

### WASHINGTON COUNTY OREGON

September 23, 2009

#### **To:** Reserves Steering Committee and Core 4

**From:** Washington County staff on behalf of the Washington County Reserves Coordinating Committee

## Subject: Washington County Reserves Coordinating Committee Recommendations for Urban and Rural Reserves

#### Recommendation

The Washington County Reserves Coordinating Committee (WCRCC), on September 8, 2009 voted 11 to 2 in support of the revised staff recommendation for the following Urban and Rural Reserves within the Washington County Reserves Study Area:

- Urban Reserves Approximately 34,300 acres are recommended for designation as urban reserves (*orange colored areas on the attached map.*) (The approximately 200 acre increase from the September 8 meeting is due to minor mapping adjustments.)
- Rural Reserves Approximately 109,750 acres are recommended for designation as rural reserves (*green colored areas on the attached map.*)
- Un-designated lands remaining in the Washington County Reserves Study Area of approximately 27,200 acres (*white areas on the attached map.*)

Staff recommendations were provided with cooperation of the WCRCC's Project Advisory Committee<sup>1</sup>. The recommendations include refinements as discussed at the September 8 WCRCC meeting (clarification of City of Sherwood's and City of Tigard's areas under review and removing a buffer area from urban reserves consideration between the City of North Plains and the City of Hillsboro.) A further approximately 200 acre adjustment is included as a result of final re-mapping of cities' area of interest that occurred after the September 8 meeting.

These recommendations are based upon application of the "Factors" in the Oregon Administrative Rules under OAR 660-027. These "Factors" guided staff's efforts in determining the suitability of lands as either Urban Reserves or Rural Reserves. Application of the factors is discussed in detail in the accompanying staff report.

The recommendations also are based upon a determination of potential land need for residential and employment demands over the next 40 - 50 years. Each of the cities provided their aspirations including how they could plan to accommodate future growth. Those aspirations identify what their existing capacity is to absorb growth and how they would use expanded lands to complete their communities.

<sup>&</sup>lt;sup>1</sup> County Planning Directors and/or assigned principal staff of each member government/agency.



### WASHINGTON COUNTY OREGON

Public input leading to the WCRCC recommendation included more than 1250 comments, testimonies and petition signatures. In addition, the Washington County Farm Bureau provided their aspirations and comments on the August 3 Staff Report. A public hearing held on August 20, 2009 provided opportunity for more than 250 attendees to review the current recommendations, talk with staff from the county and the cities involved, and offer testimony before the WCRCC. All input was considered in development of the accompanying staff report and WCRCC recommendation.

Included in the report are a series of issues papers providing responses to several community-identified concerns with the recommendations or with the analysis process. The issue papers address the following topics:

- How the County meets its public involvement responsibilities
- How the staff utilized successive revisions from Metro of the Natural Landscape Features Inventory
- How soils were analyzed in the Helvetia area
- How existing urban industrial land uses are be best utilized
- What the effect of un-designated lands has on property owners
- Why staff approached inventories from the Oregon Department of Agriculture different from the Oregon Department of Forestry
- How staff arrived at growth and future land needs estimates
- How cultural and historic features were addressed
- Staff's response to the Helvetia area's justification for rural reserve designation
- Staff's response to the Helvetia area's rebuttal to urban reserves designation
- Staff's response to Farm Bureau concerns to proposed reserve designations
- How transportation infrastructure costs are considered in the designation process



Washington County Reserves Coordinating Committee - Urban and Rural

### Washington County

# Recommended Rural and Urban Reserves

Recommended Rural Reserve

Recommended Urban Reserve

Recommended Urban Reserve in Clackamas County

Existing Urban Area

Extent of Reserves Study Area

Urban Growth Boundary

**County Boundary** 

Disclaimer:

The information on this map was derived from digital databases on Washington County's Geographic Information System (GIS). Care was taken in the creation of this map, however, Washington County cannot accept any responsibility for errors, omissions, or positional accuracy. Therefore there are no warranties which accompany this product. Notification of any errors will be appreciated.



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#### Urban and Rural Reserve Recommendations for Washington County Key to finding information.

The "Factors" for designation of lands as either Urban or Rural Reserves (OAR 660-027-0050 and  $0060^{1}$ ) are the basis for the recommendations outlined in this report. The Urban and Rural Reserves Factors are on the accompanying two pages. The following tables provide Factor based references to applicable report pages, maps, and related appendices

Urban Reserve Factors (OAR 660 027-0050):	Staff Report Page Number(s)	Applicable Map Number(s)	Applicable Appendix Number	Notes
(1)(a)	pp. 16-19	1, 8, 11-14, 34	1, 2	Pre-qualified Concept Plans applied 2040 plan typology. Issue papers 9b & 11.
(1)(b)	pp. 19-21	7, 34	1, 2, 3	Growth capacity analysis based on Metro's '07 vacant lands inventory. Issue papers 4, 7 & 9b.
(1)(c)	pp.21-22	11,12, 13, 34	1,2	Analysis from service providers and cities. Noted in submitted concept plans. Issue paper 9b.
(1)(d)	pp.22-23	9, 34	1, 2	Issue papers 9b & 11.
(1)(e)	p.23	n/a	1, 2	Constrained areas removed in concept plans. Issue paper 9b.
(1)(f)	P.23	7, 34	1, 2	Issue paper 9b.
(1)(g)	p.23	n/a	1,2	Site-specific recommendations contained in concept plans. Issue paper 9b.
(1)(h)	p.23	n/a	1, 2	Site-specific recommendations contained in concept plans. Issue paper 9b.

<sup>&</sup>lt;sup>1</sup> Oregon Administrative Rules, Chapter 660, Division 27: "Urban and Rural Reserves in the Portland Metropolitan Area"

Rural Reserve Factors (OAR 660 027-0060):	Staff Report Page Number(s)	Applicable Map Number(s)	Applicable Appendix Number	Additional Notes
(2)(a)	pp.26; pp.34-35	3, 6, 16,17,35	1	Subject to urbanization rated low, medium, high. Issue paper 10.
(2)(b)	pp. 26-27; p.35	18, 20, 21,30,35	1	Issue papers 9a & 10.
(2)(c)	pp.27-28; pp.30-33; p.35	3,19- 21,30,35	1	Tier and sub-area chart pp 32- 33. Issue papers 3, 9a, & 10.
(2)(d)	pp.28-33; p.35	22-24, 25- 28,30,35	1	Tier and sub-area chart pp 32- 33. Issue papers 9a & 10.
(3)(a)	p.36	16	1	5-mile study area subject to urbanization. Issue papers 2 & 9a.
(3)(b)	p.36	31-33,35	1	lssue papers 2 & 9a.
(3)(c)	p.36	31-33,35	1	Goal 5 areas mapped. Issue papers 2 & 9a.
(3)(d)	p.36	31-33,35	1	Floodplains mapped. Issue Papers 2 & 9a.
(3)(e)	pp.36-37	31-33,35	1	350 foot level as sense of place boundary. Issue papers 8 & 9a.
(3)(f)	p.37	31-33,35	1	lssue paper 9a.
(3)(g)	p.37	31-33,35	1	Issue paper 9a.
(3)(h)	p.37	31-33,35	1	Issue paper 9a.

When identifying and selecting lands for designation as urban reserves under this division, Metro shall base its decision on consideration of whether land proposed for designation as urban reserves, alone or in conjunction with land inside the UGB:

(1) Can be developed at urban densities in a way that makes efficient use of existing and future public and private infrastructure investments;

(2) Includes sufficient development capacity to support a healthy economy;

(3) Can be efficiently and cost-effectively served with public schools and other urban-level public facilities and services by appropriate and financially capable service providers;

(4) Can be designed to be walkable and served with a well-connected system of streets, bikeways, recreation trails and public transit by appropriate service providers;

(5) Can be designed to preserve and enhance natural ecological systems;

(6) Includes sufficient land suitable for a range of needed housing types;

(7) Can be developed in a way that preserves important natural landscape features included in urban reserves; and

(8) Can be designed to avoid or minimize adverse effects on farm and forest practices, and adverse effects on important natural landscape features, on nearby land including land designated as rural reserves.

#### Figure 2 – OAR 660-027-0060 Rural Reserve Factors

(1) When identifying and selecting lands for designation as rural reserves under this division, a county shall indicate which land was considered and designated in order to provide long-term protection to the agriculture and forest industries and which land was considered and designated to provide long-term protection of important natural landscape features, or both. Based on this choice, the county shall apply the appropriate factors in either section (2) or (3) of this rule, or both.

(2) Rural Reserve Factors: When identifying and selecting lands for designation as rural reserves intended to provide long-term protection to the agricultural industry or forestry industry, or both, a county shall base its decision on consideration of whether the lands proposed for designation:

(a) Are situated in an area that is otherwise potentially subject to urbanization during the applicable period described in OAR 660-027-0040(2) or (3) as indicated by proximity to a UGB or proximity to properties with fair market values that significantly exceed agricultural values for farmland, or forestry values for forest land;

(b) Are capable of sustaining long-term agricultural operations for agricultural land, or are capable of sustaining long-term forestry operations for forest land;

(c) Have suitable soils where needed to sustain long-term agricultural or forestry operations and, for agricultural land, have available water where needed to sustain long-term agricultural operations;

(d) Are suitable to sustain long-term agricultural or forestry operations, taking into account:

- (A) For farm land, the existence of a large block of agricultural or other resource land with a concentration or cluster of farm operations, or, for forest land, the existence of a large block of forested land with a concentration or cluster of managed woodlots;
- (B) The adjacent land use pattern, including its location in relation to adjacent non-farm uses or non-forest uses, and the existence of buffers between agricultural or forest operations and non-farm or non-forest uses;
- (C) The agricultural or forest land use pattern, including parcelization, tenure and ownership patterns; and
  - (D) The sufficiency of agricultural or forestry infrastructure in the area, whichever is applicable.

(3) Rural Reserve Factors: When identifying and selecting lands for designation as rural reserves intended to protect important natural landscape features, a county must consider those areas identified in Metro's February 2007 "Natural Landscape Features Inventory" and other pertinent information, and shall base its decision on consideration of whether the lands proposed for designation:

(a) Are situated in an area that is otherwise potentially subject to urbanization during the applicable period described in OAR660-027-0040(2) or (3);

(b) Are subject to natural disasters or hazards, such as floodplains, steep slopes and areas subject to landslides;

(c) Are important fish, plant or wildlife habitat;

(d) Are necessary to protect water quality or water quantity, such as streams, wetlands and riparian areas;

(e) Provide a sense of place for the region, such as buttes, bluffs, islands and extensive wetlands;

(f) Can serve as a boundary or buffer, such as rivers, cliffs and floodplains, to reduce conflicts between urban uses and rural uses, or conflicts between urban uses and natural resource uses;

(g) Provide for separation between cities; and

(h) Provide easy access to recreational opportunities in rural areas, such as rural trails and parks.

(4) Notwithstanding requirements for applying factors in OAR 660-027-0040(9) and section (2) of this rule, a county may deem that Foundation Agricultural Lands or Important Agricultural Lands within three miles of a UGB qualify for designation as rural reserves under section (2) without further explanation under OAR 660-027-0040(10).

## Urban and Rural Reserves Planning in Washington County

### Washington County Reserves Coordinating Committee Urban and Rural Reserves Recommendations

Submitted to: Reserves Steering Committee

Prepared by: Department of Land Use and Transportation Long Range Planning Division

September 23, 2009

#### Urban and Rural Reserve Recommendations for Washington County Key to finding information.

The "Factors" for designation of lands as either Urban or Rural Reserves (OAR 660-027-0050 and  $0060^{1}$ ) are the basis for the recommendations outlined in this report. The Urban and Rural Reserves Factors are on the accompanying two pages. The following tables provide Factor based references to applicable report pages, maps, and related appendices

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(3)(h)	p.37	31-33,35	1	Issue paper 9a.

#### **Urban Reserve Factors**

Figure 1 – OAR 660-027-0050 Urban Reserve Factors When identifying and selecting lands for designation as urban reserves under this division, Metro shall base its decision on consideration of whether land proposed for designation as urban reserves, alone or in conjunction with land inside the UGB:

(1) Can be developed at urban densities in a way that makes efficient use of existing and future public and private infrastructure investments;

(2) Includes sufficient development capacity to support a healthy economy;

(3) Can be efficiently and cost-effectively served with public schools and other urban-level public facilities and services by appropriate and financially capable service providers;

(4) Can be designed to be walkable and served with a well-connected system of streets, bikeways, recreation trails and public transit by appropriate service providers;

(5) Can be designed to preserve and enhance natural ecological systems;

(6) Includes sufficient land suitable for a range of needed housing types;

(7) Can be developed in a way that preserves important natural landscape features included in urban reserves; and

(8) Can be designed to avoid or minimize adverse effects on farm and forest practices, and adverse effects on important natural landscape features, on nearby land including land designated as rural reserves.

Figure 2 – OAR 660-027-0060 Rural Reserve Factors (1) When identifying and selecting lands for designation as rural reserves under this division, a county shall indicate which land was considered and designated in order to provide long-term protection to the agriculture and forest industries and which land was considered and designated to provide long-term protection of important natural landscape features, or both. Based on this choice, the county shall apply the appropriate factors in either section (2) or (3) of this rule, or both.

(2) Rural Reserve Factors: When identifying and selecting lands for designation as rural reserves intended to provide long-term protection to the agricultural industry or forestry industry, or both, a county shall base its decision on consideration of whether the lands proposed for designation:

(a) Are situated in an area that is otherwise potentially subject to urbanization during the applicable period described in OAR 660-027-0040(2) or (3) as indicated by proximity to a UGB or proximity to properties with fair market values that significantly exceed agricultural values for farmland, or forestry values for forest land;

(b) Are capable of sustaining long-term agricultural operations for agricultural land, or are capable of sustaining long-term forestry operations for forest land;

(c) Have suitable soils where needed to sustain long-term agricultural or forestry operations and, for agricultural land, have available water where needed to sustain long-term agricultural operations;

(d) Are suitable to sustain long-term agricultural or forestry operations, taking into account:

For farm land, the existence of a large block of agricultural or other resource land with a concentration or cluster of farm operations, or, for forest land, the existence of a large block of forested land with a concentration or cluster of managed woodlots;

The adjacent land use pattern, including its location in relation to adjacent non-farm uses or non-forest uses, and the existence of buffers between agricultural or forest operations and non-farm or non-forest uses;

The agricultural or forest land use pattern, including parcelization, tenure and ownership patterns; and

The sufficiency of agricultural or forestry infrastructure in the area, whichever is applicable.

(3) Rural Reserve Factors: When identifying and selecting lands for designation as rural reserves intended to protect important natural landscape features, a county must consider those areas identified in Metro's February 2007 "Natural Landscape Features Inventory" and other pertinent information, and shall base its decision on consideration of whether the lands proposed for designation:

(a) Are situated in an area that is otherwise potentially subject to urbanization during the applicable period described in OAR660-027-0040(2) or (3);

(b) Are subject to natural disasters or hazards, such as floodplains, steep slopes and areas subject to landslides;

(c) Are important fish, plant or wildlife habitat;

(d) Are necessary to protect water quality or water quantity, such as streams, wetlands and riparian areas;

(e) Provide a sense of place for the region, such as buttes, bluffs, islands and extensive wetlands;

Can serve as a boundary or buffer, such as rivers, cliffs and floodplains, to reduce conflicts between urban uses and rural uses, or conflicts between urban uses and natural resource uses;

(g) Provide for separation between cities; and

(h) Provide easy access to recreational opportunities in rural areas, such as rural trails and parks.

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- 3. Land Needs Estimate exhibits
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- 5. Issue Papers

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- PCP 8 City of Sherwood
- PCP 9 City of Tualatin
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Land Needs Estimate May Report & June Addendums

#### Appendix 4 – Public Involvement

Public Comment Report - Phase 3 July 2009

#### Appendix 5 – Issue Papers

- Issue Paper 1: Meeting Public Involvement Responsibilities of Goal 1
- Issue Paper 2: Revised Natural Landscape Features Inventory
- Issue Paper 3: Helvetia Area Soils Analysis
- Issue Paper 4: Urban Industrial Land Uses & Growth
- Issue Paper 5: Undesignated Lands
- Issue Paper 6: Utilization of Department of Forestry and
- Department of Agriculture Inventories
- Issue Paper 7: Growth Estimates and Future Land Needs
- Issue Paper 8: Cultural and Historic Features
- Issue Paper 9a: Justification for Rural Reserves Designation for the area north of Highway 26

Issue Paper 9b: Urban Reserve Findings Rebuttal

Issue Paper 10: Farm Bureau Concerns Related to Proposed Reserves Designations

Issue Paper 11: Transportation Infrastructure Costs

#### **Recommendation**

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#### **Staff Report Introduction**

This following staff report provides an overview of the technical analysis conducted to support the above recommendations. Beginning in early 2008, County staff researched and identified attributes of lands under consideration for reserves in order to determine whether those lands could meet the applicable Rule Factors. The attributes were used for analysis as was information supplied by key stakeholders throughout the process.

Staff relied on assistance from the Project Advisory Committee (as provided in the Washington County Reserves Coordinating Committee – WCRCC – bylaws), input from stakeholder groups (business, development, environmental, citizen, and neighborhood organizations among others), stakeholder agencies, and the public. Staff also was provided direction by the WCRCC and the Board of County Commissioners. The process was additionally informed through collaborative efforts with Metro and staff of Clackamas and Multnomah counties.

<sup>&</sup>lt;sup>2</sup> County Planning Directors and/or assigned principal staff of each member government/agency. Washington County Reserves Coordinating Committee Recommendation – Urban and Rural Reserves

September 23, 2009

This report provides a brief process background and review of the regional effort toward designating reserves. In-depth background material is available on Metro's website and the dedicated Washington County reserves website (in the Documents and Maps section.) The report further provides details of staff's approach in using a geographic information system (GIS) for technical analysis and for the mapping of land attributes. This aided in the determination of how well within the study area lands qualified as either Urban or Rural Reserves under the Factors. A step-by-step methodology was utilized which allowed for continued refinements leading to the recommendations in this report.

#### Regional Urban and Rural Reserves Designation Background

Washington, Multnomah and Clackamas counties and Metro are collaborating on a regional effort to help shape future growth in the tri-county region over the next 40 to 50 years. The designation of Urban and Rural Reserves are a significant component of this process and are intended to provide greater certainty as to where future growth may take place outside the current Urban Growth Boundary (UGB), while protecting important farmland and natural areas from urbanization.

The Urban and Rural Reserves designation process derives from Senate Bill 1011 adopted in 2007. The Land Conservation and Development Commission (LCDC) adopted administrative rules to govern how Urban and Rural Reserves are determined. Those rules OAR 660-027-0050 and OAR 660-027-0060 (*provided in the "Key to Report" section*), provide the framework for how future reserves are determined through the application of "factors" used to identify and select lands appropriate for designation. Washington County staff analysis is based on the OAR's eight urban factors and four (plus subset clarifications) rural factors. All of the factors are of equal importance in the designation process and all relevant factors will be addressed in the course of the analysis. Factors were applied with increasing specificity in successive process refinements.

The eight Urban Reserve Factors guide the analysis of potential growth areas to ensure new communities, whether residential or employment, meet Metro's intentions to be efficiently planned. The eight Factors consider:

- Can the land be developed at urban densities that make efficient use of existing and future infrastructure?
- Does the land have enough development capacity to support a healthy economy?
- Can water, sewer, schools, parks and other urban-level systems be provided efficiently?
- Can the land accommodate a well-designed system of streets, trails and transit?
- Can the area be designed to preserve and enhance natural ecological systems?
- Is there enough land to accommodate a range of housing types?
- Can the area be developed while preserving natural landscape features?
- Can the area be designed to minimize conflicts with farms, forests and important natural features on nearby land, including adjacent rural reserves?

The Rural Reserve Factors are based on the results from a comprehensive study conducted in 2006 by Metro, the three counties, Oregon Department of Agriculture, and Department of Land Conservation and Development. That study, "The Shape of the Region", identified how the agricultural economy, natural areas, and urban communities contribute value to this region. Those Factors consider:

• Is the land in an area that is potentially subject to urbanization?

- o Is the area capable of sustaining long-term agriculture or forestry operations?
- Does the area include:
  - •Natural landscape features such as natural hazards?
  - •Important fish, plant or wildlife habitat?
  - •Lands that protect water supply and quality?
  - •Features that provide a sense of place such as rivers or buttes?
  - •Lands that separate cities?
  - Lands that provide access to recreational opportunities?

#### **Regional Urban and Rural Reserves Study Area**

Throughout summer and early fall of 2008 the regional partners (Clackamas, Multnomah and Washington counties and Metro) worked to identify the appropriate lands within the region that should be studied as potential candidates for designation as Urban or Rural Reserves.

In August 2008 the WCRCC concurred on a Draft Reserves Study Area within Washington County and forwarded that recommendation to the regional Reserves Steering Committee (RSC). At their September 2008 meeting, the RSC approved the Reserves Study Area for the three counties. This Study Area encompassed approximately 404,000 acres (*Appendix 1: Map 1.*)

Next, Metro and the three counties began applying the factors to the study area in order to determine areas that are suitable for urban or rural reserve consideration or that should not be considered for either.



#### **Refinement through "screens"**

Initially, the administrative rule factors were broadly applied across all areas potentially suitable for designation as either Urban or Rural Reserves.

Each jurisdiction began to apply increasingly higher levels of detail in the technical analysis (represented by the series of "screens" in the adjoining diagram.



Washington County Reserves Coordinating Com September 23, 2009

**Urban Reserves** 

As each of these "screens" (Figure 3) was applied, the results were reviewed with key stakeholders, interested parties, the WCRCC and Project Advisory Committee for further review and comment. At key points throughout the "screening" process, public outreach was conducted to provide opportunity for community review and input.

#### Shape of the Region and Great Communities Studies

Several significant studies provided the basis of Senate Bill 1011 and the accompanying Oregon Administrative Rules. Key elements of these studies became the guiding Factors to identify Urban and Rural Reserves.

The Shape of the Region, completed in early 2007, included three distinct studies through the cooperation of Clackamas, Multnomah, and Washington Counties, Metro, the Oregon Department of Land Conservation and Development, and the Oregon Department of Agriculture. Three broad issues were investigated: 1) what lands are functionally critical to the region's agricultural economy?; 2) what natural landscape features are important in terms of ecological function and defining a sense of place for residents of the region?; and 3) what attributes allow lands to most efficiently and effectively be integrated into the urban fabric of the region to create sustainable and complete communities?

The results provided the impetus for Senate Bill 2051 (providing a one-time, two-year extension of Metro's UGB analysis) and Senate Bill 1011 initiating the Urban and Rural Reserves designation process. The outcomes also assisted in developing the Rural Reserve Factors and looking at new tools to preserve the agricultural integrity of the region.

Each of the three studies produced maps (and descriptive text) to be used as the foundation level of regional analysis. Those maps included:

Agricultural Lands Inventory – Oregon Department of Agriculture (Appendix 1: Map 3) Wildland Forest Inventory – Oregon Department of Forestry (Appendix 1: Map 4) Landscape Features Inventory – Metro (Appendix 1: Map 5)

The Great Communities studies, completed in December 2006 with cooperation of the same participants as the Shape of the Region, provided a basis for creation of the Urban Reserves Factors. The study defined and described community characteristics to be included in urban decision-making processes. The eight Great Communities attributes directly relate to the factors and intend to guide community development to embody Metro's 2040 Growth Plan concept for compact, efficient communities.

#### Washington County Approach to Analyzing Potential Urban and Rural Reserves

In late October 2008 Washington County staff began presenting preliminary maps to the public addressing the suitability of lands for Urban and Rural Reserves. These maps represented initial efforts to use spatial data and geographic information system (GIS) applications evaluating different factors to identify candidate reserves areas. This analysis was subject to continuous refinement and improvement.

#### **Suitability Analysis**

#### GIS and suitability mapping

One of the approaches Washington County has taken to identify candidate areas is to perform a suitability analysis for Rural and Urban Reserves. This method relies upon the processing of spatial data in GIS to measure the suitability of a location for a particular purpose. Data layers that help define or quantify criteria are selected and then their attributes are ranked based on their relative ability to support the intended use. A numeric value representing this ranking was then applied. Once all of the layers were selected and assigned they were weighted based on their relative importance and then added together to generate a suitability layer that was mapped. Some of the benefits of this approach were that it allowed the user to objectively measure the outcomes of alternative decisions and that by changing the weightings different scenarios or values could be easily mapped and compared.

#### Suitability values and weightings

Staff utilized data layers to represent or define the LCDC factors identifying Urban and Rural Reserves. Figures 4 and 5 show the Factors and related land attributes used for the initial reserves screening. Attributes for each factor were assigned a value from one (1) to nine (9) with nine (or the highest value for that attribute) being the most suitable for reserve consideration. For instance, the agricultural inventory was assigned three values (based on foundation, important, and conflicted lands) with three being most suitable. Irrigation was assigned nine values with nine the most suitable for consideration. For some factors, due to the nature of the Factor or the lack of available data, staff were unable to apply this GIS-based suitability analysis.

Multiple factors were then combined into one map with each factor given a "weighting" relative to other factors. In all cases the total weight of any compilation was 100%. Tables 1 and 2 indicate the relative weightings of the initial compilation of six factors (with Water Resources representing three attributes) for Rural Reserves and five factors (with Transportation representing eight attributes) for Urban Reserves. The following two sections provide greater detail regarding specific factors.





Rural Reserves suitability factors

For Rural Reserves eight data layers were identified, one of which is identified in the rule itself; the Oregon Department of Agriculture's (ODA) Agricultural Lands Inventory (Appendix 1: Map 3) was divided into Foundation, Important and Conflicted lands. The Oregon Department of Forestry's (ODF)

Wildland Forest Inventory (Appendix 1: Map 4) was used to represent forestry in the same way as ODA's inventory represents agriculture. A second set of ODA attributes, soil types, was also used and their productivity Classes I, II, III, & IV were all valued as being most suitable.

Acknowledging the impact of water resources on farming, three data layers were ranked and weighted for this component. The first was whether a location was inside or outside of the Tualatin Valley Irrigation District because it would allow for the possibility of receiving irrigation. The second was for properties with existing point-of-use water rights for agriculture or forestry use; this data came from the Oregon Water Resources Department (OWRD). The third layer was to identify those lands located inside ground water limited areas as determined by ORWD (Appendix 1: MAP 18).

To address the criteria for being subject to urbanization, proximity to an existing urban growth boundary (UGB) was used as a proxy with areas closer to the UGB (Appendix 1: Map 15) presumed to be more suitable for a rural reserve than those farther away.

The final element used was to identify those lands meeting the requirements for being an American Viticulture Area in Oregon. These elements were then weighted, with water resources, the ODA inventory, and the ODF inventory given a total weight of 70% and soils, proximity to the UGB, and viticulture given the remaining 30%. The values and weights assigned to data layers for rural reserves can be found in Table 1.

					W	ater Resources		
Value	ODA Lands	ODF Lands	Soil Type	Viticulture Lands	Irrigation District	Water Rights	Ground Water Limited Area	Proximity to UGB
9	Foundation	Wildland Forest	I, II, III, IV	Inside	Inside	Agriculture or Forestry Use	Outside	< 0.25 mi
8		Wildland Range						0.5 mi
7								0.75 mi
6								1 mi
5	Important	Mixed Forest Agriculture	V					1.5 mi
4		Mixed Range Agriculture	VI					2 mi
3		Intensive Agriculture	VII					2.5 mi
2		Low Density Residential/ Commercial	VIII					3 mi
1	Conflicted	Urban & Other	No Data	Outside	Outside	No Agriculture or Forestry Use	Inside	> 3 mi
					30%	30%	40%	
Wgt.	20%	20%	10%	10%		30%		10%

Table 1. Rural Reserve Suitability Values and Weighting

Table 1. Rural Reserve Suitability Values and Weighting

#### Urban Reserves suitability factors

Twelve data layers were used for reviewing urban reserve suitability, eight of which were related to transportation. The ranking of attributes for most of the data layers focused on efficient uses of existing investments and infrastructure. As with the Rural Reserves suitability, proximity to an UGB was used with locations closer to an existing UGB being assigned higher values than those farther away. Proximity to an existing incorporated area was also used because of a working agreement in Washington County that future urban areas will be governed by cities.

The limitation of slope on urban development was likewise considered. Limited development can occur on steep slopes given environmental constraints and the difficulty of creating well-connected, compact communities. For these reasons, Staff ranked slopes less than 7% as the highest scoring.

Three of the eight elements of the transportation component were based on the distance from the following features (or layers in the GIS): freeway access, proximity to light-rail/commuter rail, and proximity to railroads. The remaining five elements were based on 2005 data for evening two-hour peak modeled travel times. The overall attempt was to depict how an existing rural transportation zone may relate to the rest of the region. Travel times from the central city, regional centers, and industrial areas were used to tie into the existing investment in 2040 centers. The average travel time for each zone was also used as was the percentage of trips on congested routes. The percentage of trips on

congested routes identified zones that may exacerbate existing roadway deficiencies and was used because such deficiencies may be difficult, expensive or impossible to fix.

A final element was the County's Mineral and Aggregate Areas. These areas are comprised of District A, which would be the site of extraction, and District B, which is a buffer of that use. The inclusion of these districts is due to the often incompatible interface between quarries and urban uses.

Transportation and distances to a city and UGB received 75% of the weighting with each being assigned 25%. Slope was weighted with 15% and mineral and aggregate areas 10%. The values and weights for data layers for Urban Reserves can be found in tables 2 and 3.

				Transportation	
Value	Distance to UGB	Distance to City	Slope	See Table 3 for detail	Mineral & Aggregate Areas
9	0.25 mi	< 0.25 mi	7%		Outside All
8	0.5 mi	0.5 mi			
7	0.75 mi	0.75 mi	10%		
6	1 mi	1 mi			
5	1.5 mi	1.25 mi			Inside District B
4	2 mi	1.5 mi	15%		
3	2.5 mi	2 mi			
2	3 mi	3 mi	20%		
1	> 3 mi	> 3mi	> 25%		Inside District A
Wgt.	25%	25%	15%	25%	10%

Table 2. Urban Reserve Suitability Values and Weighting

Table 3. Detailed Transportation Componen	Table 3.	Detailed	Transportation	Component
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Value	Freeway Access	Proximity to LRT/WES	Proximity to Rail	Average Travel Time	Time from Central City	Time from Regional Centers	Time from Industrial Areas	Percent on Congestion	
9	1 mi.	0.25 mi	250 ft	< 15 min	< 10 min	< 10 min	< 10 min	< 10%	
8	2 mi	0.5 mi	500 ft	15-20 min	11-15 min	11-15 min	11-15 min	10%-20%	
7	3 mi	0.75 mi	750 ft					20%-30%	
6	4 mi	1 mi	1000 ft		16-20 min	16-20 min	16-20 min	30%-40%	
5	5 mi	2 mi	1250 ft					40%-50%	
4	6 mi	3 mi	1500 ft	21-25 min	21-25 min	21-25 min	21-25 min		
3	7 mi	4 mi	1750 ft	25-30 min	26-30 min	26-30 min	26-30 min	50%-60%	
2	8 mi	5 mi	2000 ft	30-35 min	31-35-min	31-35-min	31-35-min	60%-75%	
1	> 8 mi	> 5 mi	>2000 ft	> 35 min	>35 min	>35 min	>35 min	> 75%	
	6%	6%	7%	20%	12%	12%	12%	25%	
Wgt.		25%							

#### Summary of suitability factors application

While the suitability maps (Appendix 1: Maps 2, 6) do not provide a definitive answer on where to draw a boundary for reserves, they do provide guidance into what areas would likely make better

reserves than others. For both Urban and Rural Reserves the areas along existing UGBs are the highest scoring. With regards to Urban Reserves this is largely due to their proximity to existing infrastructure and service providers. The scores are high mostly from the almost ubiquitous assessment of a large percentage of rural Washington County as Foundation lands in the ODA inventory adjacent to UGBs in Washington County and from being considered as subject to urbanization through the use of proximity to UGBs.

#### Subject to Urbanization

#### Proximity to Urban Growth Boundary

One of the factors to be addressed when selecting land for designation as a rural reserve requires a consideration of the potential for urbanization (Appendix 1: Map 16.) Rural Reserve Factor (2)(a) requires a consideration of those areas that: "Are situated in an area that is otherwise potentially subject to urbanization...or proximity to properties with fair market values that significantly exceed agricultural values for farmland, or forestry values for forest land."

#### Fair Market Value

Staff has compiled more than a dozen analysis variations to address this factor. Because adequate data necessary to explore fair market value was not readily available, Staff utilized real market values (RMV) for individual parcels as recorded in Washington County's Department of Assessment and Taxation. Study areas included land at one to nine mile intervals from the existing Urban Growth Boundary. Based on the results, elevated RMVs occurred within one, six and eight miles of the UGB (Appendix 1: Map 17.) Successive iterations included:

- Utilizing only natural resource lands' zoning designations (Exclusive Forest and Conservation EFC; Exclusive Farm Use EFU; and Agriculture and Forestry, 80-acre minimum lot size AF-20) with .5 acre minimum lot size and 10 acre minimum lot size.
- Removing non-natural resource use lands, for example golf courses.
- Adding updated A&T data.
- Changing the data to only lands in farm and forest deferral (zoned farmland, un-zoned farmland, and forestland) with attention to calculating the RMV per acre values from the portion of the tax lot in deferral.
- Comparing RMV's in quarter-mile increments from the Urban Growth Boundary for lots of similar size (0-10 acres, 10-20, 20-40, 40-80, 80-120 and greater than 120 acres.) For example, this provided comparable average costs for 10-20 acre plots beginning at one-quarter up to 3 miles from the UGB.
- Applying a GIS interpolation method (Kriging) as an additional aid to viewing the data.

Based on results from the above iterations, planning staff determined that the notion of "Fair Market Value" independent of other indicators does not provide a conclusive indication of land areas that may be "subject to urbanization".

#### Moving toward Candidate Reserve Areas

Referring to the "screen" metaphor (Figure 3), staff efforts to this point identified broad attributes within the Study Area and generated data layers that could be mapped. These visual depictions, like all the data created in this process, did not provide answers but instead provided opportunity to evaluate various attributes for decision-making.

Screen one, the coarsest filter, was used to evaluate the entire Metro region. Applying broad analysis resulted in the Reserves Study Area as likely to contain potential Urban or Rural Reserves. Screen two could be interpreted as staff's efforts at evaluating more specifics. Although still broad in nature, this screening looked at each of the Urban and Rural Reserve Factors and determined initial characteristics that could be analyzed relative to one-another.

In Washington County the second screen generated discussion regarding what further characteristics should be considered and how those characteristics might inform further refinements. Results from this screen also opened discussions regarding what, if any, areas could be removed from further study leading directly into efforts to identify "candidate" reserve areas – still broad but with increasingly more detailed information.

#### Candidate Urban Reserves Development

#### Introduction

Oregon State law guides designation of Urban and Rural Reserves by the definitions established under ORS Chapter 195. ORS 195.137 (2) defines Urban Reserve:

"Urban reserve means lands outside an urban growth boundary that will provide for:

- (a) Future expansion over a long-term period; and
- (b) The cost-effective provision of public facilities and services within the area when the lands are included within the urban growth boundary."

Standards for the creation of Urban Reserves for the Portland Metro Region are outlined in the eight Urban Reserve Factors established under OAR 660-027-0050 (*provided in "Key to Report" section*.) These Factors provide the basis of Washington County's analysis of candidate Urban Reserve areas as described in the following analysis overview.

#### Analysis overview

In March 2009, the WCRCC approved an initial candidate Urban Reserve study area surrounding the Metro Urban Growth Boundary in Washington County. This approximately 107,000 acre study area was selected out of the county's regional Study Area 171,000 acre portion. Subsequent land suitability analysis are shown in Appendix 1: Map 9. Appendix 1: Map 10 identifies approximately 107,000 acres as the Candidate Urban Reserve Study Area. (Note that the parallel analysis of Rural Reserve candidate areas continued to examine the entire 171,000 (+/-) acre primary study area.)

Washington County utilized two unique processes to further refine the analysis and to identify lands most suitable for designation as Urban Reserves. These processes included an additional, more refined land suitability analysis along with cities' aspirations-based growth area plans developed in response to requests from Metro. As described in the following discussion on Factor 1 the cities of Washington County developed overall aspirations for future growth, including the general character of expected growth within their existing boundaries (including infill and redevelopment in centers and along primary transportation corridors) as well as the general character of potential new Urban Reserves expected to be added to their service areas over the course of the next 40 - 50 years. The areas identified by the cities were selected based upon a variety of criteria including but not limited to:

- Visioning exercises designed to elicit long-term growth expectations
- Long-term land needs estimates included in local Goal 9 based Economic Opportunities Analysis

- o Geographic limitations of surrounding land areas (floodplains, wetlands, steep slopes, etc.)
- Logical service area boundaries based upon: terrain, location of existing infrastructure, relative costs of service extensions, service areas of neighboring cities and/or special service district, etc.

Combined, these approaches assure that lands selected for potential designation as Urban Reserves conform to the Factors of OAR 660-027-0050.

Of the 171,000 acres, 107,000 acres were selected for further analysis as candidate urban reserves. Additional analysis was done to evaluate the suitability of lands for urban reserves designation. This analysis continued to rely upon the Factors described in OAR 660-027-0050. Provided below is a discussion of the analysis tied to each of the Factors.

# Factor 1 – Can the land be developed at urban densities that make efficient use of existing and future infrastructure?

To support a reasonable level of region-wide consistency in the application of this first Urban Reserve Factor, Metro and the three counties worked with service providers throughout the region to analyze and report relative levels of difficulty and/or cost to providing primary infrastructure. Results from three key areas (Sewer, Water, and Transportation) were published as a series of sub-regional maps and accompanying brief methodology reports. Maps 11, 12 and 13 (Appendix 1) show the results of the water, sewer and transportation analysis.

In order to integrate the resulting regional infrastructure analysis into the developing recommendations for candidate Urban Reserve areas, the cities were asked to review the products of the regional infrastructure analysis as an element of the "Pre-qualified Concept Planning" work they were undertaking for each of their respective "aspirational areas of interest". The actual application of these regional infrastructure analysis products varied from city to city and most chose to look at local infrastructure at a much higher level of detail than available in the regional analysis. The application of this regional analysis is included in the Pre-qualified Concept Plans materials submitted by the cities as included in Appendix 2.

#### City Aspiration Areas

In October of 2008, Metro began a discussion of future growth "aspirations" with cities throughout the region. This discussion was targeted on fulfilling the intent of the Region 2040 Growth Concept and included a focus on enhancing growth within major centers and along major transportation corridors. Aspirations focus on the desired future characteristics of urban design in each city. The main urban design characteristics include building heights (low-rise, mid-rise, high-rise), activity hours (8, 12, 18 hrs. /day) housing densities and accessibility (walk, bike, transit...etc). It is expected that the relative change from existing plans expressed through these aspirations will generally give rise to estimates of increased growth capacity in most, if not all cities.

Included in the cities' expressions of their aspirations was recognition of the long-term need for additional land. In Washington County, the city's aspirations included areas of interest outside of their existing boundaries. Generally, these areas include lands which could reasonably fulfill the long-term need to accommodate expected/forecasted growth and meet the standards outlined in the "Factors for Designation of Lands as Urban Reserves" (in the "Key to Report" section.)

The aspirational areas of interest for cities in Washington County initially totaled approximately 47,000 acres. This acreage was compared with the Land Needs Estimates (see discussion under Factor

2) developed from the long-term regional population and employment forecast. This comparison demonstrated that the areas of interest supported by the cities could reasonably fulfill the requirement of OAR 660-027-0040 (2). These initial aspirational areas of interest are depicted on Appendix 1: Map 8.

Following the initial mapping of the lands depicted on Map 8 as "potential areas of interest", the cities began a more detailed technical analysis and review of these areas to determine overall serviceability, appropriate land uses, developable vs. un-developable land areas, environmentally sensitive lands, and potential number of housing units and jobs that could be accommodated in each area. This analysis was called "Pre-qualified Concept Planning" and is further described below.

#### Pre-qualifying Concept Plans Typology Introduction

Pre-qualifying Concept Planning was a vital component of Washington County's approach to identifying urban reserve areas. The approach to Pre-qualifying Concept Planning connects directly with three important planning concepts/considerations:

- o The Urban Reserve Factors of OAR 660-027-0050
- The Metro Region 2040 plan typology and related plan approach (focusing on local growth aspirations)
- The Washington County Urbanization Forum<sup>3</sup> being conducted by the cities of Washington County, the service districts of Washington County and the County itself.

The overall approach of Pre-qualifying Concept Planning was to prepare a plan map (a general example of these maps is shown here and plan text (depicting the planning intentions) for each Urban Reserve Candidate Area. The overall intent was to apply the OAR 660-027-0050 Urban Reserve planning factors. The level of plan detail was akin to the detail of the Metro 2040 Plan and of Concept Plans called for in Title 11 of Metro's Urban Growth Management Functional Plan (UGMFP). It was proposed that the Metro Plan typology be employed with several enhancements as further described below.

#### Typology

The application of the typology was in the form of a plan map and plan text setting the planning concepts firmly in the context of the planning work to prepare Pre-qualifying Concept Plans. The planning work would be led by the appropriate city, with assistance from Washington County if required.



<sup>&</sup>lt;sup>3</sup> The Urbanization Forum is a concurrent but separate planning effort regarding service and infrastructure delivery to future Urban Growth Boundary inclusions in Washington County. The Forum is a group of elected and appointed officials representing the County, cities and special service districts in Washington County. See www.urbanizationforum.com Washington County Reserves Coordinating Committee Recommendation – Urban and Rural Reserves Page 12

This approach was consistent with the Urbanization Forum's exploration of a policy which would provide governance and urbanizing land use authority by a city for all future UGB additions. The Washington County Reserves Coordinating Committee (WCRCC), along with assistance from the Planning Directors of Washington County coordinated the concept planning efforts to ensure consistency within the County. The WCRCC will, in turn, coordinate with the regional Reserves Steering Committee and Core 4.

It was not the intent of Pre-qualifying Concept Planning to be an official, binding land use plan. Rather it was a depiction of a city's ideas of how Candidate Urban Reserve Areas fit with established Centers and Transportation Corridors, city aspirations for future growth, and how lands within the candidate areas would be used to create great communities. Subsequent to final decisions on Urban Reserves, more deliberate planning with extensive citizen involvement will be required.

#### Designating Land Uses

The foundation for the land designations used is the regional 2040 design types. The reason for applying these is that they are a familiar and common nomenclature. Not all of the design types were being recommended for candidate urban reserves and not every reserve would use every one of the suggested types. There were seven design types being recommended. Definitions for the first six are from Section 3.07.130 of Metro's Urban Growth Management Functional Plan. The seventh, Neighborhood Center, was proposed as a means to capture a type that was not adequately addressed in the current 2040 plan.

**Station Community** – Nodes of development centered approximately one-half mile around a light rail or high capacity transit station that feature a high-quality pedestrian environment.

**Town Center** – Local retail and services will be provided in town centers with compact development and transit service.

**Corridor** – Along good quality transit lines, corridors feature a high-quality pedestrian environment, convenient access to transit, and somewhat higher than current densities.

**Employment Area** – Various types of employment and some residential development are encouraged in employment areas with limited commercial uses.

**Industrial Area** – Industrial areas are set aside primarily for industrial activities with limited supporting uses.

**Inner Neighborhood** – Residential areas accessible to jobs and neighborhood businesses with smaller lot sizes are inner neighborhoods.

**Neighborhood Center** – Areas providing localized commercial services to neighborhoods. People who live in Inner Neighborhoods should be able to obtain daily goods and services from centers that are accessible via walking or biking thereby reducing vehicle miles traveled. Such centers can range from 3-5 acres.

Associated with these design types were targets for dwelling units and employment. Because future Urban Growth Boundary expansions will look to areas designated as Urban Reserves and would involve the conversion of land from rural to urban it is not unreasonable to expect higher densities from Urban Reserves than existing urban areas. The recommended densities for these design types are shown in Table 4.

Tahla 1	Recommended	Design	Tyne	Donsitios
Table 4.	Recommended	Design	rype	Densilies

Design Type	Dwelling Units per Acre	Jobs per Acre	Notes	
Station Community Area	20	20	Some areas may be more employment based and others more residential based which may justify different splits between units & jobs.	
Town Center	20	20	Some areas may be more employment based and others more residential based which may justify different splits between units & jobs.	
Corridor	10			
Employment Area	0	40		
Industrial Area	0	19		
Neighborhood Center			Draft definition being developed	
Inner Neighborhood	10	0	50% Single-Family Detached 25% Single-Family Attached 25% Multi-Family	
Residential densities are for net residential acres The housing type splits for inner neighborhoods may change for an area to reflect local aspirations.				

The housing type splits for inner neighborhoods may change for an area to reflect local aspirations. The splits used need to be documented, particularly for the calculation of students to determine school needs.

#### Factor 2 – Does the land have enough development capacity to support a healthy economy?

A variety of methods were used to determine whether Candidate Urban Reserves would contain enough development capacity to form complete communities. Staff utilized population and employment forecast data from Metro to develop a Land Needs Analysis that is discussed in more detail below. In addition, the findings for Factor 2 were supplemented by data presented by the National Association of Industrial and Office Properties (NAIOP), a business group focused on needs of industrial and related uses, as well as a stakeholder in the Reserves process.

#### Land Needs Estimates

A significant component of the Urban Reserves planning process was consideration of the potential demand, based on population and employment forecasts, for how much land should be included in Urban Reserves recommendations. Population and employment projections were important to identify the gap between how much growth can be accommodated inside the current UGB and what, if any, additional land needs should be considered.

OAR 660-027-0040 requires that "Urban Reserves designated under this division be planned to accommodate estimated urban population and employment growth in the Metro area for at least 20 years, and not more than 30 years, beyond the 20-year period for which Metro has demonstrated a buildable land supply in the most recent inventory, determination and analysis performed under ORS 197.296." Effectively, the applicable planning period would run to between 2050 and 2060. Metro is scheduled to make the next UGB expansion decision in 2010.

Metro provided initial 2005 – 2060 population and employment forecasts in May 2008. These forecasts covered the seven-county Portland-Beaverton-Vancouver Primary Metropolitan Statistical Area

(PMSA) in its entirety. No county-specific allocations were provided to assist in determining potential demand within Washington County. In spring of 2009, Metro provided updates of the 20 and 50 year Regional population and employment range forecasts again without specific county allocations.

Members of the WCRCC and the regional Reserves Steering Committee, along with staff, noted many times that a range of demand was relevant to Urban Reserve discussions. Washington County staff decided that developing estimates for inclusion in these discussions was important and therefore developed county-specific growth allocations which were in turn used in developing land needs estimates for consideration and refinement of Candidate Urban Reserves. These allocations were based on Metro's most recent population and employment forecasts issued in April 2009.

Following is a brief summary of the allocations and land needs estimates. (A complete report, including source data tables, assumptions and calculation methodology is included in Appendix 3.)

Four key steps were required in the development of long-term land needs estimates designed to meet the requirements of OAR 660-027. These steps included:

- 1. Determining County shares of forecast population and employment (county level growth allocations)
- 2. Determining the amount of forecast growth that could reasonably be accommodated within the existing Urban Growth Boundary (UGB capacity analysis)
- 3. Determining the amount of growth that could not be accommodated within the existing UGB
- 4. Estimating the amount of land needed to accommodate that growth.

Following is a summary of the growth allocations and related land needs estimates resulting from the analysis developed by Washington County staff:

1. The following table provides the population and employment projections for Washington County based on the county's share of the 7-county Primary Metropolitan Statistical Area (PMSA):

	Population (low)	Population (high)	Jobs (low)	Jobs (high)
2050	899,051	1,105,959	395,676	592,910
2060	989,785	1,238,075	430,062	666,749

Table 5. Washington County's 2050 and 2060 Population and Employment Forecasts

\* The allocations split for 2050 and 2060 address the OAR requirement that Urban Reserves be "…planned to accommodate estimated urban population and employment growth in the Metro area for at least 20 years, and not more than 30 years, beyond the 20-year period for which Metro has demonstrated a buildable land supply in the most recent inventory, determination and analysis…"

2. A growth capacity analysis for Washington County was conducted during the winter of 2008/2009. This analysis was a cooperative effort between and among the county and each of its cities and was based upon Metro's 2007 vacant lands inventory. The results of this analysis show that through a combination of new development, infill, and redevelopment, lands within

the current (2008) UGB in Washington County could accommodate up to an additional 64,844 housing units and 113,477 jobs.

3. The population forecast was utilized as the basis for determining future housing demand (see Appendix 3 for a description of the housing unit demand estimates). Based upon the growth forecast allocations and capacity estimates noted above, by the years 2050 and 2060, Washington County will have a shortfall in capacity for housing units and jobs as shown in the table below:

	Housing Units (low)	Housing Units (high)	Jobs (low)	Jobs (high)
2050	96,500	182,600	Up to 191,400	
2060	134,300	237,500	28,600	265,300

Table 6. Projected Capacity Shortfall of Housing Units and Jobs in 2050 and 2060

 Assumptions related to typical land efficiencies and average job and housing densities are outlined in Appendix 4. These assumptions are combined with the deficits indicated under item 3 above to determine the amount of land that would need to be designated as Urban Reserves in Washington County in order to meet the requirements of OAR 660-027-0040 (2).

Following completion of the four analysis steps above it was determined that the total estimated Urban Reserve land needed to accommodate projected growth in Washington County range between 17,734 and 50,411 acres by the year 2050 and between 27,722 and 66,934 acres by the year 2060. For general reference, the mid-points of these two ranges produces an estimated land needs range for the year 2055 of between 22,728 and 58,673 acres.

#### Business group / NAIOP input

The National Association of Industrial and Office Properties (NAIOP) is a Commercial Real Estate Development Association and a stakeholder in the Urban and Rural Reserves process. This organization is also a member of the regional Reserves Steering Committee (RSC) and has been directly involved in the reserves planning process. NAIOP invested in research designed to assist the region in determining lands that would be suitable for future industrial and related employment uses (Appendix 1: Map 7.) Together with a coalition of other business interests, they requested the inclusion of areas not constrained by steep slopes, floodplain, or wetlands into the candidate Urban Reserves.

Staff incorporated the recommended attributes into the technical analysis as another GIS data layer. The resulting boundaries were drawn in a manner designed to avoid the potential creation of small Urban Reserve islands. An additional 1,000 foot buffer was then added to this new boundary to avoid or minimize impacts to adjacent rural land uses. Appendix 1: Map 7 – "Development Constraints Regarding Industrial and Employment Lands" shows the results of the NAIOP supported research in the regional study area. The lands identified on this map as priority areas for candidate Urban Reserves were included in the county's technical analysis.

#### Factor 3 – Can water, sewer, schools, parks and other urban-level systems be provided efficiently?

Metro and the three counties worked with service providers throughout the region to analyze and report relative levels of difficulty and/or cost to providing primary infrastructure. Results from the sewer, water, and transportation analysis were published as a series of sub-regional maps and accompanying

brief methodology reports. Maps 11, 12 and 13 a - c (Appendix 1) show the results of these three analyses. Additional information regarding the provision of water, sewer, schools, parks and other urban services was provided in the individual Pre-Qualified Concept Plans prepared by cities and included in Appendix 2 to this report.

Generally, following the removal of land for designated open space (see the discussion for Factor 5), the developable portion of the plan area was further reduced for public infrastructure, principally streets, schools and parks. From the planning of recent urban growth boundary additions, a 20% deduction for rights-of-way was recommended and typically applied. An additional 5% may have been removed for small-scale neighborhood commercial and non-park and school institutional uses. Using the acreages for design types (less the 25% for streets and other uses) and the estimated yields for residential units and jobs in Table 5, the initial number of units and jobs was determined. The number of dwelling units by housing type was typically used to determine school needs. Presuming an average of 2.5 people per dwelling unit allowed the estimation of potential population for the area. This number was then used to determine park needs.

It was recommended that existing school standards be used to estimate the number of students by school type that would result from development and how many of each school type would be needed along with the number of acres to build those schools. The information in Table 7 is an example from the Beaverton School District; the standards of the applicable school district were typically used.

Туре	Students per Household Type	Students per	Students per
Туре	Students per riodsenoid Type	School	Dwelling Unit*
Elementary School	0.31 Single-Family Detached		
-	0.10 Single-Family Attached	600	0.205
	0.10 Multi-Family		
Middle School	0.13 Single-Family Detached		
	0.05 Single-Family Attached	1,000	0.0875
	0.04 Multi-Family		
High School	0.13 Single-Family Detached		
_	0.08 Single-Family Attached	2,000	0.0975
	0.05 Multi-Family		

Table 7. Estimated Students by School Type

\* Housing type split of 50% Detached, 25% Attached & 25% Multi-Family

In order to build complete communities, adequate park space was also needed. Existing park requirements varied from jurisdiction to jurisdiction. A starting point was the targets being used for the West Bull Mountain Planning Area that were a hybrid of the standards from the Tualatin Hills Park & Recreation District, City of Tigard and the National Recreation Parks Association, shown in Table8. As with the school standards the applicable local district standards were also considered appropriate.

#### Table 8. Park Facility Standards and Sizing

Park Type	Size	Acres per 1,000 People
Community Park	15 acres & larger	3
Neighborhood Park	1-3 acres	2
Open Space / Linear Parks / Trails	N/A	5

The overall park standard was 10 acres per 1,000 people. If open space did not reach 5 acres per 1,000 people, additional acres were to be assigned to community and neighborhood parks to reach 10 acres.

The needed acres for parks and schools led to an iterative process of taking out the acres from development capacity and recalculating the park and school needs until a balance was reached between students and schools, population and parks.

#### Factor 4 – Can the land accommodate a well-designed system of streets, trails and transit?

Transportation infrastructure was an important and expensive element for preparing an area for urbanlevel development. Consideration was given not only to circulation within the new urban areas, but how people would get to and from these new urban areas. Additionally, it was important to consider the transportation impacts new urban areas would have on existing urban transportation facilities. A suitability analysis related to transportation was performed and the resulting data was captured in Appendix 1: Map 9.

Some of the proposed Urban Reserve areas may be suitable for expansion of the region's high capacity transit system and such opportunities were identified as part of Pre-qualifying Concept Planning.. The spacing of facilities was structured as an attempt to meet the goals identified in the regional road concept; arterials spaced approximately one-mile apart with collectors midway in-between. Additionally, proposed trail alignments were shown in the individual cities' concept plans. Testing for transportation system needs and off-site impacts was important to assist with understanding the nature of transportation needs the new urban areas may eventually have. The testing and resulting costs should not have been seen as a constraint to urban growth area expansion. Rather this type of testing was designed to inform the planning process by reviewing the size and scope of necessary off-site improvements.

Factor 5 – *Can the area be designed to preserve and enhance natural ecological systems?* After applying the design types the next step was to determine the capacity for dwelling units and employment that would be generated from the pre-qualifying concept plans. Natural areas requiring protection or that would not be available for development were typically identified and their designation changed to "Open Space" on the plan. These areas were comprised of:

- o 100-year Floodplain
- Steep Slopes (over 20%)
- o Power Line easements
- o Classes I, II, III, A & B of Metro's Goal 5 Inventory where it exists
- o 50' buffers of known streams and wetlands and 125' buffers along the Tualatin River
- o Areas on Metro's Natural Landscape Features map

#### Factor 6 – Is there enough land to accommodate a range of housing types?

The calculations to determine needed land for housing units by 2050 and 2060 are provided within the discussion for Factor 2, as well as within Appendix 3. The land needs estimates indicated the number of acres necessary to accommodate housing units projected to be needed by the year 2060. In addition, individual Pre-Qualified Concept Plans prepared by each city indicate the range of housing types that may be accommodated within given Reserve areas.

Factor 7 – Can the area be developed while preserving natural landscape features?

This Factor was addressed through the development of Pre-Qualified Concept Plans by the county and the applicable cities. Site-specific strategies for preserving natural landscape features can be found in the Concept Plans located in Appendix 2 to this staff report.

# Factor 8 – Can the area be designed to minimize conflicts with farms, forests and important natural features on nearby land, including adjacent Rural Reserves?

This Factor was addressed through the development of Pre-Qualified Concept Plans by the county and the applicable cities. Farmland is a highly valued resource in Washington County; many of the Urban Reserve study areas were in part defined by Natural Landscape Features such as streams, floodplains and wetlands which would provide natural buffers from nearby agricultural lands. Site-specific strategies for preserving natural landscape features can be found in the Concept Plans in Appendix 2.

#### **Candidate Area Adjustments**

Beginning with Washington County's share of the regional Reserve Study Area (Appendix 1: Map 1) approved by the regional Reserves Steering Committee in September 2008, Washington County, in cooperation with County cities, has progressively analyzed lands for overall conformance with the Urban Reserve Factors outlined in OAR 660-027-0050 (*provided in the "Key to Report" section*.) Candidate areas were analyzed through a series of screens as described early in this report. The first screen was identifying the area presumed to contain all lands within the entire Metro region that include potential Urban or Rural Reserves – the result was the Reserves Study Area.

County staff, in cooperation with the Project Advisory Committee, the WCRCC, stakeholders and partnering jurisdictions embarked on refining the Study Area by analyzing it with finer screens (increasing levels of detail for each screen/refinement step.) Following is a synopsis of the Urban Reserves analysis (it must be noted that a parallel analysis was occurring for Rural Reserves and the concurrent analysis informed every discussion.)

For potential Urban Reserves, the next screen was to identify which lands within the Study Area were suitable for urbanization. The processes discussed above, urban suitability analysis (Appendix 1: Map 2), the cities' areas of interest (Appendix 1: Map 8) and the business community's (NAIOP) evaluations (Appendix 1: Map 7) were applied as a series of data layers over the Study Area. In addition to these considerations, staff included a 1,000 foot buffer between these refined Candidate Urban Reserve areas and surrounding rural areas to reduce potential conflicts (Urban Reserve Factor 8.) This analysis resulted in the first level of Candidate Urban Reserves (Appendix 1: Map 10) and included approximately 107,000 acres.

The next level of analysis, or screen, included the Land Needs Analysis (Appendix 3), discussed previously that provided a population and employment range. Combined with the detailed analysis of remaining growth capacity within Washington County's 2007 UGB, a clearer understanding was gained of how much additional land might be needed for future expansion. Based on this information the WCRCC agreed to a reduction in the Candidate Urban Reserves to approximately 47,000 acres (Appendix 1: Map 14) in June 2009.

Beginning in June the cities within Washington County began developing their Pre-qualified Concept Plans to assess how Urban Reserves, if brought into the UGB, would complete each of their respective communities. This planning effort provided opportunity for the cities to review their areas of interest and affirm if the identified areas were appropriate. The results of these efforts further refined the Candidate Urban Reserves to approximately 39,000 acres.

#### Rural Cities:

The cities of Banks and North Plains are rural cities located in Washington County outside of the Portland Metro jurisdictional boundary, yet they fall within the Urban and Rural Reserves Study Area. For purposes of the Urban and Rural Reserves planning effort there are three important points related to these cities:

- 1. They would potentially be affected by the designation of Rural Reserves in proximity to their Urban Growth Boundaries and therefore required careful coordination as priorities for Rural Reserves were developed.
- 2. They have their own Urban Growth Boundaries independent of the Portland Metro UGB, and are responsible for managing those boundaries in a manner that adequately addresses local needs.
- 3. They are not subject to the standards of OAR 660-027 and have therefore not developed detailed Pre-qualified concept plans. They have however, provided important background information relating to the characteristics of their communities and their respective plans for accommodating future growth. This information has been included in Appendix 2 to this report.

A final reduction to the approximately 33,800 acre Urban Reserve Recommendation (Appendix 1: Maps 34 & 36) was to subtract the approximately 5,100 acres located within of the Cities of Banks and North Plains areas of interest. Both cities aspirations and potential to absorb growth were important to Washington County's long-term planning efforts and both cities participated fully in the Urban and Rural Reserves designation process.

Additional refinements to the Urban Reserves recommendations occurred as the City of Sherwood and the City of Tigard clarified their considerations of areas previously under review. The City of Sherwood recommended an area to the north for urban reserves (the acreage was previously included in the total Staff Report recommendation.) The City of Tigard recommended areas to the west of Bull Mountain as urban reserves (of which the county had already included approximately 250 acres of EFU land adjacent to the West Bull Mountain Community Planning area.) The third refinement was the removal from urban reserves of approximately 150 acres of land between the City of North Plains and the City of Hillsboro to be left undesignated and act as a buffer between the two cities. A final 200 acre increase adjustment was made resulting from a re-mapping of the cities areas of interest.

The Washington County Reserves Coordinating Committee recommended the resulting approximately 34,300 acres as Urban Reserves for Washington County.

#### **Candidate Rural Reserves Development**

#### Introduction

In September 2008 the Metro regional Reserves Steering Committee (RSC) concurred on an Urban and Rural Reserves Study Area including approximately 171,000 acres within Washington County (Appendix 1: Map 1). This approximately five-mile band around the existing Urban Growth Boundary was considered to contain lands that could potentially be designated as urban or rural reserves. For potential Rural Reserves, Washington County must consider designating farmland, forest land and important landscape features for long-term protection. Staff began applying the Rural Reserve Factors to determine if any of the lands within the Study Area could be removed from consideration.
In February, 2009, staff provided a report to the Washington County Reserves Coordinating Committee (WCRCC) suggesting that initial analysis indicated all lands within the Study Area remain candidates for potential Rural Reserves and that additional analysis would be necessary for further refinement. The WCRCC concurred and staff provided that information to the RSC in March. Staff began more detailed evaluations with the results provided in this staff report.

## **Analysis Overview**

The basis for Rural Reserves analysis began with three inventories: the Oregon Department of Agriculture's (ODA) Agricultural Land (Appendix 1: Map 3), the Oregon Department of Forestry's (ODF) Wildland Forest (Appendix 1: Map 4), and Metro's Natural Landscape Features Inventory (Appendix 1: Map 5). The inventories provided a broad basis for analysis and the first "screen" for considering the Study Area. Throughout the analysis staff continued to refine the tools required for more specific determinations assuming that the more characteristics that could be identified, the more informed the discussion would be regarding reserves suitability.

Staff applied the Rural Reserve Factors (*"Key to Report"*) separately to farmland, forest land and natural landscape features by identifying additional characteristics (beyond the inventories) for each Factor. Staff used those characteristics to define the suitability for reserve designation. Those evaluations follow.

To provide clarity as to which of the three base inventories are being discussed the individual descriptions are indicated as follows:

- RF indicating Rural Farmland Reserves evaluations
- RFL indicating Rural Forest Land Reserves evaluations
- o RNF indicating Rural Natural Landscape Features Reserves evaluations

## **Farmland Analysis**

The following describes the considerations and application of factors used for farmland analysis in Washington County.

# Farmland

The ODA Agricultural Lands Inventory divides land into three categories; Foundation, Important, and Conflicted. The inventory map (Appendix 1: Map 4) shows that virtually all of the five-mile study area is designated Foundation or Important Agricultural Land. Since the majority of the existing UGB abuts Foundation Agricultural Land, it is much more likely to be impacted by potential Urban Reserves than forest land. Staff believes that there will be serious consideration of adoption of Urban Reserves on the valley floor near existing cities and therefore it is necessary to provide additional specific details about farmland beyond the ODA Agricultural Lands Inventory.

Rural Reserve Factors - 660-027-0060 Section 2

Factor 2a - Are situated in an area that is otherwise potentially subject to urbanization during the applicable period described in OAR 660-027-0040(2) or (3) as indicated by proximity to a UGB or proximity to properties with fair market values that significantly exceed agricultural values for farmland, or forestry values for forest land;

## Proximity to a UGB

To apply this factor, we initially proposed to score "proximity to a UGB" on a scale of 1 to 9 (Appendix 1: Map 6) and subsequently refined this analysis to a scale of 1 to 4, which reflected areas

least subject to urbanization to those most subject to urbanization. Based on additional review, staff proposed using only three classes of land (Appendix 1: Map 16) - land that is rated as high subject to urbanization (HU), medium subject to urbanization (MU), and low subject to urbanization (LU). The city areas of interest are rated HU. The area previously identified as potential urban candidate areas, approximately 106, 000 acres, (Appendix 1: Map 10) is rated MU. The remainder of the five-mile reserve study area is rated LU.

This takes into account that land being studied for Potential Candidate Urban Reserve Areas is subject to urbanization and should also be considered for Rural Reserves designation. The land nearest the UGB is rated as high for subject to urbanization. Land that is rated as medium is generally further away from the UGB. Land that is rated as low is usually furthest from the UGB. New information such as population and employment forecasts will add to future refinements.

# Fair Market Value

Staff compiled more than a dozen analysis variations to address this factor. Because adequate data necessary to explore fair market value was not readily available, staff utilized real market values (RMV) for individual parcels as recorded in Washington County's Department of Assessment and Taxation(A&T). Study areas included land in intervals of one to nine miles from the existing Urban Growth Boundary. Based on the results, elevated RMVs occurred within the one, six and eight mile intervals of the UGB (Appendix 1: Map 16). Successive iterations included:

- Utilizing only natural resource lands' zoning designations (Exclusive Forest and Conservation EFC; Exclusive Farm Use EFU; and Agriculture and Forestry, 80-acre minimum lot size AF-20) beginning with a .5 acre minimum lot size and expanding to a 10 acre minimum lot size.
- Removing non-natural resource use lands, for example golf courses.
- Adding updated A&T data.
- Changing the data to only lands in farm and forest deferral (zoned farmland, un-zoned farmland, and forestland) with attention to calculating the RMV per acre values from the portion of the tax lot in deferral.
- Comparing RMV's in quarter-mile increments from the Urban Growth Boundary for lots of similar size (0-10 acres, 10-20, 20-40, 40-80, 80-120 and greater than 120 acres.) For example, this provided comparable average costs for 10-20 acre plots beginning at one-quarter up to 3 miles from the UGB.
- Applying a GIS interpolation method (Kriging) as an additional aid in viewing the data.

Map 17 (Appendix 1) illustrates the ¼ mile increments out to three miles with various parcel sizes. The three charts included in the map illustrate the lack of a correlation between parcels in close proximity to the urban growth boundary and property value. Based on results from the above iterations, planning staff determined that the notion of "Fair Market Value" independent of other indicators does not provide a conclusive indication of land areas that may be "subject to urbanization".

# Factor 2b - Are capable of sustaining long-term agricultural operations for agricultural land, or are capable of sustaining long-term forestry operations for forest land;

After examining various methods for analyzing farmland, water availability appears to be a significant factor in preservation of farmland over the long-term. Given projected growth rates for the region and existing limitations to available water resources, the likelihood that water availability is going to become more intensively managed in the future is high. When considering between two areas for designation as a Rural Reserve, preference was therefore given to irrigated farmland over non-irrigated

farmland. Irrigated soils are more productive than non-irrigated soils (see discussion under "Agricultural Productivity Ratings for Soils") and can grow more diverse crops. The Willamette Valley typically gets most of its rain in the winter (50% of the annual total occurs from December through February) with less in the spring and fall, and dry summers (*The Climate of Oregon*, George H. Taylor and Chris Hannan, 1999). Staff believes that water availability will be a significant limiting factor for agriculture over the 40-50 year planning horizon for the reserves process and will be key to sustaining long-term agricultural operations.

Approximately 82,100 acres of farmland are in the Tualatin Valley Irrigation District (TVID). The water is allocated by Bureau of Reclamation as part of the Tualatin Project. The principal features of the Tualatin Project include Scoggins Dam, Henry Hagg Lake, Patton Valley Pumping Plant, Spring Hill Pumping Plant, and more than 120 miles of a piped distribution system. The area of land that can be irrigated varies year to year. For example, in 2001 (a drought year), the Bureau of Reclamation allocated only 12,832 acre feet of water to TVID.

Staff mapped the boundaries of the Water District as well as existing water rights based on "place of use" (Appendix 1: Map 18) using Oregon Water Resources Department (OWRD) data. Rural Reserves should protect irrigated farmland where possible.

Factor 2c - Have suitable soils where needed to sustain long-term agricultural or forestry operations and, for agricultural land, have available water where needed to sustain long-term agricultural operations;

After examining various methods for analyzing farmland, water availability appears to be a significant feature. If there are Urban Reserves, staff believes irrigated farmland should be considered for protection where possible. (No data is currently available for several attributes that could assist farmland analysis such as leased or rented farmland that could be used to determine farm sizes and types. Therefore in addition to Factor 2a, staff focused much effort on Factor 2c.)

Staff considered four approaches when identifying characteristics for agricultural lands analysis:

- ODA Agricultural Lands Inventory (Appendix 1: Map 3)
- o Soil-capability classifications (Appendix 1: Map 19)
- Agricultural productivity ratings for soils (Appendix 1: Map 20)
- High-value farmland (Appendix 1: Map 21)

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# ODA Agricultural Lands Inventory

This rating system is described above under "Farmland" and is used as the basis for farm evaluation. All the following characteristics build upon the base information.

## Soil-Capability Classification

This system was developed in the 1930s and has been used by to defined soil types in the state since 1973 when Goal 3 (*Agricultural Lands*) was adopted. The *Soil Survey of Washington County, Oregon* was published in 1982 by the Soil Conservation Service (SCS-now National Resource Conservation Service or NRCS). The digital copy of the soil maps was produced in 1991. Seven of the eight soil classifications are found in Washington County (see Appendix 1: Map 19 for soil classifications within the Study Area). Although this system continues to be widely used, there are several inherent challenges and discrepancies:

- Agriculture Handbook No. 210 notes that new technology applies unevenly to soils and that soil conditions can change over time (e.g. some soils that were once considered poor for crop production are now some of the best.)
- The originators of the system realized that land conditions were not permanent and any number of changes in the land such as accelerated erosion or supplies of irrigation water would call for reclassification of the area. Staff is unaware of any systematic examination or change to the soil classifications in Washington County that reflects an update to the original soil mapping.
- There is subjectivity in the assignment of certain soil types to a class due to issues of overlap. For example, the slope range, which often divides classes, can be 7 to 12% for a Class II soil and the range for Class III can be 12 to 20%. The edge of class distinctions are therefore difficult to assess. (LiDAR mapping could be used to reexamine slopes but is currently not available for all areas)
- Classes I IV within the valley are intermingled, making it difficult to distinguish areas that may be most suitable (i.e. Classes I or II) or somewhat less suitable (i.e. classes III or IV) for agriculture. Mapping agricultural land in Washington County based on NRCS Soil Capability Classes results in all agricultural land on the valley floor looking the same.

## High-Value Farmland

This system for defining agricultural land was adopted by the Oregon Land Conservation and Development Commission (LCDC) in 1993. It too is based on the SCS classification system, but it provides only two types agricultural land: High-Value and Other. For Washington County, High-Value Farmland is mainly Class I – IV (Appendix 1: Map 21.) With only two categories of agricultural land, the system is not a useful analysis tool for refining the reserve work - the valley floor is primarily all High-Value Farmland.

## Agricultural Productivity Ratings for Soils

This rating system<sup>4</sup> was developed by J. Herbert Huddleston, an OSU Extension Service Soil Specialist. This system divides soils into three categories: Native Productivity, Maximum Productivity for Dryland farming, and Irrigated farming. This rating system is based on actual yields for indicator crops and provides a ratings-based system for dryland and irrigated maximum crop productivity. One of the intended uses of the report is to help planners "make difficult decisions when choosing among competing uses for agricultural land."<sup>5</sup> It also highlights the importance of water (Appendix 1: Map 20).

Staff considered this rating system useful because:

- It highlights the importance of irrigation. The maximum Native Productivity is 75, the maximum Dryland Productivity is 80 and the maximum Irrigated Productivity is 100 - there is only a 5% difference between Native Productivity and Dryland but there is a 20% difference between Dryland Productivity and Irrigated Productivity.
- This system provides a classification system with 100 levels of distinction. It provides one additional method for analysis refinement.

Staff believes that in the future water availability will be a significant limiting factor. Land inside TVID and land with agricultural water rights based on "place of use" (OWRD data), were mapped and

<sup>&</sup>lt;sup>4</sup> Agricultural Productivity Ratings for Soils of the Willamette Valley, Huddleston, J. H. 1982. Oregon State University Extension Service - Circular 1105.

<sup>&</sup>lt;sup>5</sup> Huddleston, p. 3.

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given Irrigated Productivity values with all other farmland given Dryland Productivity values. These maps were used to identify the most productive farmland.

Factor 2d - Are suitable to sustain long-term agricultural or forestry operations, taking into account:

(A) for farm land, the existence of a large block of agricultural or other resource land with a concentration or cluster of farm operations, or, for forest land, the existence of a large block of forested land with a concentration or cluster of managed woodlots;

(B) The adjacent land use pattern, including its location in relation to adjacent non-farm uses or non-forest uses, and the existence of buffers between agricultural or forest operations and non-farm or non-forest uses;

(C) The agricultural or forest land use pattern, including parcelization, tenure and ownership patterns; and

(D) The sufficiency of agricultural or forestry infrastructure in the area, whichever is applicable.

Data is currently not available for several attributes that could assist farmland analysis, such as information on leased or rented farmland that could be used to determine types and sizes of farm operations. The only information that can be easily analyzed is ownership and parcel sizes. As an initial "test run" effort, Staff first studied approximately 44,000 acres north of the Cities of Cornelius, Forest Grove and Hillsboro for parcelization and ownership patterns.

Tax lots were ranked by size into seven ranges and color coded to determine parcelization patterns (Appendix 1: Map 22). A similar process was used to rank ownership. However, the ownership analysis was time consuming since the data had to be cleaned up - slight differences in data entry of names resulted in tax lots being labeled as different owners (e.g. one include middle initial and another tax lot only includes first and last name).

The ownership ranking map (Appendix 1: Map 23) looked similar to the parcel ranking map - large ownership patterns seemed similar to large parcel patterns. Inasmuch as the County has no information about leased or rented farmland that can be used to determine actual farm operation sizes and that location of farms and ownerships change over time, staff determined that tax lot sizes are the best available data for mapping parcelization blocking patterns. With the current minimum lot size restrictions of 80-acres in the exclusive farm use zones (EFU & AF-20), staff believes that parcel sizes are less subject to change than ownership data and thus more useful for predicting future agricultural land-use patterns. Staff is aware that crops and agricultural practices vary over time, but ultimately parcel sizes and shapes are more static.

The initial parcelization study area was then expanded to include approximately 95,000 acres of the reserves study area (56 percent). Only the areas nearest the UGB were studied due to the labor intensive nature of this analysis. The parcelization data covers most of the valley floor though some areas, such as southwest of the Tualatin River, were not studied. The study area is essentially a ring around the existing UGB. An overall map (Appendix 1: Map 26) was made that ranked tax lots in the area into seven ranges to determine patterns.

As noted above, TVID boundaries and water right data were mapped to help define agricultural infrastructure. Staff continued to analyze other infrastructure such as agricultural product processors and access to farm markets.

## Potential candidate Rural Reserve Areas for Farmland and Sub-Area Types

For the farmland analysis, the entire reserve study area was divided into 41 sub-areas. The purpose of creating sub-areas throughout the reserve candidate area was to account for area differences based on the following four categories:

- 1. The degree to which the sub-area was subject to urbanization
- 2. The productivity rating of the area
- 3. The degree to which the area has multiple parcels
- 4. The physical features of each area.

Residential dwelling density was an additional consideration in those sub-areas that had clustered housing. Finally, all sub-areas were assigned into one of four tiers based on their suitability as a rural reserve. Tier rankings and categories are discussed below and summarized in Table 7. *Urbanization* 

Sub-areas were broadly defined as high subject to urbanization (HU), medium subject to urbanization (MU), and low subject to urbanization (LU). City areas of interest were rated HU. The area previously identified as potential urban candidate areas (approximately 106,000 acres) were rated MU. The remainder of the 5 mile reserve study area was rated LU.

## Productivity Rating

All parcels throughout the study area were assessed for agricultural productivity based on the availability of water. This method of determining productivity is based on Huddleston's 1982 soil productivity study as discussed above. As shown in this report, irrigation increases the productivity rating of most soils, including significant increases in the productivity rating of moderately rated soils. Soils that were in the TVID or had an existing water right were given the Irrigated productivity rating. Remaining soils were given the Dryland productivity rating. GIS data layers were then mapped to reveal those areas where maximum productivity was attainable. Sub-areas were rated higher for productivity if a majority of the parcels were at or above 90 on the productivity rating scale. Parcels were rated lowest for agricultural productivity if they had no access to water for agriculture.

# Parcelization

Parcelization of a sub-area was used in the analysis given Staff's belief that commercial agricultural production is more easily facilitated in areas where parcel size is large enough to viably farm, given economies of scale and the input cost of agricultural infrastructure such as drainage tile, machinery, etc. Additionally, the degree of parcelization tends to correlate with residential dwelling density. Conflicts (as noted below) between agricultural and non-agricultural users can increase as a result. Areas of high parcelization were therefore rated comparatively low for rural reserve designation. Sub-areas boundaries were in part shaped by the degree of parcelization. Staff considered a sub-area to be parcelized if a majority of tax lots in the areas were generally 35 acres or less.

# Rural Residential Dwelling Density

Sub-areas that have residential clusters are listed in the table as High Dwellings (HD). High dwelling unit density is considered more likely to be a negative factor to agricultural uses given the potential for residential complaints related to typical agricultural practices such as spraying, machinery hours of operation and noise, increased dust levels from tillage, etc. Conversely, residential uses can potentially impact farm operations through increased traffic congestion on rural roads, trespass and/or vandalism, or livestock disturbance from household pets.

After determining from Assessment and Taxation information which tax lots had dwellings, aerial and oblique photos were used to physically locate dwellings on tax lots (Appendix 1: Map 25). A point pattern was then used to map dwelling density in order to determine density clusters throughout the study area. Point patterns were then illustrated within each of the sub-areas (Appendix 1: Map 26).

# Physical Features

Sub-areas that have physical features that help define boundaries are labeled PF. Both natural and manmade physical features were considered when delineating sub-area boundaries. The most common physical features are flood plains, golf courses (of which there are eight in the study area), and roads. Golf courses, depending on size and location, can demarcate one area from another. Flood plains also form buffers between areas. Finally, roads tended to form more consistent linear boundaries compared to features such as property lines.

# Sub-area and Tier delineation

Sub-area boundaries were determined first by the subject to urbanization boundaries. These broad areas were then divided into smaller areas based on parcelization patterns and productivity ratings. Sub-areas were further refined based on physical features (roads, floodplains, golf courses). Finally, additional adjustments were made based on dwelling densities. For larger sub-areas, dwelling density was not factored into the analysis if there was no discernable density pattern.

Sub-areas were divided into four tiers based on an analysis of how the above components (subject to urbanization, parcelization, productivity, and dwelling density) interrelate. Tier 1 indicates that candidate areas are most suitable for rural reserves, followed by Tier 2, Tier 3, and Tier 4 areas. Some features are positive (e.g. high productivity) while others are considered negative (e.g. areas that are highly parcelized). All tier 1 sub-areas had high productivity ratings given the importance of land productivity to the agricultural component of rural reserve designation. Dwelling density was generally lowest in Tier 1 areas given the negative externalities discussed above. Typically, Tier 1 areas had a high subject to urbanization rating and had larger parcels, though variability existed in the latter case as some Tier 1 areas had parcels that were intermediate in size between high and low. Tier specifications are noted as follows. Table 9 below provides a brief discussion of each sub-area.

Tier 1 areas are rated as high productivity and either high of medium subject-to-urbanization. Except for two sub-areas (17 and 3), the majority of all other Tier 1 areas are composed of bigger parcels. Tier 1 areas also have lower dwelling densities. Sub-areas 17 and 3 have somewhat smaller average parcel sizes than the other Tier 1 sub-areas but were not <u>rated</u> as having small parcels. Sub-areas that have high productivity ratings but are rated as having small parcels or high dwelling densities were not included in Tier 1.

Tier 2 areas are sub-areas that have lower productivity ratings and either high or medium subject-tourbanization. Tier 2 are also sub-areas that would have been rated as Tier 1 but have negative attributes, such as higher dwelling densities or smaller parcel sizes, that reduced the tier rating.

Tier 3 areas distinguished from Tier 1 and 2 areas by higher dwelling densities. They are also all rated as having smaller parcel sizes. The only exception is Sub-area 8, which has a high productivity rating, bigger parcels and lower dwelling densities. This data is misleading, however, given that 50% of the sub-area is Pumpkin Ridge Golf Course. Golf Courses are non-farm uses; since Pumpkin Ridge Golf Course is the dominate feature of the sub-area, the area was rated was Tier 3.

Tier 4 areas are all either rated as conflicted by ODA or have a low subject-to-urbanization rating. Subarea 33 is an exception; it is surrounded by the UGB (includes two areas).

## Potential candidate Rural Reserves for farmland

- **<u>RF</u>1** Farmland that should be considered for protection due to high productivity (HP) and either high or medium subject-to-urbanization value (HU or MU).
- **RF 2** Farmland that is either less productive (LP) but a high or medium subject-tourbanization value (HU or MU) and bigger parcels (BP) or has a high productivity (HP) but smaller parcels (SP) or higher dwelling density (HD).
- **RF 3** Farmland that could qualify as Tier 1 or 2 but is rated lower because of higher dwelling density or has a significant physical feature that dominates the area and reduces its farm value.
- **RF 4** Farmland that has the lowest subject-to-urbanization values (LU) or conflicted on the ODA map or surrounded by UGB.

Table 9 Farm land tiers

Tier 1

Sub-area Number	Tier	Sub-area Factors Urbanization	Productivity	Parcelization	Physical Feature	Dwelling Density	Evaluation Notes
3	1	HU	HP		PF		Higher Urbanization, Higher Productivity Rating, Physical Features help define the area
5	1	HU	ΗP	SP	PF		High Urbanization, Higher Productivity Rating, Smaller Parcels, Physical Features help define the area
7	1	HU	ΗP	BP			High Urbanization, Higher Productivity Rating, Bigger Parcels
11	1	HU	ΗP	BP			High Urbanization, Higher Productivity Rating, Bigger Parcels
12	1	MU	HP	BP	PF		Medium Urbanization, Higher Productivity Rating, Bigger Parcels, Physical Features help define the area
17	1	HU	HP		PF		High Urbanization, Higher Productivity Rating, Physical Features help define the area
19	1	HU	HP	BP	PF		Higher Urbanization, Higher Productivity Rating, Bigger Parcels, Physical Features help define the area
22	1	HU	HP	BP	PF		High Urbanization, Higher Productivity Rating, Bigger Parcels, Physical Features help define the area
25	1	MU	HP	BP	PF		Medium Urbanization, Higher Productivity Rating, Bigger Parcels, Physical Features help define the area
29	1	HU	HP	BP	PF		High Urbanization, Higher Productivity Rating, Bigger Parcels Physical Features help define the area

Tier 2

9	2	MU	LP	BP	PF	Medium Urbanization, Lower Productivity Rating, Bigger Parcels, Physical Features help define the area
13	2	HU	LP	ΒP	PF	High Urbanization, Lower Productivity Rating, Bigger Parcels

18	2	HU	HP		PF	HD	High Urbanization, Higher Productivity Rating, Physical Features help define the area, High Dwelling density,
21	2	HU	HP	BP	PF	HD	High Urbanization, Higher Productivity Rating, Bigger Parcels, Physical Features help define the area, High Dwelling density
32	2	MU	LP	BP	PF		Medium Urbanization, Lower Productivity Rating, Bigger Parcels, Physical Features help define the area
34	2	MU	LP	SP	PF		Medium Urbanization, Lower Productivity Rating, Smaller Parcels, Physical Features help define the area
40	2	HU/MU	LP	BP			High Urbanization(small portion is Med.) , Lower Productivity Rating, Bigger Parcels

Tier 3

2	3	HU	LP	SP	PF	HD	High Urbanization, Lower Productivity Rating, Smaller Parcels, Physical Features help define the area, High Dwelling density
4	3	HU	HP	SP	PF	HD	High Urbanization, Higher Productivity Rating, Smaller Parcels, Physical Features help define the area, High Dwelling density
6	3	MU	LP	SP		HD	Medium Urbanization, Lower Productivity Rating, Smaller Parcels, High Dwelling density
8	3	HU	HP		PF		High Urbanization, Higher Productivity Rating, Physical Features help define the area (Pumpkin Ridge Golf Course)
10	3	HU	LP	SP		HD	Higher Urbanization, Lower Productivity Rating, Smaller Parcels, High Dwelling density
14	3	HU/MU	LP	SP	PF	HD	High Urbanization (small portion is Med.), Lower Productivity Rating, Smaller Parcels, Physical Features help define the area, High Dwelling density
16	3	MU	LP	SP		HD	Medium Urbanization, Lower Productivity Rating, Smaller Parcels, High Dwelling density
20	3	HU	HP	SP	PF	HD	High Urbanization, Higher Productivity Rating, Smaller Parcels, Physical Features help define the area, High Dwelling density
26	3	HP	HP	SP	PF	HD	High Urbanization, Higher Productivity Rating, Smaller Parcels, Physical Features help define the area, High Dwelling density
28	3	HU	LP	SP	PF	HD	High Urbanization, Lower Productivity Rating, Smaller Parcels, Physical Features help define the area, High Dwelling density
30	3	MU	LP	SP		HD	Medium Urbanization, Lower Productivity Rating, Smaller Parcels, High Dwelling density
31	3	HU	HP	SP		HD	High Urbanization, Higher Productivity Rating, Smaller Parcels,
35	3	HU	LP	SP		HD	High Urbanization, Lower Productivity Rating, Smaller Parcels, High Dwelling density

Tier 4

	•					
1	4	LU	LP	PF		Low Urbanization, Lower Productivity Rating, Physical Features help define the area
9	4	LU/MU	LP	PF	HD	Chehalem Mtn., Low Urbanization (small portion is Med.), Lower Productivity Rating, Physical Features help define the area, High Dwelling density
15	4	С				Conflicted
23	4	LU	LP	PF		Henry Hagg Lake area, Low Urbanization, Lower Productivity Rating, Physical Features help define the area

27	4	С				Conflicted
33	4	HU	LP	SP		High Urbanization, Lower Productivity Rating, Smaller Parcels, Surrounded by UGB
36	4	С				Conflicted
37	4	С				Conflicted
38	4	С				Conflicted
39	4	С				Conflicted
41	4	С				Conflicted

HU = High Urbanization, MU = Medium Urbanization, LU = Low Urbanization, C = Conflicted

HP = High Productivity, LP = Low Productivity

BP = Bigger Parcels, SP = Smaller Parcels

PF = Physical Features

HD = High Dwelling Unit Density

#### Washington County Farm Bureau Rural Reserve Input

The Washington County Farm Bureau provided the following information with their input on aspirations and comment on Washington County Staff's Proposed Rural and Urban Reserves.

"The Washington County Farm Bureau represents approximately 600 farm families in Washington County; the Oregon Farm Bureau represents approximately 10,000 farm families in Oregon. We are also a member of the American Farm Bureau. The Washington County Farm Bureau's Land Use Policy is based on Oregon Farm Bureau Policy

The Washington County Farm Bureau has followed closely the County's process of recommending urban and rural reserves. We noted the lack of any representative of the agricultural industry on the Reserves Coordinating Committee (RCC), which resulted in the Farm Bureau eventually getting two spots, but one vote, on the RCC. We have tried to participate in good faith in the hopes that the County's vibrant agricultural industry would receive the protection called for in the legislation authorizing urban and rural reserves, while still balanced with other interests. That has not happened. We have many concerns about the Washington County staff proposal, both overarching and specifically in how the law was applied. The following are our initial comments; we will provide more as this process continues.

#### **Overall Concerns**

The proposal seems to treat farm land as "vacant" land awaiting urbanization, when, in fact, that land is the base for one of the county's and state's top industries. Washington County is always in the top 5 of Oregon's counties in agricultural production. This represents a significant industrial engine, because agriculture is Oregon's #2 industry, grossing over \$5 billion in 2008. Add in the goods and services farmers purchase from other businesses to grow food and fiber, and the value-added products that are produced, and agriculture is a \$ 10 billion industry, accounting for over 10% of the state's economy. And much of that is exported, bringing new dollars into the state, and into Washington County's economy.

Oregon agriculture has been increasing in value every year for over a decade, and Washington County's agricultural cluster has been growing for over 150 years. Agriculture's importance to the region's and state's economy is not just based on what is produced in the fields; there are also many businesses inside the boundaries of *every* city in the County that are wholly or primarily dependent on the agricultural industry - including equipment dealers, processors, insurance companies, banks, etc ....

The RCC has heard testimony from many of these businesses, and we submit more along with this testimony. We quote here from one large equipment dealer, located in Cornelius, who recently testified

"the importance of the region's agriculture to another segment of me local economy ... those businesses that support the region's agricultural producers ... include[ing] farm equipment dealers; farm chemical and seed businesses; businesses that prepare, process, or package agricultural products, trucking company businesses .... Businesses that provide services, goods, and other infrastructure needs to agriculture in Washington County depend on a critical mass of ...suitable agricultural land. Loss of agricultural land in Washington County has been dramatic and is of concern to our business."

Washington County agriculture cannot simply pick up and move somewhere else; it is dependent on the excellent soils and climate of the area, and the large cluster of farms and farm-related industries in the county. Nor should the county want it to – the continued growth of the Oregon and Washington County agriculture industry is a record that cannot be matched by other industries.

#### Specific Concerns

The Washington County staff proposal does not meet the criteria for urban and rural reserves in the legislation and administrative rule, for the following reasons:

• OAR 660-027-0005 states the overarching purpose of reserves:

"The objective of this division is a balance in the designation of urban and rural reserves that, in its entirety, best achieves livable communities, the viability and vitality of the agricultural and forest industries and protection of the important natural landscape features that define the region and its residents."

The Washington County staff proposal designates 33,800 acres of land as urban reserves. It appears that almost 30,000 of those acres are in exclusive farm use. This is over 20% of the farm land remaining in the County. Ad most of those lands are in the heart of Washington County's agricultural industry, on lands that the Department of Agriculture has designated as "Foundation" lands. This is not a balance; rather, this is the dismemberment of the County's agricultural industry.

- ORS 195. 141(3)(a) and OAR 660-027-0060(2)(a) provide that a county's decision on which lands to select for rural reserves should be based on whether the land is "potentially subject to urbanization" Little of the land designated as *rural* reserves seems to be actually under threat from urbanization over the next 40-50 years. In reality, the farm lands subject to urbanization are the same ones that certain cities have identified for *urban* reserves. Yet none of these areas is protected by the County staff's proposal.
- ORS 195.141(3)(b), and (d) and OAR 660-027-0060(2)(b) and (d) provide that those lands "capable of sustaining long term agricultural operations" and are "suitable to sustain long-term agricultural operations" are appropriate for rural reserves designation. Yet the very lands proposed by the County staff as urban reserves are those lands that have been the productive heart of Washington County agriculture for over ISO years. Designating them as urban reserves will ensure the demise of the entirety of the county's agricultural land industry.

- There is too much emphasis on irrigation as provided by the TVID. ORS 195.141(3)(c) and OAR 660-027-0060(2)(c) state that in selecting rural reserves, a county should take into consideration whether there is "available water *where needed*." Washington County staff analysis seems to equate this with being in the TVID. This is a wrong assumption for many reasons.
  - Many of our members grow high value crops that either do not need irrigation, or for which they obtain irrigation from a source other than TVID. Examples include legume seeds, hay, grapes, grass seed and more.
  - Ironically, almost all of the proposed urban reserve lands north of Cornelius and Forest Grove are in the TVID.
- ORS 197.141(3)(d)(A) and OAR 660-027-0060(2)(d)(.A.) address the importance of whether there is a "large block of agricultural land" in designating rural reserves. The staff report seems to equate "large block" with large "parcels," and "parcelization" with "ownership," reflecting a major misunderstanding of both the law and the way farming really works on the ground. The staff proposal looks too narrowly at parcelization, and seems to discount lands if they are parcelized.

 $\circ$  Not only is the 35-acre cut-off for what is deemed "parcelized" too high, the issue for farmers is not parcelization per se, as that seems to have been translate by the staff into ownership and tax lots. Almost off us farm small parcels that we own or lease as part of our larger agricultural operations. Moreover, the real issue is whether a small parcel is located in an area that is largely agricultural in nature, or whether it is isolated in an area that is already broken up with smaller developed parcels. The issue is surrounding conflicts, not the parcel size or even pattern. This is emphasized by factors (d)(B), (e), and (D), which explain just what is meant by a "large block."

 $\circ$  It seems the county staff proposal completely ignores the existence of the large block of agricultural lands existing north of Council Creek, norh and west of Hillsboro, south of the former St. Mary's land, and north of Highway 26, and instead designates those as urban reserves.

• Small parcels, especially if located within a larger farming area, are those lands that smaller specialty farmers like, such as organic farmers, CSAs, and folks just starting out in farming. The RCC heard quite a bit of testimony on this point. This is the incubator for future farmers; the region should be encouraging this, not discouraging it.

- Some lands have overlapping values as both necessary for the viability of the region's agriculture and as an important landscape feature. It does not seem that the County took both reasons into account.
- In contrast, the County seems to give added weight to viticulture lands. These are valuable lands, but that should not be used as a reason to rate more poorly non-viticulture lands, as seems to have been done. Rather, these lands reflect what is great about Washington County farm land the excellent soils and climate give local farming the ability to adapt readily to changing markets, prices, consumer preferences, and world events.

- The county's analysis does not adequately address factor (d)(D), "the sufficiency of agricultural infrastructure in the area." As we have described many times, and as the letters from local businesses that are in the record demonstrate, the continued health of Washington County's vibrant agricultural industry and many businesses in the region both inside and outside of cities are intertwined.
- The last urban reserve factor, OAR 660-027-0050(8), requires that the urban reserve area be capable of being developed in a way to "avoid or minimize adverse effects on farm and forest practices." The expansive urban reserves proposed do not meet this factor. Today's cut-through commuter traffic in the areas of EFU and Foundation lands, which is headed into the cities, is presently terrible. It appears this proposal will approximately double the existing size of Hillsboro, Beaverton, Cornelius, and Forest Grove. This will at least double the conflicts that now exist between urbanites who believe they are moving out to "the country," but just want the scenery and not the inconveniences of slow moving farm equipment and farm practices.
- Much of the proposed "undesignated" lands, especially around North Plains and Banks, appear to be in reality just a holding zone for the future urban expansion of those towns. Those lands meet every factor for being designated as rural reserves they are designated as Foundation lands on the Department of Agriculture's map and report. These undesignated areas are a significant encroachment into the county's agricultural land core, but just coming at it from the other direction. The remaining farm land in Washington County will be squeezed between urban areas, causing it to become less and less viable for agriculture. This does not meet the purpose of the Reserve legislation, ORS 195.139, which is to offer "protection of large blocks of [agricultural] land ... to maintain their viability."

Washington County produces a tremendous abundance and variety of farm products on one of the smallest amounts of farm land in the state. Over 200 different crops can be grown in the Tualatin Valley. The reason we can do that is because we have excellent soils and climate, and water where needed. Washington County farmers grow blueberries, hazelnuts, many vegetables, wheat, grass seed, nursery products, wine grapes, clover sees, dairy products, beef cattle, and more. Because of the quality of the soils here, we can adapt quickly to changing global economies and weather patterns by changing crops. *No other industry* is *soil dependent*. High tech companies, shopping malls, office buildings, and houses can locate in many communities and can re-use already developed land and buildings. In contrast, farming is dependent upon an ever decreasing amount of an irreplaceable resource that is completely place-dependent.

We would like the Reserves process to designate 33,000 acres *more* land for agriculture. There is certainly land inside the existing UGB that is excellent farm land and is just sitting idle. The agricultural industry would like the same long-term supply of land that other industries are pushing for, and just as other industries would like to take that land from our existing industrial land base, maybe we should be advocating doing the same back. Sound ridiculous? Well, that is how it sounds to someone in the farming industry when others say they want this industry's land base. Taking the land base from the state's #2 industry, an industry that has been increasing in value over the last two decades, is a very poor economic strategy. And as the population grows, the region is going to need more food, and it will be increasingly important for that to be a local food supply. So at a minimum, we should be preserving what we have of our already diminished supply of farm land, while using the existing urban land supply more efficiently."

# Forest Land Analysis

The following describes the considerations and application of factors used for forest land analysis in Washington County.

# Forest Land

The Oregon Department of Forestry (ODF) Forest Land Inventory (Appendix 1: Map 4) divides land into four categories - Wildland Forest, Mixed Forest/Agriculture, Intensive Agriculture, and Low Density Residential/Commercial.<sup>6</sup> (.) For the reserves process, ODF provided Metro with a more recent analysis of forestland (See *Criteria for Consideration of Forestlands within Future Rural Reserves*, ODF January 29, 2008) which was used as the basis for forest analysis.

Wildland Forest is defined as large continuous tracts of forest land with fewer than five dwellings per square mile. This designation may include both timberland and other forest land. Timberland is forest land not withdrawn from timber utilization and capable of growing at least 20 cubic feet or more per acre per year of industrial wood. Forest land, which is of lower productivity or which is withdrawn from timber production, may also be classified as wildland forest.

Mixed Forest/Agriculture is defined as intermixed forest, range, and agricultural lands with fewer than nine dwellings per square mile.

Intensive Agriculture is defined as large continuous tracts of agriculture land with fewer than nine dwellings per square mile.

Low Density Residential/Commercial is defined as forest, agriculture, range, or other non-urban land, or mixture of these lands, with nine or more dwellings per square mile.

Factor 2a - Are situated in an area that is otherwise potentially subject to urbanization during the applicable period described in OAR 660-027-0040(2) or (3) as indicated by proximity to a UGB or proximity to properties with fair market values that significantly exceed agricultural values for farmland, or forestry values for forest land;

# Proximity to a UGB

As with the farmland analysis process, staff initially proposed to score "proximity to a UGB" on a scale of 1 to 9, which would reflect areas least subject to urbanization to those most subject to urbanization. Upon further review, we are proposing to define three classes of land - land that is rated as high subject to urbanization (HU), medium subject to urbanization (MU), and low subject to urbanization (LU). The city areas of interest are rated HU. The area previously identified as potential urban candidate areas (approximately 106,000 acres) is rated MU. The remainder of the five-mile reserve study area was rated LU. This process and result was identical to that utilized for the farmland analysis.

# Fair Market Value

Staff compiled more than a dozen analysis variations to address this factor. Because adequate data necessary to explore fair market value was not readily available, staff utilized real market values (RMV) for individual parcels as recorded in Washington County's Department of Assessment and Taxation. Study areas included land in intervals of one to nine miles from the existing Urban Growth Boundary. Based on the results, elevated RMVs occurred within the one, six and eight mile intervals of

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<sup>&</sup>lt;sup>6</sup> As described in *Forests, Farms, and People: Land Use Change on Non-Federal Land in Western Oregon, 1973-2000.* Oregon Department of Forestry. May, 2002.

the UGB. Successive iterations were identical to those noted above under comments specific to fair market value for farmland.

Map 17 (in Appendix 1) illustrates the <sup>1</sup>/<sub>4</sub> mile increments out to three miles with various parcel sizes. The three charts contained as insets on Map 17 show the lack of evidence that values of properties adjacent to the UGB are indicators of potential urban growth.

Based on results from the fair market value iterations, planning staff determined that the notion of "Fair Market Value" independent of other indicators did not provide a conclusive indication of land areas that may be "subject to urbanization".

Factor 2b - Are capable of sustaining long-term agricultural operations for agricultural land, or are capable of sustaining long-term forestry operations for forest land;

The aforementioned studies conducted by ODF state that Wildland Forest land are areas that need to be protected in order to "*sustain long-term forestry operations for forest land*." These lands were considered to be among the most suitable for rural reserves.

Factor 2c - Have suitable soils where needed to sustain long-term\_agricultural or forestry operations and, for agricultural land, have available water where needed to sustain long-term agricultural operations;

The Wildland Forest category includes land that is capable of growing 20 cubic feet or more per acre per year of industrial wood. This volume production rating is related to soils. These lands were considered to be among the highest for suitability as rural reserves.

Factor 2d - Are suitable to sustain long-term agricultural or forestry operations, taking into account:

(A) for farm land, the existence of a large block of agricultural or other resource land with a concentration or cluster of farm operations, or, for forest land, the existence of a large block of forested land with a concentration or cluster of managed woodlots;

(B) The adjacent land use pattern, including its location in relation to adjacent non-farm uses or non-forest uses, and the existence of buffers between agricultural or forest operations and non-farm or non-forest uses;

(C) The agricultural or forest land use pattern, including parcelization, tenure and ownership patterns; and

(D) The sufficiency of agricultural or forestry infrastructure in the area, whichever is applicable.

Based on ODF's analysis contained in *Forests Farms & People* and the updated maps produced by ODF, Wildland Forest are lands that need to be protected in order sustain long-term forestry operations.

# Potential candidate Rural Reserve Areas for Forest Land:

- **RFL 1** Forest land that should be considered suitable as rural reserves because it is wildland and has either high or medium subject-to-urbanization value (HU or MU).
- **RFL 2** Wildland Forest that has a low subject-to-urbanization value (LU) or Mixed Forest/Agriculture has either high or medium subject-to-urbanization value (HU or MU).
- **RFL 3** Mixed Forest/Agriculture has a low subject-to-urbanization value (LU).

Map 30 (Appendix 1) illustrates application of the three tiers to the Study Area.

# Natural Landscape Features Analysis

The following discussion describes staff application of available data to the criteria specified in OAR 660-027-0060 (3) (Appendix 1: Figure 2.) Rural Reserve Factor 3 required consideration of Metro's Natural Landscape Features Inventory as well as other pertinent information when addressing each factor.

## Background

Metro published the Natural Landscape Features Inventory report (Appendix 1: Map 5) February 28, 2007 as part of the "Shape of the Region" – a key document supporting the urban and rural reserves designation process. This study was published prior to LCDC adopting Division 27 in January 24, 2008. Metro subsequently published a revised Natural Landscape Features Inventory map February 20, 2009 that expanded upon the original inventory (Appendix 1: Map 31). Staff then augmented Metro's work by adding Washington County's Goal 5 resources, steep slopes (25% or greater), and a sense-of-place criterion based on areas above 350 feet (Appendix 1: Map 32). Staff used this final iteration as the basis for applying the Factors.

Factor 3a - Are situated in an area that is otherwise potentially subject to urbanization during the applicable period described (in) OAR 660-027-0040(2) or (3)

The farm and forest analysis discussed above also considered subject to urbanization pursuant to OAR 660-027-0060 (2)(a). However, factor (3) (a) is worded differently than Factor (2) (a). Factor (2)(a) requires the consideration of proximity to a UGB or proximity to land with fair market values that significantly exceeds agricultural values for farmland or forest values for forest land. Factor (3) (a) simply states that reserve lands "are situated in an area that is otherwise potentially subject to urbanization." Thus, "subject to urbanization" can be defined differently than how staff defined it in Factor 2. Two approaches in defining "subject to urbanization" were therefore considered.

One approach was to use the same definition as used in Factor 2 - land that is rated as high subject to urbanization (HU), medium subject to urbanization (MU), and low subject to urbanization (LU). A disadvantage to this option is that some natural feature areas may be strong candidates for inclusion in a rural reserve but be in an area of low urbanization potential. Weighting of values used to make a decision would be one way of addressing this issue.

A second approach is to broadly define "subject to urbanization" as all of the 5 mile study area. This allows for all natural features to be considered equally relative to this factor. The Washington County Farm Bureau has advocated that some of the hillside areas should be in urban reserves rather than farmland on the valley floor. Given this perspective, all of the 5 mile study area may be subject to some degree of potential urbanization.

# Factor 3b - Are subject to natural disasters or hazards, such as floodplains, steep slopes and areas subject to landslides;

Staff considered 100-year floodplains and steep slopes over 25% to be additional pertinent information and mapped these resources.

Factor 3c - Are important fish, plant or wildlife habitat;

Staff mapped Washington County's Rural/Natural Resource Plan Goal 5 Significant Natural Resources, which includes the following: Water Areas and Wetlands (floodplains); Water Areas and Wetlands/Fish and Wildlife Habitat (riparian corridors); Wildlife Habitat (upland habitat for game and non-game species) and Significant Natural Areas.

Factor 3d - Are necessary to protect water quality or water quantity, such as streams, wetlands and riparian areas;

The hundred-year floodplains of significant water features were mapped as were streams in upland areas.

# Factor 3e - Provide a sense of place for the region, such as buttes, bluffs, islands and extensive wetlands;

Washington County has historically defined the Tualatin Valley floor as below an elevation of 350 feet. Limiting urban development above the 350 foot contour helps provide a sense of place by maintaining viewpoints and minimizing residential density. There are exceptions to this such as Cooper and Bull Mountains which already have existing residential density impacts. Additional areas considered for this factor included the Tonquin Scabland area, the wetlands west of the town of Banks, and rural communities such as Verboort and Roy.

OAR 660-027-0010 provides definitions for the subsequent Urban and Rural Reserve Factors. Definition (6) notes under "Important natural landscape features" that these features "include, but are not limited to…historic and cultural areas; and other landscape features that define and distinguish the region." Factor 3e however provides only examples of natural features, not man-made features. Staff nevertheless analyzed historic and cultural areas, such as rural communities, historic structures, and pioneer cemeteries. These resources, while important on a local level, were determined to not provide a sense of place for the <u>region</u> and were not included in the tier considerations.

Factor 3f - Can serve as a boundary or buffer, such as rivers, cliffs and floodplains, to reduce conflicts between urban uses and rural uses, or conflicts between urban uses and natural resource uses;

The primary streams of the Tualatin Basin can serve as buffers between urban uses and natural resource areas. These are the Tualatin River, Lower Gales Creek, Dairy Creek and McKay Creek.

Factor 3g - Provide for separation between cities;

Where possible, consideration was given to providing separation between cities.

Factor 3h - Provide easy access to recreational opportunities in rural areas, such as rural trails and parks;

Where possible, consideration was given to providing recreational opportunities in rural areas.

# Potential Candidate Rural Reserve Areas for Important Natural Landscape Features

The Potential Candidate Rural Reserve areas are divided into three tiers based on the combination of factors including a broad definition of subject to urbanization.

- **RNF 1** All areas above the 350-foot contour that provide a sense of place as well as providing headwater protection for streams. Not included were Cooper Mountain and Bull Mountain, which already are impacted by urban development. Other Tier 1 areas included mapped resources not having some type of existing land use protection (i.e. not protected by floodplain regulations) or cannot be preserved as an important natural landscape feature if included in an urban reserve (i.e. Tonquin Geologic Area). The main stems of the Tualatin River, Lower Gales Creek, Dairy Creek and McKay Creek were also considered Tier 1 areas given their flood plain functions, wildlife habitat value, sense of place value, and potential role as natural buffers.
- **RNF 2** The remaining areas on Metro's Natural Landscape Features Inventory. This included buffer areas to designated flood plains on primary streams, the Cooper Mountain area, and floodplain areas adjacent to primary stream floodplains.

• **RNF 3** - Tier 3 areas are on Metro's revised inventory but most were not on the original inventory. Almost all are portions of streams on the valley that do not contain floodplains and have less riparian vegetation. Some are manmade reservoirs.

Map 33 (Appendix 1) illustrates application of the natural landscape features attributes applied to the Study Area in Washington County.

# Urban and Rural Reserves Recommendations

As described in the Recommendations section of this report, staff recommendations are the result of successively more detailed analysis to provide a basis for decision making. Staff worked closely with members of the Project Advisory Committee, stakeholder groups including business, development, environmental and community organizations, and took direction from the Board of County Commissioners and the Washington County Reserves Coordinating Committee (WCRCC.) In addition multiple public events and avenues for communications resulted in significant community input that helped to shape the process and outcome. At every level of evaluation staff was cognizant of the goal to provide useful and accurate information that would bear on the question of which areas within the Reserve Study Area were most suitable as an Urban or Rural Reserve.

Urban Reserves Recommendations are the result of applying the eight Urban Reserves Factors utilizing as many characteristics as could be identified to support each Factor's suitability. The approximately 33,800 acres illustrated in the Urban Reserves Recommendation Map (Appendix 1: Map 34 and 36) represent lands that best meet the intent for all eight Factors. Those lands were further refined to 34,300 acres through clarifications of lands under review by the Cities of Sherwood and Tigard and a buffer between the cities of North Plains and Hillsboro removing some lands from urban reserves recommendation. An additional 200 acres was included as the result of final re-mapping of cities areas of interest.

Rural Reserves Recommendations result from evaluation of multiple characteristics for agricultural and forest lands and natural landscape features. The recommendations capture lands within the Study Area receiving the highest characteristic values across many criteria. Those approximately 108,800 acres illustrated in the Rural Reserves Recommendation Map (Appendix 1: Map 35 and 36) represent lands that should be protected from urbanization for the next 40 - 50 years.

Rural Reserves Recommendations were further refined to approximately 109,750 acres through a recalculation of lands north of NW Phillips Road. The 940 acres was previously considered as undesignated. Remapping of Tier 1 lands in the area identified the additional acreage.

Where an area was under study as a candidate area for either Urban Reserve or Rural Reserve and otherwise qualified under the prevailing analysis as either Urban Reserve or Rural Reserve, a choice was available about which designation was most appropriate. The Planning Directors looked to the OAR 660-027 (Urban and Rural Reserves in the Portland Metropolitan Area) for guidance.

OAR 660-027-0040 (2) requires Urban Reserves to accommodate estimated urban population and employment growth of at least 20 years and not more than 30 years. The Washington County Reserves Coordinating Committee has repeatedly requested Metro provide Washington County with an estimate or allocation of urban growth. Absent Metro providing the requested growth estimate/allocation, Washington County developed its own analysis of a growth estimate/allocation which is contained in Washington County Reserves Coordinating Committee Recommendation – Urban and Rural Reserves September 23, 2009 the June 4, 2009 memo titled "Addendum to May 11 Staff Report on Land Needs Estimate for Urban Reserves." In June 2009, the subject memo was utilized to decide in favor of continuing study of approximately 47,000 acres rather than continuing to study 107,000 acres.

The June 4, 2009 memo regarding land needs estimate for urban reserves found that a Washington County estimate for land needs for 2050 ranged from 17,734 acres to 50,411 acres. Similarly, for year 2060, the Washington County estimate for land need ranged from 27,722 acres to 66,934 acres. Therefore, Washington County's estimated land need for the period 2050 to 2060 ranged from 17,724 acres to 66,934 acres (with a midpoint of 42,334 acres).

OAR 660-027 requires Urban Reserves to accommodate a land need of at least 20 but not more than 30 years of urban land need, beyond the20 year period for which Metro has a demonstrated buildable land supply inside the UGB. Absent any Metro estimate of Washington County land need for 20 years but not more than 30 years, it is reasonable to utilize the June 2009 Washington County estimate of land need. The suitability analysis and pre-qualifying urban reserve concept planning identified approximately 34,300 acres of land as needed and suitable for Urban Reserves. The identified 34,300 acres is below the midpoint estimate of 42,334 acres and is clearly at the lower end of the estimated Washington County land need from 2050-2060 of 17,734 acres to 66,934 acres.

The requirement to accommodate urban land need was the deciding element in choosing between an Urban Reserve designation rather than Rural Reserve designation, where the underlying suitability analysis would otherwise support either designation.

Referring to the Urban and Rural Reserves Recommendations (Appendix 1: Map 37) there are areas in white that represent lands within the Study Area not recommended for either Urban or Rural Reserves. There are three reasons:

- 1. The lands surrounding the Cities of Banks and North Plains have been removed from Urban Reserve recommendations as they are outside of Metro's jurisdictional ability to provide Urban Reserves. (This was discussed in the conclusion to Candidate Urban Reserves Development.)
- 2. Analysis of these lands did not identify them as the highest priority rural resources (Tier 1) for agricultural lands, wildland forest or important natural landscape features.
- 3. The land needs estimates provided a range of population and employment needs for 40 and 50 years. The total acres recommended for Urban Reserves falls within the lower half of the lands need estimate range. Staff and the Project Advisory Committee deemed it appropriate to retain some undesignated lands to address potential long-term population and employment needs that may not be accommodated within the recommended Urban Reserves.

# Public Involvement

## <u>Introduction to summary of public input for Staff recommendations for Urban and Rural</u> <u>Reserve</u>

Concurrence by the Washington County Reserves Coordinating Committee (WCRCC) of candidate urban and rural reserves in March 2009 initiated increasingly more detailed analysis of those areas. In early August, 2009, Washington County staff in collaboration with the Project Advisory Committee<sup>7</sup> distributed the Staff Report – Urban and Rural Reserves Recommendations identifying lands deemed most suitable as an urban or rural reserve.

<sup>&</sup>lt;sup>7</sup> County Planning Directors and/or assigned principal staff of each member government/agency.

Washington County Reserves Coordinating Committee Recommendation – Urban and Rural Reserves September 23, 2009

Public comment on proposed reserves began as early as January, 2009. Since then more than 1250 comments and testimonies have been received by the county through email, letters, faxes, and written and oral testimonies. This summary highlights that input providing community perspectives on a variety of reserves policy considerations. In July 2009, the WCRCC was provided

#### **Public Testimony versus Public Comment**

Initially public testimony and comment were treated differently based on Washington County's protocols for testimony before the Board of Commissioners. It has since been determined that for the reserves process, testimony and comment are indistinguishable and that both will be treated equally in the public record. References in this document to public input, comment or testimony are interchangeable.

the Phase 3 Public Comment Report addressing the more than 1,400 comments on candidate areas submitted through regional open houses and an online survey. This summary reflects input in addition to that report. Also much of the input in this report refers to regional planning efforts however this summary will focus on the Washington County reserves process.

This summary is divided into four parts: 1) Overview, 2) Details per jurisdiction, 3) a Public Record Index as an addendum, and 4) Description of Public Involvement efforts throughout Phase 3. Verbatim input is available on the reserves website: <u>www.co.washington.or.us/reserves</u> in the "Public Comment Log."

#### **Overview**

More than half the public comments refer to farmlands in general supporting protection of agricultural lands and the livability of the region's communities while promoting efficient urban growth and minimizing environmental impacts. Much input supports Community Supported Agriculture (CSA) and local farm-to-market operations.

Many comments propose that lands north of Highway 26 not currently in the Urban Growth Boundary be recommended as rural reserves protecting the agricultural lands and communities and preserving natural and cultural historic resources.

Several comments propose inclusion of specific lands and properties into urban reserve recommendations including some current farms near North Plains, farms on the west side of SW Roy Rogers Road, properties northwest of Bethany, lands in the South Hillsboro Plan, and lands on the south side of Cooper Mountain among others. In addition to individual public input, the City of North Plains also provided testimony before the WCRCC on August 20 indicating interest in refining their earlier considerations to un-designate some rural reserves recommendations south of the city.

Overall the ratio of comments suggesting expanded rural reserve recommendations to expanded urban reserve recommendations was approximately 3 to 1. Approximately a third supported the current urban reserves recommendations. Many on both sides of the recommendations advocate for improved utilization of lands within the existing Urban Growth Boundary including redevelopment and consideration for more land-efficient industrial lands planning.

#### How comments were received

As noted above, public input arrived via emails, faxes, letters, postcards, and testimony provided at the August 20 WCRCC Public Hearing. Two significant efforts deserve noting; 1000 Friends initiated an outreach effort and collect signed pre-printed postcards from more than 380 community members (several included individual comments as well), and Save Helvetia initiated an email effort generating

more than 300 comments (many using a provided template as a base and elaborating further) and petition drive gathering more than 750 signatures. At the public hearing, approximately 250 attended with more than 90 providing oral testimony and another 40 written testimony. To date staff has received more than 1250 comments and signatures to petitions in addition to the 1000 Friends postcards.

## **Geographically-oriented input**

## Protection of farmlands and livability of the region

As noted above more than 380 postcards were received from 1000 Friends initiated outreach effort. Most of the postcards were signed indicating support of regional protection of agriculture and the region's livability. Additional comments included: support for local, organic food production, farming, protection of wildlife corridor and suggestions to urbanize elsewhere.

The regional support was indicated by comments coming from: Clatskanie, Canby, Gales Creek, Gaston, Jefferson, Mollala, Salem and Tillamook in addition to areas within the county's study area.

## All lands north of Highway 26 as rural reserves

More than 300 comments were received based on an email template initiated by Save Helvetia<sup>8</sup>. The group also initiated a petition drive gathering more than 750 signatures encouraging efficient use of lands within the existing UGB and designating all lands north of Highway 26 as Rural Reserve. Some additional comments also support the Save Helvetia proposal to place all lands north of Highway 26 in rural reserves. The template notes concern for farm lands and natural resources, that the rural lands currently provide the base for a healthy agricultural economy, that growth should be accommodated by infill [within the existing UGB] and there should be more efficient use of urban and industrial areas. The template supports rural reserves designation by referring to the OAR 660-027-0060 rural reserve factor (4) that the lands are "foundation" lands and require no further analysis.

Many submissions, including many not associated with the Save Helvetia initiative, provided additional rationale. The key themes include:

- o Preserving family histories which include consecutive ownership of many farm lands
- Protecting cultural assets as the area is rich in Swiss and German heritage
- o Guarding against the loss of important foundation agricultural lands
- Concerns that there are inadequate studies on economic and environmental impacts of reducing farmlands
- o Adding additional growth-related traffic impacts to farm community
- Protecting agricultural and forest reserves
- Providing sufficient lands for CSAs [community supported agriculture] to grow local food
- Minimizing automobile transportation times and distances by buying from Local food production businesses
- Increasing costs for infrastructure to new development
- Replacing investments that could better serve areas inside existing UGB by paying for infrastructure to new development
- Providing educational opportunities for children regarding where and how food is grown

<sup>&</sup>lt;sup>8</sup> According to their website: **Save Helvetia** is a <u>coalition</u> of farmers, business owners, concerned citizens, neighbors, and residents of the greater Helvetia area who are working to protect the <u>Helvetia community</u> and its neighboring agricultural lands.

- Looking to other metropolitan areas that did not do long-range planning to protect rural livability
- Creating compact communities to allow rural areas to counter effect of global warming
- Recognizing areas north of Bethany development (including North Bethany) will not support additional growth
- Protecting the livelihoods of CSAs within the Helvetia Area such as La Finquinta Del Buho and Dos Sequoias.
- o Protecting wildlife corridors between Forest Park and the Coast Range
- Protecting the scenic, tranquil and pastoral qualities of the area including the artistically inspiring characteristics of the area
- Preserving the tourism and recreational attributes (many mentioned bike riding)
- Recognizing topography is too steep for urban development in many areas
- Protecting agriculture from impacts of urbanization (incompatibility of agricultural operations and residences

#### <u>Banks</u>

Several individual rural property owners adjacent to the City of Banks indicated their desire to be brought into the city's area of interest for future urban reserves and Urban Growth Boundary expansions.

Another property is considered no longer viable for commercial agriculture and the owner supports the current inclusion as undesignated (for future urban reserves.)

#### <u>Cornelius</u>

City representatives noted the desire to build a "complete community" while preserving a balance between agriculture and industry.

#### Forest Grove

A few property owners adjacent to the current urban reserve recommended area requested inclusion in urban reserves.

## <u>Hillsboro</u>

19 property owners with 23 parcels in the Minter Bridge area desire their properties be brought into urban reserves noting the area is "no longer suitable for farming due to urban encroachment." Several other rural property owners support inclusion in urban reserves including farms between 30 and 240 acres.

#### <u>North Plains</u>

A local farm owner requests his land become part of the un-designated lands that could eventually be annexed to the city. Another supports North Plains satellite-city status and suggests a buffer be kept between cities.

#### <u>Sherwood</u>

Two families have indicated desire and support to be brought into the City of Sherwood's urban reserves (one property is half designated urban.) Two other property owners also request inclusion into the city's urban reserve.

## <u>Tigard</u>

Farm property owners west of SW Roy Rogers Road desire to be recommended as urban reserves due to increasing difficulties to farm the area. Adjacent to current and planned urban

development the area is no longer suitable for farming. Tigard would be the logical jurisdiction to provide governance and services.

#### General Comments regarding urban reserves

The following comments were generally in support of current or expanded urban reserves recommendations:

- o Concern that long-term farming use is too restrictive to adapt to future demand
- Availability of infrastructure is important [proximity to existing cities provides efficient delivery]
- Recommendations are too limited, one-in-four future residents in the Metro area will be in Washington County and recommendations represent less than one-half the estimated need [based on Washington County staff projections]
- $\circ$  Insufficient lands exist for future industrial and commercial development over the next 40 50 years
- Compact and well designed development is the appropriate approach [to accommodate growth]

## **Overview of Public Involvement efforts for Phase 3**

Phase 3 of the Urban and Rural Reserves designation process began with the establishment of the reserves study area in September 2008 and concluded with recommendations of Urban and Rural Reserves delivered to the regional Reserves Steering Committee and Core 4 in September 2009.

County staff and advisory committee members of all three counties and Metro applied the Urban and Rural Reserve Factors (*provided in the "Key to Report" section*) to lands within the Reserves Study Area. As analysis was conducted to determine the suitability for future reserves, ongoing public involvement occurred through a myriad of outreach activities.

In April 2009 the Washington County Reserves Coordinating Committee (in collaboration with the regional partners) made recommendations for Candidate Urban and Rural Reserves areas. The regional Reserves Steering Committee concurred with their findings, kicking off an intensive public engagement effort to achieve two primary outcomes: 1) continue building public awareness and understanding of the reserves designation process and 2) validate results of the suitability analysis by asking for public feedback on the candidate area maps.

## **Outreach Activities**

The most visible outreach activity was a series of eight regional open houses (three within Washington County) attended by more than 650 community members. Between questionnaires provided at the open houses and online, more than 1,400 comments were received. The Phase 3 Public Comment Report is attached as Appendix 4. Less than half of those who responded suggested specific changes to the proposed candidate reserve areas though many added thoughtful comments and hopes for a well considered decision.

The reserves process has been in the news, under discussion in community and stakeholder meetings, and considered in the context of regional and local planning processes. From September through July, staff and elected officials from Washington County jurisdictions have distributed information at community events and made presentations to citizen groups as well as professional, agriculture, business, and commerce organizations. Regionally, members of the Reserves Steering Committee and the Washington County Reserves Coordinating Committee have conducted outreach and advocacy through their respective networks. The reserves process has been regularly covered by the Oregonian and a variety of community papers, as well as on Oregon Public Broadcasting radio.

In addition, staff along with assistance from community members and Washington County cities' staff, have distributed more than 2,000 brochures by placing counter-top displays in gathering places across the county. Citizen Participation Organization (CPO) members distributed information at neighborhood events, Concerts in the Parks, and the County Fair.

#### Key public comment themes

In broad terms, public input indicated that protection of farm and forest lands is very important to their sense of livability, with conservation of land for local food production as a central theme. Many recognize growth as inevitable, some as beneficial, but most encourage officials to contain as much future growth as possible within existing boundaries before moving into agricultural areas.

Much public comment focused on the area north of Highway 26, including Helvetia and the Portland West Hills adjoining Forest Park. Comments focused on the area's agricultural and habitat values, aesthetics, lack of readily available infrastructure and production of farm-to-market goods. Many comments suggested the area be protected from urbanization either by removing it from consideration for urban reserve designation or by designating it a rural reserve.

The complete report provides more detailed responses to the suitability questions, suggestions for process refinements, and compilations of other community input through presentations, letters, emails other venues.

## Appendix 5 – Issue Papers

Staff has developed a number of corresponding issue papers in response to community input regarding concerns with the recommendations and process of determining suitability for urban or rural reserves.

The issue papers provide rationale for recommendations or process elements and relate to how the public was informed and engaged, how regionally-supplied data was utilized and how projected future growth accommodations is addressed.

- Issue Paper 1: Meeting Public Involvement Responsibilities of Goal 1
- Issue Paper 2: Revised Natural Landscape Features Inventory
- Issue Paper 3: Helvetia Area Soils Analysis
- Issue Paper 4: Urban Industrial Land Uses & Growth
- Issue Paper 5: Undesignated Lands
- Issue Paper 6: Utilization of Department of Forestry and Department of Agriculture Inventories
- Issue Paper 7: Growth Estimates and Future Land Needs
- Issue Paper 8: Cultural and Historic Features
- Issue Paper 9: Concerning Areas North of Highway 26
  - 9a: Justification for Rural Reserves Designation
  - 9b: Urban Reserve Findings Rebuttal
- Issue Paper 10: Farm Bureau Concerns Related to Proposed Reserves Designations
- Issue Paper 11: Transportation Infrastructure Costs

## WASHINGTON COUNTY RESERVES COORDINATING COMMITTEE ISSUE PAPER No. 01

## Meeting Public Involvement Responsibilities of Goal 1

## Issue

Inquiries have been made as to whether Washington County staff efforts for public involvement in the Urban and Rural Reserves long range planning process have met the criteria set forth in Oregon Administrative Rules 660-015-0000(1) – Goal 1: Citizen Involvement. In particular have Washington County staff utilized all the tools identified in the Coordinated Public Involvement Plan (CPIP), specifically making use of citizen involvement committees.

## Recommendation

Consider the information presented in this issue paper as part of the deliberations for recommending rural and urban reserves in Washington County to the Regional Reserves Steering Committee. In addressing this issue there are no changes proposed to the recommendations outlined in the August 3 Staff Report.

## Background

The Coordinated Public Involvement Plan (CPIP) for Urban and Rural Reserves was adopted in May 2008 by the regional Reserves Steering Committee and adopted by the three counties and Metro as the guiding document for public involvement. The CPIP was reviewed and accepted by the Citizen Involvement Advisory Committee of the Oregon Land Conservation and Development Department as required to meet the objectives of Goal 1.

Washington County's Committee for Citizen Involvement (CCI) also reviewed and concurred with the CPIP. The county's CCI, established in 1986, consistently serves as a public engagement process providing community input to the Board of County Commissioners.

Washington County's Public Involvement Plan and subsequent Communications Plan (April 2008) addendum expand upon the CPIP by providing additional public outreach and involvement opportunities. The CCI reviewed and judged the county's Public Involvement Plan and Communications Plan to be in accord with the regional plan.

# Analysis

The CPIP bases outreach and involvement activities on five general approaches, including: open house events, Committee for Citizen Involvement (CCI) and Citizen Participation Organization (CPO) presentations, County Coordination and Policy Advisory Committees, other stakeholder meetings, and public hearings in Phase 4.

The following efforts by Washington County staff were intended to fulfill the tasks identified in the CPIP:

- Convened, with regional partners, 15 open houses (six in Washington County)
- Convened presentations and discussions with the county's CCI in 2008 and 2009 including early discussions regarding the county's public involvement plan (with suggestions incorporated.) The CCI has routinely provided outreach and solicited comments throughout the process.
- Presented at CPOs 3, 4K, 4M, 7, 8, and 15 (some multiple presentations)
- Presented to 12 stakeholder groups in 2008 and eight in 2009

- Provided information for public awareness to over 60 partner groups including chambers of commerce, business development, rural farm suppliers, environmental and agricultural groups
- o Produced and distributed multiple brochures and reports describing the reserves process
- Created and distributed more than 3000 postcards and brochures through partner affiliations, meetings, volunteer distribution
- Created and distributed more than 100 counter-top displays with postcards and brochures to community gathering centers including CSAs, farm stands, churches, cafes, grange halls and city offices
- Distributed posters and counter-top displays with postcards and brochures to all libraries within the Washington County Cooperative Library Association
- Provided articles and news updates to more than 55 partner organizations (representing development, environmental, neighborhood associations, chambers of commerce and agricultural interest groups)
- Provided news articles and meeting notices to regional and county-wide media outlets (more than 100 Urban and Rural Reserves and directly related articles published over the last year.)
- Produced and distributed updated interim and phase-specific public involvement reports (August 2008, April 2009, July 2009)
- Conducted two online surveys resulting in more than 1,400 comments
- Provided information to farm and agricultural attendees at two county fairs plus general public outreach
- Hosted an urban and rural reserves informational table at Tualatin Tomorrow Event in April 2009
- Distributed more than 13,000 notices to unique addresses in the county's Study Area and to addresses inside the existing UGB adjacent to the Study Area
- Convened a public hearing and open house with more than 250 community members in attendance
- o Conducted 10 initial informational stakeholder interviews
- Convened monthly Reserves Coordinating Committee meetings each of which included public comment opportunities
- Presented to Tualatin Chamber of Commerce, the Westside Economic Alliance (WEA), the Portland Metropolitan Area Realtors (PMAR), the University Women's Association – Beaverton Chapter, and twice at the Washington County DLUT Managers and Supervisors meeting.
- Participated in a CPO-lead panel discussion including representatives of 1000 Friends, Oregon Department of Agriculture, Metro and Tualatin Valley Irrigation District
- Provided maps and analysis information to each of the cities in Washington County for discussion at city council meetings
- Gave interviews to local and regional broadcast companies (KEX, KUIK, OPB)
- Videotaped discussions by Chair Brian on Tualatin Valley Community Television and the Clackamas County Government broadcast channel
- o Maintained an updated website including maps and documents used in reserves analysis
- Maintained, updated and distributed to a reserves "Interested Parties" email list of approximately 800
- Provided ongoing project updates for distribution through stakeholder groups such as the Washington County Farm Bureau, the Tualatin Soil and Water Conservation District and 1000 Friends.
- Collected and compiled more than 2500 comments, testimonies, postcards and petitions.

## City Efforts

In addition to staff efforts listed above, each of the cities within Washington County provided ongoing opportunity for community awareness building and comment. Following are examples of city-led efforts:

City of Tualatin

- City Council work sessions in December 2008, February, March and April 2009
- Tualatin Planning Advisory Committee (Citizen Involvement Committee): January, February, March,
- o April, May, June, July and August 2009
- Outreach at Tualatin Tomorrow Community Event April 2009 and Tualatin Crawfish Festival – August 2009
- o Published in: City newsletter (front page) June 2009
- o August Public Hearing notice City newsletter August 2009
- o Website content added and updated since April 2009
- Presentation to Stafford CPO April 2009

City of Forest Grove

• City Council and Planning Commission work sessions January, May, November 2008, January, March, May, July and August 2009.

City of Sherwood

- City Council and Planning Commission updates and discussions June, July, November 2008, January, February and August 2009.
- o Presentation to Sherwood Chamber of Commerce January 2009
- Website information, updates and links ongoing
- o Articles in city newsletter (the Archer) ongoing

## Summary

Staff efforts in public outreach and involvement meet and in many instances exceeded the expectations identified in the CPIP and Goal 1. The county's Committee for Citizen Involvement and the Citizen Participation Organizations provided many active voices for the rural communities and on-going citizen input into the process.

## WASHINGTON COUNTY RESERVES COORDINATING COMMITTEE ISSUE PAPER No. 02

#### **Revised Natural Landscape Features Inventory**

#### Issue

Metro presented two revised Natural Landscape Features Inventory Maps (NLFI), the first in October 2008, the second at the August 12, 2009 Regional Reserves Steering Committee meeting. These revisions were made to the initial Metro inventory (2007) that was to be used as the basis for Rural Reserve Factor (3) to identify potential rural reserves. The first revision was subsequently included in the county's analysis process. The second revision wasn't made available until after staff had completed analysis, written, distributed and presented their recommendations for rural and urban reserves to the Washington County Reserves Coordinating Committee (WCRCC) in the August 3, 2009 Urban and Rural Reserves Recommendations (staff report). This issue paper addresses the information presented in the second revision.

#### Recommendation

Consider the information presented in this issue paper as part of the deliberations for recommending rural and urban reserves in Washington County to the Regional Reserves Steering Committee. In addressing this issue there are no changes proposed to the recommendations outlined in the August 3 Staff Report.

## Background

As part of the New Look work in February 2007 Metro created a map entitled *Natural Landscape Features Inventory* that identified 26 features considered significant. When the legislature adopted rules implementing SB 1011 this map was cited in the Oregon Administrative Rules (OAR) section 660-027-0060(3) "when identifying and selecting lands for designation as rural reserves intended to protect important natural landscape features." In October 2008 Metro revised the NLFI by identifying 23 features and also provided spatial data layers for use in GIS. Washington County staff, along with staff from its partner cities, considered and utilized the 2008 inventory as part of their analysis for recommending rural and urban reserves. After presentation of the staff report on August 10, 2009 to the WCRCC a new NLFI was released by Metro that added the following data layers;

- Metro Title 13 Fish and Wildlife Habitat Inventory covers only a portion of the urban and rural reserves study area
- Federal Emergency Management Agency (FEMA) Floodplains and 1996 Flood extent
- National Wetland Inventory
- 200' stream buffers

## Analysis

A full description of staff's analysis of the October 2008 NLFI can be found on pages 35-37 of the staff report. The newly added data will be discussed here.

## Metro Title 13 Fish and Wildlife Habitat Inventory

Washington County staff considered this inventory prior to Metro's inclusion of the Title 13 inventory in the August 2009 NLFI. In late summer 2008 the County requested that Metro extend the Title 13 inventory to cover the entire Regional Reserves Study Area to be used as part of the analysis. The August 2009 revised NLFI included Title 13 data to one mile from the Metro district boundary, not the

entire study area. County staff reviewed the limited inventory and decided that due to the relatively small portion of the study area it covered that it was best to incorporate the Title 13 inventory analysis as part of the cities' pre-qualified concept plans for potential urban reserves. Therefore no additional analysis is required

#### FEMA Floodplains and 1996 Flood extent

These areas are almost entirely within the October 2008 NLFI dataset and therefore already addressed as part of the existing recommendations. There are areas where the 1996 flood extent bumps out beyond the 2008 NLFI, with many in areas currently recommended for designation as rural reserves while some are in areas recommended as urban reserves. Like the Title 13 inventory, floodplains were addressed in the cities' pre-qualified concept plans. If a recommended urban reserve area were brought inside the urban growth boundary, more detailed land use planning would need to be done and the floodplain more clearly delineated in order to resolve resolving this issue.

#### National Wetland Inventory

This inventory was an important element of, and included in, the Title 13 inventory.

#### 200' Stream Buffers

From a visual review of the data provided by Metro there does not appear to be much additional land from these buffers that is not already covered by the draft recommended rural and urban reserves.

#### **Technical Concerns**

It is possible that capacity estimates for some draft recommended urban reserve areas would be lower.

#### Summary

Staff believes there is no significant difference between the October 2008 revised NLFI used by staff and the August 2009 revised NLFI that were not already addressed as part of the cities' pre-qualified concept plans or the rural reserve analysis.

## WASHINGTON COUNTY RESERVES COORDINATING COMMITTEE ISSUE PAPER No. 03

#### Helvetia Area Soils Analysis

#### Issue

The Agricultural lands analysis used several characteristics to determine the top tier for rural reserves recommendations. The analysis included (but was not limited to) soil productivity and water availability. Helvetia community members question the results of the lands analysis by noting the Helvetia soils are the "cream of the cream" and in particular indicated concern regarding use of the above two characteristics. They noted the Oregon Department of Agriculture's (ODA) designation of the area as Foundation Land (discussed below) and suggest that too much emphasis is placed on the value of irrigation.

Staff recognizes that Helvetia soils are productive, as evidenced by existing agricultural activities in the area. However, it was incumbent on staff to choose those areas *most* suitable as rural reserves based on the factors used in the analysis. When compared with other agricultural areas south of Highway 26, Helvetia area soils do not rank as high. The lower soil ranking combined with additional attributes (such as parcelization and housing density) resulted in tier rankings. The following information is provided to support staff's decisions.

#### Recommendation

Consider the information presented in this issue paper as part of the deliberations for recommending rural and urban reserves in Washington County to the Regional Reserves Steering Committee. Based on the additional review of analysis staff recommends no change to the August 3 Staff Report – Draft Urban and Rural Reserves Recommendations.

#### **Background and Analysis**

Staff used several factors in recommending specific areas as rural reserves, including (but not limited to) irrigation availability and soil productivity. The "Soil Survey of Washington County, Oregon"<sup>1</sup> has been the soil classification document used by the County since 1983. Given the relative stability of soil class type over time, staff believes this document maintains its relevance and applicability and notes that it continues to be the most widely used source data about Washington County soils. Staff is not aware of more updated soil productivity data that can be used to map soils on the scale considered in the reserves process.

Staff recognized the usefulness of the ODA map as a starting point in the analysis process; nevertheless, a more detailed analysis was necessary in order to refine the lands that were broadly classified as "Foundation Agricultural Lands. (Most farmland in the county's Reserves study area is classified by the Oregon Department of Agriculture as "Foundation Agricultural Land", a broad classification that precludes an in-depth discussion of area –specific characteristics that could better inform Reserve designation decisions.)

The ODA report did use NRCS capability class and importance (prime, unique, important farmlands) along with other information to develop a soil map of the region. On this map, farmland is classified as Foundation, Important or Conflicted. OAR Factor 660-027-0060 identifies additional attributes that must be considered in determining suitability for rural reserves.

<sup>&</sup>lt;sup>1</sup> USDA Soil Conservation Service and Oregon Agricultural Experiment Station; October, 1982.

Soil suitability is a component of addressing Factor 2c of the administrative rule. Initial NRCS mapping resulted in the vast majority of the valley floor consisting of one large block of either Class I-IV soils or one large block of farmland designated as high-value. This uniformity precludes refined distinctions if decisions need to be made regarding one area or another, illustrating the need for more detailed characteristics.

The 1982 OSU report provides more detailed information about the productivity of the soils and highlights the importance of water relative to potential productivity. It also provides seven soil classes instead of four (based on variations of slope) that provide for more distinctions. The three predominant soil types in the Helvetia area are Helvetia (13%), Woodburn (10%) and Verboort (9%) Series soils. According to the Soil Survey of Washington County, Helvetia soil series are SCS Capability units IIe-2, IIIe-5 and IVe-5 (The SCS Capability units range from I to VIII, with Class I being the best). The report rates the Helvetia soil series at 48 to 60 for Native Productivity, with 70 being the highest possible native productivity rating. With soil amendments (i.e. fertilizer) and the addition of drainage infrastructure such as tiles, these soils have a maximum Dryland Productivity value ranging from 61 to 73 (the maximum Dryland value is 80). Finally, with irrigation, these soils have a maximum Irrigated Productivity value ranging from 61 to 93, with the maximum Irrigated value at 100. The Woodburn and Helvetia Series show a similar progression of increased productivity with increasing agricultural inputs.

Much of the area north of Forest Grove and south of Highway 26 has been recommended as a rural reserve. The reserve recommendation area is comprised of Sub-area 12. The three predominant soil types in this sub-area are Woodburn (40%), Jory (10%), and Aloha (8%) series soils. The SCS capability determination for Woodburn soils is primarily IIe-2 but also IIIe-5. The report rates the Woodburn soil series at 59-65 for native productivity, 72-78 for Dryland and 89-94 for irrigated land. The narrow range of each category of the sub-area 12 soils compared to the Helvetia sub-area soils illustrate that the soils are consistently more suitable for agriculture on a relative basis.

The Helvetia sub areas discussed above were classified as either Tier 2 or Tier 3 in the farm analysis based on the above soil analysis and irrigation elements discussed below, as well as a comparatively high level of parcelization and housing density. In the area north of Forest Grove and south of Highway 26, the predominant soil capability class was II, parcel size was greater and housing density was less. This area was subsequently recommended as a rural reserve

Access to irrigation provides a significantly wider choice as to what crops can be grown on a site. Staff is aware that dryland farming is currently practiced in on a number of parcels in the area. However, an increase in the diversity of crops is possible on those sites with available water, particularly waterdependent food crops such as vegetables. Staff analysis included assigned water rights such as stream and in-ground water rights and TVID delivered water in the irrigation analysis, based on information from the Oregon Water Resources Department.

Jim Johnson, an ODA representative, noted (in a July 2009 meeting with the Reserves Coordinating Committee) that - in 2007 - 78,304 acres of irrigated farm land were identified in the county, with 17,000 acres in the Tualatin Valley Irrigation District (TVID). Seventy-seven percent (77%) of the total value of crops harvested in Oregon was irrigated.

For irrigation productivity results, staff relied on a 1982 report published by Oregon State University<sup>2</sup> that illustrated enhanced soil productivity through the use of irrigation, due in part to Factor (2)(c), which requires consideration of parcels to"..have available water where needed to sustain long-term agricultural operations." The OSU report supports staff's contention that water availability may be a limiting factor for agriculture over the 40-50 year reserves planning horizon and may ultimately prove essential in sustaining long-term agricultural operations.

#### Summary

Staff used the analysis described above to determine rural reserve suitability in the Helvetia area. Subareas 9, 13, and 14 (shown on Map 27 of the August Staff Report appendix) comprise the majority of the Helvetia area. This sub-area consists of approximately 354 acres (3.2% of sub-area) of Class I soils and approximately 3,065 acres of Class 2 soils (37.3%). The continued refinement of the analysis for farm productivity indicated that irrigation increases productivity of all land on which it is applied. Sub-area 14 and the Helvetia area in general are productive farm lands, as evidenced by on-going viable agricultural efforts in the area. However, Helvetia soils are less productive than larger, more contiguous blocks of irrigated farmland, including the drainage basins of McKay Creek, Dairy Creek, and the Tualatin River, due to the lack of access to irrigated water or water right for agricultural use. Based upon the detailed application of the Factors, much of these areas are rated as Tier 1 and are recommended as rural reserves. Additionally, the Helvetia area is more parcelized and typically has significantly greater housing density than the above areas, which further reduce the suitability of the area for Rural Reserve designation.

<sup>&</sup>lt;sup>2</sup> "Agricultural Productivity Ratings for Soils of the Willamette Valley." Huddleston, J. Herbert. Oregon State University Agricultural Extension Service, October 1982.

## WASHINGTON COUNTY RESERVES COORDINATING COMMITTEE ISSUE PAPER No. 04

#### **Urban Industrial Land Uses & Growth**

#### Issue

Recent public comments assert that existing urban industrial lands in Washington County are underutilized: i.e., that large industrial sites occupied by high tech, silicon solar energy manufacturing, bio-pharmaceutical products assembly and other industrial businesses appear to be sparsely developed while additional industrial lands are being sought for future urbanization through the Urban Reserves and UGB amendment processes. These comments also questioned the reliability of the estimates of remaining growth capacity.

#### **Staff Recommendation**

In developing final recommendations for Urban and Rural Reserves in Washington County, consider the need to continue support of traded sector industries that are vitally important to the local, regional and state economies. This may best be achieved through recommendations supporting the collaboratively developed candidate Urban and Rural Reserve areas shown on attached Revised Recommended Urban and Rural Reserves map. In addressing this issue there are no changes proposed to the recommendations outlined in the August 3<sup>rd</sup> Staff Report.

#### Conclusions

As explained below, there are a variety of development practices typical of industries locating in Washington County that may lead to a misconception that urban industrial development in the County does not efficiently utilize available land. Many large scale industrial developments in Washington County are tied to business plans and site development plans requiring many years to implement. These practices typically do not lead to inefficient use of buildable industrial lands.

#### **Background and Analysis**

Industrial projects in Washington County include a broad variety of forms, scale and overall building floor to land area ratios (FAR's<sup>3</sup>). These projects contain a mix of manufacturing, warehousing and distribution, research and development as well as office uses. The following discussion provides an overview of the characteristics of contemporary industrial development in Washington County including examples of typical 'phased' industrial developments.

## Attributes of Typical Washington County Urban Industrial Projects:

• Urban Industrial Business Models, Business Plans & Site Development Master Plans: Most large scale urban industrial businesses that chose to locate in Washington County came into the County with business models and master plans for the sites they were acquiring that identify their immediate and longer-term expansion needs. These businesses prepared site development Master Plans designed to apply their proven (and often pre-financed) production and operation business models to the site. They implement their business plans over time through phased expansions of their operations that respond to forecast business growth, market

<sup>&</sup>lt;sup>3</sup> FAR's are a measure of the total square feet of building area compared with the total buildable land area of the site on which the building is located. FAR's provide an indication of the overall efficiency of land use. Higher FAR's are associated with buildings with more floors or larger footprints on a given site size. For example, a five story building on a one acre site with a maximum allowable building footprint will have a much higher FAR than a two story building on the same site.

demand for products as well as unforeseen new-opportunities. Therefore, "regulatory certainty" in the ability of these businesses to carry out these plans is absolutely critical to their ability to expand (based upon their respective business models and master plans) and respond to market demand in a timely manner. Examples of the typical evolution of industrial site development in Washington County are shown in attachment 1.

#### • Hours of operation:

Many of the major traded sector industries operate two to three business shifts per day (18 to 24 hours). Significant efficiencies are realized by businesses running multi-shift operations – these include but are not limited to: increased use of building space, increased efficiencies of utilities and selection of work hours outside of peak travel times which significantly increases efficiencies and decreases impacts on the transportation system.

#### • Employment densities:

Densities range from 10 to 60 jobs per acre with office and research and development (R&D) facilities averaging over 30 jobs per acre. Total employment per acre is significantly higher for businesses running multiple work shifts per day.

#### • General Site Characteristics:

Typical industrial sites may include or be adjacent to large areas of floodplain, wetlands, wildlife habitat or other un-developable lands (such as utility easements, required building setbacks or open space). These un-developable lands may often be viewed as wasted or underutilized land.

#### **Special Site Characteristics:**

Some industrial / office campuses are unique and incorporate special features such as lakes, trails and recreation facilities. For example, the Nike World Headquarters campus incorporates special landscaping elements such as a lake, trails, soccer fields, and a running track. Each of these elements is strategically intended to represent Nike's business model and corporate image. Many office and industrial parks in Washington County incorporate streams, floodplains and wetlands within overall site designs. These special landscape features are both environmentally sound as well as attractive elements for tenants and surrounding neighborhoods, yet may again be viewed as inefficient use of industrial lands. The Nike World Headquarters campus is one of many examples of office / industrial projects in Washington County that was developed in phases over the course of many years. One of the last major additions to this campus was a large structured parking facility.

## • Surface vs. Structured Parking:

In many cases, it may not be practical or financially feasible for new businesses to construct structured parking facilities during early phases of business plans and related site development. Once site development, ramp-up of employment and net revenue reaches an appropriate threshold, surface parking may be supplemented by structured parking or replaced with new buildings supported by structured parking. Depending on the business, it may take many years for company earnings, property values, business equity and other fiscal circumstances to reach a stage wherein on-site structured parking becomes financially feasible.

## • Re-use and Retrofit of Existing Industrial Buildings:

Unlike the versatility of some industrial flex-space buildings in industrial parks, vacant buildings that were specially designed for the unique production requirements of their initial user may not reasonably accommodate other types of industrial users without incurring retrofit costs that exceed the cost of new buildings on vacant land. Hence, for the most part, existing industrial buildings are not "fungible resources" and cannot be counted on to accommodate future needs of specialized urban industries.

## Estimated Industrial UGB Land Capacity:

In developing estimates of remaining growth capacity in Washington County, the jobs capacities of all undeveloped portions of industrial sites are counted in both County-level as well as Regional-level estimates. Thus, County estimates of future need for Urban Reserves take into account the potential capacities of the unused portions of these existing, master-planned industrial sites. The Washington County growth capacity estimates also include estimates for long-term infill and redevelopment (see Appendices E-1 through E-3 of the August 3<sup>rd</sup>, 2009 Staff Report).

## Protection of Environmentally Sensitive Lands:

A common theme to the majority of the urban industrial development in Washington County is the creation of vegetated open space and the protection and/or mitigation of environmentally sensitive areas. Although these open space areas are often viewed as wasted land that results in reduced development densities, they are the direct result of contemporary state, regional and local environmental regulations. (Rain gardens and green roofs can not adequately compensate for the loss of open streams and tree canopy).
Attachment 1 - Major Phased Developments			
Project Name	Phase	Phase Year	Nature of Phase
Intel Ronler Acres			
(approx. 330 acres)	1	1994	warehouse and project buildings
,			327,000 sq. ft. office building, and fabrications/CUB
	2	1995	building, and gass processing building
	3	1996	2 office/research buildings
	4	1997	manufacturing/industrial support buidling.
	5	1998	1200 car parking garage
		2000	
	6	2000	Pathfinder industrial building, and RS-2 expansion
		2001	RS-1 expansion, RA-3 office/manufacturing support
	7	2001	buidling, and D1D chip manufacturing buildings
	8	2002	SE campus parking lot
	9	2005	RA-3 building expansion
TOK America			
(approx. 38 acres)	1	1992	chemical production plant
	2	1996	new industrial building
	3	2002	industrial building expansion
	4	2003	chemical plant expansion
	5	2006	wharehouse, and factory expansion
Solarworld			
(approx. 95 acres)	1	1995	wafer manufacturing plant (Komatsu)
	2	2007	mechanical equipment building
	3	2008	210,000 sq. ft. industrial building
		2000	11,000 sq. ft. expansion to industrial building, and waste
	4	2009	transfer building
Intel Jones Farm			
(approx. 115 acres)	1	1992	new office buildings and manufacturing facility
	2	1993	new office/lab/cafeteria
	3	1995	new office building
		1007	
	4	1997	New data center/conference center/office building
	5	1999	new office building
	6	2004	new 150,000 sq ft. data center
Triquint Corp.			
(approx. 30 acres)	1	1995	new office/manufacturing facility
	2	2000	office building expansion
	3	2005	nitrogen generation facility
Genentech			
(approx. 75 acres)	1	2006	fill and finish facility
	2	2007	70,000 sq. ft. expansion of fill and finish facility
Intel Hawthorne Farm			
(approx. 53 acres)	1	1978	Intel Campus
	2	1993	nitrogen delivery pad and tank
	3	1994	cafeteria and parking addition
	4	1995	computer test site and equipment facility
	5	1996	new liquid nitrogen tank
	6	1997	new fitness center
Source: City of Hillsboro; Augu	ist 20, 20	09	

## **Undesignated Lands**

#### Issue

The August 3, 2009 Staff Report Urban and Rural Reserves Recommendations (staff report) identified lands suitable for urban and rural reserves. In addition some lands did not receive either of those designations. Some property owners have questioned why some lands were not designated and what the effects of non designation will have on their properties.

#### Recommendation

Consider the information presented in this issue paper as part of the deliberations for recommending rural and urban reserves in Washington County to the Regional Reserves Steering Committee. In addressing this issue there are no changes proposed to the recommendations outlined in the August 3 Staff Report.

#### Background

The urban and rural reserve designation criteria set forth in Oregon Administrative Rule (OAR) 660-027 do not require a rural or urban reserve designation be applied to all areas. Land may be left undesignated.

#### Analysis

The study and analysis conducted by staff resulted in three reasons for areas inside the study area being left undesignated:

#### Area of Interest for a Non-Metro City

The cities of Banks and North Plains are not within Metro's boundary and not subject to Metro's regional regulations. Further there is a separate and different process and law potentially available to Banks and North Plains should they engage in a planning process involving the county. Representatives from each city requested that their respective areas of interest for future growth be left undesignated so as to allow for potential application in the future.

#### Rural Analysis did not result in a Tier 1 classification

As described in the August 3, 2009 staff report, the rural analysis evaluated agriculture, forestry, and natural landscape features separately in sub-areas and then divided them into tiers based on how well they met the Rule requirements for designating rural reserves. These tiers can be found in map numbers 28, 30 and 33 in the staff report. A composite tier and sub-area map was then created that overlaid the three features into one map showing recommended rural reserves. The Tier 1 areas became the basis for the rural reserve recommendation. This left many locations outside of the Tier 1 areas and also outside of a recommended urban reserve. Staff decided to accurately represent analysis results and not close the gaps that appear as undesignated land.

#### Adjusted Candidate Urban Reserve area not included in a Pre-Qualified Concept Plan

As staff's analysis proceeded, the amount of land under consideration for an urban reserve went from the regional study area in September, 2008 (Map 1) to candidate urban reserves in February 2009 (Map 10) to adjusted candidate urban reserves in May 2009 (Map 14) to recommended urban reserves in August 2009 (Map 34). Each progression reduced the area being considered (the final result was less

than the mid-point of the estimated future land needs analysis.) For this reason (with the exception of lands identified by the city of Tigard) it was decided to leave those areas identified on the May 2009 adjusted candidate urban reserve map that did not have a pre-qualified concept plan as undesignated.

## **Technical Concerns**

The draft recommendations leave some parcels with split designations however this is no different than what occurs now with parcels divided by the existing urban growth boundary.

## Summary

Staff does not believe that leaving land as undesignated is problematic for landowners in that the reserve designations do not change underlying land uses or plan designations. Some landowners on undesignated parcels have informed staff of their concern that undesignated status for parcels will result in potential urbanization in the (relatively distant) future inasmuch as municipalities will have to consider utilization of undesignated lands if the recommended urban reserves areas are fully developed.

## **Utilization of Department of Forest and Department of Agriculture Inventories**

#### Issue

Staff evaluated agricultural, forestry and natural area attributes in considering areas suitable for rural reserves. The question has been raised as to why staff conducted a more layered analysis of agricultural attributes than forest land analysis.

## Recommendation

Consider the information presented in this issue paper as part of the deliberations for recommending rural and urban reserves in Washington County to the Regional Reserves Steering Committee. In addressing this issue there are no changes proposed to the August 3 Staff Report.

# Background

OAR 660-027-0060(4) allows counties a 'safe harbor' by declaring all lands designated as "Foundation" or "Important" (in the Oregon Department of Agriculture's (ODA) 2007 Agricultural Lands Inventory) as suitable for rural reserves without further explanation. Staff determined the ODA map provided the basis for evaluation but that the available information was too broad-based to make precise recommendations for rural reserves. Staff concluded a more rigorous analysis of agricultural lands than was available through the ODA report would be necessary for decision-making.

To map forestlands, staff used the Oregon Department of Forestry's (ODF) Wildland Forest Inventory mapping data from 2008. This data more accurately assessed on-the-ground conditions relative to forest lands by including eight separate land use categories. ODF recommended larger blocks of forested land in the outer edges of the study area for protection. These areas ('Wildland Forest') were included as Tier 1 candidates for rural reserve recommendation. Tier ranking determinations for forestry were facilitated by this greater level of detail.

All areas within the five mile study area were considered as subject to urbanization in the reserves analysis. For the agricultural and forest analysis, consideration of "subject to urbanization" was separated into three categories to enhance the analysis: high, medium, and low. Though subject to urbanization, Wildland Forest areas, due to their location above the valley floor, were determined to have a low subject to urbanization rating. Given this fact and the level of detail in the ODF report, further analysis was not required.

# Analysis

The land mapping resulting from the ODA analysis is limited to a total of three classifications in their 2007 Agricultural Lands Inventory: Foundation, Important, and Conflicted lands. The overwhelming majority of the acreage was considered foundation land; this designation was broadly applied and made no further distinction among those agricultural areas. (As an example, the entirety of Hagg Lake and relatively large blocks of forestland were classified as foundation land.) To better apply the rural reserve factors found under OAR 660-027-0060, Staff believed a more intensive agricultural analysis was important to the rural reserve designation process. Components of this analysis are detailed in the County's August 3, 2009 Staff Report and included parcelization, dwelling density, and crop productivity based on successive agricultural inputs, and possession of a water right or inclusion within the Tualatin Valley Irrigation District.

The ODF's Wildland Forest Inventory was a more detailed analysis than ODA's mapping effort in that it established eight separate land type categories, including Wildland Forest, Mixed Forest Agriculture, and Low Density Residential/Commercial. Wildland forest is defined by ODF as "large continuous tracts of forest land with fewer than five developments per square mile generally scattered across the area" (staff interprets "developments" as a proxy for dwelling units). The Wildland Forest designation effectively captures larger blocks of commercially-grown timber, thereby addressing factors (2)(b-d) of OAR 660-027-0060.

All areas within the five mile study area were considered subject to urbanization. Subject to urbanization was further refined into three determinations of low, medium, and high. The Wildland Forest areas were determined to have a low subject to urbanization (rather than medium or high determinations) due to the location of these areas above the valley floor. All areas noted as Wildland Forest on the ODF map were included as suitable for rural reserves.

## Summary

The ODA data was an excellent source to begin the reserves analysis; however, it was incumbent on staff to provide additional detail on agricultural features in order to address the Rural Reserve Factors more completely. Parcelization, water accessibility where needed, soil capability, housing density and suitability to sustain long-term operations all were factored in staff's analysis.

The ODF data provided sufficient detail for analysis, most was not subject to potential urbanization and staff identified all lands designated as Wildland Forest for Tier 1 rural reserve recommendations.

# **Growth Estimates and Future Land Needs**

#### Issue

A variety of comments related to the growth estimates developed in support of recommended Urban Reserves imply that those estimates may be too high and that the resulting recommendations may include too much land within the areas proposed for Urban Reserve designation.

## Recommendation

Continue to rely upon Metro's long-term seven-county Regional Growth Forecast and related Washington County land needs estimates developed by Washington County in determining the amount of land to recommend as Urban Reserves.

# Background

This Issue Paper summarizes the key considerations and related analysis supporting the Regional Growth Forecast and related land needs estimates developed by Washington County. Provided below is a review of the ranged growth forecast for the Portland Metro 'Primary Metropolitan Statistical Area' (PMSA), together with:

- o historic growth trends in Washington County,
- o applicable requirements of OAR 660-027 related to the designation of Urban Reserves,
- o the general methodology utilized in developing the land needs estimates, and
- o the conservative nature of recommended Urban Reserves.

# A. Regional Growth Forecast:

In April of 2009, Metro released a draft 20 and 50 year range forecast for the seven-county Portland – Beaverton – Vancouver PMSA. This forecast estimates that by the year 2060, the 7-county PMSA will grow to between 3.6 and 4.4 million people with resulting average annual growth rates of between 1.05% and 1.38% per year. This forecast acknowledges likely uncertainties of these estimates and incorporates statistical probability analyses which provide confidence levels for the lower and upper bounds of the forecast range. The resulting confidence levels indicate that there is a 5 percent chance that the 2060 population will be below 3.6 million and a 5% chance that it will be above 4.4 million. This overall level of confidence indicates that there is a 90 percent probability that the total population in the year 2060 will fall within the predicted range.

Metro has declined to provide county level allocations of forecast growth. Therefore, growth projections for Washington County were developed by Washington County Staff. These county level allocations were derived from county level shares of the seven-county forecast. These shares were based on long-term historic growth trends in each of the seven counties. Details of the county level distribution of the Regional Forecast are included in Appendix 4 of the August 3<sup>rd</sup>, 2009 Staff Report.

# B. Historic Growth Trends in Washington County:

The 'Land Needs Analysis' developed in support of the candidate Urban Reserves recommendations in Washington County (Appendix 4 of the August 3, 2009 Staff Report) includes a table showing historic population growth in the seven-county PMSA. This table includes data showing county shares of PMSA growth for the sixty year period from 1940 to 2000. During this period, the 3-county Metro area captured an average of 74.8 percent of the total seven-county growth and that Washington County captured nearly twenty nine percent of the seven-county area. This table also shows that Washington

County has captured an average of more than 33 percent of the seven-county population growth since 1960. Strong job growth, generally within high technology business clusters, is expected to continue to support a relatively high capture rate in Washington County.

# C. Rule Requirements – OAR 660-027-0040 (2):

This Rule states: "Urban reserves designated under this division shall be planned to accommodate estimated urban population and employment growth in the Metro area for at least 20 years, and not more than 30 years, beyond the 20-year period for which Metro has demonstrated a buildable land supply inside the UGB in the most recent inventory, determination and analysis performed under ORS 197.296". In essence, this generally translates to a requirement to designate as Urban Reserves a supply of land that would meet growth needs for the 3-county Metro area out to the time period between the years 2050 and 2060. In conjunction with Metro's most recent growth forecast, reasonable assumptions of potential future job and housing densities led to estimates of the amount of land needed to meet this rule requirement.

# D. Land Needs Estimates – Methodology:

Following a detailed analysis of remaining growth capacity within Washington County's current UGB (including estimates of long-term infill and redevelopment capacity), forecast growth was compared with these remaining UGB capacity estimates to determine land needs to the years 2050 and 2060. These land needs estimates are shown in Appendix 4 of the August 3, 2009 Staff Report. Appendix 4-(A-3) includes a detailed description of the methodology utilized in developing the land needs estimates.

# E. Conservative nature of recommended Urban Reserves:

As noted above, Urban Reserves must be adequate to meet growth needs for the time period between 2050 and 2060. For the year 2050, the land needs estimates<sup>4</sup> for Washington County range from 17,734 acres to 50,411 acres while the needs estimates for the year 2060 range from 27,722 to 66,934 acres. The total acreage of recommended Urban Reserves (at approximately 34,400 acres) currently stands at the mid-point of the land needs range for the year 2050 (34,073 acres) and is more than 12,000 acres below the mid-point of the land needs range for the year 2060 (47,328 acres).

<sup>&</sup>lt;sup>4</sup> See Appendix 4 of the August 3<sup>rd</sup>, 2009 Staff Report

## **Cultural and Historic Features**

## Issue

A rich heritage of cultures exists in many areas throughout the region. Public comments refer to these cultural aspects as being significant to the considerations for urban and rural reserves recommendations. In particular Washington County has century farms, historic churches and cemeteries and links to a variety of cultural identities. Public testimony made special reference to local Swiss and German cultures.

## Recommendation

Consider the information presented in this issue paper as part of the deliberations for recommending rural and urban reserves in Washington County to the Regional Reserves Steering Committee. In addressing this issue there are no changes proposed to the recommendations outlined in the August 3 Staff Report.

# Background

The Oregon Administrative Rules OAR 660-027-0010 Definitions (6) refers to "Important natural landscape features". These features "...means landscape features that limit urban development or help define appropriate natural boundaries of urbanization, and that thereby provide for the long-term protection and enhancement of the region's natural resources, public health and safety, and unique sense of place. These features include, but are not limited to....historic and cultural areas; and other landscape features that define and distinguish the region."

Historic and cultural features are acknowledged in the definition of the rules. However the "Factors" that provide guidance for reserves designation (OAR 660-027-0060 (3)(e)) refer to natural features such as buttes, bluffs, islands and extensive wetlands and not to man-made features.

# Analysis

Despite not having historic and cultural features identified in the Rural Reserve factors under OAR 660-027-0060, staff recognized that these features are important on a local level and analyzed such features including rural communities, historic structures and pioneer cemeteries as well as many other historic and cultural areas. These area are typically identified within a landscape by special man-made features (schools, churches, cemeteries ...etc.). These features exist throughout the regional landscape in both urban and rural settings. Designation within a Rural Reserve would not provide special protection for any unique local cultural features.

# Summary

The staff analysis indicates that the identified historic and cultural features would not appropriately limit urban development or help define appropriate natural boundaries of urbanization. Although historic and cultural features provide good background information, they are not determinant for Rural Reserves designation.

# Justification for Rural Reserves Designation for the area north of Highway 26 per the following Rural Reserve Factors under OAR 660-027-0060

## Introduction

The following series of issue responses address a series of comments provided on August 31, 2009. These comments address key points in the submission "Justification for Rural Reserves Designation.." noted in the issue paper title. The issues are addressed in the order they were submitted and the responses refer to appropriate portions of the August 3 Staff Report – Recommended Urban and Rural Reserves. Some responses refer to issue papers included in the September 1, 2009 Revisions to the August 3 Staff Report.

The following recommendation is applicable to all the issues discussed in this document: Consider the information presented in this issue paper as part of the deliberations for recommending rural and urban reserves in Washington County to the Regional Reserves Steering Committee. In addressing this issue there are no changes proposed to the recommendations outlined in the August 3 Staff Report.

## Factor (4) Foundation Lands

#### **Issue:**

Many comments include a request that Rural Reserves Factor (4) be used by the county in designating rural reserves noting that no additional analysis is necessary. The result would be that all lands north of Highway 26 would be recommended as rural reserves.

# **Background:**

Rural Reserve Factor (4) provides that all Oregon Department of Agriculture designated "Foundation Lands" within three miles of the existing Urban Growth Boundary qualifies as rural reserves without further explanation.

# Analysis:

Staff determined that application of Factor (4) was insufficient to provide details likely to be important in decision-making when considering whether lands might be considered for urban or rural reserve designations. The other Rural Reserve Factors as well as the Urban Reserve Factors provide additional information necessary for determining the highest priorities for Rural Reserve designations.

# Factor (2)(b)

# **Issue:**

Comments on this Factor describe the productivity and diversity of agricultural operations in the area noting excellent soils, favorable rainfall and hydrology, and good parcel sizes.

# **Background:**

Factor (2)(b) notes that a rural area be capable of sustaining long-term agricultural (or forest) operations. (2)(b) is further defined in Factors (2)(d) (A) – (D). Factor (2)(d)(C) identifies parcelization, tenure and ownership patterns as additional characteristics to be considered.

# Analysis:

Staff consistently acknowledges the lands north of Highway 26 (and agricultural lands throughout the county) to be productive and diverse, to have good soils and many to have access to water rights as identified by the Washington County Water Master and Oregon Department of Water Resources data. Additionally staff acknowledges that many dryland farms successfully grow crops that don't require additional irrigation. Furthermore staff acknowledges that many farms in the region have passed through multiple generations. (Relative soil ratings are addressed in an additional issue paper regarding Factor (2)(c).)

Factor (2)(d)(C) identifies parcelization, tenure and ownership patterns as considerations. Staff analyzed parcel sizes and ownership patterns for the county's portion of the Reserve Study Area in the August 3 Staff Report (*page 28 – 29 and Appendix 1:Maps 22 & 26.*) Staff attempted to understand utilization patterns of multiple parcels and requested information relating to leased agricultural lands from both the Oregon Department of Agriculture and the Washington County Farm Bureau. No data was provided to support an analysis on that attribute.

# **Summary:**

Staff has consistently recognized the productivity and diversity of agricultural operations in the lands north of Highway 26. As guided by the Rural Reserve Factors, staff conducted analysis on a number of additional characteristics to gain a better understanding of the agricultural and forest lands and natural landscape features and to better inform the decision-making process.

# Factor (2)(c)

# **Issue:**

Comments received on this Factor request the county designate all lands north of Highway 26 as rural reserves based on the Oregon Department of Agricultures designation as "Foundation Lands". Comments also suggest the county's analysis is using outdated data for soil productivity from the 1982 Huddleston Report (which is described as being biased towards the use of irrigation and ignoring alternatives such as sub-surface ground water control through tiling and crop choice.)

# **Background:**

Factor (2)(c) describes two characteristics to be considered: suitable soils where needed to sustain long-term agriculture and available water where needed to sustain long-term agricultural operations.

# Analysis:

Staff based the soils analysis on a variety of data as described in the August 3 Staff Report (*pages 26 – 29, Appendix 1: Maps 3,18,19,20,21,22 & 23.*)

One of the studies staff used was "Agricultural Productivity Ratings for Soils" (1982 J. Herbert Huddleston – OSU Extension Service Soils Specialist.) This study illustrated the increased productivity of native soils from original soil productivity, to the addition of amendments (such as tiling and fertilizers) to the addition of irrigation. Staff used this study, with other information, to differentiate areas with available water (through stream or ground water rights or as part of an irrigation district) from those areas without water for irrigation. The differentiation could be an important factor if decision-making required recommendation of one area over another.

# Summary

Staff analysis identified a variety of characteristics to better inform choices between lands with higher or lesser rated soils and water-availability or not, should decisions need to be made between them. This issue is also addressed in another issue paper developed as part of the Revisions to August 3 Staff Report. That issue paper is titled: "Helvetia Area Soils Analysis" *page 13-14*.

# Factor (2)(d)

#### **Issue:**

Comments on this Factor note existing parcelization is not a problem – it is an opportunity for diversification. Additional comments note that placing lands into urban reserves will "put farming families out of work and cause the businesses that support these farms to go out of business or relocate."

#### **Background:**

Factor (2)(d)(A)&(C) describes existence of a large block of agricultural or other resource land with a concentration or cluster of farm operations (A) or agricultural and use pattern, including parcelization, tenure or ownership patterns..(C) as elements that contribute to long-term sustainable agricultural operations.

## Analysis

Staff analyzed parcel sizes and ownership patterns for the county's portion of the Reserve Study Area in the August 3 Staff Report (*page 30 and Appendix 1:Maps 22 & 26.*) Staff attempted to understand utilization patterns of multiple parcels and requested information from both the Oregon Department of Agriculture and the Washington County Farm Bureau. No data was received by which to conduct an analysis on that attribute.

In addition to parcelization patterns staff also mapped dwelling densities to better understand the issue of "large blocks of agricultural or other resource lands". The dwelling densities are identified in the August 3 Staff Report (*page 30 and Appendix 1: Maps 25 & 26.*)

#### Summary

Staff consistently recognized the productivity and diversity of agricultural operations in the lands north of Highway 26. Staff also consistently acknowledges that some farm operations have passed through multiple generations. Analyzing parcelization and dwelling densities throughout the county's portion of the Reserves Study Area provides additional information for choices if decision-making must distinguish between one area of land and another.

Regarding the affects of urban reserves designation, staff has not been provided evidence to support the discussion points that suggest an Urban Reserve designation will put farmers out of work or impact viability of businesses. Urban Reserve designations will not change underlying zoning or permitted land uses.

#### Factor (3)(c)

#### Issue:

Comments on this Factor note that the Oregon White Oak stands and savannahs should be considered in the designation of lands as rural reserves.

#### **Background:**

Factor (3)(c) describes areas that are "important to fish, plant and wildlife habitat;" as considerations for rural reserve designation.

#### Analysis

Staff utilized Metro's Natural Landscape Features inventory as directed in the Rural Reserves Factors. In addition, staff included the Goal 5 resources the county has developed (effectively increasing the lands to be considered for rural reserves.) Oregon White Oak are currently not an identified species for

protection within the Goal 5 inventory or by Oregon Department of Forestry (considered by staff as "other pertinent information".) The analysis approach is described in the August 3 Staff Report (*pages* 35 - 37 and Appendix 1:Maps 5, 31,32, and 33.) It is important to note however, that all new lands brought into the Metro UGB will require additional Goal 5 analysis and that any significant special habitat areas found through that analysis will be subject to program decisions.

# Summary

Staff utilized available inventories to recommend areas important to fish, plant and wildlife habitat as described in the August 3 Staff Report. Staff can find no evidence that either an urban or rural reserve designation will impact Oregon White Oaks as designation does not change the underlying land use zoning. Currently Oregon White Oaks are not a protected species in either an urban environment or farm setting.

# Factor (3)(c)

# **Issue:**

Comments on this Factor note that Roosevelt elk use the lands north of Highway 26 for range and forage and that those lands should be designated as rural reserves. Comments included a community survey of sightings of elk in the Helvetia area.

# **Background:**

Factor (3)(c) describes areas that are "important to fish, plant and wildlife habitat;" as considerations for rural reserve designation.

# Analysis

Staff utilized Metro's Natural Landscape Features inventory as directed in the Rural Reserves Factors. In addition, staff included the Goal 5 resources the county has developed (effectively increasing the lands to be considered for rural reserves.) The Oregon Department of Fish and Wildlife contributed input into the NLF inventory including wildlife corridors in the Tualatin Mountains. In addition to the NLF inventory and the county's Goal 5 inventory, lands above the 350' elevation surrounding the Tualatin Basin were also included in recommendations for rural reserves. The analysis approach is described in the August 3 Staff Report (*pages 35 - 37 and Appendix 1:Maps 5, 31,32, and 33.*)

# Summary

Staff acknowledges the importance of protecting wildlife habitat corridors between Forest Park and the west hills and the Coast Range. Staff utilized available inventories to recommend areas important to fish, plant and wildlife habitat as described in the August 3 Staff Report (*page 35 – 37 and Appendix 1: Map 5, 31,32, & 33.*) Oregon Department of Fish and Wildlife contributed input to the inventories used for analysis including identified wildlife corridors.

# Factor (3)(e)

# Issue:

Comments on this Factor note cultural and historic features in the Helvetia area including features registered on the National Register of Historic Places, Century Farms, State of Oregon Historic Buildings, and the Washington County Cultural Resource Inventory. The comments also include references to the Swiss heritage of the area. The comments request that the area north of Highway 26 be designated as a rural reserve based on the contribution of these features to the regional sense of place.

# Background

The Oregon Administrative Rules OAR 660-027-0010 Definitions (6) refers to "Important natural landscape features". These features "...means landscape features that limit urban development or help define appropriate natural boundaries of urbanization, and that thereby provide for the long-term protection and enhancement of the region's natural resources, public health and safety, and unique sense of place. These features include, but are not limited to....historic and cultural areas; and other landscape features that define and distinguish the region."

Historic and cultural features are acknowledged in the definition of the rules. However the "Factors" that provide guidance for reserves designation (OAR 660-027-0060 (3)(e)) refer to natural features such as buttes, bluffs, islands and extensive wetlands and not to man-made features.

## Analysis

Despite not having historic and cultural features identified in the Rural Reserve factors under OAR 660-027-0060, staff recognized that these features are important on a local level and analyzed such features including rural communities, historic structures and pioneer cemeteries as well as many other historic and cultural areas. The description of this analysis is in the August 3 Staff Report (*pages 36 – 37.*) These areas are typically identified within a landscape by special man-made features (schools, churches, cemeteries ...etc.). These features exist throughout the regional landscape in both urban and rural settings.

This comment was also addressed in Issue Paper Number 07, Revisions to August 3, 2009 Staff Report – Recommended Urban and Rural Reserves.

## Summary

The staff analysis indicates that the identified historic and cultural features would not appropriately limit urban development or help define appropriate natural boundaries of urbanization. Although historic and cultural features provide good background information, they are not a determining consideration for Rural Reserves designation. Designation within a Rural Reserve would not provide special protection for any unique local cultural features.

# Factor (3)(h)

#### Issue:

Comments on this Factor note the lands north of Highway 26 be designated as rural reserves to protect access to recreational opportunities in the Helvetia area. Opportunities noted include specialty farms, Community Supported Agriculture farms, equine and alpaca businesses, vineyards and wineries, and attractive areas for runners and bicyclists.

#### Background

Factor (3)(h) describes providing "..easy access to recreational opportunities in rural areas, such as rural trails and parks" as considerations for rural reserves. Rural recreational opportunities such as rural trails and parks were incorporated in the Metro Natural Landscape Features Inventory.

#### Analysis

Staff utilized Metro's NLFI as a basis for rural reserves designation including protection of access to rural recreational opportunities. A description of that analysis is in the August 3 Staff Report (*pages 35* – 37.) In consideration of urban reserves designation connectivity to existing trails and parks will be an element of community planning when a particular area is brought within the Urban Growth Boundary.

The factor cites examples of recreation in rural areas "such as rural trails and parks." For examples such as businesses, specialty farms and Community Supported Agriculture farms, staff could find no evidence that inclusion in an urban reserve would negatively impact those operations.

## **Urban Reserve Findings Rebuttal**

#### Issue

A document entitled: "Draft Recommendation for Urban Reserves Designation – Rebuttal" has been submitted. This document raises concerns and provides comments on the eight "Factors for Designation of Lands as Urban Reserves" as they relate to the Helvetia area in Washington County.

## Recommendation

Consider the information presented in this issue paper as part of the deliberations for recommending rural and urban reserves in Washington County to the Regional Reserves Steering Committee. Based upon this information, staff is not recommending changes to proposed Urban and Rural Reserves.

## Background

For purposes of this issue paper, the Helvetia area is defined as that portion of unincorporated rural Washington County (within the Regional Urban and Rural Reserves Study Area) located north of Sunset Highway from the Multnomah County line west approximately 6.5 miles to the city of North Plains. This issue paper responds to comments provided in the document "Draft Recommendation for Urban Reserves Designation – Rebuttal" as it relates to the eight "Factors for Designation of Lands as Urban Reserves".

Pre-qualifying Concept Plans developed by the cities in Washington County include materials addressing each of the Urban Reserve Factors along with detailed reviews of potential public facility and service needs.

# Analysis

The following discussion addresses key points of each of the eight 'Factors' related comments provided in the "Draft Recommendation for Urban Reserves Designation – Rebuttal" document.

(1) Can be developed at urban densities in a way that makes efficient use of existing and future public and private infrastructure improvements;

The first key comment provided in regard to this factor relates to drainage and states: "It would be unpredictable and costly to aggregate the right parcels in the right places at the right time to establish this necessary system sufficient to prevent flooding, erosion, and silting of downstream habitats." Staff Comment: The current regulatory framework for drainage applicable to urban development in the Tualatin Basin requires mitigation of downstream impacts at the time of development.

The second key comment on this factor relates to freight movement on Highway 26 stating that: "The county Urban Reserve proposal does not adequately address the aggregate impact of this added traffic to reliable movement on Highway 26".

Staff Comment: Freight mobility is addressed by the Regional Transportation Plan once lands are included within the Metro UGB. Both Federal and State funds are allocated to address identified problem areas through regular updates of that plan.

# (2) Includes sufficient development capacity to support a healthy economy;

The comment on this Factor expresses concerns related to trends of moving manufacturing jobs oversees and states: "We believe the demand for these facilities will decline".

Staff Comment: Our general understanding of this factor is that a "healthy economy is dependent upon assuring that a balance of all land needs are adequately addressed including but not limited to industrial, commercial, office, residential and institutional. Manufacturing jobs represent only one segment of these needs. As well, many businesses in Washington County with current manufacturing activities are currently expanding or planning to expand resulting in an increase in local manufacturing jobs.

# (3) Can be efficiently and cost-effectively served with public schools and other urban-level public facilities and services by appropriate and financially capable service providers;

Staff Comment: comments related to public schools and other public facilities and services do not address whether these facilities could be "...efficiently and cost effectively..." provided and do not indicate that this Factor could be more appropriately achieved in other areas. The cities have determined through their respective Pre-qualifying Concept Plan (PQCP) efforts that public schools and other urban-level public facilities and services could be efficiently and cost-effectively provided to the Helvetia area.

# (4) Can be designed to be walkable and served with a well-connected system of streets, bikeways, recreation trails and public transit by appropriate service providers;

Comments on this factor raise three concerns: 1) "The NE corner of the proposed Urban Reserve in Greater Helvetia is so difficult to serve for transportation that is was not even rated in the regional infrastructure study. "Not rated" because it is obviously not suitable for a network of roads to provide urban level transportation options." 2) That the "...proposed new development will reduce the overall density of homes and employment, making it harder to justify new High Capacity Transit to service existing employers ..." and 3) relating to active heavy rail lines in the Helvetia area they note that "...noise and vibration of the trains themselves could not be mitigated..." and that "The city and the county have not considered the cost of upgrading all existing and future crossings. Staff Comments: 1) Due to time and staff limitations, the transportation element of the regional infrastructure study only reviewed a portion of the overall 404,000+ acre regional reserves study area. These limitations led to the selection of areas that would provide reasonable representative samples of the broad variety of geographic areas around the region. Lands that were not studied (and therefore not rated) do not imply that those areas could not reasonably be served with urban level transportation facilities. 2) Pre-qualifying Concept Planning for proposed Urban Reserve areas assumed a minimum average of ten dwelling units per net developable acre for residential development and a minimum average of twenty jobs per acre for non-residential. These averages are higher than the established overall average densities in Washington County. Links to Centers and Corridors and High Capacity Transit service are expected to be established throughout all future urban areas. 3) Active heavy rail lines are an important element of most urban areas and rail crossings and adaptation to the noise and vibration related to those lines is expected as lands surrounding those lines are urbanized. Established rail lines provide opportunities for expansion of commuter facilities.

# (5) Can be designed to preserve and enhance natural ecological systems;

Comments on this factor raise four concerns related to floodplains, animal corridors, Oregon White Oak, and cultural sites.

Staff Comments: Each of these concerns is important to the urbanization process and is addressed by Statewide Planning Goal 5. This Goal requires detailed inventories, analysis and determination of significance followed by program decisions designed to protect significant resources prior to urbanization of any area.

## (6) Includes sufficient land suitable for a range of needed housing types;

Comments on this Factor state that "The City of Hillsboro does not offer true urban forms of living..." This statement did not address either the sufficiency or suitability elements of this Factor. The cities of Hillsboro and Beaverton have developed PQCP's and responses to this Factor indicating an ability to provide a range of housing types in the Helvetia area. The Cities have included preliminary estimates showing a total housing capacity for the proposed Helvetia Urban Reserve area of over 28,000 dwelling units. These units would be included in a variety of 2040 Design Type areas including: Inner Neighborhoods, Outer Neighborhoods, Neighborhood Centers and Town Centers with <u>average</u> densities ranging from eight to twenty units per acre.

# (7) Can be developed in a way that preserves important natural landscape features included in urban reserves;

Comments on this Factor cite a variety of important landscape features that are important to this area of the County (including: clusters of Oregon white oak, views of the Tualatin Mountains, important wildlife corridors, Holcomb Lake and views of the Tualatin Plains).

Staff Comment: As with the natural ecological systems addressed under Factor 5, many of these features must be addressed through a comprehensive Goal 5 inventory, analysis and implementing program prior to or at the time of urban zoning.

(8) Can be designed to avoid or minimize adverse effects on farm and forest practices, and adverse effects on important natural landscape features, on nearby land including land designated as rural reserves.

Comments on this Factor raise a series of 7 concerns: 1) poor transportation options; 2) required massive economic investment; 3) lack of citizen based commitment to economic investments required to develop the area; 4) irreversible disturbance of farm lands and related hydrologic resources; 5) conflicts along a long urban/rural interface; 6) alteration of drainage resulting in adverse impacts to established farming practices in the area; and 7) existing parcelization of the area will be an obstacle to developers resulting in increased costs.

Staff Comments: 1) The regional infrastructure analysis developed to inform the Urban Reserves planning process ranked the vast majority of the Helvetia area under a category of "Medium" suitability for relative costs of providing transportation infrastructure – a high percentage of the entire area analyzed within the Regional Reserves Study Area fell into this category. 2) The regional infrastructure analysis shows the majority of the Helvetia area within a "High Suitability" area for the provision of both Water and Sanitary Sewer. These rankings imply that the regional Water and Sewer providers that were directly involved in this analysis believe that this area would be comparatively easier and therefore potentially less expensive to serve when compared with other alternative areas within the Reserves Study Area. 3) It is currently unknown whether local public subsidy of infrastructure costs for new urban development in this area will be needed if and when these lands may be subject to urban development. 4) As previously noted, the urban development process requires analysis and mitigation of potential downstream impacts. 5) POCP's have addressed the ability to avoid or minimize impacts on farm and forest practices. 6) Green design concepts will encourage or require reduction of stormwater runoff and to provide natural filters designed to return runoff to existing groundwater aquifers. 7) Although Parcelization of lands may become a factor which could increase urban development costs, typical parcel sizes in the Helvetia area would not result in significant added costs.

#### Summary

At the outset, it is extremely important to note that Urban Reserve lands are expected to provide a long-term (40 to 50 year) supply of land that may be drawn upon only when it can be demonstrated that a need exists and that need cannot reasonably be met by lands within the Urban Growth Boundary (UGB) at that time. Further it is reasonable to assume that Metro and the applicable Counties, Cities and other service providers will adequately analyze potential serviceability and relative costs prior to bringing new lands into the Boundary.

It is important to note that each of the Factors of OAR 660-027-0050 has been addressed for the geographic areas being recommended for Urban Reserve designation in Washington County. Responses to each of the Factors are provided in Appendix 3 of the August 3, 2009 Staff Report. For the Helvetia area, these responses are included within the Pre-qualifying Concept Plans developed by the Cities of Beaverton and Hillsboro.

# Farm Bureau Concerns Related to Proposed Reserve Designations

# Issue

The Farm Bureau has submitted to the County a list of concerns regarding how staff applied rural reserve factors contained in OAR 660-027-0060<sup>5</sup>. Specifically, the Bureau questioned staff's methodology in using parcelization, soil capability, housing density, and irrigation as factors in assessing which agricultural lands were recommended as rural reserves to the Regional Reserves Steering Committee and the Core 4. A complete description of the methodology used by Staff to recommend rural (and urban) reserves can be found in the August 3rd, 2009 Staff Report.

This issue paper addresses the concerns noted in the Farm Bureau submittal.

# Recommendation

Consider the information presented in this issue paper as part of the deliberations for recommending rural and urban reserves in Washington County to the Regional Reserves Steering Committee. In addressing the issues discussed in this paper, staff recommends no changes to the rural reserve recommendations as noted in the revised September 1 Staff Report.

# Background

The Farm Bureau noted the following concerns:

- Too much farm land designated for Exclusive Farm Use (EFU) is recommended for urban reserves.
- Farm land most subject to urbanization overlaps the urban reserve recommendations.
- An overemphasis on irrigation.
- Disagreement with use of parcelization in the analysis.
- An overemphasis on lands suitable for viticulture.
- Inadequate address of agricultural infrastructure.
- Recommended Urban Reserves will not avoid or minimize adverse effects on farming.
- Undesignated land adjacent to the city boundaries of Banks and North Plains.

# Analysis

# Too much farm land designated for Exclusive Farm Use (EFU) is recommended for urban reserves.

The September 1 revision to the Staff Report recommends approximately 109,750 acres as rural reserves and approximately 34,250 acres for urban reserves, an increase of 950 and 650 acres respectively from the acreage figures contained in the August 3rd Staff Report . The 950 additional acres to rural reserves is from recalculated land north of NW Phillips Road and the 650 additional acres to urban reserves is from 650 acres west of SW Roy Rogers Road. Urban Reserves must be adequate to meet growth needs for the time period between 2050 and 2060. For the year 2050, the land needs estimates<sup>6</sup> for Washington County range from 17,734 acres to 50,411 acres while the needs estimates to the year 2060 range from 27,722 to 66,934 acres. The total acreage of recommended Urban Reserves is just beyond the mid-point of the land needs range for the year 2050 (34,073 acres) and is more than 13,000 acres below the mid-point of the land needs range for the year 2060 (47,328)

<sup>&</sup>lt;sup>5</sup> Letter dated August 26, 2009.

<sup>&</sup>lt;sup>6</sup> See Appendix 4 of the August 3<sup>rd</sup>, 2009 Staff Report

acres). The majority of land immediately outside city boundaries is designated EFU. Virtually all exception lands (AF-10 & AF-5) adjacent to urban areas have been included in the urban reserve recommendations. The amount of EFU-designated lands included in the urban reserve recommendation is based on the respective need assessments contained in pre-qualified concept plans found in the appendix of the Staff Report as well as the lack of available exception lands beyond what has been included.

# Farm land most subject to urbanization overlaps the urban reserve recommendations.

Staff evaluated all lands within the study area for both rural and urban reserve designation based on the applicable reserve factors and found that approximately 9,505 acres (28% of the recommended urban reserve area) were suitable for either designation. Approximately 2,491 acres of this total is adjacent to the cities of Banks or North Plains. The remaining 7,014 acres were recommended for urban designation based on land use need as indicated in the cities' pre-qualified concept planning.

# An overemphasis on irrigation and disagreement with use of parcelization in the analysis.

Part of the methodology used by staff to refine the agricultural analysis included considerations of parcel size and of parcels with available water (through stream or ground water agricultural rights or as part of an irrigation district). A thirty-five (35) acre parcel size separated small from large parcel in the analysis. The Farm Bureau notes that viable farm production occurs in the county on parcels smaller than 35 acres and on land that is not irrigated. Staff does not discount this assertion but was nevertheless faced with the task of having to choose the best available lands for rural reserve designation. Staff continues to believe that larger parcels and parcels in an irrigation district or with a recognized agricultural water right are most suitable for long-term agricultural operations and more closely align with the intent of rural reserve factor (2)(b-d). Hence areas with larger parcels and irrigation rated higher as rural reserve candidates.

# An overemphasis on lands suitable for viticulture.

During the early screenings of the analysis process, Staff considered analyzing slope and soil conditions within the study area to determine their suitability for viticulture. In spring of 2009 the Farm Bureau expressed concern that too much emphasis was being placed on viticulture as a determinant in the analysis process. The viticulture analysis was removed from the rural reserve methodology given the Farm Bureau's concern as well as staff's decisions that a single-crop analysis was too specific for review and that inputs necessary for viable viticultural production would be captured in the larger analysis.

# Inadequate address of agricultural infrastructure.

County staff asked both the Department of Agriculture and the county Farm Bureau for *quantitative* information that would help us better address this concern [agricultural infrastructure - Factor (2)(d)] without receiving a response. In considering this factor, staff could not find any information that established a threshold for continued viability of agricultural suppliers when considering potential loss of farm acreage.

# Recommended Urban Reserves will not avoid or minimize adverse effects on farming.

Impacts of newly urbanized land to existing farm practices will be addressed through the development of comprehensive plans at the point in which those areas are brought into a UGB. This may include buffering through the use of appropriate land use designations and/or through transportation improvements.

## Undesignated land adjacent to the city boundaries of Banks and North Plains.

North Plains and Banks are outside Metro's jurisdictional boundary and have not proposed urban reserves through the current process. Approximately 1,435 acres of land adjacent to Banks was considered suitable for a rural reserve and 1,056 acres adjacent to North Plains were likewise suitable for rural reserve designation. These lands were left undesignated to account for the potential future growth of these two cities over the next 50 years.

## Summary

Staff recommends no changes to the rural reserve recommendations noted in the revised September 1 Staff Report. Staff continues to believe that, notwithstanding viable agricultural production on smaller parcels outside a water district, parcels that are larger and that do have access to water will be more capable of sustaining agriculture over the long term. Virtually all available exception land adjacent to cities is included in the urban reserve recommendations. EFU lands included in urban reserve designations acknowledge the cities' expected growth projections and land needs to 2050 and beyond. Cities have submitted capacity estimates with their pre-qualified concept plans.

#### **Transportation Infrastructure Costs**

#### Issue

A variety of comments related to infrastructure costs were received. Many of these comments related to the county-wide distribution of local development costs. One particular issue was the costs of providing transportation infrastructure to "...30,000 plus acres in proposed Washington County Urban Reserves..." The following discussion and analysis focuses on the concepts of long-term costs of transportation infrastructure that may be needed to serve proposed Urban Reserve Areas in Washington County.

#### Recommendation

Consider the information presented in this issue paper as part of the deliberations for recommending rural and urban reserves in Washington County to the Regional Reserves Steering Committee. Based upon this information, Staff is not recommending changes to proposed Urban and Rural Reserves.

#### Background

Urban Reserve Factors 1 and 3 relate to the utilization and provision of urban infrastructure and services. Factor 1 states: "Can be developed at urban densities in a way that makes efficient use of existing and future public and private infrastructure investments." Factor 3 states: Can be efficiently and cost-effectively served with public schools and other urban level public facilities and services by appropriate and financially capable service providers." In order to determine the relative ability of lands within the Regional Reserves Study Area to meet the intent of these Rule Factors, a regional infrastructure analysis was conducted. Following this analysis, Reports and Maps reflecting the relative ability of applicable service providers (cities and/or special service districts) to provide services to lands within the overall Regional Reserves Study Area were developed. These Reports and Maps were developed through the cooperative efforts of engineering and technical staff representing the cities and special service districts from throughout the region with assistance from planning staff from Metro and the three counties. An important product of these efforts was the development of two maps showing the relative difficulty of providing transportation facilities including a map depicting "Connectivity Suitability" and another depicting "Added Lane Cost Suitability". It is also important to note that (due to limited time and staff resources) the Transportation element of the Regional Infrastructure Analysis was limited to a selected set of sub-areas from among the 404,000 plus acre Regional Reserves Study Area. These sub-areas were selected based upon the results of the Sewer and Water infrastructure analyses. The transportation study areas were very generally selected to coincide with areas shown on the sewer and water maps within classified Medium and High suitability areas. The resulting transportation analysis areas

#### Analysis

The Regional Infrastructure Analysis resulted in the development of a transportation report entitled "Preliminary Analysis of Providing Urban Level Transportation Service within Reserves Study Area". This report includes maps depicting: 1) Connectivity Suitability, and 2) Added Lane Cost Suitability. With the exception of a small area of land between Sherwood and Tualatin, the majority of lands within proposed Urban Reserve areas in Washington County are classified in the "Higher" suitability class on the 'Connectivity' analysis map and are classified in the "Medium" suitability class on the "Added Lane Cost" analysis map.

## Summary

For purposes of prioritizing lands for potential designation as Urban Reserves, the results shown on the two transportation analysis maps support the proposed areas in Washington County.

For most infrastructure related issues related to Urban Reserves it is premature to assume that the costs concerns that may exist today will still be an issue at a the time the applicable lands may be considered for urbanization; or to assume that those issues or concerns would not have been adequately addressed by interim planning and budgeting activities. Infrastructure costs will be analyzed when it is determined when and how Urban Reserve lands will ultimately be used and those costs will be a key factor in final urbanization decisions.