A G E N D A

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1700 | FAX 503 797 1794

METRO

MEETING: **METRO TECHNICAL ADVISORY COMMITTEE**
DATE: March 18, 2009
DAY: Wednesday
TIME: 10:00 a.m. to noon
PLACE: Room 370A&B

TIME	AGENDA ITEM	ACTION REQUESTED	PRESENTER(S)
10:00 a.m.	**CALL TO ORDER AND INTRODUCTIONS**		Robin McArthur
1. 80 min.	**Urban and Rural Reserves** - Urban and Rural Reserve Candidate Areas for Evaluation - Initial Screening Methodology and Results - 2009 Work Program *Desired Outcome: MTAC understanding of reserves initial screening results and how candidate area recommendations were developed*	Discussion	John Williams, Doug McClain, Chuck Beasley, Brent Curtis
2. 30 min.	**Summary of HCT/Local Aspiration Workshops and Demonstration of INDEX Tool** *Desired Outcome: Help in defining how the tool could help to further develop local aspirations and implementation*	Informational	Crista Gardner, Leila Aman
3. 5 min.	**Tentative 2009 MTAC Schedule** *Desired Outcome: MTAC understanding of a general timeline for discussions and decisions regarding components of Making the Greatest Place for this year*	Informational	Robin McArthur
12 noon	**ADJOURN**		

Next regularly scheduled meeting (MTAC meets the 1st & 3rd Wednesday of the month): April 1, 2009

For further information or to get on this mailing list, contact Paulette Copperstone @ paulette.copperstone@oregonmetro.gov or 503-797-1562

Metro's TDD Number – 503-797-1804

Need more information about Metro? Go to www.oregonmetro.gov

DATE: March 13, 2009

TO: MTAC members and alternates

FROM: Reserves Core 4 Project Management Team

RE: 3/18/2009 MTAC Urban and Rural Reserves presentation

Reserves Core 4 staff will be presenting an update on the Urban and Rural Reserves project to MTAC on March 18. As you know, we are engaged in a suitability analysis of the reserves study area, and on the 18th we'll discuss the initial screening methodology, proposed urban and rural reserve candidate areas, and the timeline for next steps in the reserves work program. Many of you have participated in this work at the county level and/or attend the regional Reserves Steering Committee meetings.

The focus of the discussion will be the urban and rural reserve candidate areas, so we are including for your reference technical memos produced by the Core 4 team that contributed to the initial screening process. Following are the materials included in this packet:

- Candidate area maps:
  - Draft urban reserve candidate areas for evaluation
  - Draft rural reserve candidate areas for evaluation
  - Draft composite urban and rural reserve candidate areas for evaluation

- Initial screening technical memoranda:
  - Memos from Clackamas, Multnomah, and Washington counties summarizing discussions leading to their candidate area proposals
  - February 5, 2009 urban reserves initial screening overview memo
  - February 9, 2009 preliminary analysis of providing urban level water service within reserves study area
  - February 9, 2009 preliminary analysis of providing urban level sanitary sewer service within reserves study area
  - February 9, 2009 preliminary analysis of providing urban level transportation service within reserves study area
  - January 13, 2009 rural reserves initial screening overview memo

- 2009 Reserves Steering Committee agenda items

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Multnomah County

WASHINGTON COUNTY OREGON

CLACKAMAS COUNTY

Urban and Rural Reserve Study Areas

Draft Urban Reserve Candidate Areas for Evaluation

DRAFT

Washington County
Clackamas County
Multhomah County
Reserves Study Area

Portland Metro UGB
Neighboring Cities' UGBs
Columbia River Gorge Scenic Area
County Line

0 1.25 2.5 5 Miles

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Urban and Rural Reserve Study Areas

DRAFT Rural Reserve Candidate Areas for Evaluation

DRAFT

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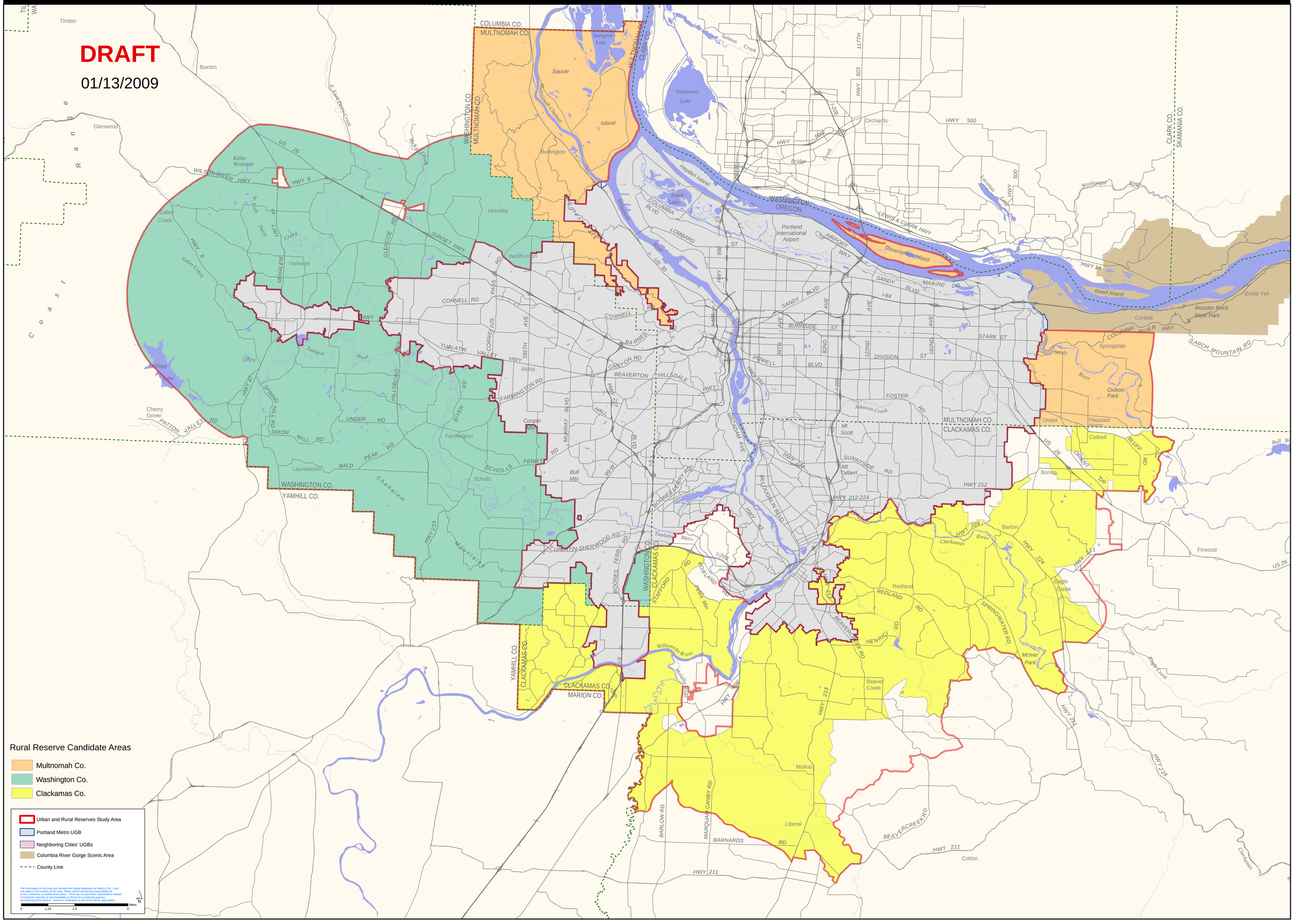

Rural Reserve Candidate Areas

- Multnomah Co.
- Washington Co.
- Clackamas Co.

- Urban and Rural Reserves Study Area
- Portland Metro UGB
- Neighboring Cities' UGBs
- Columbia River Gorge Scenic Area
- County Line

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METRO
PEOPLE PLACES • OPEN SPACES

Multnomah County

WASHINGTON COUNTY OREGON

CLACKAMAS COUNTY

Urban and Rural Reserve Study Areas

Draft Urban and Rural Reserve Candidate Areas for Evaluation

DRAFT

Rural Reserve Candidate Areas

Rural and Urban Reserve Candidate Areas

Urban Reserve Candidate Areas

Urban and Rural Reserves Study Areas

Portland Metro UGB

Neighboring Cities' UGBs

Columbia River Gorge Scenic Area

County Line

0 1.25 2.5 5 Miles

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Clackamas County's Urban Reserve CANDIDATE Areas
March 9, 2009

Clackamas County's Reserves Policy Advisory Committee (PAC) has spent their January and February meetings working with maps and discussing issues to identify candidate areas for urban reserves. Preliminary urban reserve candidate areas were mapped by small workgroups of the PAC at their February 24th, 2009 meeting. Candidate urban reserve areas will eventually be overlaid with candidate rural reserve areas. The final recommendation for actual urban and rural reserve areas will reflect the values of lands for both urban and rural purposes, as well as the need for urban land, which will be identified by Metro. Candidate urban reserve areas are NOT draft recommendations for urban reserve areas; they are an early step towards developing those recommendations.

Because the PAC considered candidate urban reserve areas immediately after they considered candidate rural reserve areas, the information they used for the previous exercise was fresh in their minds. It included:

- Recent aerial photos
- Agricultural land inventory (categories; Conflicted, Foundation, Important)
- Oregon Department of Forestry inventory (categories; Wildland Forest, Mixed Forest/Agriculture)
- Tax lots
- Reserves Study Area boundary
- Portland Metro and outlying city UGBs
- Lines showing 3 miles from Portland metro UGB and 1 mile from outlying city UGBs
- Areas with slope greater than 25%
- Region 2040 categories for nearby areas inside the Portland Metro UGB
- CPO and Hamlet boundaries

In addition, the PAC considered additional information that related to the urban reserve factors:

- Map of Sanitary Sewer Serviceability showing areas of high, medium and low relative serviceability by Portland Metro UGB service providers, and also areas that would be served by outlying cities
- Map of Water Serviceability showing areas of high, medium and low relative serviceability by Portland Metro UGB service providers
- A composite map that combined sewer and water serviceability
- Three transportation serviceability maps
- Existing road network
- Memo regarding serviceability for schools, parks, storm drainage
- Map of City Areas of Interest, showing areas of the study area that local cities are interested in considering as future service areas

Staff requested that the PAC focus this "first cut" review of urban reserves on Factors 1 and 3 of OAR 660-027-0050:

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

(3) (The area) 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;

The composite map of water and sewer serviceability was a starting point in applying these factors. The committee added local information, information about city interests, and information gleaned from topography, slope, and other maps.

Following the pattern set in the identification of candidate rural reserve areas, the 21 member PAC divided into three sub-groups to complete their analysis, with each group reviewing about 1/3rd of the study area in Clackamas County. For the most part, the individuals in the groups lived, worked or represented interests in the areas they discussed. The three groups identified preliminary candidate areas.

Following the development of the preliminary map by the PAC, staff reviewed the map with the Clackamas County Commissioners in study session. The county commissioners provided some principles for future actions regarding the reserves. The county commissioners also accepted the PAC's recommendation on candidate reserve areas with one change; they removed the candidate urban reserve area between Gresham and Sandy along Highway 26.

Board principles included:

- Protection of Foundation agricultural land is our top priority.
- Certain natural resources, especially the Clackamas River, are also top priority.
- Honor the existing agreement with the City of Sandy regarding keeping the Highway 26 corridor rural.

Preliminary Urban Reserves
Candidate Areas & Service Suitability

DRAFT

March 2009

Composite Candidate Areas

Water and Sewer Serviceability

- **High**
- **Medium**
- **Low**

- **High Water/Low Sewer Suitability**
- **Low Water/High Sewer Suitability**

Serviced From Adjacent City

Serviced From Adjacent Cities

- Study Area Draft Boundary
- County Boundary
- Areas Within Metro UGB

Scale: 1 inch = 5,000 feet

0 5,000 10,000 Feet

Clackamas County
Planning Division
Development Services Building
150 Beavercreek Rd
Oregon City, OR 97045

(503) 742-4400
zoninginfo@co.clackamas.or.us

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Multnomah County Reserves Citizen Advisory Committee
Urban and Rural Reserve Candidate Areas
Staff Report: Initial Assessment Methodology and Results
March 6, 2009 draft

Introduction

This memorandum includes a summary of the Multnomah County Reserves Citizen Advisory Committee (CAC) urban and rural reserve Phase 3 suitability analysis as of the end of February, 2009. The CAC anticipates further refinement of these initial results during Phase 3 of the Reserves project therefore these results should not be considered as final. The assessment is intended to provide the information described in Phase 3 of the Reserves work program as discussed in the November 4, 2008 memo to the Core 4 and Reserves Steering Committee from the Core 4 Project Management Team. As indicated in the Phase 3 memo, the initial "first screen" assessments are intended to narrow the focus of factors analysis by identifying "candidate" rural and urban reserve areas. It is understood that additional study of these areas will occur as more information about urban service provision and long-term land need becomes available.

The CAC assessment divides the Reserves Study Area into six subareas in Multnomah County. Five of the subareas correspond to Rural Planning Areas for which the county has developed plans and zoning regulations that reflect their different geographies and communities. The assessments reflect relative suitability for rural and urban reserves among these county planning areas.

Development of Assessments for Rural Suitability

The approach the CAC took to consider information and develop consensus entailed working in smaller area groups where members could apply their local knowledge of study areas, followed by consideration of group results by the whole CAC. The CAC divided into two groups, east county and west county, at their October, November, and January meetings to consider suitability for rural reserves. The October sessions focused on identifying areas that could be eliminated from further study due to potential for urbanization over the next 40 – 50 years because of proximity to the UGB – factor 660-027-0060(2)(a).

> (a) Situated in an area that is 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;

The assessments are based primarily on the "proximity to a UGB" clause of this factor because fair market values data was not readily available, and significant work with market value data undertaken by Washington County staff had not resulted in clear results that could be applied in Multnomah County areas.

The CAC also began consideration of rural reserve factors applicable to farm and forest land to improve their depth of understanding of the factors and the overall assessment. In November, the two groups responded to a series of questions intended to help understand how to apply the factors and to apply the agriculture and forestry studies to Multnomah County areas. This exercise was focused on the suitability concepts in the farm and forest studies, enabling CAC members to use their local knowledge of resource management and landscape elements in assessing areas against the factors. General information about the capability factors of soil and water derived from discussion with Soil and Water Conservation Service field staff for County areas was also provided to the CAC. This work was understood to be an initial assessment based on unrefined readily available sources of information.

Suitability questions:

1. What areas, based on proximity, do you believe have a relatively higher or lower potential for urbanization during the next 50 years?
2. What areas are being farmed or appear to be in forest use? Indicate what areas form large, medium, or small blocks relative to each other.
3. Where are non-farm or non-forest (resource) uses located, and do the edges between resource and non-resource uses contain adequate buffers?
4. Are there any areas that contain clusters of small parcels that appear to be in farm or forest use and clusters that are not?

In two January meetings, the groups considered the combined agriculture, forestry and landscape features maps, zoning and soils information, and worked to develop consensus on what areas should continue to be considered as candidate rural reserve. The CAC recommended that all of the Study Area within the county should continue to be considered for rural reserve, and their generalized rationale is included in the table below.

Table 1 Candidate Rural Reserve Areas

Sub areas	Rural Reserves Summary Rationale
Government Islands	Proximity to urban areas – I-205 High landscape features values
East of Sandy River	Proximity to Springdale and Corbett Suitable soils for long term agriculture Forest areas
Sandy River Canyon	Low potential for urbanization - topography Important landscape feature, sense of place
West of Sandy River	Proximity to urban areas along west edge and hwy 26 south Capable of sustaining long-term agriculture Contains Beaver Creek edge and habitat areas
NW Hills North	Areas have proximity to Scappoose Short commuting distance to Portland and Intel/Nike employment areas. High landscape features values – view corridor Wildland forest area
NW Hills South	High potential for urbanization due to adjacent urban areas

	Good wildlife habitat and headwaters streams View corridor from Sauvie Island Contains Important and Conflicted ag land
Sauvie Island/Multnomah Channel	Adjacent to Portland and hwy 30 existing transit to island, potential HCT Excellent agricultural land Good wildlife habitat and natural features values North-south flyway and bald eagle habitat

Maps used in group sessions included the study area boundary, county, UGB, 3 mile line and the following:
Aerial photo: 2006 flight, tax lots
Land use: RLIS tax lot data, parks, agriculture, forestry, public, rural residential, single family residence, and vacant.
Landscape Features
Oregon Department of Agriculture study map
Oregon Department of Forestry study map
County zoning, slope, and soils data.

Development of Assessments for Urban Suitability

The CAC used the same large group and sub area meeting format to consider and develop consensus on first screen suitability for urban reserves. Their assessment relied on the technical memos and maps provided by the regional water, sewer, and transportation work groups. This was the same information that was introduced to the Reserves Steering Committee at their February 11, 2009 meeting. The CAC also heard other information related to urban suitability in prior CAC meetings, including industrial lands constraints and infrastructure rating criteria, in preparation for their initial analysis. This work was focused on the efficiency and cost-effectiveness of providing key urban services found at OAR 660-027-0050(1) and (3):

> (1) Can be developed at urban densities in a way that makes efficient use of existing and future public and private infrastructure investments:
>
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The CAC began urban suitability assessments at their January 22 meeting by considering physical constraints mapping – slope and floodplains, and initial water and sewer maps. This information was supplemented by completed preliminary water, sewer, and transportation maps and technical memos. In addition, responses from Multnomah County "edge" cities, and testimony by property owners informed the assessment and recommendations that were completed at their February 26 meeting. The assessment of service efficiency was understood to be relative to all other areas within the regional study area, and the maps and memos reflected this.

The assessments here are based on the results of the technical analysis to date. Metro provided a useful map that blended water and sewer rankings into a single value ranked low, medium, high for suitability based on efficiency and cost of providing the service. Transportation suitability elements were also assessed from low to high, but were not blended into a composite map rating. Significant areas within Multnomah County were unrated for transportation due to constraints, and this contributed to the recommendation to not include much of those areas for further study as urban reserve candidate areas.

In developing their recommendations, the CAC considered whether they agreed with the suitability rankings for water, sewer and transportation, how areas not ranked for transportation services should be ranked, and whether any land in the Study Area should not be studied further as candidate urban reserves. The CAC recommendations are included in Table 2 below.

Table 2 Candidate Urban Reserve Areas

Planning Area	Urban Reserves Summary Rationale
Government Islands	No further study -- Concur with rankings which indicate area has a low suitability for providing sewer and water service -- Transportation suitability is low as well
East of Sandy River, Sandy River Canyon	No further study -- Concur with rankings which indicate area has a low suitability for providing water and sewer services -- Steep topography limits urbanization in this area
West of Sandy River	Continue to study -- Concur with rankings which indicate area is moderately suitable for providing water services, and highly suitable for sewer services -- Concur with rankings which indicate area is moderately suitable in terms of transportation connectivity and added lane cost; highly suitable in terms of system lane cost.
NW Hills North	No further study -- Concur with rankings which indicate area has a low suitability for providing water and sewer services -- Steep topography limits urbanization in this area
NW Hills South from Cornelius Pass/Skyline intersection south and west of 400' elevation	Continue to study -- Concur with ranking which indicate area is highly suitable for providing water -- Low suitability ranking on the ability to provide sewer services is unclear due to agreements with Clean Water Services (CWS) to service area -- Concerns exist over riparian areas and other natural resources, and ability to develop at urban densities
NW Hills South from NW Germantown Rd south and east of 400' elevation	No further study -- Concur with rankings which indicate area has a low suitability for providing sewer service, and a medium suitability for water -- Area could not develop at an urban density due to topography and lack of sewer availability

	-- Transportation suitability limited due to topography
Sauvie Island	Continue to study -- Concur with rankings which indicate area has a high suitability for providing sewer service, and a low suitability for water -- Concerns exist over floodplains, natural resources
Multnomah Channel North of SI Bridge	No further study -- Concur with rankings which indicate area has a low suitability for providing sewer and water service, and transportation infrastructure -- City of Portland has not expressed an interest in servicing this area
South Multnomah Channel – east of hwy 30	Continue to study -- Area contains marinas and moorages at a relatively high density -- Topography is flat -- Good access to transportation infrastructure -- Low ratings for water and sewer suitability a concern -- An undefined portion should be studied for urban reserve

Maps used in group sessions included:
Physical constraints – slope intervals, floodplain, distance from UGB
Preliminary Water Suitability
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Combined Water and Sewer Suitability
Transportation Services

- Preliminary Connectivity Suitability
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Multnomah County Reserves Citizen Advisory Committee
Urban and Rural Reserve Candidate Areas
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February 6, 2009 draft

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Table 2 Candidate Urban Reserve Areas

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Physical constraints – slope intervals, floodplain, distance from UGB
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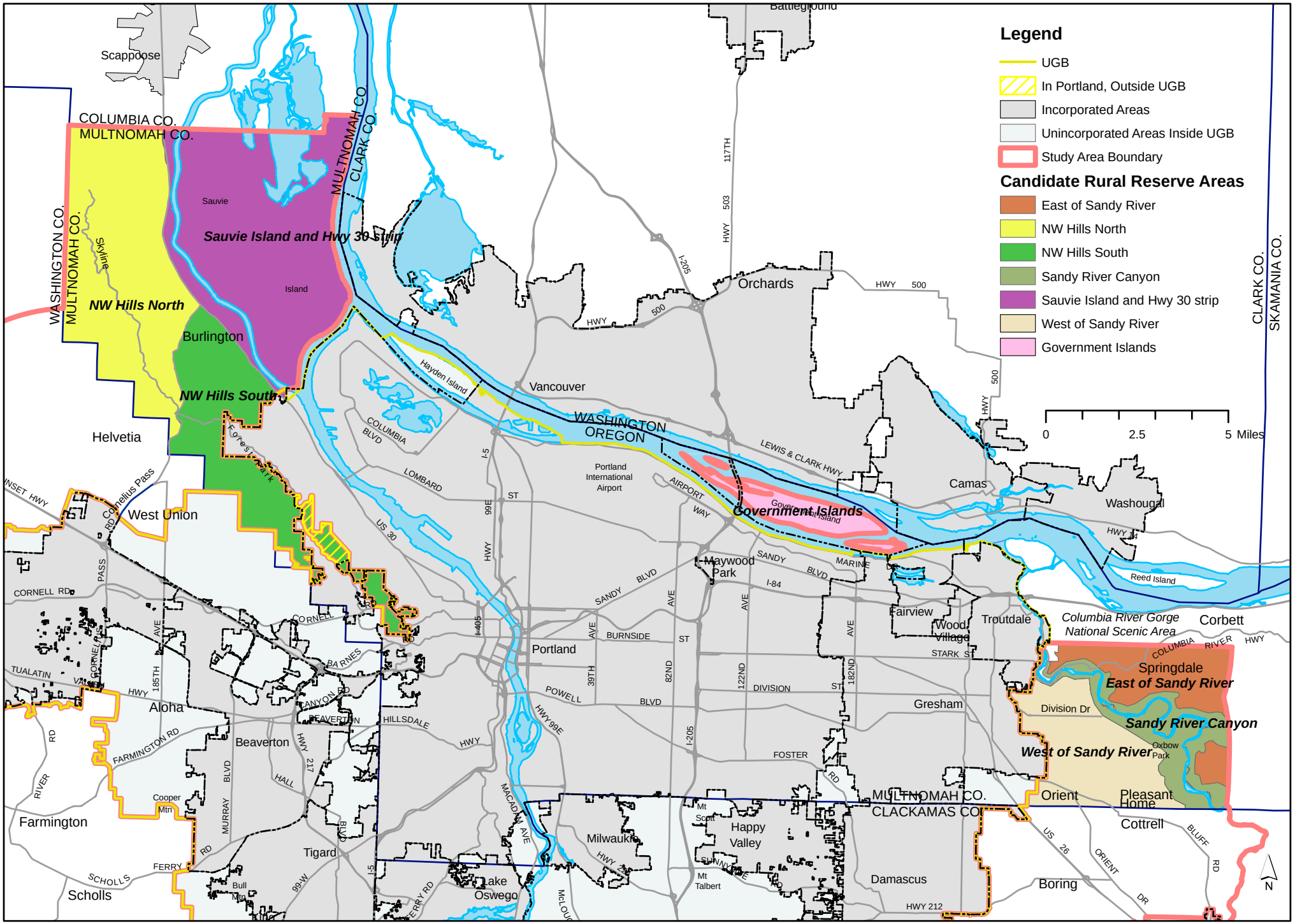
Combined Water and Sewer Suitability
Transportation Services

- Preliminary Connectivity Suitability
- Preliminary System Lane Cost Suitability
- Preliminary Lane Cost Suitability

MULTNOMAH COUNTY

Candidate Rural Reserves in Multnomah County

Draft 2/25/2009



CLACKAMAS COUNTY | MULTNOMAH COUNTY | WASHINGTON COUNTY OREGON | Metro

Date: January 13, 2009
To: Core 4, Reserves Steering Committee
From: Core 4 Project Management Team
Re: Rural reserves initial screening

Background

This memo provides an overview of the initial screening work underway for rural reserves. As previously discussed, we will use several "screens" to evaluate the suitability of the study area for potential urban and rural reserve designations. The first step is an initial screening of the entire area at a broad landscape scale utilizing certain key factors from the administrative rules. More refined analysis will then be applied to those lands that pass through the first screening in order to develop a prioritized list of reserve areas.

Work to date has been led by a coordinated effort of the staffs of Clackamas County, Multnomah County, Washington County and Metro. Discussions about the broad application of rural reserve factors have taken place at each county's advisory committee.

A similar process is being followed for urban reserve candidate areas and will be the subject of discussion in February and March at the Reserves Steering Committee. The Steering Committee is scheduled to consider both rural and urban reserves together from a regional perspective and make a coordinated recommendation on candidate areas to the Core 4 in March.

Initial screening

Baseline assessments for agriculture, forestry, and natural landscape features were completed early in the process as follows:

- *Identification and Assessment of the Long-Term Commercial Viability of Metro Region Agricultural Lands*; Oregon Department of Agriculture, January 2007
- *Natural Landscape Features Inventory*; Metro February 2007 as further defined in November 2008
- Oregon Department of Forestry mapping completed August 2008

All of these products are available on Metro's web site (www.oregonmetro.gov/reserves).

These assessments have served as the basis for initial screening discussions in each county about rural reserve candidate areas. The agriculture, forestry, and natural landscape feature maps have been overlaid to identify general patterns in suitability and call out those areas important in more than one of the three basic rural reserve components.

In Multnomah County and Clackamas County discussion has been largely qualitative, focused on how the rural reserve mapping meshes with local understanding of the landscape. Washington County discussions have also benefited from a GIS mapping exercise that added some detail to the baseline studies, including irrigation, viticulture, and soil type. This GIS mapping is a preview of the more comprehensive work to be done in the evaluation process once candidate areas have been identified.

What areas are potentially subject to urbanization?
Rural reserve factors 2a and 3a require consideration of whether lands proposed for rural reserve designation are potentially subject to urbanization during the next 40-50 years. Under these factors, therefore, it is possible (but not required) to limit rural reserve designations to those areas found to be potentially subject to urbanization in the future.

Under the agriculture and forestry section two possibilities are outlined for determining whether lands are potentially subject to urbanization: "as indicated by proximity to a UGB or to properties with fair market values that significantly exceed agricultural values for farm land, or forestry values, for forest land." Staff have been working on both of these approaches, and a test analysis utilizing assessment records was run in Washington County's part of the subject area. Preliminary results indicate that in Washington County there are no areas in which the"fair market value" appears to provide a reasonable indication of geographic areas that would be "subject to urbanization." The analysis will be run in Clackamas and Multnomah Counties as well. More details on the analysis and results will be the subject of a technical memorandum to follow.

If the market value approach is not conclusive, then a policy decision could be to use proximity to a UGB instead. Since the administrative rules already refer to a three-mile distance from the UGB in another section, Clackamas County's Policy Advisory Committee has discussed that the three-mile radius could potentially be used for this urbanization analysis as well, but more discussion is likely needed at both the county and regional level on this matter before any conclusions may be formulated.

Summary/recommendation
The overall result of the initial discussions is different in each county. It appears that it is difficult to screen out portions of the study area based solely on review of the baseline studies, and Washington and Multnomah County committees have, as yet, not reached conclusions which would lead to elimination of any portion of the approved study area from further consideration as candidate rural reserves. Clackamas County's PAC was able to move forward based on local knowledge as well as the baseline studies and other technical information. Further discussion of these issues will continue to take place at both the county and regional level during discussion of urban reserve candidate areas in order to present a coordinated recommendation to the Core 4 on both urban and rural reserve candidate areas.

WASHINGTON COUNTY
OREGON

Memo

DATE: January 12, 2009

TO: Washington County Reserves Coordinating Committee

FROM: Brent Curtis, Washington County

SUBJECT: **Washington County staff progress report on rural reserves designation**

Summary
Washington County staff began presenting maps addressing the suitability of lands for rural and urban reserves in late October 2008. These maps represent initial attempts to use spatial data and geographic information system (GIS) software to apply the factors in OAR 660-027 for identifying reserves – see Appendix A. This progress report describes staff efforts and current status of progress toward identifications of candidate rural reserves areas.

All of the factors are of equal importance to the designation process. Some of the factors will be applied in successive process refinements and all factors will be addressed in the course of the analysis. It should be noted that the efforts described in this progress report continue to be refined – all work completed to date is considered to be in draft form. Staff has presented this work to the Washington County Planning Directors, Washington County Reserves Coordinating Committee, Reserves Project Management Team, and Core 4 along with groups and individuals with experience and knowledge in different areas including staff from the Oregon Department of Agriculture and the Washington County Farm Bureau. (Due to weather additional meetings with other interest groups were postponed in December and are being rescheduled.)

Based on discussions with planning directors, the RCC, and several stakeholders and to retain as much flexibility as possible for future decision-making, staff has decided to retain all lands in the Reserves Study Area as potential candidates for rural reserves. Staff's decision is also based on desire to pursue urban reserves analysis and identify those candidate areas before removing any lands from the study area. More information regarding existing capacity within the county and cities, clarity on anticipated growth allocations and compilation of cities' growth aspirations will greatly inform the analysis.

The additional information described above is expected within the next few weeks. Staff anticipates draft urban and rural reserve candidate areas will be presented to the RCC and planning directors for consideration at their February meetings. The Reserves Coordinating Committee will be asked to concur with final urban and rural candidate reserve areas.

It has been acknowledged all along that this approach will not give the answer to determining reserve locations. It does allow decision makers and staff to see the study area from varying perspectives and help inform them to the nature of a location and how it might interact with surrounding areas

Overview of Analysis Efforts

The responses to the approach to date have been generally favorable with constructive feedback for changes to the scoring and weighting of data. In some instances the suggested changes are significantly different so the County has begun preparing alternative maps reflecting those opinions. Following are brief descriptions of analysis efforts to date:

Agricultural Lands Inventory
Addressing Rural Reserves Factor (3) (a-h); initially staff attempted to combine the Department of Agricultures *Agricultural Lands Inventory* with the forest lands inventory. Through conversations with the Washington County Farm Bureau and Department of Agriculture representatives, staff's current approach will be to use each inventory separately.

Wild Land Forest Inventory
The Department of Forestry *Wild Land Forest Inventory* was initially combined with the above and "weighted" in multiple ways to assess suitability for rural reserves. Based on conversations with key stakeholders staff will use this inventory as an individual criteria (and not combine it with others.)

Natural Landscape Features Inventory
This Metro supplied inventory provides additional information to assess rural reserves suitability.

Suitability Factors
Based on the Rural Reserves Factors (OAR 660-027-0060: (2)(a), (2)(b), (2)(c) and (3) staff identified a variety of suitability layers (conditions) to illuminate candidate rural reserves lands. Each layer was assigned a series of values based on its characteristics. For instance, proximity to the Urban Growth Boundary was assigned 9 values, the closer to the UGB, the higher the assigned value. Once plotted on the study area map different county-wide attributes appear. Each layer was also assigned a "weight" relative to other layers and compiled with different weighting patterns. Layers applied to the study area include:

- Agricultural Lands – *3 values assigned corresponding to foundation, important and conflicted lands*
- Wild Land Forest Lands – *5 values assigned*
- Irrigation – *9 values assigned based on availability or distance to available water resources*
- Soil type – *5 values assigned. Nine soil types are used by ODA. Staff combined soil classifications 1 – 4 and gave that combination the highest value.*
- Proximity to the existing Urban Growth Boundary – *9 values assigned (originally staff assigned the highest value, 9, to lands farthest from the UGB. After discussion with key stakeholders, staff reversed the order assigning 9 to lands closest to the UGB – indicating those lands have the highest suitability as a potential rural reserve due to the threat of urbanization)*
- Viticulture – *9 values assigned.*

Staff continues to refine the layers, values and weightings based on ongoing RCC, planning director and key stakeholder discussions. These suitability factors will utilized to a greater degree once urban reserve candidates are identified and contribute to discussions regarding the overlap of urban and rural reserve candidates.

Parcel-size and Ownership Patterns
Addressing Rural Reserve Factor (2)(d)(A), (B), and (C), staff has developed a sample area to assess benefits and challenges of overlaying the study area with individual parcel sizes. The goal is to illuminate patterns across the county. Staff also is testing ownership patterns in a small sample area with the same goal in mind. This information will be better utilized once urban reserve candidates emerge and further analysis is needed to address overlaps.

Fair Market Value
Staff has compiled more than a dozen variations to address Rural Reserve Factor (2)(a): "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."

The initial effort charted Real Market Values (RMVs are a surrogate for FMVs as used by the Washington County Department of Assessment and Taxation – A&T) in one-mile intervals to nine miles from the existing Urban Growth Boundary. Based on staff's professional judgment a valid sample size was used. The results indicated elevated RMVs within miles 1, 6 and 8. Staff concluded the results did not substantially meet the intent of the Factor.

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 visualization method (Kriging) as additional aid to viewing the data.

Based on available information planning staff determined that "Fair Market Value" (independent of other indicators) does not provide a reasonable indication of land areas that may be "subject to urbanization".

Progress Report Conclusion

Removing Reserves Study Area lands from potential designation as rural reserves at this time diminishes decision-making flexibility. It is staff's desire to retain as much opportunity as possible to allocate reserves until additional information is available.

As noted in the Summary, staff continues to refine these analysis processes. These efforts will be utilized to a greater degree as the urban reserve candidate areas are identified, current capacity within the existing Urban Growth Boundary is defined and additional population/employment information is made available.

Appendix

URBAN RESERVE FACTORS (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.

RURAL RESERVE FACTORS (OAR 660-027-0060)
(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).

Date: February 5, 2009
To: Core 4, Reserves Steering Committee
From: Core 4 Project Technical Team
Re: Urban reserves initial screening

Background

This memo provides an overview of the initial screening work underway for urban reserves. At the January 14, 2009 Reserves Steering Committee meeting you received a similar memo outlining the initial screening work for rural reserves. As previously discussed, we will use several "screens" to evaluate the suitability of the study area for potential urban and rural reserve designations. The first step is an initial screening of the entire area at a broad landscape scale utilizing certain key factors from the state administrative rules. More refined analysis will then be applied to those lands that pass through the first screening in order to develop a prioritized list of candidate reserve areas.

All work is accomplished through coordinated efforts of Clackamas County, Multnomah County, Washington County and Metro staffs. Discussions about the broad application of urban reserve factors have taken place at each county's advisory committee.

The Steering Committee will consider both rural and urban reserves together from a regional perspective and will make a coordinated recommendation on candidate areas to the Core 4 by April 2009. This recommendation will allow staff to continue to work with local advisory committees on a more detailed analysis of these candidate areas so that the Core 4 and the steering committee can engage in a discussion leading to a final recommendation for urban and rural reserves in July 2009.

Initial screening

Administrative Rule (OAR 660-027-0050) factors one and three for designation of lands as urban reserves provide the framework for the initial screening assessment. These factors are:

> *UR-1: Can be developed at urban densities in a way that makes efficient use of existing and future public and private infrastructure investments.*
> *UR-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.*

Public facilities and services are defined in the Administrative Rule as sanitary sewer, water, transportation, storm water management and public parks. Due to the sheer size of the study area, the technical team looked at it through a broad landscape-scale lens to assess the suitability of the land for meeting these two urban reserve factors. This approach led to the technical team

limiting this first screen analysis to sanitary sewer, water and transportation. Service providers of storm water management, public schools and public parks confirmed this screening decision.

The ability to efficiently provide sanitary sewer, water and transportation services are largely dependent on the presence or absence of development constraints such as slope or floodplains on the landscape. Therefore, the reserves technical team staff, working with staff from numerous local jurisdictions and service providers, completed an initial relative efficiency / cost effectiveness evaluation of providing sanitary sewer, water and transportation services on a general scale of high/medium/low suitability to provide services. The table on page 4 of this memo provides more information regarding the development constraints considered and methodology used.

Technical reports describing the analysis in more detail, with accompanying suitability maps, are being developed and the technical team intends to distribute them to the group prior to the meeting on February 11th. The sanitary sewer and water suitability maps will be overlaid to create a composite map for these two related services. The transportation analysis map will then be compared with the sanitary sewer/water composite map to develop a candidate area map based on the suitability of providing all of these services together. A list of the jurisdictions and service providers who participated in these assessments is below.

Sanitary Sewer Assessment
Clean Water Services
Water Environment Services
City of Portland Bureau of Environmental Services
City of Wilsonville
City of Lake Oswego
City of Gresham

Water Assessment
City of Gresham
Sunrise Water Authority
Clackamas River Water
South Fork Water Board
City of Lake Oswego
Oak Lodge Water District
City of Wilsonville
City of Sherwood
City of Hillsboro
City of Forest Grove
Tualatin Valley Water District
City of Portland
Water Providers Consortium
Technical Committee

Transportation Assessment
Clackamas County
Multnomah County
Washington County
Metro
ODOT
TriMet
City of Gresham
City of Oregon City
City of Portland
City of Tualatin

Next Steps

Reserves technical team staff will present the transportation and sanitary sewer/water composite services map to the county advisory committees for discussion. Following the county discussions, urban and rural reserve candidate areas will be identified in a coordinated manner for consideration by the steering committee.

The candidate areas will be evaluated utilizing all of the Administrative Rule urban reserve factors. For reference, the additional urban reserve factors that will be applied to the candidate urban reserve areas, in addition to refining factors 1 and 3 are:

UR-2: Includes sufficient development capacity to support a healthy economy;
UR-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;

UR-5: Can be designed to preserve and enhance natural ecological systems;
UR-6: Includes sufficient land suitable for a range of needed housing types;
UR-7: Can be developed in a way that preserves important natural landscape features included in urban reserves; and
UR-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.

Initial Screening Process for Identification of Candidate Urban Reserve Areas			
Key Public Facilities & Services	*Efficiency/cost Effective Factors Considered*	*Methodology*	*Suitability for Providing Service*
Sewer	▪ Existing capacity, ease of expanding capacity ▪ Likely service provider ▪ Gravity flow access to existing or potential facilities ▪ Ease of providing treatment or transmission facilities ▪ Distance to existing or potential outfall ▪ Development constraints (floodplain, topography, wetlands, etc.)	Coordinated analysis by service providers GIS analysis	High Medium Low
Water	▪ Existing/future supply Existing infrastructure ▪ Proximity to existing infrastructure ▪ Development constraints (floodplain, topography, wetlands, public lands etc.)	Local analysis by service providers Review by Water Providers Consortium members	High Medium Low
Transportation	▪ Existing road network ▪ Existing rail lines ▪ Potential HCT corridors ▪ Development constraints (topography, floodplain wetlands etc.)	Transportation experts developed hypothetical urban-level roadway networks GIS analysis on network	High Medium Low

Date:	February 9, 2009
To:	Core 4, Reserves Steering Committee
From:	Core 4 Technical Team
Re:	Preliminary Analysis of Providing Urban Level Water Service Within Reserves Study Area

Background & Overall Analysis Approach
The purpose of the Urban and Rural Reserves project is, in part, to designate appropriate land for each reserve type by addressing the factors listed in Oregon Administrative Rule 660 Section 27. The set of urban reserve factors that must be considered range in scale from assessing whether land can be served with public facilities and services in an efficient and cost-effective manner to determining whether areas can be designed to be walkable with a well-connected transportation system. For this reason, the Core 4 Technical Team (Tech Team), made up of staff from the three counties and Metro, chose to conduct a suitability of land analysis using a phased approach.

This memo describes the first step in this phased approach for urban level water service. It consists of an initial screening of the entire approximately 400,000-acre study area to address the following two urban reserve factors in the state rule:

UR-1: *Can be developed at urban densities in a way that makes efficient use of existing and future public and private infrastructure investments.*
UR-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.*

The state rule defines 'public facilities and services' as sanitary sewer, water, transportation, storm water management facilities and public parks. Due to the sheer size of the study area, the Tech Team looked at it through a broad landscape-scale lens to assess suitability of the land for meeting these two reserve factors. This approach led to the Tech Team limiting this first screen analysis to sanitary sewer, water and transportation.

The particular methodology and results for the water element is discussed below. The result of this assessment is expressed graphically on a map that will be combined with a similar map from the sewer element, to create a composite map for these two similar services. This composite map will then be compared with two transportation maps, to form a preliminary assessment that begins to answer the two reserve factors above. The next phase of this process is described under Next Steps below.

Water Element Strategy & Methodology

While most of the major water providers only service areas inside the urban growth boundary, there are a number of providers that do service rural areas, such as Clackamas River Water and the Boring Water District. The infrastructure in these rural areas is sized to service a rural population and would need to be upgraded in the future if urbanization was to occur. Otherwise, most service providers have not planned for service to the rural areas beyond what is in current master plans or future vision documents. There are major water facilities located within rural areas, such as transmission lines, treatment plants and reservoirs.

The Regional Water Providers Consortium serves as a collaborative and coordinating organization to improve the planning and management of municipal water supplies in the Portland metropolitan region. Utilizing the Consortium's members, small groups of water providers were convened on a geographic basis to complete an initial assessment for providing water to the study area. Prior to the meeting, proposed criteria for evaluating the study area and a study area map were provided to each participant. The proposed criteria included:

- Proximity to a current service provider;
- Institutional capabilities;
- Topography;
- Efficient use of existing resources;
- Source of supply;
- Timing; and
- Water/wastewater interface.

During these initial discussions it became apparent that the key set of criteria for this first landscape scale analysis is proximity to a current service provider, topography, use of existing resources, and source. The other criteria will be included in the next level of analysis.

At the small group meetings, additional maps were provided that displayed the following GIS information: slopes greater than 25%, shaded relief, major rivers and streams, wetlands, floodplains, public lands and major arterials. During the discussions staff took notes and made comments on the maps. In evaluating the study area, it was assumed that water services would be provided from a service provider in the Metro region and not from a water provider in a neighboring city such as Sandy, Estacada or Molalla.

The following service providers participated: City of Gresham, Sunrise Water Authority, City of Lake Oswego, Oak Lodge Water District, South Fork Water Board, City of Hillsboro, Tualatin Valley Water District, Clackamas River Water, City of Portland, City of Wilsonville and City of Forest Grove. Follow-up meetings were scheduled with some of the service providers.

Staff presented preliminary mapped results to the Water Providers Consortium Technical Committee (CTC) in January 2009. Technical committee members present at the meeting included most of the districts/jurisdictions that participated in the initial meetings, as well as representatives from the City of Beaverton, City of Tualatin, and the City of Tigard. After the meeting the draft map was sent to all CTC members for review and comment. In addition, staff has since met with engineering staff from the City of Sherwood and the City of Oregon City.

Water Element Results

This exercise, while based on service provider expertise and knowledge of the local landscape, does not assign a particular unit cost to serving any of the areas. Cost estimates to serve an area can only be assessed after assumptions are made regarding the number of dwelling units and employment acres to be served, which in turn dictate facilities such as the number of reservoirs or pump stations.

Some general issues of providing water services surfaced during the discussions.

1. Water is heavy; therefore it is expensive to distribute water over any distance.
2. Topography has a profound effect on the cost of distribution.
3. Crossing natural resource areas add additional cost to the distribution network.
4. System Development Charges (SDCs) are the typical way to fund expansion, therefore expected density also influences cost.
5. Operational cost for future services is minor compared to the cost of expanding the water system
6. Currently water supply is not an issue for most major water providers as they have existing capacity for a number of years (2020-2050), depending on the individual provider. In addition, planned expansions such as the Tualatin Supply Project (Scoggins Dam Raise), the City of Portland's statutory rights to increase surface water source in Bull Run, and the City of Wilsonville's extensive capacity at its treatment plant offer additional supply for the future.
7. Water coordination is still a challenge, the Regional Water Providers Consortium is addressing this matter.

The attached map indicates a number of sub-areas that were identified with a suitability rating of high, medium or low suitability for providing water services. The ratings on the map are defined below:

<u>High Suitability</u> – generally these areas will only require typical extensions of service – general distribution lines, reservoirs, no major facilities needed.

<u>Medium Suitability</u> – these areas require more than one substantial investment in facilities or other defining issues– examples include new/additional treatment capacity, additional reservoirs or significant upgrading of existing lines, water/waste water management issues.

<u>Low Suitability</u> – these areas require significant infrastructure improvements, usually associated with distance and topographic issues. The areas have a number of issues related to location of supply, reservoirs, pump stations, or great distances for distribution.

In many instances, the boundaries of the sub-areas are defined by features of the landscape, including extensive floodplains, edges of steep sloped areas or major water features, as these features tend to add cost to providing services. Existing water service boundaries as well as distance from existing service areas also influenced the sub-area boundaries. As noted above, water is expensive to move over long distances, thus it is not surprising that areas farther away from existing services or supplies were determined to be less suitable to serve. (The question of whether new sources could be developed for these areas was not discussed as there are too many variables involved, especially at this scale.) Areas of significant topographic constraints, such as the Chehalem and Tualatin Mountains were also determined to be less suitable, due to distance as well as the extra cost of pumping. The location of existing infrastructure also influenced the rating. For instance the Joint Water Committee's transmission lines or the Bull Run transmission line influenced the suitability of nearby areas. The Three Basin Rule in the Clackamas River sub-basin, which limits new or increased waste discharges to the river, also impacts water service in this sub-basin as it relates to the possible future need for a water re-use program.

This is an initial evaluation of a very large area of land, as additional analysis work is completed, smaller areas within the larger sub-areas, particularly those sub-areas closer to the existing service boundaries may be identified that have a different rating than the overall sub-area.

Next Steps

The water services map is one element to be used in creating a composite map, which will be the foundation of the first screen analysis. Information derived from this composite map should provide a basis for eliminating some of the study area from further consideration as urban reserves. The next screen analysis will involve more detailed analyses of the remaining potential urban reserve areas. These areas will be referred to as priority candidate urban reserve areas.

For reference, the additional urban reserve factors outlined in the Administrative Rule that will be applied to the candidate urban reserve areas, in addition to refining factors 1 and 3 are:

UR-2: Includes sufficient development capacity to support a healthy economy;
UR-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;
UR-5: Can be designed to preserve and enhance natural ecological systems;
UR-6: Includes sufficient land suitable for a range of needed housing types;
UR-7: Can be developed in a way that preserves important natural landscape features included in urban reserves; and
UR-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.

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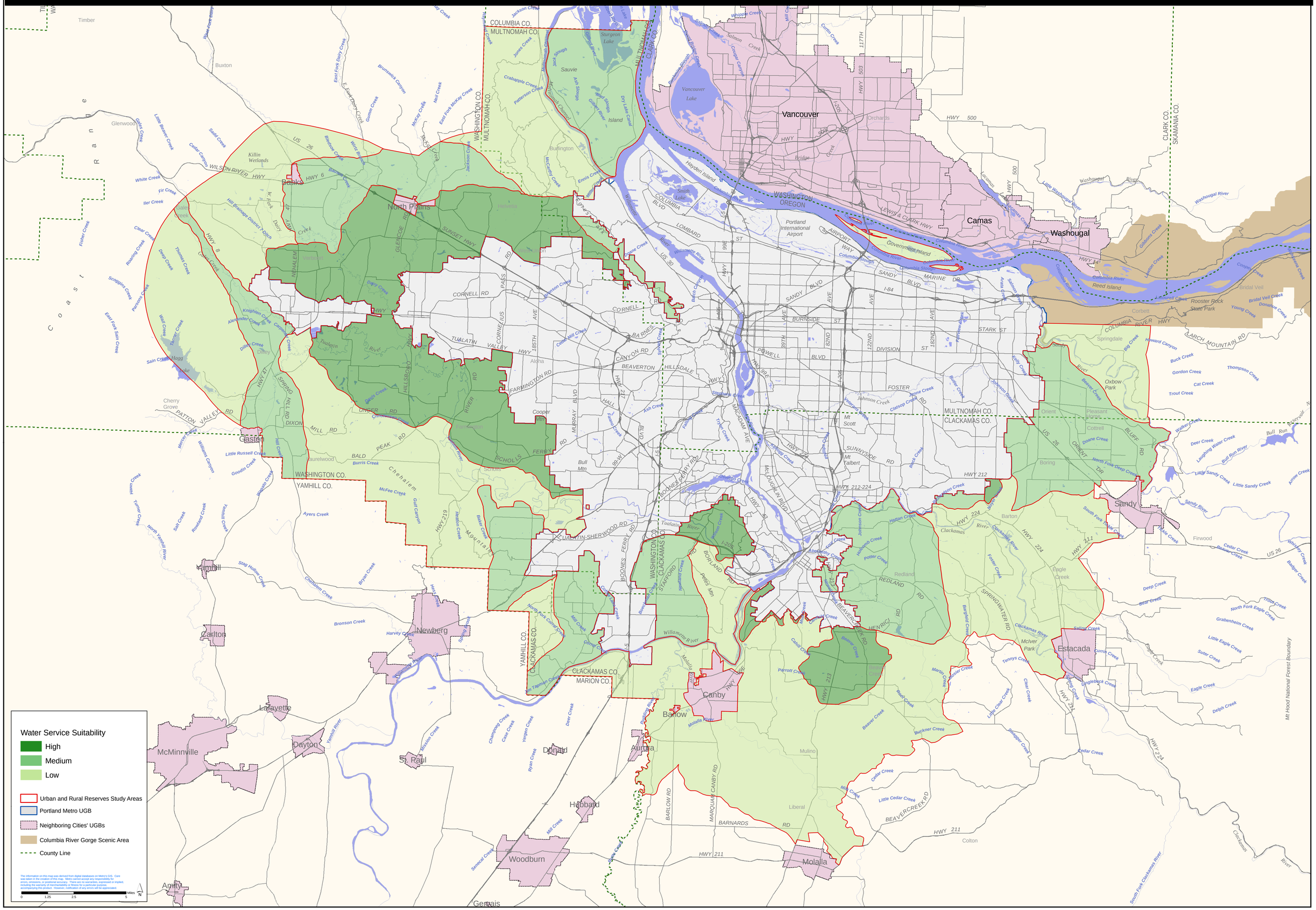
Multnomah County

Washington County

CLACKAMAS COUNTY

Urban and Rural Reserve Study Areas

Preliminary Water Service Suitability



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Date:	February 09, 2009
To:	Core 4, Reserves Steering Committee, County Coordination Committees
From:	Core 4 Technical Team
Re:	Preliminary Analysis of Providing Urban Level Sanitary Sewer Service Within Reserves Study Area

Background & Overall Analysis Approach

The purpose of the Urban and Rural Reserves project is, in part, to designate appropriate land for each reserve type by addressing the factors listed in Oregon Administrative Rule 660 Section 27. The urban reserve factors that must be considered range in scale from assessing whether land can be served with public facilities and services in an efficient and cost-effective manner to determining whether areas can be designed to be walkable with a well-connected transportation system. For this reason, the Core 4 Technical Team (Tech Team), made up of staff from the three counties and Metro, chose to conduct a suitability of land analysis using a phased approach.

This memo describes the first step in this phased approach. It consists of an initial screening of the entire approximately 400,000-acre study area to address the following two urban reserve factors in the state rule:

UR-1: *Can be developed at urban densities in a way that makes efficient use of existing and future public and private infrastructure investments.*

UR-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.*

The state rule defines 'public facilities and services' as sanitary sewer, water, transportation, storm water management facilities and public parks. Due to the sheer size of the study area, the Tech Team looked at it through a broad landscape-scale lens to assess suitability of the land for meeting these two reserve factors. This approach led to the Tech Team limiting this first screen analysis to sewer, water and transportation. Service providers of storm water management, public schools and public parks confirmed this screening decision.

The particular methodology and results for the sanitary sewer element is discussed below. The result of this element is expressed graphically on the attached map showing areas that are rated , 'high', 'medium' or 'low' for serviceability. This map, combined with those from the water and transportation elements, will be used to create a composite map that will begin to address the two reserve factors above.

Sanitary Sewer Element Strategy & Methodology

Under Oregon law, sanitary sewer service is generally not allowed to be provided outside an Urban Growth Boundary (UGB). Because of this the Reserves study area currently has no sewer service[1]. Also, because providing sewer capacity is very expensive and because there has been no way for local service providers to predict which areas will be brought into the UGB in the future, there is very little capacity currently available in existing treatment and conveyance facilities beyond that needed to serve the existing UGB. Likewise, very little planning work has been undertaken to understand how sewer services could be provided to areas outside the existing UGB. An "expert group" of engineers and key staff from the potentially impacted service providers worked together to develop an assessment of serviceability of the study area, based on their professional expertise and knowledge of nearby areas and facilities.

The sanitary sewers expert group[2] was convened in November 2008 to complete an initial assessment for the potential to provide sanitary sewer service to the study area, should it become urbanized. Prior to the meeting, each participant was provided with a study area map, divided into subareas delineated by watersheds, as well as proposed criteria for evaluating the study area. The purpose of the meeting was to answer the following questions for the entire Reserves Study Area:

How efficiently can the area use infrastructure *if the area is urbanized*

- Does it exist or can it be efficiently provided in the future?
- How efficiently and cost-effectively can an area be served?

Who would provide facilities and services? Are they "appropriate and financially capable" providers?

- What are the characteristics of an "appropriate and financially capable service provider?"
- Who is the logical service provider?
- Which of these categories do the listed service providers fall into?

During the meeting, it became apparent that the key set of criteria for this first landscape scale analysis includes topography, proximity to a current waste water treatment plant, existing capacity of that treatment plant, and the ability of the treatment plant to expand.

The sewers expert group worked on base maps that showed watersheds, topography, major rivers and streams, wetlands, floodplains, and major streets. During the discussion, staff and participants marked-up and made comments on the maps. They were also provided a ratings sheet, which was filled out for each sub-area. These ratings are reflected in Table A-1 in the Appendix to this memo. Serviceability rating factors included:

- Existing service availability
- Local system improvements that would be needed
- Area-wide improvements that would be needed (i.e. new major trunk lines or full system expansion)
- Service extension requirements
- Treatment capacity at likely facility
- Discharge issues

As part of the expert group review, information was provided about current treatment and transmission facilities. Current status of existing waste water treatment plants (WWTPs) in the Portland metropolitan area is briefly described in Table 1, below. This information is important to the serviceability ratings of

1 Except for the Boring rural center; this has a small plant intended to resolve a health hazard that is not adequate to serve additional development.

2 The Sanitary Sewers Expert Group included: Ted Kyle from Clackamas County Water Environment Services (WES); Carrie Pak and Nora Curtis from Washington County Clear Water Services (CWS); Jim Montgomery from the City of Gresham, Mike Stone from the City of Wilsonville, Lana Danaher from the Portland Bureau of Environmental Services (BES), Stephan Lashbrook from the City of Lake Oswego. These represented the likely existing service providers for the study area. These experts were also able to speak for the neighboring cities that provide their own sewer services, such as Canby.

the study area because, as noted, simply the fact that there is a plant located near an area being studied does not necessarily mean that it could serve new areas. Many existing plants will be at or near capacity in the foreseeable future.

Table 1. Existing Waste Water Treatment Plants

Plant/Provider	Current Status/ Capacity	Expansion Possibility/Comments
Durham/Clean Water Services (CWS)	Currently have a master-plan to serve surrounding areas that completely utilizes the capacity of the plant site.	Limited site size. If additional geographic areas are added to the service area beyond what is included in the master plan – will need to add to the site, which would be very difficult (there may not be enough room), or accommodate the new geography with another plant.
Hillsboro/CWS	Winter discharge only. Little to no additional capacity	No room to expand.
Forest Grove/CWS	Winter discharge only.	Summer discharge may be possible Has room to expand.
Rock Creek/CWS	Little to no additional capacity	Has room to expand.
Lake Oswego/BES	Little to no additional capacity	Area of service is essentially fully developed – no way to get additional flow to site because of topography.
Columbia Blvd/BES	Little to no additional capacity	Has potential to expand
Wilsonville/City	Currently has 4 M gal/day capacity and plans to expand to 7 M gal/day. This larger facility will max out the current site and the current trunk lines with the expected growth of the city by 2020.	No room to expand beyond 7M gal/day on-site
Gresham/City	Currently has a 20 M gal/day capacity plant and is using 12 M gal/day.	Has room to expand. They have limited conveyance; however, the incremental cost for Gresham to serve areas is less than incremental cost for Troutdale.
Tri City/WES	Currently expanding to 8M gal/day – larger facility will accommodate 5-8 years of expected growth (plus excess from Kellogg)	Has land and approved land use decision to further expand up to a 40 M gal/day facility
Oak Lodge/WES	Plant technologically obsolete	Area of service is essentially fully developed
Kellogg/WES	Currently over-capacity	Will be off-loading some excess to expanded Tri City plant
Boring/WES	Serves 100 hook-ups, no additional capacity	Very small, expensive-to-operate facility built to resolve a health hazard. If area is urbanized, this facility probably will be replaced.
Canby/City		Has a permitted outfall on the Willamette River.
Troutdale/City	3 M gal/day facility built in 2001-has not yet reached capacity	Has land to expand
Sandy, Estacada, Molalla	Limited capacity	Limited because winter discharge only (into streams); need to have enough farmland for summertime discharge onto agricultural land

The efficiency ratings were sketched on the maps by the expert group, then digitized in GIS. This digital map was sent to all the participating service providers for comment. This map shows the sewer serviceability of the study area considering availability of all treatment plants in the area, including the neighboring cities. To see *Map A-1 -- Sewer Serviceability for the Reserves Study Area including areas that might be served by neighboring cities*, please go to the Appendix of this report. Table A-1 summarizes the rationale for the categories shown on the map.

When technical staff for the Reserves project reviewed the map produced by the expert group, they determined that information about the ease of servicing areas that would be logically served by neighboring cities does not provide useful information about the best possible locations for future expansion of the Portland Metro UGB, and also requested that the four categories of information created by the expert group be rolled-up to three categories to be more compatible with the water and transportation maps. Therefore, staff produced Map 1 as shown in this memo, which focuses on serviceability for Portland Metro service providers.

Sanitary Sewer Element Results

The assessment of suitability for sewer services is not based on engineering or cost estimates, which cannot be produced without more information about employment, dwelling units, location of future facilities, and future regulations. General (not site-specific) issues that pertain to sanitary sewer service include the following.

1. Conveyance costs are generally the same on the east and west sides; however, on the west side (Tualatin basin) treatment requirements are more stringent (and therefore more expensive) than on the east side. The longer-term trend may be for higher level of treatment for all plants.

2. DEQ has stringent requirements for new outfalls into the Clackamas River basin, as specified in the Three Basin Rule for the Santiam, Clackamas and Mackenzie basins. Because of this, sanitary sewage generated in the Clackamas River basin has to be piped to the Willamette.

3. There are many existing state and federal environmental regulations as well as regulations under consideration that constrain how and where sanitary sewer treatment can be provided, including issues about nutrient discharge, fish standards, total load allocations and water temperature standards.

4. There are many unknowns to the future of sanitary sewer provision in this area. These include possible future changes in regulations the service providers must meet, and in the technology the providers have available to use.

5. There are potential relationships between sanitary sewage provision and designated rural reserves:
   - In the long run there may be an opportunity to link rural reserves with reclaimed sewage treatment water – we wouldn't necessarily need new outfalls if water could be discharged onto agricultural land, particularly nurseries. However, what would be done with the water in the winter? This works now (part of the year) for the neighboring cities with relatively small discharges.
   - CWS is using swales and floodplains in the rural area as part of its temperature management plan – would an Urban Reserve have an effect on this? Could they keep reserves/buffers around affected streams in Washington County with the designation of new urban reserves?

6. The expert group agreed that from their perspective all the likely service providers for the study area were "appropriate and financially capable."

The attached map *(Map 1 -- Sewer serviceability for potential Portland Metro UGB urban reserve sewer providers)* indicates areas that were identified as high, medium or low suitability for providing sanitary sewer services. For the most part, the boundaries of the sub-areas are defined by drainage basins. The analysis was an initial evaluation of a very large area of land, so there may be small areas for which a more detailed review would show a different rating than for the overall sub-area.

The map shows four categories of information:

High suitability for sewer service – generally these areas are the easiest and least costly to serve. This includes those few areas where there is capacity in a nearby treatment plant or conveyance facility, or those areas where capacity could be relatively easily provided. It also includes areas that require substantial improvements, but relatively easy ones for which there is land available or no major issues identified. These also include areas for which topography enables primarily gravity flow to an existing plant. For the most part, these areas will primarily require investment in facilities located inside the area to be developed, but be able to hook up to existing facilities inside the current UGB.

Medium suitability for sewer service – generally those areas would require new facilities located both inside and outside the area to be served. For example, treatment facilities would be needed that aren't planned or sited; existing conveyance facilities located between the area and the plant may be too small and need to be re-built. These areas may also have more topography, longer distances to potential outfalls, more pump stations, or other issues that make them less suitable, but no major issues that were identified by the expert group.

Low suitability for sewer service – generally these were areas for which difficult concerns were identified. They would require relatively larger investments both inside the area to be served and to treatment and conveyance facilities outside the area. Connections to these areas are sometimes difficult. For these areas it would be more difficult to figure out how to provide services and more costly to provide services. Low suitability areas included areas with steep topography, areas separated from transmission facilities by natural features, areas that were located long distances from potential outfalls or areas that were in drainage basins not served by a permitted outfall.

Areas logically served by neighboring cities – these are areas for which the logical service provider is the city of Sandy, Estacada, Molalla, or Canby. The neighboring cities in Washington County (Gaston, Banks, and North Plains) are served by Clean Water Services, which is a Portland Metro area service provider.

Next Steps

The sanitary sewer service analysis map is one element to be used in creating a composite map, which will be the foundation of the first screen analysis. Information derived from this composite map should provide a basis for eliminating some of the study area from further consideration as urban reserves. The next screen analysis will involve more detailed analyses of the remaining potential urban reserve areas. These areas will be referred to as priority candidate urban reserve areas.

For reference, the additional urban reserve factors outlined in the Administrative Rule that will be applied to the candidate urban reserve areas, in addition to refining factors 1 and 3 are:

UR-2: Includes sufficient development capacity to support a healthy economy;

UR-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;

UR-5: Can be designed to preserve and enhance natural ecological systems;

UR-6: Includes sufficient land suitable for a range of needed housing types;

UR-7: Can be developed in a way that preserves important natural landscape features included in urban reserves; and

UR-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.

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Multnomah County

WASHINGTON COUNTY OREGON

CLACKAMAS COUNTY

Urban and Rural Reserve Study Areas

Preliminary Sewer Service Suitability

Sewer Suitability
- High Suitability
- Medium Suitability
- Low Suitability
- To Neighboring City

- Urban and Rural Reserves Study Areas
- Portland Metro UGB
- Neighboring Cities' UGBs
- Columbia River Gorge Scenic Area
- County Line

0 1.25 2.5 5 Miles

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APPENDIX 1

Map A-1 Sewer serviceability for the Reserves Study Area, including areas that might be served by neighboring cities, is the map produced by the sewers expert group. It is included in this appendix along with Table A-1, which explains the rationale behind each designation. Map 1, the map included in the main body of the memo, is derived directly from map A-1 as follows:

- Areas characterized in Map A-1 as "Efficient" and "Moderately Efficient" were rolled into one category, the "High suitability" category.
- Areas characterized in Map A-1 as "Moderately Difficult" were shown on Map 1 as "Medium suitability"
- Areas characterized in Map A-1 as "Difficult" were shown on Map 1 as "Low suitability"
- When Table 1 shows the most likely service provider to be the WWTP of one of the neighboring cities that is not a part of the Portland Metro UGB, these areas were shown on Map 1 as "neighboring city" regardless of the Map A-1 sewer efficiency rating.

The expert group rated drainage basins for the relative efficiency and cost of providing sanitary sewer services. Four categories were mapped and illustrated in Map A-1:

Efficient. These areas are the easiest and least costly to serve. They would require relatively simple extensions of the existing system within the area to be urbanized, and could connect directly to existing facilities in the existing urban area. These areas are the few areas for which the treatment and conveyance systems inside the current UGB appear to have capacity to serve areas outside the current UGB.

Moderately efficient. These are areas that will require substantial improvements, but relatively easy ones. Within the area, facilities would be relatively easy to provide. Out of area improvements would be required, but, again, they would be relatively easy .An example would be an area that would require a treatment plant expansion, but where there is sufficient land available to expand the plant.

Moderately difficult. These areas would require substantial improvements inside the area itself, and also substantial improvements outside the area. These are areas where providing sewer services would require construction of treatment facilities that are not currently sited, expensive expansions of existing trunk lines, or that have moderately difficult topography or natural features impacting services.

Difficult to serve. These are areas for which difficult concerns have been identified. Substantial and difficult –to-provide improvements would be needed both inside and outside the areas. For example, these are areas with steep slope, difficult river crossings, long conveyances, or gravity flow to areas that can't be served by an existing permitted outfall.

Table A-1 below shows specific information for areas shown in Map A-1, including a brief description of the rationale behind the expert group's designation. Areas are numbered S-1, S-2, etc, as shown on the map; these areas correspond very roughly to drainage basins.

Sub-Area	Suitability	Comments	Potential Waste Water Treatment Provider (WWTP)
S1	Difficult	Require new trunk lines and river crossing, maybe tunnel; most land is floodplain	Gresham
S2	Difficult	Major pipelines and system expansion needed; Sandy River area very difficult because of topography and river	Troutdale or Gresham
S3	Moderately efficient	N of Hwy 26 - Major pipelines and system expansion needed; capacity available at existing plant(s)	Troutdale or Gresham
		SW of Hwy 26 - Major pipelines and system expansion needed; could go west to Tri City plant. Timing matters – could size Damascus conveyance to include this area.	Tri City
S4	Moderately difficult	Require new plant or long conveyance to Willamette River	Tri City or pump to Gresham
S5	Moderately difficult	Plateau between two creeks, steep topography on both sides	Tri City
S6	Difficult	No nearby facility; difficult topography; pump to Willamette River	Tri City
S7	Moderately difficult possibly served by neighboring city	Possibly pipe to Estacada WWTP	Estacada
S8	Difficult	No nearby facility; would require long conveyance, possibly to Tri City	Tri City
S9	Moderately efficient	Require new conveyance to planned new major line just north (inside existing UGB) or new trunk directly to Tri City WWTP; both require Clackamas River crossing; expansion of plant possible	Tri City
S10	Efficient	Require new conveyance to Tri City WWTP; may have capacity at plant – transmission line exists/has capacity	Tri City
S11	Moderately difficult	Require longer conveyance to Tri-Cities WWTP; would require expansion of capacity at plant	Tri City

Sub-Area	Suitability	Comments	Potential Waste Water Treatment Provider (WWTP)
S12	Difficult/ possibly served by neighboring city	Major system expansion needed; require new or expanded plant in Oregon City or Canby; steep topography that slopes away from existing sewers in Oregon City	Tri City or possibly Canby
S13	Efficient/Moderately efficient / possibly served by neighboring city	Require relative short new conveyance to Canby WWTP; limited existing capacity at plant	Canby
S14	Moderately difficult/possibly served by neighboring city	No close discharge; flat area – difficulty to serve with gravity system; potential for part of area to be served by Molalla	Canby/ Molalla
S15	Difficult	Floods	Canby
S16	Difficult/ portion possibly served by neighboring city	Difficult topography; would require a new regional pump station upstream of Willamette Falls that would have to pump across Tualatin or Willamette River	Tri City and/or Canby
S17	Efficient	W Stafford basin - relatively easy to serve	Durham
		NE Stafford basin - gravity flow to an existing pump station, then pump to Tri City WWTP	Tri City
S18	Moderately efficient	New trunk line to serve small portion of Boeckman Creek Basin in already in plan; additional trunk line is needed	Wilsonville
S19	Difficult	Require new pump station; trunk line and plant expansion; difficulty crossing river (current crossing maxed out with Charbonneau)	Wilsonville
S20	Moderately efficient	Mostly gravity flow to pump station	Wilsonville
S21	Moderately difficult	Steep topography; relatively small net developable area	Durham
S22	Moderately efficient	Large wetland areas near Tualatin River; potential for development area maybe south of Sherwood Rd; upgrade of Onion Flat PS currently planned to be completed within five years; may need to be upgraded to accommodate additional flows	Durham

Sub-Area	Suitability	Comments	Potential Waste Water Treatment Provider
S23	Moderately difficult	Potential of two or more new PS; wetland areas near Tualatin River	Rock Creek
S24	Moderately difficult	Potential of four or more PS; wetland areas near Tualatin River	Rock Creek
S25	Difficult	Steep terrain w/ deep ravines; questionable development potentials	Rock Creek
S26	Efficient	Contiguous to existing UGB; new PS and FM needed near Rosedale Rd and River Rd	Rock Creek
S27	Moderately efficient	New PS and FM needed near Meyer's Pond	Rock Creek
S28	Efficient	Contiguous to existing UGB; relatively small developable land	Forest Grove– winter Rock Creek - summer
S29	Efficient	Contiguous to existing UGB; relatively small developable land	Forest Grove – winter Rock Creek - summer
S30	Moderately efficient	PS and FM upgrade needed; wetlands and floodplain near Tualatin River but should not significantly impact sanitary; net developable land may be limited due to natural resources	Forest Grove – winter Rock Creek - summer
S31	Difficult	Steep terrain; Hagg Lake located here; very little net developable area	N/A
S32	Difficult	Steep terrain; very little net developable land due to terrain	Hillsboro– winter Rock Creek - summer
S33	Moderately difficult	Vast areas of wetlands; Dairy Creek has high value natural resources; some potential for developable land but will require careful planning to avoid natural resources	Hillsboro – winter Rock Creek - summer
S34	Moderately efficient	Contiguous to existing UGB	Hillsboro – winter Rock Creek - summer
S35	Moderately efficient	New PS needed near of Hwy 26 and McKay Creek; relatively large areas of wetland and floodplain near McKay Creek north of Hwy 26	Hillsboro – winter Rock Creek - summer
S36	Efficient	No real issues identified; will require upsizing of existing trunk line or adding new trunk lines	Rock Creek

Sub-Area	Suitability	Comments	Potential Waste Water Treatment Provider
S37	Difficult	Very difficult topography, many areas would require conveyance through Forest Park	Columbia Blvd
S38	Moderately efficient	Relatively short conveyance, mostly through urban land; would require river crossing. There is potential to expand plant.	Columbia Blvd

MAP A-1

Sewer Serviceability for the Reserves Study Area

Including areas that might be served by neighboring cities

Sewer Efficiency Ratings

- Efficient
- Moderately Efficient
- Moderately Difficult
- Difficult

- Rural Reserves Study Area Boundary
- Areas within the Urban Growth Boundary
- Sewer Treatment Plants
- Outfall

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CLACKAMAS COUNTY

Clackamas County DTD | R.GRAY | Planning\GrowthManagement\Sewer_Efficiency_rev2.MXD | Feb 2009

Date:	February 11, 2009
To:	Core 4, Reserves Steering Committee
From:	Core 4 Technical Team
Re:	Preliminary Analysis of Providing Urban Level Transportation Service Within Reserves Study Area

Background & Overall Analysis Approach

The purpose of the Urban and Rural Reserves project is, in part, to designate appropriate land for each reserve type by addressing the factors listed in Oregon Administrative Rule 660 Section 27. The set of urban reserve factors that must be considered range in scale from assessing whether land can be served with public facilities and services in an efficient and cost-effective manner to determining whether areas can be designed to be walkable with a well-connected transportation system. For this reason, the Core 4 Technical Team (Tech Team), made up of staff from the three counties and Metro, chose to conduct a suitability of land analysis using a phased approach.

This memo describes the first step in this phased approach. It consists of an initial screening of the entire approximately 400,000-acre study area to address the following two urban reserve factors in the state rule:
UR-1: *Can be developed at urban densities in a way that makes efficient use of existing and future public and private infrastructure investments.*
UR-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.*

The state rule defines 'public facilities and services' as sanitary sewer, water, transportation, storm water management facilities and public parks. Due to the sheer size of the study area, the Tech Team looked at it through a broad landscape-scale lens to assess suitability of the land for meeting these two reserve factors. This approach led to the Tech Team limiting this first screen analysis to sewer, water and transportation. Service providers of storm water management, public schools and public parks confirmed this screening decision.

The particular methodology and results for the transportation element is discussed below. The result of this element is expressed graphically on the attached maps showing areas that are ranked as 'higher', 'medium' or 'lower' to serve. This map, combined with those from the sewer and water elements, will be used to form a primarily assessment that begins to answer the two reserve factors above. The next phase of this process is described under Next Steps below.

Transportation Element Strategy & Methodology

A group of experts in the transportation field representing local jurisdictions and agencies was convened in October 2008 to undertake an exercise to assess the potential within the Reserves study area for accommodating an urban level of transportation service. This exercise consisted of developing a theoretical road network using the connectivity standards in the Regional Transportation Plan (RTP). The experts were able to use their knowledge of the land and existing rural transportation system to make informed decisions on where to place arterial and collector level roadways to attempt to meet the RTP standard. The ideal spacing for arterials is one mile apart, and the ideal spacing for collectors is one-half mile from another collector or arterial. This strategy reflects the evidence that such a connected system best accommodates an urban-level development pattern including vehicular, transit, bicycle and pedestrian travel.

To facilitate the exercise, Tech Team staff provided maps to the group with the following information:

- Existing rural road network
- Existing RR lines
- Topographical information in increments of 0%-7%, 7%-25% and over 25% slope
- Floodplains, streams & wetlands
- Proposed HCT corridors

In addition, a Google-earth terminal was set up to check actual on-the-ground development and features. Participating in this exercise were representatives from the following organizations: Clackamas, Multnomah and Washington counties; the cities of Gresham, Oregon City, Portland and Tualatin; ODOT; Tri-met; and Metro.

After completion of the exercise, Metro staff digitized the road network and set up a database of information that could be queried for such things as number of lane miles, both existing and added, number of intersections and distance to destinations. This information was used, in part, to develop a rough capital cost estimate of the improved network for specific geographic sub areas. The costing approach was derived from the ODOT Highway Economic Requirements System (HERS), which is used for planning-level capital costs for roadway projects. This methodology includes assigning higher roadway costs to major bridge crossings, wetlands and steep slope areas. It includes a standard right of way cost factor and is expressed as a unit cost per lane mile.

This exercise is a first screen for illustrating an arterial/collector level system upon the landscape and assessing whether an area is suitable for accommodating urban level development. From the GIS-level data, a rough cost comparison can be made among sub-areas. It is not meant to depict an actual complete urban roadway network or reflect detailed costs for construction of such a system, but rather provide preliminary information on how certain sub areas compare relative to other sub areas. Transit considerations for potential candidate urban areas, as well as a specific sub area's impact on major roadways connecting to the existing UGB will be analyzed during the next screening process; the former through working with Tri-met staff, the latter likely through transportation modeling of chosen sub areas.

In order to make a first-cut choice on which areas to query and thus enable a comparative analysis of sub areas, the Tech Team overlaid the sanitary sewer and water maps to derive areas for further exploration. These two maps are the products of consultation with experts in their respective fields.[1] The team chose areas on the sewer and water maps that indicated a higher ability to serve future urban development.

[1] For more information, see the two memos and associated maps on sanitary sewer service and water service.

Transportation Results

The results of the digitized roadway networks and interpretation of data is shown on the three attached maps. As indicated above, the sub areas were derived from the sewer and water service analyses. There are 15 distinct sub areas shown on the map. Each sub area has been ranked to indicate its ability to accommodate urban-levels of development.

The suitability rankings are based on three data sets: Cost per system lane mile; cost per added land mile; and number of intersections per square mile. The first two rankings are rough, preliminary cost estimates and do not factor in the cost of local streets or needed improvements to mobility corridors and other connections back into the existing urban area. They reflect the higher cost of constructing arterial and collector roadways in areas with steeper topography and natural resource features (cost per added lane mile) and in areas with fewer existing roadways (cost per system lane mile). The connectivity ranking is expressed in intersections per square mile, which is a good indicator of the relative density of streets in a given network. This, in turn, is an indicator of how well an area can be served by a connected transportation network, which facilitates better access to various land uses and creates the most efficient travel patterns for all modes of travel. The sub areas are ranked for the three suitability factors as follows:

Higher Suitability – The particular data set showed that these areas are among the most suitable for providing a transportation system capable of accommodating urban levels of development.

Medium Suitability - The particular data set showed that these areas are somewhat suitable for providing a transportation system capable of accommodating urban levels of development.

Lower Suitability - The particular data set showed that these areas are among the least suitable for providing a transportation system capable of accommodating urban levels of development.

Based on this initial analysis of the three suitability factors, some general observations can be made and caveats should be noted:

1. Flatter areas rank as higher (more suitable) for connectivity, due to the ability to construct a more complete grid system; though they often rank medium to lower (less suitable) for cost per system lane mile, in part, due to the very limited existing rural road network. These same areas are scattered from higher to lower suitability for cost per added lane mile, depending on the amount of natural resource land present.
2. The geographic extent of the sub areas, while initially based on preliminary sewer and water provision mapping, were in some cases modified to account for the particular needs of constructing a transportation network. Increasing, decreasing or otherwise modifying these areas could, of course, result in different rankings. Indeed, such modification will take place as candidate urban reserve areas become refined to better reflect subsequent finer-texture screens resulting from analysis of the six remaining urban factors listed under Next Steps below.
3. For this exercise, each sub area was isolated as much as possible in order to allow a first-screen comparison of them with each other. For this reason, the connections from the sub areas not adjacent to the existing UGB that would be needed were not factored in to the two cost factors during this screen. These areas would likely have higher costs to construct an urban-level arterial/collector network without urbanizing the intervening study areas.

These initial screening results offer an opportunity to look at the relative trade-offs of various sub areas within the overall Reserves Study Area. It is a way of starting to assess the viability of such areas to accommodate an urban level network and should be combined with the information from the sanitary sewer and water suitability efforts to narrow down this overall study area into candidate urban reserve areas.

Next Steps
The three transportation suitability maps are one component to be used in assessing the first screen analysis for candidate urban reserve areas. Information derived from these maps in conjunction with the sanitary sewer and water suitability maps should provide a basis for eliminating some of the study area from further consideration as urban reserves. The next screen analysis will involve more detailed analyses of the remaining potential urban reserve areas. These areas will be referred to as priority candidate urban reserve areas.

For reference, the additional urban reserve factors outlined in the Administrative Rule that will be applied to the candidate urban reserve areas, in addition to refining factors 1 and 3 are:

UR-2: Includes sufficient development capacity to support a healthy economy;
UR-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;
UR-5: Can be designed to preserve and enhance natural ecological systems;
UR-6: Includes sufficient land suitable for a range of needed housing types;
UR-7: Can be developed in a way that preserves important natural landscape features included in urban reserves; and
UR-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.

Map attachments:

1. Preliminary System Lane Cost Suitability
2. Preliminary Added Lane Cost Suitability
3. Preliminary Connectivity Suitability

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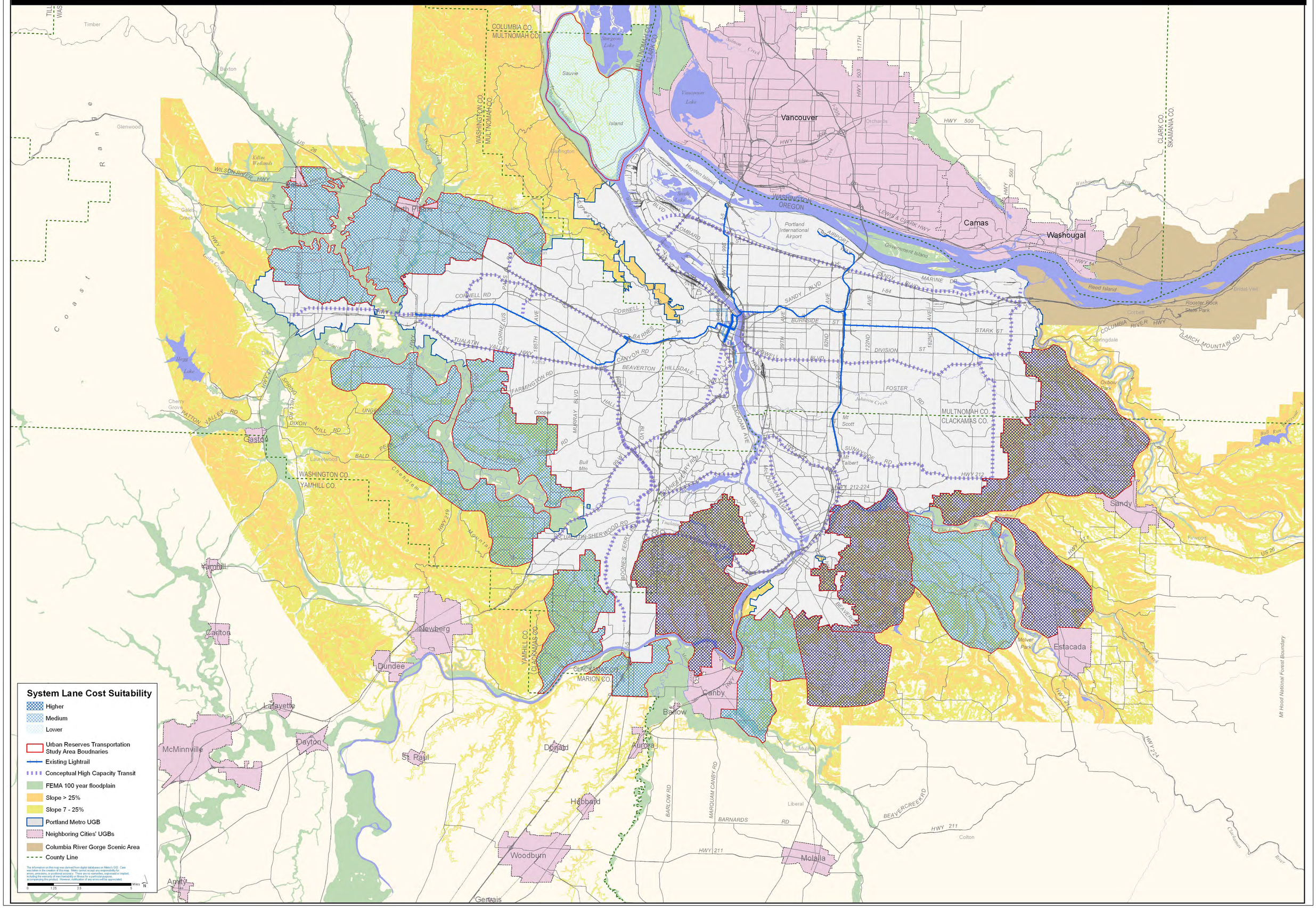
Washington County

CLACKAMAS COUNTY

Urban Reserve Transportation Study Areas

Preliminary System Lane Cost Suitability



System Lane Cost Suitability

- Higher
- Medium
- Lower

- Urban Reserves Transportation Study Area Boundaries
- Existing Lightrail
- Conceptual High Capacity Transit
- FEMA 100 year floodplain
- Slope > 25%
- Slope 7 - 25%
- Portland Metro UGB
- Neighboring Cities' UGBs
- Columbia River Gorge Scenic Area
- County Line

0 1.25 2.5 5 Miles N

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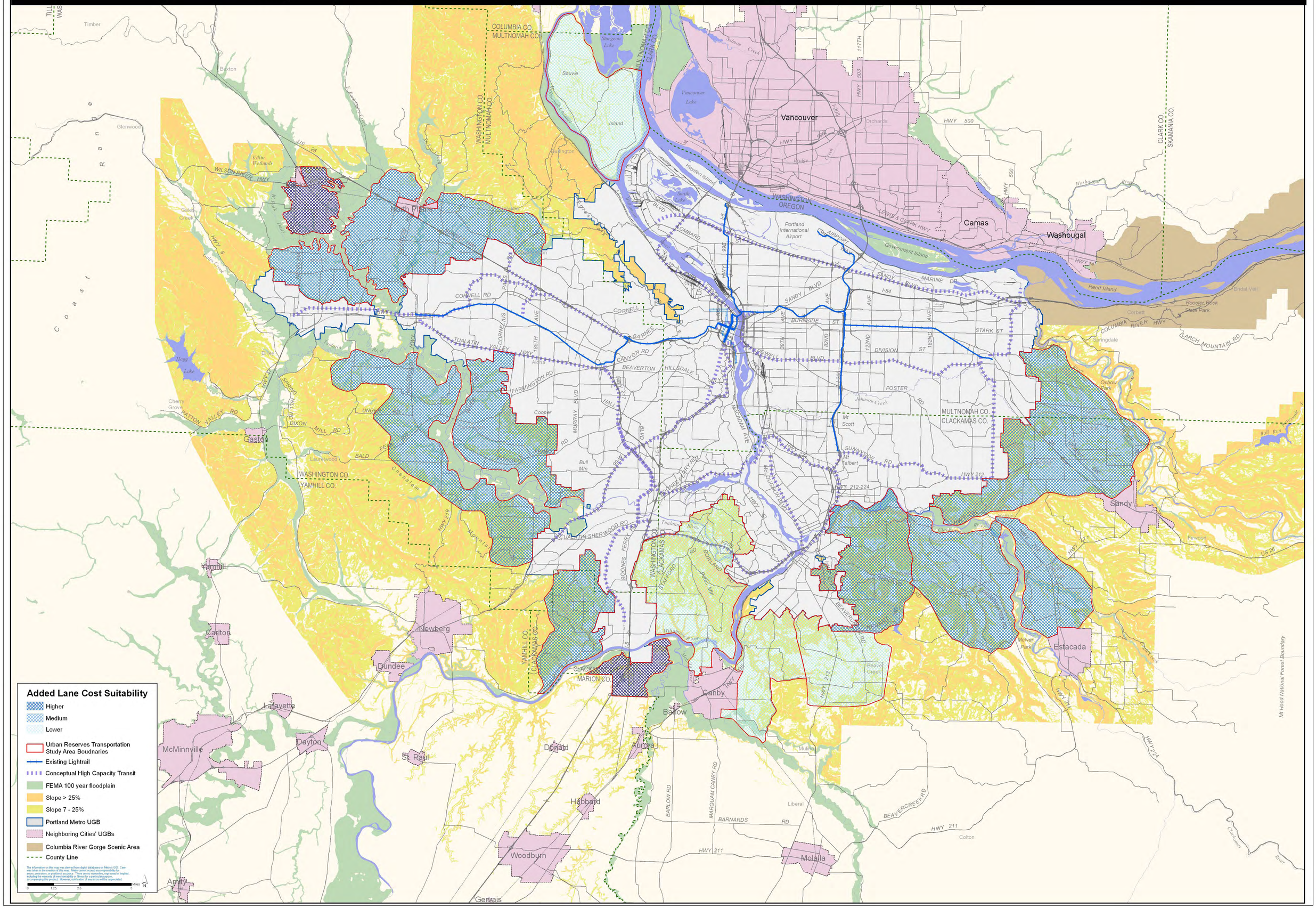
Urban Reserve Transportation Study Areas

Preliminary Added Lane Cost Suitability



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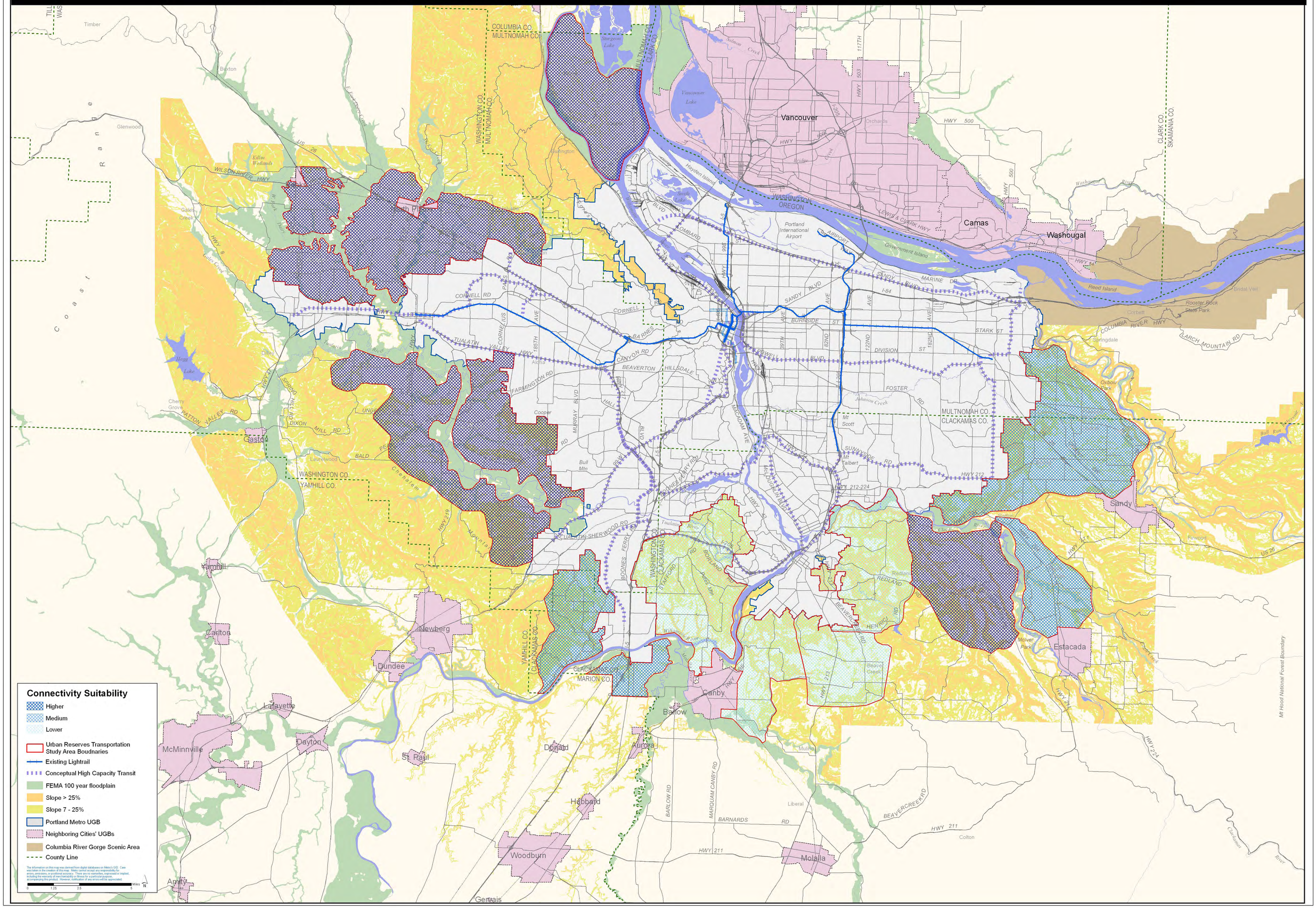
Urban Reserve Transportation Study Areas

Preliminary Connectivity Suitability



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MTAC Tentative 2009 Agendas
(subject to change)
March 12, 2009

March 18
- Urban and Rural Reserves
  - Urban and rural reserve candidate areas for evaluation
  - Initial screening methodology and results
- HCT workshop tool
- 2009 Tentative MTAC Agendas

April 1
- 20- and 50-year regional range forecast and policy choices (overview and discussion)
- Review local aspirations summary and key investment opportunities (discussion)

April 15
- Preliminary residential UGR (overview and discussion)
- RTP Needs findings (discussion)
- Update on urban and rural reserve candidate areas and candidate area evaluation process (discussion)
- Review implications of local aspirations for HCT, RTP, and UGR (discussion)

May 6
- Preliminary residential UGR (recommended refinements to MPAC)
- RTP Investment Principles (discussion)
- HCT recommended priorities and draft plan (discussion)

May 20
- Preliminary employment UGR (discussion)
- Update on candidate area evaluation results
- Oregon City SDC case study

June 3
- Preliminary employment UGR (recommended refinements to MPAC)
- HCT Plan (action – recommendation to MPAC)
- RTP Investment Principles (action – recommendation to MPAC)

June 17
- Local aspirations – confirm recently adopted local actions for consideration of finalizing UGR and capacity ranges

July 1
TBD

July 15
TBD

August 5
- Wood Village model ordinance for cottage housing

August 19
TBD

September 2
- Review coordinated Making the Greatest Place package of legislation

September 16
- Ordinance on reserves (intro)
- Resolution to authorize IGAs to designate urban and rural reserves (intro)

October 7
- Ordinance on reserves (discussion and action – recommendation to MPAC)
- Resolution to authorize IGAs to designate urban and rural reserves (discussion and action – recommendation to MPAC)
- Resolution approving 2035 RTP (intro)

October 21
- Resolution approving 2035 RTP (discussion and action – recommendation to MPAC)

November 4
TBD

November 18
- Resolution accepting regional range forecast and UGR (intro)

December 2
- Resolution accepting regional range forecast and UGR (discussion and action – recommendation to MPAC)

December 16
TBD