2,685	28%	697,010	2,000	80,700	-	0%
1992	11,227	3,910	35%	709,920	12,910	83,800	3,100	24%
1993	12,874	4,287	33%	735,200	25,280	89,100	5,300	21%
1994	15,790	5,217	33%	769,460	34,260	95,200	6,100	18%
1995	15,004	3,621	24%	805,560	36,100	100,200	5,000	14%
1996				843,230	37,670	104,300	4,100	11%

Source: Washington Employment Security Department raw data dated August 25, 1997

Housing Stock

There are approximately 113,665 housing units within Clark County as of April 1, 1995. The current ratio of single family units to multi family units is 3.3:1 (87,289 units to 26,376 units) for the entire county, though it is 2.3:1 within the designated Urban Growth Area. In contrast, according to Metro DRC's data, there are approximately 538,304 housing units within the three Oregon counties of the Metro region in 1995. The ratio of single family units to multi family units is 2.4:1 (381,713 units to 156,591 units).

Housing prices in the county have historically been less expensive than in the Metro region. Due to rapid growth of about 4 percent a year for the past 5 years, the majority of the housing stock consists of new construction. Therefore, housing prices are rising, bringing them closer into line with those in the Metro region.

Economic Development

While separated by the Columbia River, Clark County and its cities are a vital part of the economy of the greater metropolitan area. According to 1990 Census data, 36,700 Clark County workers, or about 34 percent of the Clark County workforce, worked in the Metro area. This could also be described as about 7 percent of the Metro area workforce lives in Clark County. In contrast only 9,700 jobs, or about 12 percent of Clark County's employment were filled by commuters from Oregon. The data reveal that

Clark County is an important workforce exporter to the Metro area. These workers provide the Metro area with many different skills and contribute to Oregon State revenues through the non-resident income taxes they pay. Residents of Clark County are able to utilize many of the amenities of the Metro area, including Portland International Airport, cultural and recreational opportunities, as well as tax free retail shopping opportunities. Conversely, Oregon residents can enjoy tax-exempt shopping in Washington as well as many cultural and outdoor recreational opportunities. Information about development trends in Clark County since 1990 suggest that the percent of the Clark County workforce that commutes to the Metro area will remains at least at 1990 levels, if not higher, if conditions remain intact.

Business recruitment efforts of the Columbia River Economic Development Council have brought in some rather large employers to Clark County in recent years, including high tech industries such as Wafer Tech and Sharp Electronics. A recent Washington State law which allows tax exempt purchase of capital equipment for Southwest Washington businesses gives an additional incentive for businesses to move to or stay in Clark County. That law, as well as other incentives, are slowly working to increase economic development activity in the county. The potential for bi-state coordination is great, especially if regional marketing is promoted.

Land Availability for Industrial Development

The total vacant industrial acreage by UGA and unincorporated areas has been calculated by Clark County. In the county, approximately 12,226 acres of lands are designated for industrial use and supporting development. Of this total, about 5,839 acres are covered with existing industrial, warehousing, distribution and similar uses. Some 6,387 acres of land can be classified as vacant and developable, with 830 acres of this vacant property classified as "prime", and additional 938 acres that move to "prime" in the planning horizon. There are 2,661 acres classified as "secondary" and 1,959 acres as "tertiary." Both secondary and tertiary lands may have impediments to development, with tertiary having the most. Potential impediments in developing the identified industrial lands may include: environmental constraints, infrastructure; including timing of water and sewer services and transportation. Also at work are market forces which may influence all of the above.

Transportation

Clark County is connected with the Metro region by three bridges: two highway bridges, Interstate-5 (I-5) and Interstate -205 (I-205) and a railroad bridge. If current trends continue, the auto bridges will suffer more congestion in future as shown in Table 6.3.

Table 6.3 PM 2 peak hours north bound congestion (Source: RTP)

	I-5 Bridge	I-205 Bridge
1994	V/C: >0.9 (13,500 cars)	V/C:<0.8 (12,200 cars)
2015 Forecast*	V/C: >1.0 (17,600 cars)	V/C:>1.0 (19,400 cars)

Note: * = Committed scenario that assumes traffic improvement is limited to those already financially committed.

Coordinating with the Metro region's policies, the county encourages alternative modes through enhanced public transit and other transportation demand management programs. This is facilitated by the Washington State Commute Trip Reduction law which is the policy that actually encourages the shift from Single Occupancy Vehicles (SOV's). It was passed by the Washington State legislature in 1991 and mandates goals to achieve in the reduction of SOV use by their employees for businesses with 100+ employees.

Public transit is provided by C-TRAN, a publicly funded transportation system, which serves the county and offers connections to the Metro area. This service is currently being provided by buses. A light rail connection to Vancouver is planned as part of the phased construction of the South/North Light Rail Project. Prior to establishment of light rail, other alternatives such as enhancing bus service and adding HOV lanes and commuter rail service should also be considered. Portland and Vancouver are part of the Cascadia Corridor of intercity service between Vancouver, BC and Eugene, OR. As for air travel, Clark County uses PDX Portland International Airport.

Clark County is home to several small regional general aviation airports, including Pearson Airpark and Evergreen Airport in Vancouver. About 80 percent of the planes stored in hangars at Pearson are those of Portland area residents or businesses. Similarly, many of the planes at Evergreen also belong to Portlanders. Bi-state coordination of planning for aviation facilities will be necessary.

Parks, Natural Areas and Open Spaces

Clark County 20 Year Comprehensive Growth Management Plan includes a series of policies dealing with rural and natural resources and parks, recreation and open spaces. These policies are similar to those in the Framework Plan.

As of 1996, there has been a joint City of Vancouver/Clark County Parks Department to coordinate parks planning and acquisition. There has also been a recent enactment of the Real Estate Excise Tax (REET) for funding of park development. Progress is being made toward enhanced cooperative efforts both within and outside the county.

Clark County is part of the Metro region's greenspace planning and participates in park and open space programs. However, additional bi-state coordination could further enhance programs on both sides of the river and ensure better parks, natural areas and open spaces for people of the larger region.

Existing Coordination Framework

Most planning coordination between the states has been through formal and informal efforts. There are established frameworks for planning coordination between Clark County jurisdictions and the Metro region. For example, representatives from the County and Vancouver, Washington are members of several Metro policy advisory committees, including MPAC and JPACT, as well as two technical committees (TPAC and MTAC). The Future Vision Commission, required by the Metro Charter to complete a broad vision statement about the region, also included the past Chair of the Clark County Commissioners. In addition, representatives from Metro and ODOT are full voting members on the Southwest Washington Regional Transportation Council (RTC) and Regional Transportation Advisory Committee (RTAC).

Other examples of ongoing bi-state coordination include population forecasts, transportation modeling, Metro's greenspace planning and land use plan mapping. Population forecasts for the Metro area prepared by Metro are coordinated with those prepared by the State of Washington, Office of Financial Management for Clark County. The transportation model that Metro maintains includes Clark County and reflects the southwest Washington comprehensive land use plans and policies. In addition, as the Metro 2040 Growth Concept was being developed, staff from both sides of the River worked to ensure that the Metro 2040 Growth Concept map accurately reflected the Vancouver and Clark County Comprehensive plans.

While bi-state coordination to date has strongly focused on transportation issues as described hereafter, there are needs for more comprehensive coordination that integrates land use, transportation, parks and open spaces, economic development and other planning concerns. The Framework Plan shall serve as a starting point of discussion with Clark County to seek such coordination.

Coordinated Transportation Planning

Coordinated transportation between the two states dates back at least to the early 1900's, when a bridge across the Columbia was built. The Interstate Bridge, still in use today, was built in 1917. It included lanes for auto and truck traffic as well as for a trolley car. At that time, it was possible to take a street car from Oregon City to Vancouver and the Orchards area of Clark County.

In the intervening years, the privately owned street car system, which by 1925 included over 700 miles of urban and interurban lines, was gradually eliminated on both sides of the river and public road, highway and freeway investments were made. Public transit systems (buses) were also established as a substitute for the rail-based transit systems. The most notable roadway improvements included adding a second span to the Interstate Bridge (I-5), conversion of Highway 99 to I-5 and the construction of the Interstate 205 Freeway (I-205) bypass, including the Glenn Jackson Bridge over the Columbia River.

More recently, the Metro jurisdictions and the jurisdictions within southwest Washington have worked on reestablishing possible light rail connections. Initial joint transportation system analysis concluded that all high capacity transit (HCT) modes, including light rail transit (LRT), should be further evaluated in the I-5 corridor and that only HCT bus options should be further evaluated in the I-205 corridor. Analysis of the two bi-state corridors resulted in the selection of the I-5 corridor as the first priority for HCT in Clark County.

Subsequent studies resulted in the selection of LRT as the preferred mode and I-5 as the preferred alignment in Clark County with a terminus in the vicinity of 88th Street. A local financing proposal was developed to provide local funding for an LRT project from Clark County to Clackamas County, Oregon.

While the voters of the Metro region approved a $475 million bond measure providing the local match for the South/North project, Clark County voters rejected the financing proposal for the Clark County portion of the South/North LRT project in February 1995. The defeat of the LRT vote in Clark County led to an extensive discussion of the next steps for addressing bi-state transportation needs. Policy makers agreed that it was imperative to engage the community in a full debate on a wide range of transportation issues and the transportation needs facing Clark County.

The Regional Transportation Plan explores a variety of transportation options. In addition to the road, freight, transit, bike and pedestrian improvements included in the current Regional Transportation Plan, Metro is also analyzing other methods of addressing transportation needs, such as congestion pricing.

In 1995, the Clark County Board of Commissioners and the Vancouver City Council appointed a group of citizens to serve on a Focus Group to recommend a grassroots-based approach for examining southwest Washington's future transportation needs. Coordinated by the Southwest Washington Regional Transportation Council, the results of the two Focus Group meetings in May 1995, became the foundation for the issues subsequently examined by the Transportation Futures Committee.

The Transportation Futures Committee developed a set of findings that are being used to guide further transportation study and planning in Clark County. Among other findings, bi-state issues included were:

- Reducing demand for new transportation facilities and improvements in the long run by encouraging economic development that supports family wage jobs in Clark County and reduces the need to commute to Oregon;
- Promoting the use of alternative modes of transportation to driving alone;
- Increasing capacity to accommodate long-term population growth and continued need for bi-state transportation facilities, with first priority on the I-5 corridor;
- Making more effective use of existing facilities is a high priority in the following order of preference:
    1. Improved and/or expanded bus service;
    2. High Occupancy Vehicle lanes (using existing facilities wherever possible);
    3. Commuter rail;
    4. Light rail;
    5. Reversible lanes;
    6. Widening I-5 (highway and bridge) for general purpose traffic;
    7. Ferry system.

The Committee found that a third auto bridge and highway corridor was not an acceptable solution to bi-state congestion.

Opportunities and Policy Implications

The opportunities for bi-state coordination are many. Shared environmental, transportation, economic development and land use issues bring with them an opening for dialogue, policy development and actions.

Bi-state policy development is facilitated by the fact that both Oregon jurisdictions and Clark County and its cities have adopted comprehensive land use plan maps and documents. By review and incorporation of goals and policies with regional applicability, it will be a matter of negotiation and agreement to consolidate those into a comprehensive regional policy document.

Transportation

Transportation choices impact a wide range of other issues. Most notably, air quality, costs and adequacy of infrastructure, natural resources and land use. Given the variety and strength of connections between the Metro area and southwest Washington and the growth that is likely to occur on both sides of the Columbia River, it is probable that transportation will remain as a critical element of bi-state discussion and decision making.

Residents of southwest Washington and the Metro area will remain concerned with access to the bi-state Metro area for jobs, airport facilities, shopping, recreational and cultural opportunities. Concern will remain high regarding the capacity of the existing and an enhanced road system to carry auto and freight at reasonable levels of service.

The limited capacity of the I-5 and I-205 bridges and the lack of policy direction or plans to increase capacity presents a fundamental challenge for the bi-state area. A third highway bridge is not consistent with Metro Council's policy and not favored by the Clark County Transportation Futures Committee.

Based upon the successful traffic management during the I-5 bridge repair closure in September, 1997, one potential approach is to encourage the modal shift of bi-state traffic, including the provision of public transit. It would requires citizens to change their transportation habits on a long term basis. However, it could reduce negative environmental impacts and improve air quality in the region. Metro plans to take a closer look at these issues, and integrate coordination with Clark County through JPACT, RTC and other opportunities.

Economic and Industrial Development

Metro and Clark County could consider economic and industrial development policies to guide appropriate sharing of the regional industrial and commercial growth to Clark County. Such policies need take into account commuter traffic management, housing demand and supply, available land for industrial and commercial development and the Metro region's economic health. For example, in a precedent case, the Port of Vancouver and the Port of Portland have been working together to coordinate regional port development.

Possible solutions for job/housing balance could include ways to ensure that the Clark County ratio of jobs created to new housing built is greater than current rates. For such a strategy to be effective, the jobs created would have to match and enhance the wage and skill profile of Clark County residents. Encouraging job creation may prove difficult as the infrastructure and sheer number of jobs in the Metro area are much more numerous than in Clark County. However, job growth is proceeding in Clark County with the help of the Columbia River Economic Development Council's recruiting efforts.

For at least the past twelve years, the Oregon state tax structure is lower than that of the State of Washington's, although the difference between the two states has narrowed substantially. There are now only marginal differences. The State of Washington instituted tax exempt capital equipment purchase legislation in 1994, which levels the playing field between companies in Oregon and southwest Washington.

Local business taxes in Clark County have been reduced since 1993 by 10% each year and will continue to decrease until they are eliminated.

Land Use and Housing

Metro and Clark County share similar land use policies such as encouraging infill and redevelopment, guiding new development along transit corridors, and preserving rural lands and open spaces using urban growth boundaries. These similarities could provide opportunities for coordination of land use planning, particularly when to expand urban growth boundaries. Land use planning of this kind needs to address broad issues that transcend man-made borders, such as preservation of rural lands, protection of greenspaces and wildlife habitat, travel demand management, and regional economic development.

Housing could be the most important area for potential coordination to improve Clark County's job/housing balance. While Metro should make efforts to make housing in the region more affordable, Clark County has adopted policies to reduce single family residential development outside the urban growth areas. Implementing these policies require close coordination across the jurisdictional boundaries. In addition, developing joint housing policies could be effective to deal with issues of affordability and fair share housing. Both the Metro region and Clark County are taking a fair share approach in providing affordable housing within their own jurisdictions, but currently there is no coordination. Coordinated planning could offer more flexible and effective allocation of limited financing to improve housing affordability.

Parks, Natural Areas and Open Space

As the regional ecological system transcends the Columbia River, there is an opportunity for further coordination in open space and natural resource planning. Metro and Clark County/Vancouver Parks should coordinate efforts to create more of a regional system of natural areas, open space, trails and greenways for wildlife and the people of the region.

Emergency Preparedness and Services

The location of Clark County and the northern portion of the Metro region along the Columbia River, as well as the geologic hazards present in the Pacific Northwest, present an opportunity for bi-state disaster preparedness and for coordination of emergency services. The flooding and earthquake potential of the area pose a challenge for emergency planners. As we have seen many times, natural disasters know no boundaries, and neither should coordinated assistance in the bi-state metropolitan area. Metro and Clark County can plan for coordinated response to emergency, recovery from disaster, preparedness for disaster and mitigation of hazard and risk.

Management

Chapter 7 Management

Overview

Any plan put into effect is only a set of policies or actions based on what is known at the time. Actual conditions can and do change. Accordingly, any plan which is intended to be useful over a period of time, must include ways of addressing new sets of circumstances. To this end, this chapter includes descriptions of policies and processes that will be used to keep the Regional Framework Plan abreast of current conditions and a forward thinking document.

In addition, this plan includes disparate subjects, ones that, while interconnected, at times suggest conflicting policy actions. This chapter describes the ways in which such conflicts can be resolved.

Policies (Goals and Objectives)

7.1 Citizen Participation

Metro shall develop and implement an ongoing program for citizen participation in all aspects of the regional planning effort. Such a program shall be coordinated with local programs to support citizen involvement in planning processes and shall not duplicate those programs.

> Metro Committee for Citizen Involvement (Metro CCI). Metro shall establish a Metro Committee for Citizen Involvement to assist with the development, implementation and evaluation of its citizen involvement program and to advise MPAC regarding ways to best involve citizens in regional planning activities.
>
> Notification. Metro shall develop programs for public notification, especially for (but not limited to) proposed legislative actions, that ensure a high level of awareness of potential consequences as well as opportunities for involvement on the part of affected citizens, both inside and outside of its district boundaries.

7.2 Metro Policy Advisory Committee

The 1992 Metro Charter has established MPAC to:

> assist with the development and review of Metro's regional planning activities pertaining to land use and growth management, including review and implementation of these goals and objectives, development and implementation of the Regional Framework Plan, present and prospective functional planning, and management and review of the region's UGB;

serve as a forum for identifying and discussing areas and activities of metropolitan or subregional concern; and

provide an avenue for involving all cities and counties and other interests in the development and implementation of growth management strategies.

MPAC Composition: The initial MPAC shall be chosen according to the Metro Charter and, thereafter, according to any changes approved by majorities of MPAC and the Metro Council. The composition of the Committee shall reflect the partnership that must exist among implementing jurisdictions in order to effectively address areas and activities of metropolitan concern. The voting membership shall include elected and appointed officials and citizens of Metro, cities, counties, school districts and states consistent with section 27 of the 1992 Metro Charter.

Advisory Committees. The Metro Council, or MPAC, consistent with the MPAC by-laws, shall appoint technical advisory committees as the Council or MPAC determine a need for such bodies.

Joint Policy Advisory Committee on Transportation (JPACT). JPACT, with the Metro Council, shall continue to perform the functions of the designated Metropolitan Planning Organization as required by federal transportation planning regulations. JPACT and MPAC shall develop a coordinated process, to be approved by the Metro Council, to assure that regional land use and transportation planning remains consistent with these goals and objectives and with each other.

7.3 Applicability of Regional Framework Plan Policies

The policies included in Regional Framework Plan Policies in Chapters 1-6 of this Plan are regional goals and objectives consistent with ORS 268.380(1). Many of these policies were previously adopted and acknowledged as the Regional Urban Growth Goals and Objectives. The specific policies included in this Framework Plan are neither a comprehensive plan under ORS 197.015(5), nor a functional plan under ORS 268.390(2). All functional plans adopted by the Metro Council shall be consistent with these goals and objectives. Metro's management of the UGB shall be guided by standards and procedures which must be consistent with these goals and objectives. These goals and objectives shall not apply directly to site-specific land use actions, including amendments of the UGB.

Regional Framework Plan Policies in Chapters 1-6 of this Plan shall apply to adopted and acknowledged comprehensive land use plans as follows:

- components of the Regional Framework Plan that are adopted as functional plans, or other functional plans, shall be consistent with these Policies,
- the management and periodic review of Metro's acknowledged UGB Plan, shall be consistent with these Policies, and

- Metro may after consultation with MPAC identify and propose issues of regional concern, related to or derived from these Policies as recommendations but not requirements, for consideration by cities and counties at the time of periodic review of their adopted and acknowledged comprehensive plans.

Regional Framework Plan Policies shall apply to Metro land use, transportation and greenspace activities as follows:

- the Urban Growth Boundary plans, functional plans, and other land use activities shall be consistent with these Policies;
- to the extent that a proposed policy or action may be compatible with some Policies and incompatible with others, consistency with this Plan may involve a balancing of applicable goals, subgoals and objectives by the Metro Council that considers the relative impacts of a particular action on applicable Policies.

Periodic Updates of Regional Framework Plan Policies. MPAC shall consider the regular updates of these Policies and recommend based on a periodic update process adopted by the Metro Council.

7.4 Urban Growth Boundary Management Plan

The UGB Management Plan has two components:

- the acknowledged UGB line; and
- acknowledged procedures and standards for amending the UGB line. Metro's UGB Management Plan is not a regional comprehensive plan but a provision of the comprehensive plans of the local governments within its boundaries. The UGB Management Plan shall be in compliance with applicable statewide planning goals and laws and consistent with these goals and objectives. Amendments to the UGB Management Plan shall demonstrate consistency only with the acknowledged procedures and standards. Changes of Metro's acknowledged UGB Management Plan may require changes in adopted and acknowledged comprehensive plans.

7.5 Functional Plans

Functional plans are limited purpose plans, consistent with this Framework Plan, which address designated areas and activities of metropolitan concern. Functional plans are established in state law as a way Metro may recommend or require changes in local plans. This Framework Plan uses functional plans as the identified vehicle for requiring changes in local plans in order to achieve consistence and compliance with this Framework Plan.

Those functional plans or functional plan provisions containing recommendations for comprehensive planning by cities and counties may not be final land use decisions. If a provision in a functional plan, or an action implementing a functional plan require changes in an adopted and acknowledged comprehensive plan, then the adoption of a provision or action will be a final land use decision. If a provision in a functional plan, or Metro action implementing a functional plan require changes in an adopted and acknowledged comprehensive plan, then that provision or action will be adopted by Metro

as a final land use action required to be consistent with statewide planning goals. In addition, Regional Framework Plan components will be adopted as functional plans if they contain recommendations or requirements for changes in comprehensive plans. These functional plans, which are adopted as part of the Regional Framework Plan, will be submitted along with other parts of the Regional Framework Plan to LCDC for acknowledgment of their compliance with the statewide planning goals. Because functional plans are the way Metro recommends or requires local plan changes, most Regional Framework Plan components will probably be functional plans. Until Regional Framework Plan components are adopted, existing or new functional plans will continue to recommend or require changes in comprehensive plans.

- Existing Functional Plans. Metro shall continue to develop, amend and implement, with the assistance of cities, counties, special districts and the state, statutory-required functional plans for air, water and transportation, as directed by ORS 268.390(1) and for land use planning aspects of solid waste management as mandated by ORS Ch. 459.
- New Functional Plans. New functional plans shall be proposed from one of two sources:
  - MPAC may recommend that the Metro Council designate an area or activity of metropolitan concern for which a functional plan should be prepared; or
  - the Metro Council may propose the preparation of a functional plan to designate an area or activity of metropolitan concern and refer that proposal to MPAC.

The matters required by the Charter to be addressed in the Regional Framework Plan shall constitute sufficient factual reasons for the development of a functional plan under ORS 268.390. However, the actual adoption of a functional plan will be subject to the procedures specified above.

Upon the Metro Council adopting factual reasons for the development of a new functional plan, MPAC shall participate in the preparation of the plan, consistent with these goals and objectives and the reasons cited by the Metro Council. After preparation of the plan and seeking broad public and local government consensus, using existing citizen involvement processes established by cities, counties and Metro, MPAC shall review the plan and make a recommendation to the Metro Council. The Metro Council may act to resolve conflicts or problems impeding the development of a new functional plan and may complete the plan if MPAC is unable to complete its review in a timely manner.

The Metro Council shall hold a public hearing on the proposed plan and afterwards shall:

- adopt the proposed functional plan; or
- refer the proposed functional plan to MPAC in order to consider amendments to the proposed plan prior to adoption; or
- amend and adopt the proposed functional plan; or
- reject the proposed functional plan.

The proposed functional plan shall be adopted by ordinance and shall include findings of consistency with these goals and objectives.

- Functional Plan Implementation and Conflict Resolution. Adopted functional plans shall be regionally coordinated policies, facilities and/or approaches to addressing a designated area or activity of metropolitan concern, to be considered by cities and counties for incorporation in their comprehensive land use plans. If a city or county determines that a functional plan requirement should not or cannot be incorporated into its comprehensive plan, then Metro shall review any apparent inconsistencies by the following process:
  - Metro and affected local governments shall notify each other of apparent or potential comprehensive plan inconsistencies.
  - After Metro staff review, MPAC shall consult the affected jurisdictions and attempt to resolve any apparent or potential inconsistencies.
  - MPAC shall conduct a public hearing and make a report to the Metro Council regarding instances and reasons why a city or county has not adopted changes consistent with requirements in a regional functional plan.
  - The Metro Council shall review the MPAC report and hold a public hearing on any unresolved issues. The Council may decide to:
    - amend the adopted regional functional plan; or
    - initiate proceedings to require a comprehensive plan change; or
    - find there is no inconsistency between the comprehensive plan(s) and the functional plan.

7.6 Periodic Review of Comprehensive Land Use Plans

At the time of LCDC initiated periodic review for comprehensive land use plans in the region, MPAC:

- shall assist Metro with the identification of Regional Framework Plan elements, functional plan provisions or changes in functional plans adopted since the last periodic review for inclusion in periodic review notices as changes in law; and
- may provide comments during the periodic review of adopted and acknowledged comprehensive plans on issues of regional concern.

7.7 Implementation Roles

Regional planning and the implementation of this Framework Plan shall recognize the inter-relationships between cities, counties, special districts, Metro, regional agencies and the State, and their unique capabilities and roles.

Role of Cities

- adopt and amend comprehensive plans to conform to functional plans adopted by Metro;
- identify potential areas and activities of metropolitan concern through a broad-based local discussion;
- cooperatively develop strategies for responding to designated areas and activities of metropolitan concern ;
- participate in the review and refinement of these goals and objectives.

Role of Counties

- adopt and amend comprehensive plans to conform to functional plans adopted by Metro;
- identify potential areas and activities of metropolitan concern through a broad-based local discussion;
- cooperatively develop strategies for responding to designated areas and activities of metropolitan concern;
- participate in the review and refinement of these goals and objectives.

Role of Special Service Districts

- assist Metro, through a broad-based local discussion, with the identification of areas and activities of metropolitan concern and the development of strategies to address them, and participate in the review and refinement of these goals and objectives. Special Service Districts will conduct their operations in conformance with acknowledged Comprehensive Plans affecting their service territories

Role of School Districts

- advise Metro regarding the identification of areas and activities of school district concern;
- cooperatively develop strategies for responding to designated areas and activities of school district concern;
- participate in the review and refinement of these goals and objectives.

Role of the State of Oregon

- advise Metro regarding the identification of areas and activities of metropolitan concern;
- cooperatively develop strategies for responding to designated areas and activities of metropolitan concern;
- review state plans, regulations, activities and related funding to consider changes in order to enhance implementation of the Regional Framework Plan and functional plans adopted by Metro, and employ state agencies and programs and regulatory bodies to promote and implement these goals and objectives and the Regional Framework Plan;
- participate in the review and refinement of these goals and objectives.

Role of Metro

- identify and designate areas and activities of metropolitan concern;
- provide staff and technical resources to support the activities of MPAC within the constraints established by Metro Council;
- serve as a technical resource for cities, counties, school districts and other jurisdictions and agencies;
- facilitate a broad-based regional discussion to identify appropriate strategies for responding to those issues of metropolitan concern;
- adopt functional plans necessary and appropriate for the implementation of the Regional Framework Plan;
- coordinate the efforts of cities, counties, special districts and the state to implement adopted strategies; and

- adopt and review consistent with the Metro Charter and amend a Future Vision for the region, consistent with Objective 9.

7.8 Performance Measures

Metro Council, in consultation with MPAC and the public, will develop performance measures designed for considering the Regional Framework Plan policies. The term "performance measure" means a measurement aimed at determining whether a planning activity or 'best practice' is meeting the objective or intent associated with the 'best practice.' This concept is also consistent with the Future Vision call for a "... state of the region report on our progress toward achieving the objectives..."

Performance measures for this chapter will use state benchmarks to the extent possible or be developed by Metro Council in consultation with MPAC and the Metro Committee for Citizen Involvement. Performance measures for Chapters 2-6 are measured by several different geographies, including by region, jurisdiction, 2040 design type and market area.

Performance Measures for Chapters 2-6 include the following:

1. Vacant land conversion;
2. Housing development, density, rate and price;
3. Job creation;
4. Infill and redevelopment;
5. Environmentally sensitive lands;
6. Price of land;
7. Residential vacancy rates;
8. Access to open space;
9. Transportation measures.

After concluding which measures are most useful in assessing progress in implementing Metro policies, the Metro Council has directed these measures to be completed every two years. Corrective actions may be taken by the Metro Council if they find that anticipated progress is lacking or if Metro goals or policies need adjustment. By assessing progress or lack of it on a relatively short time frame, it is hoped that if need arises for adjustments these can be made soon after any problem arises and so that relatively stable conditions can be maintained.

7.9 Monitoring and Updating

The Regional Framework Plan and all Metro functional plans shall be reviewed every seven years, or at other times as determined by the Metro Council after consultation with or upon the advice of MPAC. Any review and amendment process shall involve a broad cross-section of citizen and jurisdictional

interests, and shall involve MPAC consistent with Goal 1: Regional Planning Process. Proposals for amendments shall receive broad public and local government review prior to final Metro Council action.

- Impact of Amendments. At the time of adoption of amendments to these goals and objectives, the Metro Council shall determine whether amendments to adopted Regional Framework Plan, functional plans or the acknowledged regional UGB are necessary. If amendments to the above are necessary, the Metro Council shall act on amendments to applicable functional plans. The Council shall request recommendations from MPAC before taking action. All amendment proposals will include the date and method through which they may become effective, should they be adopted. Amendments to the acknowledged regional UGB will be considered under acknowledged UGB amendment procedures incorporated in the Metro Code.

If changes to the Regional Framework Plan or functional plans are adopted, affected cities and counties shall be informed in writing of those changes which are advisory in nature, those which recommend changes in comprehensive land use plans and those which require changes in comprehensive plans. This notice shall specify the effective date of particular amendment provisions.

7.10 Environmental Education

Metro is committed to providing education to the community on the principles and foundation of the Regional Framework Plan. In order to maintain the Regional Framework Plan as a living document, it is necessary for the citizenry of the region to understand the decision making mechanisms, the principles that guide sound planning and the effect of decisions and changes on the livability of the community.

Environmental education should provide an unbiased information source that does not advocate for one viewpoint. Environmental education should invite and involve diverse viewpoints and give everyone opportunities to participate in all aspects of the learning process. This will ensure that education for the Regional Framework Plan is enriched by and relevant to all points of view.

Metro shall develop and implement an ongoing partnership with cultural, environmental and educational organizations to keep abreast of current conditions and maintain the Regional Framework Plan as a forward-looking document. Such a partnership shall coordinate with local programs for supporting education that involves citizens in the analysis of critical environmental issues related to regional growth and environmental quality. The goal of education is to help citizens gain awareness, knowledge and skills to make connections between the issues of regional growth and the creation of livable communities.

The key objectives of education are to provide citizens with the information needed and the opportunity to:

- analyze critical environmental issues related to regional growth;

- understand the effects of their choices on the urban and natural systems used to manage growth, natural areas and transportation, process waste and provide water and energy;
- engage in decisions which affect the livability of their communities;
- take actions which reflect the region's plan.
- cooperatively develop strategies with citizens to provide regional environmental education;
- identify cultural, environmental and educational organizations which currently provide education about issues related to livable communities;
- identify sites and facilities that currently and potentially provide education about issues related to livable communities;
- function as a clearinghouse for educational organizations and facilitate educational partnerships in the community.

If the goals and policies of the Regional Framework Plan are to be achieved, individuals and communities must be enabled to challenge and discuss the rural and urban systems and policies responsible for creating livable communities.

Background

Goal I of the Regional Urban Growth Goals and Objectives, originally adopted in 1991 and now wholly incorporated in this document, provides the process for determining regional policies which includes key participants, roles and procedures to be used.

Citizen involvement in the discussion of issues must be paramount in any public decision, and regional issues are no different. Although having detailed discussions with each and every of the 1.2 million residents of the region on any one issue is not practicable, responsibility for determining the general public's values and interests as well as responding to individual citizen's concerns is one which Metro must take seriously and continue to find ways to improve. An advisory committee, the Metro Committee for Citizen Involvement, is the primary resource for determining how best to hear citizen concerns. There are myriad tools to determine the general public's opinions and values, including newsletters that describe the choices related to upcoming public decisions, open houses, presentations to neighborhood and citizen participation organizations, Metro's web page, random surveys and related public opinion measuring instruments.

Methods for hearing individual concerns are the Metro hotline, e-mail, written mailed correspondence to the Metro Council and its members and testimony at public hearings. When the Metro Council is making a decision, materials are provided to the Metro Council and any interested parties and included in the public hearing record. (For example, oral comments recorded on the hotline are transcribed and forwarded to the Metro Council, as are any written correspondence.)

Implementation of region-wide policies is dependent on actions by the cities, counties and special districts of the region. In order to ensure that local jurisdictions have an opportunity to discuss, debate and recommend regional policies, two advisory committees have been created, comprised primarily of elected officials of the region. These two committees are the Metro Policy Advisory Committee (MPAC) and the Joint Policy Advisory Committee (JPACT). MPAC deals primarily with land use issues of regional significance, while JPACT addresses regional-scale transportation concerns. Prior to making regional land use or transportation decisions, the Metro Council seeks recommendations from one, or in some cases both, of these committees. In addition, MPAC and JPACT have technical committees (MTAC and TPAC) which serve the policy committees, providing technical analysis and recommendations as requested. These technical committees are comprised of the chief planning and transportation staffs from throughout the region, as well as citizen members and members from various interest groups.

Analysis

There are two major issues with regard to management of the Regional Framework Plan. These are: 1) coordination of the elements of the Regional Framework Plan and, 2) maintaining the Regional Framework Plan as a document which continues to address the demands of a changing future.

Coordination and integration of the various elements is an important, yet difficult task. This Regional Framework Plan addresses many disparate elements. Coordination is pursued by several means. First, by listing all of the objectives and policies in one document, everyone can see the various elements. Second, the Growth Concept map illustrates how the various elements - land use, transportation, open space, etc. are expected to develop or be conserved on the landscape.

However, implementation of the Growth Concept will inevitably result in some conflicts. Economic theory suggests that it is not possible to maximize for all values simultaneously. If all of the goals and objectives could be expressed in dollars or some other common measurement, then total merit to the region of a plan could be calculated. However, such a common measure is not available and at least each element, if not portions of each element are attempts to articulate very different, particular values, such as mobility or protection of the natural habitat, etc.

What is available is a much more common sense approach. Each element expresses policies and values to which the region aspires. As implementation of the plan is accomplished by the cities, counties and special districts of the region, conflicts between these will inevitably arise. In most cases, these conflicts will be resolved at the local level, although recurring conflicts or conflicts with region-wide significance may be addressed by Metro. In either case, the process for such resolution will be a public one. That is, the conflict will be described, technical information provided, the public will have the opportunity to

make their concerns known and then the public's duly elected officials (city or county if at the local level or, after consultation with local jurisdictions, the Metro Council if at the regional level) will make a decision. While any one party may find fault with any one decision, and may appeal a decision to the courts, it is important to remember that in most cases it is impossible to maximize for all values, and the decisions before elected officials are ones in which conflicting values are expressed. By making these decisions in a public forum by a public body serving the public, a democratic, though not always quick, decision is made. It is also the way in which conflicting values can be sorted out.

Another management issue is understanding how the policies are affecting the region and understanding when changes in conditions in the region may call for changes in the Regional Framework Plan. Sometimes these "points of divergence" are subtle and only years later is it clear that conditions have changed. In other cases, major changes in public attitudes, economic conditions or other factors may be clearly evident. One way to help understand what is happening is to institute a system of measurements to gauge the success, or lack thereof, of regional policies. Performance measures can be used to periodically measure factors relating to growth capacity, housing affordability, open space conservation and other conditions which are of public concern and for which, in some cases, small changes may signal greater future problems. These measurements can also help the region assess its value choices and may be a basis for emphasizing or reducing the priority of any one value compared with another.

Following are the management policies that should be pursued as Metro develops, implements and monitors compliance with the policies contained in the previous chapters.

Implementation

Chapter 8: Implementation

The following tables list each Regional Framework Plan policy, and identify the related implementation recommendation or requirement. Each Regional Framework Plan policy which is identified as implemented by the acknowledged UGB procedures in Metro Code Chapter 3.01 or by an Urban Growth Management Functional Plan provision is applicable to city and county plans to the extent described in each of those Appendices of this Plan. Appendix A: Urban Growth Management Functional Plan (Metro Code Chapter 3.07) and Appendix B: Urban Growth Boundary and Urban Reserve Procedures (Metro Code 3.01) are hereby incorporated by reference into this Regional Framework Plan.

Section 5(2)(e) of the 1992 Metro Charter directs Metro to adopt implementing ordinances in order to require city and county comprehensive plans and implementing regulations to comply with the Regional Framework Plan. The implementing ordinances shall be consistent with the provisions of the Charter and Oregon Law and shall address rules and procedures for enforcing those provisions of this Regional Framework Plan identified as requirements that are applied directly to cities and counties. Those requirements are identified as functional plans in this Regional Framework Plan.

Implementation procedures for enforcing those provisions of this Regional Framework Plan which are identified as functional plans shall be addressed as follows:

1. The effective date section of the ordinance adopting this Plan requires city and county comprehensive plans and land use regulations to comply with this Plan within two years after adoption and compliance acknowledgment of this Plan.

2. The Metro Council shall develop provisions in an ordinance for Metro Council adjudication of and determination of consistency of local comprehensive plans with this Plan.

3. The effective date section of the ordinance adopting this Plan requires each city and county within the jurisdiction of Metro to begin making its land use decisions consistent with this Plan one year after compliance acknowledgment of this Plan by the Land Conservation and Development Commission until its comprehensive plan has been determined to be consistent with this Plan.

4. The Metro Council shall develop provisions in an ordinance allowing the Council to require changes in local land use standards and procedures if the Council determines

changes are necessary to remedy a pattern or practice of decision-making inconsistent with this Plan.

The provisions of the Urban Growth Management Functional Plan (Metro Code Chapter 3.07) adopted as a component of this Regional Framework Plan shall be subject to Metro's adopted implementing ordinances as provided in Section 5.(2)(e) of the Metro Charter. However, the requirements of the Functional Plan shall continue to have force and effect independently of this Framework Plan, and the requirements of the functional plan shall be effective on the dates specified therein, based on Metro's statutory authority in ORS 268.390. After acknowledgment of this Regional Framework Plan, requirements for changes in comprehensive plans and land use regulations initiated under Metro's statutory and charter authorities shall be required to be approved as amendments to this Plan in order to become effective.

Policies in this Plan which require development of additional functional plan provisions and other planning activities using Metro's limited planning resources shall be subject to the allocation of available funds in Metro's normal budget process.

Regional Funding and Fiscal Policy

Purpose

The purpose of this policy is to ensure that regional funding and fiscal factors support and facilitate rather than undermine and countervail the implementation of the policies of the Regional Framework Plan, especially the policies of the Metro 2040 Growth Concept as set out in Chapter 1 and as detailed in Chapters 2 through 7 as well as related functional plans adopted by the Metro Council.

Successful implementation of the Regional Framework Plan and related functional plans will require significant and targeted expenditure of public dollars to directly address the procedural and substantive elements of the Plan and related functional plans. Successful implementation also will require careful attention to how public dollars are procured and allocated within the region. Various federal, state, regional, and local funding and fiscal decisions not expressly intended to affect the form of development in the region nonetheless can have substantial effects -- sometimes in the short-run, more often in the long-run. To address these critical aspects of implementation of the Plan and related functional plans, Regional Funding and Fiscal Policies should be developed and incorporated into Chapter 8 of the Plan.

Policy

The Metro Council, with the consultation and advice of the Metro Policy Advisory Committee ("MPAC"), should adopt on or before November 1, 1998, a Regional Funding and Fiscal section to be

included in Chapter 8 (Implementation) of the Regional Framework Plan. In formulating and adopting the Regional Funding and Fiscal Policies, the following should be considered:

1. General regional funding and fiscal policies which support implementation of the Regional Framework Plan and related functional plans including but not limited to a policy requiring Metro, in approving or commenting on the expenditure of regional, state, and federal monies in the metropolitan area, to give priority to programs, projects, and expenditures that support implementation of the Regional Framework Plan and related functional plans unless there are compelling reasons to do otherwise;
2. development of a regional systems capital investment plan for the regional systems needed to implement the Regional Framework Plan and related functional plans;
3. regular periodic reports comparing the overall rates of property taxes, and business and development fees and charges assessed in each city and county in the region, the extent of fiscal disparities in the region, and the likely effects of these factors on implementation of the Regional Framework Plan and related functional plans;
4. review of pricing of infrastructure and its likely effect on implementation of the Regional Framework Plan and related functional plans; and
5. regular periodic reports identifying state and federal funding and fiscal statutes, regulations, policies, programs, and decisions that significantly support or significantly undermine implementation of the Regional Framework Plan and related functional plans; and
6. other policies, plans, and actions relating to funding and fiscal factors which the Metro Council, with the consultation and advice of the MPAC, determines are of metropolitan concern and will support implementation of the Regional Framework Plan and related functional plans.

Implementation Method for the
Regional Framework Plan

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Land Use	
1.1 Urban Form	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria Metro Code Chapter 3.06 3.06.010 Policy & Purpose: Designating Functional Planning Areas
1.2 Built Environment	Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 1 to 7 Title 2 Regional Parking Policy: Section 1 to 2 Title 3 Water Quality & Flood Management Conservation: Section 1 to 7 Title 4 Retail in Employment and Industrial Areas: Section 1 to 3 Title 5 Neighbor Cities and Rural Reserves: Section 1 to 4 Title 6 Regional Accessibility: Section 1 to 4 Title 7 Affordable Housing: Section 1 to 3 Title 8 Compliance Procedures: Section 1 to 7
1.3 Housing	Metro Code Chapter 3.03 3.03.010 Authority and Purpose Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 1 to 7 Title 7 Affordable Housing: Section 1 to 3 <u>New requirements with fair share targets for each jurisdiction as well as fair share plan to be prepared by each jurisdiction.</u> <u>Metro to monitor supply of affordable housing and land supply</u> <u>Metro to modify UGB code for preferential UGB expansions for affordable housing projects.</u>

Framework Policy	Implementation Recommendation(s) or Requirements
Land Use (cont.)	
1.4 Schools (issues to be considered in the development of the functional plan)	Metro Facilitation of Coordination - Metro shall create a standing Advisory Committee on School Facility Planning Coordination to advise Metro on implementation of Framework Plan School Facilities policies. The Committee shall prepare and implement an action plan for: 1. Establishing Local School Facilities Site Planning Committees for school districts in the Region serving 5,000 or more students. Committees shall include local school board, local government and local business representatives. The Committees shall advise their local governments on whether local comprehensive plans provide for adequate school facilities. **Outside the Metro Urban Growth Boundary:** Metro Code Chapter 3.01.012 (11) & 3.01.015(d) Urban Reserve Plan and coordination with school districts **Inside the Metro Urban Growth Boundary:** Population and Growth Projections - Upon adoption of the Regional Framework Plan, Metro shall provide to local governments a forecast of population by subarea. Local governments and school districts shall utilize these population forecasts, or mutually agreed upon amended population projections, as a basis for their facilities planning. Schools and Parks - Park providers and school districts, in preparing capital improvement plans and land acquisitions, shall, to the maximum extent feasible, coordinate their site selections and facility plans with one another. Wherever feasible, contiguous park/school sites shall be obtained by means of shared purchase or options, land exchange or other means. Regional School Site Acquisition Fund - In order to assure that school sites exist within our communities that encourage walking or biking for elementary and middle school students and connect to public transit whenever possible for high school and middle school students, Metro shall establish a region-wide school site acquisition fund using a variety of funding sources. The funds will be distributed to actual need and utilize specific criteria. Schools and Urban Design - In allocating regional and local funds to acquire school and/or school/park sites, Metro and local governments shall, in part, base any allocation to sites which reflect regional and local policies for urban design. School sites that meet more of the following desired criteria may receive greater funding: 1. Require less land area than standard practice due to multi-story construction, mixed uses in building and shared use of playing fields with local park providers;

Framework Policy	Implementation Recommendation(s) or Requirements
Land Use (cont.)	
1.4 Schools (cont.)	2. Located sufficiently close to concentrations of population in the school's attendance area so as to minimize the need for school bus transportation or private auto transportation; 3. Well connected by the local street system and by established or planned pedestrian and bicycle ways 4 High school sites that are well served by established or planned transit routes (need to include a Tri-Met coordination requirement). 5. Multi-school district collaborative projects. <u>Local Government Connection</u> 1. Large-scale development or redevelopment in local jurisdictions shall include discussions with the local school district to ensure that sufficient schools are provided for the children generated by such development or redevelopment. 2. Whenever possible, local jurisdictions shall prioritize development applications and streamline processes for public agencies, including schools, to assure that public needs are met without jeopardizing opportunities for citizen input or oversight for health and safety or environmental protection. 3. Whenever possible, local jurisdictions shall partner (including funding) with school districts to jointly use school sites for the public good (such as combined libraries, parks, connections with local services such as police, neighborhood centers, senior centers, etc.) 4. In order to help assure transportation connections with public buildings, local governments shall prioritize their transportation spending to assure bicycle and pedestrian connections are provided and the local road and land use plans encourage Tri-Met service (Metro shall recognize these efforts as it allocates federal transportation dollars.) 5. As a part of compliance with the Urban Growth Management Functional Planning effort, local jurisdictions shall engage local school districts and inform them of any density increases which may affect school populations. 6. Local governments and school districts shall review codes related to the construction of schools. <u>Performance Measures</u> - Metro, after consultation with the school districts, shall establish performance measures related to these school policies which shall help determine whether or not we are meeting state goals. Such measures may include number of elementary and middle school children who walk or bike to school, number of high school students who take public transit and amount of land used for new schools.

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Land Use (cont.)	
1.5 Economic Opportunity	Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 5 to 7 Title 4 Retail in Employment and Industrial Areas: Section 1 to 3
1.6 Urban Vitality	Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 1 to 7
1.7 Growth Management	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria Metro Code Chapter 3.06 3.06.010 Policy & Purpose: Designating Functional Planning Areas Urban Growth Management Functional Plan Title 1 to 7

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Land Use (cont.)	
1.8 Urban/Rural Transition	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria Metro Code Chapter 3.06 3.06.010 Policy & Purpose: Designating Functional Planning Areas Urban Growth Management Functional Plan Title 5 Neighbor Cities and Rural Reserves: Section 1 to 4
1.9 Developed Urban Land	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria Metro Code Chapter 3.06 3.06.010 Policy & Purpose: Designating Functional Planning Areas Urban Growth Management Functional Plan Title 1 to 7
1.10 Urban Growth Boundary	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria
1.11 Urban Design	Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 1 to 3 Title 6 Regional Accessibility: Section 1 to 3

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Land Use (cont.)	
1.12 Neighbor Cities	Title 5 Neighbor Cities and Rural Reserves: Section 1 to 4 and Signed Intergovernmental Agreements
1.13 Protection of Agriculture and Forest Resource Lands	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria
1.14 Growth Concept	Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 1 to 7 Title 2 Regional Parking Policy: Section 1 to 2 Title 3 Water Quality and Flood Management Section 1 to 7 Title 4 Retail in Employment and Industrial Areas: Section 1 to 3 Title 5 Neighbor Cities and Rural Reserves: Section 1 to 4 Title 6 Regional Accessibility: Section 1 to 4 Title 7 Affordable Housing: Section 1 to 3

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Transportation	
2.1 Intergovernmental Coordination	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 5 Neighbor Cities and Rural Reserves: Section 3
2.2 Consistency between Land Use and Transportation Planning	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 1 to 4
2.3 Public Involvement	New - To be developed as part of update to Transportation Planning Public Involvement Policy Metro Code Chapter 2.12 2.12.010 Office of Citizen Involvement: Creation and Purpose
2.4 System Objectives	New - To be developed as part of 1998 Regional Transportation Plan
2.5 Transportation Finance	New - To be developed as part of 1998 Regional Transportation Plan
2.6 Urban Form	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 1 to 4

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Transportation (cont.)	
2.7 Jobs/Housing Balance	New - To be developed as part of 1998 Regional Transportation Plan
2.8 Transportation Education	New - To be developed as part of 1998 Regional Transportation Plan
2.9 Barrier-Free Transportation	New - To be developed as part of 1998 Regional Transportation Plan
2.10 Transportation Balance	New - To be developed as part of 1998 Regional Transportation Plan
2.11 Street Design	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 1 to 3
2.12 Motor Vehicle Transportation	New - To be developed as part of 1998 Regional Transportation Plan
2.13 Public Transportation	New - To be developed as part of 1998 Regional Transportation Plan
2.14 Pedestrian Transportation	New - To be developed as part of 1998 Regional Transportation Plan

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Transportation (cont.)	
2.15 Bicycle Transportation	New - To be developed as part of 1998 Regional Transportation Plan
2.16 Freight Movement	New - To be developed as part of 1998 Regional Transportation Plan
2.17 Parking Management	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 2 Regional Parking Policy: Section 1 to 2
2.18 Transportation Demand Management	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 4.A.
2.19 Transportation System Management	New - To be developed as part of 1998 Regional Transportation Plan
2.20 Right-of-Way Opportunities	New - To be developed as part of 1998 Regional Transportation Plan
2.21 Adequacy of Transportation Facilities	New - To be developed as part of 1998 Regional Transportation Plan

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Transportation (cont.)	
2.22 Urban to Urban Travel on Rural Routes	New - To be developed as part of 1998 Regional Transportation Plan
2.23 Recreational Travel and Tourism	New - To be developed as part of 1998 Regional Transportation Plan
2.24 Natural Environment	New - To be developed as part of 1998 Regional Transportation Plan
2.25 Water Quality	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 3 Water Quality and Flood Management Section 1 to 4
2.26 Clean Air	New - To be developed as part of 1998 Regional Transportation Plan
2.27 Energy Efficiency	New - To be developed as part of 1998 Regional Transportation Plan
2.28 Motor Vehicle Level of Service	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 4.B.

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Transportation (cont.):	
2.29 Transit Level of Service	New - To be developed as part of 1998 Regional Transportation Plan
2.30 Local Street Connectivity	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 3

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Parks and Open Spaces	
3.1 Inventory of Park Facilities and Inventory of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways	***(to be developed; refer to Appendix D)*** Draft of Implementation Measures to be Revised through Discussions with Greenspaces Technical Advisory Committee.
3.2 Protection of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways	***(to be developed; refer to Appendix D)***
3.3 Management of the Publicly - Owned Portion of the Regional System of Parks, Natural Areas, Open Spaces, Trails and Greenways	***(to be developed; refer to Appendix D)***
3.4 Protection, Establishment and Management of a Regional Trails System	***(to be developed; refer to Appendix D)***
3.5 Provision of Community and Neighborhood Parks, Open Spaces, Natural Areas, Trails and Recreation Programs	***(to be developed; refer to Appendix D)***
3.6 Participation of Citizens in Environmental Education, Planning, Stewardship Activities and Recreational Services	***(to be developed; refer to Appendix D)***

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Water Management	*All implementation methods to be developed; see appendix E*
4.1 General Policy Direction	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan Chapter XII Recommended Final Plan Concept and Implementation Actions
	(to be developed)
4.2 Process	Regional Water Supply Plan Chapter XII Recommended Final Plan Concept and Implementation Actions
	(to be developed)
4.3 Efficient Use of Water	Regional Water Supply Plan Chapter XII Table XII - 1 p. 256
	(to be developed)
4.4 Water Supply Shortages	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan Chapter XII Table XII - 1 p. 256
	(to be developed)
4.5 Impacts of Catastrophic Events	Regional Water Supply Plan Chapter XII Table XII - 1 p. 256
	(to be developed)
4.6 Water Quality	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan Chapter XII Table XII - 1 p. 257, 269-271, and 275
	(to be developed)
4.7 Economic Costs and Cost Equity	Regional Water Supply Plan Chapter XII Table XII - 1 p. 256
	(to be developed)
4.8 Environmental Stewardship	Regional Water Supply Plan Chapter XII Table XII - 1 p. 257

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Water Management (cont.)	*All implementation methods to be developed, see appendix E*
4.9 Growth and Land Use Planning	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan
	(to be developed)
4.10 Flexibility to Deal with Future Uncertainty	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan
	(to be developed)
4.11 Ease of Implementation	Regional Water Supply Plan
	(to be developed)
4.12 Operation Flexibility	Regional Water Supply Plan
	(to be developed)
4.13 Overall Watershed Management	Regional Water Supply Plan
	(to be developed)
4.14 Water Quality Goals	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan Chapter XII Table XII - 1 p. 257
	(to be developed)
4.15 Stormwater Management	to be developed (identified as a next step)
	(to be developed)
4.16 Urban Planning and Natural Systems	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4
	(to be developed)

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Water Management (cont.)	*All implementation methods to be developed; see appendix E*
4.17 Water Quality Protection	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan
	(to be developed)
4.18 Fish and Wildlife Habitat Conservation Area	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 5

Regional Framework Policy	Implementation Recommendation (s) or Requirements
Natural Hazards	
5.1 Earthquake Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.2 Flood Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.3 Landslide Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.4 Volcanic Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.5 Wildland-Urban Interface Fire Mitigation Measures	To be developed. Refer to Appendix G.
5.6 Severe Weather Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.7 Biological Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.8 Other Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.9 Natural Disaster Response Coordination	To be developed. Refer to Appendix G.

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Clark County	
Pending	*(to be developed)*
Regional Framework Policy	**Implementation Recommendation(s) or Requirements**
Environmental Education	
Pending	*(to be developed)*
Regional Framework Policy	**Implementation Recommendation(s) or Requirements**
Funding & Fiscal Strategy	
Pending	*(to be developed*

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Management	
7.1 Citizen Participation	Metro Code Chapter 2.12 2.12.010 Office of Citizen Involvement: Creation and Purpose
7.2 Metro Policy Advisory Committee	see Metro Charter
7.3 Applicability of Regional Framework Plan Policies	pursuant to Oregon Revised Statute 268.380(1)
7.4 Urban Growth Boundary Plan	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria
7.5 Functional Plans	Metro Code Chapter 3.06 3.06.010 Policy & Purpose: Designating Functional Planning Areas see Metro Charter
7.6 Periodic Review of Comprehensive Land Use Patterns	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria
7.7 Implementation Roles	as stated in the Regional Framework Plan
7.8 Performance Measures	Urban Growth Management Functional Plan Title 9 Performance Measures: Section 1 to 2
7.9 Monitoring and Updating	as stated in the Regional Framework Plan

Appendices

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING THE REGIONAL FRAMEWORK PLAN	)))))	ORDINANCE NO 97-715A Introduced by Councilor McLain

WHEREAS, Section 5 of the 1992 Metro Charter requires the Metro Council to adopt a regional framework plan by December 31, 1997; and

WHEREAS, Section 5(2)(b) of the 1992 Metro Charter requires that: "(1) regional transportation and mass transit systems, (2) management and amendment of the urban growth boundary, (3) protection of lands outside the urban growth boundary for natural resource, future urban or other uses; (4) housing densities, (5) urban design and settlement patterns, (6) parks, open spaces and recreational facilities, (7) water sources and storage, (8) coordination, to the extent feasible, of Metro growth management and land use planning policies with those of Clark County, Washington, and (9) planning responsibilities mandated by state law. . . ." be addressed in the plan; and

WHEREAS, Section 4 of the 1992 Metro Charter states that Metro has jurisdiction over matters of metropolitan concern; and

WHEREAS, the Metro Council has adopted Resolution 96-2378 to add Natural Hazards, and Resolution 97-2584 to add Affordable Housing, School Siting, Environmental Education, Economic Vitality, Regional Funding and Fiscal Policies to the matters addressed in the regional framework plan; and

WHEREAS, the regional framework plan describes its relationship to the Future Vision as required by Section 5(c)(1) of the 1992 Metro Charter; and

WHEREAS, ORS 197.015(1), (16) and 197.274 were added to state law in 1993 to authorize the Land Conservation and Development Commission (LCDC) to acknowledge Metro's regional framework plan for compliance with statewide planning goals; and

WHEREAS, 1997 Oregon Laws, Chapter 833 (HB 3638) amended ORS Chapter 268 for greater consistency with the Metro Charter, including amendments to blend functional plan and regional framework plan authorities in ORS 268.390; and

WHEREAS, Section 5(e) of the 1992 Metro Charter requires Metro to adopt implementation ordinances to assure application of the regional framework plan to land use decisions of cities and counties within Metro one year after its acknowledgment by LCDC; and

WHEREAS, a May, 1997 Regional Framework Plan Discussion Draft has been extensively amended based on review by the public and recommendations from the Metro Policy Advisory Committee and its technical advisory committee, the Joint Policy Advisory Committee on Transportation and its technical advisory committee, the Greenspaces Technical Advisory Committee, the Water Resources Policy Advisory Committee, the Community Advisory Committee on Transportation, and the Metro Committee for Citizen Involvement; and

WHEREAS, the regional framework plan has been structured to include all Regional Urban Growth Goals and Objectives (RUGGOs) and to follow Goal I of the RUGGOs by applying the policies in Chapters 1-7 to Metro and identifying requirements for changes in city and county comprehensive plans in Chapter 8 and the appendices in functional plans, now, therefore,

THE METRO COUNCIL ORDAINS AS FOLLOWS:

1. That Section 1. The 1997 Regional Framework Plan attached and incorporated herein as Exhibit "A," containing the Regional Urban Growth Goals and Objectives, and provisions addressing urban growth boundary, urban reserves, housing density, protection of agriculture and forest lands, school siting and affordable housing (Chapter 1); regional transportation and transit (Chapter 2); parks, natural areas, open spaces and trails (Chapter 3); water quality and urban water supply (Chapter 4); regional natural hazards (Chapter 5); Clark County coordination (Chapter 6); Management (Chapter 7); Implementation (Chapter 8) Appendices is hereby adopted.

2. The effective date of this ordinance adopting the 1997 Regional Framework Plan shall be ninety days from the date of adoption. Cities and counties shall begin applying the requirements of this Plan to land use decisions one year after its acknowledgment by the Land Conservation and Development Commission (LCDC) for compliance with statewide land use planning goals. City and county comprehensive plans and land use regulations shall comply with this Plan within two years after its acknowledgment by LCDC for compliance with statewide land use planning goals. Requirements of the Urban Growth Management Functional Plan and Metro's acknowledged Urban Growth Boundary and Urban Reserve Procedures which are included as Appendices of the Plan shall retain the effective dates in each of those separately adopted ordinances.

3. The 1997 Regional Framework Plan shall be transmitted to the Land Conservation and Development Commission for acknowledgment of compliance with statewide goals consistent with ORS 197.274(1).

4. That the provisions of this ordinance are separate and severable. The invalidity of any clause, sentence, paragraph, section, subsection, or portion of this ordinance or the invalidity of the application thereof to any city, county, person or circumstance shall not affect the validity of the remaining provisions of this ordinance or its application to other cities, counties, persons or circumstances.

ADOPTED by the Metro Council this _____ day of _____ 1997.

_____
Jon Kvistad, Presiding Officer

ATTEST:

_____
Recording Secretary

Approved as to Form:

_____
Daniel B. Cooper, General Counsel

EXHIBIT A

REGIONAL FRAMEWORK PLAN

December 1997

Introduction

Introduction: Foundations of the Regional Framework Plan

In 1978, voters in Multnomah, Washington and Clackamas counties approved the creation of an elected regional government, defined as a "metropolitan service district" to oversee issues that transcend traditional city and county boundaries. This entity became known as Metro. The state legislation which authorized the creation of Metro described Metro's responsibilities and procedures. Among these are the responsibilities to adopt and amend the regional Urban Growth Boundary (UGB), and adopt "land use planning goals and objectives for the district" that are consistent with state goals.

The Metro Council, in partnership with local governments, adopted land use planning goals and objectives, called the Regional Urban Growth Goals and Objectives (RUGGOs), in September 1991. Through their representatives on Metro advisory committees, the cities and counties indicated that while the directions set in the RUGGOs were appropriate, they were not specific enough. Accordingly, local representatives recommended that additional work be done to further define the goals and objectives.

In 1990, the voters of Oregon approved an amendment to the Oregon Constitution, authorizing a metropolitan service district to have home rule status. Subject to voter approval, Metro would have jurisdiction over all matters of "metropolitan concern" as set forth in a charter. In 1991, the legislature authorized the appointment of a charter committee to draft a charter for Metro and to place it on the ballot. In November, 1992, the voters approved Metro's Charter. The Charter stated that the Regional Planning functions described in Section 5 of the Charter ~~were to~~would be Metro's primary functions.

Section 5 of the Charter required that Metro adopt a Future Vision statement before July 1, 1995. This statement was adopted by the Council and a copy is attached in the Appendices of this Plan. In addition, the Charter required Metro to adopt this Regional Framework Plan before December 31, 1997, with the consultation and advice of the Metro Policy Advisory Committee (MPAC). A copy of Section 5 and Section 27 (which creates MPAC) of the Charter are also included in the Appendices of this Plan.

After the adoption of the Charter and the local government recommendation that the RUGGOs needed further refinement, Metro continued to actively pursue its regional planning mission. The Region 2040 Project (begun before adoption of the Charter) ~~uses~~was the forum for developing specific land-use and transportation planning policies. In 1995, the RUGGOs were substantially

revised to incorporate the 2040 Growth Concept. A description of the process that led to the adoption of the 2040 Growth Concept is included in the Appendices of this Plan. The Regional Framework Plan is based on the adopted 2040 Growth Concept and the policy statements contained in the RUGGOs and, upon adoption, will consolidate all Metro land-use planning goals and objectives.

Section 5 of the Charter requires that Metro implement the Regional Framework Plan by requiring cities and counties to comply with the Plan. In addition to authorizing Metro to adopt land use planning goals and objectives, the state legislation creating Metro authorized Metro to adopt "Functional Plans" that could contain specific recommendations and requirements for the cities and counties within Metro's boundaries to amend their comprehensive plans and implementing zoning ordinances. Metro also has authority under state law to coordinate local comprehensive plans. Further, Metro is designated as the Metropolitan Planning Organization (MPO) for the purpose of Federal transportation funding. Pursuant to this authority, Metro has adopted, and amended from time to time, a Regional Transportation Plan (the RTP) as a Functional Plan.

After the adoption of the 2040 Growth Concept, MPAC and the Metro Council agreed that early implementation of the Growth Concept was desirable. Accordingly, the Council adopted the Metro Urban Growth Management Functional Plan in November, 1996. A copy of this Functional Plan is included in the Appendices of to this Plan.

The Regional Framework Plan is intended to be the document that unites all of Metro's adopted land use planning policies and requirements. The Charter directs Metro to address the following subject matter in the Plan:

- management and amendment of the Urban Growth Boundary
- protection of lands outside the Urban Growth Boundary for natural resource use and conservation, future urban expansion or other uses
- urban design and settlement patterns
- housing densities
- transportation and mass transit systems
- parks, open spaces and recreational facilities
- water sources and storage
- coordination with Clark County, Washington.
- planning responsibilities mandated by state law
- other issues of metropolitan concern.

This document brings together these elements and the contents of previous regional policies to create a coordinated, integrated Regional Framework Plan to achieve the preferred form of regional growth and development which is the 2040 Growth Concept. While a new document, the Regional Framework Plan incorporates goals, objectives and policies established in existing Metro legislation, including the Regional Urban Growth Goals and Objectives, the 2040 Growth Concept, the Urban Growth Management Functional Plan, the Metropolitan Greenspaces Master Plan, and the Regional Transportation Plan.

In addressing the subject matters that Metro is required or allowed to address, Metro does not choose to mandate specific requirements for cities and counties for all of these areas. Instead, the Regional Framework Plan remains consistent with previous planning legislation adopted by Metro. The Regional Framework Plan is a combination of broad planning goals and objectives, as well as specific requirements. The goals and objectives intended to be policy statements that will guide future planning activities conducted by Metro are found in Chapters 1-~~8~~7 of this Plan. The goals and objectives are themselves broad policy statements and future planning activities will need to seek a balance between these sometimes competing planning directives.

Specific requirements are also included in this Framework Plan. Some requirements are applicable to Metro itself, such as the provisions that establish procedures and standards for Urban Growth Boundary Amendments, included in the Appendices of this Plan. Where requirements are directed to cities and counties, these requirements are adopted as Functional Plans, such as the Urban Growth Management Functional Plan and the RTP. These requirements are summarized in Chapter 8 and fully stated in the Appendices of this Plan.

The Oregon Legislature, in 1997, adopted statutory amendments that ~~allow~~ require Metro to unify all of its planning goals, objectives and requirements into the Regional Framework Plan. This legislation (Oregon Laws 1997, Chapter 833) and 1993 legislation specifically ~~allow for~~requires compliance acknowledgment of the Regional Framework Plan and its implementing ordinances by the Oregon Land Conservation and Development Commission.

Metro has authority under the Charter and state law to require cities and counties to amend their comprehensive plans and implementing ordinances by requiring compliance and consistency with Metro's adopted Functional Plans and the Regional Framework Plan. In this Regional Framework Plan, Metro has decided to designate clearly any portions of the Plan that are requirements for cities and counties as Functional Plans. Section 7 of the Metro Charter limits Metro's authority to otherwise regulate services currently being provided by local governments. The requirements for cities and counties contained in this Framework Plan as component

functional plans are not intended to be considered as regulations of local government services because they are enforceable pursuant to the specific provisions of Section 5 of the Charter.

Relationships with Other Governments

The planning and growth management activities of many jurisdictions affect and are affected by the actions of other jurisdictions in the region. In this region, as in others throughout the country, coordination of planning and management activities is essential if urban growth management efforts are to succeed.

In the Portland metropolitan area, representatives from many governments and agencies play critical roles in urban growth management. Metro's partners in the region's 24 cities, three counties and more than 130 special service districts and school districts, the state of Oregon, Tri-Met, the Port of Portland and the Portland Area Boundary Commission all make decisions that affect and respond to regional urban growth. And from a broader regional perspective, the cities of Southwest Washington and Clark County are partners in addressing growth management issues such as air quality, transportation and regional economy. Metro also works with nearby Oregon cities outside the Metro boundary to develop complementary policies.

While the Metro Council ~~will~~ makes ~~the final~~ decisions about policies, Metro has more than a dozen advisory committees that advise the Executive Officer, Metro Council and staff on matters of Metro's responsibility. Membership of the committees is varied, based on the purpose of each committee, and is structured to promote interagency communication and coordination at several levels, as well as citizen involvement.

The Metro Policy Advisory Committee (MPAC) is a ~~21-member~~ Charter-mandated committee consisting of ~~mayors~~members of city councils and~~,~~ county commissioners~~s~~ and other representatives of local government governing~~governments~~ bodies. Three citizen members are appointed by Metro's Executive Officer. As provided for in the Charter, the membership of MPAC has been adjusted and can continue to be adjusted to reflect the desire for broad input from affected governments as well as citizens. MPAC provides advice and consultation to the Metro Council on the land-use matters. The committee may authorize Metro to provide or regulate a local government service. The Metro Technical Advisory Committee (MTAC) is a 24-member committee of planning managers, citizens and business representatives that provides technical support to MPAC.

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation

needs in the region to evaluate transportation needs and make recommendations to the Metro Council related to transportation policy. JPACT's discussions usually follow technical assessments by Transportation Policy Alternatives Committee (TPAC), whose membership includes technical staff from the same agencies as JPACT, as well as six citizens appointed at-large by the Metro Council.

Relationships with Metro Citizens

Metro is committed to including meaningful citizen involvement in regional planning and implementation of the Framework Plan. Metro utilizes a wide range of mechanisms to achieve this goal. Metro's commitment to citizen and public involvement is stated in the Metro Citizen Involvement Principals and in Objective 1, Goal 1 of the Regional Urban Growth Goals and Objectives.

Metro believes that effective citizen involvement is essential to good government. Elected officials, staff and citizens all play important roles in governing the region. Cooperation among Metro, local governments and citizens results in the best policy decisions. Therefore, Metro commits to promote and to sustain a responsive citizen involvement environment. To carry out this commitment, Metro adopts these guiding principles:

1. Value active citizen involvement as essential to the future of the Metro region.
2. Respect and consider all citizen input.
3. Encourage opportunities that reflect the rich diversity of the region.
4. Promote participation, based on citizen involvement opportunities, of individuals and of community, business and special interest groups.
5. Provide communications to encourage citizen participation in Metro processes that are understandable, timely and broadly distributed.
6. Provide citizens with an opportunity to be involved early in the process of policy development, planning and projects.
7. Organize involvement activities to make the best use of citizens' time and efforts.
8. Provide financial and staff support to Metro's Office of Citizen Involvement.
9. Sustain ongoing networking among citizens, local governments, Metro officials and staff.

10. Respond to citizens' perspectives and insights in a timely manner.

11. Coordinate interdepartmental and interjurisdictional activities.

12. Evaluate the effectiveness of Metro citizen involvement.

Citizen Participation

Metro shall develop and implement an ongoing program for citizen participation in all aspects of the regional planning program. Such a program shall be coordinated with local programs for supporting citizen involvement in planning processes and shall not duplicate those programs.

Metro Committee for Citizen Involvement (MCCI)

The Metro Charter established a Metro Committee for Citizen Involvement to assist with the development, implementation and evaluation of its citizen involvement program and to advise the MPAC regarding ways to best involve citizens in regional planning activities.

Notification

Metro shall develop programs for public notification, especially for (but not limited to) proposed legislative actions, that ensure a high level of awareness of potential consequences, as well as opportunities for involvement on the part of affected citizens, both inside and outside of its districts' boundaries.

Future Vision

The spirit of the Regional Framework Plan took root in a Charter-mandated document, the Future Vision Report. The first requirement of the Metro Charter, as stated below, was to develop a "Future Vision" that, while not a regulatory document, is:

> "...a conceptual statement that indicates population levels and settlement patterns that the region can accommodate within the carrying capacity of the land, water and air resources of the region, and its educational and economic resources, and that achieves a desired quality of life. The Future Vision is a long-term, visionary outlook for at least a 50-year period."

The Charter also states:

> "The matters addressed by the Future Vision include but are not limited to: (1) use, restoration and preservation of regional land and natural resources for the benefit of present and future generations, (2) how and where to accommodate the population growth of the region while maintaining a desired quality of life for its residents, and (3) how to develop new communities and additions to the existing urban areas in well-planned ways."

The connection between the Future Vision and the Regional Framework Plan, as stated in the Charter, is that the Regional Framework Plan must "describe its relationship to the Future Vision." That is the intent of this section. The full text of the Future Vision, as adopted by the Metro Council by Ordinance 95-604A, is included in the appendix. However, the following excerpts are useful highlights in this Plan.

In the Future Vision report, the Future Vision Commission came to the following conclusion regarding carrying capacity:

> "This metropolitan area, like all others, exceeded its ability to meet the physical needs of its people long ago. Our style of life depends on the importation of energy, materials, capital and brain power from all over the world. We have also found that traditional biological models of population carrying capacity are simply too narrowly drawn to be of much use in a metropolitan setting. Determining the sustainability of even current population levels at our existing quality of life is greatly complicated by uncertainties due to future technological and global economic changes. In addition, there are difficult questions of value which must be addressed first, since values can be the basis for an analysis of carrying capacity but cannot be derived from such a study. For these reasons, it may not be possible to choose a single sustainable population level for the region."

Further on, the report states:

> "Consequently, we have chosen to approach carrying capacity as an issue requiring ongoing discussion and monitoring. We believe that the relevant question is not <u>when</u> carrying capacity will be exceeded, but <u>how</u> we will collectively restore, maintain and/or enhance the qualities of the region central to sustaining our health, the quality of the natural environment and the ability of future generations to take action to meet the needs of their time.
>
> Sustainable communities will come about through the skillful blending of factual data, our values and new ideas in a public discussion occupying a place of honor in this region, not through blind adherence to numerical thresholds that cannot be specified, much less met. Hence, carrying capacity is not a one-time issue, a single number, a simple answer, but an ongoing question for us all."

With regard to accommodating new growth, the Future Vision report includes the following recommendations:

> "This vision does not call specifically for the creation of new communities. We choose instead to focus on the restoration and redevelopment of what already has been committed to non-resource use."
>
> "Direct all regional planning efforts to include equitable economic progress for communities throughout the region as a critical component for modeling and evaluation."
>
> "Address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout the nine-county region in the Regional Framework Plan elements for transportation, rural lands, urban design, housing and water resources."

"Identify needs and solutions to community problems at the neighborhood level, and actively work to enlist all units of government in supporting and acting on these grassroots agenda rather than allowing governmental entities to insulate themselves from participating."

"Continue to encourage a choice of neighborhood types, including new neighborhoods with suburban densities, neighborhoods of traditional (pre-World War II) densities, and mixed-use neighborhoods of a more urban design."

The relationship of the Regional Framework Plan to the Future Vision is as follows:

- The Future Vision statement provides a beginning point from which policy debate and analysis can begin.
- The Future Vision brings a broad, inclusive perspective to the Regional Framework Plan.
- The Future Vision establishes the approach that all of the issues and problems addressed in the Regional Framework Plan will require an ongoing process of monitoring, analysis and reform in order to meet the needs and expectations of this and future generations.

Description of the Regional Framework Plan Structure

This Plan is organized into this Introduction, a broad description of the 2040 Growth Concept which constitutes the "framework" which unifies all of the components of the Regional Framework Plan, and 8 additional chapters. Informational material is included in the Appendices. ~~Chapter 1 is the 2040 Growth Concept; e~~Chapters ~~2~~1 through ~~7~~6 address substantive planning issues. Chapter ~~8~~7 addresses how Metro will manage the plan, including provisions addressing future amendments to the Plan. These amendments may be in the form of adoption of ~~additional~~ revisions to existing provisions of the Plan, additions to goals and objectives or additions of new requirements for cities and counties. Chapter 8 incorporates the specific requirements for cities and counties adopted ~~by this Plan~~as Functional Plan components of the Regional Framework Plan and identifies the process Metro will follow to adopt implementing ordinances to establish the rules by which Metro will enforce compliance with the Plan.

Each chapter is structured with a format that includes statements of goals and objectives that are intended to apply to Metro's planning efforts. In addition, some of the chapters include references to the specific requirements that are made directly applicable to cities and counties in Chapter 8. Furthermore, the chapters contain background information and policy analysis that describes the subject matter that is addressed.

Any requirements that apply directly to cities or counties are separately referenced in a substantive chapter addressing a specific subject area and summarized in Chapter 8. All requirements of this Regional Framework Plan that are requirements applicable to cities and counties are adopted by functional plans included in the Appendices~~x~~.

2040 Growth Concept

The 2040 Growth Concept

This chapter of the Framework Plan describes the 2040 Growth Concept which is the unifying concept or "framework" around which this Regional Framework Plan is based. Thise 2040 Growth Concept ~~as described herein~~ contains refinements to the original 2040 Growth Concept that was adopted in the 1995 amendments to RUGGO. This Plan anticipates that the 2040 Growth Concept and the provisions of this Plan will continue to evolve.

The Growth Concept states the preferred form of regional growth and development and includes the Growth Concept map. The preferred form of growth is to contain growth within a carefully managed Urban Growth Boundary. Growth should occur inside the current UGB in the form of infill and redevelopment with higher density being developed in areas where it is appropriate. Expansions of the UGB should be done carefully to allow for the need for additional land. This concept is adopted for the long-term growth management of the region including a general approach to approximately where and how much the UGB should be ultimately expanded, what ranges of density are estimated to accommodate projected growth within the boundary, and which areas should be protected as open space.

The Growth Concept is designed to accommodate approximately 720,000 additional residents and 350,000 additional jobs. The total population served within this concept is approximately 1.8 million residents within the Metro boundary.

The basic philosophy of the Growth Concept is to preserve our access to nature and build better communities for the people who live here today and who will live here in the future. The Growth Concept applies the above policies with the technical analysis to guide growth for a period up to the next 50 years. The Growth Concept is an integrated set of objectives which guide all Regional Framework Plan policies.

The Growth Concept sets the direction for development of implementing policies in Metro's existing functional plans and the Charter-required Regional Framework Plan. This direction will be refined, as well as implemented, in subsequent functional plan amendments and framework plan components. Additional planning will be done to test the Growth Concept and to determine implementation actions. Amendments to the Growth Concept and some Regional Framework Plan policies may be needed to reflect the results of additional planning to maintain the consistency of implementation actions with the stated policies.

Fundamental to the Growth Concept is a multi-modal transportation system that assures continued mobility of more people and goods throughout the region, consistent with transportation policies. By coordinating land uses and this transportation system, the region embraces its existing locational advantage as a relatively uncongested hub for trade.

The basic principles of the Growth Concept directly apply to the Regional Framework Plan policies. An urban to rural transition to reduce sprawl, keeping a clear distinction between urban and rural lands and balancing re-development, is needed. Separation of urbanizable land from rural land shall be accomplished by the UGB for the region's 20-year projected need for urban land. That boundary will be expanded into designated urban reserves areas when a need for additional urban land is demonstrated. About 18,600 acres of lands shown on the Growth Concept map have been designated by the Metro Council as urban reserves. The Growth Concept also assumes that cooperative agreements will be reached with neighboring cities to coordinate planning for the proportion of projected growth in the four county region expected to locate within their urban growth boundaries and urban reserve areas.

The Metro UGB would only expand into urban reserves when need for additional urban land is demonstrated. Rural reserves are intended to assure that Metro and neighboring cities remain separate. The result is intended to be a compact urban form for the region coordinated with nearby cities to retain the region's sense of place.

Mixed-use urban centers inside the UGB are one key to the Growth Concept. Creating higher density centers of employment and housing and transit service with compact development, retail, cultural and recreational activities in a walkable environment is intended to provide efficient access to goods and services, enhance multi-modal transportation and create vital, attractive neighborhoods and communities. The Growth Concept uses interrelated types of centers. The central city is the largest market area, the region's employment and cultural hub. Regional centers serve large market areas outside the central city, connected to it by high-capacity transit and highways. Connected to each regional center, by road and transit, are smaller town centers with local shopping and employment opportunities within a local market area. Planning for all of these centers will seek a balance between jobs, housing and unique blends of urban amenities so that more transportation trips are likely to remain local and become more multi-modal.

In keeping with the jobs-housing balance in centers, a jobs-housing balance by regional sub-areas can and should also be a goal. This would account for the housing and employment outside centers, and direct policy to adjust for better jobs-housing ratios around the region.

Recognition and protection of open spaces both inside the UGB and in rural reserves outside urban reserves are reflected in the Growth Concept. Open spaces, including important natural features and parks, are important to the capacity of the UGB and the ability of the region to accommodate housing and employment, while protecting and promoting livability. Green areas on the Growth Concept map may be designated as regional open space, removing these lands from the inventory of urban land available for development. Rural reserves, already designated for farms, forestry, natural areas or rural-residential use, would remain and be further protected from development pressures by the rural zoning of the counties.

The Concept map shows some transportation facilities to illustrate new concepts, such as "green corridors," and how land-use areas, such as centers, may be served based on agreements with affected agencies and jurisdictions. Neither the current regional system nor final alignment choices for future facilities are intended to be represented on the Concept map.

The percentages and density targets in the Growth Concept are used to describe the relationship between centers and areas. They are estimates based on modeling analysis of one possible configuration of the Growth Concept. Implementation actions that vary from these estimates may indicate a need to balance other parts of the Growth Concept to retain the compact urban form contained in the Growth Concept. Each jurisdiction is encouraged to adopt a unique mix of characteristics to retain the sense of place of each locality consistent with the overall Growth Concept.

Neighbor Cities

The Growth Concept recognizes that neighboring cities outside Metro's boundaries ~~surrounding the region's metropolitan area~~ are likely to grow rapidly. There are several such cities proximate to the Metro region. ~~The~~ Metro ~~Council~~ shall pursue discussion of cooperative efforts with neighboring cities. ~~Full n~~Neighbor city coordination could be achieved with the completion of intergovernmental agreements concerning ~~the following~~ key concepts ~~cited~~. Communities such as Sandy, Canby and Newberg will be affected by Metro, city and county decisions about managing ~~the~~ growth within Metro. A significant number of people may be accommodated in these neighboring cities, and cooperation between Metro and these communities is necessary to coordinate planning to address common transportation and land-use issues.

There are four key Metro polices for seeking cooperative agreements with neighbor cities:

1. There shall be a separation of rural land between each neighboring city and the metropolitan area. If the region grows together, the transportation system would suffer and the cities would lose their sense of community identity.

2. There should be a strong balance between jobs and housing in the Metro region and in the neighbor cities. The more a balance of jobs and households is retained, the more trips will remain local.
3. Each neighboring city should retain its own identity through its unique mix of commercial, retail, cultural and recreational opportunities which support the its balance of jobs and housing.
4. There should be consideration of a "green corridor," transportation facility through a rural reserve that serves as a link between the metropolitan area and a neighbor city with limited access to the farms and forests of the rural reserve. Keeping accessibility high encourages employment growth but limits the adverse effect on the surrounding rural areas. Metro will seek limitations in access to these facilities and will seek intergovernmental agreements with ODOT, the appropriate counties and neighbor cities to establish mutually acceptable growth management strategies. Metro will link transportation improvements to neighbor cities to successful implementation of these intergovernmental agreements.

Cooperative planning between a city outside the region and Metro could also be initiated on a more limited basis. These cooperative efforts could be completed to minimize the impact of growth on surrounding agriculture and natural resource lands, maintain a separation between a city and the Metro UGB, minimize the impact on state transportation facilities, match population growth to rural resource job and local urban job growth and coordinate land-use policies. Communities such as North Plains and other communities adjacent to the region such as Estacada and Scappoose may find this more limited approach suitable to their local situation.

Rural Reserves

Some rural lands adjacent to and nearby the regional UGB and not designated as urban reserves may be designated as rural reserves. This designation is intended as a policy statement by Metro to not extend its UGB into these areas and to support neighboring cities' efforts not to expand their urban growth boundaries into these areas. The objectives for rural land planning in the region will be to maintain the rural character of the landscape to support and maintain our agricultural economy, and to avoid or eliminate conflicts with farm and forest practices, help meet regional needs for open space and wildlife habitat, and help to clearly separate urban from rural land. ~~This will be pursued by not expanding t~~The UGB will not be expanded into these areas.~~ and s~~Supporting rural zoning designations will be encouraged. These rural reserves keep adjacent urban areas separate. These rural lands are not needed or planned for development but are more likely to experience development pressures than are areas farther away.

These lands will not be developed in urban uses in the foreseeable future, an idea that requires establishing and maintaining agreement among local, regional and state agencies. They are areas outside the present UGB and along highways that connect the region to neighboring cities.

New rural commercial or industrial development should be restricted. Some areas should receive priority status as potential areas for park and open space acquisition. Zoning should be for resource protection on farm and forestry land, and very low-density residential (no greater average density than one unit for five acres) for exception land.

These rural reserves would support and protect farm and forestry operations. The reserves also would include some purchase of natural areas adjacent to rivers, streams and lakes to ensure that water quality is protected and wildlife habitat enhanced. Large natural features, such as hills and buttes, also would be included as rural reserves because they buffer developed areas and are poor candidates for compact urban development.

Rural reserves are designated in areas that are most threatened by new development, that separate communities, or exist as special resource areas.

Rural reserves also would be retained to separate cities within the Metro boundary. Cornelius, Hillsboro, Tualatin, Sherwood and Wilsonville all have existing areas of rural land that provide a break in urban patterns. Urban reserve study areas that are indicated on the Concept Map are also separated by rural reserves, such as the Damascus-Pleasant Valley areas from Happy Valley.

The primary means of achieving rural reserves would be through the Regional Framework Plan for areas within the Metro boundary, and voluntary agreements among Metro, the counties, neighboring cities and the state for those areas outside the Metro boundary. Metro shall seek agreements which would prohibit extending urban growth into the rural reserves and require that state agency actions be consistent with the rural reserve designation.

Open Spaces and Trail Corridors

The areas designated open space on the Concept map are parks, stream and trail corridors, wetlands and floodplains, largely undeveloped upland areas and areas of compatible very low-density residential development. Many of these natural features already have significant land set aside as open space. The Tualatin Mountains, for example, contain major parks such as Forest Park and Tryon Creek State Park and numerous smaller parks such as Gabriel Park in Portland and Wilderness Park in West Linn. Other areas are oriented toward wetlands and streams, with Fanno Creek in Washington County having one of the best systems of parks and open space in the region.

Local jurisdictions are encouraged to establish acres of open space per capita goals based on rates at least as great as current rates, in order to keep up with current conditions.

Designating these areas as open spaces ~~would have~~has several effects. First, it ~~would~~ removes these lands from the category of urban land that is available for development. The capacity of the UGB ~~would have~~then has to be calculated without these areas, and plans to accommodate housing and employment ~~would have~~have to be made without them. Second, these natural areas, along with key rural reserve areas, ~~would~~ receive a high priority for purchase as parks and open space, through programs such as Metro's Open Spaces Acquisition~~Greenspaces~~ program. Finally, regulations ~~e~~should be developed, to protect ~~these~~ critical natural areas, that would not conflict with housing and economic goals~~, thereby having the benefit of regulatory~~. This will provide protection of critical creek areas, compatible low-density development of sensitive areas and transfer of development rights from protected natural areas to other lands better suited for development.

About 35,000 acres of land and water inside today's UGB are included as open spaces in the Growth Concept map. Preservation of these open spaces ~~could~~may be achieved by a combination of ways. Some areas could be purchased by public entities, such as Metro through its Open Spaces Acquisition~~'s Greenspaces~~ program or local park departments. Others may be donated by private citizens or by developers of adjacent properties to reduce the impact of development. Some could be protected by environmental zoning that allows very low-density residential development through the clustering of housing on portions of the land while leaving important features as common open space.

Centers

Creating higher density centers of employment and housing provides many advantages to communities~~is advantageous for several reasons~~. These centers provide citizens with access to a variety of goods and services in a relatively small geographic area, creating an intense business climate. Having centers also makes sense from a transportation perspective, since most centers have an accessibility level that is conducive to transit, bicycling and walking. Centers also act as social gathering places and community centers, where people would find the cultural and recreational activities and "small-town atmosphere" they cherish.

The major benefits of centers in the marketplace are accessibility and the ability to concentrate goods and services in a relatively small area. The problem in developing centers, however, is that most of the existing centers are already developed and any increase in the density must be made through redeveloping existing land and buildings. Emphasizing redevelopment in centers over development of new areas of undeveloped land is a key strategy in the Growth Concept. Areas of high unemployment and low property values should be specially considered to encourage

reinvestment and redevelopment. Incentives and tools to facilitate redevelopment in centers should be identified.

There are three types of centers, distinguished by size and accessibility. The central city is downtown Portland and is accessible to millions of people. Regional centers are accessible to hundreds of thousands of people and town centers are accessible to tens of thousands.

The Central City

Downtown Portland serves as our major regional center and functions quite well as an employment and cultural hub for the metropolitan area. It provides accessibility to the many businesses that require access to a large market area and also serves as the location for cultural and social functions that draw the region together. It is the center for local, regional, state and federal governments, financial institutions, commerce, the center for arts and culture, and for visitors to the region.

In addition, downtown Portland has a high percentage of travel other than by car – three times higher than the next most successful area. Jobs and housing are readily available there, without the need for a car. Maintaining and improving upon the strengths of our regional downtown shall remain a high priority.

Today, about 20 percent of all employment in the region is in downtown Portland. Under the Growth Concept, downtown Portland would grow at about the same rate as the rest of the region and would remain the location of about 20 percent of regional employment. To do this, downtown Portland's 1990 density of 150 people per acre would increase to about 250 people per acre. Improvements to the transit system network, development of a multi-modal street system and maintenance of regional through routes (the highway system) would provide additional mobility to and from the city center.

Regional Centers

There are nine regional centers, serving four market areas (outside of the central city market area). Hillsboro serves that western portion of the region and Gresham the eastern. The central city and Gateway serve most of the Portland area as a regional center. Downtown Beaverton and Washington Square serve the east Washington County area, and downtown Oregon City, Clackamas Town Center and Milwaukie together serve Clackamas County and portions of outer south east Portland.

These regional centers would become the focus of compact development, redevelopment and high-quality transit service, multi-modal street networks and act as major nodes along regional

through routes. The Growth Concept estimates that about 3 percent of new household growth and 11 percent of new employment growth would be accommodated in these regional centers. From the current 24 people per acre, the Growth Concept would allow for about 60 people per acre.

Transit improvements would include light-rail connecting all regional centers to the central city. A dense network of multi-modal arterial and collector streets would tie regional centers to surrounding neighborhoods and other centers. Regional through-routes would be designed to connect regional centers and ensure that these centers are attractive places to conduct business. The relatively small number of centers reflects not only the limited market for new development at this density but also the limited transportation funding for the high-quality transit and roadway improvements envisioned in these areas. As such, the nine regional centers should be considered candidates and ultimately the number should be reduced or policies established to phase in certain regional centers earlier than others.

Town Centers

Smaller than regional centers and serving populations of tens of thousands of people, town centers are the third type of center with compact development and transit service. Town centers would accommodate about 3 percent of new households and more than 7 percent of new employment. The 1990 density of an average of 23 people per acre would nearly double – to about 40 persons per acre, the current densities of development along Hawthorne Boulevard and in downtown Hillsboro.

Town centers would provide local shopping, employment and cultural and recreational opportunities within a local market area. They are designed to provide local retail and services, at a minimum. They also would vary greatly in character. Some would become traditional town centers, such as Lake Oswego, Oregon City and Forest Grove, while others would change from an auto-oriented development into a more complete community, such as Hillsdale. Many would also have regional specialties, such as office centers envisioned for the Cedar Mill town center. Several new town centers are designated, such as in Happy Valley and Damascus, to accommodate the retail and service needs of a growing population while reducing auto travel. Others would combine a town center within a regional center, offering the amenities and advantages of each type of center.

Corridors

Corridors are not as dense as centers, but also are located along good quality transit lines. They provide a place for densities that are somewhat higher than today and feature a high-quality pedestrian environment and convenient access to transit. Typical new developments would

include rowhouses, duplexes and one- to three-story office and retail buildings, and average about 25 persons per acre. While some corridors may be continuous, narrow bands of higher intensity development along arterial roads, others may be more nodal, that is, a series of smaller centers at major intersections or other locations along the arterial that have high quality pedestrian environments, good connections to adjacent neighborhoods and good transit service. As long as the average target densities and uses are allowed and encouraged along the corridor, many different development patterns – nodal or linear – may meet the corridor objective.

Station Communities

Station communities are nodes of development centered around a light-rail or high-capacity transit station that feature a high-quality pedestrian environment. They provide for the highest density outside centers. Station communities would encompass an area approximately one-half mile from a station stop. The densities of new development would average about 45 persons per acre. Zoning ordinances now set minimum densities for most Eastside and Westside MAX station communities. An extensive station community planning program is now under way for each of the Westside station communities; similar work is envisioned for the proposed South/North line. It is expected that the station community planning process will result in specific strategies and plan changes to implement the station communities concept.

Because the Growth Concept calls for many corridors and station communities throughout the region, together they are estimated to accommodate 27 percent of the new households of the region and nearly 15 percent of new employment.

Main Streets and Neighborhood Centers

During the early decades of this century, main streets served by transit and characterized by a strong business and civic community were a major land-use pattern throughout the region. Examples remain in Hillsboro, Milwaukie, Oregon City and Gresham as well as the Westmoreland neighborhood and Hawthorne Boulevard. Today, these areas are undergoing a revival and provide an efficient and effective land-use and transportation alternative. The Growth Concept calls for main streets to grow from 1990 levels of 36 people per acre to about 39 per acre. Main streets would accommodate nearly 2 percent of housing growth.

Main streets typically will serve neighborhoods and may develop a regional specialization – such as antiques, fine dining, entertainment or specialty clothing – that draws people from other parts of the region. Main streets form neighborhood centers as areas that provide the retail and service development at other intersections at the focus of neighborhood areas and around MAX light-rail stations. When several main streets occur within a few blocks of one another, they may also serve

as a dispersed town center, such as the main street areas of Belmont, Hawthorne and Division that form a town center for inner Southeast Portland.

Neighborhoods

Residential neighborhoods would remain a key component of the Growth Concept and would fall into two basic categories. Inner neighborhoods include areas such as Portland, Beaverton, Milwaukie and Lake Oswego, and would include primarily residential areas that are accessible to employment. Lot sizes would be smaller to accommodate densities increasing from 1990 levels of about 11 people per acre to about 14 per acre. Inner neighborhoods would trade smaller lot sizes for better access to jobs and shopping. They would accommodate about 28 percent of new households and 15 percent of new employment (some of the employment would be home occupations and the balance would be neighborhood-based employment such as schools, daycare and some neighborhood businesses).

Outer neighborhoods would be farther away from large employment centers and would have larger lot sizes and lower densities. Examples include cities such as Forest Grove, Sherwood and Oregon City, and any additions to the UGB. From 1990 levels of nearly 10 people per acre, outer neighborhoods would increase to about 13 per acre. These areas would accommodate about 28 percent of new households and 10 percent of new employment.

One of the most significant problems in some newer neighborhoods is the lack of street connections, a recent phenomenon that has occurred in the last 25 years. It is one of the primary causes of increased congestion in new communities. Traditional neighborhoods contained a grid pattern with up to 20 through streets per mile. But in new areas, one to two through streets per mile is the norm. Combined with large-scale single-use zoning and low densities, it is the major cause of increasing auto dependency in neighborhoods. To improve local connectivity throughout the region, all areas shall develop master street plans intended to improve access for all modes of travel. These plans shall include eight to 20 local street connections per mile, except in cases where fewer connections are necessitated by constraints such as natural or constructed features (for example streams, wetlands, steep slopes, freeways, airports, etc.)

Industrial Areas and Employment Areas

The Portland metropolitan area economy is heavily dependent upon wholesale trade and the flow of commodities to national and international markets. The high quality of our freight transportation system and, in particular, our intermodal freight facilities are essential to continued growth in trade. The intermodal facilities (air and marine terminals, freight rail yards and

common carrier truck terminals) are an area of regional concern, and the Regional Framework Plan will identify and protect lands needed to meet their current and projected space requirements.

Industrial areas would be set aside primarily for industrial activities. Other supporting uses, including some retail uses, may be allowed if limited to sizes and locations intended to serve the primary industrial uses. They include land-intensive employers, such as those around the Portland International Airport, the Hillsboro Airport and some areas along Highway 212/224. Areas of high agglomerative economic potential, such as the Sunset Corridor for electronics products and the Northwest industrial sanctuary for metal products, shall be supported with transportation planning and infrastructure development designed to meet their needs. Industrial areas are expected to accommodate 10 percent of regional employment and no households. Retail uses whose market area is substantially larger than the employment area shall not be considered supporting uses.

Other employment centers would be designated as employment areas, mixing various types of employment and including some residential development as well. These employment areas would provide for about 5 percent of new households and 14 percent of new employment within the region. Densities would rise substantially from 1990 levels of about 11 people per acre to about 20 people per acre. Employment areas would be expected to include some limited retail commercial uses primarily to serve the needs of people working or living in the immediate employment areas, not larger market areas outside the employment area. Exceptions to this general policy can be made only for certain areas, indicated in a functional plan.

The siting and development of new industrial areas would consider the proximity of housing for all income ranges provided by employment in the projected industrial center, as well as accessibility to convenient and inexpensive non-auto transportation. The continued development of existing industrial areas would include attention to these two issues as well.

Urban Reserves

One important feature of the Growth Concept is that it would accommodate all 50 years of forecasted growth through a relatively small amount of urban reserves. Urban reserves consist of land set aside outside the present UGB for future growth. The Growth Concept contained approximately 22,000 acres of urban reserve study areas. Less than the full study area, about 18,600 acres was designated as urban reserve areas in March, 1997. More than 75 percent of these lands are currently zoned for rural housing and the remainder are zoned for farm or forestry uses.

Transportation Facilities

~~In Adopting the 2040 Growth Concept, the region has shown a strong commitment to developing a regional plan that is based on greater land use efficiencies and a truly multi-modal transportation system. However, the transportation system defined in the Growth Concept analysis serves as a theoretical definition of the transportation system needed to serve the land uses for the Growth Concept urban form. The modeled system reflects only one of many possible configurations that might be used to serve future needs, consistent with the policy direction called for in the Growth Concept.~~

~~As such, the Growth Concept transportation map provides only general direction for development of an updated Regional Transportation Plan (RTP) and does not prescribe or limit what the RTP will ultimately include in the regional system. Instead, the RTP will build upon the broader land use and transportation directions that are defined in the Growth Concept.~~

Adoption of the 2040 Growth Concept established a new direction for planning in the region by linking urban form to transportation. This new direction reflects a commitment to develop a regional plan that is based on efficient use of land and a safe, efficient and cost-effective transportation system that supports the land uses in the 2040 Growth Concept and accommodates all forms of travel.

In this new relationship, the 2040 Growth Concept provides the desired urban form for the Regional Transportation Plan to support. The 2040 Growth Concept Map identifies one possible regional transportation system. Therefore, the 2040 Growth Concept Map does not prescribe or limit what the adopted regional transportation system will include.

The transportation elements needed to create a successful growth management policy are those that support the 2040 Growth Concept. Traditionally, streets have been defined by their traffic-carrying potential, and transit service according to its ability to draw commuters. Other travel modes have not been viewed as important elements of the transportation system. The Growth Concept establishes a new framework for planning in the region by linking urban form to transportation. In this new relationship, transportation is viewed as a range of travel modes and options that reinforce the region's growth management goals.

In the 2040 Growth Concept, transportation is viewed as a range of travel modes and options that reinforce the region's growth management goals. To implement this vision, the Regional Transportation Plan will define the regional transportation system and prioritize planned transportation improvements to support the 2040 Growth Concept design types and to serve the region's current and future travel needs.

Consistent with the 2040 Growth Concept, the Regional Transportation Plan shall define a regional transportation system integrating intermodal facilities, truck routes, regional through-routes, multi-modal arterials, collectors and local streets, light rail, bus networks and other public transportation, bicycle and pedestrian networks and transportation demand management.

For example, the Regional Transportation Plan will target areas of concentrated development, such as the central city and regional centers such as Gresham and Beaverton, to provide a balance of high quality transit, pedestrian and bicycle projects that complement needed auto and freight improvements. In station communities, town centers, main streets and along mixed-use corridors, the Regional Transportation Plan will emphasize a high quality bicycle and pedestrian environment and improved access to transit, but will also allow for auto access. Industrial areas need good auto, truck and rail access for freight movement, while allowing employees and customers to commute by auto, transit and, in some instances, bicycles. Improvements within these areas will be largely oriented toward accommodating these needs and improved access to intermodal facilities.

Chapter 2 of this Regional Framework Plan describes the different 2040 Growth Concept land use components and associated transportation policies as defined during the Region 2040 process. Implementation of these transportation policies will occur through the Regional Transportation Plan and the Metro Transportation Improvement Program (MTIP).

~~Within the framework of the Growth Concept is a network of multi-modal corridors and regional through routes that connect major urban centers and destinations. Through routes provide for high volume auto and transit travel at a regional scale, and ensure efficient movement of freight. Within multi-modal corridors, the transportation system will provide a broader range of travel mode options, including auto, transit, bicycle and pedestrian networks, that allow choices of how to travel in the region. These travel options will encourage the use of alternative modes to the auto, a shift that has clear benefits for the environment and the quality of neighborhoods and urban centers and address the needs of those without access to automobiles.~~

~~In addition to the traditional emphasis on road and transit facilities, the development of networks for freight travel and intermodal facilities, for bicycle and pedestrian travel and the efficient use of capacity on all streets through access management and congestion management and/or pricing will be part of a successful transportation system.~~

~~While the Concept map shows only major transit facilities and corridors, all areas within the UGB have transit access. Transit service in the Growth Concept included both fixed route and demand~~

~~responsive systems. The RTP shall further define the type and extent of transit service available throughout the region.~~

~~Intermodal Facilities~~

~~The region's continued strength as a national and international distribution center is dependent upon adequate intermodal facilities and access to them. Intermodal facilities include marine terminals, railroad intermodal points, such as the Union Pacific's Albina Yard, the airports and the Union Station/inter-city bus station area. The RTP will identify these areas and their transportation requirements and will identify programs to provide adequate freight capacity.~~

~~Truck Routes~~

~~Truck routes will be identified and freight movement will be given priority in terms of roadway design and operation between areas with freight dependent uses within the region and major facilities serving areas locations outside the region.~~

~~Regional Through Routes~~

~~These are the routes that move people and goods through and around the region, connect regional centers to each other and to the Central City, and connect the region to the statewide and interstate transportation system. They include freeways, limited access highways and heavily traveled arterials, and usually function as through routes. As such, they are important not only because of the movement of people, but as one of the region's major freight systems. Since much of our regional economy depends on the movement of goods and services, it is essential to keep congestion on these roads at manageable levels. These major routes frequently serve as transit corridors but are seldom conducive to bicycles or pedestrians because of the volume of auto and freight traffic that they carry.~~

~~With their heavy traffic and high visibility, these routes are attractive to business. However, when they serve as a location for auto-oriented businesses, the primary function of these routes, to move regional and statewide traffic, can be eroded. While they serve as an appropriate location for auto-oriented businesses, they are poor locations for businesses that are designed to serve neighborhoods or sub-regions. These are better located on multi-modal arterials. They need the highest levels of access control. In addition, it is important that they not become barriers to movements across them by other forms of travel, auto, pedestrian, transit or bicycle. They shall focus on providing access to centers and neighbor cities, rather than access to the lands that front them.~~

~~**Multi-Modal Arterials**~~

~~These represent most of the region's arterials. They include a variety of design styles and speeds, and are the backbone for a system of multi-modal travel options. Older sections of the region are better designed for multi-modal travel than new areas. Although these streets are often smaller than suburban arterials, they carry a great deal of traffic (up to 30,000 vehicles a day), experience heavy bus ridership along their routes and are constructed in dense networks that encourage bicycle and pedestrian travel. The RTP shall identify these multi-modal streets and develop a plan to further encourage alternative travel modes within these corridors.~~

~~Many new streets, however, are designed to accommodate heavy auto and freight traffic at the expense of other travel modes. Multiple, wide lanes, dedicated turning lanes, narrow sidewalks exposed to moving traffic, and widely spaced intersections and street crossings create an environment that is difficult and dangerous to negotiate without a car. The RTP shall identify these potential multi-modal corridors and establish design standards that encourage other modes of travel along these routes.~~

~~Some multi-modal arterials also carry significant volumes of freight. The RTP will ensure that freight mobility on these routes is adequately protected by considering freight needs when identifying multi-modal routes, and in establishing design standards intended to encourage alternative modes of passenger travel.~~

~~**Collectors and Local Streets**~~

~~These streets become a regional priority when a lack of adequate connections forces neighborhood traffic onto arterials. New suburban development increasingly depends on arterial streets to carry trips to local destinations, since most new local streets systems are specifically designed with curves and cul-de-sacs to discourage local through travel by any mode. The RTP should consider a standard of 8 to 20 through streets per mile, applied to both developed and developing areas to reduce local travel on arterials. There should also be established standard bicycle and pedestrian through routes (via easements, greenways, fire lanes, etc.) in existing neighborhoods where changes to the street system are not a reasonable alternative.~~

~~**Light Rail**~~

~~Light rail transit (LRT) daily travel capacity measures in tens of thousands of riders and provides a critical travel option to major destinations. The primary function of light rail in the Growth Concept is to link regional centers and the central city, where concentrations of housing and employment reach a level that can justify the cost of developing a fixed transit system. In~~

addition to their role in developing regional centers, LRT lines can also support significant concentrations of housing and employment at individual station areas along their routes.

In addition, neighbor cities of sufficient size should also include a transit connection to the metropolitan area to provide a full range of transportation alternatives.

"Planned and existing light rail lines" on the Concept map represent some locations shown on the current RTP that were selected for initial analysis. "Proposed light rail alignments" show some appropriate new light rail locations consistent with serving the Growth Concept. "Potential High Capacity Transit (HCT) lines" highlight locations for some concentrated form of transit, possibly including light rail. These facilities demonstrate the general direction for development of an updated RTP which will be based on further study. The Concept map transportation facilities do not prescribe or limit the existing or updated RTP.

Bicycle and Pedestrian Networks

Bicycling and walking should play an important part in the regional transportation system especially within neighborhoods and centers and for other shorter trips. They are also essential to the success of an effective transit system. In addition to the arrangement of land uses and site design, route continuity and the design of rights-of-way in a manner friendly to bicyclists and pedestrians are necessary. The RTP will establish targets that substantially increase the share of these modes.

Demand Management/Pricing

The land uses and facilities in the Growth Concept cannot, by themselves, meet the region's transportation objectives. Demand management (carpooling, parking management and pricing strategies) and system management will be necessary to achieve the transportation system operation described in the Growth Concept. Additional actions will be needed to resolve the significant remaining areas of congestion and the high VMT/capita that it causes. The RTP will identify explicit targets for these programs in various areas of the region.

Land Use

Chapter 1 Land Use

Overview

This chapter of the Framework Plan addresses regional land use policies, including those relating to the following Charter-mandated Regional Framework Plan components:

- management and amendment of the Urban Growth Boundary
- protection of lands outside the Urban Growth Boundary for natural resources, future urban or other uses
- housing densities
- urban design and settlement patterns

This chapter contains specific goals and objectives adopted to guide Metro in future growth management land use planning. Following the goals and objectives, this chapter refers to specific legal requirements for cities and counties as well as for Metro that are adopted in Chapter 8. These provisions are implemented in the acknowledged Metro Code section governing Urban Growth Boundary Amendments and in the adopted Urban Growth Management Functional Plan.

The Metro Code provisions, Urban Growth Management Functional Plan, and a background discussion and policy analysis for this chapter are all included in the Appendices of this Plan.

Policies (Goals and Objectives)

Following are Regional Framework Plan policies for land use:

1.1 Urban Form

The quality of life and the urban form of our region are closely linked. The Growth Concept is based on the belief that we can continue to grow and enhance livability by making the right choices for how we grow. The region's growth will be balanced by:

- maintaining a compact urban form, with easy access to nature
- preserving existing stable and distinct neighborhoods by focusing commercial and residential growth in mixed-use centers and corridors at a pedestrian scale

- assuring affordability and maintaining a variety of housing choices with good access to jobs and assuring that market-based preferences are not eliminated by regulation
- targeting public investments to reinforce a compact urban form.

1.2 Built Environment

Development in the region should occur in a coordinated and balanced fashion as evidenced by:

- a regional "fair-share" approach to meeting the housing needs of the urban population
- the provision of infrastructure and critical public services concurrent with the pace of urban growth and that supports the 2040 Growth Concept
- the continued growth of regional economic opportunity, balanced so as to provide an equitable distribution of jobs, income, investment and tax capacity throughout the region and to support other regional goals and objectives
- the coordination of public investment with local comprehensive and regional functional plans
- the creation of a balanced transportation system, less dependent on the private automobile, supported by both the use of emerging technology and the location of jobs, housing, commercial activity, parks and open space.

1.3 Housing

The Metro Council shall adopt a "fair share" strategy for meeting the housing needs of the urban population in cities and counties based on a subregional analysis that provides for:

- a diverse range of housing types available within cities and counties inside the UGB;
- specific goals for low- and moderate-income and market rate housing to ensure that sufficient and affordable housing is available to households of all income levels that live or have a member working in each jurisdiction;
- housing densities and costs supportive of adopted public policy for the development of the regional transportation system and designated centers and corridors;
- a balance of jobs and housing within the region and subregions.

1.4 Economic Opportunity

Metro should support public policy that maintains a strong economic climate through encouraging the development of a diverse and sufficient supply of jobs, especially family wage jobs, in appropriate locations throughout the region.

In weighing and balancing various values, goals and objectives, the values, needs, choices and desires of consumers should also be taken into account. The values, needs and desires of consumers include:

- low costs for goods and services

- convenience, including nearby and easily accessible stores; quick, safe, and readily available transportation to all modes
- a wide and deep selection of goods and services
- quality service
- safety and security
- comfort, enjoyment and entertainment.

Expansions of the UGB for industrial or commercial purposes shall occur in locations consistent with this plan and where an assessment of the type, mix and wages of existing and anticipated jobs within subregions justifies such expansion. The number and wage level of jobs within each subregion should be balanced with housing cost and availability within that subregion. Strategies should be developed to coordinate the planning and implementation activities of this element with Policy 1.3, Housing and Policy 1.8, Developed Urban Land.

1.5 Urban Vitality

Special attention shall be paid to promoting mixed-use development in existing city and neighborhood centers that have experienced disinvestment and/or are currently underutilized and/or populated by a disproportionally high percentage of people living at or below 80 percent of the area median income. In creating these designations, Metro shall consider new and existing community plans developed by community residents.

1.6 Growth Management

The management of the urban land supply shall occur in a manner that:

- encourages the evolution of an efficient urban growth form
- provides a clear distinction between urban and rural lands
- supports interconnected but distinct communities in the urban region
- recognizes the inter-relationship between development of vacant land and redevelopment objectives in all parts of the urban region
- is consistent with the 2040 Growth Concept and helps attain the region's objectives.

1.7 Urban/Rural Transition

There should be a clear transition between urban and rural land that makes best use of natural and built landscape features and that recognizes the likely long-term prospects for regional urban growth.

- Boundary Features – The Metro UGB should be located using natural and built features, including roads, rivers, creeks, streams, drainage basin boundaries, floodplains, power lines, major topographic features and historic patterns of land use or settlement.
- Sense of Place – Historic, cultural, topographic and biological features of the regional landscape that contribute significantly to this region's identity and "sense of place" shall be identified. Management of the total urban land supply should occur in a manner that supports the preservation of those features, when designated, as growth occurs.
- Urban Reserves – "Urban reserve areas," shall be designated by Metro consistent with state law. ~~pursuant to LCDC's urban reserve rule for purposes of coordinating planning and estimating areas for future urban expansion,~~ Urban reserve designations shall be consistent with ~~these~~ Regional Framework Plan policies ~~goals and objectives,~~ and shall be reviewed by Metro at least every 15 years.
    - The priority for ~~I~~inclusion of land within an urban reserve area shall generally be based upon the locational factors of Goal 14. Lands adjacent to the UGB shall be studied for suitability for inclusion within urban reserves as measured by factors 3 through 7 of Goal 14 and by the requirements of OAR 660-04-010. (Copies of Goal 14 and OAR 660-04010 are included in the Appendices for informational purposes.)
    - Lands of lower priority in the LCDC rule priorities may be included in urban reserves if specific types of land needs cannot be reasonably accommodated on higher priority lands, after options inside the UGB have been considered, such as land needed to bring jobs and housing into close proximity to each other.
    - Lands of lower priority in the LCDC rule priorities may be included in urban reserves if higher priority land is needed for physical separation of communities inside or outside the UGB to preserve separate community identities.
    - Expansion of the UGB shall occur consistent with the urban/rural transition, developed urban land, UGB and neighbor city objectives. Where urban land is adjacent to rural lands outside of an urban reserve, Metro will work with affected cities and counties to ensure that urban uses do not significantly affect the use or condition of the rural land. Where urban land is adjacent to lands within an urban reserve that may someday be included within the UGB, Metro will work with affected cities and counties to ensure that rural development does not create obstacles to efficient urbanization in the future.

1.8 Developed Urban Land

Opportunities for and obstacles to the continued development and redevelopment of existing urban land shall be identified and actively addressed. A combination of regulations and incentives shall be employed to ensure that the prospect of living, working and doing business in those locations remains attractive to a wide range of households and employers. In coordination with affected agencies, Metro should encourage the redevelopment and reuse of lands used in the past or already used for commercial or industrial purposes wherever economically viable and environmentally sound.

Redevelopment and Infill – When Metro examines whether additional urban land is needed within the UGB, it shall assess redevelopment and infill potential in the region. The potential for redevelopment and infill on existing urban land will be included as an element when calculating the buildable land supply in the region, where it can be demonstrated that the infill and redevelopment can be reasonably expected to occur during the next 20 years.

Metro will work with jurisdictions in the region to determine the extent to which redevelopment and infill can be relied on to meet the identified need for additional urban land. After this analysis and review, Metro will initiate an amendment of the UGB to meet that portion of the identified need for land not met through commitments for redevelopment and infill.

1.9 Urban Growth Boundary

The regional UGB, a long-term planning tool, shall separate urbanizable from rural land, be based in aggregate on the region's 20-year projected need for urban land and be located consistent with statewide planning goals and these RUGGOs and adopted Metro Council procedures for UGB amendment. In the location, amendment and management of the regional UGB, Metro shall seek to improve the functional value of the boundary.

Expansion into Urban Reserves – Upon demonstrating a need for additional urban land, major and legislative UGB amendments shall only occur within urban reserves once adopted, unless urban reserves are found to be inadequate to accommodate the amount of land needed for one or more of the following reasons:

- Specific types of identified land needs cannot be reasonably accommodated on urban reserve lands
- Future urban services could not reasonably be provided to urban reserves due to topographical or other physical constraints
- Maximum efficiency of land uses within a proposed UGB requires inclusion of lower priority lands other than urban reserves in order to include or provide services to urban reserves.

Urban Growth Boundary Amendment Process – Criteria for amending the UGB shall be derived from statewide planning goals 2 and 14, other applicable state planning goals and relevant portions of the RUGGOs:

- Major Amendments. Proposals for major amendment of the UGB shall be made through a legislative process in conjunction with the development and adoption of regional forecasts for population and employment growth. The amendment process will be initiated by a Metro finding of need, and involve local governments, special districts, citizens and other interests.
- Locational Adjustments. Locational adjustments of the UGB shall be brought to Metro by cities, counties and/or property owners based on public facility plans in adopted and acknowledged comprehensive plans.

1.10 Urban Design

The identity and functioning of communities in the region shall be supported through:

- the recognition and protection of critical open space features in the region
- public policies that encourage diversity and excellence in the design and development of settlement patterns, landscapes and structures
- ensuring that incentives and regulations guiding the development and redevelopment of the urban area promote a settlement pattern that:
    - link any public incentives to a commensurate public benefit received or expected and evidence of private needs
    - is pedestrian "friendly," encourages transit use and reduces auto dependence
    - provides access to neighborhood and community parks, trails and walkways, and other recreation and cultural areas and public facilities
    - reinforces nodal, mixed-use, neighborhood-oriented design
    - includes concentrated, high-density, mixed-use urban centers developed in relation to the region's transit system
    - is responsive to needs for privacy, community, sense of place and personal safety in an urban setting
    - facilitates the development and preservation of affordable mixed-income neighborhoods.

Pedestrian- and transit-supportive building patterns will be encouraged in order to minimize the need for auto trips and to create a development pattern conducive to face-to-face community interaction.

1.11 Neighbor Cities

Growth in cities outside the Metro UGB, occurring in conjunction with the overall population and employment growth in the region, should be coordinated with Metro's growth management activities through cooperative agreements which provide for:

Separation – The communities within the Metro UGB, in neighbor cities and in the rural areas in between will all benefit from maintaining the separation between these places as growth occurs. Coordination between neighboring cities, counties and Metro about the location of rural reserves and policies to maintain separation should be pursued.

Jobs Housing Balance – To minimize the generation of new automobile trips, a balance of sufficient number of jobs at wages consistent with housing prices in communities both within the Metro UGB and in neighboring cities should be pursued.

Green Corridors – The "green corridor" is a transportation facility through a rural reserve that serves as a link between the metropolitan area and a neighbor city which also limits access to the farms and forests of the rural reserve. The intent is to keep urban to urban accessibility high to encourage a balance of jobs and housing, but limit any adverse effect on the surrounding rural areas.

1.12 Protection of Agriculture and Forest Resource Lands

Agricultural and forest resource land outside the UGB shall be protected from urbanization, and accounted for in regional economic and development plans, consistent with these RUGGOs.

Rural Resource Lands – Rural resource lands outside the UGB that have significant resource value should actively be protected from urbanization.

Urban Expansion – Expansion of the UGB shall occur in urban reserves, established consistent with the urban rural transition objective.

Farm and Forest Practices – Protect and support the ability for farm and forest practices to continue. The designation and management of rural reserves by the Metro Council may help establish this support, consistent with the Growth Concept.

1.13 Participation of Citizens

The following policies relate to participation of Citizens:

1.13.1 Metro will encourage public participation in Metro land use planning.

1.13.2 Metro will follow and promote the citizen participation values inherent in RUGGO Goal 1, Objective 1 and the Metro Citizen Involvement Principles.

1.13.3 Local governments are encouraged to provide opportunities for public involvement in land use planning and delivery of recreational facilities and services.

Requirements

In order to immediately implement the land use portion of the Regional Framework Plan, Metro has adopted Metro Code Chapter 3.01, Urban Growth Boundary Amendments and Urban Growth Management Functional Plan. These documents are incorporated as components of the Regional Framework Plan in Chapter 8 and are included in the Appendices. The Urban Growth Management Functional Plan contains requirements for cities and counties. Any additional land

use planning requirements for cities and counties adopted by Metro should be incorporated into the Urban Growth Management Functional Plan structure.

Background

Future Vision

As noted above, the Future Vision statement is the broadest set of declarations about our region. The Regional Framework Plan is required to describe its relationship to the Future Vision. With regard to land-use, the Future Vision notes many values including the following:

> "We value natural systems for their intrinsic value, and recognize our responsibility to be stewards of the region's natural resources."
>
> "Widespread land restoration and redevelopment must precede any conversion of land to urban uses to meet our present and future needs."
>
> "We value economic development because of the opportunities it affords us all, but recognize that there can be true economic development only with unimpaired and sustainable natural ecosystems, and suitable social mechanisms to ensure dignity and equity for all and compassion for those in need."
>
> "We value our regional identity, sense of place and unique reputation among metropolitan areas, and celebrate the identity and accomplishments of our urban neighborhoods and suburban and rural communities."
>
> "We value a life close to the beauty and inspiration of nature, incorporated into urban development in a manner that remains a model for metropolitan areas into the next century."
>
> "We value vibrant cites that are both an inspiration and a crucial resource for commerce, cultural activities, politics and community building."
>
> "Direct all regional planning efforts to include equitable economic progress for communities throughout the region as a critical component for modeling and evaluation."
>
> "Address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout...the region in the Regional Framework Plan elements for transportation, rural lands, urban design, housing and water resources."
>
> "Focus public policy and investment on the creation of mixed-use communities that include dedicated public space and a broad-range of housing types affordable to all."
>
> "Incorporate specific expectations for a basic standard of living for all citizens in Regional Framework Plan elements concerned with urban design, housing, transportation, and parks and open space."
>
> "Specifically incorporate historic preservation and landscape ecology in Regional Framework Plan elements concerned with transportation, housing, urban design, rural lands and the UGB, parks and open space, and bi-state governance."

Regional Framework Plan relationships to these statements will be described in the discussion following.

Urban Growth Boundary

State law assigns Metro responsibility for managing the region's Urban Growth Boundary, one tool for managing growth, which separates urbanizable land from rural land. The boundary was established in 1979 and included 24 cities (Beaverton, Cornelius, Durham, Fairview, Forest Grove, Gladstone, Gresham, Happy Valley, Hillsboro, Johnson City, King City, Lake Oswego, Maywood Park, Milwaukie, Oregon City, Portland, Rivergrove, Sherwood, Tigard, Troutdale, Tualatin, West Linn, Wilsonville and Wood Village) and the urban metropolitan portions of Clackamas, Multnomah and Washington counties. The UGB has been reevaluated about every five to seven years to assess whether capacity for the next 20 years is available. Since the UGB's inception, fewer than 3,000 acres of land have been added. As of the first quarter of 1997, the UGB contained 232,667 acres. Expansion of the UGB from 1978-1997 was only a little more than 1.2 percent increase. In 1997, the Metro Council concluded that there was not a 20 year land supply and that additional lands would need to be added to the Metro Urban Growth Boundary.

Approximately every five years, Metro revisits the region's urban land needs for the next 20 years and estimates the growth capacity within the UGB. A state law now requires Metro to demonstrate that there is a sufficient 20-year future capacity, which, if previous forecasts were not higher than actual growth, must be remedied by more efficiently using the land within the current UGB or by expanding it.

Urban Reserves

The Oregon Land Conservation and Development Commission (LCDC) mandated that Metro designate urban reserves adjacent to the Urban Growth Boundary as a means of managing long-term regional growth. Designating urban reserves allows communities and the region to more cost-effectively plan and phase in public infrastructure (sewer, water, streets, schools, etc.) and enables private interests to plan development with more certainty. Careful development of urban reserves also may allow communities to plan more livable communities and conserve natural resources.

LCDC's Urban Reserve Area Rule (especially Goal 14, Factors 3 – 7) and the requirements of OAR 660-04-010 are the basis for considering urban reserves.

Compiling the state criteria and using data available or created to address state criteria, the region's selection criteria for urban reserves include:

Factor 3: utility feasibility, road network, traffic congestion and schools

Factor 4: efficiency of land and buildable land

Factor 5: environmental constraints, access to centers, jobs/housing balance

Factor 6: agricultural retention

Factor 7: agricultural compatibility

Metro designated urban reserve areas in March, 1997, to meet projected urban land needs to the year 2040. Counties are required by the Urban Reserve Area Rule to adopt rural zoning to preserve designated urban reserves for future urban use.

As the Metro Council considered possible urban reserve areas, they concluded that establishing priorities for bringing in urban reserve lands would be helpful to property owners, service providers and citizens. Accordingly, the Metro Council, with the advice of local jurisdictions, established "First Tier" lands within the urban reserves. These First Tier lands are those thought to be most easily served with urban services and for which adjacent cities or the county have indicated capacity to serve. About 4,100 acres of land are designated as First Tier of the 18,579 total acres designated as Urban Reserves. ~~When these lands would be brought into the boundary remains an outstanding Metro Council decision.~~ The designation ~~does~~ establishes, as a formal Metro policy, which lands would be brought in first. The Metro Council is expected to move the Urban Growth Boundary into the Tier 1 lands consistent with its decision in 1997 that there was not a 20 year land supply.

Housing

The state's Metropolitan Housing Rule (OAR 660, Division 7) requires local jurisdictions to "plan for local residential housing densities that support net residential housing density assumptions underlying the Urban Growth Boundary."

In addition, ORS 197.303 states that cities' and counties' needed housing means "...housing types determined to meet the need shown for housing within an Urban Growth Boundary at particular price ranges and rent levels. "It also "...includes, but is not limited to attached and detached single-family housing and multiple family housing for both owner and renter occupancy; (b) government assisted housing; (c) mobile home or manufactured dwelling parks...
(d) manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions."

In addition to these requirements, the state requires that cities and the urban portions of counties in the region must "....provide the opportunity for at least 50 percent of new residential units to be attached single family or multiple family housing..." and provide an "...overall density of six, ...eight ....or ten or more dwelling units per net buildable acre..." Relatively small cities with some growth potential of less than 8,000 persons for the active planning area were required to provide zoning for at least six dwelling units. This applied to the cities of Cornelius, Durham, Fairview, Happy Valley and Sherwood. The urban portions of Clackamas and Washington counties and the cities of Forest Grove, Gladstone, Milwaukie, Oregon City, Troutdale, Tualatin, West Linn and Wilsonville were to provide at least eight dwelling units per acre. The urban portion of Multnomah county and the cities of Portland, Gresham, Beaverton, Hillsboro, Lake Oswego and Tigard were to provide 10 dwelling units per acre.

Analysis

The Urban Growth Boundary is one of the primary tools available to the region for managing urban form. In turn, the capacity of the boundary to accommodate growth is of critical importance to managing the UGB. Assessment of the current UGB capacity includes analysis of nine variables. These are:

- a forecast of population and jobs for the next 20 year period
- an estimate of the amount of unbuildable land (land over 25 percent slope, etc.);
- reductions to remaining buildable land for streets, parks, etc.
- reductions for the probable difference between zoning maximum densities and actual built densities
- consideration of time to allow local jurisdictions to make zoning changes if higher densities are to be allowed and required
- reductions for buildable parcels with full buildout obstacles (e.g., land with 8-24 percent slopes, etc)
- an estimate of the probable amount of additional redevelopment
- projections of probable infill on built land
- evaluation of the amount of farm tax assessment lands within the current UGB that are likely to be urbanized.

~~(See the *Urban Growth Report* for a detailed description of these factors).~~

The Metro Council has ~~tentatively~~ concluded that capacity for the ~~248,000~~ additional dwelling units needed to accommodate the year 2017 forecasted need is not totally available within the current Urban Growth Boundary. The following table provides a step-by-step description of the

process, assumption and initial conclusions about the current capacity of the region's Urban Growth Boundary.

It is important to note that the variables include several new factors never before measured or considered when the capacity of the UGB was calculated. These include assessing the amount of infill and redevelopment capacity within the current UGB and assuming implementation of the 2040 Growth Concept. Estimating infill and redevelopment potential increased the total estimated potential capacity of the UGB significantly. About ~~30~~40 percent of the jobs and ~~more~~almost 30~~-20~~ percent of the demand for housing is estimated to be accommodated through infill and redevelopment. These forecasts are based on actual rates occurring now in the region. This responds to statements in the Future Vision about land restoration and redevelopment as well as recognizing what is actually happening in the market.

Assuming that the Growth Concept will be implemented in UGB capacity calculations also responds to issues raised in the Future Vision. The Growth Concept includes "mixed-use communities" and a "broad range of housing types" by including regional centers, town centers, main streets, station communities and employment areas. These are all design types which encourage mixed-use development. The Growth Concept also is designed to protect existing neighborhoods by directing the higher density development to these mixed-use areas where transit service is most frequent. Assuming that this zoning will be applied and that the market will respond remains a supposition based on the requirements of Metro's Urban Growth Management Functional Plan. However, recent data concerning the past few years indicates that job growth is more than 100 percent of the Growth Concept goal and that residential growth is up to 83 percent of goal. Activity in the next few years will provide verification of these trends and will demonstrate the extent that the Growth Concept is achievable.

Table 1.1 Calculation of Current Urban Growth Boundary Capacity

	Dwelling Units	*Employment*
Demand Calculations:		
1994 History	633,600	956,000
2017 Regional Forecast	990,500	1,536,500
Regional Need (1994 – 2017)	356,900	580,500
UGB Need (1994 – 2017)	**249,800**	**476,000**
	(70% of Region)	(82% of Region)
Supply Calculations:		
Metro UGB Supply Capacity (net buildable vacant land today)	22,420	22,420
Capacity using 2040 Growth Concept densities	175,430	291,870
- Underbuild	(36,850)	(22,330)
- Ramp-up (1994 to 1999)	(6,430)	(2,650)
+ Net Redevelopment	46,990	162,510
+ Infill and Absorption	24,200	43,700
+ Platted Lots not counted as vacant	10,900	0
+ Development rights on "unbuildable land"	3,190	0
UGB Capacity	**217,430**	**473,100**
Result:	**(32,370)**	**(2,900)**
	(deficit)	(deficit)

~~**Calculation of Current Urban Growth Boundary Capacity[1] (Numbers to be Added)**~~

	~~Action~~	~~Acres of Land~~	~~Dwelling Units~~	~~Jobs~~
~~Step 1~~	~~Determine total land area in the UGB~~	~~232,667~~	~~n/a~~	~~n/a~~
~~Step 2~~	~~Subtract developed land, bodies of water, etc.[2]~~	~~-177,630 = 55,040~~	~~n/a~~	~~n/a~~
~~Step 3~~	~~Subtract acres of already platted lots~~	~~-1,590 = 53,450~~	~~n/a~~	~~n/a~~
~~Step 4 (variable 2)~~	~~Subtract estimate of unbuildable lands such as slopes over 25%, etc.~~	~~-15,950 = 37,500~~	~~n/a~~	~~n/a~~

~~[1] For a more detailed explanation of these data, see the *Urban Growth Report*, Metro, May, 1997.~~

~~[2] Data for developed land and platted, but vacant parcels as of 9/1/95.~~

Step 5 (variable 3)	Subtract estimate of land for future streets, schools, parks, etc.	-12,710 =24,790	n/a	n/a
Step 6	Convert available buildable land to Metro 2040 Growth Concept as dwellings and jobs	24,790	204,320	318,080
Step 7 (variables 4 & 6) (27%)	Subtract capacity to compensate for difficult sites and not building to maximum densities	n/a	-52,220 =152,100	-22,330 =295,750
Step 8 (variable 5) (5 years)	Estimate and subtract capacity to allow time for cities and counties to rezone	n/a	-8,020 =144,080	-8,630 =287,120
Step 9 (variable 7)	Add estimate of redevelopment capacity	n/a	+41,410 =185,490	+136,860 =423,980
Step 10 (variable 8)	Add estimate of infill capacity	n/a	+21,110 =206,600	+43,700 =467,680
Step 11 (variable 1)	Add in capacity of already platted lots	n/a	248,000	462,000
Step 12 Capacity Surplus/(Deficit)	Estimate and subtract capacity of farm tax assessed lands not likely to be built on	n/a	(41,400)	5,680

Needed UGB expansion in acres 4,140[3]

The Metro Council has asked for nine additional data items in order to complete its decision about the capacity of the current Urban Growth Boundary. Once the decision is completed, urban reserves will be used to address any deficits. The first tier urban reserves total about 4,100 acres. Some of the lands within the first tier are not buildable (some contain creeks, already developed small parcels, steep slopes, etc.). If the Metro Council conclusion about the present UGB capacity is similar to its initial conclusion, expansion of the UGB will likely include all first tier lands and consider some additional lands in order to fully accommodate the estimated need.

Housing

Table 1.1 included estimates of needed urban housing for the region to the year 2017. In order to ensure that housing choice is provided, more detailed data about housing needs of the region are necessary.

Table 1.2 is from the draft Housing Needs Analysis, describing the region's housing needs to the year 2017. After consideration of public testimony and any other additional requested data, the

[3] Assumes average density of 10 dwelling units per buildable acre as stated in Metro Code Chapter 3.01. Total acres needed may be more if not all lands within urbans reserves are buildable.

~~Metro Council may revise the table to ensure that Metro has acted consistent with the region's projected housing needs~~

Table 1.2 Regional Housing Need 1994 - 2017 - Based on the Metro 2040 Growth Concept (Urban Metro Area Only - Includes Vacancy Rate)

Monthly Rental Cost	Approximate Equivalent Ownership Price	Number of New Housing Units Needed	Housing Type Distribution					
			Detached Homes		Attached Homes			
			Detached Single Family & Manufactured Homes on Individual Lots	Detached Small Lot Single Family & Mobile Homes and Manufactured Housing in Parks	Attached Single Family & Rowhouses	Multiple Family Low Rise	Multiple Family Mid Rise	Multiple Family High Rise
0-299[2]	<49,999	2,381	n/a	n/a	n/a	A,R	A,R	A,R
300-399[2]	50-59,999	10,340	n/a	n/a	n/a	A,R	A,R	A,R
400-499	60-74,999	25,859	n/a	n/a	A,R	A,R	A,R	A,R
500-599	75-89,999	32,993	O	O[3]	A,R	A,O,R	A,O,R	A,O,R
600-749	90-114,999	38,823	O	O	O,R	O,R	O,R	O,R
750-999	115-149,999	51,823	O	O	O,R	O,R	O,R	O,R
1,000-1,165	150-174,999	39,082	O	O	O,R	O,R	O,R	O,R
1,166-1,330	175-199,999	12,693	O	O	O,R	O,R	O,R	O,R
1,331+	200,000 +	35,806	O	O	O,R	O,R	O,R	O,R
	Total Units:	249,800	SF Units Range: 105,077 - 137,993 [4]		Rowhouse Units:20,787-53,732	Multi-Family Units: 86, -97,526		
Single Family/Rowhouse/Multi-Family Split [8]: 42/19/39 - 5/10/35						Assisted Housing Units [7]: 48,000 - 66,000[10]		

1. n/a means not available in the cost/price range. Ownership tenancy within the lower range of prices is a rough estimate.
2. Assisted Housing means housing provided through Government Assisted Housing programs, non-profit organizations or households paying more than 30 percent of income for housing. Additional assisted housing for larger households also may be provided on a limited basis in other categories than those listed above.
3. O means that the new housing is expected to be owner occupied; "R" means that the housing is expected to be renter occupied. "A" means assisted housing.
4. Of this between 5,750 and 25,062 manufactured homes would be needed.
5. To calculate the total number of housing units needed, you must add the high end of the detached single family range to the low end of the attached home range, or vice-versa. Total demand for housing units is not assumed to change, but actual housing preferences could range within the estimates of the ranges cited.
6. Housing needs projected in this chart are cited to the level of individual units in order to be consistent with model results. However, these forecasts should be considered to be accurate to the nearest 1,000 units.
7. Estimate for UGB. Low estimate preserves current % of income spent on housing. High estimate derived from separate analysis where share of household income spent on housing was 30%. Low estimate is calculated consistently with the other data used in the Table is used to calculate housing needs.
8. Assumes 35 % to 50 % of assisted housing will be multifamily. Conversely, we assume 65% or 50% will be single family of which ½ will be detached and ½ will be attached.
9. Housing demand and supply analysis is based on a "baseline projection" assuming that no new single family dwelling units are produced on the private market below $110,000 and no new multifamily rental units are produced below $550 per month rent. $ estimates are in 1995 $.
10. Based on UGB receiving 70% of the 4 county regional total (94,000 affordable units) of housing demand and supply; model run on 8/20/97.

Table 2: Regional Housing Need 1995 - 2017, Based on the Metro 2040 Growth Concept (Urban Metro Area Only - Includes Vacancy Rate)

Monthly Rental Cost	Approximate Equivalent Ownership Price	Number of New Housing Units Needed	Housing Type Distribution					
			Detached Homes		Attached Homes			
			Detached Single Family & Manufactured Homes on Individual Lots	Detached Small Lot Single Family & Mobile Homes and Manufactured Housing in Parks	Attached Single Family & Rowhouses	Multiple Family Low Rise	Multiple Family Mid Rise	Multiple Family High Rise
$0-199[2]	n/a	0	n/a	n/a	n/a	A,R	A,R	A,R
200-299[2]	<49,999	2,372	n/a	n/a	n/a	A,R	A,R	A,R
300-399[2]	50-59,999	10,303	n/a	n/a	n/a	A,R	A,R	A,R
400-499	60-74,999	25,766	n/a	n/a	A,R	A,R	A,R	A,R
500-599	75-89,999	32,874	O	O[3]	A,R	A,O,R	A,O,R	A,O,R
600-749	90-114,999	38,683	O	O	O,R	O,R	O,R	O,R
750-999	115-149,999	51,637	O	O	O,R	O,R	O,R	O,R
1,000-1,165	150-174,999	38,941	O	O	O,R	O,R	O,R	O,R
1,166-1,330	175-199,999	12,647	O	O	O,R	O,R	O,R	O,R
1,331+	200,000 +	35,677	O	O	O,R	O,R	O,R	O,R
Total Units: 248,900			SF Units Range: 104,699 - 137,497[4]		Rowhouse Units:20,712-53,539	Multi Family Units: 86,574 - 97,175		
Single Family/Rowhouse/Multi Family Split[8]: 42/19/39 - 55/10/35						Assisted Housing Units[7]: 54,883 - 86,242		

1. "n/a" means not available in the cost/price range. Ownership tenancy within the lower range of prices is a rough estimate.
2. Assisted Housing means housing provided through Government Assisted Housing programs, non-profit organizations or households paying more than 30 percent of income for housing. Additional assisted housing for larger households also may be provided on a limited basis in other categories than those listed above.
3. "O" means that the new housing is expected to be owner occupied; "R" means that the housing is expected to be renter occupied. "A" means assisted housing.
4. Of this between 5,750 and 25,062 manufactured homes would be needed.
5. To calculate the total number of housing units needed, you must add the high end of the detached single family range to the low end of the attached home range, or vice-versa. Total demand for housing units is not assumed to change, but actual housing preferences could range within the estimates of the ranges cited.
6. Housing needs projected in this chart are cited to the level of individual units in order to be consistent with model results. However, these are forecasts and should be considered to be accurate to the nearest 1,000 units.
7. Estimate for UGB plus Urban Reserves. Low estimate preserves current % of income spent on housing. High estimate derived from separate analysis where share of household income spent on housing was 30%. Low estimate which is calculated consistently with the other data used in the Table is used to calculate housing needs.
8. Assumes 35 % to 50 % of assisted housing will be multifamily. Conversely, we assume 65% or 50% will be single family of which ½ will be detached and ½ will be attached.
9. Housing demand and supply analysis is based on a "baseline projection" assuming that no new single family dwelling units are produced on the private market below $110,000 and no new multifamily rental units are produced below $550 per month rent. $ estimates are in 1995 $.

~~*Placeholder – Include Metro Council decision on the Housing Needs Analysis here, when concluded*~~

As can be seen, a wide variety of housing types will be needed to meet expected future demand in the region. Differing construction types, including manufactured housing, stick built and some high-rise structures are included. Ownership and rental options are also included, as are varieties in housing density. No one housing type can supply the varying needs of the region.

It is also important to consider the dynamics of residential development in the region. ~~(for a more detailed description of this analysis see the *Housing Needs Analysis*, May 1997.)~~ The regional economy is cyclical and the region is likely to continue to have times of high and low growth rates. The importance of these cycles is that there is a correlation between high growth rates and high housing prices/low affordability. In the late 1970s, we had high growth rates and low affordability at rates comparable to current conditions.

Housing prices in the region are high and housing affordability is lower than some times in the region's past. In particular, this causes those who rent or first-time homebuyers to get less housing or pay much more of their household income than recommended. However, housing prices are only slightly higher than those in other metropolitan regions in the nation and are lower than most metropolitan areas in the West.

Interestingly, the region is at historic highs with regard to the number of units being built. Accordingly, an unchanging or slowly increasing supply does not seem to be the primary obstacle to lowering housing prices.

Limitations to increased production include:

- home builders can "ramp-up" production only so quickly
- the increasing cost of land and labor
- lack of urban infrastructure to vacant buildable lands
- local government zoning inflexibility can limit development options and reduce the capacity of the region to accommodate growth. This results in more expensive housing.
- higher standards including those for stormwater management, seismic standards, energy conservation, etc. (However, these costs existed before the regulations, they were simply paid for in a different way – homes were flooded, residents paid more for heating costs, etc. These "extra" costs may also be thought of as cost shifts rather than increased cost.)

It is estimated that about 2/3 of the forecast growth is from people moving to the region. In addition, the demographic characteristics of the total population is expected to change. The future population is expected to be on average older, have more years of education, have fewer

people per household and be more racially diverse. Inherent in these forecasts is that continuing in-migration will be attracted by a continuing robust economy and preeminent livability. Also of note, a smaller average household size means a demand for more housing units even if total population did not change.

Another finding of the technical analysis of housing market dynamics of this region is that the demand for land is much more elastic than previously thought. That is, most people are not willing to pay much more for a larger lot. Therefore, the market is likely to adjust if higher densities are allowed. In fact, the market has already adjusted to 83 percent of Growth Concept residential densities during the 1993 to 1995 period. The biggest obstacle to accommodating this density of development seems to be existing zoning regulations, which may limit change in some area. As building size has much more influence on total housing cost than the cost of raw land, unless average house size built drops dramatically, expanding the Urban Growth Boundary greatly could likely only result in lower densities, not lower housing costs.

Another dynamic of our region can be illustrated by comparison with other metropolitan areas. For example, in most regions in the country, a deteriorating inner urban core is the source of affordable, if less desirable, housing. However, in this region, the value of close-in housing has not depreciated, rather, it has appreciated substantially from values in the early 1980s even adjusting for inflation. In some cases, appreciation in inner urban areas has outstripped the appreciation in more suburban locations. As long as these areas retain a high quality of life, they will remain desirable and not be a source of affordable housing.

It is also important to note that as~~if~~ new lands are added to the Urban Growth Boundary, they will not effectively increase the supply of buildable land until infrastructure (roads, sewer, water, etc.) ~~are~~is available or provided. If the public is not willing to fiscally support these services in a timely manner, either standards must be lowered or new property owners (through the housing price passed on by the developer or builder) must be able to pay for these services. Alternatively, very large tracts of buildable lands must be made available (e.g., 500-1,000 acre pieces of flat farmlands) so that economies of scale can be realized.

Another factor in housing dynamics is that housing expectations have been rising. If the average house built in 1950 were built today, the result would likely be affordable housing. The average house built in 1950 was about 800 square feet (with a much larger average household size than today). In contrast, the average home built today is about 1,900 square feet. Simply put, one way to produce affordable housing is to build small homes on small lots.

A substantial number of today's households (currently about 12 percent) are subsidized or assisted housing. Subject to very major changes to the regional housing market and/or state and federal government policy changes, it is likely that this percentage of assisted housing will be needed in the future.

Housing costs are likely to be high and unaffordable in the future when high rates of growth occur. There is only so much that can be done to address affordability during these times. If the inner core housing remains desirable, high growth rates continue, low public interest in substantial urban expansion on farmlands persists and low public support for substantial public infrastructure extensions remains, then public policy initiatives to encourage affordable housing will be needed if additional affordable housing is to be provided.

Consistent with the analysis above and concerns stated in the Future Vision statement regarding "....a broad range of housing affordable to all,;" ~~the following table lists recommendations for a "fair share" of the affordable housing that would need to be constructed within each jurisdiction in order to supply the region's affordable housing need.~~ The Housing Needs Analysis includes three examples of how fair share can be calculated. However, additional discussion of fair share calculations and methods will be needed before fair share targets for each jurisdiction in the region can be determined.

~~Table 3: Recommended Needed Additional Affordable Housing If Affordable Housing is to be Achieved Throughout the Region~~

~~City/County~~	~~Total Housing Units (1995-2015)~~	~~Assisted Housing Estimates: No Income Shift~~	~~Assisted Housing Estimates: Income Shift*~~
~~Beaverton~~	~~12,916~~	~~3,694~~	~~1,534~~
~~Cornelius~~	~~851~~	~~129~~	~~77~~
~~Durham~~	~~n/a~~	~~n/a~~	~~n/a~~
~~Fairview~~	~~2,707~~	~~479~~	~~247~~
~~Forest Grove~~	~~1,334~~	~~305~~	~~144~~
~~Gladstone~~	~~505~~	~~38~~	~~24~~
~~Gresham~~	~~12,122~~	~~2,948~~	~~1,336~~
~~Happy Valley~~	~~1,888~~	~~290~~	~~109~~
~~Hillsboro~~	~~13,230~~	~~2,792~~	~~1,144~~
~~Johnson City~~	~~n/a~~	~~n/a~~	~~n/a~~
~~King City~~	~~n/a~~	~~n/a~~	~~n/a~~
~~Lake Oswego~~	~~2,472~~	~~556~~	~~284~~
~~Maywood Park~~	~~n/a~~	~~n/a~~	~~n/a~~
~~Milwaukie~~	~~2,890~~	~~516~~	~~210~~
~~Oregon City~~	~~3,226~~	~~844~~	~~358~~
~~Portland~~	~~55,608~~	~~10,427~~	~~5,176~~
~~Rivergrove~~	~~n/a~~	~~n/a~~	~~n/a~~
~~Sherwood~~	~~4,713~~	~~1,096~~	~~425~~
~~Tigard~~	~~4,994~~	~~1,236~~	~~532~~
~~Troutdale~~	~~2,270~~	~~365~~	~~227~~
~~Tualatin~~	~~3,067~~	~~750~~	~~290~~
~~West Linn~~	~~2,082~~	~~492~~	~~207~~
~~Wilsonville~~	~~3,953~~	~~601~~	~~364~~
~~Wood Village~~	~~344~~	~~55~~	~~32~~
~~Clackamas County~~	~~49,348~~	~~7,565~~	~~4,642~~
~~Multnomah County~~	~~10,405~~	~~3,608~~	~~1,620~~
~~Washington County~~	~~55,471~~	~~9,698~~	~~4,859~~
~~Total~~	~~246,396~~	~~48,484~~	~~23,841~~

~~* Given the limited resources available for subsidized housing, this is the most likely behavioral adjustment to a limited supply of low- and moderate- income housing.~~

~~The above recommendations will be used as individual urban reserves adjacent to cities or within counties are analyzed for affordable housing programs.~~

~~*Placeholder -- Include Metro Council decision on the Housing Needs Analysis here, when concluded.*~~

Urban Reserves

Urban reserve areas are lands designated for future expansion of the Urban Growth Boundary when needed. Recognizing that accommodation of future growth within the current UGB is only

one way to address future growth, more than 23,000 acres of lands adjacent to the current Urban Growth Boundary were analyzed for suitability as urban reserves. These urban reserve study areas were determined by the Metro Council after consideration of public testimony and technical analysis. The technical analysis included consideration of land forms and the landscape ecology of the region. Land forms such as the Boring Lava domes and water features such as streams, floodplains and wetlands were mapped and considered along with avoidance of lands protected as exclusive farm and forest lands all around the current UGB. Avoidance of most of these features was directed by the Metro Council as it determined which areas to study as urban reserves. This direction relates to the Future Vision statement that suggests that "...specifically incorporate...landscape ecology in Regional Framework Plan elements concerned with transportation, housing, urban design, rural lands and the UGB. . ."

During a period of more than two years, a technical analysis of the study areas was completed, and discussion and public testimony was heard and considered by the Metro Council. On March 6, 1997, the Metro Council designated 18,579 acres of urban reserves. The location of these urban reserves is shown on the Metro 2040 Growth Concept Map~~, attached and incorporated into this plan as Exhibit A.~~

The adopted urban reserves provide an estimated 23-year inventory of land beyond the 20-year supply to be maintained within the Urban Growth Boundary. From these reserves, the region can expand as needs are unable to be met within the current Urban Growth Boundary.

In addition, a "First Tier" of urban reserves lands – lands to be brought into the Urban Growth Boundary first – has been designated. A set of requirements to be met prior to development also has been added to the Metro Code (see Appendix B, Metro Code Chapter 3.01 for more details) to ensure that the transition from rural to urban within the First Tier and other urban reserves addresses critical issues including governance, land-use planning, provision and funding of needed public facilities, conservation of natural resources and affordable housing.

While there are direct connections between the Urban Growth Boundary and urban reserves, it should be noted that one of the fundamental aspects of urban growth boundaries is that they are intended to expand as needed to provide capacity for projected growth. Urban reserves, whether there is an immediate demand, provide clear policy direction about where the boundary will move over time and allow both private and public sectors to anticipate and act accordingly.

Economic Opportunity

The regional economy, like all economies, is subject to cycles – periods of faster growth and slower growth. Currently the region has very low unemployment and relatively high rates of

construction. Some of these conditions may be the result of local policies, but, as much of the country as a whole is experiencing similar conditions, other factors, outside the region, clearly also play a role. It seems likely that these conditions will not continue indefinitely, and economic circumstances will change. When change does occur, interest in addressing future unemployment is likely to increase. However, the results of any corrective actions may take time to take hold. Accordingly, actions to address economic conditions must consider that there is a time lag between action and outcome. There may be few short-term regional economic fixes.

The region has effectively used several strategies to maintain economic activity. One strategy has been to maintain the region's livability. This includes conservation of and access to the natural landscape as well as more traditional considerations such as attention to the transportation system, public infrastructure, etc. A second strategy has been to encourage efficient use of land within the region. While housing at prices or rents consistent with jobs could be improved in some areas, the region is relatively compact, making jobs and housing reasonably close. As long as sufficient land for housing and jobs are provided and sufficient natural areas are conserved, these strategies can continue to keep the region attractive and provide a competitive advantage when compared with other metropolitan areas of the country. A third strategy has been to designate large amounts of industrial land such as the sunset corridor, Columbia south shore and in Tualatin.

Analysis of employment growth in the region has found that about 40 percent of new jobs are on lands considered "developed." Second shifts are added, office space per person is reduced or other measures are taken to accommodate more workers within existing buildings. Redevelopment of existing buildings or removal and replacement also constitute means of securing additional density. Another means of adding capacity is that additional building space may be added to lands assumed to be fully developed. While either of these methods are not as noticeable as new buildings built on vacant lands, this job capacity is significant.

Another economic consideration is diversification of the region's economy. The bulk of new jobs come from small businesses. Many small businesses provide a diversified and stable economy when compared to an alternative of reliance on a relatively few large businesses. Having more small businesses also provides more opportunities for people to own their own businesses and likely provides more business interest in community affairs.

The Future Vision states that the Regional Framework Plan should "address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout...the region in the Regional Framework Plan elements

for transportation, rural lands, urban design, housing and water resources." In addition, it recommends the Regional Framework Plan "incorporate specific expectations for a basic standard of living for all citizens in Regional Framework Plan elements concerned with urban design, housing, transportation, and parks and open space."

The Growth Concept provides access to most areas of the region via many different modes, especially transit service. This is in contrast to some metropolitan areas which have urban inner cores with difficult transit access to suburban jobs. The region apparently does have some attractiveness to smaller businesses, as the region has been named two years running as the No. 1 large "city" ("Portland, OR/Vancouver, WA") for entrepreneurs ("The Nations Entrepreneurial Hot Spots," October 1995 and October 1996 Entrepreneur Magazine).

Accordingly, policies that encourage smaller businesses to form, expand and prosper would seem to be more effective than other methods of maintaining a stable economy.

Urban/rural Transition

The concept of separating urban areas, or rural reserves, emerged during the Region 2040 planning process. Rural reserves would serve to separate and protect rural lands from lands within the Urban Growth Boundary over a 50-year period.

Rural reserves would include land used for farms, forestry, natural preserves and very low-density rural residential development and might receive priority status for new park and open space acquisitions. New commercial or industrial development would be restricted, and highway interchanges, other highway access to the rural road system and extensions of urban services would be prohibited.

Rural reserves might also be used to separate cities and break urban patterns within the Urban Growth Boundary. Rural lands already create separation between Cornelius and Hillsboro, and Tualatin, Sherwood and Wilsonville.

Neighbor Cities

The future of the region is closely linked to our neighbor cities. Their growth will affect us, as ours will affect them. By coordinating planning efforts, we can help ensure livability inside and outside our borders.

Based on projections, Sandy, Canby and Newberg will grow the most. And as a result of strong transportation connections, Woodburn, Scappoose and North Plains will also experience growth

pressure. Conversely, with poor transportation connections, Estacada will probably experience less growth.

Based on analysis done in Concepts for Growth, developing an effective neighbor cities strategy could help contain traffic congestion by keeping 65 percent of work traffic and 90 percent of non-work traffic within neighbor cities. This strategy relies on using rural reserves to separate neighbor cities from urban areas, working cooperatively with neighbor cities to balance jobs and housing within their communities and directing transportation through green corridors.

Protection of Agriculture and Forest Lands

More than 233,000 acres of rural resource lands (zoned exclusive farm and forest) exist within the tri-county area. With the Metro Council decision on Urban Reserves, 3,085 acres of resource lands were designated as urban reserves, leaving more than 230,000 acres of remaining resource lands in the tri-county area. The Future Vision states that "rural lands shape our sense of place by keeping our cities separate from one another, supporting viable farm and forest resource enterprises and keeping our citizens close to nature, farm, forest..." Further, it states that the Regional Framework Plan should "actively reinforce the protection of land currently reserved for farm and forest uses for those purposes." While not all rural resource lands were protected, less than 2 percent were affected by the urban reserve decision – a decision that is estimated to provide a 23 year supply of buildable land beyond the capacity within the current UGB.

Schools

~~The Future Vision includes a substantial number of declarations about the need for education in the region. While land use policies may not directly impact educational opportunity, there are clear relationships between education and land use. One of the most important is that if the objective is to build better communities, schools should be one of the anchors for a community. The urban reserves designated by the Metro Council include language that provides school districts the opportunity to participate in planning urban reserves. This may allow for adequate and suitable school sites, and may also allow neighborhoods to be centered around future needed schools~~

Overview

Our region faces many challenges in accommodating growth while still maintaining a high level of amenities and sustaining the quality of life standards that the people of this region cherish. One of these challenges is to provide a quality education for the growing number of school-age children[1] in this region. This chapter focuses on the challenges faced by public schools today and in the future.

Current population estimates (1995) show about 223,000 children[2] living inside the urban growth boundary. This represents a sharp increase of nearly 11 percent growth in school-age children in just the last five years. By the year 2015, Metro expects the total number of school-age children to increase by another 35 percent to about 300,000. According to current school enrollment estimates, about 90 percent of the region's school-age population attends public schools[3]. If this school enrollment ratio continues, an increase of around 70,000 children can be expected to attend public schools when compared with today's enrollment estimates.

New schools are needed in areas with growing populations, but sufficient land for school siting is becoming more difficult to locate as large parcels are becoming more scarce and expensive within the urban growth boundary. Planning in the region has always attempted to encourage the establishment of schools, especially elementary schools, as the major focus of neighborhoods. However, school districts are usually unable to establish long-term site acquisition plans. They have only been able to address more immediate facility needs, in the 1-4 year range, and usually two years or less. This does not lend itself to acquisition of sites well in advance of need. In addition, schools have a cash flow problem. Even if able to locate an appropriate site, the district must raise the capital, usually through a bond measure. By the time the district is in a position to purchase the land, the land price is much higher than what is was when growth in the area began, or the property may no longer be available for purchase.

The basic philosophy of the 2040 Growth Concept is to preserve our access to nature and to build better communities for the residents living here today and who will live here in the future. The Growth Concept calls for a more compact urban form, and for providing for all modes of

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[1] We define school-age children to be between the ages of 5 and 18, inclusively. Elementary school-age children are assumed to be between 5 and 10 years old, inclusive. Middle school children are between ages 11 and 13, inclusive.

[2] The school-age population estimate for the tri-county area (Multnomah, Clackamas and Washington counties) in 1995 is 247,000. In order to get a UGB estimate of school-age children, we assume about 90% of the tri-county population figure.

[3] The other 10 percent of eligible school-age children attend private or parochial schools or are home-schooled.

transportation, including walking. Design of residential areas, especially street connectivity, can be critical in providing alternatives to only driving school children to school. School siting and design can also play a role in assuring that walking and biking are an alternative and viable means of transportation. School site size may also be an issue as most other public and private uses are looking for ways to more efficiently (and more cheaply) accommodate uses on smaller sites.

Schools provide a valuable service to our communities and serve a variety of functions: education center, meeting center, sporting events and open space. Land needs will need to reflect the variety of uses and needs that a school site may serve. Better communities may also be enhanced if planning for schools is done in coordination with planning for other public facilities such as parks, libraries, etc.

The needs of schools and children and the families they serve must be recognized in the growth equation of this region. Together we must address the challenges faced by school districts. We must strive to discover creative solutions and tools that address issues of school siting and design, capital costs and funding strategies, and collaborative community partnerships relative to at least the land use, transportation and parks elements of this framework plan.

Background

This section gives an overview of existing state and regional policies governing school districts in regards to planning for school needs.

State Requirements

ORS 195.110 addresses planning for schools districts with high growth. A city or county with a "high growth school district," must include in its comprehensive plan a school facility plan prepared by the district in cooperation with the city or county. A "high growth school district" is one that has "an enrollment of over 5,000 student and had an increase in student enrollment of six percent or more during the three most recent school years, based on certified enrollment numbers submitted to the Department of Education during the first quarter of each new school year." As can be seen, the school districts of Beaverton, Tigard-Tualatin and West Linn meet the requirements of a high growth school district.

Table 1.3 **Enrollments in School Districts Larger than 5,000 Pupils in the Metro Area**

School District	1994-1995	1995-1996	1996-1997	Increase in Enrollment 1994-1997
Beaverton	28,341	29,320	30,210	6.6%
Centennial	5,595	5,631	5,881	5.1%
David Douglas	7,092	7,237	7,369	3.9%
Gresham-Barlow	11,022	11,060	11,242	2.0%
Hillsboro	15,220	15,564	15,898	4.5%
Lake Oswego	6,938	7,026	7,272	4.8%
North Clackamas	13,817	13,964	14,339	3.8%
Oregon City	6,905	6,966	7,199	4.3%
Portland	53,339	53,527	54,408	2.0%
Reynolds	7,959	7,955	8,142	2.3%
Tigard-Tualatin	10,302	10,645	10,917	6.0%
West Linn/Wilsonville	6,711	6,975	7,182	7.0%

Source: Oregon Department of Education, Hillsboro School District 1J

In addition to ORS 195.110, Goal 11 of the Statewide Planning Goals and Guidelines addresses public facilities and services. The goal is to "plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development." However, for urban facilities and services, "key facilities" does not include schools, nor does the goal require public facilities plans to include schools.

Regional Policies

Future Vision

The Future Vision statement is the broadest set of declarations about our region. The Regional Framework Plan is required to describe its relationship to the Future Vision. With regard to schools, the Future Vision notes many values, including that the region should:

> "Create and enhance cooperative ventures linking public and private enterprises to ensure that:
>
> > Community arts and performance centers, community libraries and schools, colleges and universities, concert halls, galleries, museums, nature centers and theaters are each vital links in the integrated educational system for all residents, and

Opportunities exist for all children and community residents, regardless of income, to engage in the visual, literary and performing arts in community centers closest to their homes."

Metro Policies

The Regional Urban Growth Goals and Objectives (RUGGO), originally adopted in 1991 and are now wholly incorporated within this document (see Chapter 8, Management, especially section 8.7, Implementation) defined implementation roles including school districts.

In addition, in February 1997, Metro Council adopted approximately 18, 500 acres of urban reserves, areas where future urban growth boundary expansion will occur. Chapter 3.01 of the Metro Code addresses the urban growth boundary and urban reserve procedures. The chapter was amended after the adoption of urban reserves to reflect procedural changes to the urban growth boundary amendment process and establishment and management of urban reserves. Objectives of the urban reserve, which are outlined in 3.01.005(c), include one that specifically relates to schools: urban reserves are to "provide for coordination between cities, counties, school districts and special districts for planning for the urban reserve areas."

Section 3.01.012(e) of the Code requires a conceptual land use plan and concept map that demonstrates compliance with the 2040 Growth Concept for any major amendment applications and legislative amendments of the urban growth boundary. A conceptual school plan is one of the required components of urban reserve plan that "provides for the amount of land and improvements needed for schools facilities. Estimates of the need shall be coordinated among affected school districts, the affected city or county, and affected special districts consistent with the procedures in ORS 195.110(3), (4) and (7)." An urban reserve plan map must show the "general locations or alternative locations for any needed school, park or fire hall sites.

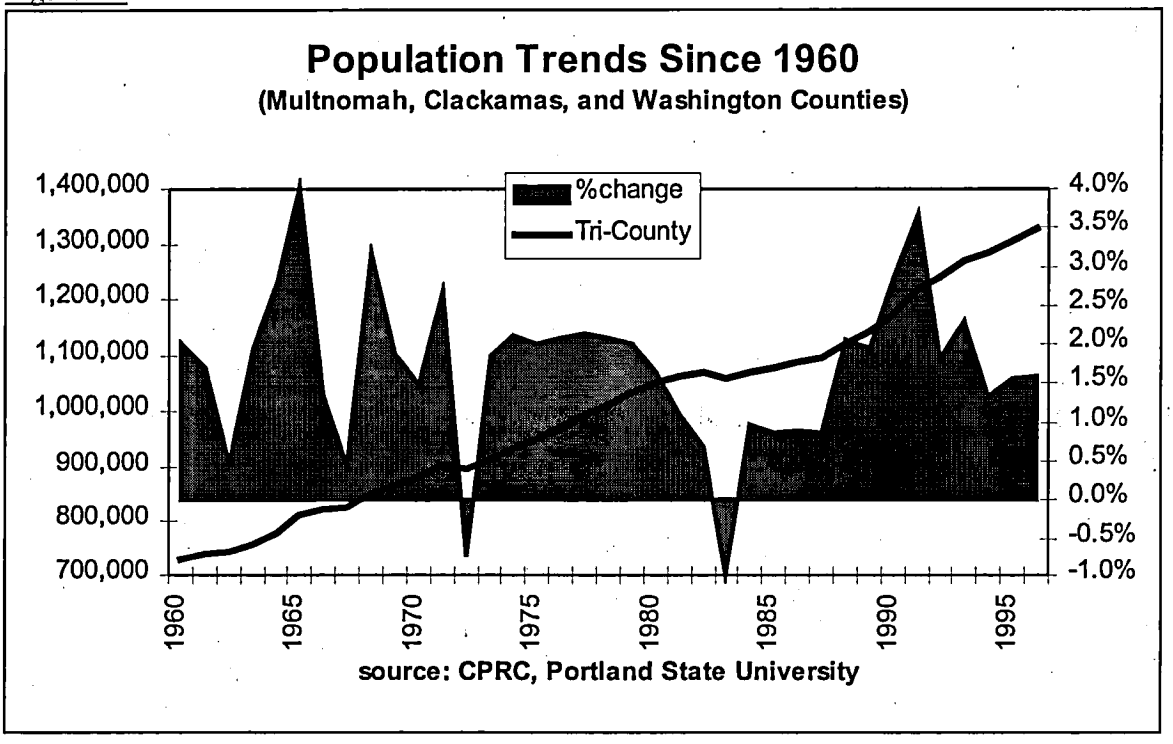
Analysis

The Metro Urban Growth Boundary added over 500,000 new residents[4] between 1960 and 1995. In 1960, there were about 730,00 people living in the tri-county area (Multnomah, Clackamas, and Washington counties). The share of school-age children then was 24.8 percent of the total population, or about 181,000 children between the ages of 5 and 18, inclusive. Today, the

[4] The net change in population inside the present Metro UGB for the period 1960 to 1995 is a very rough estimate because the first Urban Growth Boundary was not drawn until 1979. Therefore, any estimate of population inside the UGB prior to 1979 is, at best, an educated guess. The U.S. Census in 1960 estimated 728,088 residents in the tri-county area. By 1995, Portland State University (CPRC) estimated 1,305,100 residents living in the tri-county area, an increase of about 575,000 during this 35 year span.

number of residents in the tri-county area has grown to over 1.3 million in all – of which 247,000 are school-age children. However, there are now proportionally fewer school-age children in the tri-county area – only 18.9 percent of the total. The overall demographic characteristics of the entire population have also changed. As a population, the people living in the region today are somewhat older and are less likely to have as many children during their lifetime. Fertility rates and the average household sizes across the region have steadily declined during this period. A summary statistic in 1960 showed that the median age in the region was 32.8 years; today the median age has edged up to over 34.8 years of age.

Figure 1.4



Between 1960 and 1995, the number of school-age children for the tri-county population increased by approximately 66,000 children. However, this single statistic does not describe the entire story. During this 35-year period, a number of demographic changes occurred. In 1964, the "baby-boom" generation ended, and with the end of this generation began almost two decades of virtually no change in the number of school-age children in this region even while the overall total population was still increasing at a rapid pace. During this period, the region's population grew at an average annual rate of 1.7 percent a year (the national average during this same period was 1.08%), but the total regional number of children did not appreciably change. In 1970, the decade began with about 230,000 school-age children; twenty-five years later, the number of children in the same age group increased only slightly to 247,000, an average growth rate of only 0.3 percent per year.

In the 1990's, we saw a remarkable turnaround in the number of school-age children in the tri-county area. From about 223,000 in 1990, the number of children between 5 and 18, inclusive, rose to about 247,000, an increase of 10.8 percent or 2.1 percent growth per year (see table: *Change in the Number of School Age Children*). After 20 years of virtually no increase in the school-age population, clearly, the so called "baby-bust" generation has come to an end and a second wave of births had begun in the late 1980's and is now appearing in elementary school enrollment in the 1990's.

Table 1.5 **Change in the Number of School Age Children**

Year	Change	% Change
1960-70	49,143	27.2 %
1970-80	11,152	4.8
1980-90	3,753	1:7
1990-95	24,246	10.9
1995-00	24,120	9.8
2000-05	16,338	6.0
2005-10	15,275	5.3
2010-15	15,715	5.2

It has become apparent that the baby-boom generation, which was once thought to have forsaken the path of parenthood, has temporarily reversed the downward spiral of child births and is now giving birth to a "baby-boomlet" – an echo of the first baby boom[5]. Demographers now believe that women have only delayed childbirth to a later age. Instead of bearing children in their early 20's, many women of the previous generation (1965-1985) put off having children until their late 20's and early 30's. Some have even waited until their late 30's and early 40's to have their first child.

This shift in demographics is now starting to show up in the number of school-age children growing up in this region. An increase of nearly 25,000 additional children of school age within a span of five years (1990-95) is a sharp increase not seen since the last baby boom. However, we are less sanguine about the peak and duration of the current baby-boomlet. It is our belief that because of the delay in female pregnancy combined with slowly declining fertility rates, the baby-boomlet will be shorter in length and less robust. By 2000-05, we anticipate the current baby-boomlet will begin to falter and slow.

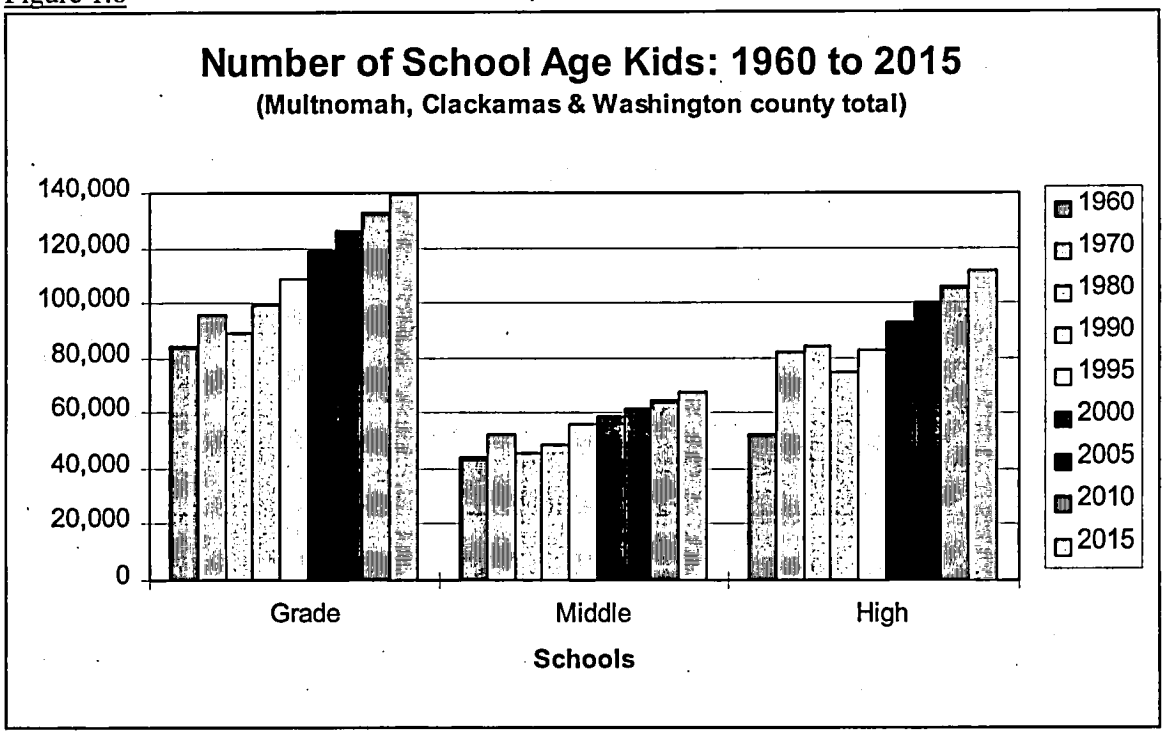
[5] Shifting socio-economic behavior (e.g., greater number of woemn entering the workforce, higher female labor force participation, birth control, higher costs involved in raising children, slower wage and productivity growth) have occurred which have combined to create the "baby-bust" which began in the late 1960's and extended through the early 1980's.

Meanwhile, direct migration of families with school-age children and working-age couples will tend to prop up and boost the number of children. Migrants tend to be younger and eventually more likely to begin families after they have settled into the region. The Metro Regional Forecast anticipates a steady stream of migrants flowing into this region – about 10,000 per year. About 20 percent are assumed to be in the school-age population group. Therefore, migration not only directly adds about 2,000 school-age children each year, but also contributes through additional births derived from newly transplanted Oregonians.

However, despite continuing gains projected in school-age population numbers, the overall population will continue to age and the share of school-age children will slowly decrease. The median age today is estimated to be about 34.8 years; by 2015 the median age is projected to increase to 36.9 years old. In other words, the fastest growing segment of the population will still be weighted in favor of the baby-boomers, but these baby-boomers will be much grayer than they are today. The second-baby boom wave, the baby-boomlet, will be like an echo – much fainter than the original wave but still audible.

In the forecast for the next 20 years, we anticipate an increase in the number of school-age children from 247,000 in 1995 to approximately 318,000 – an increase of another 71,000. This is a potential increase of about 29 percent more children than in today's student enrollment.

Figure 1.6



The conclusion that is reached from reviewing this data is that the next decade or so is likely to experience much greater growth of school-age children than that experienced in the last two decades. While there may be some additional capacity available within existing school infrastructures, it is likely that substantial increases in school capacities will be needed in order to accommodate expected growth[6]. Accordingly, the following policies are included for schools.

[6] The scope of this analysis was limited to the entire tri-county region. Any interpolation or extrapolation of the data or information from this analysis to smaller areas or specifically to indivisual school districts or attendance areas should NOT be made. Each school district in the region should analyze its own population and enrollment projections based on its own population forecast, attendance and school district specific data sets. It would be inappropriate to use regional data to estimate individual school district enrollment trends.

Transportation

Chapter 2 Transportation

Overview

In 1992, the region's voters approved a charter for Metro that formally gave responsibility for regional land use planning to the agency, and requires adoption of a Regional Framework Plan that integrates land use, transportation and other regional planning mandates. The combined policies of this framework plan establish a new framework for planning in the region by linking land use and transportation plans. Fundamental to this plan is a transportation system that integrates goods and people movement with the surrounding land uses.

This chapter of the Regional Framework Plan presents the overall policy framework for the specific transportation goals, objectives and actions contained in the Regional Transportation Plan (RTP). It also sets a direction for future transportation planning and decision-making by the Metro Council and the implementing agencies, counties and cities.

Policy highlights of this chapter include:

- Ensuring efficient access to jobs, housing, cultural and recreational opportunities, shopping in and throughout the region and providing transportation facilities that support a balance of jobs and housing.
- Reducing reliance on any single mode of travel and increasing the use of alternative modes, such as transit, bicycling and walking.
- Integrating land use, automobile, bicycle, pedestrian, freight and public transportation needs in regional and local street designs.
- Providing efficient transportation systems that accommodate motor vehicles, public transportation, pedestrian transportation, bicycle transportation and freight movement.
- Reducing vehicle miles of travel per capita and related parking spaces.
- Providing transportation demand management and system management strategies.
- Minimizing impact of urban travel on rural land through use of green corridors.
- Protecting water and air quality and reducing energy consumption.

Policies[7] (Goals and Objectives)

The following section contains the policies for regional transportation. It should be noted that implementation of these policies is through the Regional Transportation Plan, a Metro functional plan that includes both recommendations and requirements for cities and counties of the region. The RTP is now being revised and as the Metro Council considers potential changes to the existing RTP, the Regional Framework Plan may be revised.

2.1 Intergovernmental Coordination

Coordinate among the local, regional and state jurisdictions that own and operate the region's transportation system to better provide for state and regional transportation needs. These partners include the cities and counties of the region, Metro, the Oregon Department of Transportation (ODOT), the Oregon Department of Environmental Quality, the Port of Portland and Tri-Met. Metro also coordinates with RTC, C-Tran, the Washington Department of Transportation (Wash-DOT), the Southwest Washington Air Pollution Control Authority (SWWAPCA) and other Clark County Governments on bi-state issues.

2.2 Consistency between Land Use and Transportation Planning

Ensure the identified function, capacity and level of service of transportation facilities are consistent with applicable regional land use and transportation policies as well as the adjacent land use patterns.

2.3 Public Involvement

2.3.1. Provide complete information, timely public notice, full public access to key decisions and support broad-based, early and continuing involvement of the public in all aspects of the transportation planning process that is consistent with Metro's adopted regional Public Involvement Policy and Local Public Involvement Policy for transportation planning. This includes involving individuals traditionally under-served by the existing

[7] The following policies result from integration of the air quality and transportation objectives in the adopted Regional Urban Growth Goals and Objectives (RUGGO) and policies approved by resolution by the Metro Council in July 1996 as part of the Regional Transportation Plan (RTP) update. These policies comply with and replace the air quality and transportation objectives adopted in the RUGGOs. They also comply with the 2040 Growth Concept, the federal Intermodal Surface Transportation Efficiency Act (ISTEA), Clean Air Act Amendments (CAAA) and Americans with Disabilities Act (ADA), the Oregon Transportation Planning Rule (TPR) and the Oregon Transportation Plan (OTP). These mandates are described in the Background section of this chapter. The RTP, which will be updated in early 1998, will continue to provide specific transportation information, including project identification and funding criteria

system, individuals traditionally under-represented in the transportation planning process, the general public and local, regional and state jurisdictions that own and operate the region's transportation system in all aspects of the transportation planning process.

2.3.2. Develop a detailed public involvement work plan consistent with the regional Public Involvement Policy for each transportation plan, program or project.

2.3.3. Provide opportunities for the public to supply input. Revise work scopes, plans and programs to reflect public comment, as appropriate. Create a record of public comment received and agency response regarding draft transportation plans and programs at the regional level.

2.4 System Objectives

In developing new transportation system infrastructure, the highest priority should be providing accessibility and mobility to and from central city, regional centers and industrial areas and intermodal facilities. Specific needs, associated with ensuring access to jobs, housing, cultural and recreational opportunities and shopping within and among those centers, should be assessed and met through a combination of intensifying land uses and increasing transportation system capacity so as to mitigate negative impacts on environmental quality and where and how people live, work and play. The region's system-wide policies are:

2.4.1. Implement a transportation system that serves the region's current and future travel needs and implements the 2040 Growth Concept.

2.4.2. Provide a cost-effective transportation system.

2.4.3. Protect the region's livability.

2.4.4. Protect the region's natural environment.

2.4.5. Improve the safety of the transportation system.

2.4.6. Provide for statewide, national and international connections to and from the region, consistent with the Oregon Transportation Plan.

2.4.7. Provide for the movement of people and goods through an interconnected system of road, air and rail systems, including passenger and freight intermodal facilities, major distribution facilities and air and water terminals.

2.5 Transportation Finance

2.5.1. Implement a regional transportation system that supports the 2040 Growth Concept through the selection of complementary transportation projects and programs.

2.5.2. Emphasize the maintenance, preservation and effective use of transportation infrastructure in the selection of the RTP projects and programs.

2.5.3. Anticipate and address system deficiencies that threaten the safety of the traveling public in the implementation of the RTP.

2.5.4. Recognize financial constraints and provide public investment guidance for achieving the desired urban form.

2.6 Urban Form

2.6.1. Support and maintain a compact urban form with specific strategies that address mobility and accessibility needs and use transportation investments to leverage desired land use patterns.

2.6.2. Serve new development with interconnected public streets which provide safe and convenient pedestrian, bicycle and motor vehicle access.

2.6.3. Provide street, bicycle and pedestrian connections to transit routes within and between new and existing residential, commercial and employment areas and other activity centers.

2.6.4. Encourage development consistent with desired land use patterns that supports increased mobility and accessibility, particularly by transit, walking and bicycling.

2.7 Jobs/Housing Balance

Support a balance of jobs and housing in each subarea of the region to reduce the need for additional transportation facilities. Provide housing that is easily accessible to jobs and that is affordable to all members of the workforce.

2.8 Transportation Education

Encourage bicyclists, motorists and pedestrians to share the road safely. Expand the amount of information available about alternative modes of travel to encourage their use.

2.9 Barrier-free Transportation

2.9.1. Provide transportation facilities that comply with the Americans with Disabilities Act of 1990 (ADA).

2.9.2. Continue to work with Tri-Met and local jurisdictions to identify and assess structural barriers to mobility for transportation disadvantaged populations in the current and planned regional transportation system .

2.9.3. Continue to work with Tri-Met and local jurisdictions to make public transportation stops and walkway approaches accessible.

2.10 Transportation Balance

Provide a multi-modal regional transportation system that reduces reliance on any single mode of travel and increases the use of alternative modes of travel.

2.11 Street Design

Regional street design policies address federal, state and regional transportation planning mandates with street design elements intended to link land use and transportation planning These street design policies are intended to support individual 2040 Growth Concept land use design types, reduce reliance on any single mode of travel and increase the use of alternative modes of travel. These design concepts reflect the fact that streets perform many, often conflicting functions, and that there is a need to reconcile conflicts among travel modes. The regional street design map (see Figure 2.1) will work in tandem with the modal system maps (Figures 2.2 through 2.7)~~shown at the end of this chapter~~. The region's street design policies are:

2.11.1. Provide regional street design concepts to guide local implementation of the 2040 Growth Concept.

2.11.2. Support local implementation of regional street design concepts in local transportation system plans (TSPs).

2.11.3. Manage the regional street system to achieve the access and mobility needs of each of the 2040 design types.

2.11.4. Although focused on motor vehicle travel, the system is multi-modal, with street design criteria intended to limit the impact of motor vehicles on bicyclists, pedestrians, public transportation and pedestrian and transit-oriented districts.

2.11.5. To implement regional street design policies, Metro shall consider non-binding guidelines contained in "Creating Livable Streets: Street Design Guidelines for 2040" (1997) and other non-binding resources.

2.12 Motor Vehicle Transportation

The motor vehicle system provides access to the central city, regional centers, industrial areas and intermodal facilities, with an emphasis on mobility between these destinations. The regional motor vehicle system is shown in Figure 2.2~~ at the end of this chapter~~. This plan recognizes the need to accommodate a variety of trip types on the regional motor vehicle system that include shopping, recreation, personal errands, commuting to work or school, commerce, freight movement and public transportation. Although focused on motor vehicle travel, the system described in this section is multi-modal, with design criteria intended to serve motor vehicle mobility needs, while reinforcing the urban form of the 2040 Growth Concept. While the motor vehicle system usually serves bicycle and pedestrian travel, the system is designed to limit impacts of motor vehicles on pedestrian and transit-oriented districts. The region's motor vehicle system policies are:

2.12.1. Provide a regional motor vehicle system of arterials and collectors that connect the central city, regional centers, industrial areas and intermodal facilities, and other regional destinations, and provide regional accessibility and mobility.

2.12.2. Implement a congestion management system to identify and evaluate low cost strategies to mitigate and manage congestion in the metropolitan region.

2.13 Public Transportation

The regional public transportation system is a key component in providing access to the region's most important activity centers, and for 25 years has been the centerpiece to the region's strategies for improving air quality and reducing reliance on the automobile as a principal mode of travel. Public transportation service is also prominent in Metro's 2040 Growth Concept, such that key elements of the concept, including regional centers, town centers, corridors, main streets and station communities, are strongly oriented toward existing and planned public transportation service. The regional public transportation system map is shown in Figure 2.3~~ at the end of this chapter~~. Public transportation ridership is highly dependent on pedestrian access and adjacent land use. Therefore, the overarching goal of the public transportation system, within the context of the 2040 Growth Concept, is to provide an appropriate level of access to regional activities for everyone residing within the Urban Growth Boundary (UGB). An important aspect of this goal is promoting public transportation amenities and connections to serve the region's major activity

centers. Providing amenities that make walking to or waiting for transit safer and more pleasant (e.g., street lights, benches, bus shelters and improved street crossings) can benefit other elements of the region's transportation system and complement the region's urban form and growth management goals. The region's public transportation policies are:

2.13.1. Develop a public transportation system that provides a primary transit level of service to central city, regional centers and a primary or secondary transit level of service to industrial areas, intermodal facilities and special regional destinations (such as major colleges or entertainment facilities).

2.13.2. Develop a public transportation system that provides a primary transit level of service to station communities, town centers, main streets, corridors and special community destinations (such as local colleges or entertainment facilities).

2.13.3. Develop a public transportation system that provides a secondary transit level of service to employment areas, outer neighborhoods and inner- neighborhoods).

2.13.4. Continue to develop fixed-route service and complementary paratransit services which comply with the Americans with Disabilities Act of 1990 (ADA).

2.13.5. Continue efforts to maintain transit as the safest form of motorized transportation in the region.

2.13.6. Expand the amount of information available about public transportation to encourage more people to use the system.

2.13.7. Continue efforts to make public transportation an environmentally friendly form of motorized transportation.

2.13.8. Increase use of transit through making public transportation competitive with the private automobile.

2.14 Pedestrian Transportation

Walking is the most basic form of transportation and links most other trip types. All bicycle, bus, light rail, car and truck trips being and end in a walk. By providing dedicated space for those on foot or using mobility devices, pedestrian facilities are recognized as an important incentive that promotes walking as a mode of travel. Walking for short distances is an attractive option for most people when safe and convenient pedestrian facilities are available. Combined with adequate sidewalks and curb ramps, amenities such as benches, curb extensions, marked street crossings, landscaping and wide planting strips make walking a safe, attractive and

convenient mode of travel. This benefits other elements of the region's transportation system and complements the region's urban form and growth management goals. For example, both bus users and motorists benefit from an improved pedestrian environment. Improved street crossings, street lighting, bus shelters, benches and wide planting strips that create a buffer for pedestrians between the curb and sidewalk are examples of pedestrian improvements that make waiting for a bus safer and more appealing. For motorists, where there are sidewalks and street crossing opportunities, a person can park a car once to access several destinations. The focus of the regional pedestrian system is identifying areas of high, or potentially high, pedestrian activity in order to target infrastructure improvements that can be made with regional funds. The regional pedestrian system map is shown in Figure 2.4~~ at the end of this chapter.~~ The region's pedestrian system policies are:

2.14.1. Increase the walk mode share for short trips, including walking to public transportation within the central city, regional centers, town centers, main streets, corridors and LRT station communities and as access to regionally significant parks, open spaces and recreational facilities.

2.14.2. Increase walking for short trips and improve access to the region's public transportation system through pedestrian improvements and changes in land use patterns, designs and densities.

2.14.3. Make the pedestrian environment safe, convenient, attractive and accessible for all users.

2.14.4. Provide for pedestrian access, appropriate to existing and planned land uses, street classification and public transportation, as a part of all transportation projects.

2.14.5. Encourage motorists, bicyclists and pedestrians to share the roadway safely.

2.15 Bicycle Transportation

The bicycle is an important component in the region's strategy to provide a multi-modal transportation system. The regional bicycle system map is shown in Figure 2.5~~ at the end of this chapter~~. The 2040 growth concept focuses growth in the central city and regional centers, station communities, town centers and main streets. One way to meet the region's travel needs is to provide greater opportunity to use bicycles for shorter trips and to access regionally significant parks, open spaces and recreational facilities. The region's bicycle system policies are:

2.15.1. Provide a continuous regional network of safe and convenient bikeways integrated with other transportation modes and local bikeway systems.

2.15.2. Increase the modal share of bicycle trips.

2.15.3. Ensure that all transportation projects include bicycle facilities using established design standards appropriate to regional land use and street classifications.

2.15.4. Encourage bicyclists and motorists to share the road safely.

2.16 Freight Movement

Developing and adopting the Regional Freight System and associated system goals acknowledges that the movement of goods and services makes a significant contribution to the region's economy and wealth, and that it contributes to our quality of life. The region's relative number of jobs in transportation and wholesale trade exceeds the national average. The regional economy has historically, and continues to be closely tied to the transportation and distribution sectors. This trend is projected to increase. Freight volume is projected (by the 2040 Commodity Flow Analysis) to grow two to three times by 2040 - a rate faster than population growth. The significant growth in freight projected by the 2040 Commodity Flow Analysis indicates the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities, and to continue maintaining and enhancing the freight transportation network. The 2040 Growth Concept identifies industrial sanctuaries for distribution and manufacturing activities. The RTP freight system identifies the transportation infrastructure and intermodal facilities that serve these land uses and commodities flowing through the region to national and international markets. The regional freight system map is shown in Figure 2.6 ~~at the end of this chapter~~. The region's freight system policies are:

2.16.1. Provide efficient, cost-effective and safe movement of freight in and through the region.

2.16.2. Maintain and enhance the region's competitive advantage in freight distribution through efficient use of a flexible, continuous, multi-modal transportation network that offers competitive choices for freight movement.

2.16.3. Protect and enhance public and private investments in the freight network.

2.16.4. Promote the safe operation of the freight system.

2.17 Parking Management

The Oregon Transportation Planning Rule requires that the Regional Transportation Plan include methods to reduce non-residential parking spaces per capita by 10 percent over the next 20 years (by 2015). The requirement is one aspect of the rule's overall objective to reduce per-capita

vehicle miles traveled (VMT), promote alternative modes and encourage pedestrian and bicycle friendly development.

The mode of travel is directly influenced by the convenience and cost of parking. As auto parking in densely developed areas becomes less convenient and more costly, alternative modes of travel (e.g., public transportation, bicycle, walk and telecommute) become relatively more attractive. In addition, as alternative modes of travel are used more for work and non-work trips, the demand for scarce parking decreases. The reduction in demand will allow the region to develop more compactly and provide the opportunity for redevelopment of existing parking into other important and higher end uses. The region's parking management policies are:

2.17.1. Reduce the demand for parking by increasing the use of alternative modes for accessing the central city, regional centers, town centers, main streets and employment areas.

2.17.2. Reduce the number of off-street parking spaces per capita.

2.17.3. Provide regional support for implementation of the voluntary parking provisions of the Portland region's Ozone Maintenance Plan.

2.17.4. Manage and optimize the efficient use of public and commercial parking in the central city, regional centers, town centers, main streets and employment centers to support the 2040 Growth Concept and related RTP goals and objectives.

2.17.5. Establish minimum and maximum parking ratios no greater than those listed in Regional Parking Ratios Table and as illustrated in the Parking Maximum Map in Title 2 of the Urban Growth Management Functional Plan. The designation of A and B zones on the Parking Maximum Map should be reviewed after the completion of the Regional Transportation Plan update and every three years thereafter.

2.18 Transportation Demand Management

Transportation demand management (TDM) is not one action, but rather a series of actions to promote shared ride and the use of alternative modes, especially during the most congested times of the day. The term TDM encompasses the strategies, techniques and supporting actions that encourage non–single occupant vehicle travel (i.e., transit, walk, bike, carpool and telecommute), as well as measures to reduce per-capita vehicle miles traveled (VMT).

The primary benefit of managing travel demand is to minimize the need to expand the capacity of the region's transportation system (i.e., building new highways or adding lanes to existing highways) and make more efficient use of non–SOV modes (transit, walk, bike, carpool and

telecommute) of travel. Managing travel demand will also help the region reduce overall per-capita vehicle travel, reduce air pollution and maximize energy conservation in a relatively low-cost manner. Regional TDM policies are intended to complement city and county efforts to assist employers in implementing measures to meet the Department of Environmental Quality Employee Commute Options (ECO) rule. Regional TDM policies also help the region achieve its 2040 Growth Concept land use accessibility goals. The region's transportation demand management policies are:

2.18.1. Enhance mobility and support the use of alternative transportation modes by improving regional accessibility to public transportation, carpooling, telecommuting, bicycling and walking options.

2.18.2. Promote policies and strategies that reduce travel by single occupant vehicles (SOV) in order to help the region achieve the 10 percent reduction in vehicle miles traveled (VMT) per capita as required by the Transportation Planning Rule (TPR) over the Regional Transportation Plan planning period, and that improve air quality.

2.18.3. Provide incentives for employers and developers to build/locate in the 2040 Growth Concept central city, regional centers, town centers, station communities and transit corridors to promote more compact land use.

2.18.4. Continue to coordinate efforts to promote TDM at the regional and local level.

2.18.5. Implement TDM support programs to reduce the need to travel, and to make it more convenient for people to use alternative modes for all trips throughout the region.

2.18.6. Increase public knowledge and understanding about TDM as a tool to reduce congestion, reduce air pollution, implement the 2040 Growth Concept and to help the region meet the TPR VMT per capita and parking per capita reduction targets.

2.18.7. Mode split will be used as the key regional measure for transportation effectiveness in this region. Metro shall establish an alternative mode split target (defined as non-Single Occupancy Vehicle person trips as a percentage of all person trips for all modes of transportation) for each of the 2040 Design Types identified in Table 3, below.

The alternative mode split targets shall be evaluated for each 2040 Design Type based on their ability to help the region meet the Transportation Planning Rule 10 percent VMT reduction requirement. Metro will develop additional guidance in the Regional Transportation Plan on methods to implement these regional mode split targets.

Table 2.1 Regional Non-SOV Mode Split Targets
Needed To Achieve State Transportation Planning Rule 10% VMT/Capita Reduction Requirement
(for trips to and within each 2040 Design Type)

2040 Design Type	Non-SOV* Mode Split Target
Central City	60-70%
Regional Centers, Town Centers, Main Streets, Station Communities and Corridors	45-55%
Industrial Areas and Intermodal Facilities, Employment Areas and Inner and Outer Neighborhoods	40-45%

*Non-SOV includes shared ride, bike, walk and transit.

2.19 Transportation System Management

2.19.1. Use transportation system management techniques (e.g., signal improvements, intersection channelization, access management, HOV lanes, ramp metering, incident response, and programs that smooth transit operations) to optimize performance of the region's transportation systems. Mobility will be emphasized on corridor segments between high priority land use designations. Access and livability will be emphasized within such designations. Selection of appropriate TSM techniques will be according to the functional classification of corridor segments.

2.20 Right-of-Way Opportunities

Where appropriate, plan for the preservation of rights-of-way for future transportation projects, including future transportation corridors.

2.21 Adequacy of Transportation Facilities

Ensure that changes to land use patterns are consistent with the identified function, capacity and level of service (see Policy 2.28.1 which defines motor vehicle level of service) of the facility.

2.22 Urban to Urban Travel on Rural Routes

Minimize the impact of urban travel on rural land uses. Limit access to and minimize urban development pressure on resource lands adjacent to transportation corridors that link neighboring towns to the nearest regional center by designating urban connectors between these destinations as "green corridors", with exceptions identified in the motor vehicle system map (see Figure 2.2 ~~at this end of this chapter~~).

2.23 Recreational Travel and Tourism

Provide reasonable and convenient access to regional cultural, historic or natural area sites for passive and active recreational or tourism purposes.

2.24 Natural Environment

2.24.1 Place a priority on protecting the region's natural environment in all aspects of the transportation planning process.

2.24.2. Minimize the environmental impacts of system development, operations and maintenance.

2.24.3. Reduce negative impacts on parks, public open space, natural areas, wetlands and rural reserves arising from noise, visual impacts, physical segmentation and volume and pollutants of storm water runoff from transportation facilities.

2.25 Water Quality

Protect the region's water quality by meeting applicable state and federal water quality standards and supporting local jurisdiction efforts to reduce impervious surface coverage in the development review and street design process.

2.26 Clean Air

2.26.1. Protect and enhance air quality so that as growth occurs, human health and visibility of the Cascades and the Coast Range from within the region is maintained.

2.26.2. Encourage use of all modes of travel (e.g., transit, telecommuting, zero-emissions vehicles, ridesharing, bicycles and walking) that contribute to clean air.

2.26.3. Include strategies for planning and managing air quality in the regional airshed in the State Implementation Plan for the Portland-Vancouver air quality maintenance areas as required by the federal Clean Air Act Amendments.

2.26.4. Develop new regional strategies to comply with federal Clean Air Act Amendments requirements and provide capacity for future growth.

2.26.5. Work with the state to pursue close collaboration of the Oregon and Clark County Air Quality Management Areas.

2.27 Energy Efficiency

Reduce the region's transportation-related energy consumption through increased use of transit, telecommuting, zero-emissions vehicles, ridesharing, bicycles and walking and through increasing efficiency of transportation network to diminish delay and corresponding fuel consumption.

2.28 Motor Vehicle Level of Service

Establish acceptable motor vehicle level of service thresholds that balance the regional accessibility and mobility policies with the region's growth management objectives. Exceeding an acceptable threshold identifies a system deficiency or need. The appropriate motor vehicle level-of-service shall correspond to categories of design types defined in the 2040 Growth Concept and will be balanced against the alternative mode split target established for the various design types. A variable motor vehicle level-of-service will also enable the region to ensure that:

- limited resources are allocated to the most critical motor vehicle projects in the most critical areas
- limited resources remain to fund alternative mode projects and projects that best leverage the 2040 Growth Concept
- when road projects are recommended, they are sized consistent with the availability of limited resources, appropriate to the applicable 2040 design type and consistent with alternative mode split targets.

A transportation need is identified when a particular transportation standard or threshold has been exceeded either through a land use action or projected travel demand. Subsequent to the identification of a need, an appropriate transportation strategy or solution is generally identified through a two-phased multi-modal planning and project development process. The first phase is multi-modal system-level planning that examines a number of transportation alternatives over a larger geographic area such as a corridor or sub-area, or through a local or regional Transportation System Plan (TSP). The purpose of the TSP step is to determine the best mode and corridor to pursue in addressing an identified need after considering alternative modes and corridors. The second phase is project-level planning (also referred to as project development). The purpose of project-level planning is to develop design details and consider potential environmental impacts for the recommended mode and corridor identified during multi-modal system-level planning.

The Regional Transportation Plan shall provide specific thresholds, as appropriate, to ensure that the economic vitality and livability of any given area is protected from unacceptable levels-of-service occurring outside of normal peak periods of congestion.

One-hour of significant congestion is expected in both the a.m. peak-hour of the day and the p.m. peak-hour of the day within the Central City, Regional Centers, Main Streets and Station Communities because of the level of activity expected to occur in these areas. This level of congestion is acceptable in these 2040 Design Types because the opportunity to use alternative modes of travel is greatest in these areas. However, more than one-hour of significant congestion in either the a.m. peak-hour of the day or p.m. peak-hour of the day is unacceptable, with the preference being that these areas remain substantially uncongested for the remainder of the day.

Less congestion will be tolerated in the less concentrated Corridors, Industrial Areas, Intermodal Facilities, Employment Areas and Inner and Outer Neighborhoods.

Acceptable levels of congestion for Regional Highway Corridors will be determined on a case-by-case basis in the Regional Transportation Plan, consistent with Policies 2.11, 2.12 and 2.16 of this chapter. Regional Highway Corridors are defined as I-84, I-205, I-5, I-405, US 26, OR 217, OR 224, 99E, 99W connecting to I-5 in Tualatin, the Sunrise Corridor, US 26 entering the eastern edge of the UGB, US 30 entering NW Portland, the Mount Hood Parkway, Marine Drive from I-5 to T-6 terminal, Going Street from I-5 to Swan Island and Airport Way from I-205 to Portland International Airport. (See Regional Highway Corridors map in Figure 2.7.~~) at the end of this chapter.)~~

2.29 Transit Level of Service

Establish transit level of service thresholds that balance the regional accessibility and mobility policies with the region's growth management objectives. Exceeding an acceptable threshold identifies a transit system deficiency or need. The Regional Transportation Plan shall define specific thresholds for each 2040 Design Type, as appropriate, to ensure that the highest quality transit service (in terms of coverage, speed and frequency) is available to the areas with the highest population and employment densities.

Within the Central City and Regional Centers, the regional public transportation system shall provide full coverage to high-quality transit service for all households and jobs within ¼-mile of that service, including routes competitive with the automobile and frequent service to its full market area.

Within Town Centers, Main Streets, Station Communities and Corridors, the regional public transportation system shall provide full coverage to high-quality transit service for all households and jobs within ¼-mile of that service, including routes competitive with the automobile.

Within Industrial Areas and Intermodal Facilities, Employment Areas and Inner and Outer Neighborhoods, the regional public transportation system shall provide an appropriate level of transit service, if densities in those Design Types exceeds 10 persons per acre.

2.30 Local Street Connectivity

Establish 10 to 16 street intersections per mile as a minimum range for local street connectivity, except where topography, barriers such as railroads or freeways, or environmental constraints such as major streams and rivers, prevent full street connections. The number of street intersections should be greatest in the highest density mixed-use centers. Consider bicycle, pedestrian and emergency accessway connections on public easements or right-of-way when full street connections are not possible, with spacing between auto connections of at least 16 connections per mile in the highest density mixed-use centers, except where topography, barriers such as railroads or freeways, or environmental constraints such as major streams and rivers, prevent street extension.

Regional System Maps

The Regional System Maps referred to as Figures 2.1 through 2.7 are included in the Appendices of this Regional Framework Plan.

Background

A number of federal, state and regional mandates form the basis for the policies contained in this chapter of the Regional Framework Plan.

Federal Mandates

At the federal level, the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) emphasizes expanding public participation in the transportation planning process and increasing cooperation among the jurisdictions that own and operate the regional transportation system. These partners include the region's cities and counties, Metro, Oregon Department of Transportation (ODOT), Oregon Department of Environmental Quality (DEQ), Port of Portland, Tri-Met, Washington Regional Transportation Council (RTC), Washington Department of Transportation (Wash-DOT), Southwest Washington Air Pollution Control Authority (SWWAPCA) and other Clark County governments.

As the federally designated Metropolitan Planning Organization (MPO) for the region, Metro must coordinate metropolitan transportation planning efforts in partnership with these multiple

jurisdictions and citizens to help develop statewide and regional transportation plans. These plans must forecast future growth, identify needed transportation investments to meet this growth and ensure the maintenance and efficient operation of existing transportation systems over a 20-year period. The Oregon Transportation Plan guides the transportation system statewide, and the Regional Transportation Plan (a Metro functional plan) is the transportation plan for this region.

ISTEA also requires the establishment of a National Highway System to provide an interconnected system of principal arterial routes that will serve major population centers, public transportation facilities, airports, and intermodal facilities, and serve interstate and inter-regional travel.

In addition to the Federal requirements of ISTEA, Federal 1990 Clean Air Act Amendments (CAAA) establish air quality standards for key air pollutants, including carbon monoxide, ozone and particulate matter. Areas that do not meet the standards are designated in varying degrees of nonattainment, from "marginal" to "extreme." States must submit implementation plans (SIP) showing how these areas will meet the standards and maintain compliance over a ten-year period. Areas that do not meet SIP requirements may face sanctions, including potential loss of highway funds and limits on industrial expansion.

The Portland-Vancouver Interstate Air Quality Maintenance Area (AQMA) was designated as a marginal nonattainment area for ozone and moderate nonattainment area for carbon monoxide in 1991. By the end of 1991, the area began to meet the federal ozone and carbon monoxide standards on a consistent basis. As a result, the region began to work on ten-year maintenance plans and attainment redesignation requests for both pollutants. These plans were finalized in 1996 and submitted to the U.S. Environmental Protection Agency (EPA) as revisions to the Oregon State Implementation Plan (SIP). EPA approved the maintenance plans and also redesignated the Portland-Vancouver Interstate AQMA to attainment status in 1997.

The maintenance plans were developed on the basis of Metro's long-range population and employment forecasts. Control strategies, including transportation control measures (TCMs) were developed to reduce automobile emissions to show standards maintenance through the ten-year plan period. These measures include projects to provide facilities for alternative modes, demand management programs to encourage use of alternative modes and implementation of the 2040 Growth Concept to produce more transportation efficient land use patterns. The goal of these measures is to manage travel demand and improve traffic flow in order to reduce the number of vehicle trips made and the number of vehicle miles traveled. The SIP recognizes that

land use patterns that shorten trips and increase opportunities for transit, bicycling and walking also help reduce emissions.

The Oregon Department of Environmental Quality monitors three locations for the ozone standard and four locations for the carbon monoxide standard for the Portland-Vancouver AQMA, as shown in Table 2.2, below.

Table 2.2 Oregon Department of Environmental Quality Air Quality Monitoring Locations

Ozone Monitoring Locations	Carbon Monoxide Monitoring Locations
• Milwaukie High School • Sauvie Island • Carus (approximately 5 miles south of Oregon City on Highway 213)	• 4th/Alder Street - downtown Portland • Postal Building - downtown Portland • SE 82nd Avenue/Division Street - Portland • SE 58th Avenue/Lafayette Street - Portland

In 1996, the AQMA area exceeded the summer ozone standard twice at one monitoring location (Milwaukie High School). There was no violation of the summer ozone standard in 1997. A fourth exceedance, at one monitoring location over a three-year period, would violate federal air quality standards and trigger the SIP contingency plan for ozone. The contingency plan provides for a rule development process to reduce emissions from industry and other sources. Any TCMs identified as control strategies in the SIP are to be included in Metro's Transportation Improvement Program and the Regional Transportation Plan within twelve months after the violation is recorded.

Additional federal requirements include the 1990 Americans with Disabilities Act (ADA) which mandates that transportation plans address equal access and opportunity for disabled people. An ADA transportation plan has been developed by Tri-Met. In addition, state and local jurisdictions must design and construct pedestrian facilities in compliance with ADA requirements.

State Mandates

The Oregon Transportation Planning Rule (TPR) focuses on the link between land use and transportation. It intends to ensure that planned transportation systems support land use plans and travel patterns to achieve the state goal of compact, highly livable urban areas. The TPR

contains requirements designed to reduce reliance on the automobile and requires consideration of land-use policies when developing transportation plans. Cities and counties are required to revise development standards to promote public transportation, pedestrian and bicycle travel, orient new buildings toward major transit stops and design local streets that require less right-of-way width and improve pedestrian circulation. The TPR also requires that city and county transportation plans include policies that promote completion of local street networks. The rule also requires that local and regional transportation system plans target the following goals:

- a 10 percent reduction in vehicle miles of travel per capita during the next 20 years and 20 percent during the next 30 years
- less reliance on the automobile and a reduction in the number of people driving alone
- a 10 percent reduction in the number of parking spaces per capita during the next 20 years
- a stronger connection between land use and transportation planning

Local and regional transportation system plans must also examine possible land-use solutions to transportation problems and identify multi-modal, system management and demand management strategies to address transportation needs.

Regional Mandates

With adoption of the 1992 Metro Charter by voters in the region, Metro was directed to complete a Future Vision. The fifty-year Future Vision includes many references as to the importance of transportation. These references include:

> "Address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout...the region in the Regional Framework Plan elements for transportation, rural lands, urban design, housing and water resources."
>
> "Incorporate specific expectations for a basic standard of living for all citizens in Regional Framework Plan elements concerned with urban design, housing, transportation, and parks and open space."
>
> "Identify and address public and personal safety issues in the Regional Framework Plan elements dealing with transportation, urban design and bi-state coordination."

Other regional statements of existing transportation policy are included in the Regional Urban Growth Goals and Objectives (RUGGOs), the Urban Growth Management Functional Plan (see Appendix A) and the 1992 Regional Transportation Plan (RTP). The Regional Urban Growth Goals and Objectives (RUGGOs) are Metro's regional goals and objectives required by state law. First adopted in 1991, revised in 1995 and acknowledged by the Land Conservation Development Commission in 1996, the RUGGOs establish a process for coordinating planning in the metropolitan area in an effort to preserve regional livability. The RUGGO goal and

objectives, including the 2040 Growth Concept, also provide the policy framework for guiding Metro's regional planning program, including development of functional plans and management of the region's Urban Growth Boundary.

RUGGOs policies related to transportation include Objective 14 (Air Quality) and Objective 19 (Transportation). Transportation policies contained in this chapter of the Regional Framework Plan integrate existing RUGGOs policies and Chapter 1 policies developed as part of the current Regional Transportation Plan update to become Chapter 1 of the 1998 RTP. Many of these new policies were created for the Regional Framework plan to address mandates in ISTEA, ADA, CAAA, the Oregon Transportation Planning Rule and the Oregon Transportation Plan.

Likewise, the 1998 Regional Transportation Plan will respond to the same federal and state requirements and define a balanced, multi-modal transportation system that supports the Region 2040 Growth Concept. New Regional Transportation Plan policies were approved by the Metro Council in July 1996 and reflect extensive public comment. These new policies, as amended with the adoption of the Regional Framework Plan will be used to direct and define specific improvements to the regional transportation system for the next 20 years. The plan update is expected to be completed in June 1998.

The relationship of Regional Transportation Plan (RTP) policies to Regional Framework Plan policies is that the RTP implements this Chapter of the Regional Framework Plan. Separate functional plans, like the RTP, will clearly identify the role that cities and counties will play in implementing this Regional Framework Plan.

To ensure consistency between the two plans, the policy statements in the updated Regional Transportation Plan will be identical to the policy statements in this chapter of the Regional Framework Plan. However, the Regional Framework Plan will not include the same level of detail as the Regional Transportation Plan, where policy statements will be accompanied by objectives and performance measures that will guide implementation of individual policies. This chapter of the Regional Framework Plan will not include objectives and performance measures.

This chapter of the Regional Framework Plan will be implemented through the 1998 Regional Transportation Plan, a Metro functional plan, once the current update is complete. In the interim, Title 2 and Title 6 of the Urban Growth Management Functional Plan will be amended at the time the Regional Framework Plan is adopted to clearly identify the role that cities and counties will play in implementing transportation policies reflected in this chapter.

Analysis

Metro and its regional partners initiated the Region 2040 planning process to better evaluate how different growth management strategies could accommodate expected growth in this region and to analyze the possible consequences of such policies (see Chapter 1). In undertaking the Region 2040 process, the region has shown a strong commitment to developing a regional plan that is based on more efficient use of land and a balanced, multi-modal transportation system. The adopted and acknowledged 2040 Growth Concept resulted from this process. The 2040 Growth Concept integrates transportation, land use, water and open space elements to reinforce the region's growth management goals. The success of this land use concept, in large part, hinges on regional transportation policy. The following section includes general descriptions of the 2040 Growth Concept land-use components, called "design types," and associated transportation elements as defined during the Region 2040 process. In general, each of the land use components will be served with a multi-modal transportation system tailored to its specific needs. The land use components are ordered according to their relative significance in the region.

The central city, regional centers, industrial areas and intermodal facilities are key design types of the 2040 Growth Concept. Implementation of the overall growth concept is largely dependent on the success of these areas. For this reason, these areas are the primary focus of transportation implementation policies and infrastructure investments defined in the 1998 Regional Transportation Plan.

Central City and Regional Centers

Portland's central city already forms the hub of the regional economy. Regional centers in suburban locations such as Gresham, Beaverton and Hillsboro in the 2040 Growth Concept are complementary centers of regional economic activity. These areas are planned for region's highest development densities, the most diverse mix of land uses and the greatest concentration of commerce, offices and cultural amenities. They are planned to be the most accessible areas in the region by both auto and public transportation, and have very pedestrian-oriented streets.

In the 2040 Growth Concept, the central city is highly accessible by a high-quality public transportation system, multi-modal street network and a regional freeway system of through-routes. Light-rail lines radiate from the central city, connecting to each regional center. The street system within the central city is designed to encourage public transportation, bicycle and pedestrian travel, but also accommodate auto and freight movement. Of special importance are

the bridges that connect the east and west sides of the central city and serve as critical links in the regional system.

Regional centers are also planned to feature a high-quality radial transit system serving their individual trade areas and connecting to other centers, as well as light-rail connections to the central city. In addition, a fully improved network of multi-modal streets are intended to link regional centers to surrounding neighborhoods and nearby town centers, while regional through-routes will be designed to connect regional centers with one another and points outside the region. The street design within regional centers is planned to encourage public transportation, bicycle and pedestrian travel while also accommodating auto and freight movement.

Industrial Areas and Intermodal Facilities

Industrial areas are planned to serve as "sanctuaries" for long-term industrial activity. These areas are primarily served by a network of major street connections to both the regional freeway system and intermodal facilities. Many industrial areas are also served by freight rail, and have good access to intermodal facilities. Freight intermodal facilities, including air and marine terminals, freight rail yards and common carrier truck terminals, are an area of regional concern. Access to these areas is centered on rail, the regional freeway system, public transportation, bikeways and key roadway connections. While industrial activities often benefit from roadway improvements largely aimed at auto travel, there are roadway needs unique to freight movement that are critical to the continued vitality of industrial areas and intermodal facilities.

Town Centers, Station Communities, Main Streets and Corridors

While more locally oriented than the primary components of the 2040 Growth Concept, town centers, station communities, main streets and corridors are significant centers of urban activity. Because of their density and pedestrian-oriented design, they play a key role in promoting public transportation, bicycling and walking as viable alternatives to the automobile as well as conveniently close services for surrounding neighborhoods. As such, these secondary components are an important part of the region's strategy for reducing per-capita automobile travel.

Station communities are located along light-rail corridors. They are planned to feature a high-quality pedestrian and bicycle environment. These communities are designed around the transportation system to best benefit from the public infrastructure. While they include some local services and employment, they are mostly residential developments that are oriented

toward the central city, regional centers and other areas that can be accessed by rail for most services and employment.

Town centers function as local activity areas that provide close access to a full range of local retail and service offerings within a few miles of most residents. While town centers are not planned to compete with regional centers in scale or economic diversity, they will offer some specialty attractions of regional interest. Though the character of these centers varies greatly, each will function as strong business and civic communities excellent multi-modal arterial street access and high-quality public transportation with strong connections to regional centers and other major destinations. Main streets feature mixed-use, storefront style development that serve the same urban function as town centers, but are located in a linear pattern along a limited number of bus corridors. Main streets feature street designs that emphasize pedestrian, public transportation and bicycle travel.

Corridors will not be as intensively planned as station communities, but similarly emphasize a high-quality bicycle and pedestrian environment and convenient access to public transportation. Transportation improvements in corridors will focus on nodes of activity - often at major street intersections - where transit and pedestrian improvements are especially important. Corridors can include auto-oriented land uses between nodes of activity, but such uses are carefully planned to preserve the pedestrian orientation and scale of the overall corridor design.

Employment Centers and Neighborhoods

Some design types in the 2040 Growth Concept are primarily of local significance, including employment centers and neighborhoods. Urban activities in these areas often impact the regional transportation system, but are best addressed through the local planning process.

Employment centers allow mixed commercial and industrial uses, including some residential development. These areas are primarily served by a network of arterial connections to both the regional freeway system and intermodal facilities. Some employment centers are also be served by freight rail. Employment centers are often located near industrial areas, and thus may benefit from freight improvements primarily directed toward industrial areas and intermodal facilities.

In recent decades, the newest neighborhoods have become the most congested largely due to a lack of street connections. A lack of street connections discourages walking and bicycling for local trips in these areas, and forces local auto trips onto the regional multi-modal arterial network. The 2040 Growth Concept envisions master street plans in all areas to increase the number of local street connections to the regional roadway network. However, new connections must be designed to discourage through-travel on local neighborhood streets.

Urban Reserves

Urban reserves, which are currently located outside the Urban Growth Boundary (UGB), are relatively undeveloped with limited transportation facilities. Urban reserves are intended to accommodate future growth and will eventually require multi-modal access to the rest of the region. Because they may be added to the urban area during the 20-year Regional Transportation Plan (RTP) planning period, they are included in the RTP functional classification scheme. General street and public transportation planning is completed prior to urbanization, as part of the RTP process, and based on specific 2040 Growth Concept land use policies for these areas. Once urban reserves are brought within the UGB, more detailed transportation system planning at the regional and local level occurs in conjunction with detailed land use planning.

Areas Outside the Region's Urban Areas

Rural reserves are undeveloped areas located outside the UGB and have very limited transportation facilities. Roadways in these areas are intended to serve rural industry and needs, and urban travel on these routes is accommodated with designs that are sensitive to their basic rural function. Rural reserves are planned to be protected from urbanization for the foreseeable future through state statutes and administrative rules, county land use ordinances, intergovernmental agreements and by limiting rural access to urban through-routes whenever possible. Urban-to-urban travel is generally discouraged on most rural routes, with the exception of a limited number of designated urban connector roads identified in the RTP. All other rural roads should serve rural purposes.

Neighboring cities are separated from the main urban area by rural reserves, but are connected to regional centers within the metropolitan area by limited-access green corridor transportation routes. In addition to highway access, green corridor routes will include bicycle and public transportation service to neighboring cities. Neighboring cities will be encouraged, through intergovernmental agreements, to balance jobs and households in order to limit travel demand on these connectors. The region also has an interest in maintaining reasonable levels of through-travel on major routes that pass through neighbor cities and function as freight corridors. Growth of neighboring cities will ultimately affect through-travel and could create a need for bypass routes. Such impacts will also be addressed through coordination with county and state agencies, as well as individual neighboring cities.

The 2040 Commodity Flow Study

As part of the Region 2040 process, the region also conducted a Commodity Flow Study. The study was designed to determine how freight moves through the region, understand the linkage between the regional economy and the transportation system and assess the implications of future freight volumes on the regional transportation system. The study concluded with these key findings:

- Goods movement has historically sparked the region's economic growth. Our region's freight market can be segmented into three distinct but complementary components: goods movement that supports local consumption, goods movement that is generated by local industries and goods movement throughout the region that is tied to a successful distribution system. Each of these depends on access to an efficient transportation network.
- The existing transportation system is adequate to support current goods movement requirements, although there are specific points of congestion, particularly within rail facilities and at some highway crossings.
- Employment in the construction, manufacturing, transportation and utilities and trade sectors of the economy account for approximately one-half of the region's jobs. Traditionally well-paid, these jobs depend on the successful movement of goods on the region's transportation system. In addition, the transportation system affects the ability of the region to maintain its competitive advantage as a warehousing and distribution center. Portland outranks similarly sized cities in its role in wholesale trade.
- Truck is the predominant mode for goods movement in the region. One out of ten vehicles on roadways in the region is a truck involved in moving freight. In 1991, 60 percent of all freight tonnage moved on trucks, and an additional portion of the rail and air traffic relied on truck for pickup and delivery.
- By the year 2040, freight volume is expected to grow by two to three times to approximately 19 million twenty-foot equivalent container units, which is faster than population growth. Of this, 80 percent is expected to be due to the region's market economy or goods that simply move through the Portland area to other destinations.
- Continued emphasis on maintaining and enhancing the transportation system is necessary to continue Portland's strong freight economy. Quick transfer between ship, rail, truck and air service is increasingly a competitive strength of any freight economy.

In conclusion, the projected growth in the flow of goods in this region is an important consideration in the region's land-use and transportation planning efforts. This significant growth points to the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities and to continue maintaining and enhancing the freight transportation network. To this end, the 2040 Growth Concept identifies industrial sanctuaries for distribution and manufacturing activities as critical in terms of their significance to the regional economy. Policies contained in this element of the framework plan recognize the importance of protecting freight movement and the road, rail, air, shipping and pipeline facilities needed to facilitate this movement.

1994 Travel Behavior/Activity Survey

In 1994, Metro also conducted a travel behavior survey within the four-county boundary of Clackamas, Multnomah and Washington Counties in Oregon and Clark County, Washington. As part of this survey, approximately 6,000 households kept a diary of activities performed over a two-day period, including identification of how individuals traveled to those activities. The study was designed to focus on the relationship between an activity type and the need for travel and highlighted the importance of all activities, whether "big" or "small." Results from the study are summarized in Table 2.3 below.

Table 2.3 Summary of 1994 Metro Travel Behavior/Activity Survey Results (for all trip purposes)

	Mode Share					Vehicle Miles per Capita	Auto Ownership per Household
Land Use Type	% Auto	% Walk	% Transit	% Bike	% Other		
Areas with Good Transit/ Mixed Use In Multnomah County	58.1%	27.0%	11.5%	1.9%	1.5%	9.80	0.93
Areas With Good Transit Only In Multnomah County	74.4%	15.2%	7.9%	1.4%	1.1%	13.28	1.50
Remainder of Multnomah County	81.5%	9.7%	3.5%	1.6%	3.7%	17.34	1.74
Remainder of Region	87.3%	6.1%	1.2%	0.8%	4.6%	21.79	1.93

Areas with good transit service and a good mix of land uses showed the highest percentage of alternative mode use (41.9 percent combined). Conversely, the remainder of the region showed the highest percentage of automobile use (87.3 percent). This indicates that individuals are likely to use the automobile when no other choices exist, but may choose other alternatives when they are available. The results of this study support this region's effort to link land use and transportation planning as a means to provide a balanced, multi-modal transportation system.

Conclusions

Assessment of federal, state and regional mandates and analysis of data from the Region 2040 process produced the following conclusions:

Transportation Implications

- The transportation system must serve the urban form established in the 2040 Growth Concept if the region is to be successful in managing expected growth.
- In addition to supporting implementation of the 2040 Growth Concept, policy implementation must give top priority to projects or programs that maintain or preserve existing transportation infrastructure and address safety-related deficiencies, including the safety of pedestrians and cyclists.
- Transportation investment should be a priority in key target areas, particularly the central city, regional centers, industrial areas, transit corridors and station areas.
- The density of the regional street network must be expanded to accommodate planned population and employment growth, particularly in areas where significant increases in density are planned, such as regional centers. Portions of the existing street network also warrant expansion to meet new demands. These new or expanded streets must be designed

as multi-modal facilities, reflecting the variety of travel demands that accompany each land-use component.

- Higher-density, mixed-use locations should be tied to the highest quality transit and should provide improved pedestrian and bicycling environments.
- Improved transit, pedestrian and bicycle travel, parking limits and other transportation demand management actions complement higher-density land use designations and will help achieve mandated 10 percent reduction in VMT per capita in the UGB by 2015 and a 20 percent reduction by 2025.
- Local governments should implement code changes that address building orientation and pedestrian access to transit, particularly in higher-density centers and corridors, consistent with requirements contained in the Oregon Transportation Planning Rule.
- Access to highway corridors that connect the region to neighboring towns must be limited to reduce urban development pressure on adjacent rural lands.
- Specific urban connector routes through rural areas outside the Metro UGB should be designated as such and designed to ensure safe, efficient travel while discouraging urban development. Other rural routes should be limited to serve only rural needs to reduce urban development pressure.
- Parking limitations, pedestrian amenities and compact, more densely developed urban areas should be implemented to reduce vehicle miles traveled and to increase transit ridership.
- Local street connectivity must be improved for more direct local access to reduce excess demand on regional routes and to promote alternative modes.
- A balance between jobs and housing within the market areas of regional centers can minimize travel needs for both shorter commutes and closer access to retail and other commercial services.
- The projected growth in the flow of goods in this region is an important consideration in the region's land-use and transportation planning efforts. This significant growth points to the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities and to continue maintaining and enhancing the freight transportation network.

Air Quality Implications

- Metro must establish minimum and maximum parking ratios consistent with air quality maintenance plans. In areas where transit is provided or other non-auto modes are convenient, less parking should be provided while allowing accessibility and mobility for all modes, including autos. See Table 2 of the Urban Growth Management Functional Plan.
- Regional transportation investment should maintain compliance with air quality standards. Investment should support regional transit service hours increases averaging at least 1.5 percent annually, completion of the west-side light rail transit facility and completion of the light rail transit facility in the South/North corridor by the year 2007.
- If greater reduction of transportation-related pollutant emissions becomes necessary to assure maintenance of the ozone standard, federal transportation funding may increasingly be diverted to trip reduction programs and transit, bike and pedestrian capital projects.

Accordingly, all major roadway expansion, construction or reconstruction projects must include pedestrian and bicycle facilities.

Water Quality Implications

Impervious surfaces are hard surfaces that do not allow water to soak into the ground, and increase the amount of storm water running off into the storm water drainage system. The majority of total impervious surfaces is from roads, sidewalks, parking lots and driveways. Storm water runoff from these impervious surfaces reduces the amount of recharge of water to ground water and increases the capacity requirements of the storm water drainage system. Higher impervious surface coverage has been linked to dramatic changes in the shape of streams, water quality, water temperature and the health of the flora and fauna that live in the natural waterways. Examples of impervious surface reduction techniques include:

- consider use of open channels and swales on smaller streets and roads, as long as runoff velocities are low enough to prevent erosion;
- grade sidewalks so that storm water runs off into adjacent unpaved areas such as planting strips or landscaped private property;
- encourage the use of shared parking to reduce the size and number of parking lots;
- consider reducing commercial, industrial and multi-family use parking requirements to reduce impervious surface coverage;
- encourage shared driveways between adjacent development projects;
- follow guidelines for erosion control techniques during construction of regional streets and adjacent development projects.

~~Placeholder for Figure 2.1 Regional Street Design Map~~

~~Placeholder for Figure 2.2 Regional Motor Vehicle System Map~~

~~Placeholder for Figure 2.3 Regional Public Transportation System Map~~

~~Placeholder for Figure 2.4 Regional Pedestrian System Map~~

~~Placeholder for Figure 2.5 Regional Bicycle System Map~~

~~Placeholder for Figure 2.6 Regional Freight System Map~~

Parks & Openspaces

Chapter 3 Parks, Natural Areas, Open Spaces And Recreational Facilities

Overview

Parks, natural areas, open space, trails, greenways and associated recreational services provide important benefits to the visitors and citizens of the Portland metropolitan region including:

- Personal health benefits from leisure and fitness activities in local parks and open spaces (e.g., hiking, biking, field sports, playgrounds, swimming, picnicking, fishing, wildlife viewing). Recreational pursuits are vital to the social development of youth and the mental and emotional health of adults.
- Community benefits such as park access close to home, environmental education opportunities and community involvement in the planning and management of facilities. Parks and natural areas also provide unique landscape characteristics in the community.
- Economic benefits related to tourism and recreation industries and enhanced property values.
- Environmental benefits helping to maintain air and water resources, providing flood control and protecting fish and wildlife habitat.

Citizens throughout the region have demonstrated the importance of parks, natural areas and recreation services through their support in elections, opinion surveys, recreational activities and volunteer community service. Today, over 700 publicly-owned parks exist within and adjacent to the metropolitan region ranging from Mill End Park (18-inches in diameter) to Forest Park (4,683 acres). These facilities are managed by over 25 public park and recreation service providers. Metro currently manages ~~approximately~~more than ~~6,100~~6,500 acres of land at more than 40 locations.

With increasing growth in the region, the demand for park facilities and recreational services has also ~~has~~ increased. But the supply of facilities and services has not kept pace. The ability of parks providers to maintain existing parks is increasingly strained. ~~and t~~Resources to acquire, ~~and~~ develop, operate and maintain new parks are ~~becoming~~ scarce. This is due to a variety of factors including an exclusive dedication of gas tax revenues to highway needs, significant reductions in federal appropriations for federal, state and local parks programs (e.g., Land and Water Conservation Fund), reductions in federal timber harvest receipts to counties, and property tax reduction measures ~~(e.g., Oregon's Measure 5 in 1990; Measure 47 in 1996)~~.

Metro recognizes the desire of citizens to have quality natural areas and parks close to home. Metro is working with federal, state, and local governments to address and meet the park and recreation needs of the Portland metropolitan area. The Metro Charter, approved by voters of the region in 1992, authorizes Metro to acquire, develop, maintain, and operate a system of parks, open space, and recreational facilities of metropolitan concern. ~~The Charter also designates these facilities as one of the mandatory components to be addressed in the Regional Framework Plan.~~

The policies and implementation of the parks, open spaces and recreation component of the Regional Framework Plan is based upon the Metropolitan Greenspaces Master Plan, adopted by Metro Council in 1992. The Greenspaces Master Plan describes goals and policies related to establishing an interconnected system of natural areas, open space, trails, and greenways for wildlife and people throughout the metropolitan area. The master plan relates to a number of Regional Urban Growth Goals and Objectives (RUGGOs), particularly Objective 15 which calls for protection of natural areas, parks and fish and wildlife habitat.

This chapter of the Regional Framework Plan outlines the policies that guide Metro ~~and local governments~~ in providing services related to the provision of parks, open spaces, and recreational services. ~~It includes policies intended to clarify roles and responsibilities to assure continued access to parks and natural areas and to protect significant natural resources for current and future generations.~~ The policies reflect the importance of parks, natural areas and recreational facilities in the urban fabric of communities throughout the region, and offer measures to ensure that ~~as the landscape is affected by human settlement,~~ natural resources are protected and citizens are provided appropriate recreational opportunities and facilities, close to where they live. This chapter also directs Metro to develop a functional plan that will provide specific requirements for cities and counties related to the need for specific comprehensive plans and implementing ordinances that recognize the need for park and open space planning.

Policies (Goals and Objectives)

Metro ~~P~~policies related to ~~the provision of~~ parks, open spaces, and recreational services ~~by Metro and local governments~~ address inventory, protection, management and use of these resources at the regional and local levels. These policies have been derived from the Greenspaces Master Plan, the RUGGOs, the Future Vision Report, and recommendations from MPAC, ~~participation and involvement from~~ the Greenspaces Technical Advisory Committee, and from citizens of the region.

3.1 ~~Policies related to the~~ Inventory of Park Facilities and Identification and Inventory of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways.

3.1.1. Metro will inventory and identify regionally significant parks, natural areas, open spaces, vacant lands, trails and greenways at the watershed level using topographical, geologic and biologic functions and features, i.e., "landscape ecology," ~~so that~~ to ensure coordinated protection and enhancement of natural functions such as water quality and wildlife habitat across jurisdictional boundaries ~~will be assured~~.

3.1.2. Metro will identify natural corridors that connect regionally significant parks, natural areas, open spaces, trails and greenways. River and stream corridors, utility corridors, abandoned roads, and railroad rights-of-way will provide primary linkages.

3.1.3. Metro will inventory lands outside the Urban Growth Boundary and Metro's jurisdictional boundary and identify them as prospective components of the Regional System when protection of these lands are determined to be of direct benefit to the region.

3.1.4 Metro shall identify urban areas which are deficient in natural areas and identify opportunities for acquisition and restoration.

3.1.5 Metro, with the assistance of local governments shall update the parks inventory which was completed in 1988. The inventory shall include acreage, facilities, environmental education programs, existing school sites and other information as determined by Metro and the Greenspaces Technical Advisory Committee. This inventory should be updated at five (5) year intervals.

3.1.6 Using appropriate landscape level techniques, such as remote sensing or aerial photo interpretation, Metro will inventory the urban forestry canopy on a periodic basis and will provide inventory information to local jurisdictions.

3.2 ~~Policies related to the~~ Protection of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways

3.2.1 Metro will continue to develop a Regional System of Parks, Natural Areas, Open Spaces, Trails, and Greenways (the Regional System) to achieve the following objectives:

a) protect the region's biodiversity;

b) provide citizens opportunities for, primarily, natural resource dependent recreation and education;

c) contribute to the protection of air and water quality; and

d) provide natural buffers and connections between communities.

3.2.2. Metro, upon the advice of citizens, and in coordination with local governments and state and federal resource agencies and appropriate non-profit organizations, will finance and coordinate protection and management of the Regional System across jurisdictional boundaries.

3.2.3. Strategies to protect and manage the Regional System and regional Goal 5 resources will include, but not be limited to, acquisition, education, incentives, land use and environmental regulations.

3.2.4. Lands inside and outside the Urban Growth Boundary and Metro's jurisdiction will be included in the Regional System when protection of these lands are determined to be of direct benefit to the region.

3.2.5. Metro shall collect and evaluate baseline data related to natural resource values of the regional system to identify trends and to guide management decisions.

3.2.6. New transportation and utility projects shall seek to avoid fragmentation and degradation of components of the Regional System. If avoidance is infeasible, impacts shall be minimized and mitigated.

3.2.7. Metro, in conjunction with affected local governments will work with the State to update, reinvigorate and implement a Willamette River Greenway Plan for the metropolitan region.

3.3 ~~Policies related to the~~ Management of the Publicly-Owned Portion of the Regional System of Parks, Natural Areas, Open Spaces, Trails and Greenways

3.3.1. Metro will assume management responsibility for elements of the publicly owned portion of the Regional System, as outlined in a functional plan to be developed.

3.3.2. Metro will assume financial responsibility related to those portions of the publicly owned system which are managed by Metro.

3.3.3. Local governments shall be given an opportunity to transfer existing publicly owned components of the Regional System to Metro and to acquire components of the Regional System with local resources.

3.3.4. The publicly owned portion of the Regional System shall be managed to protect fish, wildlife, and botanic values and to provide, primarily, natural resource dependent recreational and educational opportunities.

3.3.5. Metro will acquire portions of the Regional System as financial resources allow. Metro will negotiate acquisition agreements primarily with willing sellers. Power of eminent domain will be used only in extraordinary circumstances.

3.3.6 Master/Management plans shall be developed for each component of the Regional system to insure public use is compatible with natural resource protection. Master/Management plans shall be completed prior to formal public use.

3.3.7. Metro and local government cooperators in the Regional System shall be responsive to recreation demands and trends identified in the State Comprehensive Outdoor Recreation Plan (SCORP).

3.3.8 Metro shall develop master planning guidelines to assure consistency in the management of the Regional System.

3.3.9 From time to time, or in conjunction with the periodic up-date of the region wide parks inventory, Metro shall convene local government park providers to share information, review and analyze issues, and if appropriate develop recommendations related to:

1. roles and responsibilities
2. funding
3. levels of service
4. information needs
5. user trends and preferences
6. technical assistance
7. interagency coordination
8. public involvement
9. other topics as determined by Metro and local park providers

3.4 ~~Policies related to the~~ Protection, Establishment and Management of a Regional Trails System.

3.4.1. Metro will identify a Regional Trails System which shall be included in the Regional Transportation Plan.

3.4.2. The Regional Trail System shall provide access to publicly owned parks, natural areas, open spaces, and greenways, where appropriate.

3.4.3. Metro will coordinate planning for the Regional Trail System with local governments, federal and state agencies, utility providers, and appropriate non-profit organizations

3.4.4. Metro will cooperate with citizens and other trail providers to identify and secure funding for development and operation of the Regional Trails System.

3.4.5. Metro shall encourage local governments to integrate local and neighborhood trail systems with the Regional Trail System.

3.5 ~~Policies related to the~~ Provision of Community and Neighborhood Parks, Open Spaces, Natural Areas, Trails and Recreation Programs

3.5.1. Metro shall recognize that local governments shall remain responsible for the planning and provision of community and neighborhood parks, local open spaces, natural areas, sports fields, recreational centers, trails, and associated programs within their jurisdictions.

3.5.2. Pending adoption and implementation of the functional plan referenced in section 3.5.8, Metro shall encourage local governments to (I) adopt level of service standards for provision of parks, natural areas, trails, and recreational facilities in their local comprehensive plans and (II) locate and orient such parks, open spaces, natural areas, trails, etc., ~~shall be located,~~ to the extent practical, in a manner which promotes non-vehicular access. "Level of service standards" means: a formally adopted, measurable goal or set of goals related to the provision of parks and recreation services, based on community need that could include but not be limited to: 1) park acreage per 1,000 population; 2) park facility type per 1,000 population; 3) percentage of total land base, dedicated to parks, trails and open spaces; 4) spatial distribution of park facilities.

3.5.3. Metro shall encourage local governments to be responsive to recreation demand trends identified in the State Comprehensive Outdoor Recreation Plan (SCORP).

3.5.4. Metro shall encourage local governments to develop, adopt and implement Master Plans for local parks and trail systems, natural areas, and recreational programs.

3.5.5. Metro, in cooperation with local governments, state government, and private industry shall work to establish a supplemental funding source for parks and open space acquisition, operations and maintenance.

3.5.6 Metro shall encourage local governments to identify opportunities for cooperation and cost efficiencies with non-profit organizations, other governmental entities, and local school districts.

3.5.7 Urban Reserve master plans shall demonstrate that planning requirements for the acquisition and protection of adequate land ~~is set aside~~ to meet or exceed locally adopted levels of service standards for the provision of public parks, natural areas, trails, and recreational facilities, will be adopted in the local comprehensive plans. Lands which are undevelopable due to natural hazards or environmental protection purposes (i.e., steep slopes, floodways, riparian corridors, wetlands, etc.) shall not be considered to meet the natural area level of service standards unless ~~it is~~ the land will be preserved in perpetuity for public benefit. Proposed public parks, open spaces, natural areas, trails, etc. shall be located in a manner which promotes non-vehicular traffic. No urban reserve area shall be brought within the Urban Growth Boundary unless the requirements set out in this subsection 3.5.7 are met.

3.5.8 Metro, in cooperation with local governments shall develop a functional plan which establishes the criteria which local governments shall address in adopting a locally determined~~determining their~~ "level of service standard." The functional plan shall also establish region-wide goals for the provision of parks and open space in various urban design types identified in the 2040 regional growth concept. The functional plan shall apply to the portion of the region within the Urban Growth Boundary and the urban reserve when urbanized.

3.5.9 Metro will work with local governments to promote a broader understanding of the importance of open space to the success of the 2040 Growth Concept and to develop tools to assess open space on a parity with jobs, housing, and transportation targets in the Regional Framework Plan.

3.6 ~~Policies related to~~ Participation of Citizens in Environmental Education, Planning, Stewardship Activities, and Recreational Services.

3.6.1. Metro will encourage public participation in natural and recreation resource management decisions related to the Regional System.

3.6.2. Metro will provide educational opportunities to enhance understanding, enjoyment and informed use of natural, cultural, and recreational resources.

3.6.3. Metro will provide and promote opportunities for the public to engage in stewardship activities on publicly owned natural resource lands. Cooperative efforts between Metro

and private non-profit groups, community groups, schools and other public agencies should be encouraged.

3.6.4 Metro should provide opportunities for technical assistance to private owners for stewardship of components of the Regional System.

3.6.5 Metro and local governments should work with state, federal, non-profit and private partners to facilitate stewardship and educational opportunities on publicly owned natural resource lands.

3.6.6. Metro shall encourage local governments to provide opportunities for public involvement in the planning and delivery of recreational facilities and services.

3.6.7 Metro will follow and promote the citizen participation values inherent in RUGGO Goal 1, Objective 1 and the Metro Citizen Involvement Principles.

Requirements

This Regional Framework Plan requires Metro in conjunction with local governments to develop a functional plan that will address land use planning requirements that:

- identify and delineate an interconnected regional system of parks, natural areas, open spaces, trails and greenways (the Regional System);
- identify implementation measures to protect and manage the Regional System; and
- establish local government land use planning criteria and goals for parks consistent with policy 3.5.8.

Background

For decades, parks have played a vital role in the quality of life in the metropolitan region. In 1903, visiting landscape architects Frederick Law Olmsted, Jr. and John Charles Olmsted discussed a newly-emerging American notion of making nature urbane and, thus, naturalizing the city. In their report to the Portland Parks Board, the Olmsteds noted, "While there are many things, both small and great, which may contribute to the beauty of a great city, unquestionably one of the greatest is a comprehensive system of parks and parkways."

From the time of the Olmsteds' report through the 1960s, the city of Portland was the primary population center and primary parks provider in the region. With continuing urban growth through the 1970s, suburban communities outside the central city established new and expanded parks and recreation programs. A primary emphasis of these programs was, and continues to be,

the provision of facilities for active recreation ~~opportunities including~~ such as sports fields, swimming pools, playgrounds and associated recreation programs.

In 1974, the State of Oregon issued the Willamette River Greenway Plan outlining protection and acquisition proposals for the Willamette River from Cottage Grove to its confluence with ~~at~~ the Columbia River. The Plan directs development away from the river, establishes a greenway setback line, requires inventories be completed and requires protection of significant fish and wildlife habitats, vegetative fringe, scenic qualities and viewpoints.

The State of Oregon requires all cities and counties to develop comprehensive plans. These comprehensive plans must address State Land Use Planning Goals including: Goal 5, Open Spaces, Scenic and Historic Areas and Natural Resources; Goal 6, Air, Water and Land Resources Quality; Goal 8, Recreational needs and Goal 15, the Willamette River Greenway. Metro, as well as the cities and counties, ~~of the state,~~ must show that ~~their~~ land use plans are consistent with these goals.

In 1989, Metro published the Metro Recreation Resource Study, ~~a work in cooperation~~ in a cooperative effort with other ~~local~~ park providers in the region. The purpose of the study was to:

- identify existing public parks, natural areas and other recreational resources in the region;
- describe the general issues, problems, and opportunities relating to these resources;
- identify needed actions to provide adequate park facilities and services in the Portland metropolitan region.

The study identified the need to increase the inventory of park facilities and services and address the need for additional natural area park facilities in the metropolitan region, in response to the growing demand for natural resource-based recreational opportunities (e.g., hiking, biking, fishing, boating, camping, wildlife watching) close to home. Publicly-owned and managed natural areas were found to be limited to, primarily, Forest Park, Oxbow Park and Tryon Creek State Park. A regional, cooperative planning approach was recommended to address this issue.

In 1990, the Metro Council established two advisory committees to coordinate development of a regional natural areas master plan to guide protection and management of regionally significant natural areas in the region. The Greenspaces Technical Advisory Committee is composed of parks and natural resource professionals in local jurisdictions, state and federal agencies and representatives of nonprofit advocacy groups for parks, natural areas, open spaces, trails and greenways.

A Greenspaces Policy Advisory Committee consisting of elected officials from local jurisdictions in the region, including Clark County, oversaw development of the Metropolitan

Greenspaces Master Plan, which the Metro Council adopted in 1992. The Greenspaces Policy Advisory Committee was replaced by a citizen-based Regional Parks and Greenspaces Advisory Committee in 1995 to advise the Metro Council, Metro Executive Officer and the Metro Regional Parks and Greenspaces Department on a variety of issues affecting regional parks and natural area facilities and services.

In 1993, Multnomah County approached Metro concerning the possible consolidation of its Parks Services Division with Metro's Greenspaces Program. The consolidation was consistent with each agency's desire to support its own mission (e.g., growth management for Metro; social services for Multnomah County) and was expected to further the regional vision embodied in the Metropolitan Greenspaces Master Plan. In December 1993, Metro Council approved the merger of the Multnomah County Parks Division with Metro's Greenspaces program, creating the Metro Regional Parks and Greenspaces Department.

The new department began operations in January 1994. Combining Metro's planning experience with park management experience greatly enhanced Metro's ability to acquire, develop, maintain, and operate a system of parks, natural areas, and recreational facilities of regional significance. It also put Metro in a position to better support local parks providers in coordination and planning activities. The parks merger allowed Metro to ~~better~~ address and coordinate issues common to all local park providers. For example, Metro coordinated the identification of 90 local park acquisition and improvement projects which were included in the 1995 open space, parks, and streams bond measure.

In 1995, Metro referred a $135.6 million bond measure to voters of the region that identified 14 regional acquisition~~regional target acquisition~~ target areas, 6 regional greenway and trail projects and 90 local natural area acquisition and development projects that supported the goals of the Metropolitan Greenspaces Master Plan. Voters of the Portland metropolitan region approved Measure 26-26 in May 1995. Metro's goal is to acquire approximately 6,000 acres within the 14 regional target acquisition areas and corridors.

The Future Vision Report (1995) required by the Metro Charter also identifies parks and natural areas as valuable components of a livable community. The report states that:

- "We value a life close to nature incorporated in the urban landscape."
- "We value nature for its own sake, and recognize our responsibility as stewards of the region's natural resources."
- "...this region is recognized as a unique ecosystem...which seeks to:
    - improve air and water quality, and increase biodiversity;

- protect views of Mt. Hood, Mt. St. Helens, Mt. Rainier, Mt. Adams, Mt. Jefferson, and other Cascade and coastal peaks;
- provide greenspaces and parks within walking distance of every household;
- assure a close and supportive relationship among natural resources, landscape, the built environment, and the economy of the region; and
- restore ecosystems, complemented by planning and development initiatives that preserve the fruits of those labors."

In addition, the RUGGOs state under Objective 15 that:

> "Sufficient open space in the urban region shall be acquired, or otherwise protected, and managed to provide reasonable and convenient access to sites for passive and active recreation. An open space system capable of sustaining or enhancing native wildlife and plant populations should be established."
>
> "15.1 Quantifiable targets for setting aside certain amounts and types of open space should be identified.
>
> 15.2 Corridor Systems- The regional planning process shall be used to coordinate the development of interconnected recreational and wildlife corridors within the metropolitan region
>
> 15.2.1 A region-wide system of trails should be developed to link public and private open space resources within and between jurisdictions.
>
> 15.2.2 A region-wide system of linked significant wildlife habitats should be developed. This system should be preserved, restored where appropriate, and managed to maintain the region's biodiversity (number of species and plants and animals).
>
> 15.2.3 A Willamette River Greenway Plan for the region should be implemented by the turn of the century."

The policies in this chapter capture the intent of the RUGGOs, Future Vision and Metropolitan Greenspaces Master Plan related to providing an adequate and viable system of parks, natural areas, trails, greenways and recreational programs and services in the Portland metropolitan region.

Analysis

A key element of the 2040 Growth Concept for accommodating future urban growth in the region includes encouraging a compact urban design. ~~That is, more households are expected to be accommodated by higher densities.~~ This means smaller lots in much of the new development and where transit service ~~is at~~levels are high~~levels~~, such as in regional and town centers, mainstreets and station communities, residential development types including rowhouses and multi-family development.

New neighborhoods and communities ~~must~~should include adequate parks and open spaces. Planning for the acquisition and protection of ~~L~~land ~~set aside~~ for parks and open spaces ~~must~~ should be included in planning for future urbanization inside and outside the Urban Growth Boundary. A crucial issue related to parks, natural areas and recreation in the region is how communities will work together to plan for the provision of these important public facilities and services.

Identification and Inventory of the Regional System

The development of the Metropolitan Greenspaces Master Plan required the systematic, scientific identification, inventory and assessment of natural area features in the metropolitan region. A consultant team was assembled by Metro in 1989 to conduct the inventory and analysis of the Portland metropolitan region to identify regionally significant natural areas and corridors for fish, wildlife and natural resource dependent recreation.

The natural areas inventory was based on aerial photography of the total study area (372,682 acres) with biological field checks of seven percent of the natural areas mapped. Periodic updates of the inventory will be necessary to assess the status of regionally significant natural areas, monitor trends and to support future planning and management efforts. Future work will be based on systematic and scientific methods of identifying and delineating natural resource lands and maintaining and managing links between them on a landscape level.

~~I~~New inventories are needed in order to accomplish the following:

- Reevaluate protection priorities established in the Metropolitan Greenspaces Master Plan. Some sites identified may no longer be considered regionally significant. New sites may be added to the regionally significant inventory once updated~~current and more complete~~ data are available.
- Delineate regionally significant natural areas; research and document the ~~critical~~ natural resources values for which protection should be justified and supported.
- Delineate and conduct field assessments of biological corridors that interconnect regionally significant sites.
- Assure that the regional system of parks, natural areas, open spaces, trails and greenways contributes to the maximum extent, based on scientific data, to the protection of water quality, fish, wildlife and botanic diversity within the region.
- Inventory existing park facilities, recreational capacity and analysis of park service needs

Protection of the Regional System

Ecological principles are important in establishing protection priorities including:

- Maintaining biological diversity by protecting and enhancing a variety of habitats such as wetlands, riparian corridors, forests, and agricultural lands distributed throughout the metropolitan area;
- Consolidating natural areas to create or maintain relatively large contiguous acreages connected to natural habitats outside the urban environment to avoid habitat fragmentation and species isolation;
- Protecting, restoring, and recreating stream corridor vegetation by replacing riparian vegetation where it is lacking or dominated by exotic species and removing barriers, where possible, to maintain connections with adjacent upland habitats;
- Protecting or restoring naturally vegetated connections between watersheds at headwaters or other appropriate locations; and
- Planning for capital improvements to provide appropriate access and use of parks and natural areas.

A variety of strategies will be used to protect and manage the regional system of parks, natural areas, trails and greenways to support fish and wildlife populations as well as provide a variety of recreational opportunities. These include:

1. Acquisition;
2. Environmental education, stewardship and landowner incentives;
3. Land use and environmental regulations.

Acquisition

One effective means of natural resource protection is public acquisition from willing sellers. The Open Spaces Parks and Streams Bond Measure 26-26, approved by voters in 1995, provided funds for the acquisition of open space in 14 regional areas and 6 regional greenway and trail corridors. The measure also provided funds for up to 90 local greenspace projects which support or complement the Metropolitan Greenspaces Master Plan.

Since 1990, voters in Gresham, Lake Oswego, Portland, Tualatin, Tualatin Hills Park and Recreation District and other jurisdictions have approved general obligation bond issues which support, in part, elements of the Metropolitan Greenspaces Master Plan and other ~~outdoor~~active recreation facilities and services needs.

More than $6 million in federal transportation funding under the Intermodal Surface Transportation Efficiency Act of 1991 has been invested in trail projects in the region. Land acquisition can also be supported through donations of land, conservation easements and dedication of ~~surplus~~ land as open space.

Environmental education and incentive programs

Environmental education and incentive programs have the capacity to provide a level of protection for park and natural areas. Building an increased understanding and awareness of metropolitan natural resource values and the benefits of parks in general leads to informed management decisions and increased public participation in volunteer stewardship activities. An informed public uses parks and natural areas in ways that helps reduce ~~the~~ maintenance costs ~~of these facilities~~. Incentive programs (e.g., grants, tax reductions, technical support) provide public agencies and private parties support in the restoration, enhancement, and management of natural areas.

Land Use and Environmental Regulations

Oregon land use policies and regulations provide limited protection of natural resources in the metropolitan region. Local governments can use the comprehensive land use planning process to establish protective zoning standards to protect natural resources within their jurisdictions, but often apply them inconsistently. Natural resource management on a regional basis offers the opportunity for uniform standards to protect these resource values. Coordinated ~~L~~local planning efforts are needed to assure that an adequate supply of park land is available to meet the future demand for community and neighborhoods parks, sports fields, recreation centers and locally significant open space trails and greenways.

~~Metro's~~ Title 3 of Metro's ~~the~~ Urban Growth Management Functional Plan is a first step towards protecting water quality and water features such as streams and wetlands from human disturbances by requiring vegetated buffers. Title 3 also requires Metro to conduct a regional assessment for identification and protection of Goal 5 resources (see section under Goal 5).

A combination of strategies will be required to protect and connect a regional system of parks, natural areas, trails and greenways for fish, wildlife and people. Metro will work with local governments, state and federal agencies, conservation organizations, businesses and citizens to review, refine and further implement these protection strategies.

Management of the Regional System

~~Federal, state, county and local agencies have an important role in the management and operation of the metropolitan region's parks, natural areas and associated programs and services.~~ The Metro Charter provides for Metro to serve as a regional provider of parks, natural areas, and recreational facilities. The 1994 City Club of Portland report, Portland Metropolitan Area Parks, cites the value of a regional parks authority. A cooperative, regional management approach can

result in equitable distribution of facilities, funding equity, consistency in planning, management and operation of facilities and user benefits.

Currently, regionally significant parks, natural areas and trails are managed by a variety of public entities with a variety of financial resources. There is little consistency in development, operation and management standards and little or no integration regarding funding, user fees, or visitor services. Tax reform initiatives may have serious implications for local and state agencies' abilities to operate and maintain existing parks for the region's growing population. Local governments, in particular, may at some point wish to transfer management of regionally significant facilities to Metro, to address funding equity issues and allow local providers to focus on community and neighborhood parks and other facilities and programs related to active recreation.

Site specific management begins with the preparation of master/management plans. The primary purpose of a master plan is to articulate management, development and operation guidelines. ~~Metro will prepare m~~Master/management plans should be prepared for the system of regional parks, natural areas, open spaces, trails and greenways. Metro will prepare guidelines for master planning to ensure consistency in management of the Regional System.~~for sites that Metro purchases or expects to manage~~. Sites which lack master/management plans will be "landbanked" and public use limited until appropriate facilities and services can be planned, developed and maintained.

Metro should provide the forum for addressing issues related to the coordination and integration of management, and of service delivery related to parks, open spaces and recreation. Metro should lead an effort to study and evaluate how park and recreation services are provided and recommend actions which will improve funding stability and equity, operational efficiency, customer service, management integration, coordination, and continuity.

Regional Trail and Greenway System

In their report to the Portland Parks Board in 1903, the Olmsted brothers observed~~recommended~~ that a system of interconnected parks serves the public far better than a collection of isolated pieces of land. ~~Regional t~~Trails and greenways provide the connective network necessary to link the region's parks and natural areas, while providing public access and~~. It is also the critical component that provides people access to parks and natural areas, and the~~ corridors to support movement of fish and wildlife. ~~They connect~~ Trails and greenways also link communities ~~with regionally significant natural areas and also~~and connect the ~~metropolitan region~~ Metro urban area to the Pacific Coast, Cascade Mountains and Washington state.

Since 1988, Metro has staffed a Regional Trails and Greenways Working Group composed of parks/trails/bike planners from local, regional, state and federal agencies, and nonprofit trail organizations. The working group assisted Metro in developing the trails and greenways component of the Greenspaces Master Plan. Thirty-five trail and greenway corridors are identified in the master plan. ~~(see attached map, adopted by the Metro Council in 1995).~~

Refinement of the trails and greenways component has been ongoing since the Greenspaces Master Plan was adopted in 1992. Citizen involvement ~~also~~ plays an important role in trail planning. For example, the Peninsula Crossing Trail was added to the Regional Trail System in 1993 at the request of residents of North Portland. Many of the trails and greenways segments support local comprehensive plans and/or local parks and trails master plans.

In 1996, Metro commissioned a Rails and Trails Strategic Plan which inventoried rail right-of-ways throughout the region and identified those having trail potential, should abandonment occur. Abandoned rail lines provide outstanding trail opportunities. The Springwater Corridor Trail, for example, was envisioned to link the metropolitan area with Mt. Hood National Forest. ~~,~~ ~~e~~Constructed segments now link S.E. McLoughlin in Portland with~~to~~ the city of Gresham~~town of Boring~~ and provide 16.8 miles of trail, utilized by an estimated 500- 600 thousand people per year.

Public planning and transportation agencies incorporate elements of the Regional Trails Plan into state, regional, and local transportation projects and urban development projects (e.g., Mt. Hood Parkway, Sunrise Corridor, Hwy. 30 Corridor Study; Multnomah County West Hills Study).

Provision of Community and Neighborhood Parks, Open Spaces, Trails and Recreation Programs

Cities and two special districts (i.e., Tualatin Park and Recreation District; North Clackamas Park and Recreation District) in the region are responsible for community and neighborhood parks, open spaces, trails, and recreation programs. ~~In t~~The 1994 City Club of Portland report, Portland Metropolitan Area Parks, assessed and considered a vision for parks in the region. The report concluded that the size and configuration of the current parks and recreation system is inadequate to meet current and future demand. In order to address this perceived inadequacy, the "completion ... of the core system" was envisioned.

In essence, a core system of parks would ensure that a "minimum level of parks and recreation facilities ... be available to all citizens regardless of income or geography in the metro area." The approach was based on assessing local community values and making adjustments to reflect

"separate social goals... held by a specific community." Not surprisingly, neighborhood and community parks were the first element of this system.

The City Club report recommended the provision of parks be coordinated with other basic services including schools, public safety, land use and transportation planning, and watershed management. Citing Portland as an example, the survey concluded that a "multi-generational community center at each middle school" should provide local communities in the region with a place of education, recreation, and congregation.

Local governments and park and recreation districts have been and will continue to be the primary providers of community and neighborhood parks, open space, trails, sports fields, recreation centers and recreation programs. These facilities and programs provide important opportunities for active and passive recreation in closest proximity to where citizens live.

Local governments should be encouraged to prepare park and recreation master plans which provide a framework for community level park and recreation facilities, trails and recreation programs. Master plans should:

- Identify parks deficient areas and include strategies for addressing these deficiencies;
- Integrate local trail systems with the regional trails system;
- Identify opportunities for cooperation and cost efficiencies between communities, schools, and quasi-public organizations such as the YMCA;
- Provide for citizen involvement in the development and implementation of master plans;
- Identify funding strategies and implementation schedules;
- Be responsive to the State Comprehensive Outdoor Recreation Plan (SCORP);
- Complement the Regional System.

Metro should identify and evaluate opportunities to assist local governments and park and recreation districts with development and implementation of master plans. Potential opportunities include:

- Develop a functional plan, in conjunction with local governments which will address needed land use planning for parks, open spaces, natural areas, trails and recreation programs. Land use planning should reflect that locally chosen "levels of service" in terms of parks per population or per acre should be used to guide the need for additional resources;
- Provide mapping and information services through the agency's Data Resources Center to support local planning efforts;
- Provide forums for the exchange of ideas, information, strategies and development of partnerships between providers, schools, and quasi-public organizations;
- Provide funding support by incorporating local parks components in regional funding strategies and continuing the restoration and education grants program;

- Advocate for the identification and implementation of state and federal funding sources which provide financial resources to supplement local investments in parks, open spaces, trails, recreation facilities and programs;
- ~~Ensure that the regional and local park systems are incorporated into comprehensive plans and addressed in planning for urban reserve areas.~~

Participation of Citizens in Planning, Stewardship, Environmental Education and Recreational Activities

> "*What is not understood is not valued, what is not valued will not be protected, what is not protected will be lost.*" Charles Jordan, Portland Bureau of Parks and Recreation.

Public understanding and participation in the planning and protection of the region's parks, natural areas, open spaces, trails, greenways and recreational facilities are the foundation of successful parks and recreation services. Meaningful citizen involvement is fundamental to an effective response to community needs, it results in more responsive management through identification of appropriate priorities, and enhances financial and volunteer support. Metro, local governments, businesses and citizens working together must build a stewardship ethic and provide meaningful opportunities for public participation to assure parks and recreational services meet the needs of the metropolitan region and ensure the protection of natural resources.

As members of the public gain a comprehensive understanding of parks and natural area needs and opportunities, they will become active partners in efforts to determine future planning choices, and conduct periodic public review of local master plans and other related plans. Citizens can provide guidance through forums, participation on advisory committees, and in various other capacities.

Goal 5

In Oregon, local governments carry out planning to protect natural areas consistent with the State Land Use Planning Program. This land use program requires local governments to conform with up to nineteen statewide planning goals. Goal 5, Open Spaces, Scenic and Historic Area and Natural Resources is one of the key goals which can result in tools for protecting urban natural areas at the local level in the metropolitan region. A study, To Save or to Pave; Planning for the Protection of Urban Natural Areas, by the Portland Audubon Society and 1000 Friends of Oregon (1994), analyzed and evaluated the implementation of Goal 5 in the metropolitan region in protecting urban natural resources during the last decade. Some of the important findings from the study are listed below:

- Over three-fourths of local decisions examined allowed degradation of natural and scenic resources.

- Goal 5's rules were site specific and did not protect resources on an ecosystem or landscape level.
- Local governments employed a variety of regulatory and non-regulatory techniques with no overall consistency in an area.
- Goal 5 does not require standardized inventories or methods of data collection. As a result, important areas were omitted from consideration for protection, and inventories did not contain enough information to guide local planning decisions.
- Enforcement of local Goal 5 programs is difficult, inadequate and too reliant on citizen efforts.
- Upland forests are the least protected resource, and are vulnerable to destruction~~being destroyed~~.

Metro has addressed natural resource issues in three policy documents: 1) the Metropolitan Greenspaces Master Plan (1992), 2) the Regional Urban Growth Goals and Objectives (RUGGOs) (1995), and 3) Title 3 of the Urban Growth Management Functional Plan (1996).

The Greenspaces Master Plan, adopted in 1992, through a mapping and public process, identified 57 sites in our metropolitan area that retained significant natural biological characteristics. Seventeen of these 57 sites are in the process of been acquired through the Open Spaces Parks and Streams Bond Measure 26-26. The remaining 40 sites are in private ownership~~property~~, and are being lost to development~~urbanized~~ at the rate of 6 percent per year. These sites are all Goal 5 areas and effective land use regulations under the Goal 5 rule ~~will~~ help protect these regionally significant sites.

Title 3 of the Urban Growth Management Functional Plan (Water Quality and Floodplain Management Conservation) ~~protects~~could set performance standards to protect streams, wetlands and~~,~~ floodplains~~ and steep slopes associated with vegetated corridors along streams~~ by limiting or mitigating the impacts of development activities. Title 3 addresses Goal 6 and 7 and does not currently address Goal 5~~. , because Goal 5's rules were changing when Title 3 was being addressed. However,~~ Title 3 (Section 5 Fish and Wildlife Conservation Area) recommends local governments to address fish and wildlife habitat, but does not mandate any protection of these resources~~for the~~ at this time. Title 3 does, however, require that Metro conduct a regional assessment of regionally significant Goal 5 resources and evaluate the protection of these resources. Based on this analysis, Metro will develop a strategy and action plan to address inadequacies in the ~~regional~~ protection of regional Goal 5 resources. This plan will be carried out by Metro. L~~and l~~ocal jurisdictions may be required to also adopt protective measures through amendments to the Functional Plan.

~~Metro recognizes that addressing Goal 5 will result in protecting fish and wildlife habitat, and balancing it with other economic uses in the metropolitan area. However, Goal 5 will have to be~~

~~a comprehensive process which will include protecting fish and wildlife habitat on a landscape level, standardizing inventory of resources, determining significance of resources, and systematizing land use regulations throughout the metropolitan area. In its 18 month analysis, Metro will propose strategies and an action plan to address the protection of Goal 5 resources in the Metro region.~~

Water Management

Chapter 4 Water

This Chapter is divided into two sections: Part 1, Urban Water Supply and Part 2, Watershed Management and Water Quality.

Part 1 Urban Water Supply

Overview

Clean and sufficient quantities of water are essential to the people of the region, as well as their commerce, agriculture and economic viability. It is not only important, however, to have adequate supply, but that supply must be able to reach where people are living throughout the region. How water is supplied to the region can also have impacts on the natural environment, including whether there is sufficient water for fish and wildlife habitats. This highlights the important linkage between growth management planning and planning for the provision of water supply and its related infrastructure.

This section of the Regional Framework Plan sets out the policies, their background and analysis implications, and the implementation plan and regulations concerning urban water supply and storage.

~~Policy~~Policies (Goals and Objectives)

4.1 General Policy Direction

The Metro Council has communicated to the region's water providers that its main interests in water supply planning and implementation focus on water conservation and the link between land use and water supply. Metro has not assumed any function related to transmission, storage and distribution of drinking water. Based on this, future Metro policies will primarily concentrate on:

- promoting and achieving regional water conservation and demand management goals as defined in the Regional Water Supply Plan;
- promoting the coordination between regional growth management programs and water supply planning;

- promoting the coordination between land use planning and achieving the goals of the Regional Water Supply Plan; and
- setting benchmarks and evaluating achievement of the targets and goals established in the Regional Water Supply Plan in coordination with the region's water providers.

4.2 Process

The regional planning process shall be used to continue coordination with the implementation of the adopted RWSP and any future updates of that plan to ensure that future needs for water supply are appropriately met.

A regional strategy and plan for the Regional Framework Plan element linking demand management, water supply sources and storage shall be developed to address future growth in cooperation with the Regional Water Providers Consortium and the region's water providers.

The regional strategy and plan element shall be based upon the adopted 1996 Regional Water Supply Plan, which contain integrated regional strategies for demand management, new water sources and storage/transmission linkages. Metro shall evaluate its future role in encouraging conservation on a regional basis to promote the efficient use of water resources and develop any necessary regional plans/programs to address Metro's future role in coordination with the region's water providers.

Participants in the RWSP as members of the Regional Water Providers Consortium have endorsed the following policy objectives to guide their cooperative efforts in regional water supply planning. These same policy objectives appear in the RWSP where they are intended to provide guidance for weighing and balancing the strategies contained in the plan and for any future updates of the plan. All Consortium participants have agreed to collaborate and coordinate on regional water supply planning; however, the regional water providers have reserved the power to make their own determinations of how to carry out these policies.

Specific policy directions identified in the RWSP include the following:

4.3 Efficient Use of Water

- Maximize the efficient use of water resources, taking in to account current and emerging conservation opportunities, availability of supplies, practicality, and relative cost-effectiveness of the options.
- Make the best use of available supplies before developing new ones.

4.4 Water Supply Shortages

- Minimize the frequency, magnitude, and duration of water shortages through a variety of methods including development and operation of efficient water supply systems, watershed protection and water conservation.
- Ensure that the frequency, duration and magnitude of shortages can be managed.
- Ensure that decision makers retain the flexibility to select appropriate risk levels for peak event water shortages given applicable future conditions, constraints, and community values.

4.5 Impacts of Catastrophic Events

- Minimize the magnitude, frequency, and duration of service interruptions due to natural or human-caused catastrophes, such as earthquakes, landslides, volcanic eruptions, floods, spills, fires, sabotages, etc.

4.6 Water Quality

- Meet or surpass all current federal and state water quality standards for finished water.
- Utilize sources with the highest raw water quality.
- Maximize the ability to protect water quality in the future, including support for and participation in watershed-protection and pollution-prevention based approaches.
- Maximize the ability to deal with aesthetic factors, such as taste, color, hardness and odor.

4.7 Economic Costs and Cost Equity

- Minimize the economic impact of capital and operating costs of new water resources on customers.
- Ensure the ability to allocate capital and operating costs (e.g., rate impacts) for new water supply, related infrastructure, and conservation water savings, among existing customers, future customers, and other customer groups, proportional to benefits derived by the respective customer group(s).
- Maximize cooperative partnerships to co-sponsor projects and programs that provide mutual and multiple benefits.

4.8 Environmental Stewardship

- Minimize (i.e., avoid, reduce and/or mitigate) the impact of water resource development on the natural and human environments.
- Foster protection of environmental values through water source protection and enhancement efforts, and conservation.

4.9 Growth and Land Use Planning

- Be consistent with Metro's regional growth strategy and local land-use plans.
- Facilitate and promote effective Regional Water Supply Plan implementation through local and regional land use planning and growth management programs.

4.10 Flexibility to Deal with Future Uncertainty

- Maximize the ability to anticipate and respond to unforeseen future events and changes in forecasted trends. All potential water supplies will be kept as potential sources, including the Willamette River.

4.11 Ease of Implementation

- Maximize the ability to address current and future local, state, and federal legislative and regulatory requirements in a timely manner.

4.12 Operational Flexibility

- Maximize operational flexibility to best meet the needs of the region, including the ability to move water around the region and to rely on backup sources as necessary.

Ensure that the plan includes flexible strategies for meeting both sub-regional and regional water demands in the near-term and beyond

Background

Metro's involvement in regional water resource planning extends back to the 1960's and 1970's when Metro's predecessor, the Columbia Regional Area Government (CRAG) compiled water and sewer infrastructure needs, and met federal reporting mandates. This work coincided, in part, with a rapid surge of suburban growth in Oregon dating back to the 1950's. During the decade of the 1960's, residents in the Willamette Valley began to regard higher costs for services

imposed on governments and urban development patterns with concern. Combined with an outspoken and environmentally-minded governor, Tom McCall, the late-1960's direction in Oregon was to protect the state from the "grasping wastrels of the land.". The state established the Oregon Department of Environmental Quality (DEQ) in 1969 to administer and monitor statewide environmental standards associated with existing federal mandates.

In 1973, the Legislature passed Senate Bill 100, calling for the formation of the Land Conservation and Development Commission (LCDC) to monitor compliance of local plans with state goals. State planning goals were written to link concerns about urban development with environmental protection measures. Goal 14 established the concept of urban growth boundaries (UGB) to separate urban from rural lands. The establishment of the UGB was considered not only a tool to reduce land extensive development, but also as a way to help minimize costs of extending public services and facilities, such as water and its transmission piping.

At the national level there was a parallel course of events that led to the of the enactment of the Clean Water Act (CWA) in 1972, and the formation of the Environmental Protection Agency (EPA) to track progress towards the goals of the CWA.

During the early 1970's, CRAG was designated by DEQ as the region's Areawide Water Quality Planning Agency (1974), an effort that culminated in the Metro Council's adoption of the Regional Wastewater Management Plan (1980) and the Regional Stormwater Plan (1982).

The Metro Water Resources Policy Advisory Committee (WRPAC) was formed in the early 1980's to provide technical advice to the Metro Council on the development of Metro's functional plans for areawide wastewater and stormwater management. WRPAC, whose membership consisted of technical staff representing water providers and wastewater managers from around the region, extended the scope of its purview and membership to include matters related to "multi-objective watershed management" and policies and plans related to growth management planning.

Early Plans: Defining Roles and Responsibilities

In 1989, Metro began to evaluate regional water resource needs and to clarify its role, as described in a Water Quality Issues Report (July 1989). The following year, the Metro Council Planning Committee approved the Water Resources Work Plan (1990), which emphasized stormwater management; water quality modeling and participation in other regional water initiatives.

In late 1989 and early 1990, the region's water providers formally organized a Regional Providers Advisory Group and started to discuss future water supply issues. It was agreed that the region was facing future supply shortfalls based on current supplies, use patterns, and growth projections.

Over the next two years, including one summer of record drought (1992), the Portland Water Bureau, in coordination with other providers, sponsored a series of Phase I studies concerning future regional water demands, potential water source options and water conservation opportunities (Water Source Options Study, 1992; Water System Demand Study, 1992; and City of Portland Conservation Study, 1992).

An evaluation of Phase I results concluded that six regionally significant source options to meet population growth forecasts over a 50 year-horizon were worthy of further analysis. A Phase II scope of work was developed that focused on the development of an integrated water supply plan for the region. Twenty-six of the region's water providers signed an intergovernmental agreement in April 1993, to fund and manage the Regional Water Supply Planning Study. In 1994, Metro became the 27th project participant.

More Recent Regional Policies

In assessing how the region's growth should be managed, the Metro Council adopted the Regional Growth Goals and Objectives (RUGGOs). These goals identify both water quality and water quantity issues of regional significance in Metro's growth management planning. The RUGGOs also instruct Metro to work with all relevant jurisdictions to comply with state and federal requirements for drinking water, to sustain beneficial water uses and to accommodate growth.

Another source of regional policy, the 1992 Metro Charter, was approved by the region's voters in November, 1992. The Charter recognized the important linkage between planning for the region's growth and planning for water supply needs, and directed Metro, in its Regional Framework Plan, to address ". . . water sources and storage.."

In response to requirements of the Metro Charter, the Future Vision document was adopted by the Metro Council in 1995. It states that there should be: "...intelligent integration of urban and rural development which seeks to: improve air and water quality..."

The Greenspaces Master Plan called for the protection and enhancement of open space and natural areas, and directly linked their "survival" with water resources planning and management (see also Chapter 4). The Master Plan identified the need to protect and enhance waterways and

floodplains as a strategy to protect and manage parks and open spaces. The plan recognized the value of watershed planning and, further, used watersheds as the basis for ecological planning and protection of resources.

The Region 2040 Growth Concept, adopted by the Metro Council as an ordinance in 1995, addressed land use, transportation, open space and livability for the region. The growth concept relied on a number of key elements, including population projections and projected land use densities and employment assumptions. It also analyzed the different water supply infrastructure needs and implications associated with three growth concepts. (Concepts for Growth, 1994). Metro worked closely with the region's water providers to rank each growth concept and compare the concepts based on various factors related to water supply. This work is summarized in Metro's Water Descriptive Indicators Report (1994) which also identified the relative cost differences between the three growth concepts.

The intent was to ensure that the eventual growth concept adopted by the Metro Council took into full consideration the implications of providing drinking water to future populations. The Region 2040 project and the Regional Water Supply Planning Study clearly identified how growth affects water supply and the need for coordinated planning to meet future water supply demands.

The Metro FY 1994-99 Water Resources Work Plan builds on the successes of the 1990 Water Resources Work Plan and on the water resources policies contained in the RUGGOs, Metro Charter, Metropolitan Greenspaces Master Plan, and Metro's Regional Wastewater and Stormwater Management Plans. These policies identified the water quality and water supply issues of regional concern that Metro should address in its planning functions.

The five-year work plan proposes work elements in the subject areas of water supply and water quality. The work plan sets out to accomplish the following:

- ensure sufficient quantity of surface water and groundwater is available to the region;
- protect and enhance water quality through coordinated growth management planning, emphasizing integrated watershed management, technical assistance and public education;
- adopt water resource elements in the Regional Framework Plan;
- develop a watershed program, including water conservation program and public education and technical materials for the region's water providers;
- recertify the annual wastewater management plan.

Other Region-wide Work

As previously discussed, the scope for the Regional Water Supply Plan came about as a result of the Phase I studies: Water Source Options Study; Water System Demand Study, and City of Portland Conservation Study, all completed in 1992. The Phase I study results pointed to the value of examining issues in a regional context, integrating available technical information and growth projections, and identifying strategies to develop water options for the future. The Regional Water Supply Planning Study was initiated in 1993; Metro formally joined the study in 1994. The final draft of the Regional Water Supply Plan was ~~adopted by resolution~~ endorsed by the Metro Council on November 21, 1996. The~~is~~ resolution endorsing the Regional Water Supply Plan also authorized Metro to join the Regional Water Providers Consortium.

The 27-member Regional Water Providers Consortium, formed at the end of 1996, was created to promote voluntary coordination of individual and collective actions of those parties implementing the Regional Water Supply Plan. In addition, the Consortium's general purposes include the following:

- serve as the central custodian for plan documents, including computer models;
- review and recommend revisions of the Plan, as appropriate;
- provide a forum for the study and discussion of water supply issues of mutual interest which could apply to statewide land use goals, comprehensive plans, regional plans or land use regulations;
- establish an avenue for public participation in water supply issues;
- promote the voluntary coordination of individual and collective actions of Participants implementing the Plan;
- provide a forum for the study and discussion of water supply issues of mutual interest to Participants and to coordinate the responses of Participants to such issues.

The RWSP is intended to provide guidance to each of the individual participants, however, each Participant that endorsed the RWSP and joined the Consortium also remains responsible for determining and adopting appropriate policies~~comprehensive and functional plan provisions~~ as permitted by law. Each regional water provider retains its own decision making powers to plan, construct and operate its own water system.

Metro is not bound by any federal or state regulatory requirements regarding water supply or drinking water quality, because it is not a water provider. Although Metro does not have direct authority over water supply provision or transmission, its land use decisions have significant implications for drinking water quality, quantity and protection of current and future drinking water sources.

The tri-county region has high quality drinking water from numerous surface water and groundwater sources. Future development and expected population increases, however, will place new demands on these resources. The region's water suppliers predict regional mid-range and high-range average annual demand increases of 1.5 percent and 2.1 percent between 1990 and 2050, respectively. Comprehensive regional water supply planning is necessary to meet these future demands. The region's water providers also included low and high range water demand forecasts in their water supply planning process.

Serving future growth will have inherent opportunities and challenges. The more planning is coordinated, the better chance water providers will have to serve future growth.

The 1992 summer drought caused residents to realize that climatic drought cycles are a reality in this region and water conservation must be integrated into how we use water. Potential water shortages due to droughts, increased demands on water consumption due to population increases, and increasing state emphasis on instream water rights all highlight the crucial need for proactive regional planning to meet future demands.

Inappropriate land use activities also have an effect on water supply. Examples of industrial contamination of groundwater used for drinking water are found in the Portland metropolitan region. Land use planning and growth management, therefore, play a significant role in ensuring adequate future water supplies.

From the beginning of the Region 2040 program, it has been recognized that the future location of the Urban Growth Boundary is very important to public agencies and water providers. These agencies and providers plan for water facilities that have useful lifetimes of 50 years or more and they need to know where they will be expected to provide these services.

As a result of this need for coordinated planning, there has been close coordination between the Region 2040 program and the Regional Water Supply Planning Study. The Region 2040 and concepts for growth studies relied on the region's water providers to provide technical expertise and best professional judgment in evaluating the associated implications and costs.

Now that Metro has endorsed the 1996 Regional Water Supply Plan and will be participating in the Regional Water Providers Consortium, there are several tasks on which WRPAC must make recommendations and, ultimately, the Metro Council may consider taking action. These could include:

- identify a strategy for coordination with the water providers and the Regional Water Providers Consortium to foster the implementation of the Regional Water Supply Plan (RWSP) and Metro Regional Framework Plan objectives;

- identify what activities Metro will carry out to implement the Regional Water Supply Plan;
- determine the relationship between the implementation of the Regional Water Supply Plan and achievement of goals in this chapter.

Metro has endorsed the Regional Water Supply Plan and the Metro Council has stated that this plan will be the basis for future Metro water supply planning and coordination throughout the Region. There is no immediate need for Metro to adopt regulations or codes to implement the RWSP. If such regulations and codes are considered in the future they will be adopted according to procedures specified by Section 7 of the Charter. Consistency with the RWSP shall also be considered in the adoption of any such regulations or codes. However, the land use planning aspects of water supply and storage decision making within the region will be bound by the growth management policies of Metro and the adopted Framework Plan, to the extent required by any adopted functional plan.

Accordingly as the regional water providers and the Regional Water Providers Consortium work toward implementation of the RWSP, the following actions will be needed for coordination to ensure that the Framework Plan and the RWSP are compatible:

- identify the future resource needs of the region for municipal and industrial water supply;
- identify the transmission and storage needs and capabilities for water supply to accommodate future growth;
- identify water conservation technologies, practices and incentives for demand management as part of the regional water supply planning activities;
- identify water supply and storage policies based on the results of the RWSP that provide for the development of new sources, efficient transfer and storage of water, including water conservation strategies, which allow for the efficient and economical use of water to meet future growth.

Additionally, Metro should work cooperatively with the water providers to:

- determine how the Regional Water Supply Plan will be updated in relation to the Regional Framework Plan chapter dealing with water supply and storage;
- determine how the activities of the Regional Water Supply Plan will be monitored for compliance with Regional Framework Plan water supply element;
- determine how Metro will monitor the implementation of the 2040 growth concept for implications to water supply issues (e.g., ensure that future land use practices do not contaminate groundwater or degrade run-of- river sources of drinking water).

Part 2 Watershed Management and Water Quality

Overview

Watershed management and clean water are essential as habitat for fish and wildlife. They are also keys to a region's livability and future growth, as well as to ensure the quality of drinking water. The provisions of the 1996 reauthorization of the Federal Safe Drinking Water Act calls for source water protection activities which will be implemented by the Oregon Health Division in concert with DEQ. The interconnected web of rivers and streams, which have played an important role in the region's history and economic success are also important to the commerce, agriculture and economic vitality of the region.

Tremendous advances have been made in the last 25 years to improve regional water quality and protect natural resources and open space. Future growth and development, however, will place increasing demands on the region's natural resources and affect water quality. Metro recognizes this inherent conflict and strives to implement policies which protect natural resources and water quality while the region grows. This conflict, however, will need to be continually monitored and new challenges met.

Watershed management is a planning tool which recognizes the dynamic connectivity between different components of a watershed. It identifies land use and management activities which protect the functions of natural systems while achieving desired land use patterns.

Metro recognizes that citizens are concerned about protecting resources and maintaining open space to enhance the region's livability. It acknowledges the importance of different components of a watershed and recommends that these lands be removed from the inventory of urban land available for development and that some are acquired for purchase as parks and open space. Finally, it recommends development of positive incentives and regulations to protect these critical natural resources.

~~Policy~~Policies (Goals and Objectives)

These policies strive to address the inherent conflict between the function of natural systems and the effects of growth and development in the region. In order to meet the challenge of formulating policy in coordination with local jurisdictions and citizens, it is essential to

acknowledge the dynamic process whereby such policies will continue to be developed and refined.

4.13 Overall Watershed Management

Planning and management of water resources should be coordinated in order to improve the quality and provide sufficient quantity of surface water and groundwater available to the region.

Metro will develop a long-term regional strategy for comprehensive water resource management, created in partnership with the jurisdictions and agencies charged with planning and managing groundwater resources and aquatic habitats. The regional strategy shall meet state and federal water quality standards and complement, but not duplicate, local integrated watershed plans. It shall:

- manage watersheds to protect, restore and ensure to the maximum extent practicable the integrity of streams, wetlands and floodplains, and their multiple biological, physical and social values;
- comply with state and federal water quality requirements;
- protect designated beneficial water uses;
- promote multi-objective management of the region's watershed to the maximum extent practicable; and
- encourage the use of techniques relying on natural processes to address flood control, stormwater management, abnormally high winter and low summer stream flows and nonpoint pollution reduction. (Note: Even though these techniques are encouraged, emphasis is still placed on maintaining intact naturally functioning systems, i.e., wetlands, riparian and floodplain. These natural systems should not be used as stormwater treatment facilities.)

4.14 Water Quality Goals

Metro should protect and enhance the water quality of the region by:

- establishing vegetative corridors along streams;
- encouraging urban development which minimize soil erosion;
- implementing best management practices (BMPs);
- maintain vegetation buffers along riparian areas.

4.15 Stormwater Management

Management of stormwater as the region grows is crucial to the protection of urban water resources. Stormwater is both a valuable resource and a management problem. As a resource, it

is potentially beneficial to critical fish and wildlife habitat, recharges groundwater, and may contribute to cooler water to urban waterways during hotter, low flow summer months. As a management challenge, it can add to flooding, destroy fish and wildlife habitat, and pollute groundwater and surface waters. Metro shall encourage the following regional policies for stormwater management:

- ensure that as development and redevelopment occurs that increases in stormwater runoff is avoided to the maximum extent practicable;
- stormwater should be managed as close as practicable to the site at which development or redevelopment occurs, in a manner which avoids negative quality and quantity impacts on adjacent streams, wetlands, groundwater and other water bodies;
- to the maximum extent practicable, the quality of stormwater leaving a site after development has occurred should be equal to or better than the quality of stormwater leaving a site prior to development;
- to the maximum extent practicable, the quantity of stormwater leaving a site after development has occurred should be equal to or less than the quantity of stormwater leaving a site prior to development. (Note: The flow rate of run-off is important and should also be considered);
- require integration of local and regional transportation projects to ensure issues of quality and quantity are addressed during design of transportation facilities.

4.16 Urban Planning and Natural Systems

Urban planning within the region should:

- promote the incorporation of natural watershed systems into future planning and design processes and balance their contributions to environmental improvement with recreational and other uses, and
- address the interrelatedness of greenspace protection, land use, transportation and water resources management issues.

4.17 Water Quality Protection

The water quality of the region should be protected and restored by:

- implementing watershed wide planning;
- implementing erosion control practices;
- promoting the protection of natural areas along waterways and encourage continuous improvement of water quantity and quality through liaison with agencies that influence changes along streams and rivers in the metropolitan area.

4.18 Fish and Wildlife Habitat Conservation Area

Metro should establish standards to conserve, protect, and enhance fish and wildlife habitat within the fish and wildlife habitat conservation areas to be identified on the fish and wildlife habitat map produced as a result of carrying out Section 5 of Title 3 work by determining performance standards and promoting coordination of regional watershed planning.

Background

Federal Mandates

The Clean Water Act (1972) was established amid a growing tide of environmentalism that swept over the United States concerning the extent of water pollution in our rivers, lakes and oceans and the public's demand that these waters be cleaned up and protected. The goal of the Clean Water Act (CWA) was to ensure clean water for beneficial uses, such as drinking, swimming, fishing and to protect fish and wildlife.

This federally-mandated law created a system regulating direct and indirect discharges of pollutants in the country's waters (the National Pollutant Discharge Elimination System, or NPDES) that heralded a fundamental shift in approach to dealing with water quality issues. The act introduced two types of regulatory controls: water quality-based and technology-based effluent standards. It also introduced areawide water quality planning and recognized the link between land use and water quality.

Under provisions of the act, the Environmental Protection Agency was formed to administer the federal program. The Department of Environmental Quality (DEQ) took on the role of the state agency responsible for protecting water quality in Oregon.

The basis for DEQ's monitoring of Oregon's water quality program is the preparation of a routine water quality report describing and documenting monitoring and sampling programs at established river and estuary stations. These reports, developed by DEQ, are submitted to the EPA every two years, as required in Section 305(b) of the Clean Water Act. In this fashion, EPA has been able to compile a national summary of water quality conditions for the Congress in order to track progress on the goals of the CWA.

State Requirements

The DEQ, under guidance from the state Environmental Quality Commission, is the agency responsible for administering environmental laws in Oregon. The water quality program

managed by DEQ is based on the protection of recognized "beneficial uses," such as water supply, fisheries, aquatic life and wildlife, recreation, and navigation. Water quality criteria, designed to protect these "beneficial uses," provide the basis for DEQ's evaluation of the status of water quality.

The Oregon Legislature declared the following to be beneficial uses for the waters of Oregon: public water supplies, propagation of wildlife, fish and aquatic life, and domestic, agricultural, industrial, municipal, recreational, and other legitimate beneficial uses of such waters.

The Clean Water Act, Section 303(d) requires each state to identify those waters for which existing required pollution controls are not stringent enough to achieve that state's water quality standards. As a result of this requirement, in 1996, DEQ published its 303(d) list of Water Quality Limited Waterbodies which includes many stream segments in the metropolitan region.

Another set of state requirements come form the Oregon Statewide Planning Goals, adopted by the Legislature in 1969 through the passage of Senate Bill 100 in 1974, address water quality and human health and safety in the context of land use planning. Goal 5 addresses open spaces, scenic and historic areas, and natural resources; Goal 6 pertains to air, water and land use resources and Goal 7 to areas subject to natural disasters and hazards.

Goal 5 is intended to protect natural resources to "...promote a healthy environment and natural landscape that contributes to Oregon's livability." Comprehensive plans of cities and counties are to demonstrate consistency with this goal, as are such Metro policies as its regional goals and objectives and this Regional Framework Plan.

Goal 6 objective is "to maintain and improve the quality of the air, water and land resources of the state." The goal states that local comprehensive land use plans should provide for the maintenance and improvement of air, land and water resources, including the carrying capacity of such resources of the planning area. The goal also states that, with regard to river basins, pollutant discharges should (1) not exceed the carrying capacity of such resources, consider long range needs; (2) degrade such resources; or (3) threaten the availability of such resources.

The objective of Goal 7 is "to protect life and property from natural disasters and hazards." This goal strives to ensure that development will not be located in areas known to be prone to natural disasters and hazards without appropriate safeguards. Areas that are known to result in death or to endanger development include such things as stream flooding, groundwater contamination, erosion and deposition, landslides, earthquakes and weak foundation soils. Goals 6 and 7 are closely linked through the connection between the carrying capacity of land and water resources,

and natural disasters and hazards associated with exceeding the carrying capacity of such resources.

Regarding agricultural water quality, Senate Bill 1010, passed in the 1993 legislative session, provided the Oregon Department of Agriculture (ODA) with the authority to develop, implement and enforce agricultural water quality management programs where required by state or federal law (e.g., TMDL basins, groundwater management areas, coastal zone management area). In 1995, the Legislature passed SB 502, which gave ODA exclusive authority to develop any program or rules that directly regulate farming practices for the purposes of protecting water quality.

With this authority, ODA established the Water Quality Program (SB 1010 Program), which provides a structure through which a local water quality management plan can be developed and implemented to prevent and control water pollution resulting from agricultural activities and soil erosion. SB 1010 directs ODA to work with farmers and ranchers by developing Agricultural Water Quality Management Area Plans for listed watersheds. The plans identify problems in the watershed that need to be addressed and outline ways to correct those problems. The intent of SB 1010 is to provide a role for ODA to assist producers in addressing those agricultural activities in watershed known to have the most problems with water quality, to prevent pollution problems wherever possible, and to alleviate any existing problems.

In addition, with the enabling legislation that created Metro in the late 1970's, the state statutes were amended to include a chapter on metropolitan service districts. These statutes provide the authority for Metro to:

> "Define and apply a planning procedure which identifies and designated areas and activities having significant impact upon the orderly and responsible development of the metropolitan area, including, but not limited to, impact on:...water quality..."
>
> Further, it states that Metro may "Prepare and adopt functional plans for those areas designated under subsection (1) of this section to control metropolitan areas impact on air and water quality...."

Regional policies

Metro's involvement in regional water resource planning dates back to the 1970s when CRAG compiled reports documenting water and sewer infrastructure needs. These efforts culminated in the Metro Council adoption of the Regional Wastewater Management Plan (1980), which provides for regional coordination and staging for construction of wastewater treatment facilities, and the Regional Stormwater Management Plan (1982), which identifies eight major watersheds in the region and policies to reduce soil erosion and protect streams from degradation.

In 1989, Metro published its Water Quality Issues Report, followed by an Areawide Water Quality Report (1992) which identified the following water quality issues of regional concern: stormwater management, water quality- limited streams, wetlands and groundwater. The 1992 report also considered Metro's role in addressing the region's water quality problems, and suggested that Metro take on the following responsibilities: land use planning, watershed planning and technical assistance to local governments in addressing regional water quality issues.

The Regional Growth Goals and Objectives (RUGGOs), adopted by the Metro Council in 1991, and most recently revised in 1995, and the Metro Charter, adopted in 1992, identified the specific components Metro must address. In addition to water source and storage planning, Metro has "planning responsibilities mandated by state law" and "other growth management and land use planning matters which the Council... determines are of metropolitan concern and will benefit from regional planning."

In response to the charter mandate, a Future Vision was completed. This document states, in part:

> "Our place sits at the confluence of great rivers – the Columbia...Willamette and its tributaries..." To achieve this vision:
>
> ...Manage watersheds to protect, restore and maintain the integrity of streams, wetlands and floodplains, and their multiple biological, physical and social values."

In addition, as part of implementation of the Growth Concept, Metro is developing plans in relation to floodplains, stream corridors, wetlands and steep slopes (see Appendices) in an effort to protect the function and values of these resources, protect human health and safety, and maintain or enhance the quality of life in the region.

Analysis

Water Quality

Water quality has declined throughout the Portland metropolitan region as development has occurred. Over 213 miles of streams and rivers within the Metro boundary have been cited by the State as not meeting current water quality standards. Pollutants include dioxin, sediment, or fecal coliform and such conditions as lack of dissolved oxygen or high temperatures which greatly reduce its ability to support fish and wildlife. The State has indicated that more miles of streams and rivers within the Metro boundary also may not meet State standards, but insufficient monitoring equipment is available to confirm this.

Degraded water quality has reduced the beneficial uses of the region's streams, rivers and wetlands. Uses that depend on clean surface waters include domestic, fish life, industrial, irrigation, mining, municipal, pollution abatement, recreation, stockwater and wildlife uses. Clean water is essential to the quality of life in the region and the protection and enhancement of this resource is essential to achieving Metro's regional goals. As noted in a recent paper, "As long as the region is able to provide a quality of life that many people find attractive, it should continue to prosper". (Economic Well-Being and Environmental Protection in the Pacific Northwest, 1995, T.M. Power)

Riparian and Wetland Areas

The natural areas along rivers and streams as well as wetlands and the actual bodies of water provide fish and wildlife habitat. That is, space for spawning, nesting and rearing; feeding; migrating and other life cycle needs of the region's fauna is provided by these areas. Protection and management of these resource areas will ensure that habitat is available for current and future fish and wildlife populations which may depend on these areas for some or all stages in their life cycles. For humankind, these areas provide a place for active recreation and scenic views and vistas which can help maintain a region's quality of life even as the region grows.

These areas can be protected by avoiding, limiting and managing development which adversely impact fish and wildlife habitat. These actions need not reduce the development potential of a property, although, in some circumstances, public acquisition or transfer of development rights may be the only equitable solution to properties wholly within such areas. A project alternatives analysis would be an effective tool under specific circumstances. In addition, establishing performance standards and promoting coordination by Metro of regional urban watersheds would help to address the issue.

Impacts of urbanization on watersheds and biodiversity

Urban runoff, or "stormwater," has garnered concern focused on flooding and its potential threat to property and human life in rapidly developing areas of the region. More recently, however, concern about stormwater has focused on affects to the water quality of receiving streams. Based on national water quality studies in urban areas, it is clear that past efforts to improve water quality problems have not achieved set goals. Nonpoint sources of pollution are the principal problem behind the failure of rivers and other water bodies to support their designated uses. Consequently, control of nonpoint pollution is a new national focus as it becomes increasingly clear that water quality will not improve if nonpoint sources remain uncontrolled. For example, analysis of the literature (King County Surface Water Report, Johnson, 1992)

shows that the wider the riparian buffer, the more impacts that can be addressed. The narrowest buffer widths can control nutrients, water temperature and stormwater runoff, while much wider buffers are needed to control for fecal coliform (primarily from nonperforming septic tanks in urban areas or livestock in rural areas) and sediment control (from soil erosion). The widest buffers are needed if wildlife habitat is to be maintained. In addition, urban development design can greatly impact the amount, if not quality of stormwater. In an analysis of potential strategies in the Olympia, Washington area, reduction of commercial parking was the most effective strategy assessed followed by reduction of commercial, industrial and multifamily roof areas, followed by reductions in public street widths.

Within this region, discharges from combined sewer overflows (CSOs) and storm sewers are also a major public health concern. As do numerous cities across the country, the City of Portland violates standards due to CSO discharges into rivers at times of high stormwater runoff. Extensive reconstruction of the system is now under way. In addition, many storm sewers receive illicit discharges. These range from individuals dumping used motor oil into storm drains, to spills from transportation accidents, to improper commercial disposal of large amounts of unwanted liquid materials. Control of these discharges will greatly reduce stormwater pollution and improve water quality. Public education, source reduction and monitoring are essential to successful abatement or prevention of pollution.

Watershed-based management and planning

Biodiversity is also impacted by urbanization. Habitat is lost or becomes so fragmented that species survival and mobility is threatened. Wildlife movement corridors have been designed as a result of the Metropolitan Greenspaces Master Plan throughout the region to facilitate movement of animals and to connect isolated parks.

The impacts of urbanization on watersheds and biodiversity has been researched and documented within the metropolitan region. Our local streams, tributaries of the Willamette, Columbia, Clackamas, Sandy and Tualatin rivers, have suffered from the region's dramatic growth. The Columbia Slough and the Tualatin River have been designated water-quality limited by DEQ. Increasing urbanization and poor land use practices threaten the water quality of surface and groundwater in the metropolitan area. Water quality has diminished, groundwater has become contaminated, water supplies are threatened, water recreation is restricted in certain areas during rain events, and fish and wildlife habitat has been degraded.

Watershed analyses are being carried out in selected locations in the Portland metropolitan region. Though these analyses are primarily used by water resource managers, the goal is that

they would also guide land use and transportation planning to foster a more comprehensive and integrated approach to land use planning.

Clearly, a regional comprehensive, integrated and multi-disciplinary watershed-based approach is needed to address these complex and far-reaching impacts. This will require a "big picture" perspective at the landscape scale where protection, restoration, enhancement, planning and implementation of urban projects must take natural resources and biodiversity into consideration.

The Growth Concept places strong emphasis on the protection and management of natural resources within the Urban Growth Boundary and surrounding the metropolitan region. It acknowledges public concern and appreciation for environmental quality, open space and the scenic beauty provided by the region's natural resources. The Growth Concept identifies key natural features within the landscape for protection as greenspaces. These areas may be used as parks, open spaces, protected areas (such as wetlands and floodplains), or low-density residential development. Many of these areas have been set aside as park areas or may be acquired by Metro or local jurisdictions through implementation of the Metropolitan Greenspaces Master Plan. The Growth Concept identifies three strategies for their protection: 1) remove these lands from the inventory of urban land available for development; 2) these natural areas will receive high priority for purchase as parks and open space; and finally, 3) regulations could be developed to protect these critical natural areas that would not conflict with housing and economic goals. Transfer of development rights is one strategy or "tool" available to local governments to achieve this goal. Other areas will be protected through local zoning changes as a result of implementation of the Growth Concept (see Appendix 1a).

The Metro Council has adopted regional stream protection and floodplain management performance standards. (see Appendix 1a). This includes a model ordinance and maps of the protection areas within the region. Policies for implementation and regulation of regional watershed planning and regional Goal 5 planning has yet to be developed (see Appendix 1f).

In addition, Metro must develop, test and monitor innovative ways to manage land use and protect receiving streams within the context of the Growth Concept. There must be encouragement to implement and monitor projects that use best management practices, innovate urban site design and landscaping to eliminate, reduce and manage nonpoint source pollution, manage stormwater, and prevent stream and floodplain degradation within the context of the Growth Concept land use densities. There is a need for documentation and dissemination of information about best management practices and nonpoint source pollution control.

Water quality protection and management can be achieved by managing how and where development and land use activities occur within the region. There are several ways in which this can be achieved. First, riparian areas along the region's rivers and streams can be protected from development by establishing riparian protection zones. Development and land use activities can be prohibited, limited or managed within these zones to protect riparian functions and values. Second, soil disturbing activities and soil erosion can be eliminated, managed or minimized in order to reduce sediment entering receiving streams. This can be achieved through the identification, use and enforcement of specific best management practices when development occurs. Third, vegetation within this zone can be maintained and protected and where removal is unavoidable, vegetation can be re-established in a timely manner to maintain the functions and values of the riparian corridor in order to protect water quality.

Finally, partnerships can be encouraged between jurisdictions, developers and "friends" groups to test innovative water pollution control techniques.

Federal and State implications

There are several federal and state initiatives that will influence how Metro and local jurisdictions plan and manage water resources and watersheds within our region. At the federal level there is the potential listing of fish and wildlife species through the Endangered Species Act which will potentially affect activities on selected rivers and streams within the Metro region. For example, the steelhead trout is currently nominated for listing on the Clackamas and Sandy rivers within our region. A decision on any potential federal action is expected in mid-1997. At the state level, the Oregon Plan describes the voluntary efforts that numerous stakeholders and local jurisdictions will carry out to restore coastal salmon and steelhead populations and fisheries to productive and sustainable levels.

Additional federal implications for our region include revisions and reauthorization of the Clean Water Act and any expansion of the National Pollutant Discharge Elimination System (NPDES) program to include smaller cities in the region. Changes to federally-mandated programs will have a ripple effect on state water quality standards and regional water resources policies and planning. Any revisions to or expansion of such programs will require coordination by regional partners to respond accordingly.

Other Outstanding Issues

There are other issues that will need to be addressed in the future, including:

- impervious surface standards to minimize the impact of stormwater run-off in watersheds;

- regional watershed management with particular emphasis on the linkage between riparian areas and upland areas;
- a plan to create a regional fish and wildlife conservation area management and implementation strategy.

Critical technical work that remains includes:

- identification of the future resource needs for designated beneficial uses of water resources that recognizes the multiple values of rural and urban watersheds;
- monitoring of regional water quality and quantity trends vis-à-vis beneficial use standards adopted by federal, state, regional and local governments for specific water resources important to the region, and using the results to change water planning activities to accomplish the watershed management and regional water quality objectives;
- assessment of integration methods for urban and rural watershed management in coordination with local water quality agencies;

evaluation of the cost-effectiveness of alternative water resource management practices, including conservation.

Natural Hazards

Chapter 5 Regional Natural Hazards

Overview

Natural hazards provide a "reality check" to growth in any region, a yardstick against which we can ask, "Has the region's future been built on solid ground?"

In the past few years, natural disasters have impacted many local communities. Two examples include the Scott Mills earthquake in 1993, and the 1996 floods. For the three-county area, the cost of flooding and landslides from the February, 1996 event has been estimated at almost $60 million – some 200 households were within the area of inundation. Figure 5.1 depicts the frequency of flooding in the region. Reminders of the power that natural hazards can unleash on communities include distant more powerful events, such as the Loma Prieta (1989) and Northridge (1994) earthquakes in California; and the widespread Midwest floods in 1993. We know that major disaster can strike this region.

Flood Date	Flood Inundation Level[1] Willamette at Portland	Flood Inundation Level Columbia at Vancouver
February 1996	30.2 ft.	28.8 ft.
December 1977	17.6 ft.	Not available
January 1974	25.7 ft.	25.0 ft.
December 1964	29.8 ft.	29.5 ft.
June 1956	26.4 ft.	26.8 ft.
May 1951	Not available	21.5 ft.
June 1950	Not available	25.1 ft.
June 1948	31.6 ft.	32.8 ft.
January 1943	21.8 ft.	Not available
June 1894	35.1 ft.	36.0 ft.

Figure 5.1 Columbia and Willamette River Flooding[2]

Hazard mitigation planning, part of a new comprehensive approach to emergency management, can be instrumental in reducing the region's vulnerability to disasters. Hazard mitigation requires a partnership between emergency managers who are experts in emergency response needs, and experts in other professions such as land use planning, engineering and economics.

[1] River heights are measured by National Geodetic Vertical Datum
[2] Table information from the City of Portland Hazard Mitigation Plan for the February 1996 flood

Growth expected to occur as estimated in Metro population growth forecasts will require Metro, local governments and private partners to balance many policy considerations. Failure to address natural hazard management issues in the community planning and development stages can lead to amplification of future losses.

This chapter of the Regional Framework Plan outlines the background, analysis and policies concerning regional natural hazard mitigation planning. It addresses known regional natural hazards, and offers policy guidance for a comprehensive planning process that will help minimize the risks associated with such hazards to communities.

Policies (Goals and Objectives)

Policies concerning hazard mitigation, emergency preparedness, disaster response and recovery should be adopted and implemented. Policies addressing natural hazards mitigation and response are as follows:

5.1 Earthquake Hazard Mitigation Measures

The risk of loss or damage from an earthquake depends on: 1) the presence of seismically-hazardous land (land subject to failure or strong effects from an earthquake); and, 2) land use (structures by type and occupancy or use characteristics).

5.1.1 Metro will use the relative earthquake hazard maps for a variety of planning purposes, including:

- Urban Growth Boundary selection;
- public facility plans;
- transportation planning;
- solid waste management plans;
- natural hazard mitigation programs;
- parks and greenspaces planning.

5.1.2 Metro will encourage local governments to utilize the relative earthquake hazard maps in developed and undeveloped areas as they undertake planning actions, including:

- comprehensive land use plans updates;
- redevelopment plans updates;
- subdivision reviews;
- zoning;
- infrastructure plans updates;
- siting of new public facilities;

- siting of new public and private utility facilities;
- public and private facility emergency plan updates;
- developing retrofit and other mitigation programs;
- emergency response planning.

In planning for seismic hazards, land use classifications were identified as shown in Figure 5.2, grouping land uses according to a common tolerance for risk. Representatives of the public and private sectors participated through the Metro Advisory Committee on Earthquake Damages (MACMED) in reviewing and approving the land use groups in this figure. Each land use classification is comprised of uses recommended as having roughly equivalent ability to withstand earthquake damage. Metro encourages local governments to consider these land use classifications for seismic hazard mitigation planning and actions. Many land uses could be placed into more than one category. The table begins with land uses that should be most protected from earthquake damage and ending with land uses that need minimal protection.

Land Uses with Potentially Catastrophic Consequences if Damaged

- Large dams
- Nuclear facilities
- Facilities using/ storing large quantities of hazardous materials (defined by Oregon State law)

High-Occupancy Land Uses with Involuntary or Dependent Occupants

- Day care centers < 250 children
- Day care centers > 250 children
- Schools K-12 <300 students
- Schools K-12 > 300 students
- Convalescent homes < 50 persons
- Convalescent homes > 50 persons
- Jails and retention facilities

Land Uses Essential for Emergency Response

- Fire and police stations
- Garages for emergency vehicles
- Water tanks
- Structures housing fire suppressants
- Government communications centers
- Emergency response centers
- Hospitals
- Medical buildings with surgical services

Land Uses Critical to the Functioning of the Metro Region

- Large power plants
- Power intertie
- Sewage treatment plants
- Water storage/treatment facilities
- Regional highways, bridges & tunnels
- Regional rail lines
- Port facilities
- Major communications facilities
- Telephone exchanges
- Radio and TV stations

Land Uses with High-Occupancy

- Buildings > 10 stories
- Public & private colleges < 500 occupants
- Public & private colleges > 500 occupants
- Public assembly places w/ > 300 capacity
- Hotels & motels > 50 rooms >60,000 sq. ft. > 10 stories
- Major industries & employers
- Apartments > 25 units
- Buildings w/ > 150 employees

Land Uses with Important Local Impacts if Damaged

- Facilities using/storing small quantities of hazardous materials
- Small dams that could cause flooding
- Gas stations
- Highways, streets & bridges
- Utility lines, substations, & gas mains
- Water & sewer mains
- Industries & businesses important to economy
- Health care clinics
- Co-generation plants

Land Uses with Moderate-Occupancy

- Buildings w/4 to 10 stories
- Apartments 9 to 25 units
- Buildings w/ 50 to 150 employees
- Buildings w/ 50 to 150 employees >60,000 sq. ft. >10 stories
- Public assembly places: 50 to 300 capacity
- Hotels & motels <50 rooms <60,000 sq. ft. <10 stories

Land Uses with Low-Occupancy

- Apartments w/ 2 to 8 units
- Buildings w/ < 50 employees
- Buildings w/ 1 to 3 stories
- Public assembly places w/ < 50 capacity
- Single-family houses in a subdivision
- Single-family houses
- Mobile homes in a subdivision
- Mobile homes

Figure 5.2 Land Uses Grouped By Seismic Risk

Adoption or use of earthquake hazard maps and land use mitigation goals and policies will not, however, provide any "bright line" for determining risks, given the current level of scientific knowledge. MACMED suggested one method of determining which land uses should require site-specific studies and which land uses should not require such studies. The MACMED table is attached in the Appendices.

5.1.3 Metro will encourage local governments to use the table in the Appendices to set requirements for where site-specific seismic hazard evaluation is needed .

5.2 Flood Hazard Mitigation Measures

The surest and safest flood hazard mitigation measure is to build outside areas that can be flooded. However, the FEMA designated floodplains have been shown to be insufficient in protecting property from much less than catastrophic events. Many areas that were outside the FEMA 100 year floodplain flooded in 1996. Acquisition of vulnerable property and relocation of structures can convert a flood hazard area into a community asset. Title 3 of the Urban Growth Management Functional Plan (see Appendices) will restrict development in many of these flood hazard areas.

5.2.1 Metro will collaborate with federal agencies and local governments in using the February 1996 flood elevations and other relevant data to update the existing 100-year floodplain map.

5.2.2 Metro will encourage local governments to implement approaches for mitigating flood hazards such as the following:

- acquisition, relocation or flood proofing of vulnerable facilities;
- changing local development ordinances related to height requirement above base flood elevation;
- allowing cluster or planned unit development that keep buildings out of floodplains;
- overlay zoning that sets public health, safety or welfare requirements;
- subdivision development requirements for locating public utilities and facilities (such as sewer and water systems) to minimize flood damage;
- construction of levees and flood walls to mitigate flood hazards, particularly in densely developed urban areas, but should only be utilized when potential upstream and downstream damage is expected to be minimal;
- plans to leverage federal, state and local disaster assistance and hazard mitigation funds that may become available following a flood event;
- long-term capital improvement plans should be prepared and include provisions to elevate above the floodplain essential buildings for public health, safety and welfare services;
- flood threat recognition and/or warning systems should be investigated for cost-effectiveness.

5.3 Landslide Hazard Mitigation Measures

Exposure to landslide hazard is a function of site geology , type of construction, surrounding development and events that trigger landslides. The effect of landslides on public safety, welfare and recovery cost can be minimized by measures that focus on mitigation. Land use policies and regulations

are often the most effective measures for mitigating or minimizing exposure of lives and property to landslides.

5.3.1 Metro will encourage local governments to adopt landslide mitigation measures including:

- Logging regulations on steep slopes
- Landscape requirements
- Drainage controls
- Pre-development geotechnical studies

5.3.2 Metro will encourage local governments to limit development in the areas of greatest landslide hazard, except where development contributes to mitigation of the hazard. Such development should include appropriate safeguards and facilitate disaster response in the event it becomes necessary.

5.3.3 Metro will encourage local governments to investigate and take part in Federal Emergency Management Agency "mudslide" and "mudflow" insurance programs through the National Flood Insurance Program.

5.4 Volcanic Hazard Mitigation Measures

Mitigation of volcanic eruptive events is particularly relevant to development of the Clackamas River valley and Sandy River valley. Those areas are subject to periodic mudflows and pyroclastic flows from Mount Hood. Mudflow and flooding events are secondary to volcanism and should be addressed under the mudflow/mudslide and flooding policies.

5.4.1 Metro will collaborate with federal, state and local agencies to evaluate the regional risks of pyroclastic events, and encourage local governments to adopt appropriate hazard mitigation measures.

5.5 Wildland-Urban Interface Fire Mitigation Measures

The wildland-urban interface is defined as the area where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuel. In certain weather conditions, small fires in the interface areas can grow quickly to create extremely dangerous firestorms that are virtually impossible to control.

5.5.1 Metro will collaborate with federal, state and local agencies to evaluate the regional risks of wildland-urban interface fires, and encourage state and local governments to adopt appropriate hazard mitigation measures which may include:

- Collecting data related to fuel load and mapping vulnerable areas;
- Identifying areas of steep slopes with limited year-around water availability;
- Regulation of highly flammable material on structures, for example wooden roof shingles;
- Adequate roadway requirements to assure response by fire protection agencies;
- Adequate placement of fire suppression water hydrants;
- Landscaping regulation to improve fire resistance.

5.6 Severe Weather Hazard Mitigation Measures

Severe weather events may include windstorm, winter weather (snow, ice, prolonged cold), thunderstorms, tornadoes, drought, prolonged extreme heat and other weather events that disrupt vital regional systems.

5.6.1 Metro will collaborate with federal, state and local agencies to evaluate the regional risks of severe weather events, and encourage local governments and private organizations to adopt appropriate hazard mitigation measures which may include:

- Encouraging replanting with wind-resistant trees near power lines and other sensitive facilities.
- Incentives to retain larger stands of trees in newly developed areas, rather than preserve widely separated trees which are more vulnerable to wind fall.
- Incentives for drought-resistant landscaping.
- Improving public understanding of severe weather warnings and improving implementation of protective actions by governments, businesses and individuals.
- Encouraging vegetation management programs by utilities and local jurisdictions to reduce potential damages from the effects of severe weather events.

5.7 Biological Hazard Mitigation Measures

As development occurs around wetlands, greenbelts and open spaces, and as natural areas are set aside for environmental protection in previously developed areas, contact between humans and wildlife and insect populations is likely to increase. Death or injury to humans and loss of habitat for species can result from this contact.

5.7.1 Metro will collaborate with federal, state and local agencies to evaluate the regional risks of biological hazards, and encourage local governments to adopt appropriate hazard mitigation measures which may include:

- Support for existing insect and vector control programs to reduce the population of mosquitoes, flies, rats, etc., for disease prevention.
- Regulatory structure to create or preserve habitat for appropriate urban wildlife, while discouraging inappropriate urban wildlife such as large predators.

5.8 Other Hazard Mitigation Measures

5.8.1 Metro will collaborate with federal, state and local agencies to evaluate the regional risks of other natural hazards, and encourage local governments to adopt appropriate hazard mitigation measures.

5.9 Natural Disaster Response Coordination

Natural disasters such as a major earthquake will cause significant loss of life, injury and property damage. While vulnerability to hazards cannot be eliminated, implementation of the hazard mitigation policies described in this chapter will reduce human misery and property loss following a natural disaster. Metro has played an important role in assisting local emergency management agencies with disaster planning related to regional functions, such as disaster debris management and emergency transportation route designation.

5.9.1 Metro will provide leadership and support to the Regional Emergency Management Group (REMG) and encourage local governments to participate in the existing intergovernmental agreement and to provide the resources required to develop a regional disaster response plan.

5.9.2 Metro will collaborate with federal, state and local agencies, businesses and individuals to utilize the resources of Metro's Regional Land Information System and Natural Hazards Program data in developing a region-wide emergency management information system to improve disaster response coordination.

Relationship to Future Vision

In response to Section 5(1) of the Metro Charter, a Future Vision statement was created and adopted by the Metro Council in 1995. This document states the importance of safety and that:

> "...personal safety within communities and throughout the region is commonly expected as well as a shared responsibility involving citizens and all government agencies. Our definition of personal safety extends from the elimination of prejudice to the physical protection of life and property from criminal harm, *to mitigation and preparation for and response to natural disasters*." (Emphasis added.)

Metro's Growth Management Services department has played a pivotal role in initiating coordination of regional growth management and natural disaster planning responsibilities among local emergency management agencies in the region. This Chapter continues the department's efforts in mitigation and preparation for response to natural disasters by development of the Regional Hazard Mitigation Plan and policies 5.1 to 5.9 below.

Background

In the past decade, local, state and federal agencies have launched initiatives to improve our knowledge of natural hazards. Understanding natural hazards and the risks they create is the starting point for the long and costly process of improving the safety of communities in relation to natural disasters. Only recently has the concept of hazard mitigation become the cornerstone for developing strategies to reduce the billions of dollars spent on response and recovery operations following natural disasters. The general natural hazard information outlined in this plan will be described in greater detail in the Metro Regional Natural Hazards Mitigation Plan currently being developed in coordination with local governments in the region, the State of Oregon and private sector organizations. That plan will describe hazard-specific risk reduction strategies. It is not intended to include functional plan requirements for changes in city and county comprehensive plans.

National Mitigation Planning

The Federal Emergency Management Agency (FEMA) coordinates all federal resources in support of state and local government activities in all phases of the emergency management process: emergency preparedness, mitigation, response and recovery. Congress stated its intention in the Robert T. Stafford Disaster Relief and Emergency Assistance Act to "...provide an orderly and continuing means of assistance...to local governments in carrying out their responsibilities by...encouraging hazard mitigation measures to reduce losses from disasters, including development of land use and construction regulations."

FEMA has recently adopted a national strategy to carry out the intent of Congress to reduce the cost of natural hazards through hazard mitigation programs. FEMA administers a post-disaster hazard mitigation grant program that is currently the only source of funds for encouraging state and local adoption of hazard mitigation measures. Pending federal legislation is intended to provide FEMA additional funding to encourage states to create pre-disaster mitigation programs.

State Mitigation Planning

Several state agencies are responsible for a variety of natural hazard management programs which address mitigation planning and response and recovery strategies. For example, the Oregon Department of Geology and Mineral Industries is responsible for assessing and characterizing geologic hazard and identifying earthquake mitigation measures in the state. The Office of Emergency Management, a division of the Oregon State Police, is responsible for the state's emergency management program, including the all-hazard mitigation planning process. Other state agencies also share hazard mitigation responsibility for various functions including, but not limited to, the state Department of Environmental Quality, the Oregon Department of Transportation, the state Fire Marshal, the state Health Division of the Human Resources Department and the state Department of Water Resources.

State land use planning goals were adopted in 1969 by the Oregon Legislature requiring counties and cities to prepare comprehensive land use plans. In 1973, Senate Bill 100 established the Land Conservation and Development Commission to monitor compliance of local plans with state goals which, through passage of the bill, were rewritten to link concerns about urban sprawl with environmental protection measures. Goal 7, Areas Subject to Natural Disaster and Hazards, establishes the goal that developments shall not be planned or located in areas of natural disasters and hazards without appropriate safeguards. Goal 7 defines "Areas of Natural Disaster and Hazards" as "areas that are subject to natural events that are known to result in death or endanger the works of man..."

This Regional Framework Plan, as well as local plans, must comply with applicable state land use planning goals. This chapter and Title 3 of the Urban Growth Management Functional Plan (See Appendices) address aspects of statewide Goal 7.

Regional Mitigation Planning

The 1992 Metro Charter was adopted by a popular vote of the citizens of the region. It authorizes Metro to focus on guiding the region in how and where it will grow. The Charter, Section 6(3), also authorizes Metro to exercise authority related to the "Metropolitan aspects of natural disaster planning and response coordination" function. The Charter did not include natural disaster planning as one of the required components of the Regional Framework Plan. However, the Metro Council directed in Resolution No.

96-2378 that natural disaster planning should become a part of the plan as recommended by the Metro Policy Advisory Committee.

The Metro Data Resource Center (DRC) has collected and maintained demographic and geographic information, including databases for emergency 9-1-1 purposes and flood hazard data that can assist in the mitigation process. The information is an essential component of the urban growth process. Through its centralized database server, the Regional Land Information System (RLIS) can spatially depict land use records, zoning, urban development patterns and natural resource information. RLIS has become a tool for planning programs, including natural hazards mitigation.

Since 1992, the Oregon Department of Geology and Mineral Industries (DOGAMI) and Metro have produced earthquake hazard maps showing areas of the region where geologic conditions are more likely to contribute to damage in an earthquake. As part of the project, the City of Portland, Portland State University and Metro have evaluated buildings for seismic risk, and identified vital systems and key facilities. With hazards and risks identified, Metro's geographic information system can be used to assess the region's vulnerability to earthquake hazards. As the seismic hazard maps produced by DOGAMI and Metro became available, a gathering of emergency management professionals from throughout the region began informal review sessions. More recently, the membership of the once "informal" gathering (including Metro), signed an intergovernmental agreement to form the Regional Emergency Management Group to develop a work plan for emergency management planning activities related to regional disaster issues.

As Metro worked to develop plans for how the region will grow, it became obvious that the region's ability to mitigate and respond to natural hazards needed to be considered. In response to this need, Metro's natural hazards mitigation program was created. The program provides regional coordination, outreach, data management services and technical assistance in developing regional strategies for mitigating natural hazards and preparing communities and residents for disasters.

Metro's Natural Hazards Program has collaborated with Metro's Regional Environmental Management Department and local and state emergency management agencies to develop a Regional Disaster Debris Management Plan. Metro's Natural Hazards Program has also collaborated with local and state transportation and emergency management agencies to produce a Regional Emergency Transportation Route Report.

Currently, a Regional Natural Hazards Mitigation Plan is being developed. The Natural Hazards Technical Advisory Committee created by the Metro Council will play an oversight role in the development of the plan.

Local Mitigation Planning

Local governments are required, in city and county comprehensive plans, to respond to state land use planning goals and, specifically, to develop and inventory known hazards.

Metro also conducted a survey of local governments in an attempt to identify policies, ordinances and administrative rules or codes for mitigating natural hazards. The results of the survey shed light on the status of the region's mitigation efforts. In addition, the Metro Council approved the formation of a Natural Hazards Technical Advisory Committee to consider measures that local governments, businesses and residents can take to reduce damage from natural disasters.

As a result of the February 1996 flood many local governments in the region have initiated or completed flood and landslide hazard mitigation plans. State and local government agencies and private organizations have also undertaken a range of hazard mitigation planning initiatives related to improving the seismic performance of infrastructure and buildings.

The 1996 flood demonstrated that natural disasters do not respect jurisdictional boundaries. The regional impact of a major disaster argues for the coordination of hazard mitigation, disaster response and recovery planning with Clark County, Washington, as well as the Portland metropolitan counties in Oregon. Regional planning issues in relation to Clark County are addressed in chapter six of this plan.

Analysis

Natural hazard issues create implications for the regional planning process and the regional urban form in the 2040 Growth Concept and the form of the regional and town centers. Over time, implementing natural hazards planning measures can reduce the disaster vulnerability of the people of the region and the structures they build.

There are generally two categories of natural hazard mitigation measures related to land use planning: (1) hazard mitigation measures that may be applied to *undeveloped* areas; and (2) hazard mitigation measures that may be applied to *developed areas*.

Local governments, businesses and individuals must also plan to respond appropriately to the damage created by natural hazard events because no hazard mitigation program can totally eliminate societal vulnerability to natural disaster.

Following are categories of metropolitan features that could be affected by natural disasters.

Housing

Regional objectives for housing related to specific goals for low-income and median-income housing can be thwarted by a disaster if the desired housing is located on less expensive land that may include hazardous ground, or if the housing is not sufficiently engineered to survive an event. Natural hazard considerations can encourage the location of different housing types on different hazard zones.

For example, concentrations of lower income housing at greater risk from natural hazards can create significant housing shortages after a natural disaster. A regional policy of more evenly distributing low- and median-income housing throughout the region may improve the performance of the housing stock in a natural hazard event by distributing the population across a variety of soil and slope conditions.

Public Services and Facilities

Natural hazards considerations will play a key role in the development and redevelopment of public services and facilities. Public safety structures, schools and other key facilities must be built to standards that provide some assurance that they will survive a natural hazard event and be available to provide service when most needed. Natural hazard events can cause expensive and prolonged disruption of a community's vital systems (e.g., water, sewer, telecommunications and other utility services). Identification of system segments that cross hazardous ground can offer opportunities to engineer system components to respond better in an event, or relocate an especially fragile component to safer ground.

Transportation

Transportation infrastructure can be severely disrupted by natural events, hampering response and delaying recovery. Priority routes for response and recovery resource movement can be identified. Intermodal transfer points can be especially important after a natural hazards event. Engineering strategies to improve transportation infrastructure performance can be developed. Alternative routes can be designated to improve resource movement in the event of failure to a priority route. Natural hazards considerations can be incorporated in the public involvement process to establish transportation funding priorities.

Economic Opportunity

Natural hazard events can severely disrupt the local, regional and state economy. For example, hard hit areas may lose many stores, requiring neighborhood residents to travel to distant stores, thereby placing additional burdens on transportation systems in the disaster recovery phase.

To the extent that long-term economic development plans describe the types of industrial and commercial development appropriate to designated areas, consideration of the relationship of development to the location of natural hazards should be incorporated.

Urban/Rural Transition

Natural hazards can play a role in defining the most effective Urban Growth Boundary (UGB) to provide a clear transition between urban and rural land. Located along natural and built features (e.g., roads, rivers, floodplains or other major topographic features), the UGB may help define the types of natural hazards to be mitigated in the land use and emergency planning process.

Developed Urban Land

One key objective of growth management is to encourage the development and redevelopment of existing urban land. Development in areas known or newly discovered to be susceptible to natural hazards is especially appropriate for carefully planned redevelopment which reduces the vulnerability of the people who live in the area. In coordination with land use, economic development, redevelopment and financing agencies, a combination of regulations and incentives may be employed to encourage people to continue to live, work and shop in already developed areas that are susceptible to natural hazards.

For example, unreinforced masonry buildings (URMs) can pose significant earthquake risks to inhabitants and passersby. Neighborhoods that contain many URMs may become candidates for targeted regulation and assistance, perhaps requiring life safety retrofit of URMs by a specified date, and developing the bonding authority to provide low-interest loans to building owners for that work.

Urban Design

Natural hazard considerations can assist in the design of settlement patterns, structures and landscapes to improve the feeling of personal safety in an urban setting.

Other Implications

The natural hazards management planning process also has close ties to watershed management and water quality and supply measures. Natural hazards considerations may also create multi-objective watershed management opportunities and encourage reliance on natural processes to address flood control, storm water management and abnormally high winter and low summer stream flows.

Hazard factors can influence which natural areas may be identified for preservation. For example, land susceptible to flooding may be appropriate for fish and wildlife habitat, development into parks for periodically intensive or moderate human use, parking areas, or appropriate constructed environments. However, land that is susceptible to flooding which is also susceptible to strong seismic damage may be more appropriate for fish and wildlife habitat and human use open space, including parking areas, and less appropriate for constructed environments. Such multiple hazard factors should be taken into account when determining open space designations or any other designation based upon an evaluation of economic, social and environmental factors.

Although the potential for water quality degradation resulting from flood has been addressed in the Watershed Management and Regional Water Quality chapter of this plan, other growth management planning measures remain to be discussed in relation to:

Life protection;

Personal and public property loss reduction;

Business recovery policies.

Consideration of natural hazards as a major factor or constraint in all aspects of the regional planning process will produce realistic information that can be used in developing procedures and standards for achieving Metro's 2040 Growth Concept. This has direct implications on the development of comprehensive land-use plans by cities and counties, and in the development of comprehensive emergency management plans to address issues related to hazard mitigation, emergency preparedness, disaster response and recovery.

Clark County

Chapter 6: Clark County

Overview

Clark County is located in southwest Washington, just across the Columbia River from the Metro area. The County is approximately 660 square miles and has seven incorporated cities: Vancouver, Camas, Washougal, Ridgefield, Battle Ground, LaCenter, and the Town of Yacolt. It is the fastest growing county in the State of Washington. Vancouver is the fourth largest city in the State of Washington.

Coordination between the Metro region and Clark County is important as there are issues of common concern to be addressed. Metropolitan-wide aspects of transportation, air quality, land use and economic development issues have been raised from time to time and bi-state coordination can aid resolution of such issues.

The Metro Charter, adopted by the voters within the Metro boundary (Clackamas, Multnomah and Washington counties only) includes the requirement that the Regional Framework Plan shall address:

> "....(8) coordination, to the extent feasible, of Metro growth management and land use planning policies with those of Clark County, Washington..."

Such coordination, if it is to be achieved, should not take the form of unilateral actions by Metro. Rather, it can only come about with the consent of the jurisdictions on both sides of the River. The Future Vision Commission recognized that decisions made in the Metro area could have a much wider impact. The Future Vision Commission concluded that:

> "The bi-state metropolitan area has effects on, and is affected by, a much bigger region than the land inside Metro's boundaries. Our ecologic and economic region stretches from the Cascades to the Coastal Range, from Longview to Salem."

The Future Vision Commission, required by the Metro Charter to complete a broad vision statement about the region, also included the Chair of the Clark County Commissioners, John Magnano. He stated:

> "Future Vision recognizes that we are irreversibly linked. It will help bring our communities together to create something greater than the sum of our individual parts."

This chapter documents existing policies and coordination efforts, to date. To address bi-state issues and answers, it is important to extend and enhance dialogue between Metro and Clark County. This chapter

is not meant as an endpoint. It describes the background and challenges to the Metro region and Clark County communities. Only after review and discussion with representatives from Clark County can new actions, if any, be considered. This Regional Framework Plan shares Metro's existing and contemplated policies for the Metro area with Clark County. It also provides for consideration of new policies that might be beneficial to the communities on each side of the Columbia River. Additions or revisions to this chapter may occur after these discussions with representatives from the jurisdictions of Southwest Washington.

Policies (Goals and Objectives)

6.1 Metro shall coordinate with land use and transportation planners in Clark County to ensure the closest coordination possible regarding growth management issues.

Background

The State of Washington passed the Growth Management Act (GMA) in 1990. Under the Act, Clark County adopted the Community Framework Plan on May 26, 1993, which served as the basis for development of a comprehensive growth management plan. Clark County adopted a Comprehensive Growth Management Plan in December, 1994. The county's cities also adopted their Comprehensive Plans during the timeframe. An extensive effort was made to do partnership planning. These plans established Urban Growth Areas (UGA's) and policies to guide the county's and cities growth through the year 2012. Cooperative efforts were made with 9 school districts, fire, utility and Port districts to ensure coordination of plans.

Though there are separate aspects to Clark County and Metro's plans, there are common ones as well. Many of the goals and policies, most notably those related to the environment, housing, economic development and transportation, address issues of joint interest and concern to the metropolitan area.

Job/Housing Imbalance

Clark County has an estimated 1996 population of 303,500 people. When compared with growth in Clackamas, Multnomah and Washington counties during the period 1980 - 1996, Clark County had the fastest growth rate.

Table 6.1 Population Change by County 1980-1996

County	*1980*	*1996*	*Percent Change*	*Added Population*
Clackamas	241,900	313,200	23%	71,300
Clark	192,000	303,500	37%	111,500
Multnomah	562,600	636,000	12%	73,400
Washington	245,800	376,500	35%	130,700
Total	1,242,300	1,629,200	31%	386,900

A little more than half (52 percent) of the county's population is located within unincorporated areas of the county, but the county also includes the cities of Camas, Battleground, La Center, Ridgefield, Vancouver, Washougal, Yacolt and a portion of Woodland, Washington. The fastest population growth has been observed within unincorporated urban growth areas. However, the city of Battle Ground has experienced a 20 percent increase over the time period above. Vancouver, which recently completed a large annexation, has a population of 128,453 and is now is the fourth most populous city in the state of Washington.

The majority of Clark County's residents both live and work in the County. However, a significant number commute to Oregon for employment, about 34 percent of the Clark County workforce. Clark County is attracting a growing number of Oregonians who retain their employment in Oregon but reside in the county.

Clark County has captured more residential than employment growth in the metropolitan region as shown in Table 6.2. There is no expectation that jobs and housing will ever perfectly balance in any particular locale. However, a greater effort at business recruitment and incentives such as those included in Clark County's Comprehensive Plan, can aid in achieving a closer balance over time.

Table 6.2 Clark County's Capture of Population and Housing Growth

Year	Housing Permits			Nonfarm Employment				
	Total	Clark Co	Clark %	Total		Clark Co		Clark
1984	5,368	1,120	21%	548,750	(growth)	57,700	(growth)	
1985	9,409	2,358	25%	562,030	13,280	59,380	1,680	13%
1986	8,290	1,775	21%	580,380	18,350	62,240	2,860	16%
1987	9,871	2,389	24%	603,080	22,700	66,500	4,260	19%
1988	10,739	3,238	30%	634,220	31,140	71,600	5,100	16%
1989	16,348	2,917	18%	667,230	33,010	76,300	4,700	14%
1990	14,473	3,029	21%	695,010	27,780	80,700	4,400	16%
1991	9,573	2,685	28%	697,010	2,000	80,700	-	0%
1992	11,227	3,910	35%	709,920	12,910	83,800	3,100	24%
1993	12,874	4,287	33%	735,200	25,280	89,100	5,300	21%
1994	15,790	5,217	33%	769,460	34,260	95,200	6,100	18%
1995	15,004	3,621	24%	805,560	36,100	100,200	5,000	14%
1996				843,230	37,670	104,300	4,100	11%

Source: Washington Employment Security Department raw data dated August 25, 1997

Housing Stock

There are approximately 113,665 housing units within Clark County as of April 1, 1995. The current ratio of single family units to multi family units is 3.3:1 (87,289 units to 26,376 units) for the entire county, though it is 2.3:1 within the designated Urban Growth Area. In contrast, according to Metro DRC's data, there are approximately 538,304 housing units within the three Oregon counties of the Metro region in 1995. The ratio of single family units to multi family units is 2.4:1 (381,713 units to 156,591 units).

Housing prices in the county have historically been less expensive than in the Metro region. Due to rapid growth of about 4 percent a year for the past 5 years, the majority of the housing stock consists of new construction. Therefore, housing prices are rising, bringing them closer into line with those in the Metro region.

Economic Development

While separated by the Columbia River, Clark County and its cities are a vital part of the economy of the greater metropolitan area. According to 1990 Census data, 36,700 Clark County workers, or about 34 percent of the Clark County workforce, worked in the Metro area. This could also be described as about 7 percent of the Metro area workforce lives in Clark County. In contrast only 9,700 jobs, or about 12 percent of Clark County's employment were filled by commuters from Oregon. The data reveal that Clark County is an important workforce exporter to the Metro area. These workers provide the Metro area with many different skills and contribute to Oregon State revenues through the non-resident income taxes they pay. Residents of Clark County are able to utilize many of the amenities of the Metro area, including Portland International Airport, cultural and recreational opportunities, as well as tax free retail

shopping opportunities. Conversely, Oregon residents can enjoy tax-exempt shopping in Washington as well as many cultural and outdoor recreational opportunities. Information about development trends in Clark County since 1990 suggest that the percent of the Clark County workforce that commutes to the Metro area will remains at least at 1990 levels, if not higher, if conditions remain intact.

Business recruitment efforts of the Columbia River Economic Development Council have brought in some rather large employers to Clark County in recent years, including high tech industries such as Wafer Tech and Sharp Electronics. A recent Washington State law which allows tax exempt purchase of capital equipment for Southwest Washington businesses gives an additional incentive for businesses to move to or stay in Clark County. That law, as well as other incentives, are slowly working to increase economic development activity in the county. The potential for bi-state coordination is great, especially if regional marketing is promoted.

Land Availability for Industrial Development

The total vacant industrial acreage by UGA and unincorporated areas has been calculated by Clark County. In the county, approximately 12,226 acres of lands are designated for industrial use and supporting development. Of this total, about 5,839 acres are covered with existing industrial, warehousing, distribution and similar uses. Some 6,387 acres of land can be classified as vacant and developable, with 830 acres of this vacant property classified as "prime", and additional 938 acres that move to "prime" in the planning horizon. There are 2,661 acres classified as "secondary" and 1,959 acres as "tertiary." Both secondary and tertiary lands may have impediments to development, with tertiary having the most. Potential impediments in developing the identified industrial lands may include: environmental constraints, infrastructure; including timing of water and sewer services and transportation. Also at work are market forces which may influence all of the above.

Transportation

Clark County is connected with the Metro region by three bridges: two highway bridges, Interstate-5 (I-5) and Interstate -205 (I-205) and a railroad bridge. If current trends continue, the auto bridges will suffer more congestion in future as shown in Table 6.3.

Table 6.3 PM 2 peak hours north bound congestion (Source: RTP)

	I-5 Bridge	I-205 Bridge
1994	V/C: >0.9 (13,500 cars)	V/C:<0.8 (12,200 cars)
2015 Forecast*	V/C: >1.0 (17,600 cars)	V/C:>1.0 (19,400 cars)

Note: * = Committed scenario that assumes traffic improvement is limited to those already financially committed.

Coordinating with the Metro region's policies, the county ~~discourages the use of private autos and~~ encourages alternative modes through enhanced public transit and other transportation demand management programs.~~public transit through travel management approach.~~ This is facilitated by the Washington State Commute Trip Reduction law which is the policy that actually encourages the shift from Single Occupancy Vehicles (SOV's). It was passed by the Washington State legislature in 1991 and mandates goals to achieve in the reduction of SOV use by their employees for~~of~~ businesses with 100+ employees.

Public transit is provided by C-TRAN, a publicly funded transportation system, which serves the county and offers connections to the Metro area. ~~There has been continuous study and discussion regarding light rail connection to Portland, but none of these are planned to be built in near future.~~ This service is currently being provided by buses. A light rail connection to Vancouver is planned as part of the phased construction of the South/North Light Rail Project. Prior to establishment of light rail, other alternatives such as enhancing bus service and adding HOV lanes and commuter rail service should also be considered. Portland and Vancouver are part of the Cascadia Corridor of intercity service between Vancouver, BC and Eugene, OR. As for air travel, Clark County uses PDX Portland International Airport.

Clark County is home to several small regional general aviation airports, including Pearson Airpark and Evergreen Airport in Vancouver. About 80 percent of the planes stored in hangars at Pearson are those of Portland area residents or businesses. Similarly, many of the planes at Evergreen also belong to Portlanders. Bi-state coordination of planning for aviation facilities will be necessary.

Parks, Natural Areas and Open Spaces

Clark County 20 Year Comprehensive Growth Management Plan includes a series of policies dealing with rural and natural resources and parks, recreation and open spaces. These policies are similar to those in the Framework Plan.

As of 1996, there has been a joint City of Vancouver/Clark County Parks Department to coordinate parks planning and acquisition. There has also been a recent enactment of the Real Estate Excise Tax (REET)

for funding of park development. Progress is being made toward enhanced cooperative efforts both within and outside the county.

Clark County is part of the Metro region's greenspace planning and participates in park and open space programs. However, additional bi-state coordination could further enhance programs on both sides of the river and ensure better parks, natural areas and open spaces for people of the larger region.

Existing Coordination Framework

Most planning coordination between the states has been through formal and informal efforts. There are established frameworks for planning coordination between Clark County jurisdictions and the Metro region. For example, representatives from the County and Vancouver, Washington are members of several Metro policy advisory committees, including MPAC and JPACT, as well as two technical committees (TPAC and MTAC). The Future Vision Commission, required by the Metro Charter to complete a broad vision statement about the region, also included the past Chair of the Clark County Commissioners. In addition, representatives from Metro and ODOT are full voting members on the Southwest Washington Regional Transportation Council (RTC) and Regional Transportation Advisory Committee (RTAC).

Other examples of ongoing bi-state coordination include population forecasts, transportation modeling, Metro's greenspace planning and land use plan mapping. Population forecasts for the Metro area prepared by Metro are coordinated with those prepared by the State of Washington, Office of Financial Management for Clark County. The transportation model that Metro maintains includes Clark County and reflects the southwest Washington comprehensive land use plans and policies. In addition, as the Metro 2040 Growth Concept was being developed, staff from both sides of the River worked to ensure that the Metro 2040 Growth Concept map accurately reflected the Vancouver and Clark County Comprehensive plans.

While bi-state coordination to date has strongly focused on transportation issues as described hereafter, there are needs for more comprehensive coordination that integrates land use, transportation, parks and open spaces, economic development and other planning concerns. The Framework Plan shall serve as a starting point of discussion with Clark County to seek such coordination.

Coordinated Transportation Planning

Coordinated transportation between the two states dates back at least to the early 1900's, when a bridge across the Columbia was built. The Interstate Bridge, still in use today, was built in 1917. It included

lanes for auto and truck traffic as well as for a trolley car. At that time, it was possible to take a street car from Oregon City to Vancouver and the Orchards area of Clark County.

In the intervening years, the privately owned street car system, which by 1925 included over 700 miles of urban and interurban lines, was gradually eliminated on both sides of the river and public road, highway and freeway investments were made. Public transit systems (buses) were also established as a substitute for the rail-based transit systems. The most notable roadway improvements included adding a second span to the Interstate Bridge (I-5), conversion of Highway 99 to I-5 and the construction of the Interstate 205 Freeway (I-205) bypass, including the Glenn Jackson Bridge over the Columbia River.

More recently, the Metro jurisdictions and the jurisdictions within southwest Washington have worked on reestablishing possible light rail connections. Initial joint transportation system analysis concluded that all high capacity transit (HCT) modes, including light rail transit (LRT), should be further evaluated in the I-5 corridor and that only HCT bus options should be further evaluated in the I-205 corridor. Analysis of the two bi-state corridors resulted in the selection of the I-5 corridor as the first priority for HCT in Clark County.

Subsequent studies resulted in the selection of LRT as the preferred mode and I-5 as the preferred alignment in Clark County with a terminus in the vicinity of 88th Street. A local financing proposal was developed to provide local funding for an LRT project from Clark County to Clackamas County, Oregon.

While the voters of the Metro region approved a $475 million bond measure providing the local match for the South/North project, Clark County voters rejected the financing proposal for the Clark County portion of the South/North LRT project in February 1995. The defeat of the LRT vote in Clark County led to an extensive discussion of the next steps for addressing bi-state transportation needs. Policy makers agreed that it was imperative to engage the community in a full debate on a wide range of transportation issues and the transportation needs facing Clark County.

The Regional Transportation Plan explores a variety of transportation options. In addition to the road, freight, transit, bike and pedestrian improvements included in the current Regional Transportation Plan, Metro is also analyzing other methods of addressing transportation needs, such as congestion pricing.

In 1995, the Clark County Board of Commissioners and the Vancouver City Council appointed a group of citizens to serve on a Focus Group to recommend a grassroots-based approach for examining southwest Washington's future transportation needs. Coordinated by the Southwest Washington Regional Transportation Council, the results of the two Focus Group meetings in May 1995, became the foundation for the issues subsequently examined by the Transportation Futures Committee.

The Transportation Futures Committee developed a set of findings that are being used to guide further transportation study and planning in Clark County. Among other findings, bi-state issues included were:

- Reducing demand for new transportation facilities and improvements in the long run by encouraging economic development that supports family wage jobs in Clark County and reduces the need to commute to Oregon;
- Promoting the use of alternative modes of transportation to driving alone;
- Increasing capacity to accommodate long-term population growth and continued need for bi-state transportation facilities, with first priority on the I-5 corridor;
- Making more effective use of existing facilities is a high priority in the following order of preference:
    1. Improved and/or expanded bus service;
    2. High Occupancy Vehicle lanes (using existing facilities wherever possible);
    3. Commuter rail;
    4. Light rail;
    5. Reversible lanes;
    6. Widening I-5 (highway and bridge) for general purpose traffic;
    7. Ferry system.

The Committee found that a third auto bridge and highway corridor was not an acceptable solution to bi-state congestion.

Opportunities and Policy Implications

The opportunities for bi-state coordination are many. Shared environmental, transportation, economic development and land use issues bring with them an opening for dialogue, policy development and actions.

Bi-state policy development is facilitated by the fact that both Oregon jurisdictions and Clark County and its cities have adopted comprehensive land use plan maps and documents. By review and incorporation of goals and policies with regional applicability, it will be a matter of negotiation and agreement to consolidate those into a comprehensive regional policy document.

Transportation

Transportation choices impact a wide range of other issues. Most notably, air quality, costs and adequacy of infrastructure, natural resources and land use. Given the variety and strength of connections

between the Metro area and southwest Washington and the growth that is likely to occur on both sides of the Columbia River, it is probable that transportation will remain as a critical element of bi-state discussion and decision making.

Residents of southwest Washington and the Metro area will remain concerned with access to the bi-state Metro area for jobs, airport facilities, shopping, recreational and cultural opportunities. Concern will remain high regarding the capacity of the existing and an enhanced road system to carry auto and freight at reasonable levels of service.

The limited capacity of the I-5 and I-205 bridges and the lack of policy direction or plans to increase capacity presents a fundamental challenge for the bi-state area. A third highway bridge is not consistent with Metro Council's policy and not favored by the Clark County Transportation Futures Committee.

Based upon the successful traffic management during the I-5 bridge repair closure in September, 1997, one potential approach is to encourage the modal shift of bi-state traffic, including the provision of public transit. It would requires citizens to change their transportation habits on a long term basis. However, it could reduce negative environmental impacts and improve air quality in the region. Metro plans to take a closer look at these issues, and integrate coordination with Clark County through JPACT, RTC and other opportunities.

Economic and Industrial Development

Metro and Clark County could consider economic and industrial development policies to guide appropriate sharing of the regional industrial and commercial growth to Clark County. Such policies need take into account commuter traffic management, housing demand and supply, available land for industrial and commercial development and the Metro region's economic health. For example, in a precedent case, the Port of Vancouver and the Port of Portland have been working together to coordinate regional port development.

Possible solutions for job/housing balance could include ways to ensure that the Clark County ratio of jobs created to new housing built is greater than current rates. For such a strategy to be effective, the jobs created would have to match and enhance the wage and skill profile of Clark County residents. Encouraging job creation may prove difficult as the infrastructure and sheer number of jobs in the Metro area are much more numerous than in Clark County. However, job growth is proceeding in Clark County with the help of the Columbia River Economic Development Council's recruiting efforts.

For at least the past twelve years, the Oregon state tax structure is lower than that of the State of Washington's, although the difference between the two states has narrowed substantially. There are now only marginal differences. The State of Washington instituted tax exempt capital equipment purchase

legislation in 1994, which levels the playing field between companies in Oregon and southwest Washington.

Local business taxes in Clark County have been reduced since 1993 by 10% each year and will continue to decrease until they are eliminated.

Land Use and Housing

Metro and Clark County share similar land use policies such as encouraging infill and redevelopment, guiding new development along transit corridors, and preserving rural lands and open spaces using urban growth boundaries. These similarities could provide opportunities for coordination of land use planning, particularly when to expand urban growth boundaries. Land use planning of this kind needs to address broad issues that transcend man-made borders, such as preservation of rural lands, protection of greenspaces and wildlife habitat, travel demand management, and regional economic development.

Housing could be the most important area for potential coordination to improve Clark County's job/housing balance. While Metro should make efforts to make housing in the region more affordable, Clark County has adopted policies to reduce single family residential development outside the urban growth areas. Implementing these policies require close coordination across the jurisdictional boundaries. In addition, developing joint housing policies could be effective to deal with issues of affordability and fair share housing. Both the Metro region and Clark County are taking a fair share approach in providing affordable housing within their own jurisdictions, but currently there is no coordination. Coordinated planning could offer more flexible and effective allocation of limited financing to improve housing affordability.

Parks, Natural Areas and Open Space

As the regional ecological system transcends the Columbia River, there is an opportunity for further coordination in open space and natural resource planning. Metro and Clark County/Vancouver Parks should coordinate efforts to create more of a regional system of natural areas, open space, trails and greenways for wildlife and the people of the region.

Emergency Preparedness and Services

The location of Clark County and the northern portion of the Metro region along the Columbia River, as well as the geologic hazards present in the Pacific Northwest, present an opportunity for bi-state disaster preparedness and for coordination of emergency services. The flooding and earthquake potential of the area pose a challenge for emergency planners. As we have seen many times, natural disasters know no

boundaries, and neither should coordinated assistance in the bi-state metropolitan area. Metro and Clark County can plan for coordinated response to emergency, recovery from disaster, preparedness for disaster and mitigation of hazard and risk.

Management

Chapter 7 Management

Overview

Any plan put into effect is only a set of policies or actions based on what is known at the time. Actual conditions can and do change. Accordingly, any plan which is intended to be useful over a period of time, must include ways of addressing new sets of circumstances. To this end, this chapter includes descriptions of policies and processes that will be used to keep the Regional Framework Plan abreast of current conditions and a forward thinking document.

In addition, this plan includes disparate subjects, ones that, while interconnected, at times suggest conflicting policy actions. This chapter describes the ways in which such conflicts can be resolved.

Policies (Goals and Objectives)

7.1 Citizen Participation

Metro shall develop and implement an ongoing program for citizen participation in all aspects of the regional planning effort. Such a program shall be coordinated with local programs to support citizen involvement in planning processes and shall not duplicate those programs.

Metro Committee for Citizen Involvement (Metro CCI). Metro shall establish a Metro Committee for Citizen Involvement to assist with the development, implementation and evaluation of its citizen involvement program and to advise MPAC regarding ways to best involve citizens in regional planning activities.

Notification. Metro shall develop programs for public notification, especially for (but not limited to) proposed legislative actions, that ensure a high level of awareness of potential consequences as well as opportunities for involvement on the part of affected citizens, both inside and outside of its district boundaries.

7.2 Metro Policy Advisory Committee

The 1992 Metro Charter has established MPAC to:

assist with the development and review of Metro's regional planning activities pertaining to land use and growth management, including review and implementation of these goals and objectives, development and implementation of the Regional Framework Plan, present and prospective functional planning, and management and review of the region's UGB;

serve as a forum for identifying and discussing areas and activities of metropolitan or subregional concern; and

provide an avenue for involving all cities and counties and other interests in the development and implementation of growth management strategies.

MPAC Composition: The initial MPAC shall be chosen according to the Metro Charter and, thereafter, according to any changes approved by majorities of MPAC and the Metro Council. The composition of the Committee shall reflect the partnership that must exist among implementing jurisdictions in order to effectively address areas and activities of metropolitan concern. The voting membership shall include elected and appointed officials and citizens of Metro, cities, counties, school districts and states consistent with section 27 of the 1992 Metro Charter.

Advisory Committees. The Metro Council, or MPAC, consistent with the MPAC by-laws, shall appoint technical advisory committees as the Council or MPAC determine a need for such bodies.

Joint Policy Advisory Committee on Transportation (JPACT). JPACT, with the Metro Council, shall continue to perform the functions of the designated Metropolitan Planning Organization as required by federal transportation planning regulations. JPACT and MPAC shall develop a coordinated process, to be approved by the Metro Council, to assure that regional land use and transportation planning remains consistent with these goals and objectives and with each other.

7.3 Applicability of Regional Framework Plan Policies

The policies included in Regional Framework Plan Policies in Chapters 1-6~~2~~ 7 of this Plan are regional goals and objectives consistent with ORS 268.380(1). Many of these policies were previously adopted and acknowledged as the Regional Urban Growth Goals and Objectives. ~~Therefore, these regional~~ The specific policies included in this Framework Plan are~~comprise~~ neither a comprehensive plan under ORS 197.015(5), nor a functional plan under ORS 268.390(2). All functional plans adopted by the Metro Council shall be consistent with these goals and objectives. Metro's management of the UGB shall be guided by standards and procedures which must be consistent with these goals and objectives. These goals and objectives shall not apply directly to site-specific land use actions, including amendments of the UGB.

Regional Framework Plan Policies in Chapters 1-6~~7~~ of this Plan shall apply to adopted and acknowledged comprehensive land use plans as follows:

- components of the Regional Framework Plan that are adopted as functional plans, or other functional plans, shall be consistent with these Policies,
- the management and periodic review of Metro's acknowledged UGB Plan, shall be consistent with these Policies, and

- Metro may after consultation with ~~the~~ MPAC ~~may~~ identify and propose issues of regional concern, related to or derived from these Policies as recommendations but not requirements, for consideration by cities and counties at the time of periodic review of their adopted and acknowledged comprehensive plans.

Regional Framework Plan Policies shall apply to Metro land use, transportation and greenspace activities as follows:

- the Urban Growth Boundary plans, functional plans, and other land use activities shall be consistent with these Policies;
- to the extent that a proposed policy or action may be compatible with some Policies and incompatible with others, consistency with this Plan may involve a balancing of applicable goals, subgoals and objectives by the Metro Council that considers the relative impacts of a particular action on applicable Policies.

Periodic Updates of Regional Framework Plan Policies. MPAC shall consider the regular updates of these Policies and recommend based on a periodic update process adopted by the Metro Council.

7.4 Urban Growth Boundary Management Plan

The UGB Management Plan has two components:

- the acknowledged UGB line; and
- acknowledged procedures and standards for amending the UGB line. Metro's UGB Management Plan is not a regional comprehensive plan but a provision of the comprehensive plans of the local governments within its boundaries. The UGB Management Plan shall be in compliance with applicable statewide planning goals and laws and consistent with these goals and objectives. Amendments to the UGB Management Plan shall demonstrate consistency only with the acknowledged procedures and standards. Changes of Metro's acknowledged UGB Management Plan may require changes in adopted and acknowledged comprehensive plans.

7.5 Functional Plans

Functional plans are limited purpose plans, consistent with this Framework Plan~~ese goals and objectives~~, which address designated areas and activities of metropolitan concern. Functional plans are established in state law as a~~the~~ way Metro may recommend or require changes in local plans. This Framework Plan uses functional plans as the identified vehicle for requiring changes in local plans in order to achieve consistence and compliance with this Framework Plan.

Those functional plans or functional plan provisions containing recommendations for comprehensive planning by cities and counties may not be final land use decisions. If a provision in a functional plan, or an action implementing a functional plan require changes in an adopted and acknowledged comprehensive plan, then the adoption of a provision or action will be a final land use decision. If a provision in a functional plan, or Metro action implementing a functional plan require changes in an

adopted and acknowledged comprehensive plan, then that provision or action will be adopted by Metro as a final land use action required to be consistent with statewide planning goals. In addition, Regional Framework Plan components will be adopted as functional plans if they contain recommendations or requirements for changes in comprehensive plans. These functional plans, which are adopted as part of the Regional Framework Plan, will be submitted along with other parts of the Regional Framework Plan to LCDC for acknowledgment of their compliance with the statewide planning goals. Because functional plans are the way Metro recommends or requires local plan changes, most Regional Framework Plan components will probably be functional plans. Until Regional Framework Plan components are adopted, existing or new functional plans will continue to recommend or require changes in comprehensive plans.

- Existing Functional Plans. Metro shall continue to develop, amend and implement, with the assistance of cities, counties, special districts and the state, statutory-required functional plans for air, water and transportation, as directed by ORS 268.390(1) and for land use planning aspects of solid waste management as mandated by ORS Ch. 459.
- New Functional Plans. New functional plans shall be proposed from one of two sources:
  - MPAC may recommend that the Metro Council designate an area or activity of metropolitan concern for which a functional plan should be prepared; or
  - the Metro Council may propose the preparation of a functional plan to designate an area or activity of metropolitan concern and refer that proposal to MPAC.

The matters required by the Charter to be addressed in the Regional Framework Plan shall constitute sufficient factual reasons for the development of a functional plan under ORS 268.390. However, the actual adoption of a functional plan will be subject to the procedures specified above.

Upon the Metro Council adopting factual reasons for the development of a new functional plan, MPAC shall participate in the preparation of the plan, consistent with these goals and objectives and the reasons cited by the Metro Council. After preparation of the plan and seeking broad public and local government consensus, using existing citizen involvement processes established by cities, counties and Metro, MPAC shall review the plan and make a recommendation to the Metro Council. The Metro Council may act to resolve conflicts or problems impeding the development of a new functional plan and may complete the plan if MPAC is unable to complete its review in a timely manner.

The Metro Council shall hold a public hearing on the proposed plan and afterwards shall:

- adopt the proposed functional plan; or
- refer the proposed functional plan to MPAC in order to consider amendments to the proposed plan prior to adoption; or
- amend and adopt the proposed functional plan; or
- reject the proposed functional plan.

The proposed functional plan shall be adopted by ordinance and shall include findings of consistency with these goals and objectives.

- Functional Plan Implementation and Conflict Resolution. Adopted functional plans shall be regionally coordinated policies, facilities and/or approaches to addressing a designated area or activity of metropolitan concern, to be considered by cities and counties for incorporation in their comprehensive land use plans. If a city or county determines that a functional plan requirement should not or cannot be incorporated into its comprehensive plan, then Metro shall review any apparent inconsistencies by the following process:
  - Metro and affected local governments shall notify each other of apparent or potential comprehensive plan inconsistencies.
  - After Metro staff review, MPAC shall consult the affected jurisdictions and attempt to resolve any apparent or potential inconsistencies.
  - MPAC shall conduct a public hearing and make a report to the Metro Council regarding instances and reasons why a city or county has not adopted changes consistent with requirements in a regional functional plan.
  - The Metro Council shall review the MPAC report and hold a public hearing on any unresolved issues. The Council may decide to:
    - amend the adopted regional functional plan; or
    - initiate proceedings to require a comprehensive plan change; or
    - find there is no inconsistency between the comprehensive plan(s) and the functional plan.

7.6 Periodic Review of Comprehensive Land Use Plans

At the time of LCDC initiated periodic review for comprehensive land use plans in the region, MPAC:

- shall assist Metro with the identification of Regional Framework Plan elements, functional plan provisions or changes in functional plans adopted since the last periodic review for inclusion in periodic review notices as changes in law; and
- may provide comments during the periodic review of adopted and acknowledged comprehensive plans on issues of regional concern.

7.7 Implementation Roles

Regional planning and the implementation of this Framework Plan shall recognize the inter-relationships between cities, counties, special districts, Metro, regional agencies and the State, and their unique capabilities and roles.

Role of Cities

- adopt and amend comprehensive plans to conform to functional plans adopted by Metro;
- identify potential areas and activities of metropolitan concern through a broad-based local discussion;

- cooperatively develop strategies for responding to designated areas and activities of metropolitan concern ;
- participate in the review and refinement of these goals and objectives.

Role of Counties

- adopt and amend comprehensive plans to conform to functional plans adopted by Metro;
- identify potential areas and activities of metropolitan concern through a broad-based local discussion;
- cooperatively develop strategies for responding to designated areas and activities of metropolitan concern;
- participate in the review and refinement of these goals and objectives.

Role of Special Service Districts

- assist Metro, through a broad-based local discussion, with the identification of areas and activities of metropolitan concern and the development of strategies to address them, and participate in the review and refinement of these goals and objectives. Special Service Districts will conduct their operations in conformance with acknowledged Comprehensive Plans affecting their service territories

Role of School Districts

- advise Metro regarding the identification of areas and activities of school district concern;
- cooperatively develop strategies for responding to designated areas and activities of school district concern;
- participate in the review and refinement of these goals and objectives.

Role of the State of Oregon

- advise Metro regarding the identification of areas and activities of metropolitan concern;
- cooperatively develop strategies for responding to designated areas and activities of metropolitan concern;
- review state plans, regulations, activities and related funding to consider changes in order to enhance implementation of the Regional Framework Plan and functional plans adopted by Metro, and employ state agencies and programs and regulatory bodies to promote and implement these goals and objectives and the Regional Framework Plan;
- participate in the review and refinement of these goals and objectives.

Role of Metro

- identify and designate areas and activities of metropolitan concern;
- provide staff and technical resources to support the activities of MPAC within the constraints established by Metro Council;
- serve as a technical resource for cities, counties, school districts and other jurisdictions and agencies;
- facilitate a broad-based regional discussion to identify appropriate strategies for responding to those issues of metropolitan concern;

- adopt functional plans necessary and appropriate for the implementation of the Regional Framework Plan;
- coordinate the efforts of cities, counties, special districts and the state to implement adopted strategies; and
- adopt and review consistent with the Metro Charter and amend a Future Vision for the region, consistent with Objective 9.
- ~~cooperatively develop strategies with citizens to provide regional environmental education;~~
- ~~identify cultural, environmental and educational organizations which currently provide education about issues related to livable communities;~~
- ~~identify sites and facilities that currently and potentially provide education about issues related to livable communities;~~
- ~~function as a clearinghouse for educational organizations and facilitate educational partnerships in the community.~~

7.8 Performance Measures

Metro Council, in consultation with MPAC and the public, will develop performance measures designed for considering the Regional Framework Plan policies. The term "performance measure" means a measurement aimed at determining whether a planning activity or 'best practice' is meeting the objective or intent associated with the 'best practice.' This concept is also consistent with the Future Vision call for a "... state of the region report on our progress toward achieving the objectives..."

Performance measures for this chapter will use state benchmarks to the extent possible or be developed by Metro Council in consultation with MPAC and the Metro Committee for Citizen Involvement. Performance measures for Chapters 2-6 are measured by several different geographies, including by region, jurisdiction, 2040 design type and market area.

Performance Measures for Chapters 2-6 include the following:

1. Vacant land conversion;
2. Housing development, density, rate and price;
3. Job creation;
4. Infill and redevelopment;
5. Environmentally sensitive lands;
6. Price of land;
7. Residential vacancy rates;
8. Access to open space;
9. Transportation measures.

After concluding which measures are most useful in assessing progress in implementing Metro policies, the Metro Council has directed these measures to be completed every two years. Corrective actions may be taken by the Metro Council if they find that anticipated progress is lacking or if Metro goals or policies need adjustment. By assessing progress or lack of it on a relatively short time frame, it is hoped that if need arises for adjustments these can be made soon after any problem arises and so that relatively stable conditions can be maintained.

Placeholder – Describe forthcoming Metro Council decision about Performance Measures here.

7.9 Monitoring and Updating

The Regional Framework Plan and all Metro functional plans shall be reviewed every seven years, or at other times as determined by the Metro Council after consultation with or upon the advice of MPAC. Any review and amendment process shall involve a broad cross-section of citizen and jurisdictional interests, and shall involve MPAC consistent with Goal 1: Regional Planning Process. Proposals for amendments shall receive broad public and local government review prior to final Metro Council action.

- Impact of Amendments. At the time of adoption of amendments to these goals and objectives, the Metro Council shall determine whether amendments to adopted Regional Framework Plan, functional plans or the acknowledged regional UGB are necessary. If amendments to the above are necessary, the Metro Council shall act on amendments to applicable functional plans. The Council shall request recommendations from MPAC before taking action. All amendment proposals will include the date and method through which they may become effective, should they be adopted. Amendments to the acknowledged regional UGB will be considered under acknowledged UGB amendment procedures incorporated in the Metro Code.

If changes to the Regional Framework Plan or functional plans are adopted, affected cities and counties shall be informed in writing of those changes which are advisory in nature, those which recommend changes in comprehensive land use plans and those which require changes in comprehensive plans. This notice shall specify the effective date of particular amendment provisions.

7.10 Environmental Education

Metro is committed to providing education to the community on the principles and foundation of the Regional Framework Plan. In order to maintain the Regional Framework Plan as a living document, it is necessary for the citizenry of the region to understand the decision making mechanisms, the principles that guide sound planning and the effect of decisions and changes on the livability of the community.

Environmental education should provide an unbiased information source that does not advocate for one viewpoint. Environmental education should invite and involve diverse viewpoints and give everyone

opportunities to participate in all aspects of the learning process. This will ensure that education for the Regional Framework Plan is enriched by and relevant to all points of view.

Metro shall develop and implement an ongoing partnership with cultural, environmental and educational organizations to keep abreast of current conditions and maintain the Regional Framework Plan as a forward-looking document. Such a partnership shall coordinate with local programs for supporting education that involves citizens in the analysis of critical environmental issues related to regional growth and environmental quality. The goal of education is to help citizens gain awareness, knowledge and skills to make connections between the issues of regional growth and the creation of livable communities.

The key objectives of education are to provide citizens with the information needed and the opportunity to:

- analyze critical environmental issues related to regional growth;
- understand the effects of their choices on the urban and natural systems used to manage growth, natural areas and transportation, process waste and provide water and energy;
- engage in decisions which affect the livability of their communities;
- take actions which reflect the region's plan.
- cooperatively develop strategies with citizens to provide regional environmental education;
- identify cultural, environmental and educational organizations which currently provide education about issues related to livable communities;
- identify sites and facilities that currently and potentially provide education about issues related to livable communities;
- function as a clearinghouse for educational organizations and facilitate educational partnerships in the community.

If the goals and policies of the Regional Framework Plan are to be achieved, individuals and communities must be enabled to challenge and discuss the rural and urban systems and policies responsible for creating livable communities.

Background

Goal I of the Regional Urban Growth Goals and Objectives, originally adopted in 1991 and now wholly incorporated in this document, provides the process for determining regional policies which includes key participants, roles and procedures to be used.

Citizen involvement in the discussion of issues must be paramount in any public decision, and regional issues are no different. Although having detailed discussions with each and every of the 1.2 million

residents of the region on any one issue is not practicable, responsibility for determining the general public's values and interests as well as responding to individual citizen's concerns is one which Metro must take seriously and continue to find ways to improve. An advisory committee, the Metro Committee for Citizen Involvement, is the primary resource for determining how best to hear citizen concerns. There are myriad tools to determine the general public's opinions and values, including newsletters that describe the choices related to upcoming public decisions, open houses, presentations to neighborhood and citizen participation organizations, Metro's web page, random surveys and related public opinion measuring instruments.

Methods for hearing individual concerns are the Metro hotline, e-mail, written mailed correspondence to the Metro Council and its members and testimony at public hearings. When the Metro Council is making a decision, materials are provided to the Metro Council and any interested parties and included in the public hearing record. (For example, oral comments recorded on the hotline are transcribed and forwarded to the Metro Council, as are any written correspondence.)

Implementation of region-wide policies is dependent on actions by the cities, counties and special districts of the region. In order to ensure that local jurisdictions have an opportunity to discuss, debate and recommend regional policies, two advisory committees have been created, comprised primarily of elected officials of the region. These two committees are the Metro Policy Advisory Committee (MPAC) and the Joint Policy Advisory Committee (JPACT). MPAC deals primarily with land use issues of regional significance, while JPACT addresses regional-scale transportation concerns. Prior to making regional land use or transportation decisions, the Metro Council seeks recommendations from one, or in some cases both, of these committees. In addition, MPAC and JPACT have technical committees (MTAC and TPAC) which serve the policy committees, providing technical analysis and recommendations as requested. These technical committees are comprised of the chief planning and transportation staffs from throughout the region, as well as citizen members and members from various interest groups.

Analysis

There are two major issues with regard to management of the Regional Framework Plan. These are: 1) coordination of the elements of the Regional Framework Plan and, 2) maintaining the Regional Framework Plan as a document which continues to address the demands of a changing future.

Coordination and integration of the various elements is an important, yet difficult task. This Regional Framework Plan addresses many disparate elements. Coordination is pursued by several means. First, by listing all of the objectives and policies in one document, everyone can see the various elements.

Second, the Growth Concept map illustrates how the various elements - land use, transportation, open space, etc. are expected to develop or be conserved on the landscape.

However, implementation of the Growth Concept will inevitably result in some conflicts. Economic theory suggests that it is not possible to maximize for all values simultaneously. If all of the goals and objectives could be expressed in dollars or some other common measurement, then total merit to the region of a plan could be calculated. However, such a common measure is not available and at least each element, if not portions of each element are attempts to articulate very different, particular values, such as mobility or protection of the natural habitat, etc.

What is available is a much more common sense approach. Each element expresses policies and values to which the region aspires. As implementation of the plan is accomplished by the cities, counties and special districts of the region, conflicts between these will inevitably arise. In most cases, these conflicts will be resolved at the local level, although recurring conflicts or conflicts with region-wide significance may be addressed by Metro. In either case, the process for such resolution will be a public one. That is, the conflict will be described, technical information provided, the public will have the opportunity to make their concerns known and then the public's duly elected officials (city or county if at the local level or, after consultation with local jurisdictions, the Metro Council if at the regional level) will make a decision. While any one party may find fault with any one decision, and may appeal a decision to the courts, it is important to remember that in most cases it is impossible to maximize for all values, and the decisions before elected officials are ones in which conflicting values are expressed. By making these decisions in a public forum by a public body serving the public, a democratic, though not always quick, decision is made. It is also the way in which conflicting values can be sorted out.

Another management issue is understanding how the policies are affecting the region and understanding when changes in conditions in the region may call for changes in the Regional Framework Plan. Sometimes these "points of divergence" are subtle and only years later is it clear that conditions have changed. In other cases, major changes in public attitudes, economic conditions or other factors may be clearly evident. One way to help understand what is happening is to institute a system of measurements to gauge the success, or lack thereof, of regional policies. Performance measures can be used to periodically measure factors relating to growth capacity, housing affordability, open space conservation and other conditions which are of public concern and for which, in some cases, small changes may signal greater future problems. These measurements can also help the region assess its value choices and may be a basis for emphasizing or reducing the priority of any one value compared with another.

Following are the management policies that should be pursued as Metro develops, implements and monitors compliance with the policies contained in the previous chapters.

Implementation

Chapter 8: Implementation

The following tables list each Regional Framework Plan policy, and identify the related implementation recommendation or requirement. Each Regional Framework Plan policy which is identified as implemented by the acknowledged UGB procedures in Metro Code Chapter 3.01 or by an Urban Growth Management Functional Plan provision is applicable to city and county plans to the extent described in each of those Appendices of this Plan. Appendix A: Urban Growth Management Functional Plan (Metro Code Chapter 3.07) and Appendix B: Urban Growth Boundary and Urban Reserve Procedures (Metro Code 3.01) are hereby incorporated by reference into this Regional Framework Plan.

Section 5(2)(e) of the 1992 Metro Charter directs Metro to adopt implementing ordinances in order to require city and county comprehensive plans and implementing regulations to comply with the Regional Framework Plan. The implementing ordinances shall be consistent with the provisions of the Charter and Oregon Law and shall address rules and procedures for enforcing those provisions of this Regional Framework Plan identified as requirements that are applied directly to cities and counties. Those requirements are identified as functional plans in this Regional Framework Plan.

Implementation procedures for enforcing those provisions of this Regional Framework Plan which are dentified as functional plans ~~required by Metro Charter Section 5(2)(e)~~ shall be addressed as follows:

1. The effective date section of the ordinance adopting this Plan requires city and county comprehensive plans and land use regulations to comply with this Plan within two years after adoption and compliance acknowledgment of this Plan.

2. The Metro Council shall develop provisions in an ordinance for Metro Council adjudication of and determination of consistency of local comprehensive plans with this Plan.

3. The effective date section of the ordinance adopting this Plan requires each city and county within the jurisdiction of Metro to begin making its land use decisions consistent with this Plan one year after compliance acknowledgment of this Plan by the Land Conservation and Development Commission until its comprehensive plan has been determined to be consistent with this Plan.

4. The Metro Council shall develop provisions in an ordinance allowing the Council to require changes in local land use standards and procedures if the Council determines

changes are necessary to remedy a pattern or practice of decision-making inconsistent with this Plan.

The provisions of the Urban Growth Management Functional Plan (Metro Code Chapter 3.07) adopted as a component of this Regional Framework Plan shall be subject to Metro's adopted implementing ordinances as provided in Section 5.(2)(e) of the Metro Charter. However, the requirements of the Functional Plan shall continue to have force and effect independently of this Framework Plan, and the requirements of the functional plan shall be effective on the dates specified therein, based on Metro's statutory authority in ORS 268.390. After acknowledgment of this Regional Framework Plan, requirements for changes in comprehensive plans and land use regulations initiated under Metro's statutory and charter authorities shall be ~~included~~required to be approved as amendments to ~~in~~ this Plan in order to become effective.

Implementation Method for the
Regional Framework Plan

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Land Use	
1.1 Urban Form	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria Metro Code Chapter 3.06 3.06.010 Policy & Purpose: Designating Functional Planning Areas
1.2 Built Environment	Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 1 to 7 Title 2 Regional Parking Policy: Section 1 to 2 Title 3 Water Quality & Flood Management Conservation: Section 1 to 7 Title 4 Retail in Employment and Industrial Areas: Section 1 to 3 Title 5 Neighbor Cities and Rural Reserves: Section 1 to 4 Title 6 Regional Accessibility: Section 1 to 4 Title 7 Affordable Housing: Section 1 to 3 Title 8 Compliance Procedures: Section 1 to 7
1.3 Housing	Metro Code Chapter 3.03 3.03.010 Authority and Purpose Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 1 to 7 Title 7 Affordable Housing: Section 1 to 3 <u>New requirements withg fair share targets for each jurisdiction as well as fair share plan to be prepared by each jurisdiction.</u> <u>Metro to monitor supply of affordable housing and land supply</u> <u>Metro to modify UGB code for preferential UGB expansions for affordable housing projects.</u>

Framework Policy	Implementation Recommendation(s) or Requirements
Land Use (cont.)	
1.4 Schools (issues to be considered in the development of the functional plan)	Metro Facilitation of Coordination - Metro shall create a standing Advisory Committee on School Facility Planning Coordination to advise Metro on implementation of Framework Plan School Facilities policies. The Committee shall prepare and implement an action plan for: 1. Establishing Local School Facilities Site Planning Committees for school districts in the Region serving 5,000 or more students. Committees shall include local school board, local government and local business representatives. The Committees shall advise their local governments on whether local comprehensive plans provide for adequate school facilities. **Outside the Metro Urban Growth Boundary:** Metro Code Chapter 3.01.012 (11) & 3.01.015(d) Urban Reserve Plan and coordination with school districts **Inside the Metro Urban Growth Boundary:** Population and Growth Projections - Upon adoption of the Regional Framework Plan, Metro shall provide to local governments a forecast of population by subarea. Local governments and school districts shall utilize these population forecasts, or mutually agreed upon amended population projections, as a basis for their facilities planning. Schools and Parks - Park providers and school districts, in preparing capital improvement plans and land acquisitions, shall, to the maximum extent feasible, coordinate their site selections and facility plans with one another. Wherever feasible, contiguous park/school sites shall be obtained by means of shared purchase or options, land exchange or other means. Regional School Site Acquisition Fund - In order to assure that school sites exist within our communities that encourage walking or biking for elementary and middle school students and connect to public transit whenever possible for high school and middle school students, Metro shall establish a region-wide school site acquisition fund using a variety of funding sources. The funds will be distributed to actual need and utilize specific criteria. Schools and Urban Design - In allocating regional and local funds to acquire school and/or school/park sites, Metro and local governments shall, in part, base any allocation to sites which reflect regional and local policies for urban design. School sites that meet more of the following desired criteria may receive greater funding: 1. Require less land area than standard practice due to multi-story construction, mixed uses in building and shared use of playing fields with local park providers;

Framework Policy	Implementation Recommendation(s) or Requirements
Land Use (cont.)	
1.4 Schools (cont.)	2. Located sufficiently close to concentrations of population in the school's attendance area so as to minimize the need for school bus transportation or private auto transportation; 3. Well connected by the local street system and by established or planned pedestrian and bicycle ways 4 High school sites that are well served by established or planned transit routes (need to include a Tri-Met coordination requirement). 5. Multi-school district collaborative projects. Local Government Connection 1. Large-scale development or redevelopment in local jurisdictions shall include discussions with the local school district to ensure that sufficient schools are provided for the children generated by such development or redevelopment. 2. Whenever possible, local jurisdictions shall prioritize development applications and streamline processes for public agencies, including schools, to assure that public needs are met without jeopardizing opportunities for citizen input or oversight for health and safety or environmental protection. 3. Whenever possible, local jurisdictions shall partner (including funding) with school districts to jointly use school sites for the public good (such as combined libraries, parks, connections with local services such as police, neighborhood centers, senior centers, etc.) 4. In order to help assure transportation connections with public buildings, local governments shall prioritize their transportation spending to assure bicycle and pedestrian connections are provided and the local road and land use plans encourage Tri-Met service (Metro shall recognize these efforts as it allocates federal transportation dollars.) 5. As a part of compliance with the Urban Growth Management Functional Planning effort, local jurisdictions shall engage local school districts and inform them of any density increases which may affect school populations. 6. Local governments and school districts shall review codes related to the construction of schools. Performance Measures - Metro, after consultation with the school districts, shall establish performance measures related to these school policies which shall help determine whether or not we are meeting state goals. Such measures may include number of elementary and middle school children who walk or bike to school, number of high school students who take public transit and amount of land used for new schools.

~~Regional Framework Policy~~	~~Implementation Recommendation(s) or Requirements~~
~~Land Use (cont.)~~	
~~1.4 Schools~~	~~Outside the Metro urban growth boundary:~~ ~~Metro Code Chapter 3.01.012 (11) & 3.01.015(d)~~ ~~Urban Reserve Plan and coordination with school districts~~

~~Inside the Metro urban growth boundary:~~

~~Population and Growth Projections - Upon adoption of the Regional Framework Plan, Metro shall provide to local governments a forecast of population by subarea. Local governments and school districts shall utilize these population forecasts, or mutually agreed upon amended population projections, as a basis for their facilities planning.~~

~~Schools and Parks - Park providers and school districts, in preparing capital improvement plans and land acquisitions, shall, to the maximum extent feasible, coordinate their site selections and facility plans with one another. Wherever feasible, contiguous park/school sites shall be obtained by means of shared purchase or options, land exchange or other means.~~

~~Regional School Site Acquisition Fund - In order to assure that school sites exist within our communities that encourage walking or biking for elementary and middle school students and connect to public transit whenever possible for high school and middle school students, Metro shall establish a region wide school site acquisition fund using a variety of funding sources. The funds will be distributed to actual need and utilize specific criteria.~~

~~Schools and Urban Design - In allocating regional and local funds to acquire school and/or school/park sites, Metro and local governments shall, in part, base any allocation to sites which reflect regional and local policies for urban design. School sites that meet more of the following desired criteria may receive greater funding:~~
~~1. Require less land area than standard practice due to multi story construction, mixed uses in building and shared use of playing fields with local park providers;~~
~~2. Located sufficiently close to concentrations of population in the school's attendance area so as to minimize the need for school bus transportation or private auto transportation;~~
~~3. Well connected by the local street system and by established or planned pedestrian and bicycle ways;~~

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Land Use (cont.)	
1.4 Schools (continued)	4. High school sites that are well served by established or planned transit routes (need to include a Tri-Met coordination requirement). 5. Multi-school district collaborative projects. Local Government Connection 1. Large-scale development or redevelopment in local jurisdictions shall include discussions with the local school district to ensure that sufficient schools are provided for the children generated by such development or redevelopment. 2. Whenever possible, local jurisdictions shall prioritize development applications and streamline processes for public agencies, including schools, to assure that public needs are met without jeopardizing opportunities for citizen input or oversight for health and safety or environmental protection. 3. Whenever possible, local jurisdictions shall partner (including funding) with school districts to jointly use school sites for the public good (such as combined libraries, parks, connections with local services such as police, neighborhood centers, senior centers, etc.) 4. In order to help assure transportation connections with public buildings, local governments shall prioritize their transportation spending to assure bicycle and pedestrian connections are provided and the local road and land use plans encourage Tri-Met service (Metro shall recognize these efforts as it allocates federal transportation dollars.) 5. As a part of compliance with the Urban Growth Management Functional Planning effort, local jurisdictions shall engage local school districts and inform them of any density increases which may affect school populations. 6. Local governments and school districts shall review codes related to the construction of schools. Performance Measures - Metro, after consultation with the school districts, shall establish performance measures related to these school policies which shall help determine whether or not we are meeting state goals. Such measures may include number of elementary and middle school children who walk or bike to school, number of high school students who take public transit and amount of land used for new schools.

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Land Use (cont.)	
1.5 Economic Opportunity	Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 5 to 7 Title 4 Retail in Employment and Industrial Areas: Section 1 to 3
1.6 Urban Vitality	Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 1 to 7
1.7 Growth Management	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria Metro Code Chapter 3.06 3.06.010 Policy & Purpose: Designating Functional Planning Areas Urban Growth Management Functional Plan Title 1 to 7

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Land Use (cont.)	
1.8 Urban/Rural Transition	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria Metro Code Chapter 3.06 3.06.010 Policy & Purpose: Designating Functional Planning Areas Urban Growth Management Functional Plan Title 5 Neighbor Cities and Rural Reserves: Section 1 to 4
1.9 Developed Urban Land	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria Metro Code Chapter 3.06 3.06.010 Policy & Purpose: Designating Functional Planning Areas Urban Growth Management Functional Plan Title 1 to 7
1.10 Urban Growth Boundary	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria
1.11 Urban Design	Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 1 to 3 Title 6 Regional Accessibility: Section 1 to 3

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Land Use (cont.)	
1.12 Neighbor Cities	Title 5 Neighbor Cities and Rural Reserves: Section 1 to 4 and Signed Intergovernmental Agreements
1.13 Protection of Agriculture and Forest Resource Lands	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria
1.14 Growth Concept	Urban Growth Management Functional Plan Title 1 Requirements for Housing and Employment: Section 1 to 7 Title 2 Regional Parking Policy: Section 1 to 2 Title 3 Water Quality and Flood Management Section 1 to 7 Title 4 Retail in Employment and Industrial Areas: Section 1 to 3 Title 5 Neighbor Cities and Rural Reserves: Section 1 to 4 Title 6 Regional Accessibility: Section 1 to 4 Title 7 Affordable Housing: Section 1 to 3

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Transportation	
2.1 Intergovernmental Coordination	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 5 Neighbor Cities and Rural Reserves: Section 3
2.2 Consistency between Land Use and Transportation Planning	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 1 to 4
2.3 Public Involvement	New - To be developed as part of update to Transportation Planning Public Involvement Policy Metro Code Chapter 2.12 2.12.010 Office of Citizen Involvement: Creation and Purpose
2.4 System Objectives	New - To be developed as part of 1998 Regional Transportation Plan
2.5 Transportation Finance	New - To be developed as part of 1998 Regional Transportation Plan
2.6 Urban Form	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 1 to 4

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Transportation (cont.)	
2.7 Jobs/Housing Balance	New - To be developed as part of 1998 Regional Transportation Plan
2.8 Transportation Education	New - To be developed as part of 1998 Regional Transportation Plan
2.9 Barrier-Free Transportation	New - To be developed as part of 1998 Regional Transportation Plan
2.10 Transportation Balance	New - To be developed as part of 1998 Regional Transportation Plan
2.11 Street Design	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 1 to 3
2.12 Motor Vehicle Transportation	New - To be developed as part of 1998 Regional Transportation Plan
2.13 Public Transportation	New - To be developed as part of 1998 Regional Transportation Plan
2.14 Pedestrian Transportation	New - To be developed as part of 1998 Regional Transportation Plan

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Transportation (cont.)	
2.15 Bicycle Transportation	New - To be developed as part of 1998 Regional Transportation Plan
2.16 Freight Movement	New - To be developed as part of 1998 Regional Transportation Plan
2.17 Parking Management	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 2 Regional Parking Policy: Section 1 to 2
2.18 Transportation Demand Management	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 4.A.
2.19 Transportation System Management	New - To be developed as part of 1998 Regional Transportation Plan
2.20 Right-of-Way Opportunities	New - To be developed as part of 1998 Regional Transportation Plan
2.21 Adequacy of Transportation Facilities	New - To be developed as part of 1998 Regional Transportation Plan

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Transportation (cont.)	
2.22 Urban to Urban Travel on Rural Routes	New - To be developed as part of 1998 Regional Transportation Plan
2.23 Recreational Travel and Tourism	New - To be developed as part of 1998 Regional Transportation Plan
2.24 Natural Environment	New - To be developed as part of 1998 Regional Transportation Plan
2.25 Water Quality	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 3 Water Quality and Flood Management Section 1 to 4
2.26 Clean Air	New - To be developed as part of 1998 Regional Transportation Plan
2.27 Energy Efficiency	New - To be developed as part of 1998 Regional Transportation Plan
2.28 Motor Vehicle Level of Service	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 4.B.

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Transportation (cont.)	
2.29 Transit Level of Service	New - To be developed as part of 1998 Regional Transportation Plan
2.30 Local Street Connectivity	New - To be developed as part of 1998 Regional Transportation Plan Urban Growth Management Functional Plan Title 6 Regional Accessibility: Section 3

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Parks and Open Spaces	
3.1 Inventory of Park Facilities and Inventory of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways	***(to be developed; refer to Appendix D)*** Draft of Implementation Measures to be Revised through Discussions with Greenspaces Technical Advisory Committee.
3.2 Protection of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways	***(to be developed; refer to Appendix D)***
3.3 Management of the Publicly - Owned Portion of the Regional System of Parks, Natural Areas, Open Spaces, Trails and Greenways	***(to be developed; refer to Appendix D)***
3.4 Protection, Establishment and Management of a Regional Trails System	***(to be developed; refer to Appendix D)***
3.5 Provision of Community and Neighborhood Parks, Open Spaces, Natural Areas, Trails and Recreation Programs	***(to be developed; refer to Appendix D)***
3.6 Participation of Citizens in Environmental Education, Planning, Stewardship Activities and Recreational Services	***(to be developed; refer to Appendix D)***

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Water Management	*All implementation methods to be developed; see appendix E.*
4.1 General Policy Direction	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan Chapter XII Recommended Final Plan Concept and Implementation Actions
	(to be developed)
4.2 Process	Regional Water Supply Plan Chapter XII Recommended Final Plan Concept and Implementation Actions
	(to be developed)
4.3 Efficient Use of Water	Regional Water Supply Plan Chapter XII Table XII - 1 p. 256
	(to be developed)
4.4 Water Supply Shortages	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan Chapter XII Table XII - 1 p. 256
	(to be developed)
4.5 Impacts of Catastrophic Events	Regional Water Supply Plan Chapter XII Table XII - 1 p. 256
	(to be developed)
4.6 Water Quality	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan Chapter XII Table XII - 1 p. 257, 269-271, and 275
	(to be developed)
4.7 Economic Costs and Cost Equity	Regional Water Supply Plan Chapter XII Table XII - 1 p. 256
	(to be developed)
4.8 Environmental Stewardship	Regional Water Supply Plan Chapter XII Table XII - 1 p. 257

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Water Management (cont.)	*All implementation methods to be developed; see appendix E.*
4.9 Growth and Land Use Planning	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan
	(to be developed)
4.10 Flexibility to Deal with Future Uncertainty	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan
	(to be developed)
4.11 Ease of Implementation	Regional Water Supply Plan
	(to be developed)
4.12 Operation Flexibility	Regional Water Supply Plan
	(to be developed)
4.13 Overall Watershed Management	Regional Water Supply Plan
	(to be developed)
4.14 Water Quality Goals	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan Chapter XII Table XII - 1 p. 257
	(to be developed)
4.15 Stormwater Management	to be developed (identified as a next step)
	(to be developed)
4.16 Urban Planning and Natural Systems	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4
	(to be developed)

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Water Management (cont.)	*All implementation methods to be developed; see appendix E.*
4.17 Water Quality Protection	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 1 to 4 Regional Water Supply Plan
	(to be developed)
4.18 Fish and Wildlife Habitat Conservation Area	Urban Growth Management Functional Plan Title 3 Water Quality & Flood Management Conservation: Section 5

Regional Framework Policy	Implementation Recommendation (s) or Requirements
Natural Hazards	
5.1 Earthquake Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.2 Flood Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.3 Landslide Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.4 Volcanic Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.5 Wildland-Urban Interface Fire Mitigation Measures	To be developed. Refer to Appendix G.
5.6 Severe Weather Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.7 Biological Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.8 Other Hazard Mitigation Measures	To be developed. Refer to Appendix G.
5.9 Natural Disaster Response Coordination	To be developed. Refer to Appendix G.

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Clark County	
Pending	*(to be developed)*

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Environmental Education	
Pending	*(to be developed)*

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Funding & Fiscal Strategy	
Pending	*(to be developed*

Regional Framework Policy	Implementation Recommendation(s) or Requirements
Management	
7.1 Citizen Participation	Metro Code Chapter 2.12 2.12.010 Office of Citizen Involvement: Creation and Purpose
7.2 Metro Policy Advisory Committee	see Metro Charter
7.3 Applicability of Regional Framework Plan Policies	pursuant to Oregon Revised Statute 268.380(1)
7.4 Urban Growth Boundary Plan	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria
7.5 Functional Plans	Metro Code Chapter 3.06 3.06.010 Policy & Purpose: Designating Functional Planning Areas see Metro Charter
7.6 Periodic Review of Comprehensive Land Use Patterns	Metro Code Chapter 3.01 3.01.005 UGB Amendment Procedures 3.01.020 Legislative Amendment Criteria
7.7 Implementation Roles	as stated in the Regional Framework Plan
7.8 Performance Measures	Urban Growth Management Functional Plan Title 9 Performance Measures: Section 1 to 2
7.9 Monitoring and Updating	as stated in the Regional Framework Plan