# Eugene/Springfield Metropolitan Area Urban Reserve Analysis and Alternatives Report

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# Acknowledgements

This study was conducted by an intergovernmental staff team. The team included representatives from Eugene, Springfield, Lane County and Lane Council of Governments. Lane Council of Governments prepared this background document.

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Note: Maps associated with this report can be viewed at public workshops, public hearings, and at the offices of Lane Council of Governments (LCOG). Please contact Carol Heinkel, Principal Planner, 541-682-4107, for more information.

### Introduction

This report is one product of the Urban Reserve Rule Analysis. The Urban Reserve Rule Analysis is a work task in the Periodic Review of the *Eugene/Springfield Metropolitan Area General Plan*.

This background report presents the policy, land demand and land analysis related to urban reserves in the Eugene/Springfield area. In the policy analysis section state and local policies related to urban reserve areas are presented. The land demand analysis contains population projections, housing demand and land demand for 10, 20 and 30 years beyond the 20-year Urban Growth Boundary (UGB) time frame. The analysis of land nearby the Eugene/Springfield UGB presents information on land meeting the state criteria for inclusion in an urban reserve area, public service availability, and potential constraints to urban development. Discussion of the results of the analysis, the advantages and disadvantages to having urban reserve areas and the present status of the study are contained in the Summary section of this report.

#### What is the Purpose of the Urban Reserve Analysis?

The purpose of this Study is to review the existing urban reserve areas in light of the new Urban Reserve administrative rule criteria and revise urban reserve areas and *Metro Plan* policy consistent with the criteria.

#### What are Urban Reserve Areas?

Urban reserves areas are defined as lands outside an urban growth boundary (UGB) identified as the highest priority for inclusion in the UGB when additional urbanizable land is needed. The current, adopted *Metro Plan* diagram designates three areas as Urban Reserve: East Thurston, east of Springfield, and two areas outside Eugene: Willow Creek and an area north of Irvington Road. These Urban Reserve Areas are located beyond the UGB and are not needed to satisfy urban demands for the next 20 years. The existing urban reserves were included in the Metro Plan in 1982, prior to the Land Conservation and Development Commission's (LCDC's) adoption of the Urban Reserve OAR.

#### Why are we reviewing the existing Metro Plan Urban Reserve Areas?

As part of the state mandated periodic review of the Eugene-Springfield Metro Plan an evaluation was conducted. The evaluation concluded that the existing *Metro Plan* urban reserves meet only some of the requirements of State Administrative Rule, OAR 660-021. It found the analysis in the Technical Supplement to the *Metro Plan* was not consistent with the analysis required in the rule; and new wetland inventory information needed to be addressed. The goal of the urban reserve area study is to comply with all of the provisions of the rule.

#### What are the *Metro Plan* and Periodic Review?

The *Metro Plan* is the area's long-range, comprehensive land use plan that contains the vision for the future of the Eugene-Springfield community. The Plan accomplishes this vision by establishing general planning policies and land use allocations. It serves as the basis for the coordinated development of programs concerning the use and conservation of physical resources; provision of public services and facilities; and development and redevelopment of the metro area.

The *Metro Plan* was acknowledged by the Oregon Land Conservation and Development Commission (LCDC) in 1982. As part of the state planning guidelines, the *Metro Plan* is periodically reviewed to ensure that it is consistent with new laws and rules and that it addresses changing local conditions. This process is referred to as **Periodic Review**. The last Periodic Review of the *Metro Plan* was completed in 1987. The Residential Land and Housing Study is one of the work tasks included in the current *Metro Plan* Periodic Review Work Program, approved by the Oregon Department of Land Conservation and Development (DLCD) in May 1995.

#### What does State law require in relation to Urban Reserve Areas?

The new state administrative rules make the establishment of Urban Reserves a **choice** of the cities/county. Urban Reserves are not a requirement of adopted comprehensive plans.

If a city chooses to have Urban Reserve areas, the areas must include an amount of land to be at least a ten, and not more than a 30-year supply of developable land beyond the 20-year time frame of the plan. Local governments must specify the number of years the Urban Reserve areas are intended to accommodate. Findings must be made explaining that the demand meets the specified time frame beyond the 20-year UGB time frame.

State law requires identification of Urban Reserve land to be based upon factors specified in Goal 14. The Urban Reserve analysis must examine and provide for:

- orderly and economic provision of public facilities and services;
- maximum efficiency of land uses within and on the fringe of the existing urban area,
- environmental, energy, economic and social consequences
- retention of agricultural land as defined, with Class I being the highest priority for retention and Class VI the lowest priority,
- compatibility of the proposed urban uses with nearby agricultural activities.

Inclusion of land as an Urban Reserve Area must be based upon a hierarchy from highest priority, nonresource land, to lowest priority, productive resource land. Cities must first study land adjacent to or nearby the UGB (wholly or partially within ¼ mile) for inclusion based on the following criteria:

1<sup>st</sup> Priority – Land adjacent to or nearby a UGB designated by the County as an exception area or nonresource land. This may also include resource land surrounded by exception areas unless those lands are high value crop land or prime or unique agricultural land.

2<sup>nd</sup> Priority – If land in the 1<sup>st</sup> Priority is not adequate to meet land need, the second priority is land designated as marginal land (ML).

3<sup>rd</sup> Priority – If land in a higher priority is not adequate to meet future land needs, third priority goes to land designated agriculture or forestry. Higher priority should be given to land with soils that are of lower agricultural and timber production capability.

Land of lower priority for Urban Reserve use, as described above, may be included if land of higher priority is found to be inadequate to meet land need for one or more of the following reasons:

- Future services could not reasonably be provided to higher priority land area due to topography or other physical constraint.
- Maximum efficiency of land uses within a proposed Urban Reserve area requires inclusion of lower priority lands in order to include or provide service to higher priority lands.

#### What type of land will the Urban Reserves accommodate?

The existing Urban Reserve Areas were assumed to develop as low density residential. Staff are also assuming the Urban Reserves will develop as residential with a mix of housing types and supporting land uses such as neighborhood commercial to support land efficiencies.

# **State and Local Policy Framework For Urban Reserves**

In Oregon, cities manage growth to prevent urban sprawl, to provide for the efficient delivery of public services, and to preserve valuable resource lands. Oregon cities and counties manage growth through the implementation of state laws and local policies that guide the following processes.

- Determination of Urban Reserve Areas
- Urban Growth Boundary (UGB) expansion
- Local land development regulations and zoning
- Intergovernmental coordination and agreements

In 1992, the Land Conservation and Development Commission adopted a new administrative rule, OAR 660 Division 21, authorizing and defining urban reserves. This rule was amended in 1999. One of the work tasks in the current Eugene-Springfield Periodic Review Work Program is to evaluate the existing urban reserves for consistency with this OAR and to revise the urban reserves as needed to comply with the rule. This summary describes current state law and local policy pertaining to urban reserves.

#### What are Urban Reserves?

OAR 660-021-0010, Definitions, defines urban reserves as:

"Urban Reserve Area": Lands outside of an urban growth boundary identified as highest priority for inclusion in the urban growth boundary when the boundary is expanded in accordance with Goal 14.

The *Metro Plan* includes a description of Urban Reserve in the section on the Plan Diagram which reads:

#### Urban Reserve

These rural areas are located beyond the urban growth boundary and are not needed to satisfy urban demands associated with a population of 293,700. These areas have been identified, based on current trends and policies, as areas for urban development beyond the planning period. Certain public utilities, services, and facilities, particularly water, sanitary sewers, and storm sewers, can be provided to areas designated urban reserve most economically, following extension from areas within the urban growth boundary, because of topographic features. Designating these areas at this time will assist in the preparation of capital improvement programs that extend beyond the planning period of this Plan.

Urban levels of public utilities, facilities, and services shall be designed and sized to serve urban reserve areas; capacity and financing plans shall be calculated to serve urban reserve lands. For purposes of future planning, urban reserve areas shall be assumed to develop as low density residential at densities used in preparation of this Plan. Urban

level services shall not be extended to urban reserve areas until they are included within the urban growth boundary through future amendments or updates.

Development, land divisions, and public improvements (such as street design) in areas designated urban reserve shell be designed and regulated so as not to preclude possible subsequent decisions to provide for future development at urban densities. Until they are added to the urban growth boundary, urban reserve areas shall be designated to protect natural resource values. (Metro Plan, page II-E-14).

The draft *Eugene-Springfield Metropolitan Area Public Facilities and Services Plan* proposes the following definition as a new definition to be added to the *Metro Plan* Glossary:

<u>Urban reserve area</u>: Rural areas located beyond the urban growth boundary not needed to satisfy urban demands associated with the 20-year planning population.

#### **Determination of Urban Reserve Areas**

On March 22, 2000 new administrative rules became effective related to urban reserves. These new rules make the establishment of urban reserves a choice of the cities/county. They are not required.

#### OAR 660-021-0021

Cities and counties cooperatively, and the Metropolitan Service District for the Portland Metropolitan Area urban growth boundary, may designate urban reserve areas under the requirements of this rule, in coordination with special district listed in OAR 660-012-0050(2) and other affected local governments, including neighboring cities within two miles of the urban growth boundary. Where urban reserve areas are adopted or amended, they shall be shown on all applicable comprehensive plan and zoning maps, and plan policies and land use regulations shall be adopted to guide the management of these areas in accordance with requirements of this division.

#### OAR 660-021-0030(1)

Urban reserve areas shall include an amount of land estimated to be at least a 10-year supply and no more than a 30-year supply of developable land beyond the 20-year time frame used to establish the urban growth boundary. Local governments designating urban reserves shall adopt findings specifying the particular number of years over which designated urban reserves are intended to provide a supply of land.

If a city chooses to have urban reserve areas, the areas must include an amount of land to be at least a ten and not more than 30 year supply of developable land beyond the 20-year time frame. Local governments must specify the number of years the urban reserve areas are intend to accommodate. Findings must be made explaining that the demand meets the specified time frame beyond the 20-year UGB time frame.

#### OAR 660-021-0030(2)

Inclusion of land within an urban reserve area shall be based upon the locational factors of Goal 14 and a demonstration that there are no reasonable alternatives that will require less, or have less effect upon, resource land.

Inclusion of urban reserve land is based on locational factors of Goal 14 and a demonstration that there are no reasonable alternatives that will require less or have less affect upon resource land.

#### These locational factors include:

- orderly and economic provision for public facilities and services;
- maximum efficiency of land uses within and on the fringe of the existing urban area,
- environmental, energy, economic and social consequences
- retention of agricultural land as defined, with Class I being the highest priority for retention and Class VI the lowest priority,
- compatibility of the proposed urban uses with nearby agricultural activities.

Cities must first study land adjacent or nearby (wholly or partially within ¼ mile) the UGB for inclusion based on the following criteria:

1<sup>st</sup> Priority – Land adjacent or nearby a UGB identified as an exception area or nonresource land. May also include land resource land surrounded by exception areas unless high value crop area or prime or unique agricultural land.

2<sup>nd</sup> Priority – If land in 1<sup>st</sup> Priority not adequate to meet land need, second priority is marginal land (ML) only Lane and Washington County have marginal land.

3<sup>rd</sup> Priority – If land in higher priority is not adequate to meet land need, third priority goes to land designated agriculture or forestry. Higher priority should be given to land with soils that are of lower capability as measured by capability classification system – which relates to ag land or cubic foot site class – which relates to growing trees.

Land of lower priority, as described above, may be included if land of higher priority is found to be inadequate to meet land need for one or more of the following reasons:

- Future services could not reasonably be provided to higher priority land area due to topography or other physical constraint.
- Maximum efficiency of land uses within proposed urban serves area requires inclusion of lower priority lands in order to include or provide service to higher priority lands.

Findings must be developed describing why other areas were not chosen. Findings and conclusions concerning above considerations shall be adopted by jurisdictions affected.

#### **Analysis of Existing Urban Reserves**

There are three areas designated Urban Reserve in the *Metro Plan* diagram, located outside the UGB in East Thurston, Willow Creek, and north of Irvington Drive in north Eugene. All three of these areas are located within the Plan boundary of the *Metro Plan*. Territory within the Metro Plan Boundary serves as an interface between the area encompassed in the *Metro Plan* and areas subject to the *Lane County Rural Comprehensive Plan*.

When the *Metro Plan* was adopted in 1982, the existing urban reserves were designated to assist in the preparation of capital improvement programs that extend beyond the planning period of the *Metro Plan*. However, the *Metro Plan* recognized the need for further analysis of future urban growth areas.

31. The Mohawk Valley, LCC Basin, and Urban Reserve areas were identified in the Metropolitan Plan as alternatives for urban growth boundary expansion. The Awbrey-Meadowview area has been identified as another alternate growth area. Prior to initiation of the next major Metropolitan Plan update, an intergovernmental growth study, jointly funded by all three metropolitan area governments, shall be completed. This study will include a comparative analysis of public costs and policy implications of balanced growth into each of these alternative areas. (Metro Plan, Policy 31, page II-B-9).

The *Metropolitan Plan* provides that urban reserve areas within the Plan boundary are identified as areas for expansion of the UGB, are to be included in public facility planning processes, and, in order for Urban Reserves to develop at urban levels with urban services, they must be included within the UGB.

#### **Local Policy Direction on Future Land Use**

The *Metro Plan* assumed that the existing urban reserves areas would develop as low-density residences at densities assumed in the *Metro Plan* at that time and that they would add approximately 25,000 to 30,000 additional people beyond the projected *Metro Plan* population. For the most part, these areas were designated to protect natural resource values until they were to be added to the UGB.

The Eugene Growth Management Policies were adopted by the Eugene City Council in 1998 and guide capital improvement programming in that city. The policies require that:

Development shall be required to pay the full cost of extending infrastructure and services, except that the city will examine ways to subsidize the costs of providing infrastructure or offer other incentives that support high-density, in-fill, mixed use, and redevelopment. (Policy #14).

*Target publicly-financed infrastructure extensions to support development for higher densities, in-fill, mixed uses, and nodal development.* (Policy #15)

The draft *TransPlan* encourages nodal development, the concentration of higher density housing in close proximity to employment and commercial centers.

#### **Urban Growth Boundary Expansion**

This analysis finds that current state law pertaining to UGB expansions in areas with urban reserves is nearly identical to state law in areas without urban reserves. The primary distinction is that, where urban reserves exist, they must be considered before other lands in making a determination about where to expand the UGB.

#### State Law Pertaining to UGB Expansions In Jurisdictions With Urban Reserves

In determining where to expand the UGB, jurisdictions must look first to designated urban reserves, but they are not limited to urban reserves if they can demonstrate that the particular type of land that is needed cannot be met by lands within an established urban reserve area.

#### **Urban Growth Boundary Expansion**

All lands within urban reserve areas established pursuant to this division shall be included within an urban growth boundary before inclusion of other lands, except where an identified need for a particular type of land cannot be met by lands within an established urban reserve area.

Lands to be included in urban reserves must consider higher priority lands first, but they can include lower priority land if they adopt findings that demonstrate why higher priority lands are inadequate to accommodate the amount of land needed for one or more of the following reasons:

- Future urban services could not reasonably be provided to the higher priority area due to topographical or other physical constraints; or
- Maximum efficiency of land uses within a proposed urban reserve area requires inclusion of lower priority lands in order to include or to provide services to higher priority lands.

The priorities for including land in an urban reserve area are as follows:

- Land adjacent to, or nearby (within ¼ of a mile of), an urban growth boundary and identified in an acknowledged comprehensive plan as an exception area or non-resource land. First priority may include resource land that is completely surrounded by exception areas unless these are high value crop areas as defined in Goal 8 or prime or unique agricultural lands as defined by the United States Department of Agriculture;
- Land designated as marginal land.

• Land designated in an acknowledged comprehensive plan for agriculture or forestry, or both. Higher priority shall be given to land of lower capability as measured by the capability classification system or by cubic foot site class, whichever is appropriate for the current use.

#### **UGB Expansion Analysis With or Without Urban Reserves**

With or without designated urban reserves, Statewide Planning Goal 14 requires a Statewide Planning Goal exception to expand the UGB and allows this only when no other reasonable alternatives exist.

Oregon's statewide planning laws require cities and counties to establish UGBs that will accommodate the 20-year land use needs of the projected population (Goal 14 is contained in Appendix A). In accordance with Goal 14, UGB expansion requests must demonstrate to the Oregon Department of Land Conservation and Development (DLCD) that the expansion meets the following criteria: (a) there is a demonstrated need for the development; (b) there are no suitable sites within the existing UGB on which the development can occur; (c) urban services can be provided; and (d) the proposed amendment is consistent with the Statewide Land Use Goals and Guidelines.

#### Requirements for Expanding a Urban Growth Boundary

ORS 197.296, adopted in 1997, provides specific direction on the conditions that must be met in order to expand a UGB. An ORS 197.296 analysis must be conducted for all UGB expansions, whether or not the area to be included in the UGB is within an urban reserve.

Some of the requirements codified in ORS 197.296 apply only to specific jurisdictions. Jurisdictions subject to the specific requirements in ORS 197.296 include areas:

- " Within any urban growth boundary for a city with a population of 25,000 or more;
- " Within any urban growth boundary with a rate of growth that exceeds the average rate of growth for the state for three of the last five years; and
- " The Portland Metro area.

Each January, Department of Land Conservation and Development (DLCD) staff prepares an updated list of jurisdictions meeting one or more of the above factors. This list is based on the most recent population estimates from the Center for Population Research at Portland State University. In addition, the Land Conservation and Development Commission (LCDC) may waive the requirements of ORS 197.296. LCDC makes waiver decisions in the late winter or early spring of each year. Prior to the commission's decision, DLCD notifies all jurisdictions of the opportunity to request a waiver.

All local jurisdictions on the list prepared annually by DLCD must comply with ORS 197.296 at periodic review or any other legislative review of an urban growth boundary. Determination of when a community is conducting a legislative review of its urban growth boundary is made on a case-by-case basis. Some general guidance follows.

- A community **is** involved in legislative review when it considers a parcel-specific UGB amendment based on either or both of factors one and two under Goal 14. It is not engaged in legislative review if it is considering a boundary adjustment based on any of factors five through seven of Goal 14.
- A community **is** engaged in legislative review when the governing body or its designate undertakes a formal analysis of its buildable lands and housing needs. This may include conduct of these tasks as part of a city council-approved work program. It may also include council consideration of the results of such tasks. A community is also involved in legislative review when there is any public process, such as planning commission or citizen committee review and consideration.
- A community is **not** engaged in legislative review when its staff conducts an update of its buildable lands inventory or housing needs projections exclusively at the staff level. A community is also not involved in a legislative review if the governing body requests such an analysis on a cursory level.

ORS 197.296 contains two key objectives. These relate to housing and land, as follows:

**Housing**: Ensure that development occurs at the densities and mix needed to meet a community's housing needs over the next 20 years;

**Land**: Ensure there is enough buildable land to accommodate the 20-year housing need inside the urban growth boundary (UGB).

These objectives are inter-related. For example, a UGB may not be large enough to provide housing for the projected population in 20 years *because* development has been occurring at lower than planned densities.

# Goal 14 Amendments and New Rules Pertaining to UGB Expansions and Use of Land Inside UGBs

LCDC is currently proposing amendments to Statewide Planning Goal 14, Urbanization, and adoption of new rules (see Appendix A). The purpose of the goal and rules is to: 1) clarify the procedures and criteria for amending UGBs; and 2) foster livability and encourage the efficient use of land inside UGBs. LCDC is currently considering adoption of the rules in a new Division 024, but it may decide to amend other divisions in addition to or in place of this new division.

#### **Local Land Development Regulations and Zoning**

OAR 660-021-0040, Urban Reserve Area Planning and Zoning, provides that until included in the urban growth boundary, lands in the urban reserve area shall continue to be planned and zoned for rural uses, but in a manner that ensures a range of opportunities for the orderly, economic and efficient provision of urban services when these lands are included in the urban growth boundary.

State law provides that urban reserve area land use regulations shall ensure that development and land divisions in exception areas and non-resource lands will not hinder the efficient transition to urban land uses and the orderly and efficient provision of urban services. The measures may include:

- Prohibition on the creation of new parcels less than ten acres;
- Requirements for clustering as a condition of approval of new parcels;
- Requirements for preplatting of future lots or parcels;
- Requirements for written waivers of remonstrance against annexation to a provider of sewer, water or streets;
- Regulation of the siting of new development on existing lots for the purpose of ensuring the potential for future urban development and public facilities.

For exception areas and non-resource land in urban reserve areas, land use regulations shall prohibit zone amendments allowing more intensive uses, including higher residential density, than permitted by acknowledged zoning in effect as of the date of establishment of the urban reserve area. Such regulations shall remain in effect until such time as the land is included in the urban growth boundary. Resource land that is included in urban reserve areas shall continue to be planned and zoned under the requirements of applicable Statewide Planning Goals.

Consistent with Statewide Planning Goal 11, local land use regulations applicable to lands that are outside urban growth boundaries and unincorporated community boundaries must prohibit:

- an increase in a base density in a residential zone due to the availability of service from a water system;
- a higher density for residential development served by a water system than would be authorized without such service; or
- an increase in the allowable density of residential development due to the presence, establishment, or extension of a water system.

#### **Existing Interim Protection Measures in the Metro Plan**

The *Metro Plan* provides that development, land division, and public improvements (such as street design) in areas designated urban reserve shall be designed and regulated so as to not preclude possible subsequent development at urban densities. (See *Metro Plan*, page II-E-14).

In order to assure compact urban growth, the *Metro Plan* requires that all land divisions under 10 acres outside the city be part of a conceptual development plan that demonstrates ultimate development will occur at urban densities. The Lane County UF-10 subdistrict applies to the property in the urbanizable area to prevent it from being subdivided prior to annexation. It is current practice to approve new subdivisions only after annexation to the city. The following *Metro Plan* Policies 25 through 28 (page II-B-7 and II-B-8) specify the existing provisions related to interim development in urbanizable areas, urban reserve areas, and rural lands within the *Metropolitan Plan* boundary:

- 25. Based upon direction provided in policies 3, 7, and 23 of this section, any development taking place in an urbanizable area or in rural residential designations in an urban reserve area shall be designed to the development standards of the city which would be responsible for eventually providing a minimum level of key urban services to the area. Unless the following conditions are met, the minimum lot size for "special light industrial" designated areas shall be 50 acres and the minimum lot size for all other designations shall be ten acres. Any lot under ten acres in size but larger than five acres to be created in this area on undeveloped or underdeveloped land will require the adjacent city and Lane County to agree that this lot size would be appropriate for the area utilizing the following standards:
  - a. The approval of a conceptual plan for ultimate development at urban densities in accord with applicable plans and policies.
  - b. Proposed land uses and densities conform to applicable plans and policies.
  - c. The owner of the property has signed an agreement with the adjacent city which provides:
    - (1) The owner and his or her successors in interest are obligated to support annexation proceedings should the city, at its option, initiate annexation.
    - (2) The owner and his or her successors in interest agree not to challenge any annexation of the subject property.
    - (3) The owner and his or her successors in interest will acquire city approval for any subsequent new use, change of use, or substantial intensification of use of the property. The city will not withhold appropriate approval of the use arbitrarily if it is in compliance with applicable plans, policies, and standards, as interpreted by the city, as well as the conceptual plan approved under subsection a above.
- 26. Any lot under five acres in size to be created in the area described in policy 25 above will require city-county agreement utilizing the following additional standards:
  - a. The property will be owned by a governmental agency or public utility.
  - b. A majority of parcels located within 100 feet of the property are smaller than five acres.
  - c. No more than three parcels are being created, unless otherwise agreed.
- 27. The siting of all residences on urbanizable lots served by on-site sewage disposal systems shall be reviewed by Lane County to ensure the efficient future conversion

- of these lots to urban densities according to Plan assumptions and minimum density requirements.
- 28. The approval of on-site sewage disposal systems for rural and urbanizable area uses and developments shall be the responsibility of Lane County, subject to: (a) applicable state law; (b) the criteria for the creation of new lots in policies 25 and 26 above; (c) the requirement for the siting of residences in policy 27 above; (d) requirements of policy 29; and (5) the requirements for "special heavy industrial" designated areas.

#### **Goal 14 Amendments and New Rule Pertaining to Rural Lands**

On October 4, 2000, a Statewide Planning Goal 14 (Urbanization) amendment and new administrative rule provisions related to the application of Goal 14 to lands zoned for rural residential use became effective (See Appendix A). The new provisions do not apply within urban reserve areas but they do apply to other lands within the Eugene-Springfield Metro Plan boundary.

The new rule deals with the zoning on more than 700,00 acres of rural land zoned for residential use in Oregon. The main purpose of the rule is to keep rural residential (RR) lands from being cut into such small lots that the resulting development would reach urban densities. Goal 14 prohibits urban use of rural lands. The Goal 14 amendment specifies that lots or parcels smaller than two acres shall be considered "urban" and cannot be created without taking an exception to Goal 14. The provisions require local governments to specify a minimum lot size for rural residential lots or parcels that cannot be smaller than two acres. The Goal 14 amendment and the new rule grandfather all lawfully created lots and parcels that existed in RR areas prior to the effective date of the amendments.

#### **Intergovernmental Coordination and Agreements**

OAR 660-021-0050, Urban Reserve Area Agreements, requires that urban reserve area planning include the adoption and maintenance of urban reserve agreements among cities, counties and special districts serving or projected to serve the designated urban reserve area. These agreements must be adopted by each jurisdiction and must:

- Designate the local government responsible for building code administration and land use regulation in the urban reserve, both at the time of reserve designation and upon inclusion of these areas within the urban growth boundary.
- Designate the local government or special district responsible for the sewer, water, fire protection, parks, transportation and storm water. The agreement shall include maps indicating areas and levels of current rural service responsibility and areas projected for future urban service responsibility when included in the urban growth boundary.

- Include terms and conditions under which service responsibility will be transferred or expanded for areas where the provider of the service is expected to change over time.
- Include procedures for notification and review of land use actions to ensure involvement by all affected local governments and special districts.

# **Demand Analysis**

State law requires that if a jurisdiction chooses to have Urban Reserve Areas, the areas must include an amount of land to be at least a ten, and not more than a 30-year supply of developable land beyond the 20-year time frame of the plan. Local governments must specify the number of years the Urban Reserve Areas are intended to accommodate. Findings must be made explaining that the demand meets the specified time frame beyond the 20-year UGB time frame.

To determine how much land would be needed a demand analysis was conducted. It was assumed that the land demand for the Urban Reserve Areas would be for residential land and supporting uses. This demand analysis builds on the Eugene-Springfield Residential Land and Housing Findings and Policies that were adopted August, 1999. The Eugene-Springfield Residential Land and Housing Study projected residential land demand to 2015. The demand analysis was presented as a range, low, expected and high. The analysis indicated there was sufficient buildable residential land within the UGB to meet the future 20-year demand for housing units. This demand analysis starts at 2015 and projects population, housing demand and land demand as a range at 2025, 2035, and 2045.

#### **Demand for Residential Land Beyond 20-year UGB**

#### **Population Projections**

To project the future population of the Eugene-Springfield UGB for 10, 20 and 30 years beyond 2015, the relationship between Lane County's population and the Eugene-Springfield UGB population was reviewed. The population in the Eugene-Springfield UGB has been increasing faster than the Lane County population. Thus, the Eugene-Springfield UGB population has been an increasingly larger proportion of the County's population over time. This trend is expected to continue in the future.

The table below displays both population estimates and projections. The estimates are for 1990 and 2000. The Lane County projections between 2010 and 2040 were developed by the Oregon Office of Economic Analysis in 1997. The 2045 Lane County projection was developed for this study. It assumes a similar but slightly lower growth rate between 2040 and 2045 than the previous five year period.

Population for Eugene-Springfield UGB						
	Lane	Eugene-	Percent Eugene- Springfield UGB of Lane	Eugene- Springfield	Eug-Spr UGB Numerial	Eugene- Springfield UGB Annual Average Numerial
Year	County	Springfield UGB	County	UGB AARG	Increase	Increase
1990	282,912	191,400	67.7			
2000	318,100	223,000	70.1	1.54%	31,600	3,160
2015	397,350	286,000	72.0	1.67%	63,000	4,200
2020	419,842	304,385	72.5	1.25%	18,385	3,677
2025	442,338	322,907	73.0	1.19%	18,521	3,704
2030	464,002	341,041	73.5	1.10%	18,135	3,627
2035	485,072	358,953	74.0	1.03%	17,912	3,582
2040	505,236	375,390	74.3	0.90%	16,437	3,287
2045	526,000	391,870	74.5	0.86%	16,480	3,296

Sources: 1990 are Census Bureau figures; Lane County 2000 is PSU estimates; 2000 UGB is LCOG estimate Lane County 2015 -2040 are Oregon Office of Economic Analysis; UGB 2015-2045 LCOG projections Lane County 2045 extrapolation from OEA projection by LCOG

The Eugene-Springfield UGB population is projected to increase from an estimated 70 percent in 2000 to 74.5 percent of the Lane County population between 2000 and 2045. These projection assume the rate of growth will slow over the 30 year period.

These expected population projection figures were translated into a population range. To develop the range, the amount of growth between 2015 and 2025, 2035 and 2045 was determined. Then 10 percent of the growth was added and subtracted from the expected population projection.

Eugene-Springfield UGB Population Projection Range			
Year Population Range			
2025	319,200 - 326,600		
2035	351,600 - 366,200		
2045	381,100 - 402,800		

#### **Housing Demand**

To project future housing demand, it is necessary to project average household size, group quarter population, and vacancy rate. Many of the assumptions used are consistent with the Eugene-Springfield Residential Land and Housing Study.

To determine the population requiring housing, the persons who live in group quarter facilities are subtracted from the total population. Group quarters include dormitories, nursing homes, jails, etc. This analysis assumed three percent of the population would be living in group quarters facilities which is consistent with the Eugene-Springfield Residential Land and Housing Study. It may be that the percent of the population in group quarters facilities will increase as the baby boom cohort enters their eighties in 2026.

Once the population in households has been determined, it must be divided by the average household size which describes the number of persons who live in an occupied housing unit. This will result in the total number of households. Average household size has been declining both nationally and locally. The cause of the decline in household size is due to a variety of factors including lower fertility rates, increased divorce rate, higher survival rates and delayed marriages. It is expected that household sizes will continue to decline. During the 1990s, the baby boom generation, which constitutes a large proportion of the population, is at the highest household formation ages. As the baby boom generation ages, they will move into ages which typically have smaller household size.

Average Household Size			
Year	Actual	Estimated or Projected	
1960	3.13	J J	
1970	2.95		
1980	2.51		
1990	2.44		
1995		2.40	
2000		2.35	
2005		2.32	
2010		2.29	
2015		2.27	
2020		2.26	
2025		2.26	
2030		2.25	
2035		2.25	
2040		2.24	
2045		2.24	
2050		2.24	

Once the number of households is developed a vacancy rate is applied to ensure there is a healthy housing market. For this analysis, a 3.5 percent vacancy rate was assumed.

The following table displays the projected range of housing unit demand for 2025, 2035 and 2045.

Eugene-Springfield UGB Projected Housing Unit Demand			
Year	Population Range	<b>Housing Unit Demand</b>	
2025	319,200 - 326,600	141,970 - 145,260	
2035	351,600 - 366,200	157,075 - 163,600	
2045	381,100 - 402,800	171,010 - 180,750	

#### Land Demand

To determine the land demand beyond the 2015 time frame, the total projected expected housing units in 2015 of 127,000 was subtracted from the 2025, 2035 and 2045 housing unit demand. Thus, between 2015 and 2025 there would be a housing demand for between 14,970 and 18,260 housing units.

Once the future needed housing units has been determined, a density assumption can be applied to determine how much land is needed for the future housing. For this analysis, two density assumptions were used, 7 units per net acre and 12 units per net acre. It was assumed at both density levels that 32 percent of the total (gross) land demand would be for non-residential uses such as streets, parks, churches, neighborhood commercial, etc. Thus, the gross land demand at 7 units per net acre would be 4.76 units per gross acre.

Eugene-Springfield Urban Growth Boundary					
Preliminary Projected Gross Land Demand					
Year	Population Range	Residential Land Demand in Gross Acres Assuming 7 Units per Net Acre	Residential Land Demand in Gross Acres Assuming 12 Units per Net Acre		
2025	319,200 - 326,600	3,145 - 3,835	1,835 - 2,240		
2035	351,600 - 366,200	6,320 - 7,690	3,685 - 4,485		
2045	381,100 - 402,800	9,250 - 11,290	5,390 - 6,590		

Using these assumptions, at the 7 unit a net acre density there would be a land demand of at least 3,145 acres in 2025 to as much as 11,290 acres in 2045. Using a 12 unit a net acre density decreases the land need by approximately 42 percent.

# Analysis of Land Adjacent and Nearby the Metro UGB

State law describes the analysis required to include land within an Urban Reserve Area. The analysis requires reviewing the planned use of the land, soils, ability to provide public services and the efficiency of land uses. Specifically, the Rule states that cities must first study land adjacent to or nearby the UGB (wholly or partially within ¼ mile) for inclusion based on the following criteria:

1<sup>st</sup> Priority – Land adjacent to or nearby a UGB designated by the County as an exception area or nonresource land. This may also include resource land surrounded by exception areas unless those lands are high value crop land or prime or unique agricultural land.

2<sup>nd</sup> Priority – If land in the 1<sup>st</sup> Priority is not adequate to meet land need, the second priority is land designated as marginal land. Marginal land is land identified as being low productive agricultural and forest land but has not been identified for another use.

3<sup>rd</sup> Priority – If land in a higher priority is not adequate to meet future land needs, third priority goes to land designated agriculture or forestry. Higher priority should be given to land with soils that are of lower agricultural and timber production capability.

Land of lower priority for Urban Reserve use, as described above, may be included if land of higher priority is found to be inadequate to meet land need for one or more of the following reasons:

- Future services could not reasonably be provided to higher priority land area due to topography or other physical constraint.
- Maximum efficiency of land uses within a proposed Urban Reserve area requires inclusion of lower priority lands in order to include or provide service to higher priority lands.

To conduct this analysis, a buffer ¼ mile from the Eugene/Springfield UGB was created. Then land was divided into nineteen logical subareas around the UGB. Four of the subareas are designated urban reserve in the *Metro Plan*. Information was collected for each subarea on land meeting the state criteria for inclusion in an Urban Reserve area (URA); ability to provide public services; and other constraints to development. The information is summarized below and more detailed information is contained in a matrix in Appendix B.

Combining all the subareas, there are approximately 3,184 acres of exception land. This exception land is scattered throughout the subareas. The largest concentration of exception land is in the Dillard area followed by Lorane and Mohawk. Approximately 3,125 acres or 98 percent of this exception area is zoned for residential while 47 acres are zoned industrial and 12 acres are zoned commercial. There are 376 acres of marginal land located in the Lorane and Mohawk subareas. Low productive agricultural and forest land is primarily located south of the UGB. There are 519 acres of low productive agricultural land and 1,613 acres of low productive forest land.

The land capability class rating, often called agricultural capability class, is the basis for mapping the low productive agricultural soil types within agriculture zones. The map shows low productive agricultural soils, which includes soils with agricultural capability classes of 5 through 8. The high productive category includes soils with agricultural capability classes of 1 through 4. The high category corresponds with the description of agricultural land in western Oregon in Statewide Planning Goal 3, Agricultural Land. The USDA - Soil Conservation Service, now called the USDA – Natural Resource Conservation Service, rates soils by capability class based on limitations for field crops, the risk of damage if they are used for field crops, and the way they respond to management.

Annual forest production by volume, measured in cubic feet/acre/year, is the basis for mapping the low productive forest soil types within forest zoning. The map shows low productive forest soils, which includes soils that produce less than 50 cubic feet/acre/year of wood fiber. This category corresponds with the range of cubic foot/acre/year used to define cubic foot site classes 6 and 7, terms commonly used in forest management. The category also is the same as used in the forest dwelling requirements in the administrative rule that implements Statewide Planning Goal 4, Forest Lands.

The cubic foot/acre/year is calculated from the Douglas fir site index for the soil published by the Natural Resources Conservation Service. Site index is a measurement of tree growth. There are many soils in the Willamette valley and surrounding foothills for which the NRCS does not have adequate data to support publishing a site index. These soils have few trees suitable for measuring site index either because they are typically used for agriculture rather than forestry or support only limited tree growth. The forest productivity for soils for which NRCS data are unavailable is based on estimated cubic feet/acre/year figures. The Oregon Department of Forestry developed the estimates in 1990 in conjunction with Oregon State University Extension, Lane County Land Management, and the US Department of Soil Conservation Service (now called the Natural Resources Conservation Service). These estimates were created for planning purposes to fill in gaps in NRCS site index data. For more specific information about the agricultural or forest ratings see Appendix C.

The ability to provide public services was one of the factors used to determine where the existing urban reserves are now. In 1982, when the *Metro Plan* was adopted, the existing urban reserves were found to be the most economical areas outside the UGB to serve with water, wastewater and stormwater. Wastewater service planning with the existing facility have included the urban reserve areas and the LCC Basin.

Based on recent analyses conducted by the metropolitan area service providers, the existing urban reserves may not be the most suitable areas for future urban expansion from a service provision perspective, as indicated in the following *Metro Plan* findings proposed in the draft *Public Facilities and Services Plan:* 

5. With the improvements specified in the Public Facilities and Services Plan project lists, all urbanizable areas within the Eugene-Springfield urban growth boundary can be served with water, wastewater, stormwater, and electric service at the time those areas are developed. In general, areas outside city limits serviceable in the long-

term are located near the urban growth boundary and in urban reserves, primarily in River Road/Santa Clara, west Eugene's Willow Creek area, south Springfield, and the Thurston and Jasper-Natron areas in east Springfield.

If it were necessary, land within the metropolitan area's three Urban Reserves would be serviceable in the long-term but would require major improvement projects and significant financial resources to ensure services are extended into these areas.

#### Water

- 1. Water service is difficult to provide to Eugene's southwest Urban Reserve due to a lack of existing infrastructure. Additional water storage capacity will be necessary to provide long-term water service in this area. EWEB plans to develop reservoirs and pump stations in this vicinity to serve areas within the urban growth boundary.
- 2. Lands located in Springfield's eastern Urban Reserve are far from existing water facilities and will be difficult and expensive to develop due to distance and multiple service levels.

#### **Wastewater**

The Eugene-Springfield wastewater collection system and Regional Wastewater Treatment Plant are designed only to serve the region's long-term service needs within the metropolitan urban growth boundary. It will be difficult and costly to expand this system into large areas outside the urban growth boundary, because the capacity increase in the collection system would possibly be needed all the way back to the treatment plant.

#### Stormwater

Eugene's southwest Urban Reserve (Willow Creek area) would be difficult to serve in the long-term because developable lands upstream are significantly removed from downstream stormwater facilities. Sites located in the headwaters of Willow Creek are in a similar situation.

#### **Subareas Surrounding Springfield UGB**

#### East Springfield Urban Reserve Area

This is the only urban reserve area surrounding the Springfield UGB. It contains 90 acres of residential exception land, 12 acres of low productive agricultural land and 33 acres of low productive forest land. There are stormwater service issues in this subarea as water in this area drains down slopes and contributes to flooding downstream and additional development would add to this problem. The area presently suffers from lack of water, 30-40 people depend on ground water. The estimated cost to serve the area with water is between \$500,000 to \$1,000,000. Springfield Utility Board (SUB) water facilities are very near this subarea at this time. Wastewater services have been planned to serve this area but study would be required to determine cost and timing.

With respect to environmental constraints to urban development, recent geologic hazard mapping shows an old landslide in this subarea. On the National Wetland Inventory (NWI), there are wetlands north of Highway 126; while, south of Highway 126 there are severe slopes. Stormwater in this area flows into Cedar Creek which contains cutthroat and juvenile Spring Chinook which could be an Endangered Species Act (ESA) issue.

#### **North Gateway**

This subarea is zoned primarily Exclusive Farm Use- 30 acre minimum. Approximately 39 acres of this farmland is identified as low productive. There is no exception or marginal land in the subarea. SUB has water source and distribution facilities adjacent to the southern end of area. SUB could easily install additional facilities in this area and additional source to supply growth in this area. Stormwater service could be cost effective but there is no public outfall for the stormwater now. With respect to wastewater services, currently there are no capacity problems. In the past, there have been problems with storm inter-ties and with grease and rags clogging the pump station. Adding the North Gateway land area would necessitate increasing the capacity of the system which could be done.

#### North Springfield

This subarea also contains no exception or marginal land. Land within this subarea is zoned for Exclusive Farm Use- 30 acre minimum. Only 14 acres were identified as low productive agricultural land. SUB could extend its existing water lines in the north area of the city to serve this subarea. Along the southern edge of the subarea, Rainbow Water District has adequate distribution capacity available for single family residential levels of service and the capability to extend larger water mains from nearby transmission facilities, if needed. There is no real

constraint to providing wastewater service to this area although it would require study to determine the cost and timing. To provide stormwater services, outfalls and a major trunk system need to be developed outside the UGB. On the NWI, there are wetlands identified south of the McKenzie River. Portions of this area are within the flood plain and experienced much flooding during last big flood.

#### Mohawk

This area was identified as an alternative growth area for urban expansion in the Eugene/Springfield Metro Area General Plan. There are approximately 519 acres of residential exception land in this area and 245 acres of marginal land.

As this subarea is across the McKenzie River from the urban growth boundary providing some urban services could be very expensive. There are SUB water facilities across the river from this subarea. SUB facilities could be extended using the existing bridge to serve any growth in the Mohawk Valley area. With resect to stormwater services, little is known. The portion of the subarea east of Marcola Road did not show as flooded on the 1996 flood mapping. Extending wastewater services to the area would be expensive due to the need to cross the McKenzie River. There could be restrictions to bridge expansion over the McKenzie River due to the ESA fish listing.

#### **North Thurston**

This area is primarily in farm use. There are approximately 7 acres of residential exception land and 14 acres of agricultural land considered low productive. SUB water source and transmission facilities are adjacent to the east portion of this subarea. There are no public outfalls for stormwater in the area. To provide wastewater services to the area, fill would be required to keep development above flood elevation and prevent flood water from entering the wastewater system. There are wetlands throughout the subarea and much of it is in the floodplain and experienced much flooding during last big flood.

#### **Jasper Hills**

Most of the land in this subarea is forest land. There are 52 acres of residential exception land and 347 acres identified as low productive forest land.

At present, development is beginning inside the UGB adjacent to this area. The creation of roads is in the planning stage inside the UGB. Any road project must mitigate substantial amount of wetlands. Water sources and transmission lines are needed to serve this area. Extensive water transmission lines would be needed with multiple feeds and source/storage to adequately serve this area at the south end of the existing UGB. There are no real constraints to providing wastewater service to this area although it would require study to determine the cost and timing. To provide stormwater services, a master plan needs to be developed and must acquire rights to an outfall to the Willamette River, Jasper Slough or the Mill Race. Based on the NWI, there are a few wetlands in the area. Also, this area is quite hilly.

#### **South Springfield**

The majority of this subarea is zoned for Exclusive Farm Use-25 acre minimums. There is 26 acres of residential exception land and 41 acres of low productive agricultural farmland.

SUB water source distribution facilities are adjacent to the middle portion of this subarea and water source and distribution facilities are adjacent to west portion of subarea. It would be cost effective to provide stormwater service to the east portion of subarea in areas adjacent to existing services. Vacant lands in the mid to west portion of the subarea are close to existing wastewater collection facilities and services.

Based on the NWI, there are wetlands throughout the subarea. Much of this area is in the floodplain.

#### **Subareas Surrounding Eugene UGB**

#### **Urban Reserve Areas (URA)**

There are two Urban Reserve Areas adjacent to the Eugene portion of the UGB, Santa Clara and Willow Creek. The Willow Creek URA was divided into two subareas for analysis purposes.

#### Santa Clara URA

This subarea is north of Santa Clara and is primarily in agricultural use. There are approximately 13 acres of exception land zoned light industrial. The soils are primarily high value agricultural soils. As this was an area identified for urban development in the long term, wastewater service planning has included this area. However, study would be necessary to determine the actual cost and timing to provide urban services.

There are a number of potential constraints to urban development in this area. From a transportation perspective, there are capacity problems on the interchanges of Beltline and River Road which would be intensified with additional urban development in this area. Furthermore, River Road is currently congested during weekday travel peaks and at various times throughout the weekend. pea Also, there is a biosolids plant nearby which may impact this area. Based on the National Wetland Inventory (NWI) there are wetlands scattered throughout subarea. Spring and Flat Creek are important waterways with floodplains and if development occurred in the floodplain it could impact wildlife. There is a wildlife study underway and it is possible there are Western Pond turtles in Spring Creek and possibly cutthroat in both Spring and Flat Creeks.

#### Greenhill URA

This subarea is in west Eugene. There is some residential development and farming in the area. There are 92 acres of residential exception land, 10 acres of low capability agricultural land and about 50 acres of low capability forest land.

With respect to public services, there are a couple of difficulties. There are now capacity problems on Highway 126 and West 11<sup>th</sup> which would be intensified with additional urban development in this area. When this area was identified as a subarea, the West Eugene Parkway was planned for development. Without the West Eugene Parkway, there will be less system capacity heading out west Eugene. To provide water, additional water storage capacity is necessary; however, EWEB plans to develop reservoirs and pump stations in this vicinity to serve inside the UGB.

There may be a few environmental constraints to urban development. On the NWI, there are a few wetlands in this subarea. Also, this area contains native grasslands which could include sensitive species.

#### Willow Creek URA

There are 254 acres of residential exception land, 59 acres of low capability agricultural land and about 401 acres of low capability forest land.

The Willow Creek subarea has similar public services difficulties as the Greenhill area with respect to water service. Transportation services issues relate the West 11<sup>th</sup> congestion and future capacity issues at the West 11<sup>th</sup> and Beltline intersection. In addition, it is difficult to provide stormwater facilities as developable lands upstream are removed from downstream facilities. Land located in the headwaters of Willow Creek are in a similar situation.

This area contains the headwaters of Willow Creek. Willow Creek and most of its tributaries are protected in West Eugene Wetlands Study. This area includes some White Oak woodlands which contains sensitive species. Any development would need to ensure habitat was not fragmented. Much of this area is sloped land.

#### **Airport Vicinity**

The Airport Vicinity subarea is located south of the Mahlon Sweet Airport. Within this area, there are approximately 71 acres of residential exception land and 16 acres of low productive agricultural land.

EWEB water service is available adjacent to existing service locations within the UGB. Water distribution pipelines would be needed to serve individual parcels. With respect to stormwater services, downstream locations have potential access to stormwater drainages.

Much of this subarea is in the airport runway path. Noise levels from the runways would exceed standards for residential development. This subarea also appears to have wetlands based on the NWI.

#### **North Awbrey**

Of all the subareas, this one is the most industrial in nature. It contains a biosolid sludge flat treatment facility and approximately 27 acres of exception land that is industrially zoned. There are 50 acres of exception land that is residential zoned.

EWEB water service is available adjacent to existing service locations within the UGB. Distribution pipelines would be needed to serve individual parcels.

Urban residential development may not be appropriate in this area as it is surrounded by industrial uses and the biosolid sludge treatment facility. There are also wetlands based on the NWI.

#### **East Santa Clara**

This subarea is primarily in residential and farm use. There are 280 acres of residential exception land. Water distribution facilities are adjacent to this area but some upsizing of mains may be required to provide adequate fire protection, in some cases. Downstream locations can drain stormwater to the McKenzie River, however, potential fish listing could preclude direct stormwater discharges. This subarea faces the same transportation issues as the Santa Clara URA.

A potion of this subarea is in the floodplain. In addition, based on the NWI, there are wetlands in the northern portion of the subarea.

#### **South Armitage**

This subarea is south of Armitage Park. There is no exception land within this subarea. Most of the land in this subarea is zoned for Exclusive Farm Use. Approximately, 10 acres of this land was identified as low productive agricultural land.

Water distribution facilities are adjacent to this area but distribution pipelines would need to be extended to serve parcels in this area. EWEB is planning a new electric substation that will provide excess capacity in this area. With respect to transportation, there are major capacity problems on Beltline Road in this area. There are a few wetlands in the west portion of this subarea on the NWI.

#### Lane Community College (LCC) Basin

This area was identified in the *Metro Plan* as an alternative area for urban growth boundary expansion. There are 109 acres of exception land in the LCC Basin. Approximately 89 acres are zoned residential, 12 acres area commercial and 8 acres industrial. Most of the subarea is zoned Impacted Forest Lands. There are 538 acres of forest land identified as low productive while there are 81 acres of agricultural land identified as low productive.

The LCC Basin has a number of urban services as a result of the college. Water storage and distribution lines already exist in this area but additional distribution mains will be needed for individual parcels. In addition, water transmission lines will need to be constructed to serve this area effectively. There are some constraints to providing stormwater services. With respect to wastewater, the existing LCC lagoon has always been considered temporary. The LCC Basin was planned on being served by the Eugene/Springfield Wastewater facility. The estimated cost to serve the area is in the \$3 to \$4 million range. The main arterial, 30th Avenue, is used sporadically and is generally considered underutilized.

Most of the basin does not have severe slopes. Based on the NWI, there are a few wetlands north of 30<sup>th</sup> Avenue.

#### **Dillard**

This area contains many relatively smaller parcels in residential use. There are 702 acres of residentially zoned exception land. In addition, there are 66 acres of low productive forest land. To serve the subarea with water, a reservoir and pumping station would be needed.

There are a number of constraints to urban development. The extensive parcelization would make development at urban densities difficult. Also, much of the subarea is sloped.

#### **South Fox Hollow**

Most of this subarea is zoned Impacted Forest Lands. There are 18 acres of exception land that is zoned residential. Approximately 99 acres of the forest land were identified as low productive.

To provide water services in this area, additional infrastructure and water storage capacity would be needed. This area, similar to Dillard, is quite hilly and would be difficult to achieve urban housing densities.

#### **South Willamette**

This subarea is primarily rural residential exception land, 330 acres. There are also 65 acres of marginal land. Approximately 6 acres were identified as low productive forest land. To provide water service to this area, additional storage would be needed over the 1325 elevation. Also, distribution mains would need to be constructed. Water distribution, storage and pumping facilities exist adjacent to this area. This area also is very hilly and achieving urban housing densities would be difficult.

#### Lorane

The Lorane subarea is primarily rural residential and farmland. There are 544 acres of residential exception land and 66 acres of marginal land. Approximately 215 acres of the agriculturally zoned land was identified as low productive while 73 acres of forest land was

identified as low productive. This area would require storage and distribution facilities to be served with water.

Based on the National Wetland Inventory, there are wetlands along Lorane Highway. This area is also hilly although not to the same extent as the other subareas south of Eugene.

# **Summary**

This analysis indicates that the existing Urban Reserve Areas do not meet the state criteria for inclusion within an Urban Reserve Area. Of the approximately, 3,465 taxloted acres of land within the existing Urban Reserves Areas only 449 acres meet the first or second criteria for inclusion as an urban reserve. There are approximately 484 acres that meet the third criteria, low productive farm or forest land. However, most of this land is in the Willow Creek area which are headwaters and considered to have high value as a natural resource area. Half of the exception land is located south of the Eugene UGB which is somewhat hilly. The remaining large portion of exception land is in the Mohawk subarea which is across the McKenzie River.

Once this information was determined, it seemed clear that creating urban reserve areas around the Eugene/Springfield area would not be a straight forward process. At this point, the advantages and disadvantages to continuing to have urban reserves were considered.

Having identified Urban Reserve Areas and thus planned areas for urban expansion allows for better planning of urban service delivery facilities, which due to costs and scale, are more efficiently planned far into the future. Long range planning costs might be reduced in the long run by the analysis done today for Urban Reserve Areas. In addition, the process of expanding the UGB might be more streamlined in that analysis would already be completed and the Department of Land Conservation and Development would have already acknowledged much of the required analysis. The areas that were identified as Urban Reserve Areas would fall under intergovernmental agreements which would minimize parcelization of this land for future urban use. For the private sector, Urban Reserves might provide increased certainty in development opportunities as long as changing circumstances did not result in relocation of these areas in the future.

There are several disadvantages to continuing to have urban reserves. It is difficult to forecast future circumstances and, in fact, recent UGB expansions have been for urban needs that could not be met in the existing Urban Reserve Areas. The areas that are exception lands and meet the criteria for inclusion as urban reserve areas are already parcelized and mostly developed, so they provide limited opportunities for future urban growth. Also, if Urban Reserve Areas were continued, and a city decided to expand into an area not designated as Urban Reserve, it might be more difficult to obtain Department of Land Conservation and Development acknowledgement of that expansion. For land developers, having Urban Reserve Areas may give false expectations if changing circumstances result in decisions not to expand into Urban Reserve Areas.

In November 2000, this information was presented to the elected officials of Eugene, Springfield and Lane County with a request for direction as to whether it seemed more advantageous in planning future UGB expansions to retain or remove the existing Urban Reserve areas. The reason for requesting this initial direction was that the scope and cost of the study would be substantially different depending on whether the study did or did not plan for Urban Reserve Areas. If the process began with the premise that Urban Reserves would be removed, no analysis of where to place Urban Reserves would be necessary.

A joint work session of the elected officials of all three Metro jurisdictions occurred on November 29, 2000. Following this work session, individual work sessions were conducted with each of the three elected bodies. The elected officials of all three Metro jurisdictions unanimously agreed that staff should proceed with the plan amendment process to remove urban reserves from the *Metro Plan* diagram and text.

# APPENDIX A

# OREGON LAND CONSERVATION AND DEVELOPMENT DEPARTMENT OREGON ADMINISTRATIVE RULE DIVISION 21 URBAN RESERVE AREAS

#### 660-021-0000

# Purpose

This division authorizes planning for areas outside urban growth boundaries to be reserved for eventual inclusion in an urban growth boundary and to be protected from patterns of development that would impede urbanization.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 197.145 & ORS 197.040

Hist.: LCDC 2-1992, f. & cert. ef. 4-29-92; LCDD 4-2000, f. & cert. ef. 3-22-00

#### 660-021-0010

# **Definitions**

For purposes of this division, the definitions contained in ORS 197.015 and the Statewide Planning Goals (OAR Chapter 660, Division 015) apply. In addition, the following definitions apply:

- (1) "Urban Reserve Area": Lands outside of an urban growth boundary identified as highest priority for inclusion in the urban growth boundary when the boundary is expanded in accordance with Goal 14.
- (2) "Resource Land": Land subject to the Statewide Planning Goals listed in OAR 660-004-0010(1)(a) through (f), except subsection (c).
- (3) "Nonresource Land": Land not subject to the Statewide Planning Goals listed in OAR 660-004-0010(1)(a) through (f) except subsection (c). Nothing in this definition is meant to imply that other goals do not apply to nonresource land.
- (4) "Exception Areas": Rural lands for which an exception to Statewide Planning Goals 3 and 4, as defined in OAR 660-004-0005(1), have been acknowledged.
- (5) "Developable Land": Land that is not severely constrained by natural hazards, nor designated or zoned to protect natural resources, and that is either entirely vacant or has a portion of its area unoccupied by structures or roads.
- (6) "Adjacent Land": Abutting land.

(7) "Nearby Land": Land that lies wholly or partially within a quarter mile of an urban growth boundary.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 197.145 & ORS 197.040

Hist.: LCDC 2-1992, f. & cert. ef. 4-29-92; LCDD 4-2000, f. & cert. ef. 3-22-00

# 660-021-0020

Authority to Establish Urban Reserve Areas

Cities and counties cooperatively, and the Metropolitan Service District for the Portland Metropolitan area urban growth boundary, may designate urban reserve areas under the requirements of this rule, in coordination with special districts listed in OAR 660-021-0050(2) and other affected local governments, including neighboring cities within two miles of the urban growth boundary. Where urban reserve areas are adopted or amended, they shall be shown on all applicable comprehensive plan and zoning maps, and plan policies and land use regulations shall be adopted to guide the management of these areas in accordance with the requirements of this division.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 197.145 & ORS 197.040

Hist.: LCDC 2-1992, f. & cert. ef. 4-29-92; LCDD 4-2000, f. & cert. ef. 3-22-00

#### 660-021-0030

# Determination of Urban Reserve Areas

- (1) Urban reserve areas shall include an amount of land estimated to be at least a 10-year supply and no more than a 30-year supply of developable land beyond the 20-year time frame used to establish the urban growth boundary. Local governments designating urban reserves shall adopt findings specifying the particular number of years over which designated urban reserves are intended to provide a supply of land.
- (2) Inclusion of land within an urban reserve area shall be based upon the locational factors of Goal 14 and a demonstration that there are no reasonable alternatives that will require less, or have less effect upon, resource land. Cities and counties cooperatively, and the Metropolitan Service District for the Portland Metropolitan Area Urban Growth Boundary, shall first study lands adjacent to, or nearby, the urban growth boundary for suitability for inclusion within urban reserve areas, as measured by the factors and criteria set forth in this section. Local governments shall then designate for inclusion within urban reserve areas that suitable lands which satisfies the priorities in section (3) of this rule.
- (3) Land found suitable for an urban reserve may be included within an urban reserve area only according to the following priorities:
  - (a) First priority goes to land adjacent to, or nearby, an urban growth boundary and identified in an acknowledged comprehensive plan as an exception area or nonresource

land. First priority may include resource land that is completely surrounded by exception areas unless these are high value crop areas as defined in Goal 8 or prime or unique agricultural lands as defined by the United States Department of Agriculture;

- (b) If land of higher priority is inadequate to accommodate the amount of land estimated in section (1) of this rule, second priority goes to land designated as marginal land pursuant to ORS 197.247;
- (c) If land of higher priority is inadequate to accommodate the amount of land estimated in section (1) of this rule, third priority goes to land designated in an acknowledged comprehensive plan for agriculture or forestry, or both. Higher priority shall be given to land of lower capability as measured by the capability classification system or by cubic foot site class, whichever is appropriate for the current use.
- (4) Land of lower priority under section (3) of this rule may be included if land of higher priority is found to be inadequate to accommodate the amount of land estimated in section (1) of this rule for one or more of the following reasons:
  - (a) Future urban services could not reasonably be provided to the higher priority area due to topographical or other physical constraints; or
  - (b) Maximum efficiency of land uses within a proposed urban reserve area requires inclusion of lower priority lands in order to include or to provide services to higher priority lands.
- (5) Findings and conclusions concerning the results of the above consideration shall be adopted by the affected jurisdictions

Stat. Auth.: ORS 183 & ORS 197 Stats. Implemented: ORS 197.040

Hist.: LCDC 2-1992, f. & cert. ef. 4-29-92; LCDC 7-1996, f. & cert. ef. 12-31-96; LCDD 4-

2000, f. & cert. ef. 3-22-00

# 660-021-0040

<u>Urban Reserve Area Planning and Zoning</u>

- (1) Until included in the urban growth boundary, lands in the urban reserve area shall continue to be planned and zoned for rural uses in accordance with the requirements of this section, but in a manner that ensures a range of opportunities for the orderly, economic and efficient provision of urban services when these lands are included in the urban growth boundary.
- (2) Urban reserve area land use regulations shall ensure that development and land divisions in exception areas and nonresource lands will not hinder the efficient transition to urban land uses and the orderly and efficient provision of urban

services. These measures shall be adopted by the time the urban reserve area is designated, or in the case of those local governments with planning and zoning responsibility for lands in the vicinity of the Portland Metropolitan Area Urban Growth Boundary, by the time such local governments amend their comprehensive plan and zoning maps to implement urban reserve area designations made by the Portland Metropolitan Service District. The measures may include:

- (a) Prohibition on the creation of new parcels less than ten acres;
- (b) Requirements for clustering as a condition of approval of new parcels;
- (c) Requirements for preplatting of future lots or parcels;
- (d) Requirements for written waivers of remonstrance against annexation to a provider of sewer, water or streets;
- (e) Regulation of the siting of new development on existing lots for the purpose of ensuring the potential for future urban development and public facilities.
- (3) For exception areas and nonresource land in urban reserve areas, land use regulations shall prohibit zone amendments allowing more intensive uses, including higher residential density, than permitted by acknowledged zoning in effect as of the date of establishment of the urban reserve area. Such regulations shall remain in effect until such time as the land is included in the urban growth boundary.
- (4) Resource land that is included in urban reserve areas shall continue to be planned and zoned under the requirements of applicable Statewide Planning Goals.
- (5) Urban reserve area agreements consistent with applicable comprehensive plans and meeting the requirements of OAR 660-021-0050 shall be adopted for urban reserve areas.
- (6) Cities and counties are authorized to plan for the eventual provision of urban public facilities and services to urban reserve areas. However, this division is not intended to authorize urban levels of development or services in urban reserve areas prior to their inclusion in the urban growth boundary. This division is not intended to prevent any planning for, installation of, or connection to public facilities or services in urban reserve areas consistent with the statewide planning goals and with acknowledged comprehensive plans and land use regulations in effect on the applicable date of this division.
- (7) A local government shall not prohibit the siting of a single family dwelling on a legal parcel pursuant to urban reserve planning requirements if the single family dwelling would otherwise have been allowed under law existing prior to the designation of the parcel as part of an urban reserve area.

Stat. Auth.: ORS 183, ORS 197.040, ORS 197.050 & ORS 197.145

Stats. Implemented: ORS 197.145

Hist.: LCDC 2-1992, f. & cert. ef. 4-29-92; LCDC 5-1994, f. & cert. ef. 4-20-94; LCDD 2-

1997(Temp), f. & cert. ef.

5-21-97; LCDD 3-1997, f. & cert. ef. 8-1-97; LCDD 4-2000, f. & cert. ef. 3-22-00

### 660-021-0050

# <u>Urban Reserve Area Agreements</u>

Urban reserve area planning shall include the adoption and maintenance of urban reserve agreements among cities, counties and special districts serving or projected to serve the designated urban reserve area. These agreements shall be adopted by each applicable jurisdiction and shall contain:

- (1) Designation of the local government responsible for building code administration and land use regulation in the urban reserve area, both at the time of reserve designation and upon inclusion of these areas within the urban growth boundary.
- (2) Designation of the local government or special district responsible for the following services: sewer, water, fire protection, parks, transportation and storm water. The agreement shall include maps indicating areas and levels of current rural service responsibility and areas projected for future urban service responsibility when included in the urban growth boundary.
- (3) Terms and conditions under which service responsibility will be transferred or expanded for areas where the provider of the service is expected to change over time.
- (4) Procedures for notification and review of land use actions to ensure involvement by all affected local governments and special districts.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 197.145 & ORS 197.040

Hist.: LCDC 2-1992, f. & cert. ef. 4-29-92; LCDD 4-2000, f. & cert. ef. 3-22-00

# 660-021-0060

# <u>Urban Growth Boundary Expansion</u>

All lands within urban reserve areas established pursuant to this division shall be included within an urban growth boundary before inclusion of other lands, except where an identified need for a particular type of land cannot be met by lands within an established urban reserve area.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 197.145 & ORS 197.040

Hist.: LCDC 2-1992, f. & cert. ef. 4-29-92; LCDD 4-2000, f. & cert. ef. 3-22-00

# 660-021-0070

Adoption and Review of Urban Reserve Areas

- (1) Designation and amendment of urban reserve areas shall follow the procedures in ORS 197.610 through 197.650.
- (2) Disputes between jurisdictions regarding urban reserve area boundaries, planning and regulation, or urban reserve agreements may be mediated by the Department or Commission upon request by an affected local government or special district.

Stat. Auth.: ORS 183 & ORS 197 Stats. Implemented: ORS 197.145

Hist.: LCDC 2-1992, f. & cert. ef. 4-29-92; LCDD 2-1997(Temp), f. & cert. ef. 5-21-97; LCDD

3-1997, f. & cert. ef.

8-1-97; LCDD 4-2000, f. & cert. ef. 3-22-00

### 660-021-0080

# **Applicability**

The provisions of this rule are effective upon filing with the Secretary of State. The amendments to OAR 660-021-0030 adopted by the commission on January 27, 2000, do not apply to the urban reserve designations made by the Portland Metropolitan Service District on March 6, 1997, or to any decision by the District on remand of those designations from the Land Use Board of Appeals or a court of competent jurisdiction, and the version of that rule effective on December 31, 1996, shall continue to apply to those designations.

Stat. Auth.: ORS 183, ORS 195 & ORS 197

Stats. Implemented: ORS 195.145

Hist.: LCDC 2-1992, f. & cert. ef. 4-29-92; LCDC 5-1994, f. & cert. ef. 4-20-94; LCDD 2-1997(Temp), f. & cert. ef.

5-21-97; LCDD 3-1997, f. & cert. ef. 8-1-97; LCDD 4-1997, f. & cert. ef. 12-23-97; LCDD 4-2000, f. & cert. ef.

3-22-00

# 660-021-0090

## Implementation Schedule

- (1) Local governments listed in OAR 660-021-0080(3) shall complete urban reserve area planning under the following schedule:
  - (a) Adopt final urban reserve area boundaries, including all mapping, planning, and land use regulation requirements specified in OAR 660-021-0040 within 24 months from the effective date of this rule; and
  - (b) Adopt urban reserve area agreements meeting OAR 660-021-0050 within one year from adoption of urban reserve areas.

(2) The Director may grant an extension to time lines under subsections (1)(a) or (b) of this rule if the Director determines that the local government has provided proof of good cause for failing to complete urban reserve requirements on time.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 197.145 & ORS 197.040

Hist.: LCDC 2-1992, f. & cert. ef. 4-29-92

#### 660-021-0100

# Interim Protection of Potential Reserve Areas

- (1) The following interim protection measures apply to all land use decisions concerning exception areas and nonresource lands within two miles of the urban growth boundary of Medford, and to those areas designated as an urban reserve by Metro (for the Portland area urban growth boundary) on March 6, 1997:
  - (a) Amendments of comprehensive plans or land use regulations are prohibited if they would allow an increase in the density of residential development relative to existing acknowledged plan and land use regulation provisions;
  - (b) Amendments of comprehensive plans or land use regulations are prohibited if they would allow additional commercial or industrial uses relative to existing acknowledged plan and land use regulation provisions, except that mineral and aggregate sites inventoried in an acknowledged plan may be rezoned to authorize mining activities;
  - (c) No subdivision or partition shall be permitted within two miles of the urban growth boundary of Medford; and
  - (d) No subdivision or partition creating a lot or parcel of less than 20 acres shall be permitted within those areas designated as urban reserves by Metro on March 6, 1997.
- (2) Any local government reviewing a proposed land use decision that includes a decision under (1)(a)–(d) of this rule shall notify the department in writing of the proposal at least ten days prior to the close of the record on the decision.
- (3) The provisions of this section are effective until the earlier of the following:
  - (a) December 31, 2000;
  - (b) When the commission adopts a rule under Goal 14 limiting the circumstances in which land divisions are allowed on rural exceptions lands; or
  - (c) For the Portland area urban growth boundary, when Metro's urban reserve designations are acknowledged, and all affected local governments have adopted the

measures required under OAR 660-021-0040 and 0050 and those measures are acknowledged.

Stat. Auth.: ORS 183, ORS 195 & ORS 197

Stats. Implemented: ORS 195.145

Hist.: LCDC 2-1992, f. & cert. ef. 4-29-92; LCDD 4-1997, f. & cert. ef. 12-23-97; LCDD 4-

2000, f. & cert. ef. 3-22-00

# Appendix B

# **Analysis of Urban Reserve Areas Eugene Matrix**

	Santa Clara URA	Willow Creek Drainage URA	Greenh ill URA	Airport Vicinity	North Awbrey	East Santa Clara	South Armitage	LCC	Dillard	South Fox Hollow	South Willamett e	Lorane
Developm ent Pattern	Orchards, most land In agricultural use		Some residen tial develop ment and farmin g		Industrial in nature – Biosolid sludge flat treatment (farm use)	Farmland and residential			Many smaller parcels in residentia l use			
Number of acres exception land	12.9 Industrial	254.1 Residential	92.1 Residen tial	70.7 Residentia I	26.6 Industrial 50.3 Residential	280.2 Residential		Commer cial 7.7 Industri al 89.1 Resident ial	702.0 Residenti al	17.9 Residen tial	330.0 Residenti al	544.1 Resident ial
Number of Acres of marginal land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.1	66.1
Number of acres of lower capability ag land	0.0	58.9	10.2	16.2	0.0	0.4	10.4	80.7	0.0	7.8	0.0	214.9
Number of acres of lower capability forest land	0.0	400.6	50.2	0.0	0.0	0.1	0.0	538.4	65.7	99.1	5.9	72.8

Other Service Informati on	Transportati on issues: Interchanges on Beltline and River Rd- capacities problems. River Rd is severely congested during extended weekday peaks and at various times throughout the weekend.	Transporta tion: Major capacity problems on Hwy 126 <sup>th</sup> and West 11 <sup>th</sup> There is no state highway east of Beltline. The problem in this area is W 11 <sup>th</sup> congestion and future capacity issues at W11th and Beltline.	Transp ortatio n capacit y proble ms on Hwy 126, West 11 <sup>th</sup> and Beltline includi ng the Beltline & W. 11 <sup>th</sup> intersec tion. Withou t West Eugene Parkwa y there will be less	While not in the Airport vicinity, there are several parcels east of airport and west of UGB could serve as residential. They are so little probably can't work as agricultural		Transporta tion issues: Interchange s on Beltline and River Rd- capacities problems. River Rd is severely congested during extended weekday peaks and at various times throughout the weekend.		30 <sup>th</sup> Avenue is used sporadic ally and generall y underult ilized. Changes to Laurel Hill Refinem ent Plan could affect planning of intercha nge. A I-5 Intercha nge Refinem ent Plan from				
			Parkwa y there will be less system capacit y heading					nge Refinem ent Plan from McVay Hwy to Goshen will				
			into west Eugene.					occur in 1-2 years.				
Water	EWEB	Additional	Additio	EWEB	EWEB	Distributio	Distributi	Transmi	To serve	Additio	Distributi	Storage
Service	water service	water	nal	water	water service	n facilities	on	ssion	area a	nal	on	and
	is available	storage	water	service	available	are	facilities	lines will	water	infrastr	storage	distribut
	adjacent to	capacity	storage	available	adjacent to	adjacent to	are	need to	reservoir	ucture	and	ion fo cilitian
	area but	necessary. EWEB	capacit	adjacent to	existing service	this area. Some	adjacent to this	be	and	and	pumping facilities	facilities need to
	pipelines	E W ED	y	existing	service	Some	to tins	construc	pumping	water	racinties	need to

	need to be constructed within area to serve individual parcels.	plans to develop reservoirs and pump stations in this vicinity to serve in UGB.	necessa ry. EWEB plans to develop reservo irs and pump stations in this vicinity to serve within UGB.	service locations within UGB. Distribution pipelines needed to serve individual parcels.	locations within UGB. Distribution pipelines needed to serve individual parcels.	upsizing of mains may be required to provide adequate fire protection, in some cases.	area. Distributi on pipelines will need to be extended to serve parcels in this area.	ted to serve this area effectivel y. Storage and distribut ion lines exist. Addition al distribut ion mains will be needed for parcels.	station would be needed.	storage capacit y needed.	exist adjacent to this area. Additiona l storage will be needed for the 1325 elevation ? level. Distributi on mains will need to be construct ed to serve area.	be construc ted in order to serve area.
Stormwat	Service constraints in eastern portion, 6-20 years before serviced.	Difficult to serve in long-term as developable lands upstream are removed from downstrea m facilities. Sites located in the headwaters of Willow Creek in a similar situation.		Downstrea m locations with potential access to stormwate r drainages.		Downstrea m locations can drain stormwater to the Mckenzie, however, potential fish listing could preclude direct stormwater discharges.		Some Constrai nts				

	Santa Clara URA	Willow Creek Drainage URA	Greenh ill URA	Airport Vicinity	North Awbrey	East Santa Clara	South Armitage	LCC Basin	Dillard	South Fox Hollow	South Willamett e	Lorane
Wastewat	This area is planned to be served and there is capacity. Study necessary to determine cost and timing.	This area is planned to be served and there is capacity. Study necessary to determine cost and timing.	This area is planne d to be served and there is capacit y. Study necessary to determine cost and timing.	There is not a lot of additional capacity during wet weather flow. Would require study	There is not a lot of additional capacity during wet weather flow. Would require study	There is not a lot of additional capacity during wet weather flow. Would require study	There is not a lot of additiona l capacity during wet weather flow. Would require study	Planning to serve and have capacity. LCC may be forced to use something other than lagoon. Lagoon was considered temporary. Estimated cost in the \$3 to \$4 million range.	There is not a lot of additiona l capacity during wet weather flow. Would require study	There is not a lot of additio nal capacit y during wet weathe r flow. Would require study	There is not a lot of additiona l capacity during wet weather flow. Would require study	There is not a lot of addition al capacity during wet weather flow. Would require study
Electric	EWEB may need to cross this area to serve regardless of inclusion in the UGB to serve areas on the other side. Thus, it is awkward this area is	EWEB electric service (and excess capacity) is available.	Area is in EWEB's service area and electric serve (and excess capacit	electric service (and excess capacity) is available. The western edge of this area is	EWEB electric service (and excess capacity) is available from EWEB and Blachly Lane.	electric service (and excess capacity) is available. The northern part of this area is served by EPUD.	EWEB service is available. A new substatio n is planned that will provide excess capacity.	Electric service in this area is available from EWEB, Lane Electric, EPUD and Pacific	Service in this area is available from Lane Electric Co-op. New substatio n recently construct	Service in this area is availabl e from Lane Electric Co-op. New substati on recentl	Service in this area is available from Lane Electric Co-op. No difficulty serving.	Service in this area is available from EWEB and Lane Electric Co-op. No difficult

	not in UGB. It is difficult to cross when no public right of way and expensive when there isn't much load. EPUD serves the northern half of this area so they should be contacted about future constraints to serve.		y) is availabl e.	served by EPUD.				Power. EWEB serves most of the area and has excess capacity available .	ed.	y constructed.		y serving.
	Santa Clara URA	Willow Creek Drainage URA	Greenh ill URA	Airport Vicinity	North Awbrey	East Santa Clara	South Armitage	LCC	Dillard	South Fox Hollow	South Willamett e	Lorane
Restrictio ns	Biosolids plant nearby may impact this area.			Airport Restriction s in runway path. Noise level from runways would	Area surrounded by industrial uses and biosolid sludge treatment.		Major capacity problems on Beltline.					

				exceed standards for residential developme nt								
Wetlands	Wetlands scattered throughout subarea on NWI		Wetlan ds on NWI	Wetlands on NWI	Wetlands on NWI	Wetlands on NWI in North	A few wetlands in west portion of subarea on NWI	Wetland s north of 30 <sup>th</sup> on NWI				Wetland along Lorane Hwy on NWI
Topograp hy		Severe Slopes						A basin not severe slopes	Severe Slopes	Severe Slopes	Severe Slopes	Severe Slopes
Riparian		Headwaters for Willow Creek										
Waterwa ys	Spring and Flat Creek important waterways	Willow Creek and most of its tributaries are protected in West Eugene Wetlands Study										
Floodplai n	Spring and Flat Creek floodplains. If development occurs in floodplain will impact wildlife.	Study				Portion of area in Floodplain						

Wildlife	Study	Need to	Native					In
	underway.	ensure	grassla					Siuslaw
	Western	habitat is	nds					Watersh
	Pond turtles	not	contain					ed, there
	in Spring	fragmented.	sensitiv					could be
	Creek,	White Oak	e					coho
	possible	woodlands	species.					salmon
	cutthroat in	contain						issues.
	Spring and	sensitive						
	Flat Creek	species.						

# **Analysis of Urban Reserve Areas Springfield Matrix**

	East Springfield URA	North Gateway	North Springfield	Mohawk	North Thurston	Jasper Hills	South Springfield
Number of acres exception land	89.8 Residential	0.0	0.0	518.7 Residential	7.5 Residential	51.9 Residentia	26.2 Residential
Number of Acres of marginal land	0.0	0.0	0.0	244.5	0.0	0.0	0.0
Number of acres of lower capability ag land	11.9	38.8	13.6	0.0	14.0	0.0	41.1
Number of acres of lower capability forest land	33.2	0.0	0.0	0.0	0.0	346.8	0.0
General Service constraints	The neighbors downhill from this area are already having flooding problems which urban development in this area would add to.			Would need to expand bridge for transportati on. Sewer, electric would need to cross river – very expensive		Planning for road is in planning stage now inside UGB. Road project must mitigate substantial amount of wetlands.	
Water Service	Interest by SUB to extend serve to	SUB water source and	SUB is interested in	SUB facilities	SUB water source and	Water sources	SUB water source
	this area. The area	distribution	serving this	across river	transmissio	and	distribution

presently suffers	facilities are	area. It could	from area.	n facilities	transmissi	facilities are
from lack of	adjacent to	extend its	SUB	are	on lines	adjacent to
water, 30-40	southern end	existing lines	facilities	adjacent to	needed to	mid portion
people depend on	of area. SUB	in the north	could be	east portion	serve.	of this
ground water.	could easily	areas of the	extended	of this	Extensive	subarea and
Estimated cost to	install	city to serve	using the	subarea.	transmissi	water source
serve \$500,000 to	additional	the North	existing	Subarca.	on would	and
\$1,000,000. SUB	facilities in this	Springfield	bridge to		be needed	distribution
water facilities	area and	area. Along	serve any		with	facilities
very near area at	additional	the southern	growth in		multiple	adjacent to
this time.	source to	edge of the	the Mohawk		feeds and	west portion
tins time.	supply growth	subarea,	Valley area.		source/stor	of subarea.
	in this area.	Rainbow	vancy area.		age to	or subarca.
	in tins area.	Water District			adequately	
		has adequate			serve this	
		distribution			area at the	
		capacity			south end	
		available for			of the	
		single family			existing	
		residential			UGB.	
		levels of			UGD.	
		service and				
		the capability				
		to extend				
		larger water				
		mains from				
		nearby				
		transmission				
		facilities, if				
		needed.				
		necueu.				

Stormwater	Stormwater issues - water in this area drains down slopes and contributes to flooding downstream. EWEB restriction on new outfalls	Stormwater service could be cost effective but there is no public outfall for the stormwater now.	Outfalls and major trunk system need to be developed outside the UGB to serve area.	Little known	No public outfalls in the area.		Cost effective to provide service to east portion of subarea in areas adjacent to existing services.
Wastewater	Planned to serve this area but needs study.	Currently, no capacity problems in this area inside UGB. There have been problems with storm inter-ties and grease and rages clogging pump station. Adding this land area would require increasing capacity of system which could be done.	No real constraint.	Expensive - need to cross McKenzie River.	Fill would be necessary to keep developme nt above flood elevations and prevent floodwater from entering the wastewater system	No real constraints . To serve area, a master plan needs to be developed and must acquire rights to an outfall to the Willamette River, Jasper Slough or the Mill Race.	Vacant lands N West subarea a close to existing collection Facilities and services.
Electric	EWEB electric service (and excess capacity) is available.	EWEB electric serves this area. A new substation is planned that	In east portion of subarea, SUB electric service		EWEB provides service in this area and has		SUB electric service currently serves the east and west

		will provide excess capacity.	currently serves up to the UGB and has facilities and additional capacity available.		excess capacity available.		portion of this subarea. Facilities and additional capacity exist.
	East Springfield URA	North Gateway	North Springfield	Mohawk	North Thurston	Jasper Hills	South Springfield
Restrictions	Geologic hazard - old landslide? Thin soils			ESA fish listing may restrict bridge expansion			
Wetlands	Wetlands north of Hwy 126 on NWI.	A few wetlands on NWI.	Wetlands south of McKenzie River on NWI.	Wetlands in southern portion of subarea on NWI.	Wetland throughout subarea on NWI.	A few wetlands on NWI.	Wetlands throughout subarea on NWI.
Topography	Severe slopes south of Hwy 126					Sloped Land	
Riparian							
Waterways							

Floodplain	Portion of subarea	Portion in	Portion in	In	In Floodplain
	in floodplain	Floodplain -	Floodplain	Floodplain	
		much flooding		- much	
		during last big		flooding	
		flood		during last	
				big flood	
Wildlife	Cedar Creek				
	contains cutthroat				
	and juvenile				
	Spring Chinook				
	could be an ESA				
	issue.				

# **APPENDIX C: Agricultural and Forest Soils Ratings**

The Lane County Land Management Division, with technical assistance from Lane Council of Governments, compiled this data to assist the public in preparing land use applications. The Natural Resources Conservation Service (NRCS)

reviewed the data and methodology.

Map Symbol	Lane County Soil Map Unit	Douglas Fir Site Index	Cu. Ft./ Acre/ Year	Agricultural Capability Class	High Value Farmland
01A	Abiqua silty clay loam, 0 - 3% slopes	135	203	1	X
01B	Abiqua silty clay loam, 3 - 5% slopes	135	203	2	X
02E	Astoria silt loam, 5 - 30% slopes	130	193	6	
03E	Astoria Variant silt loam, 3 - 30% slopes	none		6	
03G	Astoria Variant silt loam, 30 - 60% slopes	none		6	
04G	Atring-Rock outcrop complex, 30 - 60% slopes	***	81	6	
05	Awbrig silty clay loam	none		4	X
06	Awbrig-Urban land complex	none		4	
07B	Bandon sandy loam, 0 - 7% slopes	105	145	3	
07C	Bandon sandy loam, 7 - 12% slopes	105	145	3	
07F	Bandon sandy loam, 12 - 50% slopes	105	145	6	
08	Bashaw clay	none		4	X
09	Bashaw-Urban land complex	none		4	
10	Beaches	none		8	
11C	Bellpine silty clay loam, 3 - 12% slopes	115	163	3	X
11D	Bellpine silty clay loam, 12 - 20% slopes	115	163	3	X
11E	Bellpine silty clay loam, 20 - 30% slopes	115	163	4	X
11F	Bellpine silty clay loam, 30 - 50% slopes	115	163	6	
12E	Bellpine cobbly silty clay loam, 2 - 30% slopes	115	163	4	
13F	Blachly clay loam, 30 - 50% slopes	119	173	6	
13G	Blachly clay loam, 50 - 70% slopes	119	173	7	
14E	Blachly silty clay loam, 3 - 30% slopes	125	184	6	
14F	Blachly silty clay loam, 30 - 50% slopes	125	184	6	
15E	Blachly-McCully clay loam, 3 - 30% slopes	***	172	6	
16D	Bohannon gravelly loam, 3 - 25% slopes	118	171	6	
16F	Bohannon gravelly loam, 25 - 50% slopes	118	171	6	
16H	Bohannon gravelly loam, 50 - 90% slopes	118	171	7	
17	Brallier muck, drained	none		4	
18	Brallier Variant muck	none		5	
19	Brenner silty clay loam	none		3	X
20B	Briedwell cobbly loam, 0 - 7% slopes	103	141	3	X
21B	Bullards-Ferrelo loams, 0 - 7% slopes	***	84	3	
21C	Bullards-Ferrelo loams, 7 - 12% slopes	***	84	3	
21E	Bullards-Ferrelo loams, 12 - 30% slopes	***	76	4	
21G	Bullards-Ferrelo loams, 30 - 60% slopes	***	76	6	

		Douglas Fir	Cu. Ft./	Agricultural	High
Map	Lane County	Site	Acre/	Capability	Value
Symbol	Soil Map Unit	Index	Year	Class	Farmland
22	Camas gravelly sandy loam, occasionally flooded	none		4	
23	Camas-Urban land complex	none		4	
24	Chapman loam	none		1	X
25	Chapman-Urban land complex	none		1	X
26	Chehalis silty clay loam, occasionally flooded	none		2	X
27	Chehalis-Urban land complex	none		2	X
28C	Chehulpum silt loam, 3 - 12% slopes	none		6 *	
28E	Chehulpum silt loam, 12 - 40% slopes	none		6	
29	Cloquato silt loam	none		2	X
30	Cloquato-Urban land complex	none		2	X
31	Coburg silty clay loam	none		2	X
32	Coburg-Urban land complex	none		2	X
33	Conser silty clay loam	none		3	X
34	Courtney gravelly silty clay loam	none		4	X
35D	Cruiser gravelly clay loam, 3 - 25% slopes	140**	145	6	
35F	Cruiser gravelly clay loam, 25 - 50% slopes	140**	145	6	
35G	Cruiser gravelly clay loam, 35 - 70% slopes	140**	145	7	
36D	Cumley silty clay loam, 2 - 20% slopes	114	162	6	
37C	Cupola cobbly loam, 3 - 12% slopes	100	136	6	
37E	Cupola cobbly loam, 12 - 30% slopes	100	136	6	
38	Dayton silt loam, clay substratum	none		4	X
39E	Digger gravelly loam, 10 - 30% slopes	102	140	6	
39F	Digger gravelly loam, 30 - 50% slopes	102	140	6	
40H	Digger-Rock outcrop complex, 50 - 85% slopes	***	114	7	
41C	Dixonville silty clay loam, 3 - 12% slopes	109	152	3	
41E	Dixonville silty clay loam, 12 - 30% slopes	109	152	4	
41F	Dixonville silty clay loam, 30 - 50% slopes	109	152	6	
42E	Dixonville-Hazelair-Urban land complex, 12 - 35% slopes	***	89	4	
43C	Dixonville-Philomath-Hazelair complex, 3 - 12% slopes	***	54	3	
43E	Dixonville-Philomath-Hazelair complex, 12 - 35% slopes	***	63	4	
44	Dune land	none		8	
45C	Dupee silt loam, 3 - 20% slopes	none		3	
46	Eilertsen silt loam	133	199	2	X
47E	Fendall silt loam, 3 - 30% slopes	125	184	6	
48	Fluvents, nearly level	none			
49E	Formader loam, 3 - 30% slopes	121	176	6	
49G	Formader loam, 30 - 60% slopes	121	176	6	
50G	Formader-Hembre-Klickitat complex, 50 - 80% slopes	***	176	7	

		Douglas Fir	Cu. Ft./	Agricultural	High
Map	Lane County	Site	Acre/	Capability	Value
Symbol	Soil Map Unit	Index	Year	Class	Farmland
51B	Haflinger-Jimbo complex, 0 - 5% slopes	***	165	6	X
52B	Hazelair silty clay loam, 2 - 7% slopes	none		3	
52D	Hazelair silty clay loam, 7 - 20% slopes	none		4	
53	Heceta fine sand	none		4	
54D	Hembre silt loam, 5 - 25% slopes	127	188	6	
54G	Hembre silt loam, 25-60% slopes	127	188	6	
55E	Hembre-Klickitat complex, 3 - 30% slopes	***	177	6	
55G	Hembre-Klickitat complex, 30 - 60% slopes	***	176	6	
56	Holcomb silty clay loam	none		3	$X^1$
57D	Holderman extremely cobbly loam, 5 - 25% slopes	119**	113	6	
57F	Holderman extremely cobbly loam, 25 - 50% slopes	119**	113	6	
57G	Holderman extremely cobbly loam, 50 - 75% slopes	119**	113	7	
58D	Honeygrove silty clay loam, 3 - 25% slopes	122	178	6	
58F	Honeygrove silty clay loam, 25 - 50% slopes	122	178	6	
59E	Hullt loam, 2 - 30% slopes	121	176	3	X
59G	Hullt loam, 30 - 60% slopes	121	176	6	
60D	Hummington gravelly loam, 5 - 25% slopes	131**	131	6	
60F	Hummington gravelly loam, 25 - 50% slopes	131**	131	6	
60G	Hummington gravelly loam, 50 - 75% slopes	131**	131	7	
61	Jimbo silt loam	121	176	1	X
62B	Jimbo-Haflinger complex, 0 - 5% slopes	***	171	1	X
63C	Jory silty clay loam, 2 - 12% slopes	122	178	2	X
63D	Jory silty clay loam, 12 - 20% slopes	122	178	3	X
63E	Jory silty clay loam, 20 - 30% slopes	122	178	4	X
64D	Keel cobbly clay loam, 3 - 25% slopes	132**	133	6	
64F	Keel cobbly clay loam, 25 - 45% slopes	132**	133	6	
64G	Keel cobbly clay loam, 45 - 75% slopes	132**	133	7	
65G	Kilchis stony loam, 30 - 60% slopes	90	116	6	
65H	Kilchis stony loam, 60 - 90% slopes	90	116	7	
66D	Kinney cobbly loam, 3 - 20% slopes	122	178	6	
67F	Kinney cobbly loam, 20 - 50% north slopes	122	178	6	
67G	Kinney cobbly loam, 50 - 70% north slopes	122	178	7	
68F	Kinney cobbly loam, 20 - 50% south slopes	122	178	6	
68G	Kinney cobbly loam, 50 - 70% south slopes	122	178	7	
69E	Kinney cobbly loam, slump, 3 - 30% slopes	122	178	6	
70E	Klickitat stony loam, 3 - 30% slopes	112	158	6	
71F	Klickitat stony loam, 30 - 50% north slopes	112	158	6	
71G	Klickitat stony loam, 50 - 75% north slopes	112	158	7	

		Douglas Fir	Cu. Ft./	Agricultural	High
Map	Lane County	Site	Acre/	Capability	Value
Symbol	Soil Map Unit	Index	Year	Class	Farmland
72F	Klickitat stony loam, 30 - 50% south slopes	112	158	6	
72G	Klickitat stony loam, 50 - 75% south slopes	112	158	7	
73	Linslaw loam	none		3	$\mathbf{X}^{1}$
74B	Lint silt loam, 0 - 7% slopes	117	169	3	
74C	Lint silt loam, 7 - 12% slopes	117	169	3	
74D	Lint silt loam, 12 - 20% slopes	117	169	3	
74E	Lint silt loam, 20 - 40% slopes	117	169	4	
75	Malabon silty clay loam	none		1	X
76	Malabon-Urban land complex	none		1	X
77B	Marcola cobbly silty clay loam, 2 - 7% slopes	none		4	
78	McAlpin silty clay loam	none		2	X
79	McBee silty clay loam	none		3	$X^2$
80F	McCully clay loam, 30 - 35% slopes	118	171	6	
80G	McCully clay loam, 50 - 70% slopes	118	171	7	
81D	McDuff clay loam, 3 - 25% slopes	112	158	6	
81F	McDuff clay loam, 25 - 50% slopes	112	158	6	
81G	McDuff clay loam, 50 - 70% slopes	112	158	7	
82C	Meda loam, 2 - 12% slopes	none		3	X
83B	Minniece silty clay loam, 0 - 8% slopes	none		6	
84D	Mulkey loam, 5 - 25% slopes	none		6	
85	Natroy silty clay loam	none		4	X
86	Natroy silty clay	none		4	X
87	Natroy-Urban land complex	none		4	X
88	Nehalem silt loam	none		2	X
89C	Nekia silty clay loam, 2 - 12% slopes	113	160	3	X
89D	Nekia silty clay loam, 12 - 20% slopes	113	160	3	X
89E	Nekia silty clay loam, 20 - 30% slopes	113	160	4	
89F	Nekia silty clay loam, 30 - 50% slopes	113	160	6	
90	Nekoma silt loam	none		3	
91D	Neskowin silt loam, 12 - 20% slopes	none		6	
91E	Neskowin silt loam, 20 - 40% slopes	none		6	
92G	Neskowin-Salander silt loams, 40 - 60% slopes	none		6	
93	Nestucca silt loam	none		3	
94C	Netarts fine sand, 3 - 12% slopes	none		6	
94E	Netarts fine sand, 12 - 30% slopes	none		6	
95	Newberg fine sandy loam	none		2	X
96	Newberg loam	none		2	X

Map	Lane County	Douglas Fir Site	Cu. Ft./ Acre/	Agricultural Capability	High Value
Symbol	Soil Map Unit	Index	Year	Class	Farmland
97	Newberg-Urban land complex	none		2	X
98	Noti loam	none		4	X
99H	Ochrepts & Umbrepts, very steep	none			
100	Oxley gravelly silt loam	none		3	
101	Oxley-Urban land complex	none		3	
102C	Panther silty clay loam, 2 - 12% slopes	none		6	
103C	Panther-Urban land complex, 2 - 12% slopes	none		6	
104E	Peavine silty clay loam, 3 - 30% slopes	125	184	6	
104G	Peavine silty clay loam, 30 - 60% slopes	125	184	6	
105A	Pengra silt loam, 1 - 4% slopes	none		3	$X^1$
106A	Pengra-Urban land complex, 1 - 4% slopes	none		3	
107C	Philomath silty clay, 3 - 12% slopes	none		6	
108C	Philomath cobbly silty clay, 3 - 12% slopes	none		6	
108F	Philomath cobbly silty clay, 12 - 45% slopes	none		6	
109F	Philomath-Urban land complex, 12 - 45% slopes	none		6	
110	Pits	none		8	
111D	Preacher loam, 0 - 25% slopes	128	190	6	
111F	Preacher loam, 25 - 50% slopes	128	190	6	
112G	Preacher-Bohannon-Slickrock complex, 50 - 75% slopes	***	188	7	
113C	Ritner cobbly silty clay loam, 2 - 12% slopes	107	149	4	
113E	Ritner cobbly silty clay loam, 12 - 30% slopes	107	149	6	
113G	Ritner cobbly silty clay loam, 30 - 60% slopes	107	149	7	
114	Riverwash	none		8	
115H	Rock outcrop-Kilchis complex, 30 - 90% slopes	***	27	8	
116G	Rock outcrop-Witzel complex, 10 - 70% slopes	***	none	8	
117E	Salander silt loam, 12 - 30% slopes	125	184	6	
118	Salem gravelly silt loam	none		2	X
119	Salem-Urban land complex	none		2	X
120B	Salkum silt loam, 2 - 6% slopes	116	167	2	X
121B	Salkum silty clay loam, 2 - 8% slopes	116	167	2	X
121C	Salkum silty clay loam, 8 - 16% slopes	116	167	3	X
122	Saturn clay loam	123	180	3	
123	Sifton gravelly loam	124	182	3	X
124D	Slickrock gravelly loam, 3 - 25% slopes	137	209	6	
124F	Slickrock gravelly loam, 25 - 50% slopes	137	209	6	
125C	Steiwer loam, 3 - 12% slopes	none		3	
125D	Steiwer loam, 12 - 20% slopes	none		4*	

		Douglas Fir	Cu. Ft./	Agricultural	High
Map	Lane County	Site	Acre/	Capability	Value
Symbol	Soil Map Unit	Index	Year	Class	Farmland
125F	Steiwer loam, 20 - 50% slopes	none		6	
126F	Tahkenitch loam, 20 - 45% slopes	124	182	6	
126G	Tahkenitch loam, 45 - 75% slopes	124	182	7	
127C	Urban land-Hazelair-Dixonville complex, 3 - 12% slopes	***	68	8	
128B	Veneta loam, 0 - 7% slopes	108	150	2	X
129B	Veneta Variant silt loam, 0 - 7% slopes	124	182	2	X
130	Waldo silty clay loam	none		3	
131C	Waldport fine sand, 0 - 12% slopes	none		6	
131E	Waldport fine sand, 12 - 30% slopes	none		7	
131G	Waldport fine sand, 30 - 70% slopes	none		7	
132E	Waldport fine sand, thin surface, 0 - 30% slopes	none		7	
133C	Waldport-Urban land complex, 0 - 12% slopes	none		6	
134	Wapato silty clay loam	none		3	$X^3$
135C	Willakenzie clay loam, 2 - 12% slopes	110	154	3	X
135D	Willakenzie clay loam, 12 - 20% slopes	110	154	3	X
135E	Willakenzie clay loam, 20 - 30% slopes	110	154	4	X
135F	Willakenzie clay loam, 30 - 50% slopes	110	154	6	
136	Willanch fine sandy loam	none		3	
137F	Winberry very gravelly loam, 10 - 45% slopes	none		7	
138E	Witzel very cobbly loam, 3 - 30% slopes	none		6	
138G	Witzel very cobbly loam, 30 - 75% slopes	none		6	
139	Woodburn silt loam	none		2	X
140	Yaquina loamy fine sand	none		4	
141	Yaquina-Urban land complex	none		4	
142G	Yellowstone-Rock outcrop, 10 - 60% slopes	none		7	

\* Indicates soils which have an irrigated capability class which is different from the nonirrigated capability class.

\*\* Indicates productivity calculated using 100-year Douglas fir data.

\*\*\* Indicates soil complexes with multiple site indices, refer to the CuFt/Acre/Year column for a composite volume rating for the complex.

"none" Indicates soil map units that lack site index information on Douglas fir. The soil map unit may have the capability to produce Douglas fir, but this productivity may be very low to very high. No site index has been collected by the NRCS due to lack of suitable sites or lack of time and or funds.

X<sup>1</sup> Only drained areas are high value farmland.

X<sup>2</sup> Only areas protected from flooding or not frequently flooded during the growing season are high value farmland.

X<sup>3</sup> Only drained areas that are either protected from flooding or not frequently flooded during the growing season are high value farmland.

# Source and Description of the Data

# Map Symbol

Data Source

USDA-Soil Conservation Service, September 1987. Soil Survey of Lane County Area, Oregon.

#### Soil Map Unit

Data Source

USDA-Soil Conservation Service, September 1987. Soil Survey of Lane County Area, Oregon.

### **Site Index**

**Data Source** 

USDA-Natural Resources Conservation Service, August 1997 printout from the National Soils Information System (NASIS). *Soils Database for Lane County, Woodland Management and Productivity* table.

#### Description

These site indices indicate the average height, in feet, that dominant and co-dominant Douglas fir trees attain in 50 years (or 100 years, for the higher elevation series of Cruiser, Holderman, Hummington, and Keel). The site index applies to fully stocked, even-aged, unmanaged stands. This table lists only site indices for Douglas fir and does not list site indices for soil complexes. The description under Cubic Feet/Acre/Year explains the composite volume rating in this table for soil complexes.

#### Cubic feet/acre/year

Data Source

USDA-Soil Conservation Service, June 1986. *Technical Note No. 2 Revised, Culmination of Mean Annual Increment for Commercial Forest Trees of Oregon.* 

#### Description

Converting site index to cubic feet/acre/year expresses productivity as a volume of wood fiber produced. For map units that are predominantly one soil type, it is straightforward to use the tables in Technical Note No. 2 to look up the cubic feet/acre/year that a soil could potentially produce based on the site index in the State Soils Database. Calculating a volume rating for a complex is more problematic. The NRCS reports site index data for each component of a soil complex but does not calculate a composite volume for the entire complex. A complex is a soil map unit which has two or more kinds of soil in such an intricate pattern or so small in area that the soils cannot be delineated separately at the scale of mapping.

The methodology used in this table to calculate forest productivity volume ratings for soil complexes involves applying a weighted average to each component of the complex and then normalizing to base it on 100% excluding the inclusions. The following example illustrates this calculation for a soil complex which has a site index for only one of the two components.

43 C	Dixonville-Philomath-Hazelair complex 3-12%						
	Actual	Normalized	Site	CuFt/	Normalized %		
Component	%	%*	Index	Ac/Yr	x Cu.F.t/Ac./Year		
Dixonville	30%	35%	109	152	54		
Philomath	30%	35%	-	-	-		
Hazelair	25%	29%					
Total	85%	100%			54		

\* Normalized % = 
$$\frac{\% \text{ of Individual Component}}{100 - (\% \text{Inclusions} + \% \text{ Urban Land})}$$

#### **Agricultural Capability Class**

#### Data Source

USDA-Natural Resources Conservation Service, August 1997 printout from the National Soils Information System (NASIS). *Soils Database for Lane County, Land Capability and Yields Per Acre of Crops and Pasture* table.

#### Description

Land capability class, often called agricultural capability class, generally shows the suitability of soils for most kinds of field crops. The Soil Survey describes capability class: "The soils are grouped according to their limitations for field crops, the risk of damage if they are used for field crops, and the way they respond to management." There are eight capability classes, I through VIII (sometimes written as 1 through 8), indicating progressively greater limitations for use as cropland. The land capability classification is discussed in USDA Agriculture Handbook No. 210, issued September 1961 and reprinted January 1973.

The NRCS reports both irrigated and non-irrigated capability classes. In Lane County, because of adequate rainfall, the ratings are the same for irrigated and non-irrigated except for all but two map units (28C, Chehulpum silt loam, 3-12%, and 125D, Steiwer loam, 3-12%). This table lists the non-irrigated capability class. For soil complexes, this table lists only the capability class of the most predominant soil in the complex (which is the first soil in the name of the map unit).

#### **High Value Soils**

#### Data Source

Land Conservation and Development Commission, adopted February 18, 1994. *Oregon Administrative Rules, Chapter 660, Division 33* (OAR 660-33).

#### Description

The Agricultural Land Rule (OAR 660-33) defines "high value farmland" as land in a tract composed predominantly of soils that are prime, unique, Class I or II, and other soils as specified in the rule. These other soils include the wet clay soils on valley terraces that are generally used for grass seed production, and moderately sloping soils on low foothills.

NRCS is the agency responsible for classifying soils as prime, unique, or land capability class I through VIII (1 through 8). The names 'prime' and 'unique' are what they imply. Prime soils are the best soils from a national perspective—easy to farm, suitable for a wide variety of crops, producing the highest yields. NRCS designates unique soils in conjunction with the state and county so as to recognize soils suited for growing a specialty crop of state or local importance, e.g., the soils on the southern Oregon coast used for growing cranberries and the organic soils in the Willamette Valley used for growing onions. Lane County has not requested the designation of any unique soils. Class I and II are land capability classes—the soils in them have the fewest limitations for crop growth. Refer to the description of Agricultural Capability Class (immediately above) for more information.

Note: The Soil Conservation Service and Natural Resources Conservation Service are the same USDA agency. A name change to Natural Resources Conservation Service was approved in 1994.