2019 WETLAND MONITORING REPORT

Cedars Compensatory Wetland Mitigation Site

SR 502 NE 15th Ave to NE 102nd Ave – USACE IP NWS-2009-1093
I-5 I-205 NE 124th Street IC – USACE IP NWS-2010-185

Southwest Region

Wetlands Program
Issued March 2020
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Site Summary
Cedars Compensatory Wetland Mitigation Site
SR 502 NE 15th Ave to NE 102nd Ave USACE IP NWS-2009-1093
I-5 I-205 NE 134th Street IC USACE IP NWS-2010-185

<table>
<thead>
<tr>
<th>General Site Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USACE IP Numbers</strong></td>
</tr>
<tr>
<td><strong>Ecology WQC</strong></td>
</tr>
<tr>
<td><strong>Mitigation Location</strong></td>
</tr>
<tr>
<td><strong>LLID Number</strong></td>
</tr>
<tr>
<td><strong>Construction Date</strong></td>
</tr>
<tr>
<td><strong>Monitoring Period</strong></td>
</tr>
<tr>
<td><strong>Year of Monitoring</strong></td>
</tr>
<tr>
<td><strong>Type of Impact</strong></td>
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<td><strong>Area of Project Impact</strong></td>
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<td><strong>Area of Project Impact</strong></td>
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<td><strong>Type of Compensation</strong></td>
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<td></td>
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<tr>
<td><strong>Planned Area of Compensation</strong></td>
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</tr>
</tbody>
</table>

¹ Project impacts for the I-5/Salmon Creek Interchange project (NWS-2010-185) are from the Final Critical Area Mitigation Report (WSDOT 2011), with additional amendment for 0.35 acre of temporary impacts converted to permanent impacts.

² Project impacts for the SR 502 Corridor Widening project (NWS-2009-1093) are mitigated at several different wetland mitigation sites and one mitigation bank. The 005 Cedars compensation site provides partial compensation for the overall 11.12 acres of project impacts. The project impact number is from Final Critical Areas Mitigation Plan (WSDOT 2012).
Table of Contents

Site Summary.................................................................................................i

1. Introduction..............................................................................................1
   1.1. Summary..........................................................................................1
   1.2. Monitoring Results and Management Activities............................2

2. Site Description .......................................................................................3
   2.1. Location..........................................................................................3
   2.2. Purpose and Description ..................................................................3
   2.3. Study Area.......................................................................................4

3. Performance Standards and Methods ..................................................5
   3.1. Performance Standards..................................................................5
   3.2. Methods..........................................................................................8

4. Discussion ................................................................................................9
   4.1. Site development............................................................................9
   4.2. Results............................................................................................10
   4.3. Adaptive Management....................................................................15

5. References...............................................................................................16

Figures

Figure 1. Site Sketch.....................................................................................4
Figure 2. Sample Design...............................................................................8

Appendices

Appendix A. Planting Plan with Photo Point Locations and Well Locations..................................................17
Appendix B. Photo Points ...........................................................................18
Appendix C. Data Tables............................................................................21
Appendix D. Temporary Wetland Impact Areas JARPA Figures..........................................................24
1. Introduction

1.1. Summary

This report summarizes seventh-year (Year-7) monitoring activities at the 005 Cedars Compensatory Wetland Mitigation Site. Included are a site description, the performance standards, an explanation of monitoring methods, and an evaluation of site development. Monitoring activities at the Cedars Compensatory Wetland Mitigation Site included vegetation surveys and photodocumentation on July 15-17, and assessments of wetland hydrology on March 14, March 28, and April 16 in 2019. Vegetation surveys at the Temporary Wetland Impact Areas were conducted on October 17, 2019.
1.2. Monitoring Results and Management Activities

<table>
<thead>
<tr>
<th>Performance Standards for Cedars Wetland Compensation Site</th>
<th>2019 Results</th>
<th>Management Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetland Hydrology</td>
<td>Present (Appendix C, Table 2)</td>
<td></td>
</tr>
<tr>
<td>50% cover native woody vegetation in the forested wetland</td>
<td>71% cover (CI&lt;sub&gt;90%&lt;/sub&gt; = 62-81%)</td>
<td>Planted an additional 2,200 trees/shrubs in northern portion of PFO after weed treatment</td>
</tr>
<tr>
<td>At least five species of native trees and/or shrubs in the forested wetland</td>
<td>Achieved</td>
<td></td>
</tr>
<tr>
<td>50% cover native woody vegetation in the scrub-shrub wetland</td>
<td>81% cover (CI&lt;sub&gt;90%&lt;/sub&gt; = 67-96%)</td>
<td></td>
</tr>
<tr>
<td>At least five species of native trees and/or shrubs in the scrub-shrub wetland</td>
<td>Achieved</td>
<td></td>
</tr>
<tr>
<td>50% cover native woody species in the buffer</td>
<td>95% cover (CI&lt;sub&gt;90%&lt;/sub&gt; = 89-100%)</td>
<td></td>
</tr>
<tr>
<td>At least five species of native trees and/or shrub in the buffer</td>
<td>Achieved</td>
<td></td>
</tr>
<tr>
<td>60% cover native facultative wet and wetter species in the emergent wetland</td>
<td>90% cover (qualitative)</td>
<td></td>
</tr>
<tr>
<td>Less than 15% cover blackberry (<em>Rubus</em>) species and Class B noxious weeds across the site</td>
<td>&lt;1% cover (qualitative)</td>
<td>Weed control conducted in July and September 2019</td>
</tr>
<tr>
<td>No Class A noxious weeds, Japanese knotweed (<em>Reynoutria japonica</em>), or purple loosestrife (<em>Lythrum salicaria</em>) on the site</td>
<td>None observed</td>
<td></td>
</tr>
<tr>
<td>Less than 20% cover reed canarygrass (<em>Phalaris arundinacea</em>) in the wetland creation areas</td>
<td>5% cover (qualitative)</td>
<td>Weed control of reed canarygrass conducted in September 2019</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Performance Standards for Temporary Impact Areas</th>
<th>2019 Results</th>
<th>Management Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>60% cover native facultative wet and wetter species in the emergent wetland</td>
<td>55% cover (CI&lt;sub&gt;90%&lt;/sub&gt; = 49-61%)</td>
<td></td>
</tr>
<tr>
<td>Cover of reed canarygrass 10% below baseline conditions</td>
<td>15% cover (CI&lt;sub&gt;90%&lt;/sub&gt; = 9-21%)</td>
<td></td>
</tr>
</tbody>
</table>

3 Estimated values are presented with their corresponding statistical confidence interval. For example, 71% cover (CI<sub>90%</sub> = 62-81%) means we are 90% confident that the true cover value is between 62% and 81%.
2. Site Description

2.1. Location

This 42.95-acre compensation site is located in the Salmon Creek watershed about 5 miles southeast of Battle Ground in Clark County (Figure 1).

Driving Directions:

From I-5, take Exit 11 and take the right ramp for SR 502 East toward Battle Ground. Turn right onto SR 503/Southwest 10th Avenue. Turn left onto SR 503 Branch/ Northeast 179th Street. Turn right to stay on SR 503 Branch/Northeast 122nd Avenue /Northeast Caples Road. Turn left onto Northeast 159th Street. Travel approximately 1.5 miles and the entrance to the access road with a locked gate will be on your left/north side of the road. A key code for the electronic gate should be obtained from region personnel and the adjacent landowner should be notified before the site visit.

2.2. Purpose and Description

This site was established to compensate for the permanent loss of 4.41 acres of wetland and 1.10 acres of buffer due to the construction of the I-5/Salmon Creek Interchange Project. The 11.78 acres of reestablished and enhanced wetland mosaic and surrounding 3.95 acres of buffer are intended to provide compensation for lost wetland functions including wildlife habitat, water quality, headwaters storage, and flood flow attenuation. Additionally, this site provides compensation for 0.33 acre of permanent wetland impacts for the SR-502 Corridor Widening project. Excess compensatory mitigation created on this site may also be used for future pending WSDOT projects in the area.
2.3. Study Area

The 005 Cedars Compensatory Wetland Mitigation Site contains a wetland mosaic with forested, scrub-shrub, and emergent systems and buffer. This wetland mosaic is adjacent to 17.46 acres of wetland preservation with 9.76 acres of regulatory buffer (Figure 1).

![Site Sketch](image.png)

Figure 1. Site Sketch
3. Performance Standards and Methods

3.1. Performance Standards

Year 7 (Cedars Compensatory Wetland Mitigation Site)

Performance Standard 1
The soils will be saturated to the surface, or standing water will be present 12 inches or less below the surface for at least 10 percent of the growing season (growing season as defined in the Soil Survey of Clark County, WA., USDA, 1972) in years when rainfall meets or exceeds the 30-year precipitation average.

Performance Standard 2
Minimum 50 percent cover of native woody vegetation (planted and volunteer) [in the forested wetland].

Performance Standard 3
At least five species of native trees and/or shrubs will be present in the [forested wetland].

Performance Standard 4
Minimum 50 percent cover of native woody vegetation (planted and volunteer) [in the scrub-shrub wetland].

Performance Standard 5
At least five species of native trees and/or shrubs will be present in the [scrub-shrub wetland].

Performance Standard 6
Minimum 50 percent cover of native woody vegetation (planted and volunteer) [in the buffer].

Performance Standard 7
At least five species of native trees and/or shrubs will be present in the [buffer].

Performance Standard 8
Minimum of 60 percent aerial cover of native facultative wet and wetter species within the emergent zone.
**Performance Standard 9**
The aerial extent of blackberry species and Class B (Washington Department of Agriculture and Clark County Weed Board) noxious weeds will not exceed 15 percent in the combined emergent, scrub-shrub, forest, and buffer planting areas at the mitigation site.

**Performance Standard 10**
If/when detected, Class A noxious weeds (Washington Department of Agriculture and Clark County), Japanese knotweed, and purple loosestrife shall be treated so that the species do not exist on the site.

**Performance Standard 11**
At monitoring Years 1, 3, 5, and 7, the aerial extent of reed canarygrass at the Cedars mitigation site shall not exceed 20 percent total cover in the wetland creation areas.

**Year 7 (Temporary Wetland Impact Areas)**

**Performance Standard 12**
Minimum of 60 percent aerial cover of native facultative wet and wetter species within the emergent zone.

**Performance Standard 13**
The aerial extent of reed canarygrass at the temporary impact areas will be managed at a threshold 10 percent below the existing baseline conditions established in Performance Standard 5A in all years.
Year 10 (Cedars Compensatory Wetland Mitigation Site)

**Performance Standard 14**
Minimum 70 percent cover of native woody vegetation (planted and volunteer) [in the forested wetland].

**Performance Standard 15**
Minimum 70 percent cover of native woody vegetation (planted and volunteer) [in the scrub-shrub wetland].

**Performance Standard 16**
Minimum 70 percent cover of native woody vegetation (planted and volunteer) [in the buffer].

**Performance Standard 17**
Minimum of 70 percent cover of native emergent vegetation (planted and volunteer).

Appendix A shows the planting plan (WSDOT 2011).
3.2. Methods

WSDOT staff collected hydrology data using methods described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) (USACE 2010) (Performance Standard 1). Shallow groundwater monitoring wells were installed to evaluate groundwater during the growing season (USACE 2005).

The tables below document sample methods used for all of the remaining performance standards (PS) required by the mitigation plan. Additional details on our methods are located here: [WSDOT Wetland Mitigation Site Monitoring Methods Paper](https://example.com) (WSDOT 2008).

![Figure 2. Sample Design](image)

**Placement of Baseline (Cedars Wetland Site):** The baseline was placed along the east side of the site running south to north.

**Baseline:** Length 374m Transects 15

**Placement of Baseline (Temporary Wetland Impact Areas):** The baseline was placed along the north side of the site running west to east (not shown here).

**Baseline:** Length 131m Transects 9

See Appendix C for the sample design used for each performance standard (Table 1) and the hydrology observations (Table 2).
4. Discussion

4.1. Site development

All Year-7 performance standards have been met at the Cedars Compensatory Wetland mitigation site. This site has developed more rapidly than anticipated and has met the final-year (Year 10) performance standards for native cover in the scrub-shrub wetland, buffer, and emergent wetland communities for at least two years. See Appendix C, Table 3, for the final-year performance standards that have been met in both Year 6 and Year 7. The emergent wetland area at the Cedars Wetland site was qualitatively evaluated in accordance with the approval letters received from the USACE and the Department of Ecology on April 10, 2017, and April 6, 2017, respectively. Cover of noxious weeds and invasive species is low throughout the site.

Sufficient wetland hydrology was observed at the site. A wetland delineation was conducted in 2017, confirming the required wetland acreage has been created at the Cedars Wetland site. The delineation report was submitted with the year five monitoring report. The site continues to provide flood flow attenuation and water quality functions.

Complex wildlife habitat has developed on the site. Field observations include elk, deer, rabbits, garter snakes, and lots of Pacific chorus frogs. In addition, a diverse community of birds were observed on the site, including common yellowthroat, American crow, common raven, song sparrow, rufous hummingbird, red-breasted sapsucker, American goldfinch, American robin, Pacific-slope flycatcher, Swainson's thrush, black-capped chickadee, dark-eyed junco, black-headed grosbeak, belted kingfisher, mourning dove, spotted towhee, Steller’s jay, and Canada goose.

The temporary wetland impact areas were mostly not monitored because of a confusion on the exact location of these areas. Appendix D depicts the temporary wetland impact areas at the time of JARPA submittal. The wetland area located under the overpass was considered a permanent wetland impact and should not have been included in the temporary impact area. This underpass area was monitored in 2019 and seems to correspond with the emergent performance standard (PS 12). Going forward, both the underpass and temporary wetland impact areas depicted in Appendix D will be evaluated and reported on.

The underpass emergent area is steadily developing. However, it is just short of meeting the Year-7 performance standard for cover of native facultative wet and wetter species in the emergent wetland; 55% cover compared to the required 60% cover standard. The desired native vegetation is actively competing against non-native species that are also dominant on the site. This year’s sampling data for native emergent cover may have been lower than the 2017 results because the site was sampled later in the growing season this year (mid-October) when some of the native annuals would have died back already. Cover of reed canarygrass is relatively low on the site.
4.2. Results

**Performance Standard 1**  
(Wetland Hydrology)

Inundation (Photo 1) or a water table within the upper 12 inches of the soil surface was present in all intended areas during all hydrology visits in 2019 (March 14, March 28, and April 16). One groundwater monitoring well (Well 1) did not show a water table within the upper 12 inches; however, this well is located in an isolated high spot near the wetland/upland boundary and surface saturation was observed in the immediately adjacent areas. See Appendix C, Table 2, for detailed results of the hydrology visits.

**Performance Standard 2 & 14**  
(50% cover native woody vegetation in the forested wetland [70% cover in Year 10])

Cover of native woody vegetation in the forested wetland is estimated at 71% (CI90%= 62-81%) (Photo 2). This meets the final-year performance standard target. Oregon ash (*Fraxinus latifolia*) appeared to be stressed in this zone, possibly from prior year drought conditions. Woody cover was most reduced in the northwest portion of the forested wetland (see Adaptive Management section for details for additional management of this area). Woody species listed in Performance Standard 3 were dominant in this zone.
Performance Standard 3
(At least five species of native trees and/or shrubs in the forested wetland)

Oregon ash, Sitka willow (*Salix sitchensis*), redosier dogwood (*Cornus alba*), Hooker's willow (*Salix hookeriana*), cluster rose (*Rosa pisocarpa*), and other native woody species were observed in the forested wetland.

Performance Standard 4 & 15
(50% cover native woody vegetation in the scrub-shrub wetland [70% cover in Year 10])

Cover of native woody vegetation in the scrub-shrub wetland is estimated at 81% (CI90% = 67-96%) (Photo 3). This exceeds the final-year performance standard target. Native woody cover in this zone is robust and appears to be growing quickly. Woody species listed in Performance Standard 5 were dominant in this zone.

Performance Standard 5
(At least five species of native trees and/or shrubs in the scrub-shrub wetland)

Hooker's willow, Sitka willow, redosier dogwood, cluster rose, Pacific crabapple (*Malus fusca*), and other native woody species were observed in the scrub-shrub wetland.

Photo 3. Woody cover in the scrub-shrub wetland (July 2019)
Performance Standard 6 & 16
(50% cover native woody species in the buffer [70% cover in Year 10])

Cover of native woody vegetation in the buffer is estimated at 95% (CI90%= 89-100%) (Photo 4). Woody cover in the buffer area is highly robust and easily exceeding the final-year performance standard target. Woody species listed in Performance Standard 7 were dominant in this zone.

Performance Standard 7
(At least five species of native trees and/or shrub in the buffer)

Snowberry (Symphoricarpos albus), black cottonwood (Populus balsamifera), bigleaf maple (Acer macrophyllum), beaked hazelnut (Corylus cornuta), Indian plum (Oemleria cerasiformis), and other native woody species were observed in the buffer.

Performance Standard 8 & 17
(60% cover native facultative wet and wetter species in the emergent wetland [70% cover in Year 10])

Cover of native facultative wet and wetter species in the emergent wetland is qualitatively estimated at 90 percent (Photo 5). This area continues to exceed the final-year performance standard target. Dominant species include northern water-plantain (Alisma triviale), common spikerush (Eleocharis palustris), and small-fruited bulrush (Scirpus microcarpus) with many native sub-dominant species.
**Performance Standard 9**  
(Less than 15% cover blackberry species and Class B noxious weeds across the site)

Cover of blackberry species and Class B noxious weeds is qualitatively estimated at one percent. This is below the performance standard threshold. A few scattered individuals of Himalayan blackberry (*Rubus armeniacus*), cutleaf blackberry (*Rubus laciniatus*), and tansy ragwort (*Jacobaea vulgaris*) were observed in the buffer (Photo 6).

**Performance Standard 10**  
(No Class A noxious weeds, Japanese knotweed, or purple loosestrife on the site)

No Class A noxious weeds, Japanese knotweed, or purple loosestrife were observed at the time of monitoring.

**Performance Standard 11**  
(Less than 20% cover reed canarygrass (*Phalaris arundinacea*) in the wetland creation areas)

Cover of reed canarygrass in the wetland creation areas is qualitatively estimated at five percent. This is below the performance standard threshold.
Performance Standard 12  
(Temporary Wetland Impact Areas)  
(60% cover native facultative wet and wetter species in the emergent wetland)

Cover of native facultative wet and wetter species in the emergent wetland under the overpass is estimated at 55% (CI_{80%} = 49-61%) (Photo 7). This does not meet the performance standard target. Tufted hairgrass (*Deschampsia caespitosa*) and fringed willowherb (*Epilobium ciliatum*) were the dominant species.

As noted in the discussion, the temporary wetland impact areas are not located under the overpass, therefore only a very small portion of this area was monitored for this performance standard. The temporary wetland impact areas on either side of the bridge were partially planted with shrubs and not monitored in 2019. These areas will be evaluated moving forward.

Performance Standard 13  
(Temporary Wetland Impact Areas)  
(Cover of reed canarygrass 10% below baseline conditions)

Cover of reed canarygrass in the temporary wetland impact areas is estimated at 15% (CI_{80%} = 9-21%). The baseline condition was 100 percent cover, so this is below the performance standard threshold.
4.3. Adaptive Management

The region planted approximately 2,200 additional native woody species in the northern portion of the forested wetland at the Cedars Wetland site where spraying of reed canarygrass previously occurred. These plantings included rose (*Rosa* spp.), snowberry, Pacific ninebark (*Physocarpus capitatus*), redosier dogwood, Oregon ash, and Hooker's willow. This planting was also implemented to address areas of the forested wetland where native woody cover had been diminished. The region will continue routine weed control in 2020 at the Cedars Wetland site and Temporary Wetland Impact Areas.
5. References


Appendix A. Planting Plan with Photo Point Locations and Well Locations

(from WSDOT 2011)
Appendix B.  Photo Points

The photographs below were taken from permanent photo-points on July 16-17, 2019 and document current site development.

Photo Point 1

Photo Point 2a

Photo Point 2b

Photo Point 3a
## Appendix C. Data Tables

### Table 1. Sample Design by Performance Standard

#### Cedars Wetland Mitigation Site

<table>
<thead>
<tr>
<th>Attribute</th>
<th>PS 2</th>
<th>PS 3</th>
<th>PS 4</th>
<th>PS 5</th>
<th>PS 6</th>
<th>PS 7</th>
<th>PS 8</th>
<th>PS 9</th>
<th>PS 10</th>
<th>PS 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover</td>
<td>Number</td>
<td>Cover</td>
<td>Number</td>
<td>Cover</td>
<td>Number</td>
<td>Cover</td>
<td>Presence/</td>
<td>Cover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target population</td>
<td>Native</td>
<td>Native</td>
<td>Native</td>
<td>Native</td>
<td>Native</td>
<td>FAC or</td>
<td>absence</td>
<td>Noxious</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zone</td>
<td>PFO</td>
<td>PFO</td>
<td>PSS</td>
<td>PSS</td>
<td>Buffer</td>
<td>Buffer</td>
<td>Noxious</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample method</td>
<td>Line</td>
<td>Line</td>
<td>Count</td>
<td>Count</td>
<td>Line</td>
<td>Count</td>
<td>Noxious</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| SU length                                       | 10m    | 10m    | 10m    | Total # of SU | 25 | 13 | 19
| Sample method                                   | Count  | Count  | Count  | Qualitative |
| SU length                                       | 10m    | 10m    | 10m    | (memo)     |
| Total # of SU                                   | 25     | 13     | 19     |

#### Temporary Wetland Impact Areas

<table>
<thead>
<tr>
<th>Attribute</th>
<th>PS 12</th>
<th>PS 13</th>
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<tbody>
<tr>
<td>Cover</td>
<td>Cover</td>
<td>Cover</td>
</tr>
<tr>
<td>Target population</td>
<td>FAC or</td>
<td>Noxious</td>
</tr>
<tr>
<td>Zone</td>
<td>PEM</td>
<td>Entire site</td>
</tr>
<tr>
<td>Sample method</td>
<td>Point Line</td>
<td>Point Line</td>
</tr>
<tr>
<td>SU length</td>
<td>10m</td>
<td>10m</td>
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<tr>
<td>Points per SU</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Total # of SU</td>
<td>18</td>
<td>18</td>
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</tbody>
</table>
### Table 2. Hydrology Observations

<table>
<thead>
<tr>
<th>Date</th>
<th>Surface Observations</th>
<th>Well ID</th>
<th>Water Level (inches below soil surface unless otherwise noted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 14, 2019</td>
<td>40% of the site is saturated and 30% of the site is inundated. Emergent areas are all inundated; pockets of inundation throughout saturated areas as well. Well 1 is located in an isolated high spot near the wetland/upland boundary; there is surface saturation near this well.</td>
<td>1</td>
<td>15.5&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>3&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>6&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>2&quot;</td>
</tr>
<tr>
<td>March 28, 2019</td>
<td>PEM and PSS are inundated throughout, saturation present in about 30% of the PFO.</td>
<td>1</td>
<td>15&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>2.5&quot;</td>
</tr>
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<td></td>
<td></td>
<td>3</td>
<td>6&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>2&quot;</td>
</tr>
<tr>
<td>April 16, 2019</td>
<td>PEM and PSS areas are still largely inundated with pockets of inundation in the PFO area as well.</td>
<td>1</td>
<td>14&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>1&quot;</td>
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<td>3</td>
<td>4&quot;</td>
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<td></td>
<td></td>
<td>4</td>
<td>1&quot;</td>
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</tbody>
</table>
Table 3. Year 10 performance standards met in Years 6 and 7 at Cedars Wetland Mitigation Site

<table>
<thead>
<tr>
<th>Performance Standards (Year-10)</th>
<th>Year 6 (2018) Qualitative Results</th>
<th>Year 7 (2019) Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum 70 percent cover of native woody vegetation (planted and volunteer) [in the scrub-shrub wetland].</td>
<td>80% cover (qualitative)</td>
<td>81% cover (CI(_{90}%) = 67-96%)</td>
</tr>
<tr>
<td>Minimum 70 percent cover of native woody vegetation (planted and volunteer) [in the buffer].</td>
<td>90% cover (qualitative)</td>
<td>95% cover (CI(_{90}%) = 89-100%)</td>
</tr>
<tr>
<td>Minimum of 70 percent cover of native emergent vegetation (planted and volunteer).</td>
<td>80% cover (qualitative)</td>
<td>90% cover (qualitative)</td>
</tr>
<tr>
<td>At least five species of native trees and/or shrubs in the forested wetland, scrub-shrub wetland, and buffer</td>
<td>Achieved</td>
<td>Achieved</td>
</tr>
<tr>
<td>Less than 15% cover blackberry species and Class B noxious weeds across the site.</td>
<td>1% cover (qualitative)</td>
<td>&lt;1% cover (qualitative)</td>
</tr>
<tr>
<td>No Class A noxious weeds, Japanese knotweed, or purple loosestrife on the site.</td>
<td>None observed</td>
<td>None observed</td>
</tr>
<tr>
<td>Less than 20% cover reed canarygrass in the wetland creation areas</td>
<td>5% cover (qualitative)</td>
<td>5% cover (qualitative)</td>
</tr>
</tbody>
</table>
Appendix D. Temporary Wetland Impact Areas JARPA Figures
End FA# End Project
STA. 493+88.36
I-5 MP 9.51

Begin Construction
139TH STA. 41+00

Begin Construction
STA. 359+36.00
I-5 MP 6.95

Begin FA#
Begin Project
STA. 611+13.43
I-205 MP 36.07

Salmon Creek Interchange Project (SCIP)
I-5 MP 6.95-9.51, I-205 MP 36.07 to Confluence with I-5

Vicinity Map
Purpose: Highway Improvements
Datum: N.A.V.D. of 1988
Longitude: 122° 38'32"W to 122° 39'37"W
Latitude: 45° 45'43"N to 45° 44'35"N
Location: Clark County
Applicant: WSDOT

Sheet: 1 of 16
February 2011