Identification and Assessment of the Long-Term Commercial Viability of Metro Region Agricultural Lands

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The analysis, opinions and conclusions expressed in this report are solely those of the Oregon Department of Agriculture.

TABLE OF CONTENTS

Identification and Assessment of the Long-Term Commercial Viability of Metro Region Agricultural Lands ____ *1*

Metro Agriculture: General Character ____ **2**

Metro Agriculture: Economic Contribution ____ **3**

Process ____ **5**

Study area and subregions ____ 5

Analysis factors ____ **7**

Capability factors ____ 7

Suitability factors ____ 10

Analysis and Conclusions ____ **13**

Foundation Agricultural Lands ____ **14**

Important Agricultural Lands ____ **15**

Conflicted Agricultural Lands ____ **16**

East of Sandy River ____ *17*

Analysis ____ **17**

Capability ____ 17

Suitability ____ 17

Other considerations ____ 18

Conclusion ____ **18**

Clackanomah ____ *18*

Analysis ____ **18**

Capability ____ 18

Suitability ____ 19

Other considerations ____ 21

Conclusion ____ **21**

Eagle Creek ____ *23*

Analysis ____ **23**

Capability ____ 23

Suitability ____ 23

Other Considerations ____ 24

Conclusion ____ **24**

Springwater Ridge ____ *24*

Analysis ____ **24**

Capability ____ 24

Suitability ____ 25

Other Considerations ____ 25

Conclusion ____ **25**

Clackamas Heights ____ *26*

Analysis 26
Capability 26
Suitability 26
Other Considerations 26

Conclusion 27

Southeast Clackamas 27

Analysis 28
Capability 28
Suitability 28
Other Considerations 29

Conclusion 29

East Canby 29

Analysis 29
Capability 29
Suitability 30
Other Considerations 30

Conclusion 30

Clackamas Prairies 30

Analysis 31
Capability 31
Suitability 31
Other Considerations 31

Conclusion 32

French Prairie 32

Analysis 32
Capability 32
Suitability 33
Other Considerations 34

Conclusion 34

Stafford Triangle 34

Analysis 35
Capability 35
Suitability 35
Other Considerations 36

Conclusion 36

East Wilsonville 36

Analysis 37
Capability 37
Suitability 37
Other Considerations 38

Conclusion 38

West Wilsonville 38

Analysis ____ **39**
Capability ____ 39
Suitability ____ 39
Other Considerations ____ 40

Conclusion ____ **40**

Parrett Mountain ____ ***41***

Analysis ____ **41**
Capability ____ 41
Suitability ____ 42
Other Considerations ____ 42

Conclusion ____ **42**

Newberg Flats ____ ***43***

Analysis ____ **43**
Capability ____ 43
Suitability ____ 43
Other Considerations ____ 43

Conclusion ____ **43**

Chehalem Mountain ____ ***44***

Analysis ____ **44**
Capability ____ 44
Suitability ____ 45
Other considerations ____ 45

Conclusion ____ **45**

Tualatin Valley ____ ***46***

Analysis ____ **46**
Capability ____ 46
Suitability ____ 47
Other Considerations ____ 49

Conclusion ____ **49**

Dairy/McKay Creeks ____ ***50***

Analysis ____ **51**
Capability ____ 51
Suitability ____ 51
Other Considerations ____ 52

Conclusion ____ **52**

Bethany/West Multnomah ____ ***53***

Analysis ____ **54**
Capability ____ 54
Suitability ____ 54
Other Considerations ____ 55

Conclusion ____ **55**

Sauvie Island ____ ***55***

Analysis ____ **56**
Capability ____ 56
Suitability ____ 56
Other Considerations ____ 57

Conclusion ____ **57**

Scappoose Flats ____ ***57***

Analysis ____ **57**
Capability ____ 57
Suitability ____ 58
Other Considerations ____ 58

Conclusion ____ **59**

Policy Considerations ____ ***59***
Issue: Balance between protecting agriculture and other land uses. ____ 59
Issue: Should the region identify agricultural lands that should remain off limits to urbanization? Should permanent UGB boundaries or "hard edges" be established? ____ 60
Issue: Should farmland protection priorities be based on soil qualities or other factors?____ 61
Issue: Consideration of the impact of UGB expansions on surrounding agricultural lands. ____ 63
Issue: Coordination of regional growth with neighboring cities.____ 64

Identification and Assessment of the Long-Term Commercial Viability of Metro Region Agricultural Lands

As part of its *New Look at Regional Choices,* Metro, the regional government serving the Portland metropolitan region, asked the Oregon Department of Agriculture (ODA) to inventory and assess the region's agricultural lands and to provide suggestions relating to policy directions that may be considered in protecting the region's agriculture industry.

Metro describes the *New Look* as a "…collaborative effort to find new, creative ways to absorb the arrival of a million new residents in this region in the next 25 years, while preserving the values of our long-term vision." Metro's current vision relating to agriculture is set out in the following excerpt from the *Metro Regional Framework Plan*:

> **1.12 Protection of Agriculture and Forest Resource Lands**
>
> It is the policy of the Metro Council to:
>
> **1.12.1** Agricultural and forest resource lands outside the UGB shall be protected from urbanization, and accounted for in regional economic and development plans, consistent with this Plan. However, Metro recognizes that all the statewide goals, including Statewide Planning Goal 10 Housing and Goal 14 Urbanization, are of equal importance to Goal 3 Agricultural Lands and Goal 4 Forest Lands which protect agriculture and forest resource lands. These goals represent competing and, some times, conflicting policy interests which need to be balanced.
> **1.12.2** When the Metro Council must choose among agricultural lands of the same soil classification for addition to the UGB, the Metro Council shall choose agricultural land deemed less important to the continuation of commercial agriculture in the region.
> **1.12.3** Metro shall enter into agreements with neighboring cities and counties to carry out Council policy on protection of agricultural and forest resource policy through the designation of Rural Reserves and other measures.
> **1.12.4** Metro shall work with neighboring counties to provide a high degree of certainty for investment in agriculture and forestry and to reduce conflicts between urbanization and agricultural and forest practices.[1]

ODA has supported and continues to support these policies. Recognizing the issues and tasks ahead of Metro and the implications to one of the state's most valuable agricultural regions, ODA agreed to conduct an inventory and assessment with a focus on analyzing the ability of regional agricultural lands to conduct long-term viable commercial agricultural operations.

[1] Metro Regional Framework Plan, Chapter 1 - Land Use

Before discussing the inventory and assessment, it is important to get grounded in the role agriculture plays in the region.

Metro Agriculture: General Character

Metro[2] agriculture is best described as richly diverse. Food, fuel, seed, fiber and flora crops can all be found in production within the region. Intensive and extensive agricultural practices are employed, as are dryland and irrigated crop production. Many of the attributes that are key to successful and sustainable agriculture can be found within the region. Excellent soils, moderate climate, water for irrigation, access to markets and an accessible transportation system are some of the examples of the key attributes.

The physical landscape includes stream floodplains and terraces, Willamette Valley prairies, rolling to steep hillsides, and river and creek canyons that bisect the varied agricultural surfaces. The vast majority of soils found in the region are considered high-value farmland soils; a good percentage of those are also designated as prime farmland. Twenty percent of the state's prime farmland and 12% of the state's high-value farmland are located in the Metro region.[3]

Metro Counties Agricultural Soils

Acres of prime farmland, nonirrigated	238,951
Acres of Class I-IV agricultural soils, nonirrigated	672,722
Acres of Class I-IV agricultural soils, irrigated	562,055

Below are numbers from the 2002 Census of Agriculture that reflect the character of region farms in terms of size and production. At first glance, the raw number of farms appears to indicate that the nature of the region's agriculture is small-scale. It is important to note that the character of the region's agriculture, in terms of its footprint on the land and production, is dominated by farms that produced and sold $10,000 or more of agricultural products or normally would have been sold $10,000 during the census year. While lifestyle and small-scale farms are common in the region, they do not reflect the nature of the region's commercial farms. Over 63% of the region's 380,222 acres of land in farms and 88% of the market value of agricultural products sold are attributed to farms that produced and sold $10,000 or more of agricultural products or normally would have been sold $10,000 during the census year.

[2] "Metro" refers to the area under the jurisdiction of the Metro Regional government and for the purposes of this report includes the entire land area found in Clackamas, Multnomah, and Washington Counties.
[3] Soil Survey Geographic (SSURGO), http://soildatamart.nrcs.usda.gov/, USDA Natural Resource Conservation Service.

	Clackamas		Multnomah		Washington	
Farms, number	4,676	1,234	710	238	1,900	662
Land in farms, acres	215,210	119,932	34,329	21,503	130,683	98,542
Avg. size of farm, acres	46	97	48	90	69	149
Irrigated land, acres	26,927	23,322	7,780	7,536	25,182	23,822
Market value of ag products sold/farm	$71,002	$263,279	$95,143	$278,875	$122,010	$345,588
	All farms[4]	10K Farms	All farms	10K farms	All farms	10K

Metro Agriculture: Economic Contribution[5]

In 2006, agriculture directly and indirectly contributed nearly $12 billion to the state's economy. This equates to 10% of Oregon's gross state product and more than 9% of all employment in the state.

Agriculture purchases
over $3 billion in goods and services.
+ Farmers add land, capital and management
to produce over $4.3 billion.
+ Processing adds another $1.5 - $2 billion.
+ $2.3 billion in wages and salaries
are generated through the process.

= Nearly $12 billion in direct and indirect impact on Oregon's economy

[4] The census definition of a farm is any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year.

[5] Sources for economic data discussed in this section include:

- USDA National Agricultural Statistics Service (NASS), Oregon Field Office
- Oregon Agricultural Information Network, OSU Extension Economic Information Office.
- Census of Agriculture, Oregon State and County Data, USDA NASS
- Oregon Employment Department

Agriculture is a key traded sector in Oregon, ranking 1st in the volume of exported products and 3rd in the value of exported products. Over 80% of this production left the state, with 40% leaving the country.

Metro (jurisdiction) counties play a significant role in the state's agricultural production. In 2005 the value of production in the three counties was $714,547,000, nearly 17% of the state's total value of production. Clackamas County ranked 2nd and Washington County ranked 3rd in the state in overall farm and ranch sales. And it is easy to underestimate the value of Multnomah County. The smallest county in Oregon in terms of land area and the largest in terms of population, Multnomah County ranked 14th out of all 36 Oregon counties in farm sales.

County gross farm and ranch sales, 2005

Rank	County	Dollars
1	Marion	$539,629,000
2	**Clackamas**	$361,918,000
3	**Washington**	$274,885,000
4	Umatilla	$274,763,000
5.	Yamhill	$264,038,000
6.	Linn	$248,812,000
7.	Morrow	$233,396,000
8.	Malheur	$206,426,000
9.	Klamath	$200,749,000
10.	Polk	$130,052,000

Other quick facts:

- All three counties rank in the top five in terms of greenhouse and nursery production, the states number one ranked commodity. Metro counties account for over 50% of state production value.
- All three rank in the top five in the production of caneberries.
- Metro counties account for over 40% of the acreage in the state planted in small fruits and berries.
- Metro counties account for nearly 38% of the state sales of Christmas trees. Clackamas County ranks 1st, Washington County 6th.
- 60% of the Port of Portland's total export tonnage is agricultural products.

- Multnomah County leads Oregon in food processing with more than 22% of the payroll and 20% of the employees.

- Clackamas County ranks in the top five in the production of:
  Greenhouse and nursery (1)
  Christmas trees (1)
  Caneberries (2)
  Hazelnuts (4)
  Blueberries (3)
  Strawberries (3)
  Eggs and poultry (2)

- Multnomah County ranks in the top five in the production of:
  Greenhouse and nursery (5)
  Caneberries (5)
  Strawberries (5)

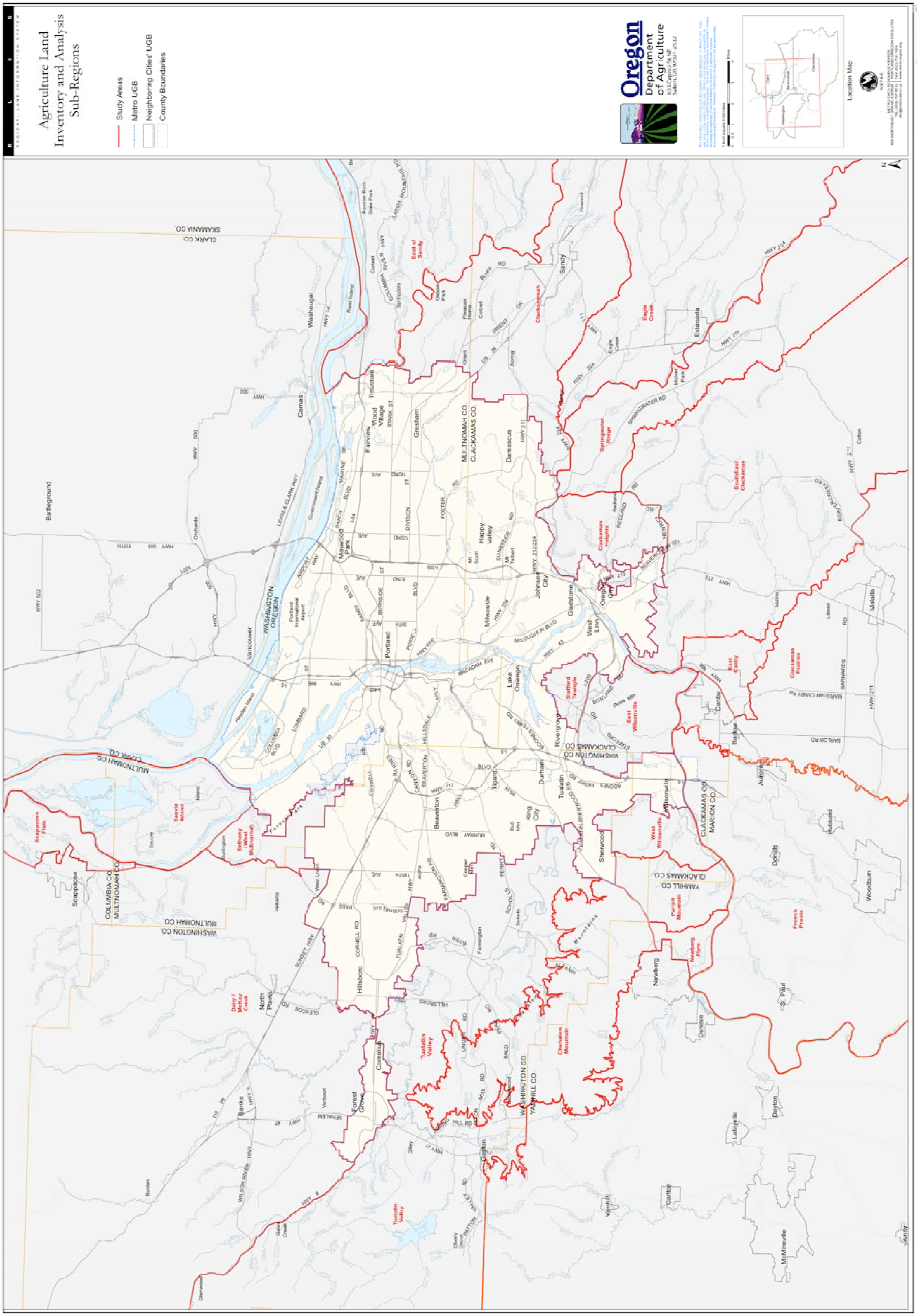
- Washington County ranks in the top five in the production of:
  Greenhouse and nursery (3)
  Caneberries (3)
  Pears (5)
  Wine grapes (3)
  Hazelnuts (3)
  Blueberries (2)
  Strawberries (2)
  Grass and legume seeds (5)

Process

Study area and subregions

The area analyzed for this report includes the three Metro counties and portions of adjacent counties that are increasingly influenced by land use in the Metro region. In many instances, agricultural lands found in the Metro region operate as part of larger blocks of agricultural lands. All together, the study area includes Clackamas, Columbia, Marion, Multnomah, Washington and Yamhill counties.

Recognizing the diversity of the region's physical and cultural landscape and the size of the area involved, the larger region was divided into agricultural subregions for this analysis. Topography, agricultural land use, connectivity, edges and barriers were key factors in establishing the subregions. The result was recognition of 20 separate subregions, listed below. A more detailed description of each subregion can be found in the analysis.


Agriculture Land
Inventory and Analysis
Sub-Regions
Study Areas
Metro UGB
Neighboring Cities' UGB
County Boundaries
Oregon
Department
of Agriculture
Location Map

Agricultural Subregions of the Northern Willamette Valley

1. East of Sandy River
2. Clackanomah
3. Eagle Creek
4. Springwater Ridge
5. Clackamas Heights
6. Southeast Clackamas
7. East Canby
8. Clackamas Prairies
9. French Prairie
10. Stafford Triangle
11. East Wilsonville
12. West Wilsonville
13. Parrett Mountain
14. Newberg Flats
15. Chehalem Mountain
16. Tualatin Valley
17. Dairy/McKay Creeks
18. Bethany/West Multnomah
19. Sauvie Island
20. Scappoose Flats

Analysis of each of these subregions involved field investigation, consultation with local planning agencies, soil and water conservation districts and farmers, and review of technical data from Metro and ODA geographic information systems. Data fields included:

Soils
Topography (slope and aspect)
Zoning
Existing land use and vegetation inventory
Parcelization and ownership
Water rights, irrigation districts, ground water restricted areas
Existing land use (aerial photography)

Analysis factors

The assessment provided in this report is best described as an analysis of the site and the situation of a subject area. Analysis of site and situation is best understood as an examination of both the capability (ability of the land to produce an agricultural product) and the suitability (ability to conduct viable farm use) of any given tract of land to be utilized for farm use. The key factors employed to identify significant and intact agricultural lands are discussed below.

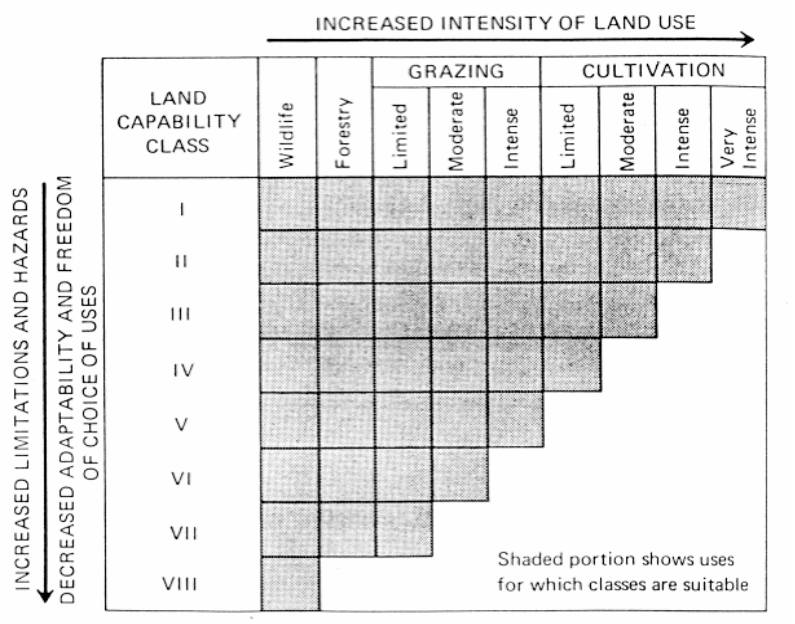
Capability factors

The physical ability of land to produce an agricultural product is a key and dominant factor in any assessment. Quantity and quality of soils and water play a significant role in the viability of agricultural production.

- Soils: USDA NRCS agricultural capability class and importance (prime, unique, important farmlands). Overall, soils are a major asset for Metro agriculture. Because soils play a key role in this analysis and Oregon land use issues, a more detailed discussion is provided below.

Soils surveys are based on all the characteristics of soils, including climate, that influence their use and management. Interpretations are provided within soil surveys for various land uses, including agriculture. Among these interpretations is the grouping of soils into agricultural capability classes. This classification system places soils in eight capability classes. The better the agricultural capability (decreasing from I-VIII), the less management (input) is required by the operator to produce a crop. Soil quality is also a key to the production options available to a grower.

The soils in the first four classes (I-IV), under typical/good management practices, are considered arable and are capable of producing adapted plants and common cultivated field crops and pasture plants. Some soils in classes V-VII are capable of producing specialized crops and even field and vegetable crops under special management.



Soils can also be designated as prime, unique, or high-value farmland:

Prime Farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops. It must be available for these uses. It has the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods, including water management. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not exclusively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding.

Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season and moisture supply needed to produce economically sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Some examples of crops are tree nuts, cranberries, wine grapes, and tree fruits.[6]

High Value Farmland is defined in ORS 215.710(1), (3) and (4) and OAR 660-033-0020(8)(a), (c), (d) and (e). "High Value Farmland" is land in a tract composed predominantly (50.1%) of certain specified soils commonly referred to as "High Value Farmland Soils." These soils (alone or in combination) are the following:

1. Those soils classified by the Natural Resource Conservation Service (NRCS) as:
    a. Prime, Unique, Capability Class 1 or Capability Class 2 <u>not irrigated</u>; or
    b. Prime, Unique, Capability Class 1 or Capability Class 2 <u>if irrigated</u>; and

2. Certain specifically listed Capability Class 3 and 4 soils for the:
    a. Willamette Valley; and
    b. Oregon Coast west of the summit of the Coast Range if used in conjunction with a dairy operation on January 1, 1993; and

High-value farmland also includes other lands planted in specified perennials based on the 1993 Farm Service Agency air photos.

- Water: Availability of water for irrigation of agricultural crops and livestock watering. Water is key to the production of many high-value crops. However, many crops, including high-value crops, can be produced using dryland agricultural practices. Dryland production is most feasible where precipitation is adequate to allow economic return on a nonirrigated crop. New technologies in delivery and storage can compensate for limited availability.

  Water availability is both an asset and a threat to regional agricultural. Current availability is overall good throughout the region. Expansion in some areas, especially where groundwater is the major source, is severely limited by ground water limitations. Such limitations do not impair the use of existing water rights. It is especially important to recognize existing agricultural irrigation in groundwater restricteds areas because new irrigation rights currently are difficult to obtain. The development of valid Measure 37 claims may compromise the availability of ground water to existing water rights.

[6] Soil Survey Manual, USDA Handbook No. 18, issued October 1993, USDA Soil Survey Division Staff.

Metro Region Water Restrictions

Chehalem Mountain Ground Water Limited Area:
Classified for exempt uses, irrigation and rural residential fire protection systems only. New permits may be issued for a period not exceeding five (5) years, for fire protection and for drip or equally efficient systems only if it is determined that the proposed use and amount would not pose a threat to the groundwater resource or existing permit holders. The amount of water permitted for irrigation is limited to one acre-foot (v. 2.5) per acre per year. Permits may be extended for additional five-year periods.

Parrett Mountain Ground Water Limited Area:
Ground water from the basalt aquifers in this area is classified for exempt users only.

Sherwood-Dammasch-Wilsonville Ground Water Limited Area:
Ground water from the basalt aquifers in this area is classified for exempt users only.

Damascus Ground Water Limited Area:
Ground water from the basalt aquifers in this area is classified for exempt users only.

Sandy-Boring Ground Water Limited Area:
Ground water from the shallow Troutdale aquifer and the specially designated portion of the deep Troutdale aquifer is classified for exempt uses only.

Cooper Mountain – Bull Mountain Critical Ground Water Area:
Limited to exempt uses only on parcels 10 acres or greater in size.

Ground water-surface water hydraulic connection:
Ground water within unconfined alluvium within 1/4 mile of the banks of a stream or surface water source is presumed to be in hydraulic connection within the surface water source and shall be classified the same as the surface source.[7]

Suitability factors

Most of the suitability factors can be related to the position of farming operations as part of a large block of agricultural land or other resource lands. Protecting and maintaining large blocks of agricultural land is key to maintaining the integrity of working lands. Integrity involves many issues including the ability to operate with limited conflicts,

[7] The Oregon Department of Water Resources should be contacted for more detailed information about water restrictions.

curtail speculative land values and maintain a critical mass of land sufficient to leverage the infrastructure needs of the industry.

- Land use pattern: Adjacent and area land use pattern (nonfarm uses, exception areas). Includes analysis of edges that provide workable buffers between agricultural lands and nonfarm uses.

- Agricultural land use pattern within the subject agricultural area: The types of crops grown and the ability of farming operations/practices associated with the producing these crops to co-exist with other land uses in the area can be an important factor.

- Parcelization (number and size), tenure and ownership pattern: In analyzing suitability, parcelization is important, but not always as a stand-alone factor. All other factors being equal, smaller parcels under multiple ownerships are less favorable for long-term commercial farm use. The practice of renting or leasing smaller (and larger) parcels is very common in the region and needs to be taken into account. Long term, if the smaller parcels are protected for farm use, they frequently become available for rent, lease or acquisition for farm use, especially if they do not contain dwellings. See discussion of trends in agriculture below.

- Agriculture infrastructure: Elements such as transportation, irrigation delivery, labor availability, processing and other service needs, agricultural special districts, drainage facilities, etc., can be important factors in the long-term viability of an area. It is important to note that, unlike the infrastructure needs for new urban development, the agricultural infrastructure is in most cases already in place and has been and is being maintained and updated on an ongoing basis.

- Zoning, <u>within subject agricultural area:</u> Many lands currently employed in farm use within the Metro region are not zoned for exclusive farm use. The long-term suitability of such areas is impacted by the nonfarm uses that may be permitted and by the ability to further partition or subdivide the area.

- Location in relationship to adjacent lands zoned for nonresource development:
    - The number, size and length of edges with urban and other nonfarm development impact the efficiency and effectiveness of agricultural practices and can impact land values.
    - The scale, shape and size of protrusions of nonresource lands into agricultural lands also impact efficient and effective agricultural operations.
    - Certain nonfarm uses are more compatible with agricultural operations than others.
    - The ability to further partition or subdivide.

- Location/availability of edges and buffers that help insulate and protect agricultural operations from nearby nonfarm use.

Other factors

- Concentration/clusters of farms:
  - The dependence between farms: ability for sharing of labor, housing, equipment and other needed services can be critical to the bottom line.
  - The ability to leverage agriculture's infrastructure needs by maintaining economies of scale.
  - A cluster of farms can also have marketing value. Customers like to make one trip to obtain berries, fruits, vegetables and other products in one area. Agri-tourism can also benefit from clusters. Examples include winery tours, marketing by the Tri County Farm Fresh Food Guide, and the Hood River Valley "Fruit Loop."

- **Trends** in regional agriculture create different needs, opportunities and abilities for the industry. Consumer trends are increasingly dynamic and segmented, creating new markets; markets that are rapidly changing and demanding more specialty products. Specifically:
  - Global trade opportunities and concerns.
  - Demand for organic, sustainable, high quality foods both in the home and at restaurants.
  - Farmers markets, direct marketing opportunities, development of specialty and niche crops.
  - "Agri-tourism".
  - Increasing demand for biofuels/energy development. Agricultural practices associated with the production of commodities used in the production of biofuels tend to be more extensive in nature, usually do not require irrigation and tend to require the use of larger machinery.
  - Growing recognition of food security issues and demand for products from the local food shed.
  - Federal Farm Bill. New conservation incentives and other programs related to renewable energy and farmland protection could help region farms cope.
  - Measure 37: We have opted to not attempt to base much on analysis on the potential impacts from Measure 37 claims because there is so much uncertainty as to how much development will actually result from claims determined to be valid. Having said this, review of the data currently available from Portland State University does show a great deal of the Measure 37 claims in the region to be located within high-value, exclusive farm use-zoned agricultural lands.

  Location within and near a major metropolitan region can be a major asset in light of the trends outlined above. Many of the intensive, high-value, niche and specialty crops in increasing demand can be produced under circumstances not otherwise conducive to more recognized agricultural production in the region.

Analysis and Conclusions

The department would emphasize that it found little land currently zoned for agricultural use that it considers to be miszoned. Local governments have done an excellent job identifying and providing protection for the region's agricultural lands.

The inventory and analysis did identify varying intensities, scale and suitability situations within the regions agricultural lands. That led to the development of an agricultural lands hierarchy that recognizes three levels of agricultural lands found in the region. These are:

Foundation Agricultural Lands are agricultural lands that provide the core support to the regions agricultural base. These lands anchor the region's larger agricultural base. They incubate and support the larger agricultural industry and are vital to its long-term viability. They have the attributes necessary to sustain current agricultural operations and to adapt to changing technologies and consumer demands.

Important Agricultural Lands are agricultural lands that are suited to agricultural production and contribute to or have the capacity to contribute to the commercial agricultural economy. These lands maintain the ability to remain viable over the long-term. They have the potential to be Foundation Agricultural Lands, but tend to be not utilized to their full potential. Trends in regional agricultural could lead to a greater development of the agricultural capacity of these areas.

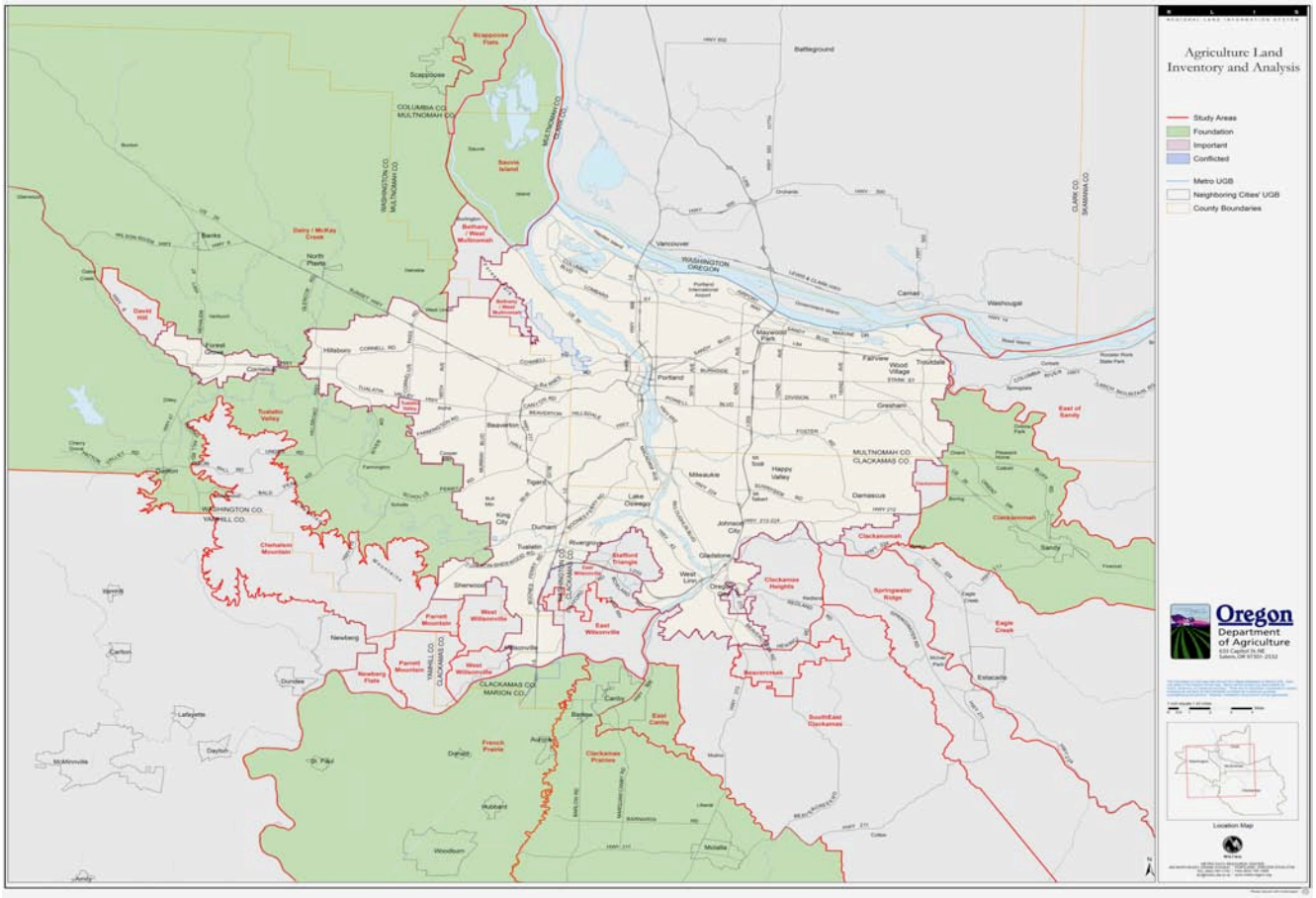
Conflicted Agricultural Lands are agricultural lands whose agricultural capability (soils/water) is more times than not considered excellent but whose suitability is questionable primarily due to questions of integrity and ability to operate. These questions lead to issues of long-term viability. These lands are influenced by factors that diminish long-term certainty, which in turn tends to limit investment in agricultural operations by area farmers. These lands could become Important Agricultural Lands with changes in circumstances and trends in the industry. There may be individual or multiple operations within these areas that are conducting efficient, effective and viable operations.

A list and map of subregions/areas within each category is found below. A detailed discussion and analysis of each subregion follows. It is important to review the detailed discussion for each subregion. Many times the discussion includes important conditions that need to be implemented or that affect the final conclusion at which level a subregion or area has been categorized.

Foundation Agricultural Lands

- Clackanomah*
- East Canby
- Clackamas Prairies
- French Prairie
- Tualatin Valley*
- Dairy/McKay Creeks*
- Sauvie Island
- Scappooose Flats

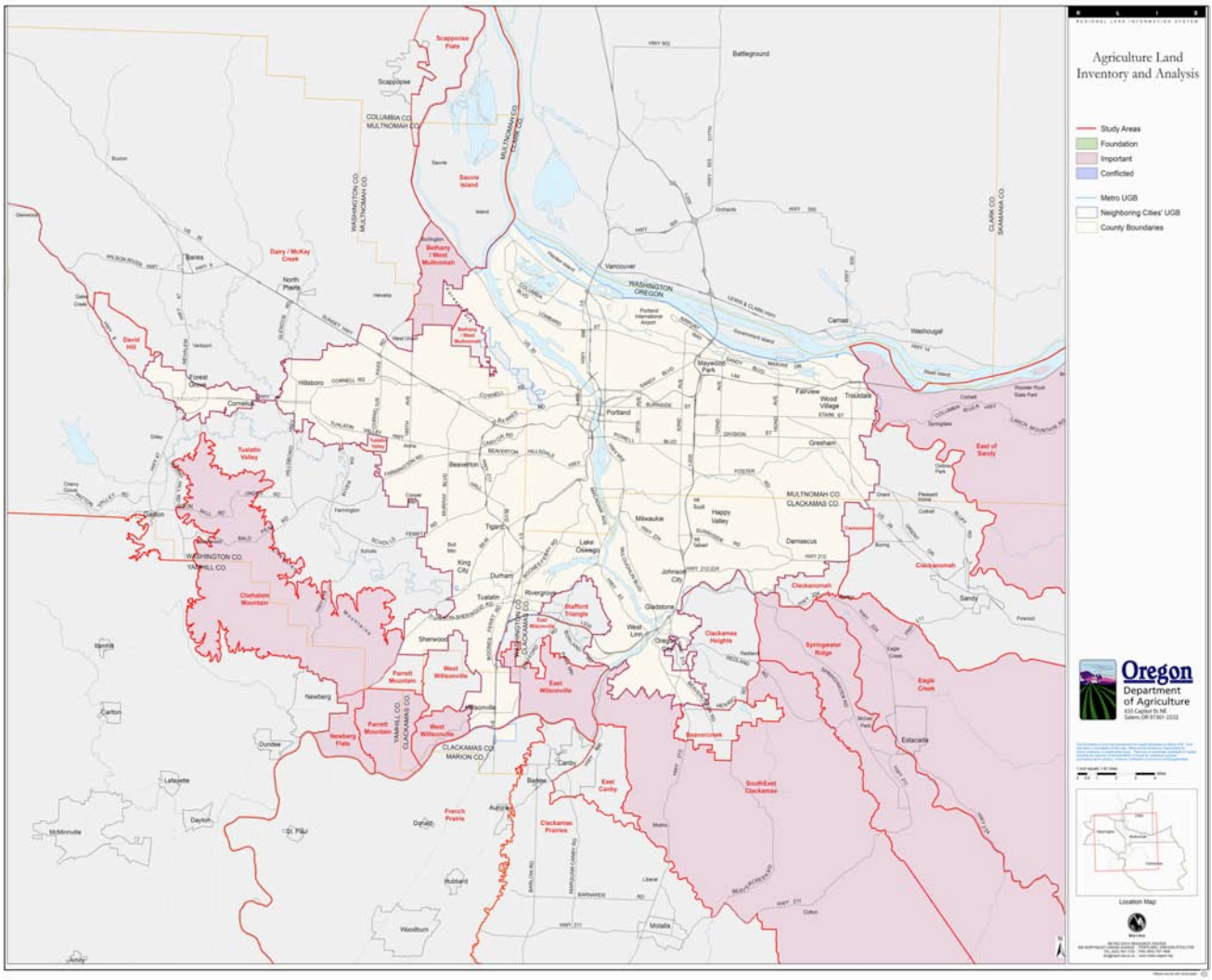
*Part of the subregion is considered Conflicted Agricultural Land; see detailed subregion analysis and map.



Important Agricultural Lands

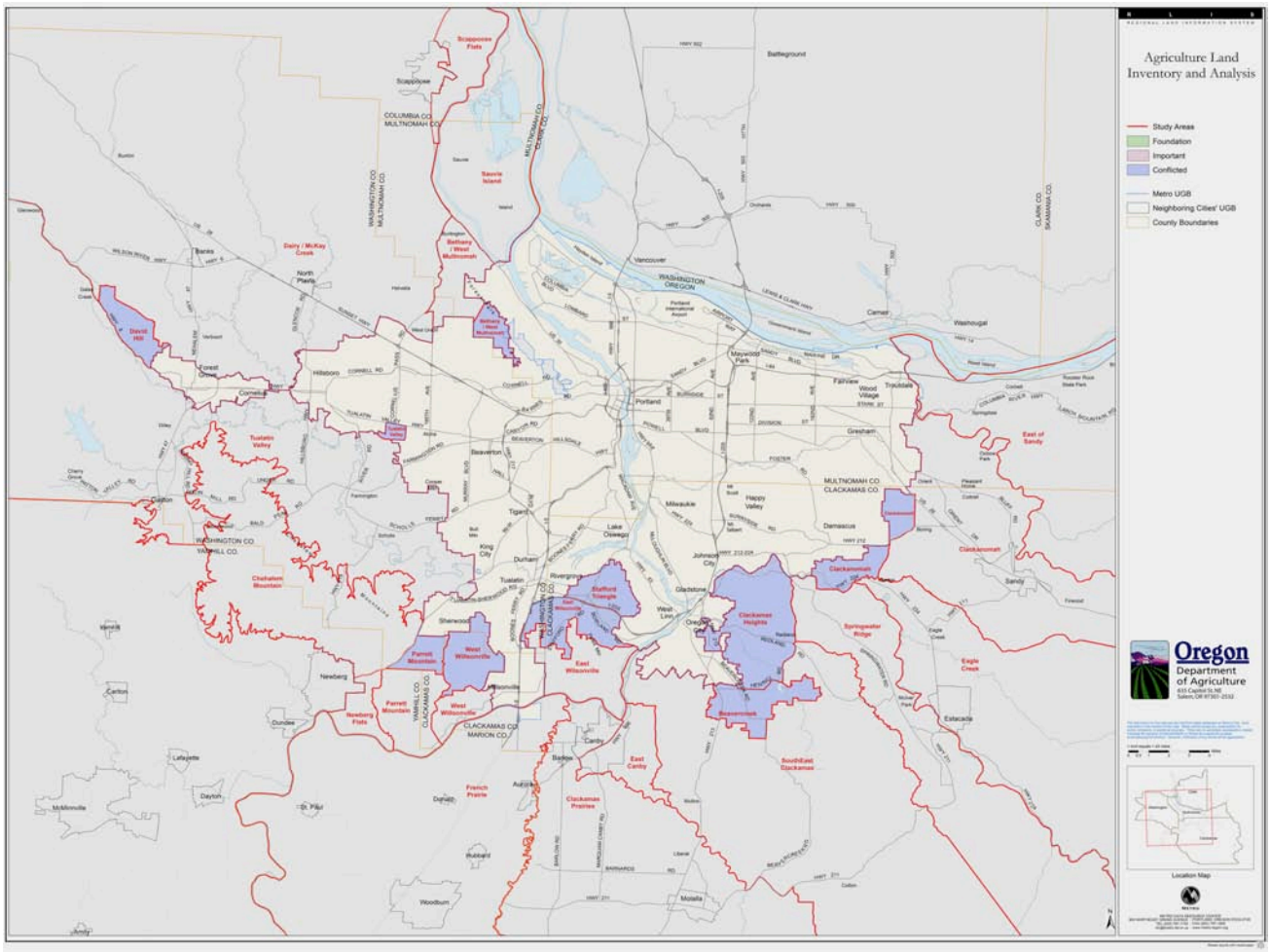
- East of Sandy River
- Eagle Creek
- Springwater Ridge
- Southeast Clackamas*
- East Wilsonville*
- West Wilsonville*
- Parrett Mountain*
- Newberg Flats
- Chehalem Mountain
- Bethany/West Multnomah*

*Part of the subregion is considered Conflicted Agricultural Land; see detailed subregion analysis and map.



Conflicted Agricultural Lands

- The area located between the Damascus UGB, the Clackamas River and Noyer Creek (located within the Clackanomah subregion)
- The area located north of Boring and Highway 212 and west of 282nd Avenue (located within the Clackanomah subregion)
- Clackamas Heights (entire subregion)
- Beavercreek Area (located within the Southeast Clackamas subregion)
- Stafford Triangle (entire subregion)
- South I-205 Crescent (located within the East Wilsonville subregion)
- West Wilsonville north of Mill Creek (located within the West Wilsonville subregion)
- North Parrett Mountain
- South Hillsboro Notch (part of the Tualatin Valley subregion)
- David Hill (part of Dairy/McKay Creeks subregion)
- Bethany/West Multnomah south of the powerline (part of the Bethany/West Multnomah subregion)



East of Sandy River

This subregion is located north and east of the Sandy River extending out to the Columbia River to the north and to private and National Forest lands to the east and southeast. It is characterized by steeply rolling hills and gently sloping benches. Multiple steep creek canyons originating from springs bisect the area. There are diverse agricultural endeavors in the subregion including larger vegetable and berry fields, pasture and hay, Christmas trees, nursery stock, a few orchards and small horse and cattle farms. A few full-time agricultural operations exist in the area. Smaller part-time commercial and lifestyle farms are common.

Analysis

Capability

Excellent soils are located within this subregion. Agricultural capability is predominantly Class II and III, nonirrigated. Soils located on the bench land located west and south of Corbett are designated as prime farmland. These soils have the capability of supporting a good diversity of products. Issues related to erosion and wind present management concerns, particularly near the Columbia River. Erosion issues associated with area high winds can be effectively managed with traditional methods. Issues associated with wind damage and desiccation to vegetation can present limitations to crop and timber production. The only management for winter desiccation is vegetative windbreaks. Areas with high winds, especially edge areas, face limitations in the types of crops that can be grown due to damage/deformation of vegetation (flagging).

Irrigation in this area is dependent almost entirely on ground water. No restrictions are currently in place that would limit the development of new ground water sources. Some landowners have reported decreased ground water capacity in the last few years.

Suitability

This area shares an edge with the Metro UGB for a short distance along the Sandy River at Troutdale. The majority of this edge is located within the Columbia River Gorge National Scenic Area. A small portion of the urban area is located east of the Sandy River along Highway 30. This urban area is physically buffered from area agricultural lands by bluffs located along the river.

Parcel size was not determined to be a limiting factor in our review. Tract and field size is appropriate for the character of agriculture in the area. Existing land use regulations limit the ability to further divide area agricultural lands. Nonfarm uses exist in throughout the area and there is little documented history of conflicts with agricultural operations in the area.

Much of the area agricultural land blocks up with forest lands. The remaining exception lands are concentrated in and around the Corbett and Springdale communities and along Highway 30. Exceptions lands located away from these communities are zoned by Multnomah County as Multiple Use Agriculture 20 (MUA 20). It is important to note

that while these "exception lands" are not protected under Statewide Planning Goal 3, the MUA20 zone affords similar if not better protection than EFU zoning and much better protection to agriculture than traditional rural residential zones commonly found in exception lands. The Scenic Area Management Plans also affords protection within the National Scenic Area.

Other considerations

The location both near the Portland metro area and within a recreational area provides excellent opportunities for the direct marketing and promotion of agricultural products. Farm stands, U-picks and small farms producing high-value products for sale to the urban market are not uncommon and are increasing in the area. This lends it self to greater opportunities for smaller parcels and parcels located within exception areas to produce crops that cater to the ever-growing demand for locally produced food and other agricultural products.

No major infrastructure issues are apparent.

Conclusion

Overall, this area is well suited for the continued production of agricultural and forest products. Some issues with wind nearer the Columbia River impact the types of crops and management required. Some crops may be limited in the future due to lack of ground water. Local conservation officials are encouraging drip and other water conservation practices. The area is well buffered and protected from urbanization.

Clackanomah

This agricultural subregion is located east of Portland, Gresham and Damascus straddling U.S. Highway 26. It is bounded on the east and north by the Sandy River, the south by Kitzmiller Road, the west by the metro urban growth boundary and southwest by Deep Creek. The area extends east out to the private and National Forest lands. This area is characterized by gently rolling hills bisected by moderate to steep stream originating from springs. Agriculture in this region includes large-scale nursery (container, in ground stock and greenhouses), berry and Christmas tree operations. Hay, pasture and orchards are not uncommon. A large number of small nurseries and horse and cattle farms are located throughout the region. This is especially evident in areas of suburban infill characterized by smaller parcels and nonresource zoning.

Analysis

Capability

Overall, soils within the region are well suited to production agriculture. Agricultural capability generally reflects a north-south distinction. Soils with higher clay content are located south of a line generally corresponding with Bluff Road, while soils north of said line tend to be a sandier loam. This distinction also reflects agricultural capability class. Soils to the north are Class II while soils to the south are Class III. It is important to note

that soils in both of these areas are also designated as prime farmland. In fact, with the exception of a lava dome area located immediately west of Highway 26 just northwest of the community of Boring, most soils located north of Tickle Creek and west of 352nd Avenue are designated as prime farmland.

Irrigation is an important element in the operational character of agriculture in this subregion. This area is extensively irrigated. Irrigation sources are almost entirely dependent on ground water. This area includes the Damascus and Sandy/Boring Ground Water Limited area. This ground water limited area is located in the Clackamas County portion of the area; it does not extend into Multnomah County. New wells for agricultural irrigation are precluded by the restrictions associated with this designation. Because the designation does not implicate existing water rights, lands with irrigation rights are especially valuable to the continued production of high-value crops in the area. Conservation managers recommend feasibility studies and construction of purple water systems when considering new water sources for use on agricultural lands in the future. Drip irrigation is highly advisable for both surface and ground water conservation.

Suitability

This area shares an edge with the urban growth boundary running from Troutdale in the north to the Clackamas River, southwest of Damascus. The City of Sandy and its associated urban area are located in the eastern portion of the subregion. Lands designated as agricultural land block up into larger resource land units when evaluated with the adjacent forest zoned lands. This subregion contains several large areas of exception lands. Areas of note include:

- Boring/Lava Dome area running parallel to the UGB generally north to south. This area is heavily parcelized and includes more intensive commercial center related uses in and around the Boring Rural Center. These exception lands do not protrude into agricultural lands located to the southeast. An isolated tract of land zoned exclusive farm use is located north of Highway 212 just outside the UGB. It is surrounded on all sides by rural residential development and like-zoned land.

- A finger intrusion of exception lands extends east from Highway 26 and Boring. It is located north of and adjacent to Highway 212/Compton Road. This area is zoned for rural residential use. This area is heavily divided into parcels predominantly ranging from two to ten acres in size. Small-scale agriculture is common. While some larger commercial nursery operations are located in this exception area associated with operations located to the north and south, most operations are small.

- A finger intrusion of exceptions lands extends east from Gresham in the Orient area straddling Dodge Park Road. While this area is an exception area, Multnomah County has zoned it Multiple Use Agriculture 20 (MUA-20). The MUA zone affords much better protection than the rural residential zoning in place in Clackamas County and comparable protection to that provided by

EFU zoning. The MUA-20 zone limits land divisions to the creation of 20-acre or greater parcels and limits the scale of nonfarm uses, in several cases more restrictively than state law. This area located west of Orient Drive is more heavily parcelized with smaller parcels, similar to the Highway 212 finger. Few parcels receive farm value special assessment. The eastern part of this area (east of Orient Drive) contains many parcels that exceed 20 acres in size. Tracts of land in this area receive farm value assessment and are in farm use. Throughout the MUA area it is not uncommon to see multiple parcels being managed together for agricultural use, especially nursery production.

Agricultural lands within and near this area have also been afforded additional protection by an intergovernmental agreement (IGA) between the City of Gresham and Multnomah County. The IGA recognizes the need to protect adjacent agricultural lands by planning for a buffer which among other things plans the urban edge for industrial uses that are generally more compatible with agricultural than residential, commercial and some public uses.

- Adjacent to the City of Sandy rural residential exceptions areas ring the UGB to the south, northwest (straddling Highway 26) and to the east. With the exception of an area located north of Highway 26, these exception lands contain larger parcels with a mixture of small woodlands and small agri-forest operations.

- A strip of exception lands extends out from the UGB along Beaver Creek out to Barlow High School. This area is split zoned by Multnomah County. The western end along Beaver Creek is zoned Rural Residential. The eastern end is zoned MUA-20. Most of the parcels located in the MUA-20 portion receive farm value special assessment and are in farm use. Beaver Creek and its associated riparian corridor provide a good edge/buffer between urban land uses and agricultural operations located to the east.

- Between the UGB at Damascus and the Clackamas River a block of lands zoned rural residential abut the UGB. This area is part of a peninsula-like tract bounded by the UGB, the Clackamas River and the deeply incised Noyer Creek.

Parcel size within the lands zoned for exclusive farm use is not a limiting factor. Tract and field size is appropriate and conducive to the character of agriculture in the subregion. It is apparent that few if any nonfarm land divisions have occurred within the designated agricultural lands. It was also apparent that the high-value nature of agricultural production in the area has lead in many cases throughout the area to the management of several smaller parcels as a farm tract, regardless of ownership. Tenure includes fee ownership, lease and rent. Nonfarm uses outside the exception areas are not widespread.

Other considerations

This subregion is an important part of a larger nursery industry cluster located in the northern Willamette Valley. Operations associated with the production of nursery products, while intensive in nature, have co-existed relatively well with low-density rural residential development. The area is also well known for berry, vegetable and Christmas tree farms that increasingly take advantage of their location in the metro area by the direct marketing and promotion of their products. Easily accessible by major transportation routes, this area is ideally located to take advantage of the increasing demand to obtain food from the local food shed. This leads toward greater opportunities for smaller parcels and parcels located within exception areas to cater towards the increasing demand for local products.

Transportation is an important issue to the nursery industry also. While it is true that major transportation corridors are located within and near the region, it is increasingly more difficult to move nursery products to these corridors, especially Interstate 84, and then on to markets located outside the state. Restrictions placed on large tractor-trailer trucks relating to certain local streets and roads have created some concerns in the industry. While not a factor that severely limits the ability of nurseries to operate, it is an issue to monitor.

Conclusion

Overall, this subregion is significant agricultural land if for no other reason than it produces high-value products important both to the traded sector economy and the increasingly important local food shed. Physically, the area is well suited to agriculture. Excellent soils and existing water availability is key. In light of the limitations in the Clackamas County portion of this subregion on future ground water withdrawals, it is important to protect lands with existing irrigation from conversion to nonfarm uses. It will also be important to consider protecting water rights associated with agriculture from transfer to other lands and nonfarm uses.

The number, size and configuration of exception areas within this subregion at first glance appear to impact the ability of farms in the vicinity to operate efficiently and effectively. As discussed above, large parts of the exception areas protruding into agricultural lands are in farm use and/or are protected by zoning for farm use. These "exception" agricultural lands, exclusive farm use zoned lands and forest zoned lands in many cases block up into larger blocks of resource land which maintain the ability of farms within to viably operate.

This being said, there are some smaller areas within the subregion where long-term viability is at question. These areas include:

1. The area located between the Damascus UGB, the Clackamas River and Noyer Creek. This area includes two islands of land zoned exclusive farm use that are separated by rural residential exception lands. The larger island includes a large nursery operation. There is no substantial commercial scale agriculture occurring within the exception areas. The eastern part of the area

is located in a notch of the current urban growth boundary that contains multiple edges. While no final plan has been adopted as to the ultimate land use of the urban lands located adjacent to this notch, the current land use of the developed lands is higher density residential. There are no evident opportunities to buffer residential uses from adjacent agricultural lands. Primary access is from the urban area and is, in effect, a dead-end. Conversely, the Clackamas River and Noyer Creek provide good opportunities to buffer any future nonresource development from the larger blocks of agricultural lands located to the south and to the east. These buffers could also provide hard edges to the UGB, providing long-term protection and certainty to the large blocks of high-value agricultural land located south of the Clackamas River and south of Boring.

2. The area located north of Boring and Highway 212 and west of 282nd Avenue extending into the current UGB. Most of this area is zoned rural residential. Little if any commercial agriculture is occurring within these rural residential lands. Higher density residential development and parcelization preclude any significant, viable commercial farm use. A small island of land zoned exclusive farm use is located in a notch formed by the UGB and Highway 212. This isolated EFU tract is completely surrounded by exception lands. The community of Boring is located immediately to the southwest and the City of Damascus to the west. This small area is isolated from larger blocks of agricultural land in the vicinity. Little opportunity exists to provide adequate buffers and the size of the tract limits its ability to provide for long-term effective operations as a stand-alone block.

Noyer Creek, the North Fork Deep Creek and their associated "canyons" border the area to the east. The Clackamas River and associated steeper terrain is located south of the area. Recent open space acquisitions by Metro are also found along the Clackamas River. These physical features would provide excellent hard edges and buffers between urban development and the large blocks of agricultural lands located within the Clackanomah and Springwater Ridge subregions. The "development" of open space along this edge provides an excellent buffer and helps to reinforce the river as a hard edge.

Beaver Creek may also provide an opportunity to provide an edge between agricultural lands to the east and the cities of Gresham and Troutdale to the west.

Development of infrastructure such as drip irrigation discussed earlier in this section is expensive, requiring an investment that will pay off over time. Because of the time element, farmers are looking for a degree of certainty that their operation will be viable at a given location before they continue to invest in needed improvements and land.

The region should continue to support the urban-rural edge defined in the agreement between the City of Gresham and Multnomah County to protect area agricultural lands located outside the UGB.

Eagle Creek

This narrow agricultural subregion parallels the Clackamas River and straddles Highway 224. It reaches from the Damascus/Barton area on the northwest to private and federal timberlands to the east and southeast. It is bordered on the west by the Clackamas River and to the north by Hwy 212, 232nd Avenue, and Deep Creek. The area is characterized with variable soils – predominantly clay and cobbly influenced with silt loam inclusions– bisected by steep creek canyons and moderately sloping benches in the northeast to flat on the southwest. The area has numerous forestland inclusions located adjacent to or intermixed with agricultural lands. Christmas trees and cattle farms are the prevalent farm use. Small nurseries, berry, horse and cattle farms are common. A large nursery is also located within the subregion.

Analysis

Capability

Excellent soils on flats and benches dissected by steep, incised streams best describe the land base in this subregion. Agricultural capability is predominantly Class II, nonirrigated. Unlike most areas in the metro region, a good deal of the soils located on the bench east of Highway 224 become Class I when irrigated. The vast majority of agricultural soils located within the subregion are designated as prime farmland.

Irrigation is provided by a combination of surface and ground water sources. The northwest corner of the region is adjacent to the Damascus-Sandy Ground water Limited area.

Suitability

This area shares no edge with the current Metro UGB. The City of Estacada is in the southeastern one-half of the subregion in an area of mixed rural residential, farm and forest uses. The rural community of Eagle Creek is located in the northern one-half of the subregion along with substantial rural residential exception areas located east of and adjacent to Highway 224. Small-scale and lifestyle agriculture is not uncommon in many of the exception areas. The largest area of lands zoned for farm use is located west of Highway 224 between the community of Eagle Creek and Estacada. While this area share edges with rural residential exception areas, these edges are relatively short. These and most other agricultural lands within this subregion share edges and block up with lands zoned for forest use. These combined “resource lands” form good size blocks that afford for good overall operating integrity.

Parcel size was not determined to be a limiting factor in our review. Tract and field size is appropriate for the character of agriculture in the area. In fact, good parcel and tract size is strength in this area. Existing land use regulations limit the ability to further divide area agricultural lands into parcels too small to be managed as agricultural units.

Nonfarm uses exist in throughout the area, predominately within the exception areas. There is little documented history of conflicts with agricultural operations in the area.

Greater potential for conflict exists in the areas zoned for mixed farm and forest use located east of Estacada. Here the farm/forest zoned lands share numerous edges with rural residential exception areas.

Other Considerations
Farm stands, U-picks and small farms producing high-value products for sale to the urban market are not common in this area. Great soils combined with location near the Portland metro area provide excellent opportunities for the direct marketing and promotion of agricultural products. This lends to greater opportunities for smaller parcels and parcels located within exception areas to produce crops that cater to the ever-growing demand for locally produced food and other agricultural products. The larger parcels located within the lands zoned for agriculture are conducive to more extensive, larger scale agriculture operations involving field crops. These larger parcels could help to meet the growing demand for biofuel/bioenergy products in the region.

No major infrastructure issues are apparent.

Conclusion
Overall, this area is suited for the production of agricultural and forest products. Prime farmland soils are predominant in the flat bench areas. Parcel size remains large and is conducive to intensive and extensive agricultural operations. Agricultural and forestlands combine into larger blocks of resource land to provide ability to operate with limited conflicts.

Springwater Ridge

This narrow agricultural subregion is bounded on the north and east by the Clackamas River, on the west by Clear Creek and by Fischers Mill and Hattan roads, and extends southeast into private and federal timberlands. The area has numerous forestland inclusions, especially along the Clackamas River. Large-scale Christmas tree operations are the predominant farm use. Smaller agricultural operations include nursery, Christmas trees, berries, and hay land.

Analysis

Capability
Soils in this subregion reflect the changing landscape of the area as it progresses west away from the Clackamas River and south into large blocks of forestland. Upper bench lands located north of Redland Road contain Class II, prime farmland soils. The lower bench between Foster Creek and the Clackamas River contains wetter soils. This is reflected in agricultural capability classification. This lower bench area contains predominately Class IV soils and is not designated prime farmland. The area located south of Redland Road reflects the transitory nature of the area. The smaller flat bench areas are Class II soils. Lands containing steeper slopes corresponding with the

woodland nature of operations in the area are Class III agricultural soils. While some soils are designated prime in this area, most are not.

Most of the agricultural land involves dryland operations. Irrigated land is almost entirely dependent on ground water. Use of surface water (snow water source is minimal) is limited. Wells require great depth for the most part.

Suitability

This area shares a short edge with the current Metro UGB along the Clackamas River. It also is bounded by the Clackamas Heights subregion to the west, which is characterized by a great deal of higher density rural residential development. The edge between these two subregions contains a good deal of land zoned for forest use. The City of Estacada is located across the Clackamas River in the southeastern one-half of the subregion in an area of mixed rural residential, farm and forest uses.

Parcel size was not determined to be a limiting factor in our review. Tract and field size are appropriate for the character of agriculture in the area. In fact, good parcel and tract size is strength in this subregion. Existing land use regulations limit the ability to further divide area agricultural lands into parcels too small to be managed as agricultural units. Nonfarm uses exist throughout the area, predominately within the exception areas near Estacada. The northern one-half of this subregion contains fewer, more isolated rural residential clusters that are also very small in area. There is little documented history of conflicts with agricultural operations in the area.

Other Considerations

Farm stands, U-picks and small farms producing high-value products for sale to the urban market are not common in this area. Excellent soils combined with location near the Portland metro area provide excellent opportunities for the direct marketing and promotion of agricultural products. This leads to greater opportunities for smaller parcels and parcels located within exception areas to produce crops that cater to the ever-growing demand for locally produced food and other agricultural products. The larger parcels located within the lands zoned for agriculture are conducive to more extensive, larger scale agriculture operations involving field crops. These larger parcels could help meet the growing demand for biofuel/bioenergy products in the region.

No major infrastructure issues are apparent.

Conclusion

Overall, this area is suited for the production of agricultural and forest products. Prime farmland soils predominant the flat bench areas. Parcel size remains large and is conducive to intensive and extensive agricultural operations. Agricultural and forestlands combine into larger blocks of resource land to provide ability to operate with limited conflicts.

Clackamas Heights

This small subregion is located south of the Clackamas River, west of Hatton and Henrici roads, east of the Oregon City UGB and north of Henrici Road. This subregion has few flat areas found within steep rolling hills dominated by timber inclusions bisected by numerous creek canyons. This area has numerous rural residential and rural residential/non-farm inclusions. There are very few industrial forestland parcels in this area. There are some large parcel, production agriculture operations generally corresponding with lands zoned Exclusive Farm Use by Clackamas County. The main agricultural commodities are row crops, hay land, Christmas trees and nursery (in ground, greenhouse and container). The area includes a large number of horse and cattle farms.

Analysis

Capability

Soils in this subregion are Class II along the Clackamas River within the floodplain and on flat plateau-like areas located along Henrici, Redland and Forsythe roads. These soils are also designated as prime farmland. Lands containing steeper slopes, the hilly areas and ravines characterized by woodland, contain Class IV and VI soils.

Irrigated agricultural is found along the Clackamas River and on the upper bench farmlands. These lands correspond with those zoned Exclusive Farm Use by the county. This subregion is almost entirely dependent on ground water for irrigation. The area is not within any designated ground water limited area.

Suitability

The agricultural integrity of this area is seriously impacted by urbanization along its western edge with Oregon City and the predominant rural residential development pattern located within the subregion. An island of over 640 acres of active, large-scale farm use blocks up with forestlands in the northern part of the area. This island is isolated from other metro area large-scale farming operations by large blocks of rural residential exception areas. Access to this island is via steep, narrow and winding roads that carry good to heavy volumes of residential traffic. Smaller blocks of Farm/Forest zoned land are located in the southern part of the subregion.

While many of the rural residential areas include some larger size parcels and small-scale and lifestyle agricultural activities, heavy parcelization and associated nonfarm development combined with rural residential zoning (potential for additional nonfarm development) provide few long-term opportunities to develop a block of viable farming operations. The larger parcels located outside the EFU zoned lands that are found throughout the area are located within and next to concentrations of smaller parcels.

Other Considerations

Small farms producing high-value products for sale to the urban market are becoming more common in this area. Excellent soils combined with location near the Portland

metro provide excellent opportunities for the direct marketing and promotion of agricultural products. This lends to greater opportunities for smaller parcels and parcels located within exception areas to produce crops that cater to the ever growing demand for locally produced food and other agricultural products.

The transportation in this subregion is a combination of bad and poor routes. There are some good major routes, but these are bottlenecked by urban connector streets to region highways. Narrow, winding roads characterize some of the roads with no or very little shoulders.

Conclusion

Overall, this area has limited ability to sustain long-term, viable commercial agricultural operations due to parcelization, nonfarm development and zoning that recognizes both the parcelization and nonfarm use. Few opportunities exist to buffer the few blocks of agricultural land from adjacent lands zoned for residential development and urbanization. Opportunities exist for small-scale agriculture that focuses on the demand for local agricultural products.

Southeast Clackamas

This broad agricultural subregion is generally bounded by Oregon City and Henrici Road to the north, Clear Creek to the east, and by the Molalla River and Mulino, Central Point and New Era roads to the west. The subregion extends southeast into private and federal timberlands. The topography is characterized by moderately to steep rolling hills dominated by timber inclusions bisected by numerous creek canyons. Forestland inclusions become smaller and less dominant from the east to the west.

Agricultural operations in this subregion reflect a transition from forestland to prairie lands. A corridor of agricultural land exists along Redland Road, eventually transcending into a solid block of forestland from the northwest to the southeast. Similar to the Springwater Ridge region, agriculture is characterized by a mixture of large and small-scale operations producing Christmas trees, berries, nurseries, hay and pastureland and cattle and horse operations. Small woodlot management is also common, especially as one travels further south out Redland Road.

To the southeast of the Beavercreek area agricultural and forest operations extend out along Beavercreek Road and Upper Highland Road. Christmas trees, pasture and small woodland management characterize the Highland Road area. To the south along Beavercreek Road, Christmas trees and larger woodlot and timber management are prevalent. Cattle operations are also common. Closer in to the community of Beavercreek the character of agriculture includes high-value livestock production, berries, flowers and some Christmas trees. It is not uncommon to see smaller operations producing crops for sale at area farmers markets.

To the south of Oregon City and west of and along Highway 213, the agricultural landscape begins to diversify. Christmas trees are still common as are livestock operations. Reflecting the transition of topography, nurseries, dairies and field crops become more common.

Analysis

Capability

Soils in this subregion are overall well suited for agricultural production. The majority of the area is comprised of Class II agricultural soils. Away from the terraces and floodplain of the Molalla River, a ridge of Class III and IV soils runs from the northwest around Union Hill to the southeast along Milk Creek. Similar soils are also found along the southern edge of the Oregon City UGB and south of Beaver Lake along Abernethy Creek.

Irrigation in this subregion has a combination of both surface and ground water sources. Most irrigated land is found along the Molalla River and in the New Era area south of Oregon City. No part of this subregion is located within a ground water-limited area.

Suitability

With the exception of the area within and around the community of Beavercreek, the agricultural character of this subregion can perhaps be best described as an agricultural block in the western one-third, and a forest block with agriculture occurring where the topography flattens out in the eastern two-thirds. The Beavercreek area is better characterized as rural residential with small-scale farm/forest and lifestyle operations. Each area is discussed in greater detail below.

The western one-third of the subregion has few suitability limitations. Rural residential exception lands are either located at the edges or are relatively small in area with few opportunities for further land division. The northern edge corresponds with the Oregon City UGB. It is well buffered by topography and forestlands, which are zoned for forest use under state law. The western and southern edges abut large blocks of agricultural lands zoned for exclusive farm use and the eastern edge borders with a large block of forest zoned land. Parcel size is not a limitation.

Within the eastern two thirds, agricultural lands at first glance appear to be more isolated in nature. However, when analyzed together with adjacent forest zoned lands, these smaller blocks of agricultural zone form much larger blocks of resource lands that work together to provide the integrity needed to ensure long-term ability to conduct farm and forest operations effectively. Parcel size within lands zoned for exclusive farm use is well suited for commercial farm use. Within the lands zoned Farm-Forest along Upper and Lower Highland roads, parcel size is similar to that of some rural residential areas. However this area is buffered from larger-scale farm and forest operations by a block of forestland made up of large sized parcels, most 80 acres or more in size. This forest-zoned land extends to the north to block up with EFU zoned lands located along Redlands Road.

The broader Beavercreek area is the most compromised area within this subregion. It would not be a stretch to describe this area as an extension of the urban area. This area shares an edge with the Oregon City UGB and the Clackamas Heights subregion and includes the area around Beaver Lake. While there are several larger tracts in farm use and while small scale and lifestyle agriculture is not uncommon within the exception lands, this area is dominated by higher density rural residential development and other nonfarm uses. The recent addition of a golf course in the area and its associated residential development add to the pressure and demand for further division of the remaining larger tracts located within the exception lands. Zoning in place would not preclude the further division of the larger rural residential parcels. South of and adjacent to Henrici Road a block of EFU zoned lands is located in a notch of exception lands that nearly surround and cut them of from the larger block of agricultural lands located to the southeast

Other Considerations
Small-scale intensive agriculture with a focus on the urban market, combined with good soils, provides a greater incentive to put smaller tracts in otherwise conflicted areas into farm use.

Conclusion
Outside the greater Beavercreek area, this area is suited for the production of agricultural and forest products. Prime farmland soils predominant the flat bench and shallower sloped areas. The size of parcels remains large and is conducive to intensive and extensive agricultural operations. Agricultural and forestlands combine into larger blocks of resource land to provide ability to operate with limited conflicts. In the Beavercreek area, residential and other nonfarm use, parcelization and potential for future development place severe limitations on the long-term viability of this area for commercial agricultural production.

East Canby

This agricultural subregion is bounded on the west by the City of Canby and the Willamette River, on the north by New Era Road, on the east by Central Point Road and the south by the Molalla River. It is characterized by rolling foothills and bisected by moderately sloping creek drainage. The agricultural sector becomes much more diversified and includes row crops, annual grasses, grass seed, nursery, berry crops, hay and pasturelands, Christmas trees and horse farms.

Analysis

Capability
Soils within this subregion with few exceptions are high-value Class I and II agricultural capability and are designated as prime farmland. A belt of Class I soils ring the City of Canby. This is one of the few areas of undeveloped Class I soils in the Metro region.

This subregion begins an area of intensive irrigation that extends into the heart of the Willamette Valley. Abundant water is available from both ground and surface water sources.

Suitability
This area shares an edge with the City of Canby. There are no major protrusions of urban land extending into agricultural lands. The only exception area lands within the subregion are located north and adjacent to Canby along the Willamette River. These exception lands are more an extension of the city and do not protrude out into the core agricultural block. All other edges are shared with commercial agricultural lands. There are no islands of exception lands located within the subregion.

Parcel size overall is large and well suited to the diversity of agricultural crops produced in the area. There is also evidence of management across larger tracts comprised of several parcels. Few nonfarm uses are located within the subregion. The agricultural block is zoned EFU. Because the soils in this area are high-value, few if any nonfarm dwellings or land divisions are allowed by the current zoning.

Other Considerations
Only the Molalla River separates this subregion from the heart of Willamette Valley agriculture. It is well connected to the service infrastructure found within the prairies and, in terms of agricultural function, should be considered a part of this larger block of significant agricultural land. Irrigation, drainage and transportation infrastructure are well established.

Conclusion
This subregion contains some of the best soils within the entire region and operates as a part of the larger prairie block of agricultural land that dominates the Willamette Valley south of the metro area. There are little if any issues related to the ability of farms to conduct farming operations. Long-term, a potential threat could relate to the character of any future expansion of the Canby UGB. Because Canby is not part of the Metro planning region, planning decisions are not required to be coordinated with other jurisdictions located in the region.

Clackamas Prairies

This agricultural subregion is located south of the Molalla River and east of the Pudding River extending southeast to the public and private timberlands of the Cascade foothills. Farm uses are diverse in scale and crop type and include the production of annual and perennial grass seeds, Christmas trees, berries, nurseries (in-ground and container), some greenhouses and irrigated annual row crops. There are also cattle, sheep, dairy and poultry operations.

Analysis

Capability
A variety of deep silt loams, many with drainage management issues, are located within this subregion. A large block of Class I agricultural soils are located immediately south of the Molalla River straddling Lone Elder Road. The vast majority of the remaining soils are Class II. Outside of narrow bands associated with the small streams, which drain the subregion, the soils are all designated as prime farmland.

This subregion is extensively irrigated by both surface and ground water sources. Few opportunities for additional surface water withdrawals currently exist. There are large numbers of ground water withdrawals. Static ground water levels are known to drop significantly in the late summer, particularly in the more southern portions of the subregion. This subregion includes the Gladtidings, Kingston, and Mt. Angel ground water limited areas.

Suitability
The northern part of this subregion shares an edge with the City of Canby on its west side. The Molalla River provides a good buffer and edge along a portion of the urban area. The City of Molalla and the community of Marquam are located within the southeastern part of the subregion. There are no major protrusions of urban land that extend out into agricultural lands. The only exception area lands within the subregion are located adjacent to the cities of Canby, Molalla and Barlow. In most cases, these exception areas are more an extension of the subject city and do not protrude out into the core agricultural block. All other edges are shared with commercial agricultural and forestlands. There are no islands of exception lands located within the subregion.

Parcel size within the lands zoned EFU is overall large and well suited to the diversity of agricultural crops produced in the area. There are groupings of smaller sized parcels located in the northern one-half of the region. There is also evidence of management across larger tracts comprised of several parcels. Few nonfarm uses are located within the subregion.

The subregion agricultural block is zoned EFU. Because the soils in this area are high-value, few if any new nonfarm dwellings or land divisions are allowed by the current zoning.

Other Considerations
Only the Molalla River separates this subregion from the heart of Willamette Valley agriculture. It is well connected to the service infrastructure found within the prairies and in terms of agricultural function, should be considered a part of this larger block of significant agricultural land. Irrigation, drainage and transportation infrastructure is well established. Major agricultural service centers in the region include Woodburn, Hubbard, Donald and Canby. There are numerous smaller service sites that cater to specific needs of the industry such as Marquam and Monitor. Irrigation and drainage infrastructure is well developed throughout the subregion. Transportation routes are well

developed providing excellent access to area agricultural operations. There are some issues with moving farm machinery on the heavier traveled main routes. This generally is not a major limitation.

Conclusion

This subregion contains some of the best soils within the entire region and operates as a part of the larger prairie block of agricultural land that dominates the Willamette Valley south of the metro area. The overall integrity of the subregion is excellent with no major issues impacting the ability of farms to operate efficiently and effectively. Current infrastructure needs are well met.

Long-term a potential threat could relate to the character of any future expansion of the Canby UGB. Because Canby is not part of the Metro planning region, planning decisions are not required to be coordinated with other jurisdictions located in the region.

French Prairie

This agricultural subregion is located west of the Pudding River and south and east of the Willamette River extending south to the Woodburn and St. Paul areas. The subregion is characterized by large flat terraces and plains bisected by moderately sloped creek canyons. It is also bisected by Interstate 5 and Highway 99E. The agricultural sector includes large amounts of grass seed, annual grasses, grass sod productions, nurseries (in ground, container and greenhouses), orchards (filberts and tree fruits), row crops, berry crops, and Christmas trees. There are also a significant number of dairy and livestock operations, poultry and egg farms.

Analysis

Capability

The soils within this subregion can generally be described as deep silt loams with mucky soils in creek and rivers bottoms. Drainage can be a problem in these soils if not managed and maintained properly. This is especially true for areas tiled in the 1940s and 1950s and in need of repair or replacement. Agricultural capability is predominantly Class II. Wetter soils are Class III and IV. The vast majority of the soils within the subregion are designated as prime farmland.

The subregion is blessed with abundant water from both surface and ground water. The majority of lands located within this subregion maintain the right to be irrigated. The major surface sources are the Willamette and Pudding rivers. There are large numbers of ground water withdrawals. No ground water limitations are in place within the area. Limitations on new withdrawals from the surface streams in the area do not implicate existing irrigators.

Suitability

This subregion maintains excellent integrity for large-scale, intensive industrial agricultural operations. It is, in effect, a large block of agricultural land containing large parcels and larger farms with several inclusions of urban development. It is not uncommon for farms to operate on several parcels located within and, in many cases, outside the subregion. While some localized conflicts with nonfarm uses exist, they are not, overall, beyond what is considered common.

The subregion shares an edge with the Wilsonville/Metro UGB, including the Charbonneau area that is located south of the Willamette River. The Willamette River provides an effective buffer for most of the edge. Residential and commercial development at Charbonneau has remained contained and isolated from surrounding agricultural lands. Location near I-5 and the fact that access to this development is, in effect, a dead-end has helped to limit impacts to area agricultural operations.

Just south of Charbonneau are located two large nonfarm use areas. The first is a golf course. Zoned EFU, this facility was approved only after Clackamas County determined that it would not significantly increase the cost of accepted farm and forest practices on surrounding lands devoted to farm and forest use and that its development and operation would not force a significant change in accepted farm and forest practices on surrounding lands [see ORS 215.296(1)]. EFU zoning also insures that any development associated with a golf course is also compatible with area farms. Many of the management practices conducted on-site are similar to agronomic practices conducted by area farms. The golf course in effect provides a buffer between the commercial and residential uses located at the Charbonneau interchange.

Approximately one-half mile south of the golf course is located the Aurora State Airport and associated commercial uses. With a few exceptions, agricultural and airport operations are considered compatible. Development at the airport is related to airport operations and future development is limited to uses that are dependent on air services and operations.

Several cities and their urban growth areas are located within this large agricultural block. These include Woodburn, Hubbard, Aurora, Donald and St. Paul. For the most part the associated UGB of each of these cities has remained compact and has maintained well-defined edges with few major protrusions into farmland. The Fargo interchange and the Aurora State Airport are two exception areas that contain substantial development. Few rural residential exceptions areas exist within the subregion and those that do are small in area.

The subregion agricultural block is zoned EFU. Because the soils in this area are high-value few, if any, new nonfarm dwellings or land divisions are allowed by the current zoning. The EFU zone also precludes several nonfarm uses, such as private parks, schools, golf courses and destination resorts on high-value farmland.

Other Considerations

The OSU North Willamette Research and Extension Center is located just south of Charbonneau. This facility provides many key services to Oregon's largest agricultural industry, nursery and greenhouse production, and to the small fruit industry. Irrigation, drainage and transportation infrastructure are well established. Major agricultural service centers in the region include Woodburn, Hubbard, Donald, St. Paul and Canby. There are numerous smaller service sites that cater to specific industry needs. Irrigation and drainage infrastructure is well developed and maintained throughout the subregion. Transportation routes are well-developed providing excellent access to area agricultural operations and outside markets. There are some issues with moving farm machinery on the heavier traveled main routes. This generally is not a major limitation.

The area is well known for berry, vegetable, flower and Christmas tree farms that increasingly take advantage of their location in the metro area and other valley urban centers by the direct marketing and promotion of their products. Easily accessible by major transportation routes and good local access routes, this area is ideally located to take advantage of the increasing demand to obtain food from the local food shed.

Conclusion

Excellent soils, available water, well established infrastructure and large parcels that block up and dominate the land use pattern. This subregion has all the elements for maintaining and expanding viable, commercial agricultural. This subregion, combined with the Clackamas Prairies and East Canby subregions, is one of the most significant agricultural areas in the state.

The Willamette River currently provides an excellent buffer and edge between urban land uses and the intensive commercial agriculture that predominates south of the river. A long-term potential threat to agriculture in this subregion relates to urbanization and expansion of the Metro UGB south of the river. This has been highlighted of late due to speculative discussions about development in, around and between the I-5 interchange at Charbonneau, the golf course and the airport. Strong consideration needs to be given to providing more certainty and long-term protection to agricultural production in this area. We believe that development of a permanent or "hard" edge at the Willamette River and coordination between Metro and north valley cities on future growth and urbanization are key considerations.

Stafford Triangle

This small subregion is best defined as the area bounded by Interstate 205 on the south, the Tualatin, Rivergrove and Lake Oswego UGBs on the northwest and the Lake Oswego and West Linn UGBs on the northeast. It is, in effect, located within a triangular notch of the urban growth boundary that is cut off from rural lands located to the south by Interstate 205. Subregion lands are moderate to steeply sloped, bisected by numerous creek canyons. The Tualatin River runs through the southeastern one-third of the area from the west to the east.

Rural residential development and small-scale, lifestyle farms and woodlots dominate the area. Numerous other institutional and commercial nonresource uses are also located within the area. The agricultural sector includes a large number of small parcels of hay and pastureland, woodlots and horse farms. In past years this area included several Christmas tree plantations. Some Christmas tree operations still exist but the acreage is greatly reduced or is reverting to small woodlands. A few nursery and vineyard operations are also located in the area. An estate winery has been developed in the Rosemont area. A community supported agricultural operation (CSA) operates on land leased from the City of Lake Oswego. The CSA is part of a larger recreational facility located straddling the Lake Oswego UGB.

Analysis

Capability

Soils in this subregion are predominately well drained, silt loam with inclusions of poorly drained loams. Soils located north of the Tualatin River, west of Stafford Road and north of Rosemont Road and in the hillier lands located south of Rosemont Road are Class II and IV agricultural lands. Flatter lands located along the Tualatin River, I-205 and Sweetbrier and Grapevine roads are Class II soils. With the exception of the Sweetbrier/Grapevine roads corridor, these Class II soils are also designated as prime farmland. Some areas along the Tualatin River have both seasonal flood and drainage issues.

The vast majority of lands with agricultural irrigation rights are located between the Tualatin River and I-205. This area is located within the Sherwood-Dammasch-Wilsonville Ground Water Limited Area. A few isolated agricultural water rights exist along Johnson and Rosemont roads.

Suitability

The integrity of the agricultural lands located within this subregion is seriously compromised. The few existing commercial operations located in the area are compromised by surrounding area development, parcelization and the potential for future residential development within the exception areas located in the subregion and at the edges along the UGB. Land values reflect the current nonresource zoning and/or the speculative land market that exists in the area due to its location. The core agricultural block is relatively small, providing little opportunity for the island to stand-alone.

South of the Tualatin River the few remaining agricultural operations are located on lands zoned for rural residential use, in an area containing several nonfarm uses that are generally not considered to be compatible with commercial agricultural practices. Such uses include churches, schools and retail commercial. High-density residential development also exists along the river. This area also shares an edge with the City of Tualatin. Along this edge, inside the UGB, exists high-density single-family and multi-family residential development. Finally, the entire area south of the river is a recognized exception area that provides no protection for farm use.

North of the Tualatin River, a block of land zoned Exclusive Farm Use runs north to south through the middle of the larger area. Exception lands zoned and developed for rural residential use and the West Linn and Lake Oswego UGBs surround these EFU lands. Some small-scale lifestyle agriculture is found within these exception lands. Inside the UGB along the northern and eastern edges the land use pattern is higher density residential development. Inside and along the western edge of the UGB are located lower density residential, institutional uses and a municipal golf course. This short edge of extensive land uses combined with lands owned by the City of Lake Oswego form a short edge/buffer. The long-range integrity of the buffer is questionable depending on the scale of recreational use that ultimately is developed.

Other Considerations
Location near the metro area does provide opportunities for the direct marketing and promotion of agricultural products. Only a few small farms producing high-value products for sale to the urban market are located in this area.

The transportation in this subregion is a combination of bad and poor routes from the prospective of moving agricultural machinery. Stafford, Borland and Rosemont roads dissect the area and are key routes between communities and/or major transportation routes. Heavy, congested, cut-through traffic is common.

A note here about impacts from Measure 37 claims. We have opted to not try to base much on analysis of the potential impacts from Measure 37 claims because there is so much uncertainty about how much development will actually result from claims determined to be valid. However, in a situation like the Stafford Triangle where a small block of agricultural land is already surrounded by urban and exception lands and that includes several approved Measure 37 claims for subdivisions, we offer the following remarks. Should the subdivisions authorized on EFU lands by Measure 37 ultimately be developed, we believe the limited integrity that this exists in this subregion for commercial agriculture currently will be lost.

Conclusion
A small, isolated core land base with poor integrity and infrastructure concerns combines to severely restrict the long-term viability of this area to survive as commercial agricultural land. This leads to a conclusion that this subregion is not does not contain significant commercial agricultural lands. Taking advantage of some trends in agriculture, some high-value, direct-marketed production may thrive.

East Wilsonville

This agricultural subregion is located south of I-205 and the City of West Linn UGB, west and north of the Willamette River, and east of the City of Wilsonville UGB and I-5 north of Wilsonville. The topography is flat to gently rolling with two major steep creek canyons bisecting the area. There are fairly large parcels that lend themselves to large production agriculture. The agricultural sector includes hay and pastureland, livestock,

annual grasses, grass seed, nursery stocks, vineyard, Christmas trees and large numbers of small horse farms. The east edge of the area is predominately small parcel timber and horse farms found on Pete's Mountain. Intensive nursery operations are found in the Peach Cove area. Annual row crop production associated with a direct marketing farm operation is located north of Wilsonville.

Analysis

Capability

Soils found in this subregion include a variety of excellent silt loams with very few inclusions. The vast majority of the soils located west of Mountain and Stafford Roads and within the Peach Cove peninsula are Class II agricultural soils. Prime farmland soils are predominant in the area located south of Homesteader Road and west of Pete's Mountain Road. They are also found in the Peach Cove peninsula and terrace land running along the southern edge of the Tualatin River.

Irrigation is not uncommon, especially in areas zoned EFU. Surface and ground water sources are utilized. The area is also located within the Sherwood-Dammasch-Wilsonville Ground water Limited Area, which precludes the development of additional ground water sources for irrigation. This subregion has begun to see a rebound in the static ground water level since the City of Wilsonville changed from wells to the Willamette River for their water supply.

Suitability

This subregion can perhaps be best described as containing two distinct areas, one resource related, the other rural residential with lifestyle farm and forest uses. This land use distinction corresponds with each area's suitability as commercial agricultural land.

A block of rural residential exception areas extends across the northern part of the subregion along I-205 and I-5. This area is heavily parcelized into parcels predominately ranging from 5 to 10 acres in size. Based on current zoning, few large parcels capable of further division exist in the area. The vast majority of parcels within the exception areas are developed with a single-family dwelling. Several nonfarm uses, primarily churches, have also located in the exception lands located along I-205 and I-5. The exception lands also isolate a smaller island of EFU lands located near the northern end of 65th Street where it crosses I-205.

The remaining large block of agricultural land, including two fingers extending north between I-5 and 65th Street and between Newland and Mountain roads and the Peach Cove peninsula, maintains good integrity.

Pete's Mountain and the forest zone uses and recreational uses occurring on the mountain buffer agricultural lands located to the southwest from the West Linn urban area and the heavily parcelized and well-developed rural residential development to the northeast. The edge this area shares with the City of Wilsonville contains no protrusions of urban land out into the agricultural block and no deep, multi-sided notches that surround

resource land. The two fingers and peninsula of agricultural land either block up directly or in combination with Forest zoned lands to the larger agricultural lands block. Few nonfarm uses exist within the larger agricultural land block. EFU zoning and associated provisions protecting high-value farmland limit future nonfarm development.

Parcel size within the EFU lands is generally large and conducive to intensive and extensive commercial agricultural operations. Many larger parcels 40-acres in size or greater exist within in the EFU area. There is also evidence of agricultural operations within the area utilizing several parcels to form one working unit.

A quick note about the Peach Cove area: It is characterized by intensive agricultural operations producing high-value nursery products. A small inclusion of several rural residential dwellings are concentrated within the EFU zoned lands. This agricultural block is bordered by the Willamette River on two sides and forest zoned lands that include lands acquired by Metro to the north. It shares but one edge with an isolated rural residential subdivision.

Other Considerations

The location both near the Portland metro area and near major transportation routes provides excellent opportunities for the direct marketing and promotion of agricultural products. Farm stands, U-picks and farms producing high-value products for sale to the urban market are not uncommon in the area. The site and situation of this subregion lends itself to greater opportunities for smaller to produce crops that cater to the ever-growing demand for locally produced food and other agricultural products. The larger parcels located within the lands zoned for agriculture are conducive to more extensive, larger scale agriculture operations involving field crops. These larger parcels located within the EFU zoned lands could help to meet the growing demand for biofuel/bioenergy products in the region.

Conclusion

With the exception of a small island of EFU zoned land located near the intersection of 65th Street and I-205, the large block of land within this subregion zoned EFU remains a viable block of agricultural land. Excellent soils, existing water rights with improving ground water conditions, large parcels and no out-of–the-ordinary edge compatibility issues all lead to this conclusion. Future land use decisions affecting the northern exception lands could have integrity implications for the two fingers of EFU land that protrude northward. However, current zoning of these heavily parcelized exception lands would not indicate much more impact from development than currently exists. These exception lands and the small island of EFU lands they surround near I-205 are not considered well suited for commercial agriculture.

West Wilsonville

This agricultural subregion is located west of Wilsonville, south of Sherwood, north of the Willamette River and east of Ladd Hill Road (Parrett Mountain). It is characterized

by moderate to steeply sloping terrain that is bisected by multiple steep creek canyons originating from springs and other surface waters. The agricultural sector includes hay land, limited nursery production, wine grapes, orchards, unmanaged pastures, Christmas trees, and large numbers of small horse farms. Some vegetable and fruit production associated with the local food market can be found within the Tualatin urban area and south of Sherwood.

Analysis

Capability

The agricultural capability as it relates to soils in this subregion is more complicated and diverse than most other subregions discussed in this analysis. South of Grahmans Ferry Road and east of Wilsonville Road, the soils are classified as Class I. Overall, Class II soils ring Parrett Mountain along the Willamette River; between the mountain and the Wilsonville and south and adjacent to the Sherwood UGB are Class II agricultural soils. Class III and IV soils are found on the steeper slopes found along the eastern edge of the area. Between the Tualatin and Sherwood UGBs along Tonquin Road, the majority of the soils have no agricultural capability rating or are classified as Class III and IV. Much of this area is wet and/or quite gravelly, mucky or rocky.

The flatter lands along the Willamette River, the southwest Wilsonville UGB and southwest of the Sherwood UGB are designated as prime farmland.

The entire subregion is located within either the Parrett Mountain or Sherwood-Dammasch-Wilsonville Ground Water Limited Areas. Large tracts with existing irrigation rights are located along the Willamette River. Smaller tracts are found south of Sherwood and to a limited extent along Ladd Hill Road. Some of the larger tracts with irrigation rights contain perennials, which require less water after initial plant development. The lack of widespread, existing irrigation rights is considered a limiting factor in this subregion, especially away from the Willamette River. Lack of irrigation precludes the development of high-value nursery and food crops, which otherwise could be produced on the smaller tracts located in the northern half of the subregion.

Suitability

South of Mill Creek, a block of agricultural land extends from the Wilsonville UGB along the Willamette River. This area shares a well-buffered edge with the Wilsonville UGB. The buffer is provided first by a deeply incised canyon associated with the lower reach of Mill Creek. Second and perhaps more significant, recent open space acquisitions by Metro are located along this edge. Rural Residential development located along the eastern edge is lower density and, topographically, is located on different terrain. Corral Creek and its associated gallery forest also buffers the agricultural lands located down slope. Lands located to the north across Mill Creek are smaller sized parcels zoned EFU. The Willamette River forms most of the southern edge. A narrow band of rural residential development is located between the river and Wilsonville Road at the southwestern corner of the area. Parcel sizes within this area are conducive to large-scale commercial agriculture. It is also evident that some agricultural operations in

the area are utilizing multiple parcels as single farm/field units. Few nonfarm uses are found in this area. This high-value farmland is zoned EFU which limits additional land divisions and nonfarm development. Agricultural operations in this area are connected and have more in common with farming operations on the French Prairie and the Newberg area.

North of Mill Creek commercial agricultural operations are more fractured and do not form a good size block. Rural residential exception areas border and squeeze the EFU zoned lands from the north, west and the east. A small area of EFU zoned lands is located in a notch of the Wilsonville UGB and is nearly surrounded by a rural residential exception area and the UGB. Numerous small rural-residential-like parcels are located within the EFU zoned lands located south of Tooze Road. Little intensive or irrigated agriculture is found in this area. North of Tooze Road, parcel sizes are larger and conducive to more commercial scale production. Some irrigated agriculture is found here.

Other Considerations

The northern and eastern parts of this subregion lack major transportation routes. For the most part, roads in these parts of the subregion are narrow and winding with no or very little shoulders. It is not well connected to other agricultural areas in the region. The southern area along the Willamette River is better connected to farm service centers located on French Prairie and in the Newberg area.

Conclusion

Excellent soils, existing water rights, good integrity and connection with adjacent agricultural lands lead to a conclusion that the block of EFU lands located south of Mill Creek are suited to commercial scale farm use.

North of Tooze Road, a combination of conditions leads to a different conclusion. Overall, this area has limited suitability to sustain long-term, viable commercial agricultural operations. Much of the area is squeezed or nearly surrounded by rural residential exception area and adjacent urban areas. Poor soils along the eastern edge and lack of existing irrigation rights further limit the amount of land capable of supporting commercial operations. South of Tooze Road parcelization into small units not conducive to commercial scale dry land agriculture reduces the block size of the larger parcels located to the north and, in effect, helps to isolate the northern area. Poor transportation routes reinforce this isolation.

One note about the agricultural lands located north of Tooze Road along Baker and McDonnell roads. The parcels found in this area are large size and there are some existing water rights for irrigation. Few opportunities exist to buffer this smaller block of agricultural land from adjacent lands zoned for residential development and urbanization. Potential for future irrigation is a limiting factor. However, opportunities exist for some agriculture production that focuses on the demand for local agricultural products.

Parrett Mountain

This subregion is located west of Ladd Hill Road, south of the City of Sherwood and Highway 99W, north of the Willamette River and east of a line formed by the Newberg-Wilsonville Road and Corral Creek Road. This subregion is generally characterized by steeply sloping terrain with some small benches along the summit of the ridges. Steep sloping creek canyons that originate from springs and surface waters bisect the area. Common agricultural activities found in this subregion include hay land, wine grapes, orchards, unmanaged pastures, Christmas trees, and large numbers of small horse farms. It is important to note that a number of parcels listed as unmanaged pasture and orchards on the Willamette Land Use/Land Type Map have been converted to wine grapes.[8] This illustrates a change in land use from lower income, marginally productive land to high-value, highly productive agricultural land. This observation can be used for all the gently to moderately sloping unmanaged lands in the north valley, especially west of the Willamette River. This subregion also contains large tracts (by Willamette Valley standards) of timberlands. The Magness Memorial Tree Farm is a part of this region.

Analysis

Capability

Soils found within this subregion can generally be described as a variety of well-drained silt loams with clay and clay loam inclusions. The slope of lands found within this subregion ranges from 15% to 40%. Slope is a key factor in the agricultural capability classification of area soils. The vast majority of soils on the sloped lands located below higher benches and terraces are Class III, IV, VI or poorer. The flatter benches and terraces are Class II and are designated as prime farmland. Many of the Class III and IV soils located in this area that do not exceed 20% slope are considered high-value farmland as defined in state statute. These include the Jory clay loam, Yamhill silt loam, Woodburn silt loam and Laurelwood silt loam.

There are not many agricultural wells or surface rights listed in the area. This subregion is part of the Parrett Mountain Ground Water Limited Areas and has been an area of concern in relation to ground water levels. New ground water withdrawals are severely restricted. Snow is not a water factor is this area. Other surface water surface water sources are limited. Many rural homeowners have had to deepen wells and develop rainwater harvesting to procure enough water. Creative irrigation methods are being employed, especially in relation to the development of perennial crops that require a good deal of irrigation up front to establish a plant and little irrigation thereafter. Examples exist in this area of farms that that utilize roof rainwater storage and drip irrigation and the trucking of water during early plant development.

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[8] *Willamette Valley Land Use/Land Cover*, Oregon Department of Fish and Wildlife, Clair Klock, Principal Researcher, February 1998.
Metadata: http://nwhi.org/inc/data/GISdata/docs/willamette/wvveg24k_meta.htm
Accuracy Assessment: http://nwhi.org/inc/data/GISdata/docs/willamette/wvveg24kaccass.pdf

Suitability
The majority of the subregion located south of Sherwood within Washington County is rural residential exception areas. A few large tracts comprising two small blocks zoned for farm/forest use are located in this immediate area. These resource lands are either nearly or completely surrounded by rural residential development on 5-10 acre lots or higher density urban residential development.

Lands in the Clackamas portion of the subregion contain a large block of forestland containing several larger tracts. While bordered by rural residential development from several sides, most of the edges are with low density, relatively small rural residential blocks of commercial agricultural lands along the southern and western edges.
The area is further characterized by a combination of small, moderate and large parcels.

The Yamhill County part of this subregion overall is characterized by larger parcels and tracts that remain in farm and/or forest use. The northeast corner of this area is zoned for mixed farm/forest use. It is parcelized into a pattern of parcels predominately ranging in size from ten to 20 acres. A rural residential exception area borders this area to the south

Other Considerations
This area lacks major transportation routes. Roads within the subregion are characterized as narrow and winding with no or very little shoulders. Trends in the development of wine grapes and wineries in the larger region are reflected in the subregion. This subregion is located at the edge of the larger Yamhill wine region and near Highway 99E.

Conclusion
Overall, this area has few edge issues. Conflicts that affect the ability to conduct farming operations occur from within the area from rural residential development. This is especially the case in the Washington County portion of the subregion. Rural residential exception lands and development heavily influence this area. Parcelization, poor agricultural soils within the lands zoned for farm/forest use and little chance to develop future irrigation shows little promise for long-term, viable agriculture.

Topography and land use reflect the transitional nature of the Clackamas County portion of this subregion. Some good size forest parcels exist alongside of larger parcel, low-density rural residential development. This area also shares edges with large blocks of agricultural lands to the southwest and the west. Parcel size and soils are conducive to the production of wine grapes. Lack of irrigation water is a concern, however, wine grapes require little irrigation once established.

The Yamhill County part of this subregion has fewer issues. Suitability is good overall, with few edge issues and little inclusion of nonresource development. Soils in the area are valued in other parts of the region for the production of wine grapes. Lack of irrigation water is a concern; however, wine grapes require little irrigation once established. This area acts as an excellent buffer between the rural residential and urban development located to the north and west and the prime farmland located on the Newberg Flat.

Newberg Flats

This agricultural subregion is located east of the City of Newberg, east of the Wilsonville-Newberg and Corral Creek Roads, south of Highway 99E and north of the Willamette River. Characterized by flat to gently sloping terrain, this subregion is bisected by moderate to steep sloping creek canyons that originate from springs and other surface waters. Coming down off of Parrett Mountain at the point where the slope flattens, erosion potential is less and agricultural uses/practices change. The agricultural sector includes hay land, wine grapes, orchards, unmanaged pastures, limited nursery production (in-ground and container), Christmas trees, and large numbers of small horse farms.

Analysis

Capability

Soils are a variety of well-drained silt loams. With the exception of a wet inclusion near the Willamette River bridge crossing and area stream corridors, soils are high-value, Class II agricultural capability. Most of the soils, including the wet inclusion if drained, are designated as prime farmland. This subregion shares its eastern border with, but is not included in, the Parrett Mountain Ground water Limited Area. Lands with existing irrigation rights for agriculture are located throughout this subregion

Suitability

This area shares an edge with the City of Newberg. With the exception of one residential subdivision, urban uses along this edge are industrial and extensive commercial, uses that tend to be more compatible with agricultural operations. Rural residential exception areas are located adjacent to the Newberg UGB and are more a part of the urban area.

Parcel size is conducive to commercial agriculture. Few nonfarm uses are found in the area. Outside the three exception areas located against the UGB, the vast majority of the area is zoned EFU. On high-value farmland, the EFU zone precludes further nonfarm dwellings and land divisions and affords greater protection against the location of several nonfarm uses that may otherwise be located on EFU lands.

Other Considerations

The Willamette River separates this subregion from the French Prairie located to the south. Highway 219 crosses the river south of Newberg connecting these two subregions. Although Highway 219 is no bargain in terms of traffic volume, it provides excellent access to service centers located to south. It also gives farmers in the area the ability to avoid the major traffic problems associated with Highway 99W.

Conclusion

This subregion in form and function operates as a part of the prairie block of agricultural land located south of the metro region. Excellent soils, existing water and good integrity all support the conclusion that this area is significant agricultural land. Long-term, a

potential threat could relate to the character of any future expansion of the Newberg UGB. Because Newberg is not part of the Metro planning region, planning decisions are not required to be coordinated with other jurisdictions located in the region.

Chehalem Mountain

The Chehalem Mountain agricultural subregion runs in a northwest/southeast direction. It is generally bordered by the Chehalem Valley, the City of Newberg and Parrett Mountain on the south and Sherwood and Tualatin Valley on the north. More specifically, it was decided to distinguish this area as the area encircled by the 300-foot contour (elevation). At that point the slope dramatically increases, erosion potential becomes a major concern and agricultural uses/practices change. This area generally is characterized by steeply sloping terrain with benches found along the main ridge and spurs. Steep sloping creek canyons originating from springs and other surface waters bisect the subregion.

The agricultural sector includes wine grapes, orchards (some abandoned), unmanaged pastures, limited nursery production, Christmas trees, some hay land, livestock and large numbers of small horse farms. Forestland and small woodlots are also found throughout the subregion. Vineyards are found more often on lower, south facing slopes where the mountain transcends into the valley floors. The southeast end of the subregion, located along Highway 99E between Sherwood and Newberg, involves more intensive and concentrated operations, including wine grapes, hazelnut orchards and annual crops. It is important to note that a number of parcels listed as unmanaged pasture and orchards on the Willamette Land Use/Land Type Map have been converted to wine grapes. This illustrates a change in land use from lower income marginally productive land to high-value, highly productive agricultural land.

Analysis

Capability

Class II agricultural soils are found where the subregion transitions into the Tualatin Valley north of Bald Peak and Dixon Mill roads, and along the northern and eastern flanks. The flatter benches and terraces are also Class II. Reflecting slope, soils within the remainder of subregion are predominantly Class III and IV agricultural capability. Many of the Class III and IV soils located in this area that do not exceed 20% slope are considered high-value farmland as defined in state statute. Examples include the Jory clay loam, Chehalem silty clay loam, Cornelius and Kinton silt loams, Melbourne silty clay loam and Laurelwood silt loam. Very limited fingers of prime farmland exist in the subregion. What does exist is found along the Sherwood UGB the flatter bench lands and with the lower elevations of the small valleys that incise the subregion.

Lands with existing water rights for irrigation are scattered throughout the subregion. The largest concentrations are found in the McFee creek area and in the north end of the subregion in the Unger Road area. The entire area is within the Chehalem Mountain

Ground Water Limited Area. Unlike other metro region ground water limitations which preclude all new irrigation, restrictions for this area allow that permits may be issued for a period not exceeding five (5) years, for fire protection and for drip or equally efficient systems, only if it is determined that the proposed use and amount would not pose a threat to the ground water resource or existing permit holders. The amount of water permitted for irrigation is limited to one acre-foot (v. 2.5) per acre per year. Permits may be extended for additional five-year periods. This allows for the startup of new perennials such as wine grapes and orchards.

Suitability

The subregion itself is an island located within larger agricultural areas located in the Tualatin and Chehalem Valleys. Numerous exception areas are located throughout the subregion, especially in Washington County south and east of Bald Peak Road. Land use within these exception areas can best be characterized as rural residential, with small-scale, lifestyle farms. These exception lands are also heavily parcelized.

Good size blocks of agricultural and forest land also exist in the subregion. Most of the Yamhill County portions of the subregion located west and northeast of Newberg maintain good integrity. Parcel size is conducive to agriculture and there are few nonfarm use issues. High-value crops are not uncommon. In Washington County, lands located south of Chapman Road and north of Highway 99W block up with lands in Yamhill County. North of Bald Peak Road, several large forest parcels exceeding 80 acres in size block up with farm unit size parcels.

Lands located outside the exception areas are zoned for exclusive farm use.

Other considerations

Narrow, winding, roads with no or very little shoulders characterize this area. Soils and parcel size provide opportunities to develop high-end boutique vineyards and wineries.

Conclusion

This subregion is most impacted by the "shotgun" scattering of rural residential exception areas throughout the area. These exception areas tend to be somewhat contained by topography and located within, not at the edges of, the subregion.

The most significant agricultural areas within this subregion are located in transition areas located near the edges of the subregion. These include the upper slopes of the Chehalem valley west of Newberg, lands between Newberg and Sherwood and a good size block of land located north of bald Peak and Dixon Mill Roads in Washington County. Isolated between the rural residential islands are blocks of land that are well suited to agri-forestry and, in many cases, wine grape production.

Tualatin Valley

The main body of this agricultural subregion is bounded on the north and east by the metro area UGB. including the cities of Sherwood, Tualatin, King City, Tigard, Beaverton, Hillsboro, Cornelius and Forest Grove and Gales Creek. It is bordered on the south by Chehalem Mountain. The subregion extends west into private and state timberlands in the Coast Range. This subregion also wraps around the north end of the Chehalem Mountain south to the end of the Wapato Lake bed. This area is characterized as flat to very gently rolling floodplain and river terrace with the Tualatin River and a number of creeks bisecting the region.

The agricultural sector is diversified and includes hay land, annual grasses, grass seed, nursery land, orchards – hazelnuts, tree fruits, berries, row crops of all types, livestock and poultry, nursery stocks and large numbers of small horse farms. Wine grapes and Christmas trees are also produced in the Bull Mountain and Cooper Mountain areas.

Analysis

Capability

Soils in the subregion include a variety of silt loams with very few inclusions. These soils are excellent agricultural soils. They are predominantly Class II capability and are designated as prime farmland. Drainage can be a management issue in some of these soils. This is especially true for areas tiled in the 1940s and 1950s and in need of repair or replacement. Some large tracts of river bottom soils also require late crops and erosion protection due to winter flooding. Flooding also places limitations on the production of perennial crops in some floodplain areas. A block of Class I, prime farmland soils are located around the west end of Tongue Lane.

Class III and IV soils are found on lands with slope located in the Bull Mountain and Cooper Mountain areas. These soils are suited for the production of wine grapes and Christmas trees. The old Lake Wapato Lake bed contains Class III soils. This area has well-established drainage and the soils have been designated as unique farmland.

The area is fortunate to have abundant water available for irrigation. There are significant numbers and quantities of both surface and ground water withdrawals in this subregion. The majority of lands located within this subregion contains water rights for irrigation of agricultural products and are located within the boundaries of the Tualatin Valley Irrigation District. The east end of the subregion located just east of Butter Creek is located within the Cooper Mountain/Bull Mountain Critical Ground water Area. Edges of the subregion shared with the Chehalem Mountain subregion are located within the Chehalem Mountain Ground water Limited Area. These ground water limitations do not affect existing water rights or the delivery of water via the infrastructure provided by the irrigation district.

Suitability

Overall, this large block of commercial agricultural land is well suited to agriculture. Parcel size lends itself to the full range and scales of agriculture found in the region. The vast majority of parcels are of a size conducive to intensive agricultural operations or extensive, large machine-dominated operations. Few confirmed uses with any history of conflict are located within the subregion. These generally are related to edges between agriculture and urban scale residential uses. The several golf courses located within the subregion are generally compatible with farming operations. The vast majority of agricultural land in the subregion is zoned exclusive farm use under state law. Because most of the subregion is considered high-value farmland, it is afforded greater protection, including provisions that limit nonfarm uses, dwellings and land divisions.

Few inclusions of exceptions lands are found throughout the subregion and many of those that do exist are located at the edges of the area. These include several along Highway 47 along the western edge of the valley farmland, near the east end of Unger Road adjacent to Chehalem Mountain, and in the Cooper Mountain area along the edge of the Beaverton UGB. The City of Gaston is located at the edge of the region adjacent to Wapato Lake. It maintains a compact UGB, is more rural in character and acts as a service center for area farms.

The subregion shares an edge with the metro urban area involving eight cities. The area along this edge is where suitability issues are most likely to exist. Overall, the integrity of the agricultural lands is well established along the entire length of the subregion.

From Sherwood north and west to Scholls Ferry Road agricultural lands tend to be well buffered from the adjacent urban area. From Sherwood to King City, the combination of lands owned and managed by the U.S. Fish and Wildlife Service and open space acquisitions by Metro provide an excellent buffer along the UGB. From King City to Scholls Ferry Road, the transition from Bull Mountain to the Tualatin River floodplain provides a physical edge. This edge is generally marked by the 200 foot contour from King City to Roy Rogers Road, by the 250 foot contour north to Beef Bend Road and by the 300 foot contour north to Scholls Ferry Road. Urban development is located on the upper slopes away from the agricultural operations.

From Scholls Ferry Road north to the Baker Rock quarry located adjacent to Farmington Road is a section of the urban area centered on Cooper Mountain. This notch in the UGB includes two edges. A rural residential exception area that exceeds 400 acres in size is located along the eastern edge. Most of this exception area is located near the ridgeline summit or on the side away from agricultural lands located to the north. The majority of lands located along the northern edge of the notch (east to west) have been acquired by the Metro Open Space program. The largest remaining tract is being utilized as a rock quarry that is considered to be compatible with agricultural operations in this situation. These open space lands and a compatible land use combined with the break in topography represent a good edge and buffer between agricultural operations and the urban area.

Two small fingers protrude out from the UGB as it stretches north from Farmington road to Butter Creek. These small fingers, one along Rosedale Road and the other along Hagg Lane, are more the exception than the rule as surrounding agricultural operations represent the predominant land use. Low density residential and industrial use along the western side of 209th Street also provide a good transition into the higher density residential development located to the west.

North of Butter Creek the UGB forms a deep notch that nearly surrounds a tract of land that is close to a section (640 acres) in size. The area is bordered on the east by 209th Street, the north by a railroad and the TV Highway, the south by Butter Creek and the west by 229th Street. A grouping of nonfarm dwellings located northeast of the Reserve Golf Course nearly encloses and cuts off the tract from the larger agricultural block located to the south and southwest. This tract is, in effect, surrounded and cut off from area agricultural lands located to the south. Access to this isolated tract can only be through urban or urbanizing lands. If a higher percentage of the perimeter of this tract bordered agricultural, forest or other compatible land uses, then the size of the tract would provide greater ability to stand by itself and remain a viable agricultural tract into the future. It is important to note that the demand for local food and high-value products combined with the size of the tract and the quality of soils found in this notch could lend this area to continued agricultural production.

One last point about this area needs to be discussed. It is important to consider how the ultimate development of an area would impact surrounding agricultural operations. In this case, adjacent land uses and physical features provide a good buffer or edge between the notch and the greater Tualatin valley subregion. A golf course is located west and southwest of this area. This land is zoned EFU. The golf course was approved only after the county found that it was compatible with area agricultural operations. The golf course provides a good buffer between the urban area and resource lands located south of the urban area. Extending east from the golf course is Butter Creek. This stream provides a good opportunity to develop a hard edge and buffer from any future urban development that may occur. Without the establishment of a buffer/edge in this location, development would be problematic to future agricultural operations in the area.

The City of Hillsboro UGB extends in a generally western direction from 229th Street to the TV Highway. It includes two fingers that protrude from the urban area into EFU lands and two notches where EFU lands are confronted with two or more edges of the UGB. The first finger extends south between the Tualatin River and River Road. It is a small protrusion that is isolated from area resource lands by the Tualatin River and area golf courses. The primary land use is sewage treatment facilities. The second protrusion extends along Highway 219 to include lands owned and managed by Clean water Services (CWS) including the Jackson Bottom wetlands. This finger in effect creates the two notches located in this segment of the UGB. The lands located within the notches and the protrusion are also owned by CWS. An examination of this length of the UGB shows that a good part of the entire length involves land uses and ownership that provide a compatible edge with area farming operations. The CWS lands and operations located both inside and outside of the UGB along Dairy Creek form a good buffer along this

segment of the UGB. The Tualatin River, Dairy Creek and two golf courses also work to buffer agricultural uses from urban area land use.

The last length of the UGB stretches from Dairy Creek west along the cities of Cornelius and Forest Grove. As with the south Hillsboro UGB, much of this length is compatible with subregion agricultural lands. The only protrusion out from the UGB along Fern Hill Road involves public opens space and water sewage facilities. These lands are located on both sides of the UGB. Gales Creek, Metro open space lands, and the Tualatin River and its associated floodplain are also located along the UGB. There are no protrusions or multi-sided notches along the remaining edge.

Other Considerations

The delivery infrastructure associated with the Tualatin Valley Irrigation District is well developed. Drainage infrastructure is also well developed through out the subregion and is routinely being maintained and updated by area farmers. These are key elements in the viability of Tualatin Valley agricultural operations.

This subregion works with the Dairy/McKay Creek subregion to form a base of agricultural operations that rival any in the state. Major transportation arterials allow for access to both local and regional service centers. While there are problems with movement of farm machinery between fields due to heavy cut-through commuter and urban traffic, this currently is not a fatal flaw to area agricultural operations. This is, however, an issue to watch and give serious consideration in future planning decisions. The department is concerned about the impacts of urban commuter traffic on roads cutting through metro core agricultural areas. Many times it is difficult at best to move farm machinery between fields or to move agricultural products from the farm to the market.

The location within the Portland metro area provides excellent opportunities for the direct marketing and promotion of agricultural products. Farm stands, U-picks, wineries and small farms producing high-value products for sale to the urban market are not uncommon and are increasing in the area. This can provide greater opportunities for both larger farm operations and the smaller parcels to produce crops that cater to the ever-growing demand for locally produced food and other agricultural products. The larger parcels located within the lands zoned for agriculture are also conducive to more extensive, larger scale agriculture operations involving field crops. These larger parcels could also help to meet the growing demand for biofuel/bioenergy products in the region.

Conclusion

A key and important element to the long-term viability is the ability of the industry to adapt and diversify. This subregion has all the elements supporting such adaptability and diversity, including excellent soils, available water for irrigation, parcel size, local market and overall ability to conduct farming practices. The excellent integrity of area agricultural lands is due in no small part to the existence of good edges, compatible land uses within the UGB (buffers) and the opportunities that exist to better develop good edges. With the exception of the lands in the Butter Creek area (see below), the

department considers agricultural lands located within this subregion to be significant and recommends strong consideration for designation as an agricultural preserve.

Additionally, this subregion and the Dairy/McKay Creeks subregion combine to act as the "anchor-tenant" for all of metro west and southwest side agriculture. These two subregions incubate and support other rural interface areas such that these less significant areas can help to meet the growing demand for smaller scale operations, local food and other niche market, high-value products.

This being said, the department's analysis leads us to question the long-term viability of the lands located north of Butter Creek in a notch of the Hillsboro UGB. Our primary issue with this tract is its integrity (see earlier discussion). Perhaps even more important, any long-term conversion of this tract to urban development should occur with limited impact to agricultural operations located to the south. The department suggests that lands located north of Butter Creek should only be allowed to urbanize if a hard edge is established that would preclude incremental conversion and subsequent development to the south and southwest.

An ongoing threat to agriculture in this subregion is uncertainty related to long-term expansions of the Metro UGB. This uncertainty leads to speculative lands prices based on urban, not rural or agricultural uses. It also leads to short term planning and investment by the agricultural industry. Development of new and the maintenance of existing infrastructure is curtailed and production decisions tend to preclude perennial high-value crops. Changes to policy and law that lend to such uncertainty need to be explored.

Finally, impacts associated with the implementation of Measure 37 need to be monitored. A valid claim may not lead to the ultimate development of any given tract at the scale approved. Large blocks of agricultural land such as the Tualatin Valley subregion should have the ability to work around much of the proposed development. Even if this is so, the conversion and loss of farmland under developed claims and to lands impacted by the shadow cast by nonfarm development could ultimately lead to a loss of critical mass needed to support elements of the industry.

Dairy/McKay Creeks

This agricultural subregion is bound on the south by the metro area UGB, including the cities of Beaverton, Hillsboro, Cornelius and Forest Grove, and Highway 8. It is bordered on the east by 185th Street and Cornelius Pass Road. The subregion extends west and north into private and state timberlands in the Coast Range and Columbia County.

This area is characterized as flat to very gently rolling farmland bisected by Diary and McKay creeks and their smaller tributaries. Finger valleys extend out Highways 26 (Sunset) and 6 (Wilson River), and up Dairy and McKay creeks into the forestland that

edge the subregion. Lower foothills are found between these valleys and along the edge of the lower valley terraces and alluvial fans.

Like the Tualatin Valley subregion, the agricultural sector is diversified and includes hay land, annual grasses, grass and legume seed, nursery land, orchards (hazelnuts and tree fruits), berries, wine grapes, row crops of all types, livestock and poultry, and nursery stocks. Christmas trees are a key crop found in the foothills and higher terraces found in the finger valleys. Compared to the Tualatin Valley subregion, fewer lifestyle farms are found and field and seed crops are more common.

Analysis

Capability

The soils found within this subregion include a variety of silt loams with very few inclusions. They are excellent agricultural soils. The majority, found on the flats, terraces and finger valley bottoms, are Class II agricultural capability and are designated as prime farmland. There are enclaves of Class I, prime soils located north and south of North Plains and east of Jackson School Road. Class III soils are found in narrow bands along stream corridors. A good deal of these soils are designated as prime farmland also. Class III and IV soils are found on sloped lands in the foothills. Class IV and VI soils dominate David Hill located northeast and adjacent to Forest Grove.

As with the Tualatin Valley subregion, drainage can be an issue in these soils. This is especially true for areas tiled in the 1940s and 1950s and in need of repair or replacement. Area farmers have developed substantial drainage infrastructure and other management tools. The bottoms of the creek valley have soils that need special consideration related to wet conditions during the early part of the growing season.

There are significant numbers and quantity of both surface and ground water withdrawals found throughout this subregion. The core of this subregion, the lands located east of McKay Creek between Highway 26 and the metro UGB are also located within the Tualatin Valley Irrigation District. The District also includes a block of land located north and west of North Plains. Substantial irrigation is also available and utilized within the finger valleys, on lands located east of North Plains and along Holcomb Creek. No ground water limitations have been placed on lands located within the subregion.

Suitability

This subregion has maintained excellent agricultural integrity and is well suited for all types of intensive and extensive agricultural operations. Parcel size lends itself to the full range and scale of operations found in the region and provides good opportunities for adaptation to changing trends in agriculture that involve both small and large scale operational characteristics. There is good evidence of “tract’ use in agricultural operations. This involves field configuration and agricultural practices being conducted across parcel and lot lines. It is also quite common for single parcels to be leased/rented for use as part of larger farming operations.

Other Considerations

This subregion works with the Tualatin Valley subregion to form a base of agricultural operations that rival any in the state. As with the Tualatin Valley subregion, the delivery infrastructure associated with the Tualatin Valley Irrigation District is well established. Drainage infrastructure is also well developed and maintained. There are fewer issues with larger scale sheet flooding like that, which occurs along the Tualatin River. This allows farmers the option of various perennial crops not available where large scale flooding is common. This is an important factor where irrigation is questionable. Seed and legume crops can be produced in such situations and are commonly found in the subregion. Recent production numbers have seen the value of grass seed production outpace many irrigated crops.

Located within this subregion are numerous businesses that provide services required by high-value crop producers. Examples include seed cleaning facilities, processing and storage facilities. Many of these services are located on-farm and are available to farmers in the area.

Major transportation arterials allow for access to both local and regional service centers. While there are problems with movement of farm machinery between fields due to heavy cut-through commuter and urban traffic, this currently is not a fatal flaw to area agricultural operations. This is however an issue to watch and give serious consideration to in future planning decisions. The department is concerned about the impacts of urban commuter traffic on roads cutting through metro core agricultural areas. Many times it is difficult at best to move farm machinery between fields or to move agricultural products from the farm to the market.

The location within the Portland metro area provides excellent opportunities for the direct marketing and promotion of agricultural products. Farm stands, U-picks, wineries and small farms producing high-value products for sale to the urban market are not uncommon and are increasing in the area. This can lead to greater opportunities for both larger farm operations and the smaller parcels to produce crops that cater to the ever-growing demand for locally produced food and other agricultural products. The larger parcels located within the lands zoned for agriculture are also conducive to more extensive, larger scale agriculture operations involving field crops. These larger parcels could also help to meet the growing demand for biofuel/bioenergy products in the region.

Conclusion

A key and important element to the long-term viability is the ability of the industry to adapt and diversify. This subregion has all the elements, including excellent soils, available water for irrigation, parcel size, local market and overall ability to conduct farming practices. The excellent integrity of area agricultural lands is due in no small part to the existence of good edges, compatible land uses within the UGB (buffers) and the opportunities that exist to better develop good edges. With the exception of the David Hill area, the department considers agricultural lands located within this subregion to be significant and recommends strong consideration for designation as an agricultural preserve.

This subregion and the Tualatin Valley subregion combine to also act as the "anchor-tenant" for all of metro west and southwest side agriculture. These two subregions incubate and support other rural interface areas such that these less significant areas can help to meet the growing demand for smaller scale operations, local food and other niche, high-value products.

An ongoing threat to agriculture in this subregion is the uncertainty related to long-term expansions of the Metro UGB and the satellite cities of Banks, Gaston and North Plains. This uncertainty leads to speculative lands prices based on urban, not rural or agricultural uses. It also leads to short term, rather than long-term, planning and investment by the agricultural industry. Development of new and the maintenance of existing infrastructure is curtailed and production decisions tend to preclude perennial high-value crops. Changes to policy and law that add to this uncertainty need to be explored.

It is the department's opinion that the critical mass needed to support the agricultural service industry in Washington County is currently present but under threat. While we understand that trends in regional agriculture include a growing focus on local food and other products, it is important to remember that the production value of the region's agricultural industry is heavily focused and dependent upon on the export market. This traded sector economy brings "new" income into the region. Blocks of agricultural land containing larger parcels are key to maintaining this sector of the local economy.

Finally, impacts associated with the implementation of Measure 37 need to be monitored. A valid claim may not lead to the ultimate development of any given tract at the scale approved. Large blocks of agricultural land such as the Dairy/McKay Creeks subregion should have the ability to work around much of the proposed development.

Bethany/West Multnomah

This agricultural subregion is bound on the west by Cornelius Pass Road and 185th Avenue, the north by US Highway 30, the east by the City of Portland UGB (and Forest Park) and the south by the Portland and City of Beaverton UGBs. The subregion can perhaps be best characterized as predominantly forestland located north and east of Skyline Road associated with the Tualatin Mountains and rolling small woodland and agricultural lands on moderate to steeply rolling hills to the southwest of Skyline Road. Numerous steep creek canyons bisect the subregion.

The agricultural sector includes haylands, annual grasses, Christmas trees, nursery land, orchard – hazelnuts, tree fruits, berries, livestock and poultry nursery stocks and large numbers of small horse farms. Agricultural operations reflect some of the common trends occurring in the region. Nursery operations, community supported agriculture operations, natural beef, grapes and organic vegetables are found in the area.

Analysis

Capability

Soils in the subregion include a number of silt and clay loams with inclusions of rock and clay. North of the urban growth boundary and Skyline Road and in the area located southeast of Bannister Creek, the soils are predominantly forestland soils with an agricultural capability of Class VI or poorer. The remainder of the subregion can best be described as possessing a mottled pattern of Class III and IV soils. A major influence on the soil capability is slope. Many of these Class III and IV soils are considered as high-value farmland soil and provide "unique" qualities for the growing of higher value crops like wine grapes and Christmas trees. Prime farmland is found along the UGB in the area along Germantown Road and Kaiser Roads, in the notch of the UGB along Springvale Road and between the UGB and 185th Avenue.

Water supply is questionable in this subregion as it is located in the upper end of small drainage that does not produce large quantities of water. The availability of ground water in any abundance is unknown. Irrigated agriculture does exist in the northwestern portion of the subregion north of and along Abbey Creek. There are no restrictions on the development of ground water in this subregion.

Suitability

Outside of the forestland areas, this subregion is best described as two areas divided by a power line corridor that angles from the northeast to the southwest through Section 9, Township 1 North, Range 1 West, WM. South of the power line, the subregion is characterized as a deep notch into the urban area. This area is nearly surrounded by the urban area and includes multiple edges including two "stair step" notches. Approximately ninety percent of the perimeter of this area is UGB. A large rural residential exception area combines with the UGB to cut off the area from the larger block of resource lands located to the northwest of the power line. Several smaller clusters of low-density rural residential housing are also located throughout the area. These exception areas further break up the area into isolated small blocks of land zoned for farm use. What agriculture that does exists is characterized as pasture, livestock and small woodlots.

Northwest of the power line corridor, the subregion opens up to an area that is bounded only to the south by the UGB. This edge is relatively short and contains no protrusion and a short, open notch. This area contains fewer and smaller exception areas (including one zoned Multiple Use Agriculture by Multnomah County) within the core agricultural land base. Agricultural lands block up with adjacent forest zoned lands and agricultural lands located within the Dairy/McKay Creek subregion. Parcel size is conducive to small and large-scale agricultural operations. Few nonfarm uses are evident in the area. Zoning is predominantly Exclusive Farm Use or Forest, precluding major land division and development of nonfarm uses.

Land use within the UGB adjacent to agricultural lands includes Portland Community College and lands that remain in agricultural use after recently being placed within the

UGB. Perhaps more important to long-term stability, an opportunity exists to provide a good edge and buffer along this UGB edge. Abbey and Rock creeks flow from the east to the west along most of the UGB.

Other Considerations
This area lacks major arterials that are utilized by agricultural transportation. Roads in the subregion can be characterized by narrow, winding, roads with no or very little shoulders. There are problems with movement of farm equipment between fields due to both area and cut- through urban traffic. The western portion of the subregion has better access due to its location adjacent to the Dairy McKay Creek subregion.

The location within the Portland metro area provides excellent opportunities for the direct marketing and promotion of agricultural products. Farm stands, U-picks, wineries and small farms producing high-value products for sale to the urban market are not uncommon in the area. This provides greater opportunities for both larger farm operations and the smaller parcels to produce crops that cater to the ever-growing demand for locally produced food and other agricultural products. The larger parcels located within the western part of this subregion are also conducive to more extensive, larger scale agriculture operations involving field crops. These larger parcels could help to meet the growing demand for biofuel/bioenergy products in the region.

Conclusion
Lands located west of the power line corridor maintain good integrity. They block up with other resource lands and maintain a compatible edge with the adjacent urban area. This combined with prime farmland soils and trending agricultural operations that cater more and more to the urban population result in the ultimate conclusion that this area is suited to commercial-scale agriculture.

South of the power line, conditions change. Agricultural lands in this region are most impacted by the configuration of the urban growth boundary. This area is almost completely surrounded by the urban growth boundary and rural residential exception lands. When the exception area lands are include, adjacent land use to lands zoned for farm use is primarily residential. Soils are generally poorer in this area and those that are not are located immediately adjacent to the UGB within a notch.

Sauvie Island

This agricultural subregion is an oblong island running roughly north and south and bounded by the Multnomah Channel and the Willamette and Columbia rivers. It is flat, deep river bottomland bisected by various riverine features such as oxbow and cutoff meanders, sloughs and meander scars. The northern part of the island is dominated by Sturgeon Lake and associated lands contained within and maintained as a state wildlife reserve. Recreational use of the many island areas is common and popular.

The dominant agricultural use is irrigated row crops. Minor agricultural commodities include includes hay land, annual grass, nursery land (in-ground and container), orchards, berries, livestock, and nursery stocks. Small horse farms and other lifestyle operations are not common on Sauvie Island as in some other agricultural regions in the north Willamette Valley.

Analysis

Capability

Soils found in this subregion are characterized by a variety of silt loams with very few inclusions. They are excellent agricultural soils. With few small exceptions, due to wetness, the soils are designated as prime farmland and contain Class II and III soils. The Class III soils tend to be wetter than the Class II soils, but are highly productive when managed for excessive water. Drainage can be an issue. This is especially true for areas tiled in the 1940s and 1950s and in need of repair or replacement. Special consideration related to wet conditions needs to be given to agricultural practices on wetter soils during the early part of the growing season. Area farmers have developed substantial drainage infrastructure and other management tools. Most of the agricultural land found on the island is well drained.

This subregion has abundant water supply. Most arable land located on the Island has water rights for irrigation. There are significant numbers and quantity of both surface and ground water withdrawals. No restrictions on the use of water exist in the area.

Suitability

This subregion is set apart from the rest of the region with the best all-around buffering found in any metro agricultural subregion. Besides the river channels, zoning on the lands located between the Multnomah Channel and US Highway 30 is Multiple Use Agriculture (see discussion below). Urban influences on island agricultural operations relate to traffic on exterior access roads and recreational users. All exception areas located within the island and outside the wildlife area are zoned Multiple Use Agriculture 20 (MUA-20) by Multnomah County. The MUA zone affords much better protection than the rural residential zoning in place in other regional exception areas and comparable protection to what is provided by EFU zoning. The MUA-20 zone limits land divisions to the creation of 20-acre or greater parcels, and limits the scale of nonfarm uses, in several cases more restrictively than state law. The vast majority of the island's agricultural land is zoned exclusive farm use. Because the soils on the island are considered high-value farmland, fewer nonfarm uses may be allowed under state law.

Parcel size is not a limiting factor. It is appropriate for all scales and intensive of production agricultural practices. In fact, parcel size is considered to be a key strength in this subregion.

Nonfarm use is limited and focused on the island. An aggregate mining operation is located on the southern tip of the island. Several smaller isolated clusters of rural residential development exist around the edges of the island. Recreational use and its

associated traffic can pose problems to agricultural operations but it is not considered a fatal limiting factor. In fact, many of the farms located on the island take advantage of the recreation use to direct market island products.

Other Considerations
Agricultural transportation off the island, the movement of crops and machinery, is presently restricted by bridge weight limit. This is currently being corrected by construction of a new bridge. Access off the island is direct to US Highway 30, which provides good access to area services.

The location both near the Portland metro area and within a recreational area provides excellent opportunities for the direct marketing and promotion of agricultural products. Farm stands, U-picks and farms producing high-value products for sale to the urban market are common and well known. Agri-tourism activities conducted on the island are well known through out the region.

The importance of drainage to agriculture in the area is highlighted by the existence of a drainage district on the island. This special district is vital in maintaining drainage systems and flood protection structures that are key to area agricultural operations.

Conclusion
Excellent soils, good water availability, location near an urban area, and excellent operational integrity combine to make this area a significant agricultural subregion within the greater metro region.

Scappoose Flats

This agricultural subregion is an oblong region running north and south. It is bounded by the Scappoose UGB and US Highway 30 to the west, the Multnomah Channel to the east and Scappoose Bay to the north. Physically, it has much of the same characteristics as Sauvie Island. It is best characterized as flat river bottomland bisected by various riverine features such as oxbow and cutoff meanders, sloughs and meander scars.

Agricultural use in this subregion includes irrigated row crops, hay and pasture land, livestock and nursery stocks.

Analysis

Capability
Soils found in this subregion are characterized by a variety of silt loams with very few inclusions. They are excellent agricultural soils. With very few small exceptions the soils are designated as prime farmland and contain Class II and III soils. The Class III soils tend to be wetter than the Class II soils, but are highly productive when managed for excessive water. Drainage can be an issue. This is especially true for areas tiled in the 1940s and 1950s and in need of repair or replacement. Special consideration related to

wet conditions needs to be given to agricultural practices on wetter soils during the early part of the growing season. Most of the agricultural land found on the island is well drained. Columbia River bottomland shallow swales and sloughs combined with constructed drainage ditch assist in drainage the area. These swales have a tendency to remain wet later in the spring and present some problem to agricultural efforts. Area farmers have also developed substantial drainage infrastructure and other management tools.

There are a significant number and quantity of both surface and ground water withdrawals in this subregion. The area is fortunate to have abundant water at this time. This is probably due to the fact that the subregion is hydrologically connected to the Columbia River.

Suitability

Agricultural lands within this subregion are squeezed between the Scappoose urban area and the Multnomah Channel. Much of this area is located on floodplain lands located below the terrace where urban development exists. This transition provides a buffering effect. The Scappoose Airport also provides an edge and buffer between the city and area farming operations. Exception areas are located on the edges of the subregion and in most cases act as a part of the urban area or the airport. One large exception area does protrude out from the Scappoose urban area to the northeast. It contains an airport and an aggregate mining and processing operation. These uses are generally compatible with farm use.

Parcel size is considered to be a key strength in this subregion, and is not a limiting factor. It is appropriate for all scales and intensities of production agricultural practices.

Nonfarm uses within the subregion are few in number but involve considerable area. Three large aggregate mining and processing facilities are roughly spaced at even intervals running south to north. While they represent a considerable footprint and conversion of quality agricultural land, the operational characteristics overall are compatible with the type of agricultural operations found in the subregion. Agricultural lands in the subregion are zoned exclusive farm use. Because the soils are considered high-value farmland, fewer nonfarm uses may be allowed under state law.

Other Considerations

The importance of drainage to agriculture is highlighted by the existence of drainage districts in the area. These local improvement special districts are vital in maintaining drainage systems and flood protection structures that are key to area agricultural operations.

This area is somewhat isolated from other regional agricultural operations. Urbanization and expansion of aggregate operations could impact the critical mass of operations needed to support and maintain the needed infrastructure in the area, especially in relation to drainage. Local drainage district officials have been able to establish cooperative

agreements with the cities, the port district and aggregate operators that recognize their impacts to area drainage and their contribution towards maintaining the system.

Conclusion

Excellent soils, good water availability, and good operational integrity combine to make this area suited for continued agricultural use.

Policy Considerations

This final section responds to Metro's request that ODA suggest policy directions that may be considered in protecting the region's agriculture industry including the ability of working farms to operate efficiently and effectively. ODA offers the following comments and suggestions.

Issue: Balance between protecting agriculture and other land uses.

It is not uncommon to hear a statement the goes something like this: "When it comes to existing policy and law relating to the expansion of urban growth boundaries, protection of agricultural lands trumps all other land uses. There is no balance given to the needs of other land uses."

Is this an accurate assumption? Based on our experience and analysis of existing policy and law, the answer is no. If anything, it appears that if an imbalance does exist, the system appears to be weighted more towards the ultimate conversion of agricultural lands to urban uses than to their protection as agricultural lands. Consider the following provisions in state law that can lead to the conversion of agricultural lands to urban land uses:

1. ORS 197.296(2): This provision in state law requires a local government to demonstrate that its plan provides sufficient buildable lands within its urban growth boundary to accommodate estimated housing needs for twenty years.

2. OAR 660-009-0025(2): This provision requires local land use plans to provide a twenty-year land supply of "employment lands" (commercial and industrial).

3. ORS 197.298(3): Allows "lower priority" lands (better agricultural lands) to be included in an urban growth boundary if it is determined by the local government that nonresource and poorer quality resource lands are inadequate to accommodate the amount of land needed to meet the determined twenty-year land supplies. The law further provides three specific reasons that may justify conversion of higher quality resource lands:
    a. Specific types of identified land cannot be reasonably accommodated on nonresource and poorer quality resource lands;
    b. Future urban services could not reasonably be provided due to topographical or other physical constraints; or

c. Maximum efficiency of land uses within a proposed UGB requires the inclusion of higher quality resource lands in order to include or provide services to other lands with high priority for inclusion.

4. Statewide Planning Goal 14: Requires that UGBs shall be consistent with 20-year population needs. Needs include housing, employment opportunities, livability or uses such as public facilities, streets and roads, schools, parks or open space or any combination of these categories. Allows local governments, when determining "need", to specify the characteristics necessary for land to be suitable for an identified need.

5. OAR 660-024-0040: Implements Goal 14 provision discussed previously.

6. Regional Problem Solving ORS 197.652: Allows for expansion onto agricultural lands regardless of soils hierarchy if deemed to not be part of the region's commercial agricultural or forestland base. Does not define "commercial agricultural land base.

The above provisions provide a path to urbanize agricultural lands regardless of soil type, quality, value or rank. None of these provisions provide any bottom line or ultimate protection for any category of agricultural land. These provisions have been utilized in actual practice. Recent examples include expansion of the Woodburn (775 acres), McMinnville (794 acres) and Metro (industrial lands, 402 acres) urban growth boundaries.[9]

These policies and laws have led some in the agriculture industry to coin the term "the rolling urban growth boundary. This focuses on the potential for different cities UGBs to ultimately coalesce. Unlike other land uses, there are no policies or provisions addressing the long-term protection of agricultural lands from urbanization.

Issue: Should the region identify agricultural lands that should remain off limits to urbanization? Should permanent UGB boundaries or "hard edges" be established?

The establishment of agricultural preserves and hard edges in some locations should certainly be given strong consideration. Many areas that are considered by region planners as best suited for urban growth involve areas that are well suited to long-term agricultural operations and in most cases involve prime farmland. While most urban uses are land dependent, they are not dependent on the quality of the soil.

The use of preserves to protect significant agricultural lands could go a long way in providing some stability and certainty to some agricultural areas, if not to the larger region. Analysis similar to that provided in this report could be used to make allocation

[9] According to data available from the Oregon Department of Land Conservation and Development, from 1987 to 2005, 14,840 acres of agricultural zoned land were moved into urban growth boundaries by way of urban growth boundary expansions. This constituted 33% of all the land brought into urban growth boundaries during said time period.

decisions as to which lands merit preserve status. Obvious candidates in the region include the McKay/Dairy Creek, Tualatin Valley, Clackamas Prairies and French Prairie subregions. The department supports and recommends the establishment of agricultural preserves. Agricultural preserves would help to balance existing urban growth policy that provides long-term certainty for residential and employment lands, but not for agricultural lands.

In the analysis section of this report a good deal of discussion focuses on edges and buffers between agricultural lands and urban lands. Where good edges currently exist, strong consideration needs to be given to making them permanent. Existing physical features that should be given strong consideration for hard edges include: Willamette River between Newberg and Oregon City, Clackamas River/Noyer Creek/North Fork Deep Creek and Council Creek/McKay Creek. Consideration should also be given to developing hard edges that do not correspond with a physical feature through land use regulation and conservation easements. This is particularly relevant along the northern segment of the Hillsboro UGB. A good example of a "designated" edge is found in east Multnomah County. This edge was established in an agreement between the county and the City of Gresham.

Good agricultural buffers provide situations that protect or moderate adverse impacts between agriculture and other land uses not considered to be generally compatible with agricultural operations and practices. Buffers can be created using different tools. Establishing compatible land uses between land uses and requiring mitigation such as setbacks and physical barriers/features are examples. Once established, buffers should be protected from urbanization (conversion) and should not be leap-frogged by urban expansion.

Examples within the Metro area of intervening land use buffers include the Metro open space acquisitions in the Cooper/Bull Mountain area, and the zoning (and development) of lands along various segments of the UGB for industrial use. Other examples are identified in the analysis section of this report. There is no apparent evidence to suggest that compatibility with or protection of agricultural lands was taken into account when these "buffers" were created. This appears to be an area that could be better developed. Decisions involving future acquisitions of "open space" lands and easements and the allocation of land use designations along UGB edges should consider long-term protection agricultural lands and compatibility with agricultural operations and practices.

We are not aware of any provisions within the region that require any mitigation such as establishment of setbacks or barriers.

Issue: Should farmland protection priorities be based on soil qualities or other factors?

This question brings focus on the state law that establishes a priority list of lands for inclusion into an urban growth boundary:

197.298 Priority of land to be included within urban growth boundary. (1) In addition to any requirements established by rule addressing urbanization, land may not be included within an urban growth boundary except under the following priorities:

(a) First priority is land that is designated urban reserve land under ORS 195.145, rule or metropolitan service district action plan.

(b) If land under paragraph (a) of this subsection is inadequate to accommodate the amount of land needed, second priority is land adjacent to an urban growth boundary that is identified in an acknowledged comprehensive plan as an exception area or nonresource land. Second priority may include resource land that is completely surrounded by exception areas unless such resource land is high-value farmland as described in ORS 215.710.

(c) If land under paragraphs (a) and (b) of this subsection is inadequate to accommodate the amount of land needed, third priority is land designated as marginal land pursuant to ORS 197.247 (1991 Edition).

(d) If land under paragraphs (a) to (c) of this subsection is inadequate to accommodate the amount of land needed, fourth priority is land designated in an acknowledged comprehensive plan for agriculture or forestry, or both.

(2) *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*.

(emphasis supplied)

This law establishes a priority for inclusion of agricultural lands based on land use designation (nonresource before resource) first, and then on soil quality (poorer soils before best soils).

The inventory and analysis in this report utilizes several factors in assessing agricultural lands. Soils capability is and remains the single most important factor in this assessment. Without quality farmland soils, all the other factors, including water availability, are irrelevant. It would not be good policy, in our opinion, to replace the soils hierarchy as the primary consideration used in determining which lands are included within an UGB. This being said, there are circumstances where the implementation of the priority system may warrant additional considerations, including the justification of exceptions to the established priority.

The first circumstance involves the lack of consideration of important farmlands in the priority ranking. Currently agricultural capability is measured by the I-VIII capability system. It does not include consideration of prime, unique or high-value farmland soils designations. This can become an issue in situations where 1) two tracts contain soils with the same capability class soil but one is prime farmland, the other is not, and 2) one tract contains a lower capability class than another yet it is considered prime farmland while the higher capability tract is not.

What happens when all lands being considered for an UGB expansion are equal in terms of the agricultural capability of the soils? This is a situation in which many of the factors utilized in this report could be employed. Under current law, there is no requirement to

protect the prime, Class II farmland over the Class II farmland that is not prime farmland. There is no requirement to protect the irrigated Class II land over the nonirrigated, or the conflicted agricultural land over the foundation agricultural land. These situations occurred during Metro's most recent UGB expansion for industrial lands. Metro Regional Framework Policy 1.12.2 recognizes this situation and provides the ability to consider other factors important to agricultural production.

When the Metro Council must choose among agricultural lands of the same soil classification for addition to the UGB, the Metro Council shall choose agricultural land deemed less important to the continuation of commercial agriculture in the region.

In regard to land use designation priority, it became evident in this analysis that a situation can occur in which an area of high-value agricultural production is zoned nonresource (exception lands), not exclusive farm use. Because of the land use designation (nonresource), these lands are high priority for inclusion in the UGB. This is not a common situation but one that, nonetheless, merits discussion of an exception to the rule due to the agricultural value of the area. Because this is and should be a rare situation, we suggest that consideration be given to an exception-like process, rather than an overhaul of the entire policy.

Issue: Consideration of the impact of UGB expansions on surrounding agricultural lands.

One of the factors that Goal 14 and the implementing rules call for when considering changes to an UGB is the compatibility of the proposed urban uses with nearby agricultural (and forest) activities occurring on farm and forest land **located outside the UGB.** The Goal is one of four factors to be "balanced" in the process. This balancing has tended to obscure or ignore the compatibility factor.

While a good deal of analysis is given to the conversion of agricultural lands to urban lands, more weight needs to be given to this compatibility factor. Expansion of UGBs need to better take into account the impact of the planned development, including the configuration (footprint) of the expansion, on area agriculture. For example, UGB expansions should not create protrusions or fingers of urban land into agricultural lands. Expansions should not create situations where urban lands have multiple edges multiple edges with agricultural lands. Urban expansion should not "commit" agricultural lands to nonresource use.

It is important to note that adverse impacts need not always lead to a "yes or no" answer to a proposed expansion. Greater consideration should be given the mitigation, when found to be appropriate, of impacts to agricultural lands. Conditions of approval such as requiring buffers and setbacks, establishment of agricultural easements and protection of compatible urban uses from conversion can mitigate impacts to agricultural operations located outside the UGB. A mitigation fund/bank could be established where funds could be deposited as mitigation for the conversion of high-value farmland. The funds could

then be used to acquire agricultural conservation easements to establish better edges and to protect key blocks of agricultural land.

Issue: How do trends in consumer demands and agricultural production affect the need to protect productive agricultural land in the region?

Examples of current trends include:

- Increasing uncertainty about long-term energy supplies.
- Increasing demand for biofuels/energy development.
- The growing demand for organic, sustainable, high quality foods both in the home and at restaurants.
- Increasing demand for food products from a local food shed.
- New conservation incentives and other programs related to renewable energy and farmland protection including the ability of working farms to operate.

These trends suggest that lands not always considered to be important to the region's agricultural base may now merit greater or equal consideration. Areas considered impacted due to parcelization, parcel size and nonfarm development may be suited to more intensive operations on a smaller parcel. Lands underutilized in the past but maintained as larger parcels may be well suited to the production of biofuel crops.

The department recognizes these and other trends and supports the development of these sectors. The region may value and wish to protect areas that are characterized by operations responding to these trends. Discussion should occur about the importance of such lands.

We do not believe that the development (and protection) of these sectors should be at the expense of the greater agricultural industry, for two reasons. First, the nature of the region's and Oregon agriculture is focused on production for the export market. Eighty percent of the production leaves the state. Forty percent of the production leaves the country. This production provides the base and critical mass needed to support the infrastructure needed and used by all types of Oregon agriculture. And this export production is an important part of the state's economic bottom line.

Second, lands that provide the needs for the production of commodities such as nursery products, grass seed, production berries and vegetables, Christmas trees and tree fruits and nuts could easily be converted to the scale and production associated with the trends discussed above. On the other hand, areas that are "conflicted" by parcelization and nonfarm land uses could not be easily converted to meet the needs of the export oriented agricultural products that drive the industry.

Issue: Coordination of regional growth with neighboring cities.

Several cities located within the greater region are not within Metro's planning jurisdiction. These include the cities of Banks, Gaston, North Plains, Newberg, Canby, Estacada and Sandy. Much of the growth occurring within these cities can be associated

with regional patterns and issues, yet decisions to urbanize lands adjacent to these cities do not require any coordination with or consideration of decisions made by Metro jurisdictions. Decisions by the Metro jurisdictions to protect or urbanize any given agricultural land may work contrary to decisions by neighboring cities to protect ofr urbanize agricultural lands.

Long-term urban growth decisions within the greater region should be made only after coordinated population forecasts and regional economic need analyses are developed and utilized. Such forecasts and analyses should include Metro jurisdictions and neighboring cities.