

# Altmann Oliver Associates, LLC

# AOA



PO Box 578    Carnation, WA 98014    Office (425) 333-4535    Fax (425) 333-4509

Environmental  
Planning &  
Landscape  
Architecture

July 25, 2025

AOA-6747

Ray Sayah  
[raysayah@gmail.com](mailto:raysayah@gmail.com)

**SUBJECT: Critical Areas Study for Reasonable Use Exception (RUE)  
Sayah Cabins on Parcel 00777800000300  
Monroe, WA (Revised)**

Dear Ray,

We have updated this report to address the October 10, 2024 letter of finding recommendations from Confluence Environmental Company, peer review consultant for the City of Monroe.

On April 11, 2023, AOA conducted a wetland and stream delineation on the subject property utilizing the methodology outlined in the May 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*, as well as the Washington State Department of Ecology's "Determining the Ordinary High Water Mark on Streams in Washington State" (Olson and Stockdale 2016).

A second site review was conducted on April 25, 2025, to re-assess the validity of the previously completed vegetation map as well as address comments regarding the previously submitted Critical Areas Study from Confluence. The property is currently undeveloped and consists of a mix of trees and brush that slopes gently down from east to west.

## **1.0 EXISTING CRITICAL AREAS**

One wetland (Wetland A), and five stream segments (Stream Segments 1, 2, 3, 4, and Flying F Creek) were identified and delineated on and directly adjacent to the site. Another Stream (Cripple Creek) was identified off-site to the south of the property.

**Attachment A** contains data sheets prepared for a representative location in both the wetland and upland. These data sheets document the vegetation, soils, and hydrological information that aided in the wetland boundary delineation.

### **1.1 Wetland A**

Wetland A consists of a Sloped Hydrogeomorphic (HGM) class wetland that contained a forested and scrub shrub plant community that included red alder (*Alnus rubra*), black cottonwood (*Populus balsamifera*), black twinberry (*Lonicera involucrata*), salmonberry (*Rubus spectabilis*), Himalayan blackberry (*Rubus armeniacus*), reed canarygrass (*Phalaris arundinacea*), skunk cabbage (*Lysichiton americanus*), and horsetail (*Equisetum* sp.). Wetland A is Category III wetland with 6 Habitat Points (**Attachment B**). Category III wetlands with 6 Habitat Points require a standard 150-foot buffer.

Soils within the wetland consisted primarily of clay and were saturated to the surface at the time of the field investigation.

### **1.2 Streams**

Stream Segments 2, 3, 4, Flying F Creek (which flows from south to north along the west property line), and Cripple Creek (which flows east to west off-site to the south) appear to meet the physical criteria for Type F streams and currently require standard 200-foot buffers. Streams 2 and 3 flow west while Stream 4 flows south and drains into Flying F Creek in the northwest corner of the site. Stream Segment 1 (along the east property line) flows south and drains into Stream 2 via a culvert under the existing access road. Stream segment 1 appears to be a Type Ns stream which requires a 50-foot buffer and had minor flow during the site visits.

All 6 stream channels were generally well defined and likely historically dredged. All flow from the on-site streams eventually merges with Flying F Creek in the northwest corner of the site and continues off-site to the west. Flow from Cripple Creek flows east to west entirely off-site. No salmonids or fish and wildlife conservation areas are mapped within any of the on-site streams associated with the site; however, Cripple Creek is shown off-site to the south containing salmonids on the WA Department of Fish and Wildlife's Priority Habitats and Species (PHS) database, WDFW Salmonscape, and WA Department of Natural Resources' Forest Practices mapping.

Since the on-site portion of Flying F Creek flows north from Cripple Creek, it is likely a side channel of the main stem of Cripple Creek and contains the physical criteria to support anadromous fish use. This is the same for Stream segments 2, 3, and 4 as they are directly connected to the on-site Flying F Creek branch and contain the physical characteristics of Type F streams. No salmonids, other species of fish, or any priority wildlife species were directly observed during the field investigations. In addition, no portion of the site is mapped as floodplain.

## **2.0 PROPOSED PROJECT & BUFFER IMPACTS**

The proposed project consists of the construction of a cabin campground (see site plan prepared by Harmsen). Since the site is entirely encumbered by critical areas and their buffers, a Reasonable Use Exception (RUE) will be required for the proposed development.

As part of the project, all of the critical areas on the subject property would be preserved and no direct impacts are proposed. Due to the highly degraded condition of the buffer (i.e., the majority of the buffer on the site is dominated by invasive Himalayan blackberry), the

project proposes to implement a buffer and wetland enhancement plan for all remaining buffer and wetland areas and a restoration plan for all temporarily impacted buffers.

The project is designed to avoid impacts to on-site critical areas as much as possible, while still allowing for the project to serve its intended use as a cabin campground. All direct impacts to critical areas will be avoided. While buffer impacts are required for the development of the property, these impacts will be mitigated for via buffer restoration and enhancement (see attached impacts and mitigation plan.). Since the current critical area habitat is degraded, stream and wetland buffer habitat loss as a result of project development will be replaced through the proposed planting plan. Invasive species will be grubbed out and be replaced with a mix of native trees and shrubs suitable for the water regime with the goal to increase the structural and plant species diversity of the enhancement areas.

A stormwater management plan has been prepared by Harmsen. As part of that plan, bioswales with native herbaceous vegetation will be installed among the cabins to provide increase filtration prior to discharge into the creek.

The proposed project consists of the construction of seven small cabins with associated paths, storage shed, parking, and off-site roadway expansion (**Plan Set Figures 3 and 4**). This equates to 22,478 sf of permanent on-site buffer impact for the cabins, storage shed, paths, and parking; 2,598 sf of permanent off-site buffer impact for the road expansion (25,076 total), and 5,816 sf of temporary on-site buffer impact for the bioswales which will be fully restored following construction.

All proposed impacts north of the buffer of Wetland A are wetland and stream buffer impacts, while all proposed impacts south of the Wetland A buffer are only stream buffer impacts.

### **3.0 BUFFER ENHANCEMENT & RESTORATION**

Buffer enhancement and restoration will consist of the removal of invasive non-native plant species and planting with native trees and shrubs. Implementation of the enhancement plan will significantly increase the plant species and structural diversity within the enhanced buffer areas, thereby increasing the habitat value, filtration, and screening functions of the buffer. Mitigation associated with the project includes 16,645 sf of on-site buffer enhancement, 1,847 sf of wetland enhancement, 3,777 sf of off-site buffer enhancement, and 5,840 sf of on-site buffer restoration. Total enhancement and restoration equate to 28,109 sf.

#### **3.1 Goal, Objectives, and Performance Standards for Enhancement Area**

The primary goal of the enhancement plan is to increase the habitat and filtration functions of the preserved buffer over current conditions. To meet this goal, the following objectives and performance standards have been incorporated into the design of the plan:

**Objective A:** Increase the structural and plant species diversity within the enhancement areas.

*Performance Standard 1: Native woody cover will be a minimum of; 10% at construction completion, 15% at Year 1, 20% at Year 2, 3% at Year 3, and 70% at Year 5.*

*Performance Standard 2: There will be 100% survival of all woody planted species throughout the mitigation planted area at the end of the first year of planting. For Years 2-5, success will be based on an 85% survival rate or similar number of recolonized native woody plants.*

**Objective B:** Limit the amount of invasive and exotic species within the enhancement area.

*Performance Standard 3: All class A WA state noxious weeds and other invasive plant species identified by AOA will be maintained at levels below 10% total cover, Removal of these species will occur immediately following the monitoring event in which they surpass the above maximum coverage. Removal will occur by hand whenever possible.*

### **3.2 Construction Management**

Prior to commencement of any work in the enhancement area, the clearing limits will be staked and all existing vegetation to be saved will be clearly marked. A consultant will supervise plan implementation during construction to ensure that objectives and specifications of the plan are met. Any necessary significant modifications to the design that occur because of unforeseen site conditions will be jointly approved by the City of Monroe and the consultant prior to their implementation.

### **3.3 Monitoring Methodology**

The monitoring program will be conducted for a period of five years, with annual reports submitted to the City of Monroe. Vegetation would be recorded on the basis of relative percent cover of the dominant species within the vegetative strata. Qualitative and quantitative analyses of the enhancement area will be provided within each report with the goal to determine if the outlined performance standards are being met for the given year.

Photo-points will be established from which photographs will be taken throughout the monitoring period. These photographs will document general appearance and progress in plant community establishment in the enhancement area. Review of the photos over time will provide a visual representation of the success of the plan.

### **3.4 Maintenance Plan**

Maintenance should be conducted on a routine, year-round basis. Additional maintenance needs will be identified and addressed following the performance monitoring site visits. Contingency measures and remedial action on the site shall be implemented on an as-needed basis at the direction of the consultant or the owner.

Routine removal and control of non-native and other invasive plants shall be performed by manual means whenever possible. Undesirable and weedy exotic plant species shall be

maintained at levels below 10% total cover within any given stratum at any time during the five-year monitoring period.

Routine maintenance of planted trees shall be performed. Measures include resetting plants to proper grades and upright positions. Tall grasses shall be weeded at the base of plants to prevent engulfment. Weed control should be performed by hand removal or selective weed-whacking. If weed whacking is performed, great care shall be taken to prevent damage to desired native species either planted or re-colonized.

### **3.5 Contingency Plan**

All dead plants will be replaced with the same species or an approved substitute species that meets the goal of the enhancement plan. Recolonized native volunteers will count toward areal coverage requirements. Plant material shall meet the same specifications as originally installed material. Replanting will not occur until after the reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.). Replanting shall be completed under the direction of the consultant or the owner.

### **3.6 Performance Bond**

A performance bond or other surety device will be posted with the City of Monroe by the property owner.

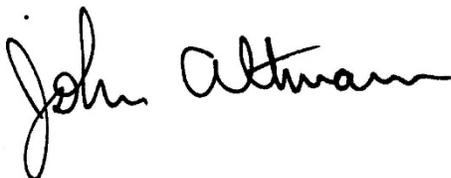
### **3.7 As-Built Plan**

Following completion of construction activities, an as-built plan for the enhancement area will be provided to the City of Monroe. The plan will identify and describe any changes in grading, planting, or other constructed features in relation to the original approved plan. The plan will also depict locations of photo-points.

If you have any questions regarding the report or mitigation plan, please give me a call. If there are questions regarding the proposed site plan, please contact Harmsen.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC

A handwritten signature in black ink that reads "John Altmann". The signature is written in a cursive, flowing style.

John Altmann  
Ecologist

Attachments



**Legend**

Cadastral

Easements



Parcels



Addresses

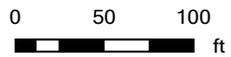
Aerial Imagery

Road Labels (white)

Aerial 2024

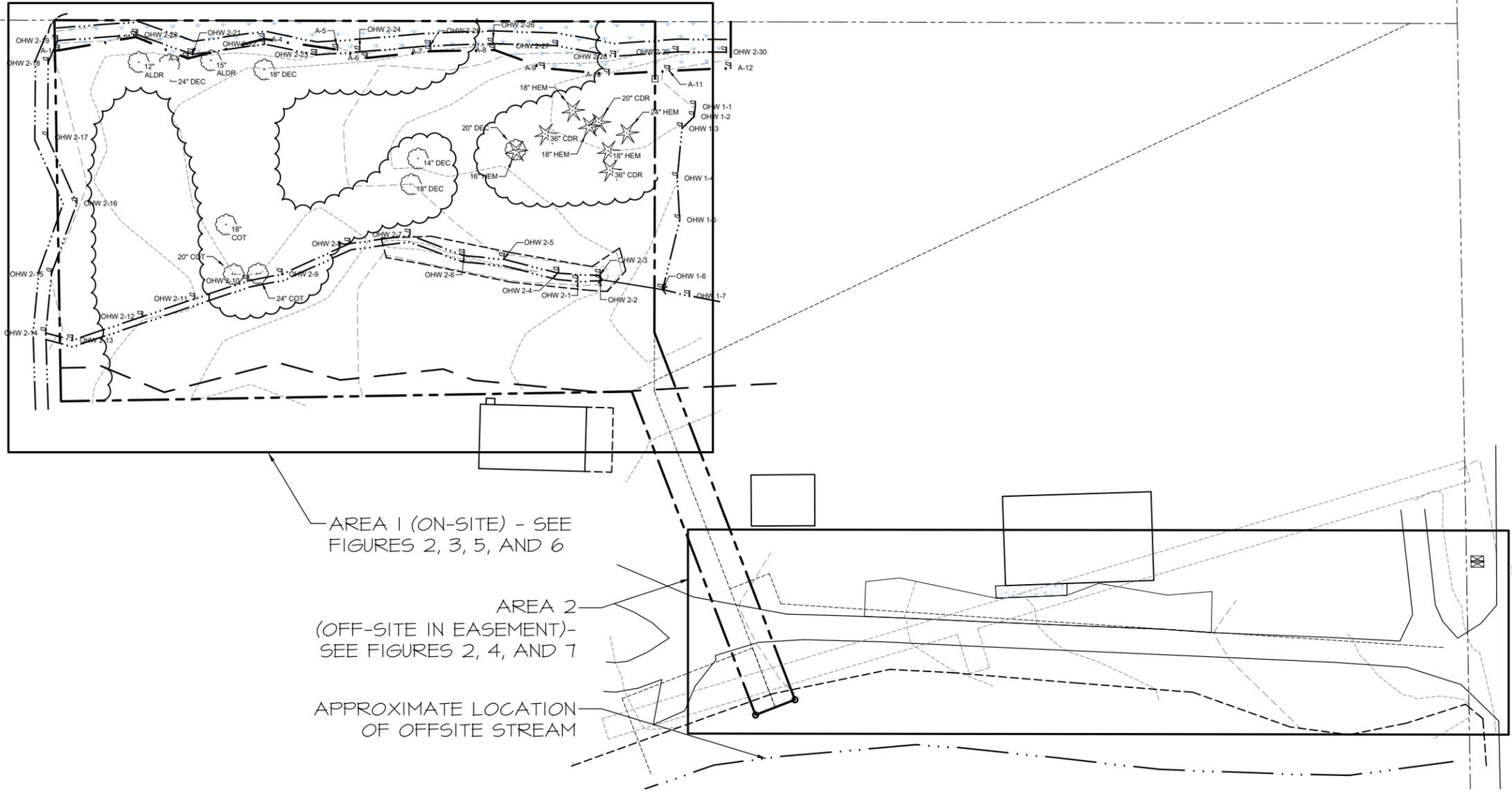
-  Red: Band\_1
-  Green: Band\_2
-  Blue: Band\_3

Snohomish County Planning and Development Services (PDS)



Scale 1 : 1916

All maps, data, and information set forth herein ("Data"), are for illustrative purposes only and are not to be considered an official citation to, or representation of, the Snohomish County Code. Amendments and updates to the Data, together with other applicable County Code provisions, may apply which are not depicted herein. Snohomish County makes no representation or warranty concerning the content, accuracy, currency, completeness or quality of the Data contained herein and expressly disclaims any warranty of merchantability or fitness for any particular purpose. All persons accessing or otherwise using this Data assume all responsibility for use thereof and agree to hold Snohomish County harmless from and against any damages, loss, claim or liability arising out of any error, defect or omission contained within said Data.



AREA 1 (ON-SITE) - SEE FIGURES 2, 3, 5, AND 6

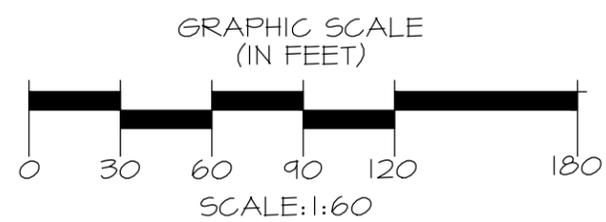
AREA 2 (OFF-SITE IN EASEMENT)- SEE FIGURES 2, 4, AND 7

APPROXIMATE LOCATION OF OFFSITE STREAM

**SITE OVERVIEW PLAN**  
SCALE - 1:60

**PLAN LEGEND**

- PROPERTY LINE
- ..... STREAM ORDINARY HIGH WATER
- . - . - . WETLAND BOUNDARY
- 150' WETLAND BUFFER
- TOP OF BANK

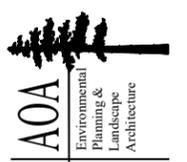


**NOTES**

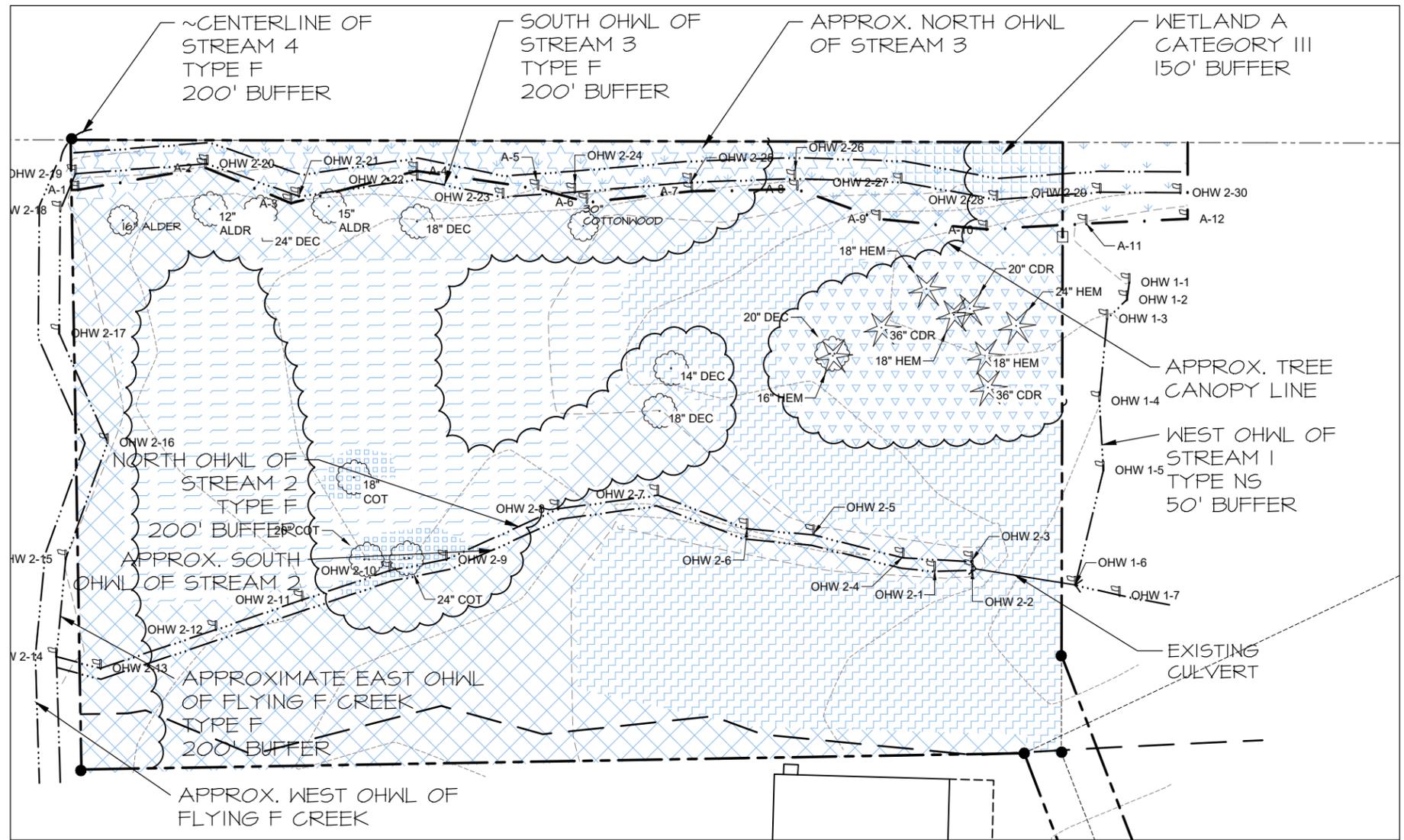
1. BASE INFORMATION PROVIDED BY ALL LAND SURVEYING, LLC., 1901 VERNON RD, UNIT C, LAKE STEVENS, WA 98258, 360.568.4031.
2. SITE PLAN PROVIDED BY HARMSSEN, LLC, 2822 COLBY AVE., SUITE 300, EVERETT, WA 98201, 360.794.7811.
3. ENTIRE SITE ENCUMBERED BY CRITICAL AREAS AND BUFFERS.

PROJECT	6747
DRAWN	KV
SCALE	AS NOTED
DATE	6-10-25
REVISION	1/10
	7-22-25

FIGURE 1: SITE OVERVIEW PLAN  
SAYAH PROPERTY  
13626 179TH AVE. SE  
MONROE, WA 98272  
PARCEL 0071800000300

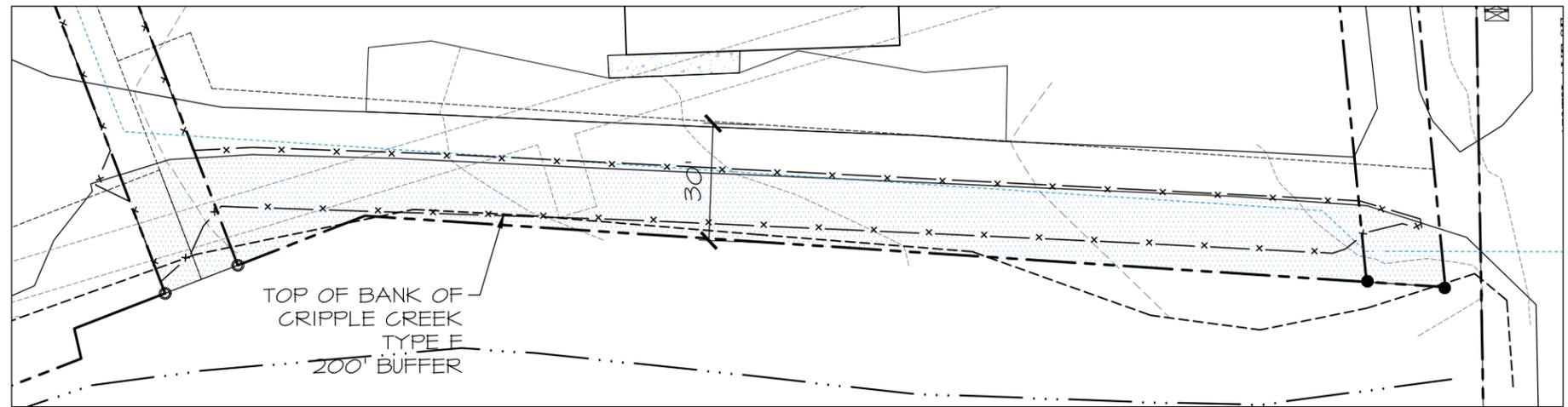


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**CRITICAL AREAS & EXISTING VEGETATION MAP - AREA 1**

SCALE - 1:40



**CRITICAL AREAS & EXISTING VEGETATION MAP - AREA 2**

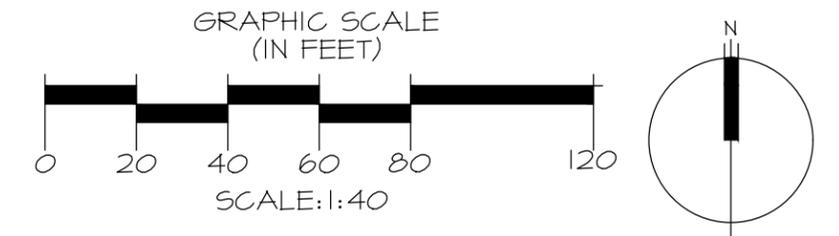
SCALE - 1:40

**PLAN LEGEND**

- PROPERTY LINE
- ..... STREAM ORDINARY HIGH WATER
- . - . - WETLAND BOUNDARY
- 150' WETLAND BUFFER
- TOP OF BANK

**EXISTING VEGETATION**

- 100% RED ALDER & BLACK COTTONWOOD, 70% SWORD FERN, VINE MAPLE & SALAL, 30% HIMALAYAN BLACKBERRY & REED CANARY GRASS
- 100% HIMALAYAN BLACKBERRY & STINGING NETTLE
- 100% NATIVE CANOPY, 10% HIMALAYAN BLACKBERRY, 90% OPEN W/ DEBRIS
- 100% HIMALAYAN BLACKBERRY, STINGING NETTLE, REED CANARY GRASS & THISTLE
- 100% REED CANARY GRASS & STINGING NETTLE
- 100% NATIVE CANOPY, 100% SALMONBERRY, SWORD FERN, RED ELDERBERRY, WILLOW & SPIREA
- 100% NATIVE CANOPY, 50% SALMONBERRY, SWORD FERN, LADY FERN & RED ELDERBERRY, 50% HIMALAYAN BLACKBERRY
- 90% OPEN MOWED LAWN, 10% HIMALAYAN BLACKBERRY



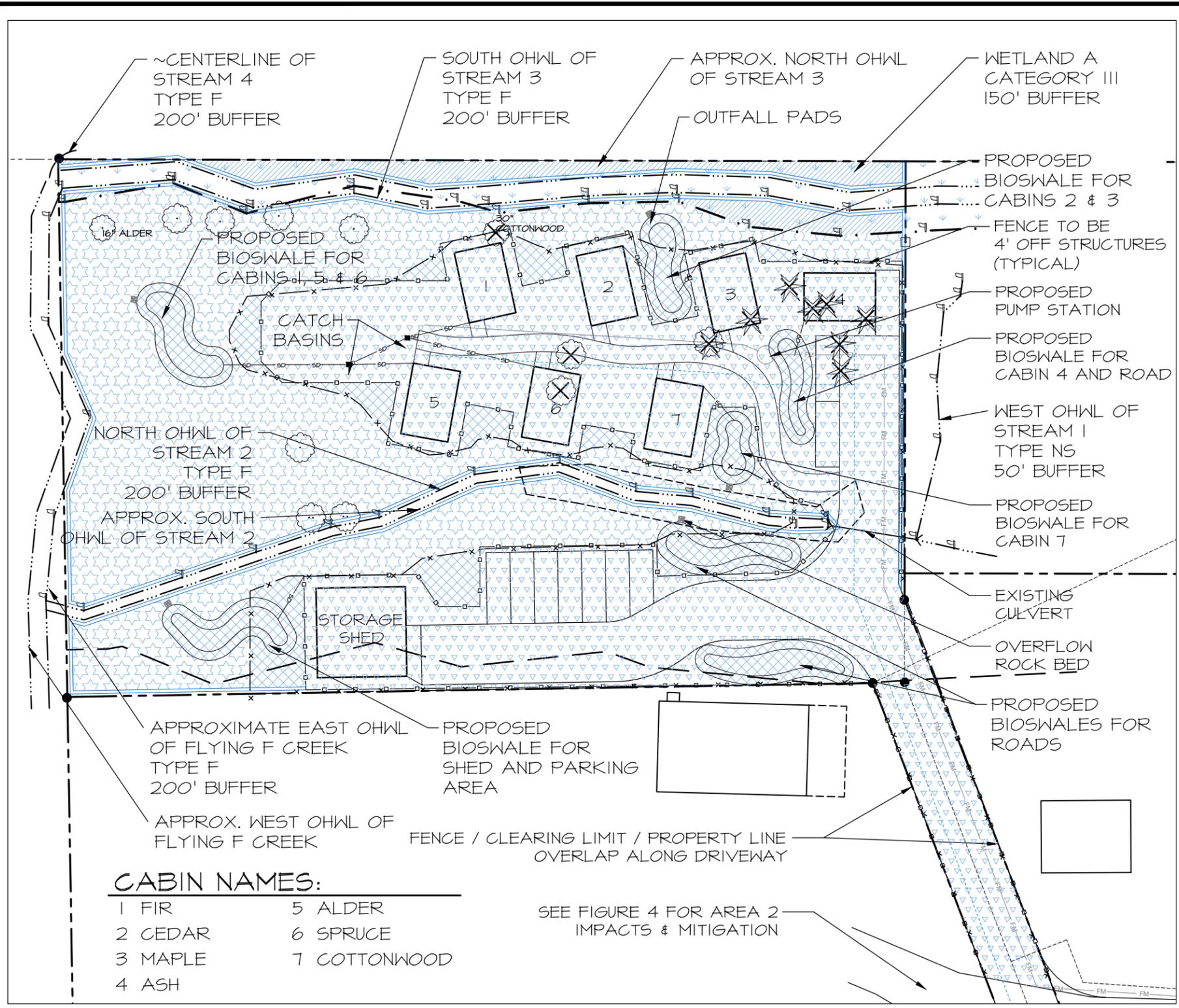
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3. ENTIRE SITE ENCUMBERED BY CRITICAL AREAS AND BUFFERS.

PROJECT 6747  
 DRAWN K.V.  
 SCALE AS NOTED  
 DATE 6-10-25  
 REVISED 7-22-25

FIGURE 2: CRITICAL AREAS + EXISTING VEGETATION  
 SAYAH PROPERTY  
 13626 179TH AVE. SE  
 MONROE, WA 98272  
 PARCEL 0077800000300

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- CABIN NAMES:**
- |         |              |
|---------|--------------|
| 1 FIR   | 5 ALDER      |
| 2 CEDAR | 6 SPRUCE     |
| 3 MAPLE | 7 COTTONWOOD |
| 4 ASH   |              |

**PLAN LEGEND**

- PROPERTY LINE
  - ..... STREAM ORDINARY HIGH WATER
  - . - . - . WETLAND BOUNDARY
  - 150' WETLAND BUFFER
  - TOP OF BANK
  - x-x-x-x-x- CLEARING LIMITS
  - o-o-o-o-o- SPLIT RAIL FENCE
  - ===== STRAW WATTLES - 1,871 LF
  - ⊗ ⊛ TREES TO BE REMOVED - 11 TOTAL
  - x-x-x-x-x- APPROXIMATE CLEARING LIMIT
  - o-o-o-o-o- PROPOSED STORMWATER DRAIN PIPES TO BIOSWALES
- \*ENTIRE SITE IS ENCUMBERED BY STREAM BUFFER - WETLAND BUFFER IS DEPICTED

**IMPACT LEGEND**

	PERMANENT ON-SITE BUFFER IMPACT - AREA 1	22,478 SF
	PERMANENT OFF-SITE BUFFER IMPACT - AREA 2	2,598 SF
	TEMPORARY ON-SITE BUFFER IMPACT - AREA 1	5,840 SF
<b>TOTAL IMPACT: 30,916 SF</b>		

**MITIGATION LEGEND**

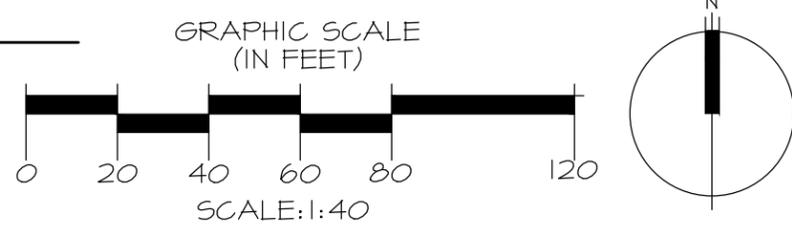
	ON-SITE BUFFER ENHANCEMENT AREA - AREA 1	16,645 SF
	ON-SITE WETLAND ENHANCEMENT AREA - AREA 1	1,847 SF
	OFF-SITE BUFFER ENHANCEMENT AREA - AREA 2	3,777 SF
	ON-SITE BUFFER RESTORATION - AREA 1	5,840 SF
<b>TOTAL MITIGATION: 28,109 SF</b>		

**NOTES**

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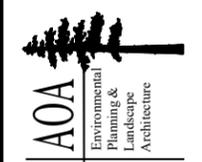
**IMPACTS & MITIGATION MAP - AREA 1**

SCALE - 1:40

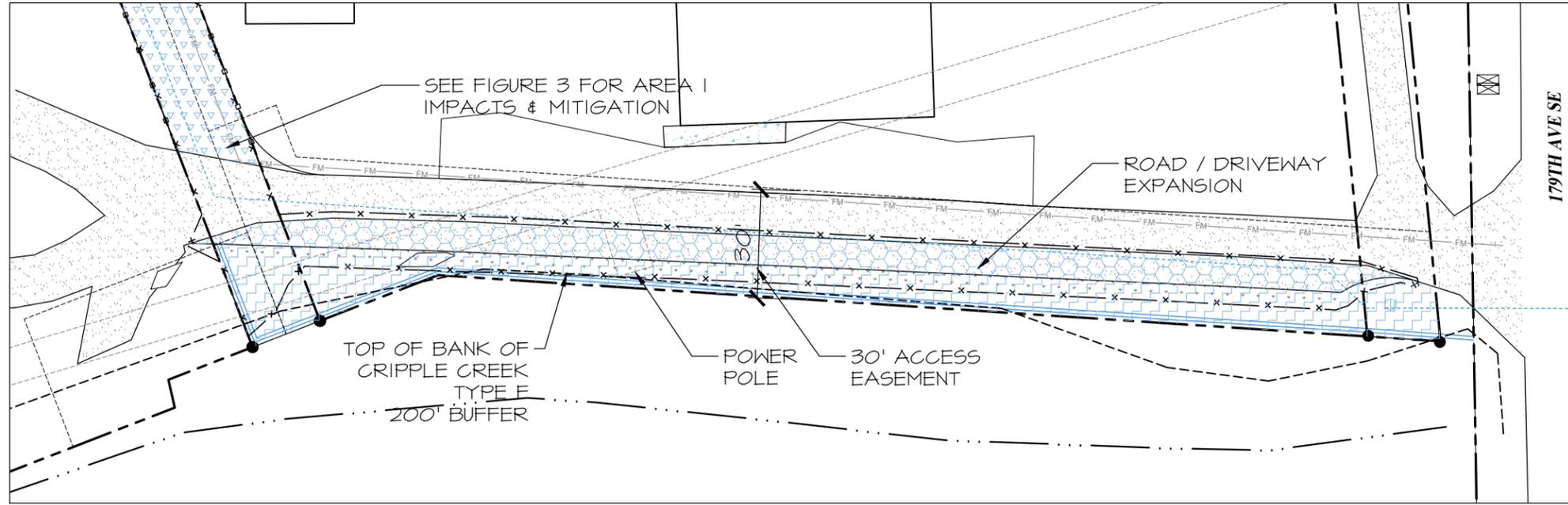


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 REVISION 3/10  
 T-22-25

FIGURE 3: IMPACTS & MITIGATION - AREA 1  
 SAYAH PROPERTY  
 13626 179TH AVE. SE  
 MONROE, WA 98272  
 PARCEL 00717800000300



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**IMPACTS & MITIGATION MAP - AREA 2**

SCALE - 1:40

**PLAN LEGEND**

- PROPERTY LINE
  - ..... STREAM ORDINARY HIGH WATER
  - x-x-x-x- CLEARING LIMITS
  - o-o-o-o- SPLIT RAIL FENCE
  - ==== STRAW WATTLES - 1,871 LF
  - x-x-x-x- APPROXIMATE CLEARING LIMIT
- \*ENTIRE SITE IS ENCUMBERED BY STREAM BUFFER - WETLAND BUFFER IS DEPICTED

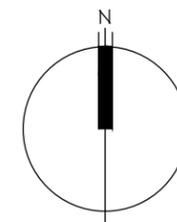
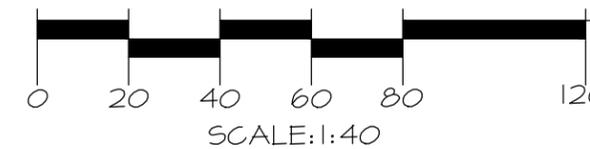
**IMPACT LEGEND**

	PERMANENT ON-SITE BUFFER IMPACT - AREA 1	22,478 SF
	PERMANENT OFF-SITE BUFFER IMPACT - AREA 2	2,598 SF
	TEMPORARY ON-SITE BUFFER IMPACT - AREA 1	5,840 SF
<b>TOTAL IMPACT:</b>		<b>30,916 SF</b>

**MITIGATION LEGEND**

	ON-SITE BUFFER ENHANCEMENT AREA - AREA 1	16,645 SF
	ON-SITE WETLAND ENHANCEMENT AREA - AREA 1	1,847 SF
	OFF-SITE BUFFER ENHANCEMENT AREA - AREA 2	3,777 SF
	ON-SITE BUFFER RESTORATION - AREA 1	5,840 SF
<b>TOTAL MITIGATION:</b>		<b>28,109 SF</b>

GRAPHIC SCALE (IN FEET)



**NOTES**

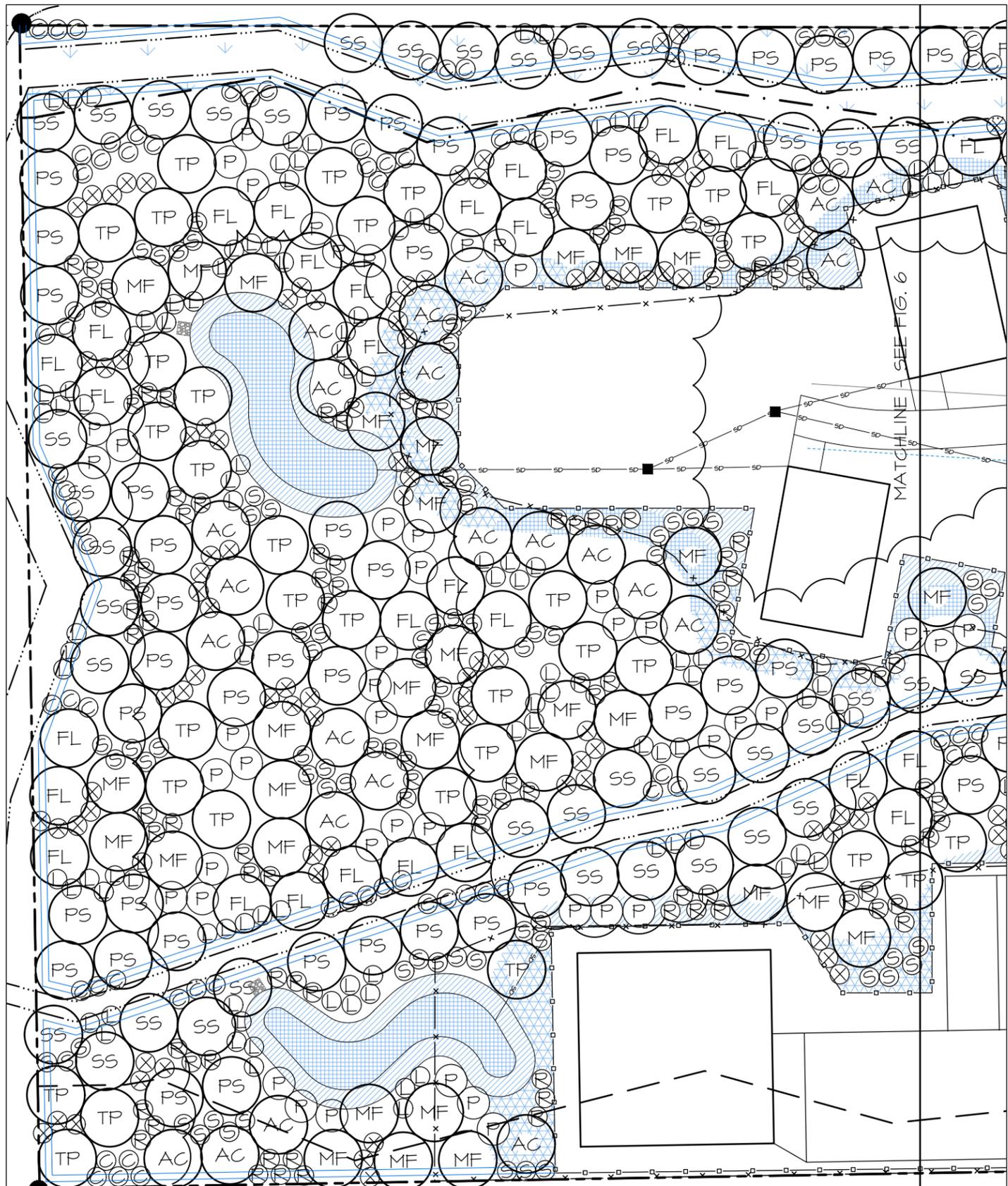
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3. ENTIRE SITE ENCUMBERED BY CRITICAL AREAS AND BUFFERS.

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SCALE	AS NOTED
DATE	6-10-25
REVISION	4/10
	7-22-25

FIGURE 4: IMPACTS & MITIGATION - AREA 2  
 SAYAH PROPERTY  
 13626 179TH AVE. SE  
 MONROE, WA 98272  
 PARCEL 00771800000300



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**PLANTING PLAN - AREA I - WEST SECTION**  
 SCALE - 1:20

**PLAN LEGEND**

- PROPERTY LINE
  - ..... STREAM ORDINARY HIGH WATER
  - . - . - WETLAND BOUNDARY
  - - - - - 150' WETLAND BUFFER
  - x - x - x - CLEARING LIMITS
  - o - o - o - SPLIT RAIL FENCE
  - ===== STRAW WATTLES
- \*ENTIRE SITE IS ENCUMBERED BY STREAM BUFFER - WETLAND BUFFER IS DEPICTED

**PLANT SCHEDULE - AREA I**

**TREES**

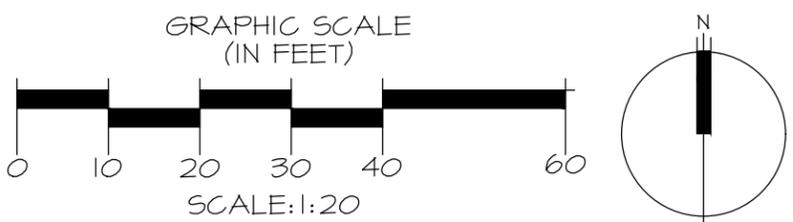
KEY	SCIENTIFIC NAME	COMMON NAME	QTY
AC	ACER CIRCINATUM	VINE MAPLE	26
FL	FRAXINUS LATIFOLIA	OREGON ASH	42
MF	MALUS FUSCA	WESTERN CRABAPPLE	44
PS	PICEA SITCHENSIS	SITKA SPRUCE	54
SS	SCOULER WILLOW	SALIX SCOULERIANA	60
TP	THUJA PLICATA	WESTERN RED CEDAR	39

**SHRUBS**

KEY	SCIENTIFIC NAME	COMMON NAME	QTY
C	CORNUS SERICEA	RED-OSIER DOGWOOD	104
L	LONICERA INVOLUCRATA	BLACK TWIN-BERRY	157
P	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	51
R	ROSA PISOCARPA	CLUSTERED ROSE	123
X	RUBUS SPECTABILIS	SALMONBERRY	133
S	SYMPHORICARPOS ALBUS	SNOWBERRY	124

**GROUND COVER**

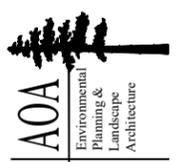
KEY	SCIENTIFIC NAME	COMMON NAME	QTY
XXXXXX	ATHYRIUM FILIX-FEMINA	LADY FERN	600
XXXX	CAREX OBNUPTA	SLOUGH SEDGE	500
XXXX	IRIS TENAX	OREGON IRIS	600



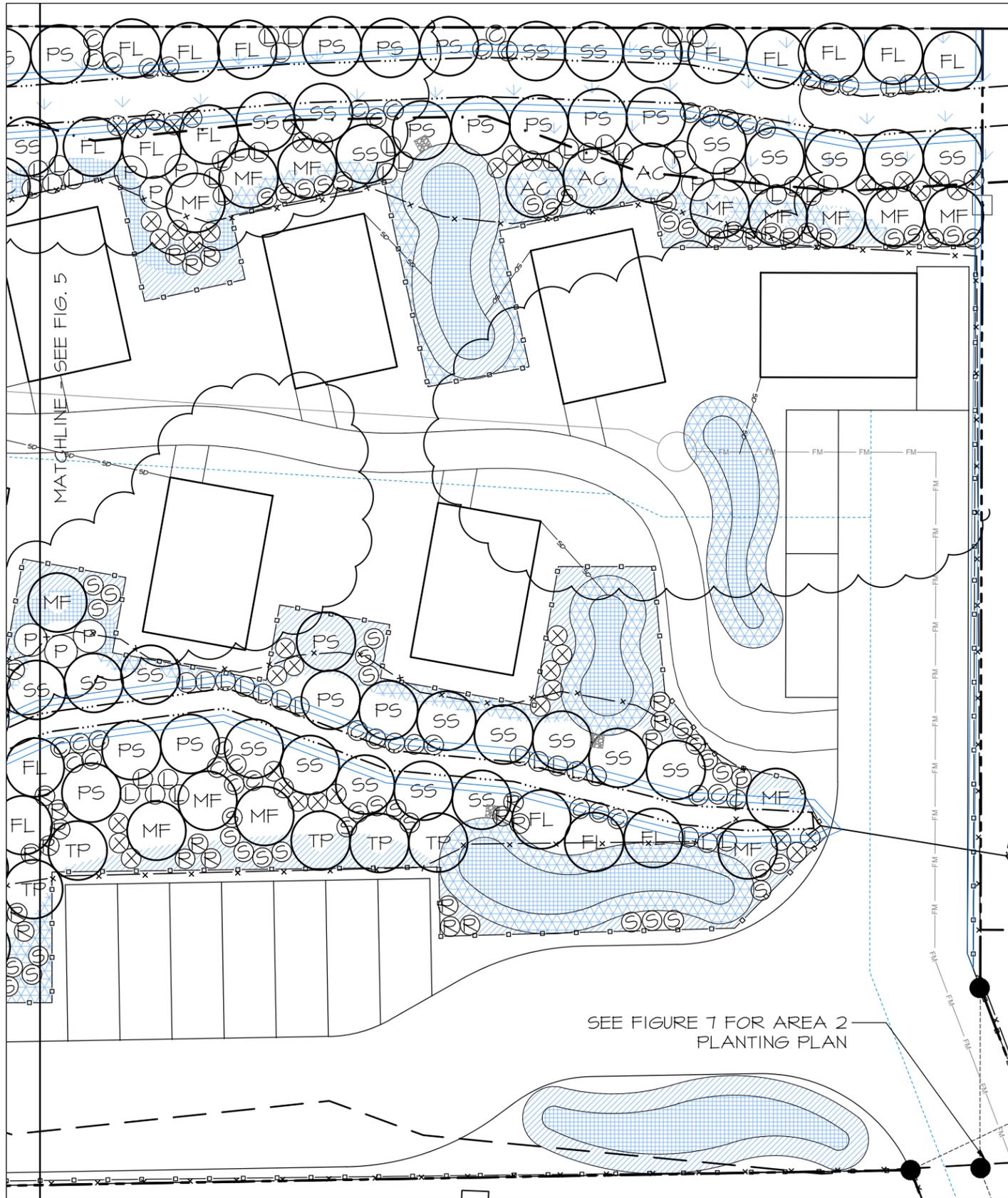
PROJECT 6747  
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5/10

FIGURE 5: PLANTING PLAN - AREA I  
 SAYAH PROPERTY  
 13626 179TH AVE. SE  
 MONROE, WA 98272  
 PARCEL 00717800000300



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**PLANTING PLAN - AREA I - EAST SECTION**  
SCALE - 1:20

**PLAN LEGEND**

- PROPERTY LINE
  - ..... STREAM ORDINARY HIGH WATER
  - . - . - . WETLAND BOUNDARY
  - - - - - 150' WETLAND BUFFER
  - x-x-x-x- CLEARING LIMITS
  - o-o-o-o- SPLIT RAIL FENCE
  - ===== STRAW WATTLES
- \*ENTIRE SITE IS ENCUMBERED BY STREAM BUFFER - WETLAND BUFFER IS DEPICTED

**PLANT SCHEDULE - AREA I**

**TREES**

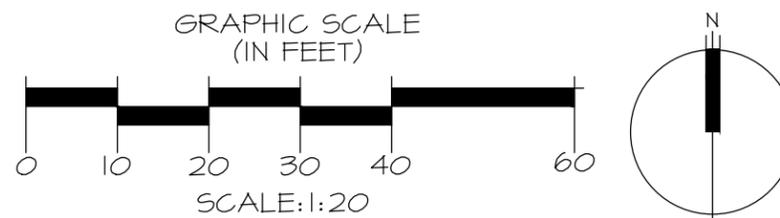
KEY	SCIENTIFIC NAME	COMMON NAME	QTY
AC	ACER CIRCINATUM	VINE MAPLE	26
FL	FRAXINUS LATIFOLIA	OREGON ASH	42
MF	MALUS FUSCA	WESTERN CRABAPPLE	44
PS	PICEA SITCHENSIS	SITKA SPRUCE	54
SS	SCOULER WILLOW	SALIX SCOULERIANA	60
TP	THUJA PLICATA	WESTERN RED CEDAR	39

**SHRUBS**

KEY	SCIENTIFIC NAME	COMMON NAME	QTY
C	CORNUS SERICEA	RED-OSIER DOGWOOD	104
L	LONICERA INVOLUCRATA	BLACK TWIN-BERRY	157
P	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	51
R	ROSA PISOCARPA	CLUSTERED ROSE	123
X	RUBUS SPECTABILIS	SALMONBERRY	133
S	SYMPHORICARPOS ALBUS	SNOWBERRY	124

**GROUND COVER**

KEY	SCIENTIFIC NAME	COMMON NAME	QTY
[Symbol]	ATHYRIUM FILIX- FEMINA	LADY FERN	600
[Symbol]	CAREX OBNUPTA	SLOUGH SEDGE	500
[Symbol]	IRIS TENAX	OREGON IRIS	600



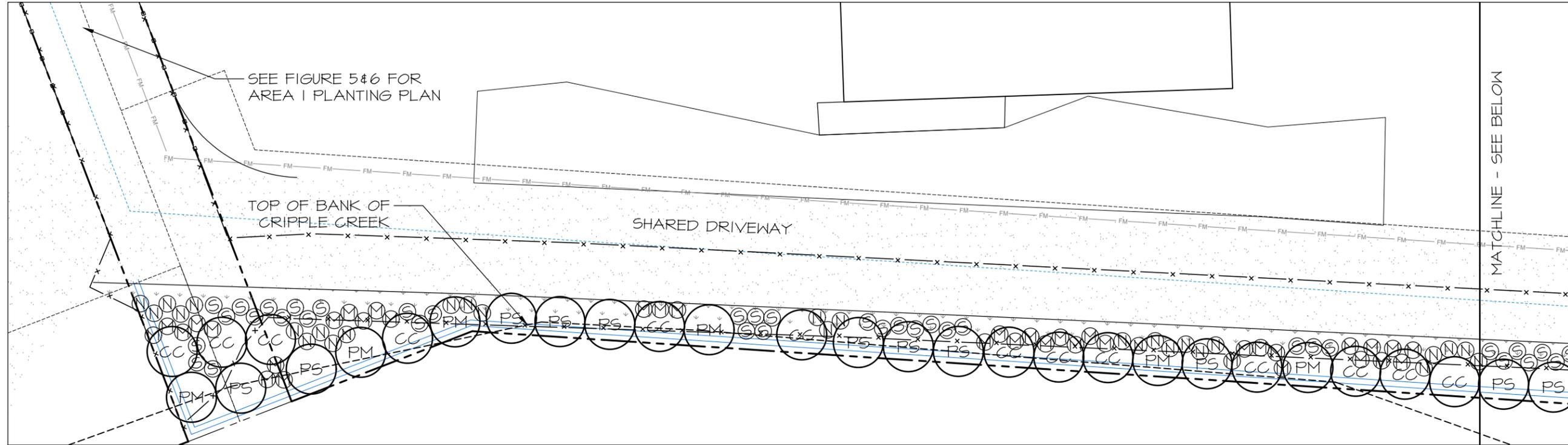
PROJECT 6747  
DRAWN KJV  
SCALE AS NOTED  
DATE 6-10-25  
REVISED 7-22-25

6/10

FIGURE 6: PLANTING PLAN - AREA I  
SAYAH PROPERTY  
13626 179TH AVE. SE  
MONROE, WA 98272  
PARCEL 0071800000300

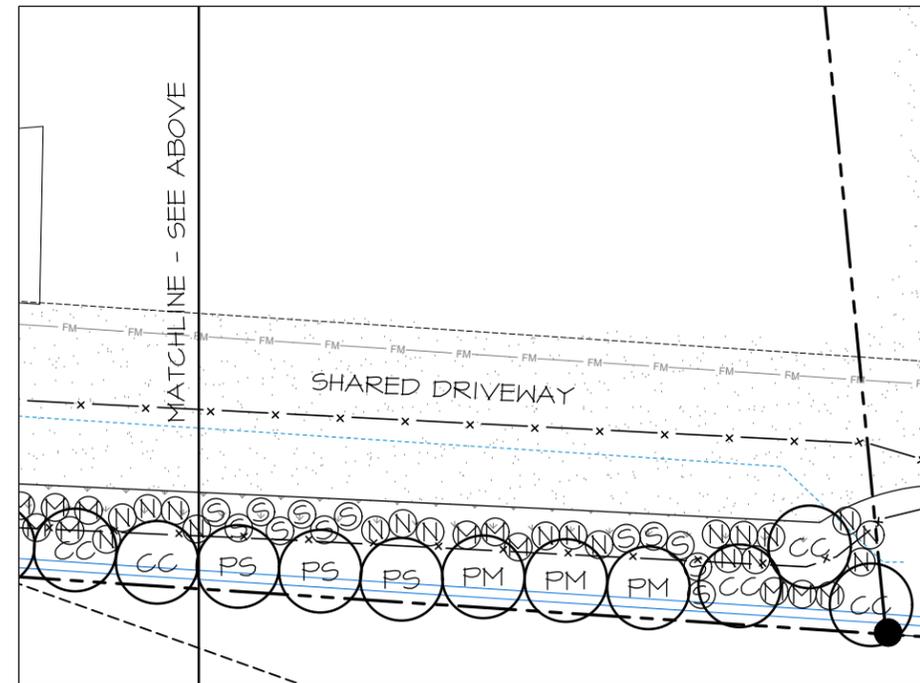


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**PLANTING PLAN - AREA 2 - WEST SECTION**

SCALE - 1:20



**PLANTING PLAN - AREA 2 - EAST SECTION**

SCALE - 1:20

**PLANT SCHEDULE - AREA 2**

**TREES**

KEY	SCIENTIFIC NAME	COMMON NAME	QTY
CC	CORYLUS CORNUTA	BEAKED HAZELNUT	16
PS	PICEA SITCHENSIS	SITKA SPRUCE	12
PM	PSUEDOTSUGA MENZIESII	DOUGLAS FIR	9

**SHRUBS**

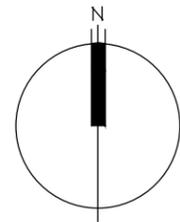
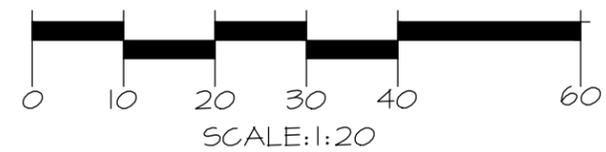
KEY	SCIENTIFIC NAME	COMMON NAME	QTY
M	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	43
N	ROSA NUTKANA	NOOTKA ROSE	42
S	SYMPHORICARPOS ALBUS	SNOWBERRY	42

**PLAN LEGEND**

- PROPERTY LINE
- ..... STREAM ORDINARY HIGH WATER
- x-x-x-x- CLEARING LIMITS
- o-o-o-o- SPLIT RAIL FENCE
- ==== STRAW WATTLES

\*ENTIRE SITE IS ENCUMBERED BY STREAM BUFFER - WETLAND BUFFER IS DEPICTED

**GRAPHIC SCALE (IN FEET)**

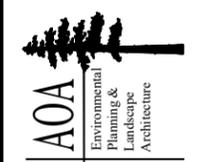


**NOTES**

1. BASE INFORMATION PROVIDED BY ALL LAND SURVEYING, LLC., 1901 VERNON RD, UNIT C, LAKE STEVENS, WA 98258, 360.568.4031.
2. SITE PLAN PROVIDED BY HARMSSEN, LLC, 2822 COLBY AVE., SUITE 300, EVERETT, WA 98201, 360.794.7811.
3. ENTIRE SITE ENCUMBERED BY CRITICAL AREAS AND BUFFERS.

PROJECT	6747
DRAWN	KV
SCALE	AS NOTED
DATE	6-10-25
REVISION	7-22-25

FIGURE 7: PLANTING PLAN - AREA 2  
SAYAH PROPERTY  
13626 179TH AVE. SE  
MONROE, WA 98272  
PARCEL 00771800000300



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# PLANT SCHEDULE

## TREES

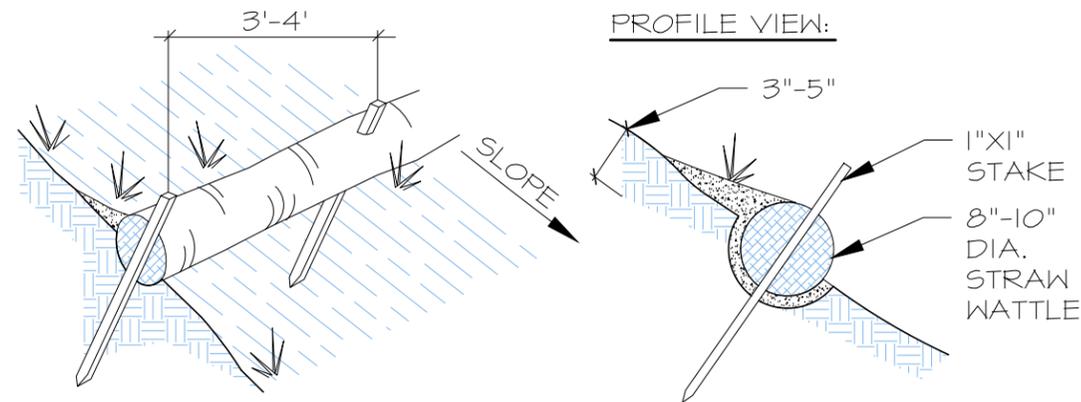
KEY	SCIENTIFIC NAME	COMMON NAME	DENSITY	QTY - AREA 1	QTY - AREA 2	SIZE (MIN.)	NOTES
AC	ACER CIRCINATUM	VINE MAPLE	9' O.C.	26		2 GAL.	MULTI-TRUNK (3 MIN.)
CC	CORYLUS CORNUTA	BEAKED HAZELNUT	9' O.C.		16	2 GAL.	MULTI-TRUNK (3 MIN.)
FL	FRAXINUS LATIFOLIA	OREGON ASH	9' O.C.	42		2 GAL.	SINGLE TRUNK
MF	MALUS FUSCA	WESTERN CRABAPPLE	9' O.C.	44		2 GAL.	SINGLE TRUNK
PS	PICEA SITCHENSIS	SITKA SPRUCE	9' O.C.	54	12	2 GAL.	FULL & BUSHY
PM	PSUEDOTSUGA MENZIESII	DOUGLAS FIR	9' O.C.		9	2 GAL.	
SS	SCOULER WILLOW	SALIX SCOULERIANA	9' O.C.	60		2 GAL.	MULTI-TRUNK (3 MIN.)
TP	THUJA PLICATA	WESTERN RED CEDAR	9' O.C.	39		2 GAL.	FULL & BUSHY

## SHRUBS

KEY	SCIENTIFIC NAME	COMMON NAME	DENSITY	QTY - AREA 1	QTY - AREA 2	SIZE (MIN.)	NOTES
C	CORNUS SERICEA	RED-OSIER DOGWOOD	6' O.C.	104		1 GAL.	MULTI-CANE (3 MIN.)
L	LONICERA INVOLUCRATA	BLACK TWIN-BERRY	6' O.C.	157		1 GAL.	FULL & BUSHY
M	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	6' O.C.		43	1 GAL.	
P	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	6' O.C.	51		1 GAL.	MULTI-CANE (3 MIN.)
N	ROSA NUTKANA	NOOTKA ROSE	6' O.C.		42	1 GAL.	
R	ROSA PISOCARPA	CLUSTERED ROSE	6' O.C.	123		1 GAL.	FULL & BUSHY
X	RUBUS SPECTABILIS	SALMONBERRY	6' O.C.	133		1 GAL.	FULL & BUSHY
S	SYMPHORICARPOS ALBUS	SNOWBERRY	6' O.C.	124	42	1 GAL.	FULL & BUSHY

## GROUND COVER

KEY	SCIENTIFIC NAME	COMMON NAME	DENSITY	QTY - AREA 1	QTY - AREA 2	SIZE (MIN.)	NOTES
	ATHYRIUM FILIX- FEMINA	LADY FERN	2' O.C.	600		1 GAL.	FULL & BUSHY
	CAREX OBNUPTA	SLOUGH SEDGE	2' O.C.	500		CLUMP DIVISIONS	FULL & BUSHY
	IRIS TENAX	OREGON IRIS	2' O.C.	600		1 GAL.	FULL & BUSHY



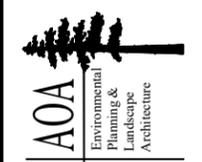
### NOTES:

- STRAW ROLLS MUST BE PLACED ALONG SLOPE CONTOURS.
- STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" X 5" DEEP DUG ON CONTOUR.
- RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

1 STRAW WATTLE INSTALLATION (TYP.)  
SCALE: NTS

PROJECT	6747
DRAWN	KV
SCALE	AS NOTED
DATE	6-10-25
REVISION	8/10
	7-22-25

FIGURE 8: PLANT SCHEDULE & DETAILS  
SAYAH PROPERTY  
13626 179TH AVE. SE  
MONROE, WA 98272  
PARCEL 00771800000300



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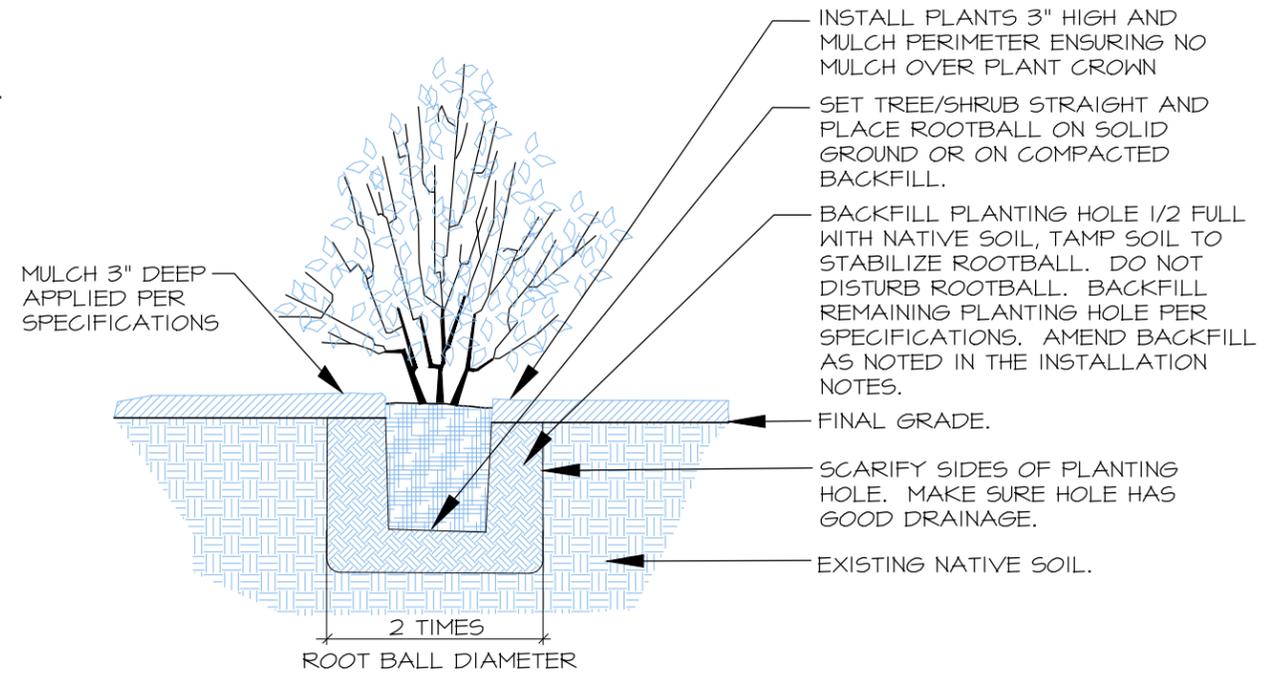
# SPECIFICATIONS

1. WATTLE INSTALLATION AND INVASIVE PLANT REMOVAL SHALL BE COMPLETED IN THE DRY SEASON, AFTER PRE-CONSTRUCTION MEETING WITH THE CITY OF MONROE, AOA AND THE LANDSCAPE CONTRACTOR.
2. UPON COMPLETION OF WEED REMOVAL, AOA TO REVIEW TO DETERMINE EXTENT AND DEPTH OF COMPOST PLACEMENT AND DECONSOLIDATION OF SUBSOILS PRIOR TO MULCHING WITH 3" OF HOG-FUEL IN ALL BARE AREAS.
3. ALL CLEARED STUMPS FROM FELLED TREES AS A PART OF THE DEVELOPMENT, SHALL BE PLACED AS LARGE WOODY DEBRIS IN THE ENHANCEMENT AREAS. AOA TO REVIEW TREES AND PLACEMENTS PRIOR TO WORK.
4. WEED REMOVAL SHALL INCLUDE FULL EXCAVATION, WITH SMALL MACHINE, OF ALL CLASS A-C WA STATE NOXIOUS WEEDS AND REMOVAL FROM SITE TO AN APPROVED DUMPING LOCATION, WITH THE EXCEPTION OF KNOTWEED THAT SHALL BE STEM INJECTED PER KING COUNTY STANDARDS IN LATE JULY PRIOR TO CLEARING.
5. IF AOA DEEMS SOIL AMENDMENTS ARE NECESSARY, IMPORTED TOPSOILS NW COMPOST SHALL BE PLACED PRIOR TO TILLING INTO THE TOP 9" OF SUBGRADE. IF COMPOST IS NOT NECESSARY, DECONSOLIDATE SUBGRADE TO A DEPTH OF 9" PRIOR TO MULCHING.
6. ALL BARE AREAS SHALL BE MULCHED TO A DEPTH OF 3" WITH HOG-FUEL AFTER INVASIVE REMOVAL, COMPOST PLACEMENT AND LARGE WOODY DEBRIS PLACEMENT.
7. ALL PLANTS SHOULD BE INSTALLED BETWEEN DECEMBER 1ST AND MARCH 15TH, UNLESS SUPPLEMENTAL IRRIGATION IS PROVIDED AT TIME OF PLANT INSTALLATION.
8. CONTAINER PLANTS SHALL BE PIT-PLANTED IN PLANTING PITS EXCAVATED 2X THE DIAMETER OF THE PLANT. PITS SHALL BE BACKFILLED WITH A 30/70 MIX OF STEERCO TO NATIVE SOIL.
9. FOR PLANTING, MULCH SHALL BE PULLED AWAY TO INSTALL PLANTS, THEN REPLACED AFTER PLANTING. PLANTS SHALL BE INSTALLED 3" HIGH AND SURFACED REMULCHED TO A DEPTH OF 3". DO NOT PLACE MULCH ON PLANT CROWNS.
10. ALL PLANTS SHALL BE NURSERY GROWN (IN W. WA OR OR.) FOR AT LEAST 1 YEAR FROM PURCHASE DATE, FREE FROM DISEASE OR PESTS, WELL-ROOTED, BUT NOT ROOT-BOUND AND TRUE TO SPECIES.
11. ALL PLANTINGS SHALL BE IRRIGATED WITH AN ABOVE-GROUND, TEMPORARY IRRIGATION SYSTEM, AT A RATE OF 1/2" OF FLOW 2-3 TIMES WEEKLY, FROM JUNE 15-OCT 15 THE FIRST YEAR AFTER PLANTING. THE SECOND YEAR, FLOW SHOULD BE REDUCED TO PROVIDE 1/2" OF FLOW 1-2 TIMES WEEKLY FROM JULY 1-SEPT 30. THE SYSTEM CAN BE REMOVED AT THE END OF THE 3-YEAR MONITORING PERIOD.
12. PLANT LAYOUT SHALL BE APPROVED BY AOA PRIOR TO INSTALLATION AND APPROVED UPON COMPLETION OF PLANTING.
13. UPON APPROVAL OF PLANTING INSTALLATION, THE CITY OF MONROE WILL BE NOTIFIED TO CONDUCT A SITE REVIEW FOR FINAL APPROVAL.
14. MAINTENANCE AND MONITORING SHALL BE IMPLEMENTED ON A REGULAR BASIS PER THE APPROVED RESTORATION REPORT.

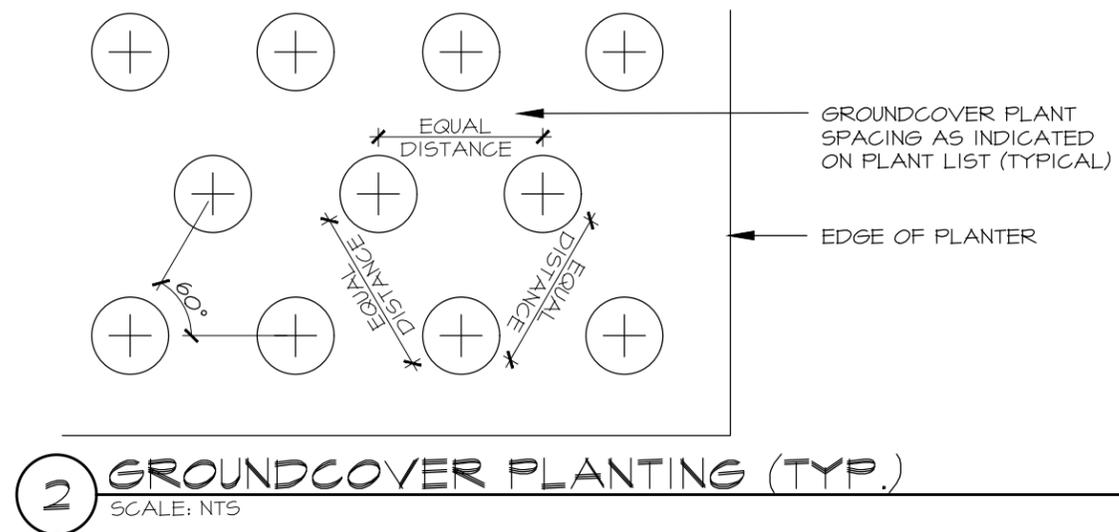
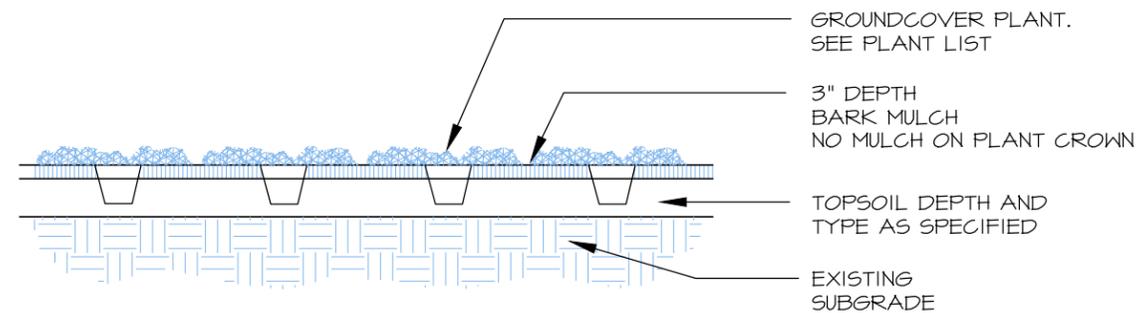
## ANNUAL MAINTENANCE SCHEDULE

MAINTENANCE ITEM	J	F	M	A	M	J	J	A	S	O	N	D
WEED CONTROL												
GENERAL MAINT.												
IRRIGATION - YEAR 1						8-12	8-12	8-12	8-12	8-12		
IRRIGATION - YEAR 2							4-8	4-8	4-8			
IRRIGATION - YEAR 3							4	4	4			

1-8 = NUMBER OF TIMES TASK SHALL BE PERFORMED PER MONTH.



**1 CONTAINER TREE/SHRUB PLANTING (TYP.)**  
SCALE: NTS



**2 GROUNDCOVER PLANTING (TYP.)**  
SCALE: NTS

PROJECT 6747  
DRAWN KV  
SCALE AS NOTED  
DATE 6-10-25  
REVISED 7-22-25

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FIGURE 9: PLANTING DETAILS  
SAYAH PROPERTY  
13626 179TH AVE. SE  
MONROE, WA 98272  
PARCEL 0077800000300



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# MAINTENANCE & MONITORING PLAN

## CONSTRUCTION MANAGEMENT

1. PRIOR TO COMMENCEMENT OF ANY WORK IN THE CRITICAL AREAS AND BUFFER, ALL EXISTING VEGETATION TO BE SAVED WILL BE CLEARLY MARKED. A PRE-INSTALLATION MEETING WILL BE HELD AT THE SITE TO REVIEW AND DISCUSS ALL ASPECTS OF THE PROJECT WITH THE OWNER AND AOA.
2. A BIOLOGIST WILL SUPERVISE PLAN IMPLEMENTATION DURING CONSTRUCTION TO ENSURE THAT OBJECTIVES AND SPECIFICATIONS OF THE MITIGATION PLAN ARE MET.
3. ANY NECESSARY SIGNIFICANT MODIFICATIONS TO THE DESIGN THAT OCCUR AS A RESULT OF UNFORESEEN SITE CONDITIONS WILL BE JOINTLY APPROVED BY THE CITY OF MONROE AND THE BIOLOGIST PRIOR TO THEIR IMPLEMENTATION.

## MONITORING METHODOLOGY

1. THE MONITORING PROGRAM WILL BE CONDUCTED YEARLY (IN THE END OF THE GROWING SEASON) FOR A PERIOD OF FIVE YEARS, WITH REPORTS SUBMITTED ANNUALLY (AT THE END OF THE GROWING SEASON) TO THE CITY OF MONROE.
2. VEGETATION ESTABLISHMENT WITHIN THE MITIGATION AREAS WILL BE MONITORED DURING EACH FIELD VISIT WITH A RECORD KEPT OF ALL PLANT SPECIES FOUND.
3. PHOTO-POINTS WILL BE ESTABLISHED FROM WHICH PHOTOGRAPHS WILL BE TAKEN THROUGHOUT THE MONITORING PERIOD. THESE PHOTOGRAPHS WILL DOCUMENT GENERAL APPEARANCE AND PROGRESS IN PLANT COMMUNITY ESTABLISHMENT IN THE MITIGATION AREAS. REVIEW OF THE PHOTOS OVER TIME WILL PROVIDE A SEMI-QUANTITATIVE REPRESENTATION OF SUCCESS OF THE MITIGATION PLAN.

## PERFORMANCE STANDARDS

SUCCESS OF PLANT ESTABLISHMENT WITHIN THE MITIGATION AREAS WILL BE EVALUATED ON THE BASIS OF PERCENT SURVIVAL OF PLANTED SPECIES.

1. NATIVE WOODY COVER WILL BE A MINIMUM OF; 10% AT CONSTRUCTION COMPLETION, 15% AT YEAR 1, 20% AT YEAR 2, 30% AT YEAR 3 AND 70% AT YEAR 5.
2. THERE WILL BE 100% SURVIVAL OF ALL WOODY PLANTED SPECIES THROUGHOUT THE MITIGATION PLANTED AREA AT THE END OF THE FIRST YEAR OF PLANTING. FOR YEARS 2-5, SUCCESS WILL BE BASED ON AN 85% SURVIVAL RATE OR SIMILAR NUMBER OF RECOLONIZED NATIVE WOODY PLANTS.
3. ALL CLASS A WA STATE NOXIOUS WEEDS AND OTHER INVASIVE PLANT SPECIES IDENTIFIED BY AOA, WILL BE MAINTAINED AT LEVELS BELOW 10% TOTAL COVER. REMOVAL OF THESE SPECIES WILL OCCUR IMMEDIATELY FOLLOWING THE MONITORING EVENT IN WHICH THEY SURPASS THE ABOVE MAXIMUM COVERAGE. REMOVAL WILL OCCUR BY HAND WHENEVER POSSIBLE.

## MAINTENANCE (M) & CONTINGENCY (C)

1. ESTABLISHED PERFORMANCE STANDARDS FOR THE PROJECT WILL BE COMPARED TO THE MONITORING RESULTS IN ORDER TO JUDGE THE SUCCESS OF THE MITIGATION PROJECT.
2. CONTINGENCY WILL INCLUDE MANY OF THE ITEMS LISTED BELOW AND WOULD BE IMPLEMENTED IF THESE PERFORMANCE STANDARDS ARE NOT MET.
3. MAINTENANCE AND REMEDIAL ACTION ON THE SITE WILL BE IMPLEMENTED IMMEDIATELY UPON COMPLETION OF THE MONITORING EVENT, (UNLESS OTHERWISE SPECIFICALLY INDICATED BELOW).

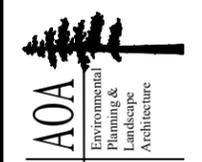
- REPLACE DEAD PLANTS WITH THE SAME SPECIES OR A SUBSTITUTE SPECIES THAT MEET THE GOAL OF THE MITIGATION PLAN (C)
- RE-PLANT AREAS AFTER REASON FOR FAILURE HAS BEEN IDENTIFIED (E.G., MOISTURE REGIME, POOR PLANT STOCK, DISEASE, SHADE/SUN CONDITIONS, WILDLIFE DAMAGE, ETC.) (C)
- IRRIGATE FOLLOWING PLANT INSTALLATION FOR FIVE YEARS (M)

## PERFORMANCE BOND

1. A PERFORMANCE BOND OR OTHER SURETY DEVICE WILL BE POSTED WITH THE CITY OF MONROE BY THE APPLICANT TO COVER THE COSTS OF MITIGATION PLAN IMPLEMENTATION (INCLUDING LABOR, MATERIALS, MAINTENANCE, AND MONITORING).
2. THE BOND OR ASSIGNMENT MAY BE RELEASED IN PARTIAL AMOUNTS IN PROPORTION TO WORK SUCCESSFULLY COMPLETED OVER THE FIVE YEAR MONITORING PERIOD, AS THE APPLICANT DEMONSTRATES PERFORMANCE AND CORRECTIVE MEASURES.

PROJECT	6747
DRAWN	KV
SCALE	AS NOTED
DATE	6-10-25
REVISED	7-22-25

FIGURE 10: SPECIFICATIONS  
SAYAH PROPERTY  
13626 179TH AVE. SE  
MONROE, WA 98272  
PARCEL 00771800000300



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# **ATTACHMENT A**

# **DATA SHEETS**

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Parcel 00777800000300 City/County: Monroe/ Sampling Date: 4-11-23  
 Applicant/Owner: Sayah State: WA Sampling Point: DP#1  
 Investigator(s): John Altmann, Dain Altmann, Jason Panzera Section, Township, Range: S6,T3N,R51E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): A Lat: 47.873666 Long: -121.992834 Datum: \_\_\_\_\_  
 Soil Map Unit Name: 32 NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Remarks: <u>Located 10' into wetland at A-9.</u>					

## VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:		
1. <u><i>Alnus rubra</i></u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>6</u>	(A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>6</u>	(B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u>	(A/B)
4. _____	_____	_____	_____			
50% = <u>25</u> , 20% = <u>10</u>	<u>50</u>	= Total Cover				
<u>Sapling/Shrub Stratum (Plot size: 10)</u>				<b>Prevalence Index worksheet:</b>		
1. <u><i>Lonicera involucrata</i></u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	Total % Cover of:                      Multiply by:		
2. <u><i>Rubus armeniacus</i></u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	OBL species	_____	x1 = _____
3. <u><i>Rubus spectabilis</i></u>	<u>20</u>	<u>no</u>	<u>FAC</u>	FACW species	_____	x2 = _____
4. _____	_____	_____	_____	FAC species	_____	x3 = _____
5. _____	_____	_____	_____	FACU species	_____	x4 = _____
50% = <u>60</u> , 20% = <u>24</u>	<u>120</u>	= Total Cover		UPL species	_____	x5 = _____
<u>Herb Stratum (Plot size: 10)</u>				Column Totals:	_____ (A)	_____ (B)
1. <u><i>Phalaris arundinacea</i></u>	<u>30</u>	<u>yes</u>	<u>FACW</u>	Prevalence Index = B/A = _____		
2. <u><i>Athyrium filix-femina</i></u>	<u>20</u>	<u>yes</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b>		
3. <u><i>Lysichiton americanus</i></u>	<u>20</u>	<u>yes</u>	<u>OBL</u>	<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation		
4. <u><i>Tolmiea menziesii</i></u>	<u>10</u>	<u>no</u>	<u>FAC</u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%		
5. _____	_____	_____	_____	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>		
6. _____	_____	_____	_____	<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)		
7. _____	_____	_____	_____	<input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>		
8. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
10. _____	_____	_____	_____			
11. _____	_____	_____	_____			
50% = <u>40</u> , 20% = <u>16</u>	<u>80</u>	= Total Cover				
<u>Woody Vine Stratum (Plot size: _____)</u>				<b>Hydrophytic Vegetation Present?</b>		
1. _____	_____	_____	_____	Yes	<input checked="" type="checkbox"/>	No <input type="checkbox"/>
2. _____	_____	_____	_____			
50% = _____, 20% = _____	_____	= Total Cover				
% Bare Ground in Herb Stratum _____						
Remarks:						

**SOIL**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-15	10YR2/1	100	_____	_____	_____	_____	sandy clay	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

<sup>1</sup>Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.    <sup>2</sup>Location: PL=Pore Lining, M=Matrix

<p><b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b></p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input checked="" type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
--	--

<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soils Present?</b>                      Yes    <input checked="" type="checkbox"/>    No    <input type="checkbox"/></p>
---	---

Remarks:

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Water-Stained Leaves (B9)	
<input checked="" type="checkbox"/> High Water Table (A2)	<b>(except MLRA 1, 2, 4A, and 4B)</b>	<b>(MLRA 1, 2, 4A, and 4B)</b>	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stresses Plants (D1) <b>(LRR A)</b>	<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes    <input type="checkbox"/>    No    <input checked="" type="checkbox"/>    Depth (inches): _____</p> <p>Water Table Present?    Yes    <input checked="" type="checkbox"/>    No    <input type="checkbox"/>    Depth (inches): <u>2</u></p> <p>Saturation Present? (includes capillary fringe)    Yes    <input checked="" type="checkbox"/>    No    <input type="checkbox"/>    Depth (inches): <u>0</u></p>	<p><b>Wetland Hydrology Present?</b>                      Yes    <input checked="" type="checkbox"/>    No    <input type="checkbox"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Parcel 00777800000300 City/County: Monroe/ Sampling Date: 4-11-23  
 Applicant/Owner: Sayah State: WA Sampling Point: DP#2  
 Investigator(s): John Altmann, Dain Altmann, Jason Panzera Section, Township, Range: S6,T3N,R51E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): A Lat: 47.873666 Long: -121.992834 Datum: \_\_\_\_\_  
 Soil Map Unit Name: 32 NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Located 10' into upland at A-9.			

**VEGETATION – Use scientific names of plants**

Tree Stratum (Plot size: 10)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:		
1. <u><i>Thuja plicata</i></u>	<u>100</u>	<u>yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)	
4. _____	_____	_____	_____			
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover				
Sapling/Shrub Stratum (Plot size: 10)				Prevalence Index worksheet:		
1. <u><i>Rubus armeniacus</i></u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	Total % Cover of:	Multiply by:	
2. <u><i>Sambucus racemosa</i></u>	<u>5</u>	<u>no</u>	<u>FACU</u>	OBL species _____	x1 = _____	
3. _____	_____	_____	_____	FACW species _____	x2 = _____	
4. _____	_____	_____	_____	FAC species _____	x3 = _____	
5. _____	_____	_____	_____	FACU species _____	x4 = _____	
50% = <u>22.5</u> , 20% = <u>9</u>	<u>45</u>	= Total Cover		UPL species _____	x5 = _____	
Herb Stratum (Plot size: _____)				Column Totals: _____ (A)	_____ (B)	
1. _____	_____	_____	_____	Prevalence Index = B/A = _____		
2. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
3. _____	_____	_____	_____			
4. _____	_____	_____	_____			
5. _____	_____	_____	_____			
6. _____	_____	_____	_____			
7. _____	_____	_____	_____			
8. _____	_____	_____	_____			
9. _____	_____	_____	_____			
10. _____	_____	_____	_____			
11. _____	_____	_____	_____			
50% = _____, 20% = _____	_____	= Total Cover				
Woody Vine Stratum (Plot size: _____)				<b>Hydrophytic Vegetation Present?</b>		
1. _____	_____	_____	_____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____			
50% = _____, 20% = _____	_____	= Total Cover				
% Bare Ground in Herb Stratum _____						
Remarks:						

**SOIL**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-15	10YR2/2	100	_____	_____	_____	_____	gravel loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
<sup>1</sup> Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
<b>Restrictive Layer (if present):</b>								
Type: _____								
Depth (inches): _____					<b>Hydric Soils Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Remarks:      No redoximorphic features								

**HYDROLOGY**

Wetland Hydrology Indicators:					
Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Geomorphic Position (D2)
			<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Shallow Aquitard (D3)
			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> FAC-Neutral Test (D5)
			<input type="checkbox"/> Stunted or Stresses Plants (D1) <b>(LRR A)</b>	<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>	<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
			<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<b>Field Observations:</b>					
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____			
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____			
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:      dry					

**ATTACHMENT B**  
**WETLAND RATING**

# RATING SUMMARY – Western Washington

Name of wetland (or ID #): Parcel 00777800000300 Date of site visit: 4/11/2023

Rated by Altmann Trained by Ecology?  Yes  No Date of training 03/08 & 03/15

HGM Class used for rating Slope Wetland has multiple HGM classes?  Yes  No

**NOTE: Form is not complete with out the figures requested** (*figures can be combined*).  
Source of base aerial photo/map PDS Map Portal

**OVERALL WETLAND CATEGORY**     III     (based on functions  or special characteristics )

**1. Category of wetland based on FUNCTIONS**

- Category I - Total score = 23 - 27
- Category II - Total score = 20 - 22
- X     Category III - Total score = 16 - 19
- Category IV - Total score = 9 - 15

**Score for each function based on three ratings**  
(*order of ratings is not important*)

9 = H, H, H  
8 = H, H, M  
7 = H, H, L  
7 = H, M, M  
6 = H, M, L  
6 = M, M, M  
5 = H, L, L  
5 = M, M, L  
4 = M, L, L  
3 = L, L, L

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>List appropriate rating (H, M, L)</i>				
Site Potential	M	L	M	
Landscape Potential	M	M	M	
Value	H	H	M	<b>Total</b>
<b>Score Based on Ratings</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>19</b>

**2. Category based on SPECIAL CHARACTERISTICS of wetland**

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	<b>X</b>

## Maps and Figures required to answer questions correctly for Western Washington

### Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

### Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

### Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

### Slope Wetlands

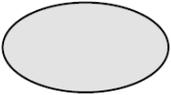
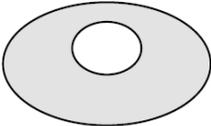
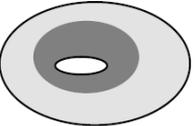
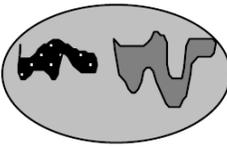
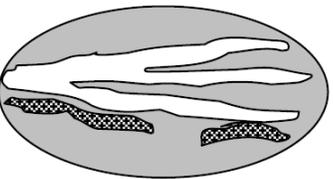
Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	E
Hydroperiods	H 1.2	F
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	E
Plant cover of <b>dense, rigid</b> trees, shrubs, and herbaceous plants ( <i>can be added to another figure</i> )	S 4.1	E
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	S 2.1, S 5.1	B
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	A
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	C
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	D









These questions apply to wetlands of all HGM classes.		
<b>HABITAT FUNCTIONS</b> - Indicators that site functions to provide important habitat		
H 1.0. Does the site have the potential to provide habitat?		
<p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Aquatic bed <span style="float: right;">4 structures or more: points = 4</span></li> <li><input type="checkbox"/> Emergent <span style="float: right;">3 structures: points = 2</span></li> <li><input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have &gt; 30% cover) <span style="float: right;">2 structures: points = 1</span></li> <li><input checked="" type="checkbox"/> Forested (areas where trees have &gt; 30% cover) <span style="float: right;">1 structure: points = 0</span></li> </ul> <p><i>If the unit has a Forested class, check if:</i></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon</li> </ul>	2	
<p>H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Permanently flooded or inundated <span style="float: right;">4 or more types present: points = 3</span></li> <li><input type="checkbox"/> Seasonally flooded or inundated <span style="float: right;">3 types present: points = 2</span></li> <li><input type="checkbox"/> Occasionally flooded or inundated <span style="float: right;">2 types present: points = 1</span></li> <li><input checked="" type="checkbox"/> Saturated only <span style="float: right;">1 types present: points = 0</span></li> <li><input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland</li> <li><input checked="" type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland</li> <li><input type="checkbox"/> <b>Lake Fringe wetland</b> <span style="float: right;"><b>2 points</b></span></li> <li><input type="checkbox"/> <b>Freshwater tidal wetland</b> <span style="float: right;"><b>2 points</b></span></li> </ul>	1	
<p>H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p>If you counted:    &gt; 19 species <span style="float: right;">points = 2</span>                                    5 - 19 species <span style="float: right;">points = 1</span>                                    &lt; 5 species <span style="float: right;">points = 0</span></p>	1	
<p>H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-bottom: 20px;"> <div style="text-align: center;">  <p><b>None</b> = 0 points</p> </div> <div style="text-align: center;">  <p><b>Low</b> = 1 point</p> </div> <div style="text-align: center;">  <p><b>Moderate</b> = 2 points</p> </div> <div style="text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="width: 20%;"> <p>All three diagrams in this row are <b>HIGH</b> = 3 points</p> </div> <div style="display: flex; justify-content: space-around;">    </div> </div>	1	

Wetland name or number     A    

<p><b>H 1.5. Special habitat features:</b>                  Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (&gt; 4 in diameter and 6 ft long)</li> <li><input checked="" type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</li> <li><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</li> <li><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt; 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</li> <li><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</li> <li><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)</li> </ul>		2
<p><b>Total for H 1</b> <span style="float: right;">Add the points in the boxes above</span></p>		7

**Rating of Site Potential** If Score is:  15 - 18 = H  7 - 14 = M  0 - 6 = L *Record the rating on the first page*

<p><b>H 2.0. Does the landscape have the potential to support the habitat function of the site?</b></p>		
<p><b>H 2.1 Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</b>                  Calculate:                  15 % undisturbed habitat + ( <u>    9.8    </u> % moderate &amp; low intensity land uses / 2 ) = 19.9%</p> <p>If total accessible habitat is:</p> <ul style="list-style-type: none"> <li>&gt; 1/3 (33.3%) of 1 km Polygon <span style="float: right;">points = 3</span></li> <li>20 - 33% of 1 km Polygon <span style="float: right;">points = 2</span></li> <li>10 - 19% of 1 km Polygon <span style="float: right;">points = 1</span></li> <li>&lt; 10 % of 1 km Polygon <span style="float: right;">points = 0</span></li> </ul>		2
<p><b>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</b>                  Calculate:                  26.5 % undisturbed habitat + ( <u>    19.7    </u> % moderate &amp; low intensity land uses / 2 ) = 36.35%</p> <p>Undisturbed habitat &gt; 50% of Polygon <span style="float: right;">points = 3</span></p> <p>Undisturbed habitat 10 - 50% and in 1-3 patches <span style="float: right;">points = 2</span></p> <p>Undisturbed habitat 10 - 50% and &gt; 3 patches <span style="float: right;">points = 1</span></p> <p>Undisturbed habitat &lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>		2
<p><b>H 2.3 Land use intensity in 1 km Polygon: If</b></p> <ul style="list-style-type: none"> <li>&gt; 50% of 1 km Polygon is high intensity land use <span style="float: right;">points = (-2)</span></li> <li>≤ 50% of 1km Polygon is high intensity <span style="float: right;">points = 0</span></li> </ul>		-2
<p><b>Total for H 2</b> <span style="float: right;">Add the points in the boxes above</span></p>		2

**Rating of Landscape Potential** If Score is:  4 - 6 = H  1 - 3 = M  < 1 = L *Record the rating on the first page*

<p><b>H 3.0. Is the habitat provided by the site valuable to society?</b></p>		
<p><b>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose <i>only the highest score that applies to the wetland being rated</i>.</b></p> <p>Site meets ANY of the following criteria: <span style="float: right;">points = 2</span></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</li> <li><input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> <li><input type="checkbox"/> It is mapped as a location for an individual WDFW priority species</li> <li><input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</li> <li><input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan</li> </ul> <p>Site has 1 or 2 priority habitats (listed on next page) with in 100m <span style="float: right;">points = 1</span></p> <p>Site does not meet any of the criteria above <span style="float: right;">points = 0</span></p>		1

**Rating of Value** If Score is:  2 = H  1 = M  0 = L *Record the rating on the first page*

## WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

<http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here:

<http://wdfw.wa.gov/conservation/phs/list/>

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE:** *This question is independent of the land use between the wetland unit and the priority habitat.*

- Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

**Note:** All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

## CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

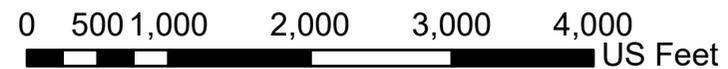
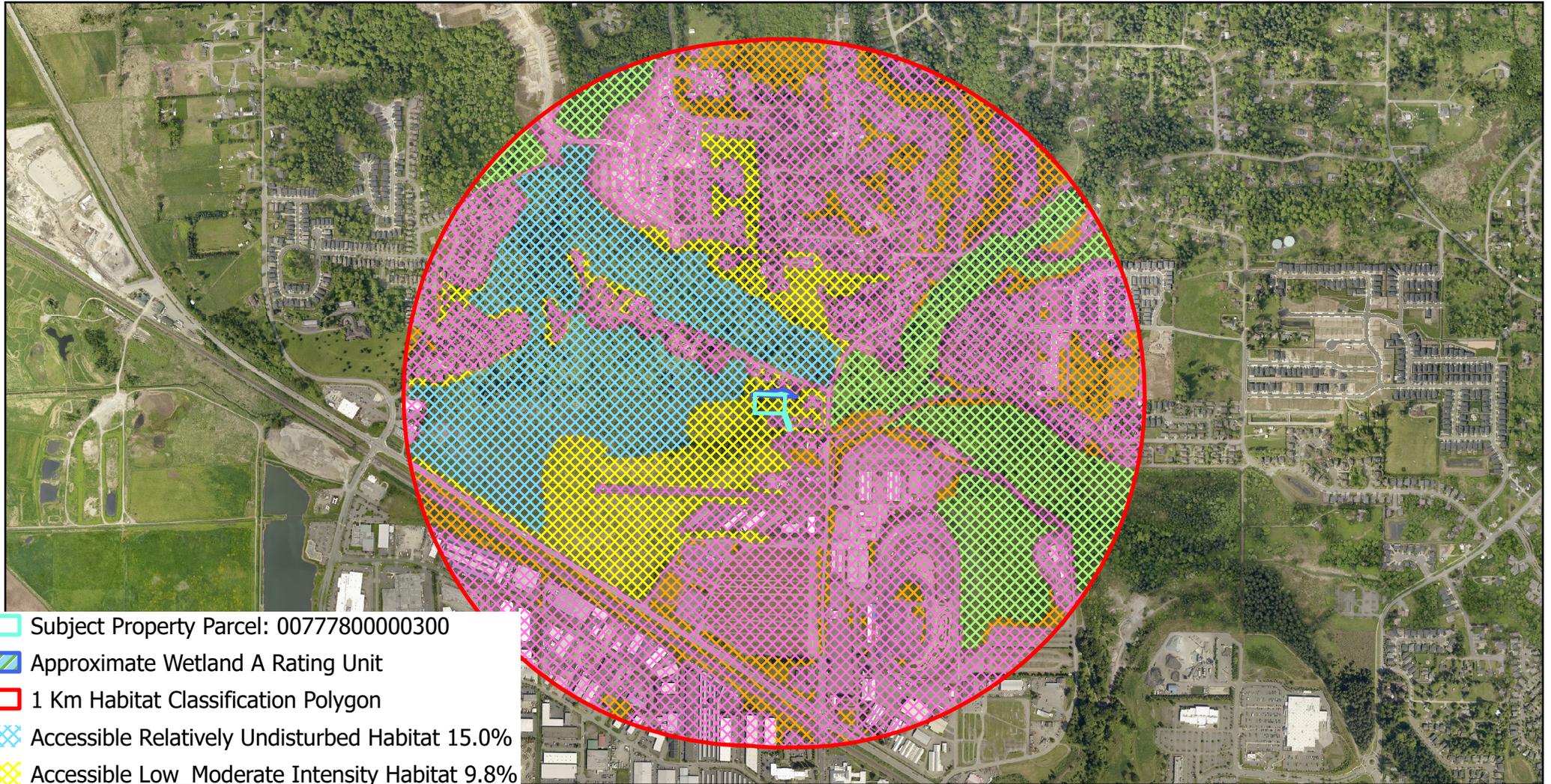
Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
<p><b>SC 1.0. Estuarine Wetlands</b>                      Does the wetland meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,  <input type="checkbox"/> Vegetated, and  <input type="checkbox"/> With a salinity greater than 0.5 ppt</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to <b>SC 1.1</b>      <input checked="" type="checkbox"/> No = <b>Not an estuarine wetland</b></p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category I</b>      <input type="checkbox"/> No - Go to <b>SC 1.2</b></p>	
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25)</p> <p><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</p> <p><input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category I</b>      <input type="checkbox"/> No = <b>Category II</b></p>	
<p><b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b></p> <p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to <b>SC 2.2</b>      <input checked="" type="checkbox"/> No - Go to <b>SC 2.3</b></p> <p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category I</b>      <input checked="" type="checkbox"/> No = <b>Not WHCV</b></p> <p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?  <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a></p> <p style="text-align: right;"><input type="checkbox"/> Yes - <b>Contact WNHP/WDNR and to SC 2.4</b>      <input type="checkbox"/> No = <b>Not WHCV</b></p> <p>SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category I</b>      <input type="checkbox"/> No = <b>Not WHCV</b></p>	
<p><b>SC 3.0. Bogs</b>                      Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i></p> <p>SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to <b>SC 3.3</b>      <input checked="" type="checkbox"/> No - Go to <b>SC 3.2</b></p> <p>SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to <b>SC 3.3</b>      <input checked="" type="checkbox"/> No = <b>Is not a bog</b></p> <p>SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Is a Category I bog</b>      <input type="checkbox"/> No - Go to <b>SC 3.4</b></p> <p><b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.</p> <p>SC 3.4. Is an area with peats or mucks forested (&gt; 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Is a Category I bog</b>      <input checked="" type="checkbox"/> No = <b>Is not a bog</b></p>	

<p><b>SC 4.0. Forested Wetlands</b></p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <b><i>If you answer YES you will still need to rate the wetland based on its functions.</i></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Old-growth forests</b> (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.</li> <li><input type="checkbox"/> <b>Mature forests</b> (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).</li> </ul> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category I</b>    <input checked="" type="checkbox"/> No = <b>Not a forested wetland for this section</b></p>	
<p><b>SC 5.0. Wetlands in Coastal Lagoons</b></p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks</li> <li><input type="checkbox"/> The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>)</li> </ul> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to <b>SC 5.1</b>    <input checked="" type="checkbox"/> No = <b>Not a wetland in a coastal lagoon</b></p> <p><b>SC 5.1.</b> Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).</li> <li><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</li> <li><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft<sup>2</sup>)</li> </ul> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category I</b>    <input type="checkbox"/> No = <b>Category II</b></p>	
<p><b>SC 6.0. Interdunal Wetlands</b></p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <b><i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></b></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103</li> <li><input type="checkbox"/> Grayland-Westport: Lands west of SR 105</li> <li><input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> </ul> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to <b>SC 6.1</b>    <input checked="" type="checkbox"/> No = <b>Not an interdunal wetland for rating</b></p> <p><b>SC 6.1.</b> Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category I</b>    <input type="checkbox"/> No - Go to <b>SC 6.2</b></p> <p><b>SC 6.2.</b> Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category II</b>    <input type="checkbox"/> No - Go to <b>SC 6.3</b></p> <p><b>SC 6.3.</b> Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = <b>Category III</b>    <input type="checkbox"/> No = <b>Category IV</b></p>	
<p><b>Category of wetland based on Special Characteristics</b></p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	

City of Monroe  
Parcel 00777800000300

# Figure A

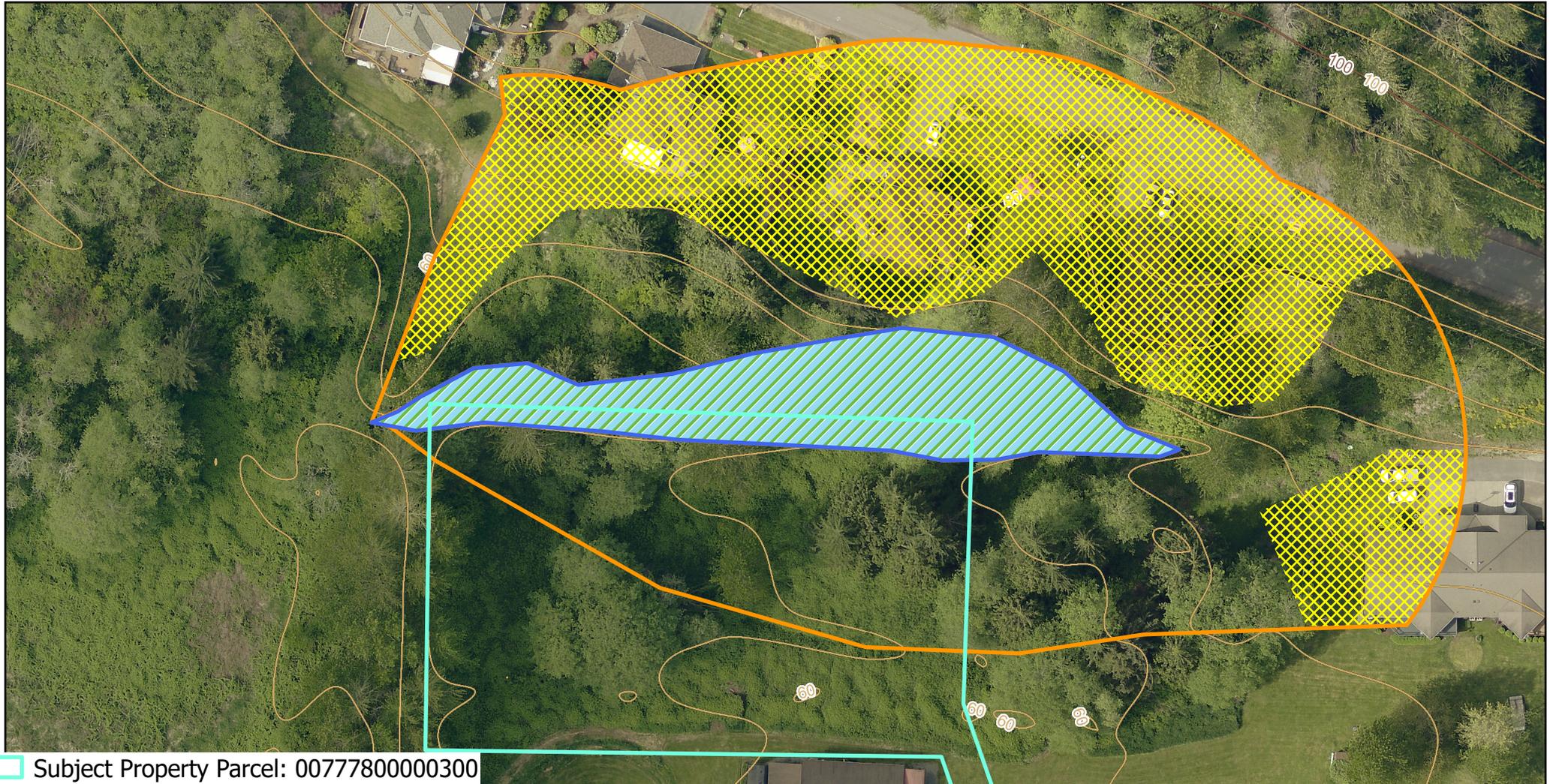
AOA - 6747



City of Monroe  
Parcel 00777800000300

# Figure B

AOA - 6747

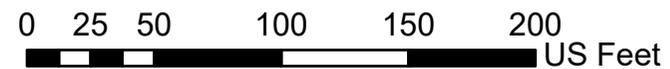


 Subject Property Parcel: 00777800000300

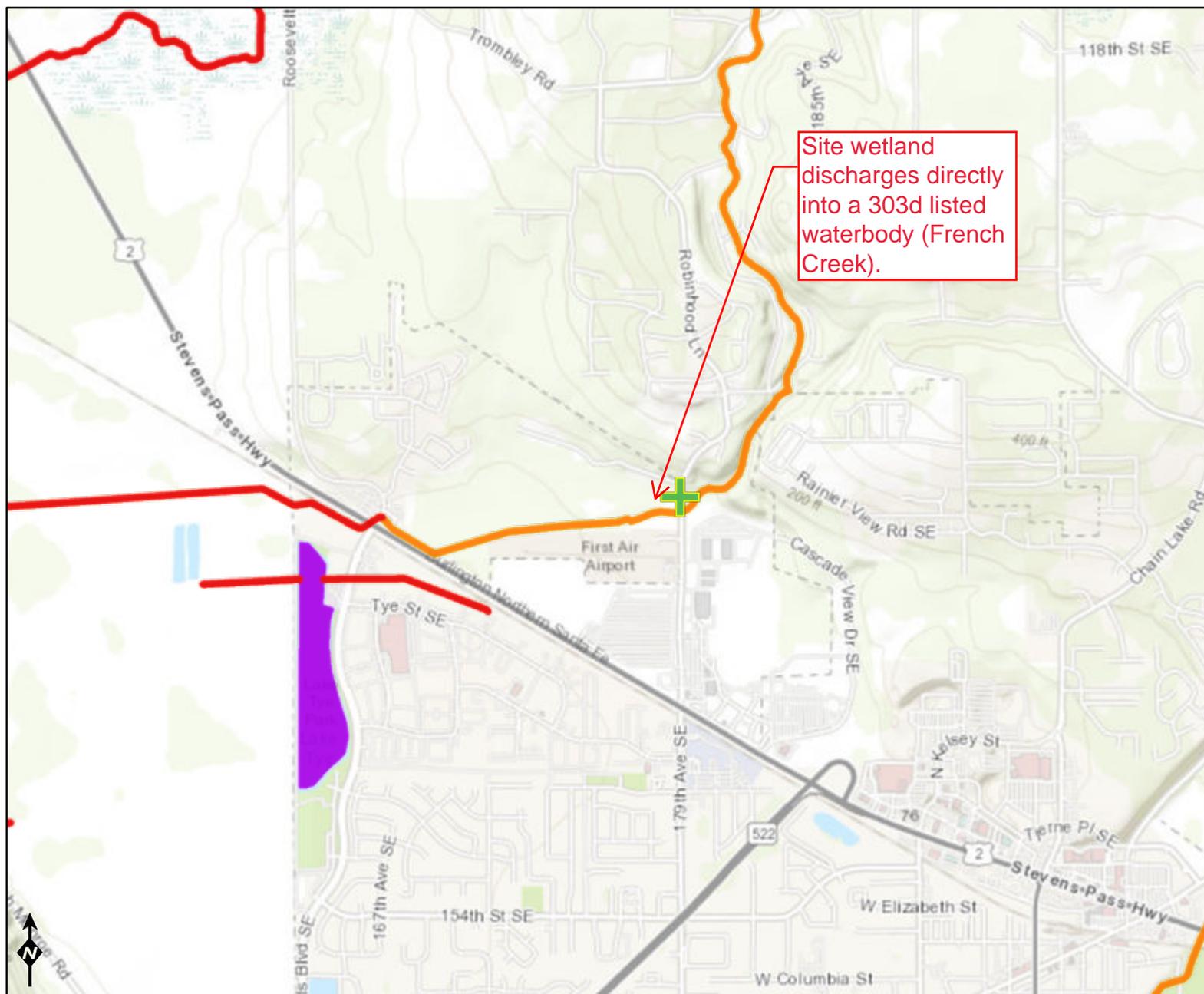
 Approximate Wetland A Rating Unit

 150' Pollution Assessment Polygon

 Pollution Generating Surfaces 47.8%



# Figure C



### Assessed Water/Sediment

#### Water

-  Category 5 - 303d
-  Category 4C
-  Category 4B
-  Category 4A
-  Category 2
-  Category 1

#### Sediment

-  Category 5 - 303d
-  Category 4C
-  Category 4B
-  Category 4A
-  Category 2
-  Category 1



# Snohomish County

Ecology homepage > Water & Shorelines > Water improvement > Total Maximum Daily Load process > Directory of projects > Snohomish County

## Water quality improvement projects

Select the waterbody or pollutant name to find more information about the specific project.

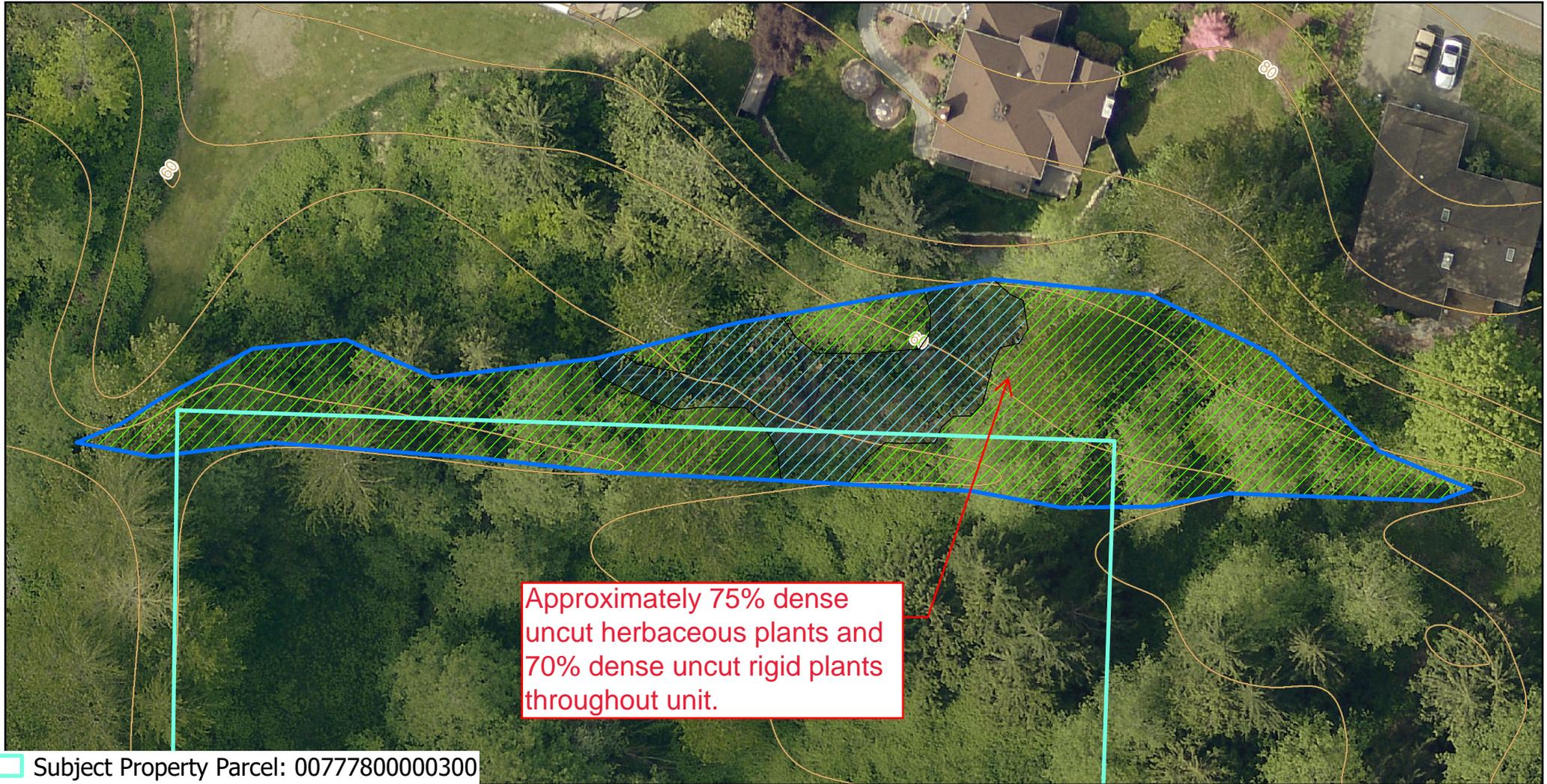
Site is located within an EPA approved WQ Improvement Project area.

Waterbody Name(s)	Pollutant(s)	Status	
<a href="#">Ballinger Lake</a>	Total Phosphorus	EPA approved	<a href="#">Tricia Shoblom</a> 425-649-7288
<a href="#">Bear-Evans Creek Basin</a>	Fecal Coliform	EPA approved	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)
<a href="#">Bear-Evans Creek Basin</a>	Dissolved Oxygen Temperature	EPA approved	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)
<a href="#">French and Pilchuck Creeks</a>	Dissolved Oxygen Temperature	Under development	<a href="#">Heather Khan</a> 425-649-7003
<a href="#">Lake Ketchum</a>	Total Phosphorus	Under development as a straight to implementation project	<a href="#">Tricia Shoblom</a> 425-649-7288
<a href="#">Lake Loma</a>	Total Phosphorus	Under development as a straight to implementation project	<a href="#">Tricia Shoblom</a> 425-649-7288
<a href="#">Little Bear Creek</a>	Fecal Coliform	EPA approved	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)
<a href="#">North Creek</a>	Fecal Coliform	EPA approved and Has an implementation plan	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)
Old Stillaguamish Channel	Dissolved Oxygen	On hold	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)
<a href="#">Snohomish River</a>	Dioxin	EPA approved	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)
Snohomish River: <a href="#">Estuary</a>	Dissolved Oxygen	EPA approved	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)
Snohomish River: <a href="#">Tributaries</a>	Fecal Coliform	EPA approved and Has an implementation plan	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)
<a href="#">Snoqualmie River</a>	Ammonia-N Fecal Coliform pH Dissolved Oxygen	EPA approved	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)
<a href="#">Snoqualmie River</a>	Temperature	EPA approved and Has an implementation plan	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)
Stillaguamish River	<a href="#">Arsenic</a> <a href="#">Dissolved Oxygen</a> <a href="#">Fecal Coliform</a> <a href="#">Mercury</a> <a href="#">pH</a> <a href="#">Temperature</a>	EPA approved and Has an implementation plan	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)
<a href="#">Swamp Creek</a>	Fecal Coliform	EPA approved and Has an implementation plan	<a href="#">Danielle DeVoe</a> 425-516-3012(cell)

City of Monroe  
Parcel 00777800000300

# Figure E

AOA - 6747

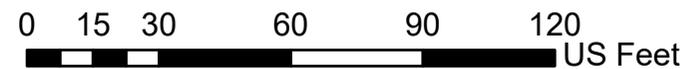


 Subject Property Parcel: 00777800000300

 Approximate Wetland A Rating Unit

 PFO

 PSS



City of Monroe  
Parcel 00777800000300

# Figure F

AOA - 6747



 Subject Property Parcel: 00777800000300

 Approximate Wetland A Rating Unit

 Seasonally Flowing Stream

 Saturated Only

