TO: Columbia River Gorge Commission

FROM: Jason Hildreth, Sr. GIS Analyst/Land Use Planner

DATE: October 10, 2017

SUBJECT: **Information Item:** Buildable Lands Inventory

Purpose:

To inform the "Gorge 2020" Management Plan review process, the Commission asked for a buildable land inventory (BLI), for the lands within the National Scenic Area (NSA). A detailed report will be presented at the Commission meeting as an attachment and will be finalized after Commission discussion. The purpose of doing this initial analysis is to determine how much additional land might be developed with structures that might have some impact the resources in the NSA, and to determine if there is potential for such development or if the NSA is effectively "built out" under the current landuse designations.

Background:

To evaluate the efficacy of land-use regulations, it is important to understand the effect of said regulations on the area they impact. Planners need to know not only what the effects of planning initiatives and regulations have been, but also what needs exist that are not currently being addressed. To inform policy decisions, planners look at a litany of cross-disciplinary issues. Transportation, economics, demographics, labor statistics, and the natural environment are just a few of the components that might be considered in the planning process.
As a part of the "resource update and review component" of the "Gorge 2020" Management Plan review and update process, the Commission requested a buildable lands inventory and land use change study of the areas in the National Scenic Area outside of the 13 designated Urban Areas.

About Buildable Lands Inventories:

Buildable land inventories are a common tool used in the Pacific Northwest states of Oregon and Washington to inform policy decisions related to urban and regional planning. BLIs are, in fact, mandatory in the region. The Growth Management Act (GMA) of Washington requires counties and their cities to compare planning targets and objectives with actual growth and development that has occurred (PDS, Snohomish County, 2012). In Oregon, BLIs are used to comply with statewide planning policies related to state law OAR 660-008 (ECONorthwest, 2015). The BLI in Oregon is

typically used to demonstrate whether an urban area's Urban Growth Boundary (UGB) has enough developable land to accommodate 20 years of residential development (Oregon Metro, 2014). Below is an explanation of the methodology commonly used to perform a BLI, as well as explanations of other methods that will be used to meet the project objective outlined above.

Metro is the metropolitan planning organization that oversees the city planning activities in the Portland, Oregon metropolitan area that includes part of Clackamas, Multnomah, and Washington counties. Every five years, Metro conducts an Urban Growth Report to guide the Metro Council's growth management decisions. As a part of this report, Metro produces a BLI, which is one of the most important components (Oregon Metro, 2014).

Metro's BLI is broken down into five basic steps: 1) Identify vacant tax lots by zoning class; 2) remove taxlots that do not have potential residential or employment growth capacity; 3) calculate deductions for environmental resources; 4) calculate deductions for future streets; and 5) calculate BLI estimates (Oregon Metro, 2014).

Across the Columbia River from Portland lies Clark County, Washington. Clark County is home to several urban areas that are required to meet the Washington GMA, the largest of which is the city of Vancouver, which is also part of the larger Portland-Vancouver-Hillsboro Metropolitan Statistical Area. Clark County has its own method of conducting a BLI, known as the Vacant Buildable Lands Model (VBLM) (Clark County Community Planning Department).

The methodology for the VBLM is similar to the BLI used by Metro. First, all parcels in the urban area are given a landuse designation based on the current comprehensive plan. Lands with certain designations, such as parks and open space, which do not have potential for residential or economic development, are excluded from the model. Constrained lands, such as those in floodplains, containing steep slopes, or that are priority habitat for sensitive plant and animal species, are also excluded. Once the classified land inventory is complete, several assumptions developed by the planners are applied to the model. The output of the model shows how many net developable acres are located in residential, commercial, and industrial areas. The model also extrapolates the capacity of said residential land to support new residents, and what capacity the commercial and industrial land has to support new employment (Clark County Community Planning Department).

BLI Objectives:

1. Use techniques developed by local governments and research groups for municipalities in the states of Oregon and Washington to identify vacant and developed parcels of land, and apply them to lands in the Columbia River Gorge National Scenic Area (NSA) outside of the 13 Urban Areas (UA's) designated by Congress.

2. Identify parcels in the NSA that are eligible for subdivision under the current landuse designations.

3. Identify land use changes in the NSA that have occurred since the adoption of the current management plan.

4. Determine if LiDAR remote sensing could be used to identify structures and building footprints within the NSA.

Key Findings:

1. The majority of taxlots and landowners in the NSA are located in the Urban Areas. Nearly 40% of the taxlots outside of the NSA have no buildings or improvements, despite being eligible for buildings and improvements.

2. Of the 7,296 privatively owned taxlots in the NSA outside of the urban areas, 160 are eligible for subdivision under the current land-use designations. These are parcels that can potentially be divided into multiple parcels and thus accommodate denser development and a higher total number of structures that might impact resources in the NSA.

3. Between 2001 and 2011 the change in acreage of agricultural and developed land was negligible. Forest land, however, saw a 1.45% decrease. This decrease appears to be caused by logging activates which are classified and encouraged as "forest uses" in the Management Plan.

4. LiDAR data can be used to identify buildings in the NSA and remove the uncertainty of relying on taxlot datasets from several sources. However, the results must still be field checked to account for false positives and negatives that are identified.

Future Work:

The study provides information regarding the current state of development in the NSA, but also leaves several questions that need to be resolved. In particular, the study did not consider the needs of future population or economic growth in the area, and what impacts they might have on the demand for buildable land in the NSA. Subsequent analyses might consider future development and the impacts that might have on the built environment of the NSA under the current Management Plan.

The promising results of the LiDAR analysis suggest that remote sensing techniques could be used in lieu of tax assessor data to identify built and vacant parcels in the NSA. The advantage of such an analysis is that it would provide a uniform method of identifying built parcels in the NSA, versus relying on local tax assessor data that uses different methodology in each county. The downside to such an analysis is that obtaining LiDAR data is expensive, and the data would need to be collected at specific intervals to monitor change in the built environment of the NSA, adding to the cost. To mitigate this cost, other remotely sense data, such as LANDSAT satellite data, could be used, but would require a separate analysis to determine the viability of using such data.

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