



MEMORANDUM

To: City of The Dalles
From: Winterbrook Planning
Date: March 22, 2006
Re: **Buildable Lands Methodology, Recent Development Data, and Potential Study Area Definition and Analysis**

The initial focus of this memorandum was to address questions from Erik Rundell regarding “underdeveloped” lands methodology and from Dan Durow regarding the sufficiency of recent development information. However, We found that an adequate response to these questions required a more comprehensive look at the overall process.

Our Work Tasks 5, 6, and 7 directly relate to the questions at hand, so this memorandum can serve as an informational base and draft work product related to those Tasks. This memorandum has three sections:

- 1) Recommendations regarding the Buildable Lands Inventory methodology;
- 2) What additional recent development data we need for analysis, and why we need it; and
- 3) A draft methodology for selection and analysis of Study Areas.

Table of Contents

Buildable Lands Methodology	2
Unbuildable Land	2
Floodplain	2
Slope.....	3
Riparian Areas	3
Wetlands.....	3
Geologic Hazard Areas	3
Superfund & Brownfield.....	3
Easements & Rights of Way	3
Unbuildable Lands Summary	4
Residential Lands	4
Public Lands.....	5
Commercial & Industrial Lands	6
Mixed Use	6
Recent Development Analysis	6

Study Areas Selection	8
Study Area Analysis	9

BUILDABLE LANDS METHODOLOGY

Our understanding of the origins of the existing Buildable Lands Inventory (BLI) is based on text in the Land Use Needs and Location Analysis (LUNALA) and is as follows:

- 1992: Creation of the base BLI for the City of The Dalles;
- 1994: First update of the BLI;
- 2002: Land use survey completed by Bryan Colbourne;
- 2005: BLI updated based on the 2002 land use survey, building permits, site plan reviews, and aerial photography.

Work Task 5 asks us to help clarify BLI methodology, and make sure the assumptions and methods used are justifiable. Our understanding of The Dalles’ BLI process is that each iteration of the BLI has taken previous work and built on it. Given our current available GIS technology, and probable varying methodology in each iteration of the BLI, it may be both feasible and preferable to rebuild the BLI using a single and clear methodology. To this end, WE propose the following methodology for addressing physical constraints on land use, and for dealing with Residential, Public, Mixed-Use, Commercial, and Industrial land. These are suggestions, and feedback is more than welcomed.

Unbuildable Land

The LUNALA identifies land that is difficult or impractical to develop due to physical characteristics. It identifies these constraints, and applies “limitation values”. Parcels that consist of over 50% of lands identified as “Limitation Value 10” are removed as unbuildable. This methodology is good for an overview and general analysis, but requires some additional specificity to be used in a UGB amendment process. Most land inside and outside the UGB can be classified for the BLI in a binary system – either it’s buildable or it’s not.¹ The suitability of the unconstrained portion of the parcel for development depends on the size and accessibility of the unconstrained portion, so we need to use a more detailed methodology than a straight 50% break point. We’ll review and comment on each of the constraints below:

Floodplain

OAR 660-008 (Interpretation of Goal 10 Housing) provides a basis for considering lands within the 100-year floodplain to be unbuildable.² The 500-year floodplain should be considered buildable, absent the presence of other constraints.

¹ As part of this process, we are looking at The Dalles’ zoning regulations to ensure that the assumptions regarding constrained lands are supported by the regulatory scheme.

² OAR 660-008-0005(2) *"Buildable Land" means residentially designated vacant and, at the option of the local jurisdiction, redevelopable land within the Metro urban growth boundary that is not severely constrained by natural hazards (Statewide Planning Goal 7) or subject to natural resource protection measures (Statewide*

Slope

The LUNALA project mapped slopes in segments of 0-5%, 5-15%, 15-20%, 20-30%, and over 30%. OAR 660-008 (Interpretation of Goal 10 Housing) defines land with greater than 25% slope to be unbuildable for residential land calculation. Generally, commercial and industrial development has more restrictive slope requirements than residential. We suggest defining 25% slope break as unbuildable for residentially-planned lands inside the UGB, and in initial analysis of lands outside the UGB. For commercial, industrial, and public land inside the UGB, a 10% slope break would be appropriate.

Riparian Areas

Riparian areas are identified in the LUNALA as areas within 50' of the edge of streams, but are not protected in any regulation. If The Dalles wants to include riparian areas as unbuildable land, we need to include some protection of riparian areas as part of this process. The current riparian data is workable as is.

Wetlands

The wetlands identified in the LUNALA were based on US Forest Service data and that is the best available data.

Geologic Hazard Areas

Geologic hazard areas information in the LUNALA was derived from two independent studies. The Fujitani study identified landslide risk areas on a 4-part scale. The Oregon Department of Geology and Mineral Industries study identified slide and slump areas. There has been residential development on some of the highest risk areas in the Fujitani study, and on a DOGAMI identified slump area. Inside the existing UGB, the highest risk areas should correspond with the 25%+ slope break areas, so using the slope break might be a more justifiable alternative than classifying geologic hazard areas as unbuildable. Outside the UGB, it's reasonable to show hazard areas as unbuildable.

Superfund & Brownfield

Superfund and brownfield sites require a very large amount of up-front investment to be developable. These sites should not be considered "available" for development, so would fall into the unbuildable category.

Easements & Rights of Way

The LUNALA project mapped public easements and rights-of-way. These can be considered unbuildable. In addition, future development of vacant land will require additional right-of-way dedication. Analysis of recent or "actual" development, discussed later in this memorandum, provides a justification for applying a percentage of available land toward right-of-way. We recommend starting with an assumption of 20% right-of-way dedication, and fact-checking that based on actual development analysis.

Planning Goals 5 and 15). Publicly owned land is generally not considered available for residential use. Land with slopes of 25 percent or greater unless otherwise provided for at the time of acknowledgment and land within the 100-year floodplain is generally considered unbuildable for purposes of density calculations.

Unbuildable Lands Summary

The unbuildable lands definitions and methods above should be applied on a parcel-by-parcel basis on developable and available land both inside the UGB and within the outside Study Areas. The unbuildable categories often overlap, so analysis can't deal with each factor separately to determine unbuildable area for each parcel.³ We recommend the methodology below to determine which parcels are available and developable, for Residential, Public, Commercial/Industrial, and Mixed-Use lands.

Residential Lands

It's very important to define the terms used in analysis of BLIs. Mr. Rundell's initial question asked how to deal with "underdeveloped" land. This is a term used in The Dalles' Water Master Plan Project, and carried through to the LUNALA. Rather than trying to define "underdeveloped", which isn't used in Statute or Administrative Rule, WE suggest we use the terms provided by ORS 197.296⁴, quoted below:

ORS 197.296

"(4)(a) For the purpose of the inventory described in subsection (3)(a) of this section, "buildable lands" includes:

- (A) Vacant lands planned or zoned for residential use;*
- (B) Partially vacant lands planned or zoned for residential use;*
- (C) Lands that may be used for a mix of residential and employment uses under the existing planning or zoning; and*
- (D) Lands that may be used for residential infill or redevelopment."*

This would give us the categories of vacant, partially vacant, mixed use, residential infill, and redevelopment lands. The "Underdeveloped" land concept, as described in the LUNALA, is incorporated in these terms and accommodated in the methodology below.

Large Vacant: This category comprises large (greater than 5 acres) residential parcels with no development, and large parcels with very low improvement value (the existing development is likely to be uninhabitable). Using the assessor database, we can determine which residentially-planned parcels have no assessed improvement value. This could identify park or planned open space area (which we don't consider vacant or available for residential use), so must be further reviewed for accuracy. We then identify residentially-planned parcels with very low (\$10,000 or less) assessed improvement values. This category generally requires on-ground or

³ For example, a 5-acre parcel may have overlap between steep (25%+) slope and riparian areas. If both unbuildable areas are accounted for separately and then aggregated, the area removed as unbuildable would be overstated.

⁴ The Dalles is not governed by ORS 197.296, as its population is below the 25,000 threshold and is projected to remain so during the 20-year planning period. However, this Statute provides a reasonable set of basic terms for assessing buildable residential lands.

aerial fact checking, as parking lots or storage areas will have low improvement values, but are actively in use and should not be considered available.

Large Partially Vacant: This category identifies large (greater than 5 acres) parcels that have some development, but also enough vacant land for additional residential development. We identify residentially-designated parcels with improvement values over the \$10,000 threshold. We take out a portion of the parcel to account for existing development,⁵ then we then examine each of the identified parcels to determine if there is a significant⁶ undeveloped portion. If there is, the parcel is “partially vacant”, and the undeveloped portion counts toward the available land supply.

Infill (Vacant, Partially Vacant): This category includes parcels that would qualify as vacant or partially-vacant, but are equal to or less than 5 acres in size. The reason for this differential is to apply a more reasonable density and capacity methodology for smaller parcels in the capacity analysis. For example, we may be able to expect a 30-acre parcel to develop more efficiently than a 1-acre parcel. Analysis of actual development trends will provide greater insight into how this is addressed.

Mixed-Use Lands: The Dalles provides mixed-use lands through the Neighborhood Center Overlay plan designation and zone. We address these separately from Residential lands under “Mixed Use” below.

Redevelopment Lands: We typically reserve this category for commercial and industrial lands, as it is a very unreliable gauge of residential land availability or capacity. For example, a low value home replaced by a high value home has a net zero effect on housing units. This is also more appropriate in higher land value areas, or high density zones. WE think the methodology for vacant, partially-vacant, and infill residential lands will accommodate this concept.

Public Lands

The LUNALA identified publicly-owned lands. These lands should not be considered available for residential use, but public lands not currently in use with buildable area should be accounted for as available for future public use. Public lands in use as parks, fields, or facilities should not be considered available. The final inventory of available public lands should be sorted by ownership, to determine what lands are available for each public use.

⁵ We recommend a base assumption of 0.1 acres per \$100,000 assessed improvement value. Thus, an improvement value of \$80,000 would remove 0.1 acres, \$150,000 would remove 0.2 acres, \$210,000 would remove 0.3 acres, etc. An alternative to this methodology is to assign a static area, regardless of assessed value. A basis for a static area can be determined by review of recent land divisions in the jurisdiction. The average parcel size remaining after the land division is a reasonable estimate of the land that is likely to remain in use by an existing house. Also known as the “remainder area”.

⁶ A “significant” area can be considered an area greater than or equal to 0.2 acres, or the identified “remainder area”.

Commercial & Industrial Lands

Oregon Administrative Rule 660-009 (Economic Development) defines “Vacant Land” as:

- (a) *Equal to or larger than one half-acre not currently containing permanent buildings or improvements; or*
- (b) *Equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements.*

This definition should be used in conjunction with the unbuildable lands methodology above to determine The Dalles’ Commercial and Industrial land supply. In addition, we should account for developed parcels that may experience redevelopment. We call these “Potential Redevelopable”.

Potential Redevelopable: These are parcels that do not qualify for vacant status, but have assessed improvement values of less than the assessed land value. The assessor data analysis will identify some actively used storage or parking areas in this category. These can be identified through aerial photography and should be removed from the Potential Redevelopable category.

Mixed Use

The Comprehensive Plan calls for a “Neighborhood Center Overlay” zone to apply to areas designated “NC” on the Land Use Plan Map. The Neighborhood Center Overlay (NC) zone allows commercial, single-, and multi-family development.

The availability of NC land is dependent on the existing use of the site. If the parcel has less than \$10,000 of improvement value, it can be considered vacant. If it has commercial development, the commercial methodology should apply. If it has residential development, the residential methodology should apply.

If a parcel in this overlay has slopes between 10-25%, it should be considered only available for residential development. If slopes are under 10%, the parcel should be considered available for residential and commercial development.

RECENT DEVELOPMENT ANALYSIS

We recently received an email from Dan Durow with three attachments relating to recent or “actual” development in The Dalles:

- 1) Commercial and Industrial Development.doc – A MS Word document listing Commercial, Industrial, Subdivision, and PUD developments from 2000-2005;
- 2) BuildingPermitInfo.xls – A MS Excel spreadsheet showing residential building permits issued by type (Stick, Manufactured, Multi-Family) from 2001-2005; and

- 3) 2005 5 year application report.xls – A MS Excel spreadsheet showing applications received by the City from 2000-2005.

This is a great start, but we do need more information if possible.

When we look at actual *Commercial and Industrial* development, the objectives are twofold – first, this information is useful for the Economic Opportunities Analysis (EOA) that ECONW is working on. It shows the type and frequency of recent employment development in The Dalles. This information is provided. Second, we want to know the amount of land typically dedicated to right-of-way in commercial and industrial developments, so we can make sure the Commercial and Industrial right-of-way assumptions used in the Buildable Lands Inventory have some basis in actual development. This information we don't have yet, and requires additional analysis of Commercial and Industrial developments, if possible.

When we look at actual Residential *Subdivision* and *PUD* development, we are again interested in right-of-way dedication, for the same reasons, and additionally we need to know what density each housing type (single family, manufactured, multiple-family) is coming in at.

To determine residential density we have two categories:

- 1) Gross Density: The total number of units divided by total site area;⁷
- 2) Net Density: The total number of units divided by the area of the site when tracts and rights-of-way areas are removed.⁸

This information is used as a basis for Buildable Lands Inventory assumptions and Land Needs Analysis assumptions.

When we look at *Minor partitions*, this is useful for residential partitioning and serves as a basis for the “remainder area” discussed earlier in this memorandum. What area was left over from the original parcel to accommodate a remaining home? We're also interested in the density achieved during the partitioning process, to be used as a density basis for infill and rural residential exceptions areas. What was the area of the original parcel, and what are the areas of the partitioned parcels. What plan designation did this partitioning occur in?

Building permit data lets us know the type and quantity of recent residential developments. This serves as a base case for projecting future needs. We have three questions regarding the building permit data:

- 1) The information provided indicates that there has been one (1) multi-family development in the past 5 years. Is this correct?

⁷ For each housing type. For example, if 3 acres of a subdivision are single family, and 1 acre is multi-family, the single family units would be divided by 3, and the multi-family by 1 to get gross density for each type.

⁸ For example, if a 10-acre site had 3 acres of right-of-way dedication and 1 acre of open space tract, the area for use in calculation of net density would be 6 acres. So for 12 single family units on the 10-acre site, the “gross density” would be 1.2 single family units per gross acre, and the net density would be 2.0 single family units per net acre.

- 2) What category would condominiums or townhouses fall into, and were there any condominium or townhouse developments in the past 5 years?
- 3) Do you have any area or density information with the building permits data?

Regarding the land use application summary data, we are more interested in the content of the applications than the overall summary. Specifically, we want to capture the types of housing units and densities developers are applying for, to both gauge interest in developing different housing types and to capture data about some applications that we haven't seen developed yet, or might not have appeared in the other data. For example, we are aware of a recent PUD by the waterfront – what housing types and densities will The Dalles see from that? Any further information in this vein would be helpful.

STUDY AREAS SELECTION

The LUNALA currently analyzes the area surrounding The Dalles in a weighted scheme. This is useful, and has provided a good idea of where The Dalles should look to grow. However, in order to get through the UGB/Urban Reserve amendment process, we have to further define the surrounding area into “Study Areas”, and compare different Study Areas for various suitability factors.

One of the most important suitability factors for UGB expansion is the ability to provide urban services to the expansion area. Public facility constraints are generally related to geography. High elevations may be more expensive to serve with water. It may be more expensive to build underground pipes in steeply sloped areas, or across water features. Due to this dynamic, Study Areas defined by serviceability factors generally follow logical geographic features. Other logical Study Area breaks are major roads.

The LUNALA project already includes consideration of public facilities, as well as natural features constraints, so we don't have to recreate the wheel here. The LUNALA shows us that expansion to the west and east make the most sense, with all weighted factors considered. WE suggest creation of 4 distinct Study Areas, with breaks that work with the LUNALA composite. These breaks turn out to be logically along major roads, which tend to follow water features.

- Study Area 1: Northwest of Chenoweth Road, and West of Browns Creek Road.
- Study Area 2: Southeast of Chenoweth Road, East of Browns Creek Road to Mill Creek Road.
- Study Area 3: East of Mill Creek Road to South of Eight Mile Road, Fifteen Mile Road, and McCoy Road.
- Study Area 4: North and Northeast of Eight Mile Road, Fifteen Mile Road, and McCoy Road.

Study Area Analysis

Analysis of Study Area suitability includes determination of Buildable Lands, Soil Class, and Public Facilities serviceability. A base level determination of Buildable lands in the Study Areas should follow the same methodology as described earlier for Residential Lands. This will require a tax lot level analysis. Gauging the suitability of expansion areas for employment lands requires site specific analysis, and will be addressed in a separate process.

The LUNALA has already accounted for Soil Class, and will just require a refocus of the soil class information relative to the new Study Areas.

The Study Areas will require more extensive cost analysis for provision of public facilities. This will require further coordination with The Dalles Public Works.