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**Date:** March 24, 2015

**To:** Suzanne Savin, Senior Planner, Long Range Planning  
Washington County Dept. of Land Use & Transportation

**From:** John van Staveren

**Re:** Riparian Corridor Inventory – Standard vs. Safe Harbor Setback Options  
Bonny Slope West Expansion Area

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As part of the natural resource inventory for the Bonny Slope West expansion area, Pacific Habitat Services (PHS) has inventoried the extent of riparian areas, which are a Statewide Planning Goal 5 resource. The inventory was conducted using the Safe Harbor option and the standard inventory method. This memorandum briefly describes both options.

First, two definitions - a "riparian area" is defined as the area adjacent to a river, lake, or stream, consisting of the area of transition from an aquatic ecosystem to a terrestrial ecosystem. A "riparian corridor" is a Goal 5 resource that includes the water areas, fish habitat, adjacent riparian areas, and wetlands within the riparian area.

**Identifying the width of the riparian corridors:**

The Department of Land Conservation and Development (DLCD) requires that local Oregon jurisdictions determine riparian corridors using either the safe harbor method or the standard inventory method.

**Safe Harbor Method:** Statewide Planning Goal 5 contains a "safe harbor" option for local jurisdictions allowing them to replace portions of the standard Goal 5 process with processes set forth in the rules for each of the listed Goal 5 resources. The safe harbor process for riparian corridors allows jurisdictions to impose a 50-foot setback from all fish-bearing lakes and streams and a 75-foot setback from all streams with average annual stream flow greater than 1,000 cubic feet per second (cfs) [OAR 660-023-0090(5)].

The Bonny Slope West expansion area contains Ward Creek and several tributaries. Ward Creek is known to contain cutthroat trout, therefore, satisfies the requirement to be fish bearing. Its annual average streamflow is well below 1,000 cfs. **As such, the safe harbor setback for the creek and its fish-bearing tributaries is 50 feet.**

**Standard Method:** PHS also assessed the location of the riparian corridors using the standard method. There is no required methodology used to identify the riparian corridor width, but several years ago PHS prepared the *Urban Riparian Inventory and Assessment Guide* (URIAG), which has been used by many jurisdictions throughout Oregon.

With URIAG, riparian corridors are first broken into “reaches” that have similar characteristics, such as vegetation patterns or land use. Each riparian reach has a right and left side, looking downstream. It relies on a combination of available knowledge, field observations, and best professional judgment. The methodology is comprised of a riparian inventory and a riparian assessment. The riparian inventory involves gathering and assimilating information pertinent to the project site, developing a base map, and completing the riparian characterization form.

The riparian characterization form includes a determination of the riparian width. The riparian width is measured from the edge of the water resource, typically either the top of a streambank or the outer edge of a wetland. Riparian areas on both sides of a stream channel are assigned separate widths. The potential width of the riparian area is based on the dominant riparian tree species within 100 feet of the water resource. The height of the dominant tree species at maturity is used as a distance to define the outer riparian boundary. The height of the tree species at maturity is called the site potential tree height (SPTH).

SPTH is used as the potential riparian width because it represents a distance in which a tree can still affect the water resource (e.g. provide shade, provide organic material). Where riparian area trees have been eliminated by land-use activities, such as development, farming, or by natural causes, such as landslides, it may be necessary to extrapolate tree heights from a reference site. Although the riparian widths never exceed the SPTH, they can be less than the SPTH if impervious surfaces or permanent structures (e.g. buildings or roads) are inventoried within the SPTH.

The width of the riparian corridor for the Bonny Slope West varies depending on the SPTH within a given “reach”. The SPTH for the dominant tree species along the Bonny Slope West riparian corridors, and corresponding riparian corridor widths are included below.

Common Name	Botanical Name	Potential Tree Height / Riparian Corridor Widths (ft)
Big-leaf maple	<i>Acer macrophyllum</i>	90
Red alder	<i>Alnus rubra</i>	65
Douglas-fir	<i>Pseudotsuga menziesii</i>	120
Pacific willow	<i>Salix lasiandra</i>	35
Western red cedar	<i>Thuja plicata</i>	120

**The majority of Ward Creek is dominated by Douglas fir, which has a SPTH of 120 feet. Therefore per the URIAG methodology, the majority of Ward Creek has a 120 foot riparian corridor setback.**

### **Protecting Riparian Corridors**

Once the riparian corridor widths have been established they must be protected. The final step in the process is to develop a program to achieve Goal 5. It consists of comprehensive plan policies and land use regulations that set forth the degree of protection "for each significant resource site" per OAR 660-023-0050(1). The regulations must be "clear and objective." Clear and objective criteria are performance standards that describe an outcome. Different performance standards may be applied to individual resource sites.

The rule also provides the option to have alternative discretionary standards as long as applicants have a choice of using the clear and objective criteria [OAR 660-023-0050(3)]. There are two options for protecting riparian corridors in the Bonny Slope West area: the safe harbor option and the standard process.

The safe harbor approach is a standard set of protection measures that ensures limited future impacts to significant resources. Washington County currently protects Goal 5 resources through Section 422 of the Community Development Code. This ordinance "permits limited and safe development in areas with significant natural resources", which includes riparian corridors. As such, Section 422 already complies with Goal 5 and an adoption of a new ordinance is not necessary.

The standard process is an analysis of the ESEE (economic, social, environmental and energy) consequences to decide whether the significant resource should be fully or partially protected and to justify a decision and then adopts measures (such as zoning code) to put that policy into effect. The ESEE analysis provides the basis for determining whether to allow, limit or prohibit a conflicting use near significant resource sites.

The ESEE analysis gives the County greater flexibility in determining and implementing Goal 5 protections. The steps necessary for compliance with Goal 5 are described in OAR 660, Division 23 Procedures and Requirements for Complying with Goal 5. The County has already completed the first step, which is mapping the significant resource (see OAR 660-023-0030).

The ESEE analysis identifies conflicting uses that exist or could occur, and which could affect significant Goal 5 resource sites. A conflicting use generally negatively impacts resource sites. To conduct the ESEE, the County will determine an impact area, which represents the extent to which land uses or activities in areas adjacent to a riparian corridor could negatively impact the riparian corridor. The impact area represents the limits of where the ESEE analysis is conducted. The County must then, through the ESEE consequences analysis, consider the impacts of a decision to fully protect, fully allow, or limit the conflicting uses within a riparian corridor.

**Riparian Corridor Inventory – Standard vs. Safe Harbor Setback Options**

**Bonny Slope West Expansion Area**

**Pacific Habitat Services**

**March 31, 2015**

**Page - 4 -**

If the County chooses to limit conflicting uses, it must do so in a way that “protects the resource to the desired extent.” Finally, the County must analyze the ESEE Consequences and then develop a program to implement the ESEE decision. During this process, the County develops ways to achieve the protection through the Goal 5 process and determines what can and what cannot occur within Goal 5 resource area (i.e. Riparian Corridor). Finally, the Goal 5 resource program is adopted into the Comprehensive Plan and implemented through the Community Development Code.