

MEMORANDUM

DATE: January 27, 2015
TO: Dave Kuhl, Development Services Director, City of Woodinville
FROM: Lisa Grueter, Manager, BERK Consulting
RE: Responses to Comments from Muckleshoot Indian Tribe, January 9, 2015

This memo provides responses to comments to an email comment sent by Karen Walter, Watersheds and Land Use Team Leader, Muckleshoot Indian Tribe Fisheries Division, Habitat Program on January 9, 2015 during the official 45-day comment period on the Comprehensive Plan and Municipal Code Update including the Draft Environmental Impact Statement (EIS).

The comments addressed three components of the Woodinville Comprehensive Plan and Municipal Code Update: Draft Comprehensive Plan, Draft Code Update, and Draft EIS. The comments are included in the table below with corresponding responses. Where there are proposed policy or analysis additions or modifications, the text is shaded.

Comment	Response
<u>Draft Comprehensive Plan</u>	
<p>1. With respect to the proposed Comprehensive Plan, there needs to be language added to the transportation, utilities and natural environment elements that identify the avoidance of new fish passage barriers and the replacement of existing fish passage barriers to provide passage. From this language, additional language should be added in the “tools” section for each of these elements that include a fish passage barrier assessment plan and the incorporation of projects into the 6-year CIP lists.</p>	<p>The Draft comprehensive plan includes several policies regarding natural environment and fish habitat protection (e.g. in the Transportation Element “Designing transportation infrastructure in a manner that is compatible with the natural environment by incorporating features based on science and low impact development approaches.” Or in the Utility Element “Minimize crossings of fish-bearing watercourses, when possible”) To address the comment the Consultant team recommends adding a policy to the transportation, utilities and natural environment elements as follows:</p> <ul style="list-style-type: none"> • Transportation: Add a new letter to Policy T-3.1 “In the design of transportation improvements, avoid the creation of new fish passage barriers and promote improvements that remove fish passage barriers where possible.” • Utilities: Add a new letter to Policy U-1.8 “Avoid utility improvements that would increase fish passage barriers and promote utility improvements that are designed to remove barriers where possible.” • Natural Environment: Add a new policy under Goal E-1, “Encourage the replacement of existing fish passage barriers to provide passage.”

Comment	Response
<p>2. The Natural Environment element should include previous and current restoration program information and discuss potential expansion efforts particularly for the Sammamish Re-Leaf project which was an implementation measure identified in the Bear-Evans Creek TMDL (www.ecy.wa.gov/biblio/1110024.html). There should also be more explicit policies and goals specific to the Shoreline Master Program and its restoration Plan. Finally there should be more explicit policies and goals related to the implementation of the WRIA 8 salmon recovery plan where it applies specifically to the City to just a citation of the plan.</p>	<p>Add to the background text of the Environmental Element: "A program called Sammamish ReLeaf has resulted in stabilization and habitat restoration projects along the Sammamish River in Bothell, Woodinville, and Redmond since the 1990s. The Sammamish River Stewards was established in 1999 and includes volunteer environmental leaders who remove invasive weeds, plant trees and shrubs, and train other volunteers in the techniques needed for successful restoration. Furthermore, they are volunteer leaders and educators for the City's large yearly events such as Earth Day and Sammamish ReLeaf. Monthly the Stewards work the restoration sites in addition to the larger annual events. (Woodinville, January 14, 2015)"</p>
<p>3. The land use classifications and zoning should be re-analyzed using the information provided in the Best Available Science Review and other consultant work products associated with this project. For example, there are floodplain, erosion and landslide hazard areas that should be avoided; however, some of these areas overlap with proposed increased land uses and housing densities. This can lead to false expectations about development opportunities and force variances and reductions on protections for these critical areas that could lead to further degradation of fish habitat.</p>	<p>The land use classifications and zoning have been evaluated in the Draft Environmental Impact Statement (EIS) with regard to critical areas. The buildable lands analysis projecting growth associated with the land use alternatives accounts for the "set aside" of critical areas and does not overstate the development potential. The City's critical areas regulations will apply to development in any location in the City.</p>
<p>4. The comments below regarding the development regulations may further affect the proposed alternative land use designations and zoning alternatives.</p>	<p>See responses below.</p>
<p><u>Draft Development Regulations</u></p>	
<p>5. The City should modify the existing regulations by incorporating the elements, issues, language, etc identified in the Critical Areas Gap Analysis completed by the Watershed Company which are extensive and cover all of the critical areas. The City's current regulations are out of date and do not sufficiently protect streams, wetlands, riparian areas and floodplains. In addition to the recommendations from this report, the City needs to include provisions for presumed fish habitat which should be based on the language found in WAC 222-16-031. Please note that the Critical Areas Gap Analysis incorrectly identifies the water typing WAC as 222-16-030 which has not been fully implemented as the WA Forest Practices Board has not adopted water typing maps. Therefore, the interim rule is still in effect which includes the provisions regarding potential fish use.</p>	<p>Comment noted. The City is considering adoption of the proposed amendments in the Critical Areas Gap Analysis concurrent with the Comprehensive Plan Update. Also, it is correct that the Forest Practices Board has not fully implemented WAC 222-16-030, but local jurisdictions are free to implement WAC 222-16-030. These state regulations were developed with peer review and comment.</p>

Comment	Response
<p>6. The development regulations need to clearly describe how they meet the FEMA Floodplain insurance Biological Opinion requirements.</p>	<p>See section 5.1.1 of the Gap Analysis. It is recommended that the City consider including:</p> <ul style="list-style-type: none"> • Specific critical area special study requirements for flood hazard areas. • Require a habitat assessment (FEMA BiOp process) for development in the floodway or floodplain
<p>7. Similarly, the regulations for riparian areas along the Sammamish River are potentially inadequate to provide sufficient shade necessary to meet State Water Quality standards and improve the existing lethal and sublethal water temperatures that can occur to the detriment of salmon. For example, the implementation plan for the Bear Evans Creek Total Maximum Daily Load indicated that a minimum mature vegetation buffer of 150 feet should be pursued on both sides of these streams outside of wetland areas.</p> <p>It should be noted that stormwater regulations and manual consistent with WA Dept of Ecology’s stormwater manual do not fully mitigate for all impacts. We identified this concern for several projects in the City and will reiterate them here. The 2009 King County Surface Water Design Manual states on page 1-20:</p> <p>1.1.4 DRAINAGE DESIGN BEYOND MINIMUM COMPLIANCE</p> <p><i>This manual presents King County's minimum standards for engineering and design of drainage facilities. While the County believes these standards are appropriate for a wide range of development proposals, compliance solely with these requirements does not relieve the professional engineer submitting designs of his or her responsibility to ensure drainage facilities are engineered to provide adequate protection for natural resources and public and private property. Compliance with the standards in this manual does not necessarily mitigate all probable and significant environmental impacts to aquatic biota. Fishery resources and other living components of aquatic systems are affected by a complex set of factors. While employing a specific flow control standard may prevent stream channel erosion or instability, other factors affecting fish and other biotic resources (e.g., increases in stream flow velocities) are not directly addressed by this manual. [emphasis added]</i></p> <p><i>Likewise, some wetlands, including bogs, are adapted to a very constant hydrologic regime. Even the most stringent flow control standard employed by this manual does not prevent increases in runoff volume, which can adversely affect wetland plant communities by increasing the duration and</i></p>	<p>The City’s standard stream buffer would still equal 150 feet; the Gap Analysis shows a possible range of 115-165 feet in width for Shorelines of the State.</p> <p>The City regulations have incentives to allow smaller width buffers if enhancement is provided. This approach is discussed in the Draft EIS in relation to the existing industrial and commercial development along the Sammamish River or other water bodies that is often closer than the standard or reduced buffer today – a policy question is what level of incentives would be appropriate to achieve a better outcome of habitat enhancement?</p> <p>The City is considering adopting the 2012 Ecology manual or its equivalent as part of its compliance with NPDES requirements. As part of the Planned Action Ordinance, the following Draft EIS mitigation measure would be included: “... require use of the 2012 Ecology manual or equivalent in the Planned Action Area prior to 2016 when it is required under NPDES, by including it in the Planned Action Ordinance (PAO) until such time as the City adopts the manual citywide.”</p>

Comment	Response
<p><i>magnitude of water level fluctuations. Thus, compliance with this manual should not be construed as mitigating all probable and significant stormwater impacts to aquatic biota in streams and wetlands; additional mitigation may be required.</i></p> <p>As we suggested previously, the 2009 KC Storm Water Manual language indicates that even with detention, it is unlikely that all impacts to fish and aquatic biota are fully mitigated. As we have discussed with the applicant's consultant, there are potential impacts from increase stormwater discharges to juvenile salmon using the margins along the Sammamish River where flows are slower than the thalweg. In areas where the margin habitat is simplified, i.e. lacking off-channel areas, wood, connected wetlands, etc. as is much the case for the Sammamish River and other streams in the City, increases in water velocities along these margins can displace juvenile salmon, force them to expend more energy staying in place leaving them susceptible to disease and predation, or reduced feeding opportunities that also leads to reduce growth and predation avoidance.</p>	
<p>8. Sockeye salmon should be added to the Sockeye should be added to list of locally important salmon species to Table 146 in the Critical Areas Gap Analysis. They are an important salmon species to the Tribe and found in the City's waterbodies.</p>	<p>Comment noted. Gap Analysis Table 146 is a list of recommended species of local importance for the City to consider, and Sockeye salmon is proposed to be added to this table.</p>
<p>9. Another consideration for modifying the Critical Areas Regulations is based a further consideration of the importance of wood to providing habitat for fish. The Best Available Science Review failed to note that McDade et al (1990) found a significant contribution of wood came from upstream sources. Further this review did not include Fox and Bolton (2007) which identifies the amount, sizes and volumes of wood that should be in streams of various sizes based on an extensive study of reference watersheds in Washington State (see attached).</p>	<p>See attached letter from The Watershed Company dated January 16, 2015. This serves as an addendum to the Best Available Science Review document prepared by The Watershed Company.</p>
<p><u>Draft Environmental Impact Statement</u></p>	
<p>For the assessment in the Environmental Impact statement to be correct regarding impacts and mitigation measures under the two action alternatives, the issued identified above need to be addressed.</p>	<p>This letter will be included in the Final EIS along with these responses to comments.</p>

TECHNICAL MEMORANDUM



Date: January 16, 2015
To: Lisa Grueter, BERK
From: Nell Lund, Ecologist
Project: 121205
Number:
Project Name: Woodinville Comp Plan & Municipal Code
Update

Subject: City of Woodinville – Best Available Science Review

Large Woody Debris comment from the Muckleshoot Tribe

Comment issued by Karen Walter via email, January 9, 2015:

“9. Another consideration for modifying the Critical Areas Regulations is based a further consideration of the importance of wood to providing habitat for fish. The Best Available Science Review failed to note that McDade et al (1990) found a significant contribution of wood came from upstream sources. Further this review did not include Fox and Bolton (2007) which identifies the amount, sizes and volumes of wood that should be in streams of various sizes based on an extensive study of reference watersheds in Washington State (see attached).”

Response to comment:

Section 6.2.1 (Stream and Riparian Areas) of the Woodinville BAS Review includes a sub-section on in-stream habitat, which is focused on large woody debris (LWD). The McDade et al (1990) study is based on analysis of natural well-stocked first- through third-order stream sites. This study found that more than 70% on the in-stream woody debris originated within 20 m (66 feet) on the channel. Additionally, woody debris size (diameter and length) was greater in third-order streams relative to first-order streams.

Further study was conducted by Fox and Bolton (2007) to provide data on the natural and regional variation of instream wood loads in relatively undisturbed basins. The study seeks to improve the scientific defensibility of regulatory thresholds for LWD. When restoring a disturbed stream, LWD targets at or above the 75th percentile documented for undisturbed basins in the region are recommended (Fox and Bolton 2007). Woody debris distribution documented in that study is provided in Table 1 below.

The Watershed Company
 Technical Memorandum
 Date
 Page 2

Table 1. Large Woody Debris distribution in Western Washington (Fox and Bolton 2007).

	Bank-full width class	No. of pieces per 100 m channel	
		75th percentile	median
Number of pieces	0-6 m	>38	29
	>6-30 m	>63	52
	>30-100 m	>208	106
Volume	0-30 m	>99	51
	>30-100 m	>317	93
Number of key pieces	0-10 m	>11	6
	>10-100 m	>4	1.3

Fox, M. and S. Bolton. 2007. A regional and geomorphic reference for quantities and volumes of instream wood in unmanaged forested basins of Washington State, North Am. J. Fish. Manage., 27, 342-359.

McDade MH, Swanson FJ, McKee WA, Franklin JF, Van Sickle J. 1990. Source distances for coarse woody debris entering small streams in western Oregon and Washington. Can J Forest Res 20:326-330