



August 2, 2022

Mike Kardas
City of Kelso
Community Development Director
P.O. Box 819
Kelso, WA 98626

Re: Mid I-5 Industrial Park Wetland Buffer Justification Memo

Dear Mr. Kardas:

Ecological Land Services, Inc. (ELS) has prepared this memo to supplement the 50-foot buffer justification discussion located in the *Critical Areas Report for the Mid I-5 Industrial Park* (ELS 2022). Information regarding the wetland delineated in the study area is summarized in Table 1 below.

Table 1. Wetland Summary.

Wetland	Size in Study Area	Category/HGM Class/Cowardin Class	Habitat Score ⁴	Buffer Width ⁵
A	7.58 acres	Category II / Depressional and Riverine / Aquatic Bed, Emergent, and Scrub-Shrub	7	50 feet

In accordance with Kelso Municipal Code (KMC), *Title 17 Unified Development Code Chapter 17.26 Environmentally Sensitive Areas Section 17.26.050.D*, wetland buffers shall be designated in accordance with the following.

1. *Buffers are required for all wetlands. Wetland buffer widths are established in Table 1-A of this Section.*

Wetland buffers are based on the wetland category and habitat score from the Rating System and are listed on *Table 1-A. Wetland Buffer Requirements*. The standard buffer width for a Category II wetland with a habitat score of 7 is 165 feet. However, the proposed wetland buffer width is based on the criteria listed in KMC *17.26.050.D*, as described below in 7. below.

2. *Buffer widths shall be measured perpendicular to the delineated boundaries of the regulated wetland and extend the required distance.*
The buffer has been measured perpendicular to the delineated boundary.

3. *The standard buffer widths assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community, or the buffer should be widened to ensure that adequate functions of the buffer are provided.*

The buffer is generally sparsely vegetated by a combination of native and invasive species that have established since placement of dredged material following the 1980 eruption of Mt. Saint Helens ended in approximately 1990. Invasive species including Himalayan blackberry (*Rubus armeniacus*) and Scot's broom (*Cytisus scoparius*) will be removed from the buffer area and native trees and shrubs will be installed in accordance with the *Mid I-5 Industrial Park Habitat Management and Buffer Enhancement Plan* (ELS 2022).

4. *If an applicant chooses not to apply the mitigation measures in Table 1-B, then a 33% increase in the width of all buffers is required. For example, a 75-foot buffer with the mitigation measures would be a 100-foot buffer without them.*

The measures in *Table 1-B* will be followed to the extent practicable. These measures are listed in the table below in italics followed by our response in regular font.

Table 1-B. Required measures to minimize impacts to wetlands.

<i>Disturbance</i>	<i>Required Measures to Minimize Impacts</i>
<i>Lights</i>	<ul style="list-style-type: none"> <i>Direct lights away from wetland</i> Lighting will be directed downward and toward the building or work areas and will not be directed towards the wetland.
<i>Noise</i>	<ul style="list-style-type: none"> <i>Locate activity that generates noise away from wetland</i> <i>If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source</i> <i>For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10-ft heavily vegetated buffer strip immediately adjacent to the outer wetland buffer</i> Noise generated by the project will likely be from commercial trucks accessing and maneuvering onsite. Parking and landscaping will generally be around the exterior of the property with access ways toward the interior. Noise levels from the proposed project are not anticipated to be higher than ambient noise levels from I-5 bordering the eastern wetland channel and the BSNF railroad bordering the western wetland channel. The wetland buffer will be enhanced with native trees and shrubs, which will help with noise screening generated by the project.
<i>Toxic runoff</i>	<ul style="list-style-type: none"> <i>Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered</i> The project site does not currently discharge stormwater to the wetland as it is composed of sandy dredged material that drains rapidly. Runoff from the existing road is currently directed to bios swales for

	<p>infiltration. All stormwater from new impervious surfaces will be also infiltrated onsite and will not alter hydrology within the wetland.</p> <ul style="list-style-type: none"> • <i>Establish covenants limiting use of pesticides within 150 ft of wetland</i> <p>Pesticide use is not likely to be needed by the completed project.</p>
	<ul style="list-style-type: none"> • <i>Apply integrated pest management</i> <p>Not applicable</p>
<i>Stormwater runoff</i>	<ul style="list-style-type: none"> • <i>Retrofit stormwater detention and treatment for roads and existing adjacent development</i> • <i>Prevent channelized flow from lawns that directly enters the buffer</i> • <i>Use low-intensity development techniques (per PSAT publication on LID techniques)</i> <p>Gibbs & Olson has designed a stormwater management system for the project. The development will not have lawns.</p>
<i>Change in water regime</i>	<ul style="list-style-type: none"> • <i>Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns</i> <p>All stormwater will be treated and infiltrated onsite.</p>
<i>Pets and human disturbance</i>	<ul style="list-style-type: none"> • <i>Use privacy fencing OR plant dense native vegetation to delineate buffer edge and to discourage disturbance</i> <p>Pet and human disturbance within the wetland and buffer is not anticipated from the light industrial development.</p> <ul style="list-style-type: none"> • <i>Place wetland and its buffer in a separate tract or protect with a conservation easement</i> <p>The wetland and buffer will either be placed in a separate tract or be protected with a conservation covenant.</p>
<i>Dust</i>	<ul style="list-style-type: none"> • <i>Use best management practices to control dust</i> <p>A water truck will be made available during construction to prevent dust/sand from blowing.</p>
<i>Disruption of corridors or connections</i>	<ul style="list-style-type: none"> • <i>Maintain connections to offsite areas that are undisturbed</i> • <i>Restore corridors or connections to offsite habitats by replanting</i> <p>The project site represents the northern extent of a large wetland system that extends to the south. Two wetland channels extend along the eastern and western sides of the property that will not be impacted. Undisturbed areas on the property are located to the south and away from the project activities. Enhancement of the 50-foot buffer will create a vegetated corridor along the eastern, southern, and western sides of the property.</p>

5. *The authorization of variable buffer widths intended to protect the functions of the wetland shall be based on a wetland assessment conducted by a qualified wetland professional, to evaluate the impact of current and proposed land use on the wetland. Wetland functions include but are not limited to flood control functions, ground and surface water aquifer recharge functions, and sediment retention and pollution control functions (refer to Subsection E of this Section for buffer averaging).*

A wetland and buffer assessment is provided in the *Critical Areas Report for the Mid I-5 Industrial Park* (ELS 2022). The *Mid I-5 Industrial Park Habitat Management and Buffer Enhancement Plan* (ELS 2022) evaluated the potential impacts of the proposed development to the wetland. Both documents provide additional information and support for the proposed 50-foot wetland buffer.

6. *Wetland buffer widths intended to protect fish and wildlife habitat shall be based on Table 1-A.*

The standard buffer width for a Category II wetland with a habitat score of 7 is 165 feet. However, the proposed wetland buffer is based on the criteria listed in KMC 17.26.050.D.7 as described below.

7. *Buffer widths can be reduced below the minimums when site-specific, abrupt topographical changes such as cliffs, or human-made features such as levees, dikes, railroads, or streets, indicate that extending the buffer beyond such features will not improve wetland protection.*

A 50-foot buffer is being proposed for the wetland onsite based on this code section. The subject property is essentially man-made, created by placement of approximately 15- to 20-foot depth of dredged material following the eruption of Mt. Saint Helens in 1980. It is not known if the property was entirely wetland before placement of the spoils. Placement of the dredged material predates the Bush-era proclamation of 1990 requiring mitigation so is not relevant in this case. During placement of the spoils, a channel to the west between the dredged material and railroad berm was essentially left unfilled as a dewatering channel connection with the Coweeman River. A wetland channel on the east side was likely similarly left open as a dewatering channel or as stormwater conveyance for I-5 and State Route (SR) 432.

The dredged material slopes along the wetland range between approximately 15 and 20 feet high with approximate 1:1 slopes. This amounts to an abrupt, man-made topographical change similar to conditions created by a levee, dike, or railroad berm. The dredged material beyond the top of the slope previously afforded minimal protection to the wetland as it was used for continued dredge spoil placement. Only vegetation near the base of the slopes and in the channels including red alder (*Alnus rubra*), various willows (*Salix* sp.), and red-osier dogwood (*Cornus sericea*) continued to establish during dredge spoil placement. Currently, the dredged material beyond the slopes is mainly vegetated with blackberries, alder saplings, Scot's broom, and mosses that have sprouted since the final placement of dredged material in approximately 1990. Some of this vegetation has been removed for development activities as observed in a 2011 Google Earth image (see attached). A portion of the vegetation bordering the eastern wetland channel is regularly mowed for powerline access and maintenance.

If the site continued to receive dredged material, the area beyond the top of the slopes would continue to be bare. Placement of the dredged material was not intended to provide habitat or

protection for the wetland. Most of the disturbances to the wetland are coming from offsite uses including the BNSF railroad, I-5, and SR 432, which also block wildlife passage. In general, wildlife can only access the upland in the study area by flying or through wetland to the south.

Additionally, the site does not currently generate runoff due to the rapid infiltration of the dredged material. Runoff from the proposed development will also be fully treated and infiltrated; therefore, a larger buffer is not needed to protect the hydrology or water quality functions of the wetland.

Conclusion

ELS believes an enhanced 50-foot buffer is sufficient to protect the functions and values of the wetland and is consistent with the *KMC 17.26.050.D.7* as described above. The subject property was previously used as a dredged material disposal site, and the wetland abuts the toe of the approximately 15- to 20-foot depth of this dredged material. The 1:1 slope and the flat-top surface of the dredged material amounts to an abrupt man-made topographical change. The slope, depth, and abrupt change at the top of the slope is similar to conditions of a levee, dike, or railroad berm. Placement of the dredged material was not intended to provide habitat or protection for the wetland. The area beyond the top of this slope has only become vegetated since placement of the dredged material stopped in approximately 1990, with some of the scrub regrowth being removed for development activities occurring onsite in approximately 2011 (see attached aerial imagery).

Ambient noise levels are high from traffic along I-5 and the BNSF railroad, which abut the eastern and western wetland channels, respectively. Noise from future development onsite will not be higher than ambient levels.

Runoff from the proposed development will be fully infiltrated and will not impact the hydrology or water quality functions of the buffer or wetland. Additionally, mitigation measures listed in *Table I-B. Required measures to minimize impacts to wetlands* will be applied to the extent practicable. Enhancing the 50-foot buffer with native trees and shrubs will provide an overall ecological lift over current buffer functions and will be sufficient to protect the wetland.

If you have questions or need additional information, please email me at steff@eco-land.com or call me at (360) 578-1371.

Sincerely,



Steffanie Taylor
Senior Biologist/Principal

Attachment



Image U.S. Geological Survey

1990 Aerial
Imagery Date: 7/14/1990



Image USDA/FPAC/GEO

2009 Aerial
Imagery Date: 6/25/2009

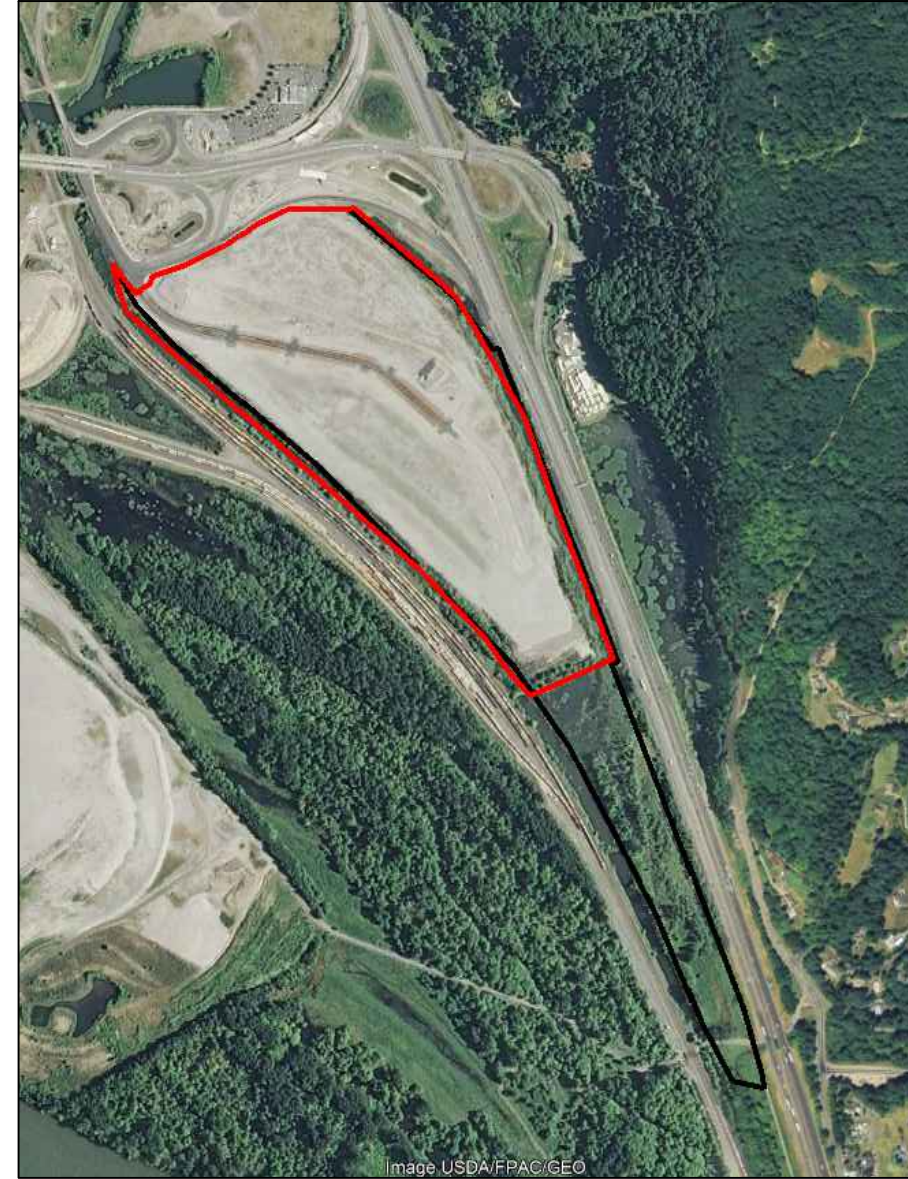


Image USDA/FPAC/GEO

2011 Aerial
Imagery Date: 9/25/2011

LEGEND:
— Subject Property
— Study Area

NOTE(S):
1. Aerial photography from Google Earth™.



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DATE: 7/7/22
DWN: JKJ
REQ. BY: ST
PRJ. MGR: ST
CHK:
PROJECT NO:
3665.02

Figure 1
AERIAL PHOTOGRAPHY
Mid I-5 Industrial Park
Trammell Crow Portland Development, Inc.
City of Kelso, Cowlitz County, WA
Section 12 & 13, Township 7N, Range 2W, W.M.

NOT TO SCALE

