

Washington
Department of
**FISH and
WILDLIFE**

NAD 1983 StatePlane WA
South FIPS 4602 Ft US

Source: Pacific County, Wilson Engineering,
McMillen Jacobs Associates
Imagery: DigitalGlobe August 2017

Legend

Project
Implementation

Phase 1

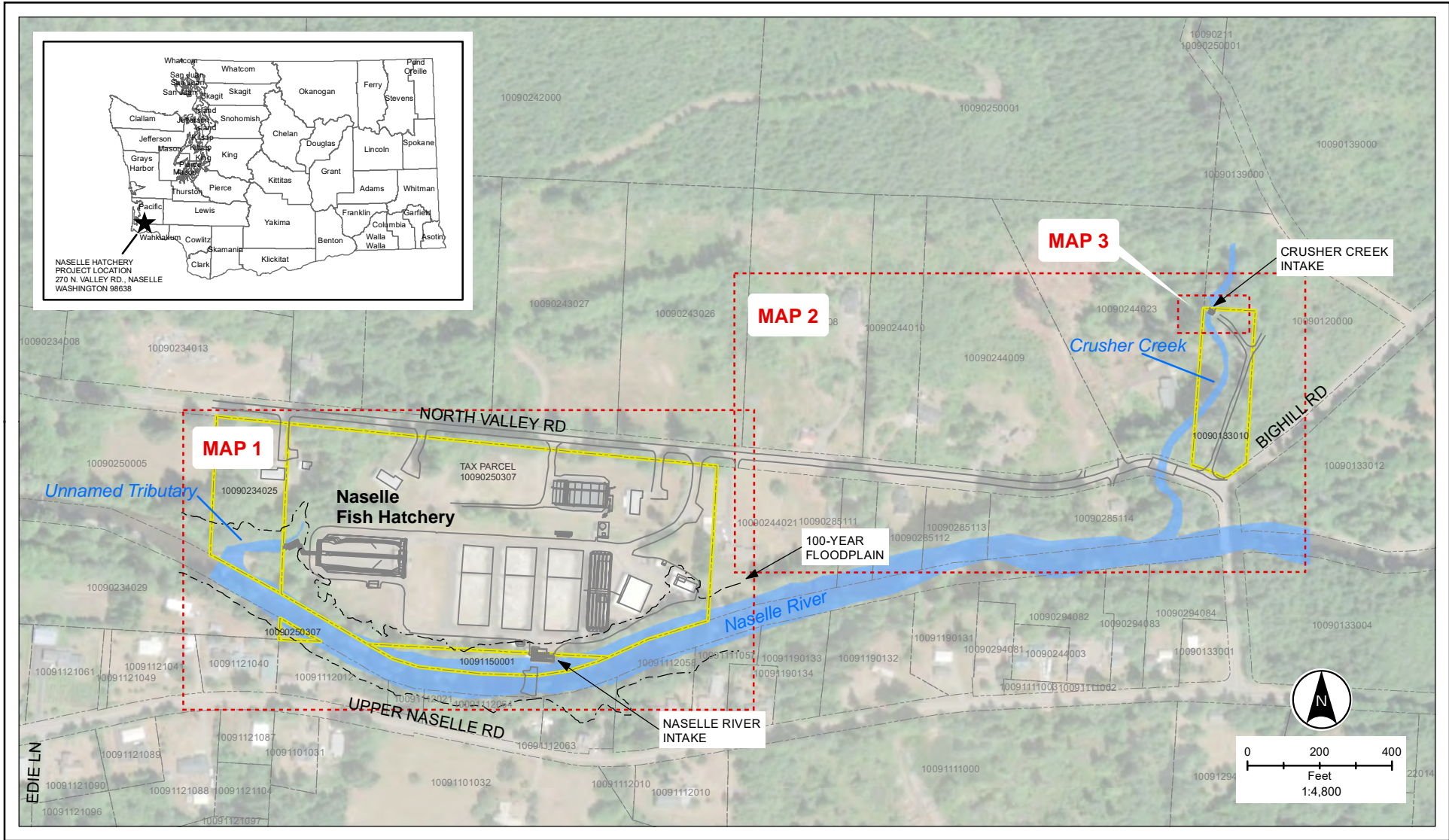
Future

State of Washington
Parcel

January 2019

Project Phase Map

Naselle Fish Hatchery Renovation Project



Washington
Department of
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Imagery: DigitalGlobe August 2017

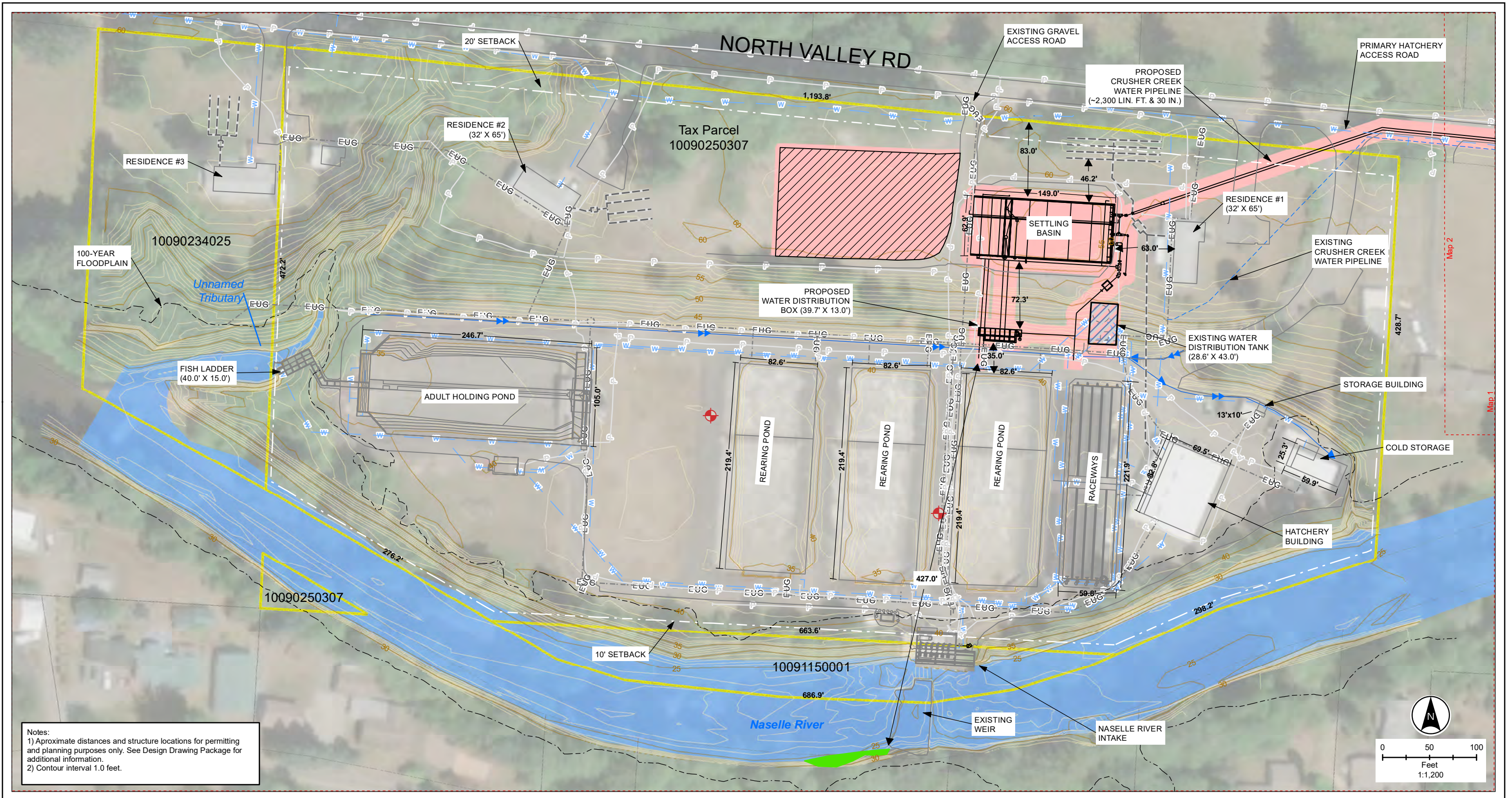
Legend

- Figure Tile Extent
- State of Washington Parcel

January 2019

Site Plan Index
Map

Naselle Fish Hatchery Renovation Project



Notes:
 1) Approximate distances and structure locations for permitting and planning purposes only. See Design Drawing Package for additional information.
 2) Contour interval 1.0 feet.



NAD 1983 StatePlane WA
 South FIPS 4602 FT US
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 McMillen Jacobs Associates
 Imagery: DigitalGlobe August 2017

Legend

- Delineated Wetland
- Proposed Staging Area
- Proposed Disturbance Area
- Demo Area
- State of Washington Parcel
- Proposed Disturbance Area
- Existing Utilities
- Power
- Underground Electrical
- Water
- Septic System
- Drainage Ditch
- Resource Protection Monitoring Well

January 2019

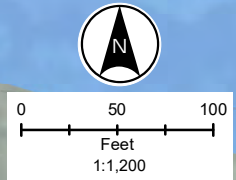
Site Plan Map 1

Naselle Fish Hatchery Renovation Project

Document Path: C:\Users\jones\Box\GIS\Project_Based\Naselle\Reports\Permit_Support\PC Site Plan Detail Pages.mxd



Notes:
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 2) Contour interval 1.0 feet.



NAD 1983 StatePlane WA
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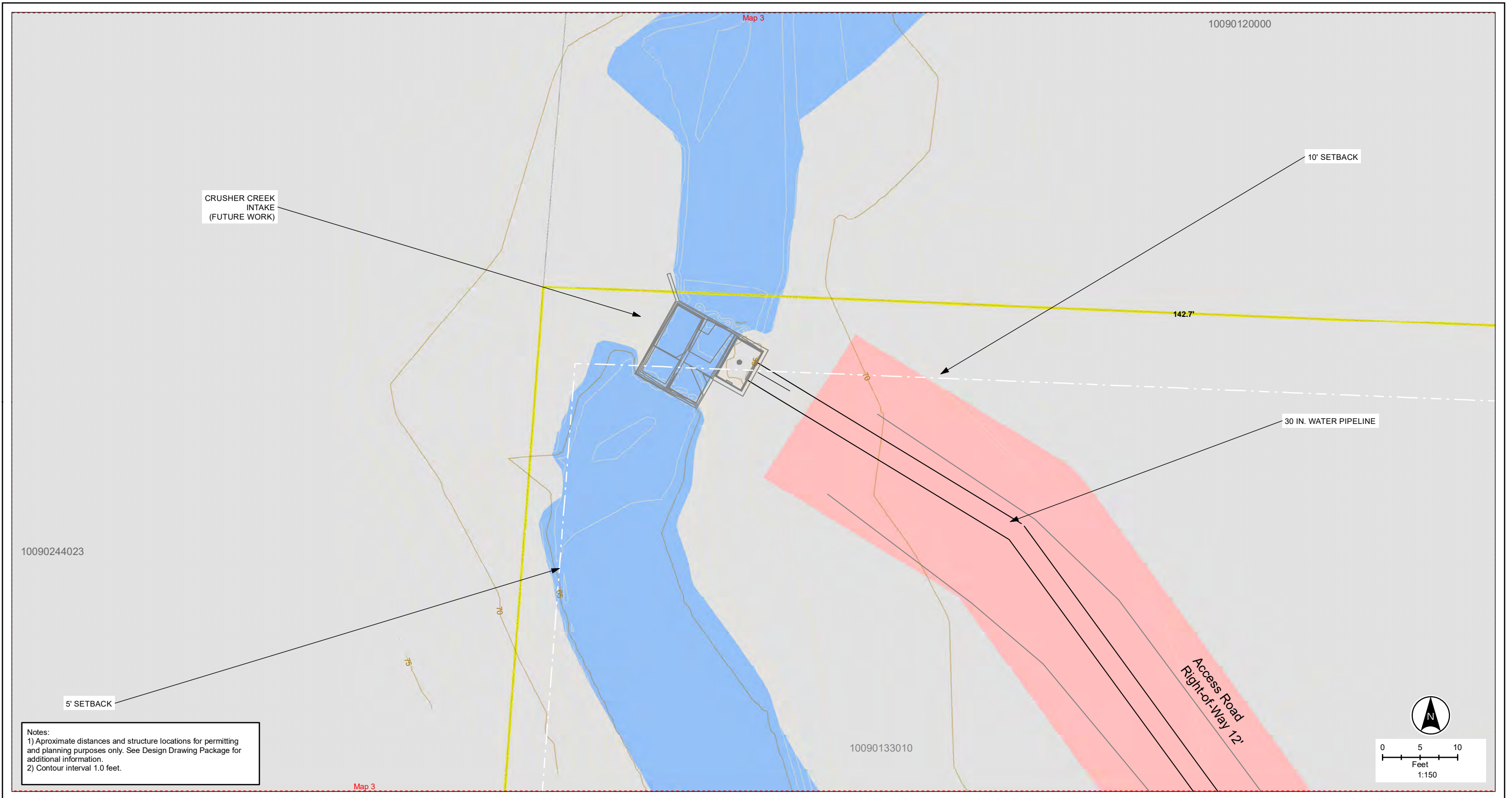
Legend

- State of Washington Parcel
- Proposed Disturbance Area
- Existing Utilities**
- P — Power
- W — Water

January 2019

Site Plan Map 2

Naselle Fish Hatchery Renovation Project



NAD 1983 StatePlane WA
 South FIPS 4602 FT US
 Source: Pacific County, Wilson Engineering,
 McMillen Jacobs Associates
 Imagery: DigitalGlobe August 2017

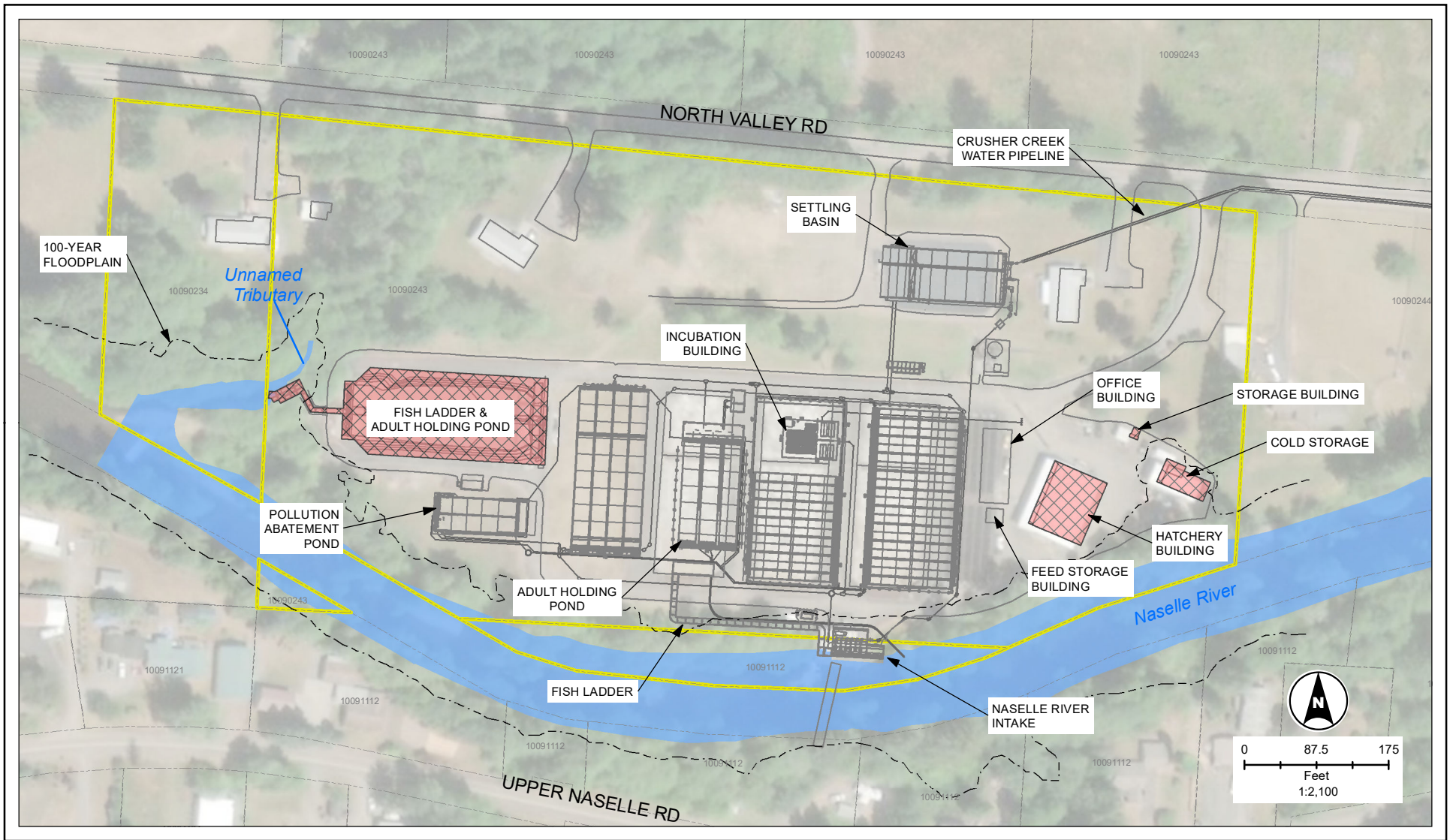
Legend

- State of Washington Parcel
- Proposed Disturbance Area

January 2019

Site Plan Map 3

Naselle Fish Hatchery Renovation Project





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Department of
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WILDLIFE**

NAD 1983 StatePlane WA
South FIPS 4602 Ft US

Source: Pacific County, Wilson Engineering,
McMillen Jacobs Associates
Imagery: DigitalGlobe August 2017

Legend

- Structures Identified for
-  Demolition in Future Phases
-  State of Washington Parcel

January 2019

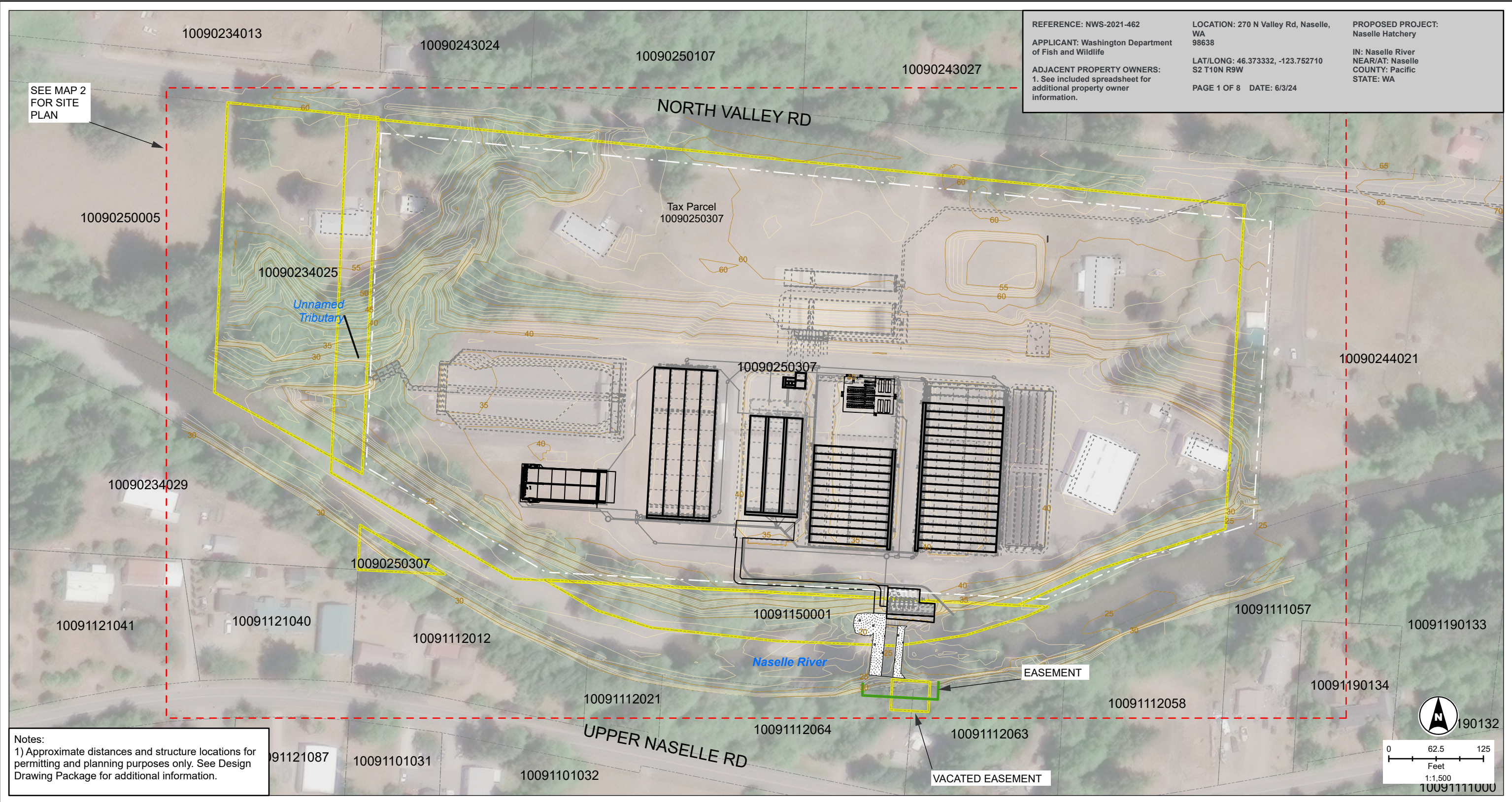
Site Plan Map

Naselle Fish Hatchery Renovation Project

REFERENCE: NWS-2021-462
 APPLICANT: Washington Department of Fish and Wildlife
 ADJACENT PROPERTY OWNERS: 1. See included spreadsheet for additional property owner information.

LOCATION: 270 N Valley Rd, Naselle, WA 98638
 LAT/LONG: 46.373332, -123.752710
 S2 T10N R9W
 PAGE 1 OF 8 DATE: 6/3/24

PROPOSED PROJECT: Naselle Hatchery
 IN: Naselle River
 NEAR/AT: Naselle
 COUNTY: Pacific
 STATE: WA



Notes:
 1) Approximate distances and structure locations for permitting and planning purposes only. See Design Drawing Package for additional information.



- Legend**
- Proposed Structures
 - Existing Facilities
 - Rip Rap
 - State of Washington Parcel
 - Tax Lots

AUGUST 2024

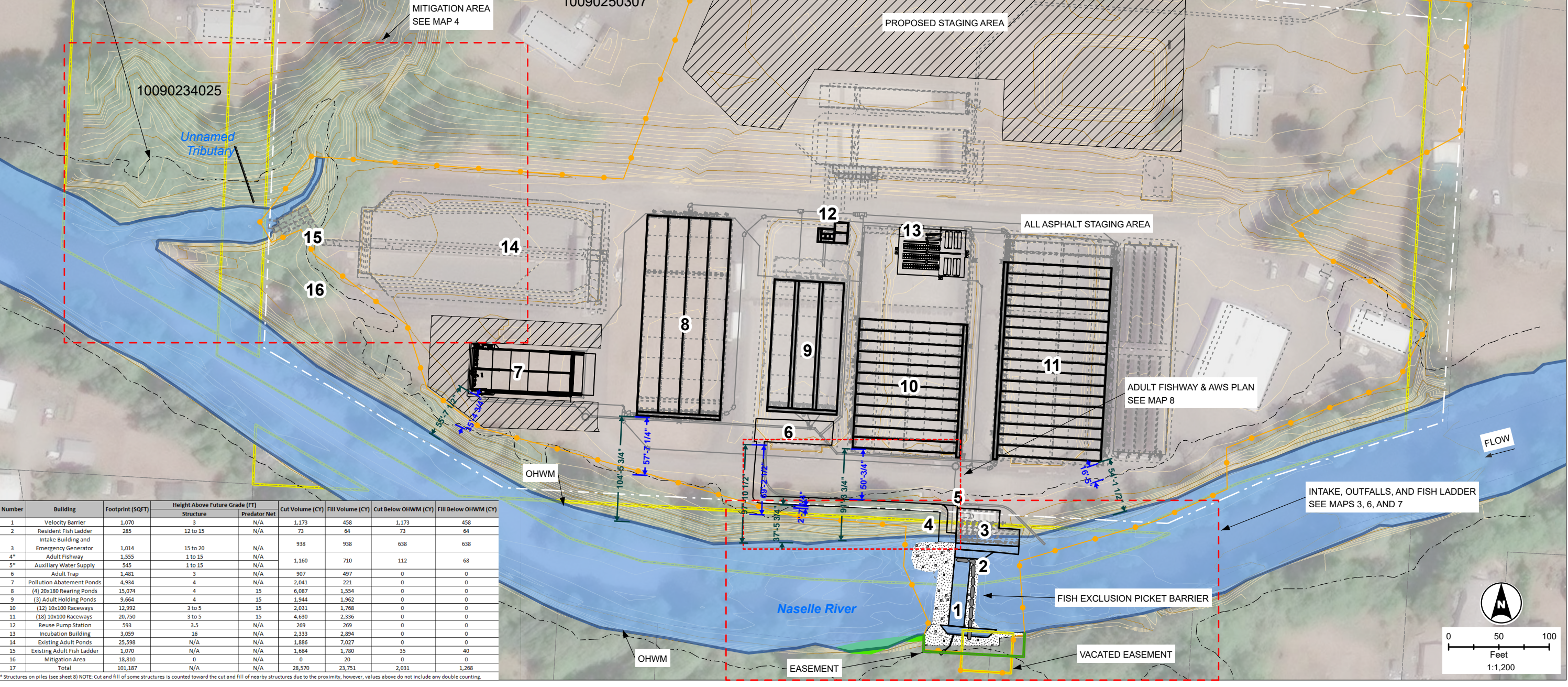
Map 1 - Parcel Site Plan

Naselle Fish Hatchery Renovation Project

Document Path: C:\Box\MCMGIS\Project_Based\Naselle\Reports\Permit_Support\Updated Maps 2024-05-23\Map2_SiteMap\Map2_SiteMap.aprx

REFERENCE: NWS-2021-462
 APPLICANT: Washington Department of Fish and Wildlife
 LOCATION: 270 N Valley Rd, Naselle, WA 98638
 PROPOSED PROJECT: Naselle Hatchery
 PAGE 2 OF 8 DATE: 6/3/24

100-YEAR FLOODPLAIN "UNCHANGED BY THIS PROJECT"



Number	Building	Footprint (SQFT)	Height Above Future Grade (FT)		Cut Volume (CY)	Fill Volume (CY)	Cut Below OHWM (CY)	Fill Below OHWM (CY)
			Structure	Predator Net				
1	Velocity Barrier	1,070	3	N/A	1,173	458	1,173	458
2	Resident Fish Ladder	285	12 to 15	N/A	73	64	73	64
3	Intake Building and Emergency Generator	1,014	15 to 20	N/A	938	938	638	638
4*	Adult Fishway	1,555	11 to 15	N/A				
5*	Auxiliary Water Supply	545	11 to 15	N/A	1,160	710	112	68
6	Adult Trap	1,481	3	N/A	907	497	0	0
7	Pollution Abatement Ponds	4,934	4	N/A	2,041	221	0	0
8	(4) 20x180 Rearing Ponds	15,074	4	15	6,087	1,554	0	0
9	(3) Adult Holding Ponds	9,664	4	15	1,944	1,962	0	0
10	(12) 10x100 Raceways	12,992	3 to 5	15	2,031	1,768	0	0
11	(18) 10x100 Raceways	20,750	3 to 5	15	4,630	2,336	0	0
12	Reuse Pump Station	593	3.5	N/A	269	269	0	0
13	Incubation Building	3,059	16	N/A	2,333	2,894	0	0
14	Existing Adult Ponds	25,598	N/A	N/A	1,886	7,027	0	0
15	Existing Adult Fish Ladder	1,070	N/A	N/A	1,684	1,780	35	40
16	Mitigation Area	18,810	0	N/A	0	20	0	0
17	Total	101,187	N/A	N/A	28,570	23,751	2,031	1,268

* Structures on piles (see sheet 8) NOTE: Cut and fill of some structures is counted toward the cut and fill of nearby structures due to the proximity, however, values above do not include any double counting.



Legend

- Delineated Wetland
- Proposed Staging Area
- 100-YR Floodplain
- Distance from OHWM
- Existing Facilities
- State of Washington Parcel
- Existing Weir
- 100-YR Floodplain
- Construction Limits/Fencing
- Proposed Structures
- Rip Rap
- Distance from 100-Year Floodplain

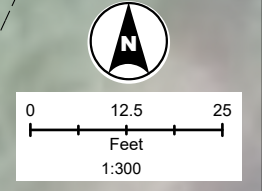
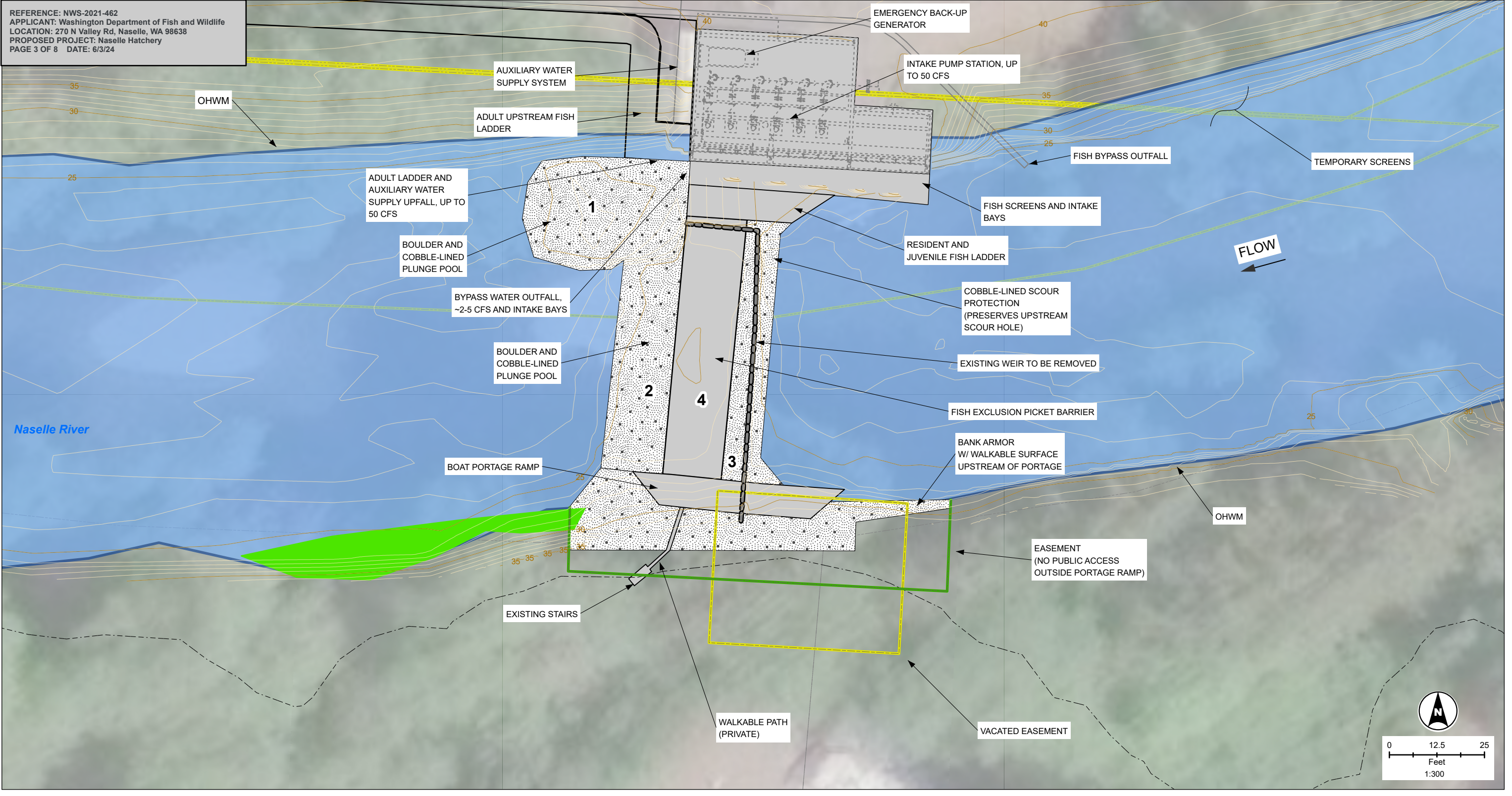
Notes:
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AUGUST 2024

Map 2 - Site Map

Naselle Fish Hatchery Renovation Project

REFERENCE: NWS-2021-462
 APPLICANT: Washington Department of Fish and Wildlife
 LOCATION: 270 N Valley Rd, Naselle, WA 98638
 PROPOSED PROJECT: Naselle Hatchery
 PAGE 3 OF 8 DATE: 6/3/24



- Legend**
- Ordinary High Water Mark (OHWM)
 - Delineated Wetland
 - State of Washington Parcel
 - Existing Structures
 - Existing Weir

Notes:
 1) Approximate distances and structure locations for permitting and planning purposes only. See Design Drawing Package for additional information.

AUGUST 2024

Map 3 - Intake, Outfalls, and Fish Ladders

Naselle Fish Hatchery Renovation Project

REFERENCE: NWS-2021-462
 APPLICANT: Washington Department of Fish and Wildlife
 LOCATION: 270 N Valley Rd, Naselle, WA 98638
 PROPOSED PROJECT: Naselle Hatchery
 PAGE 4 OF 8 DATE: 6/3/24

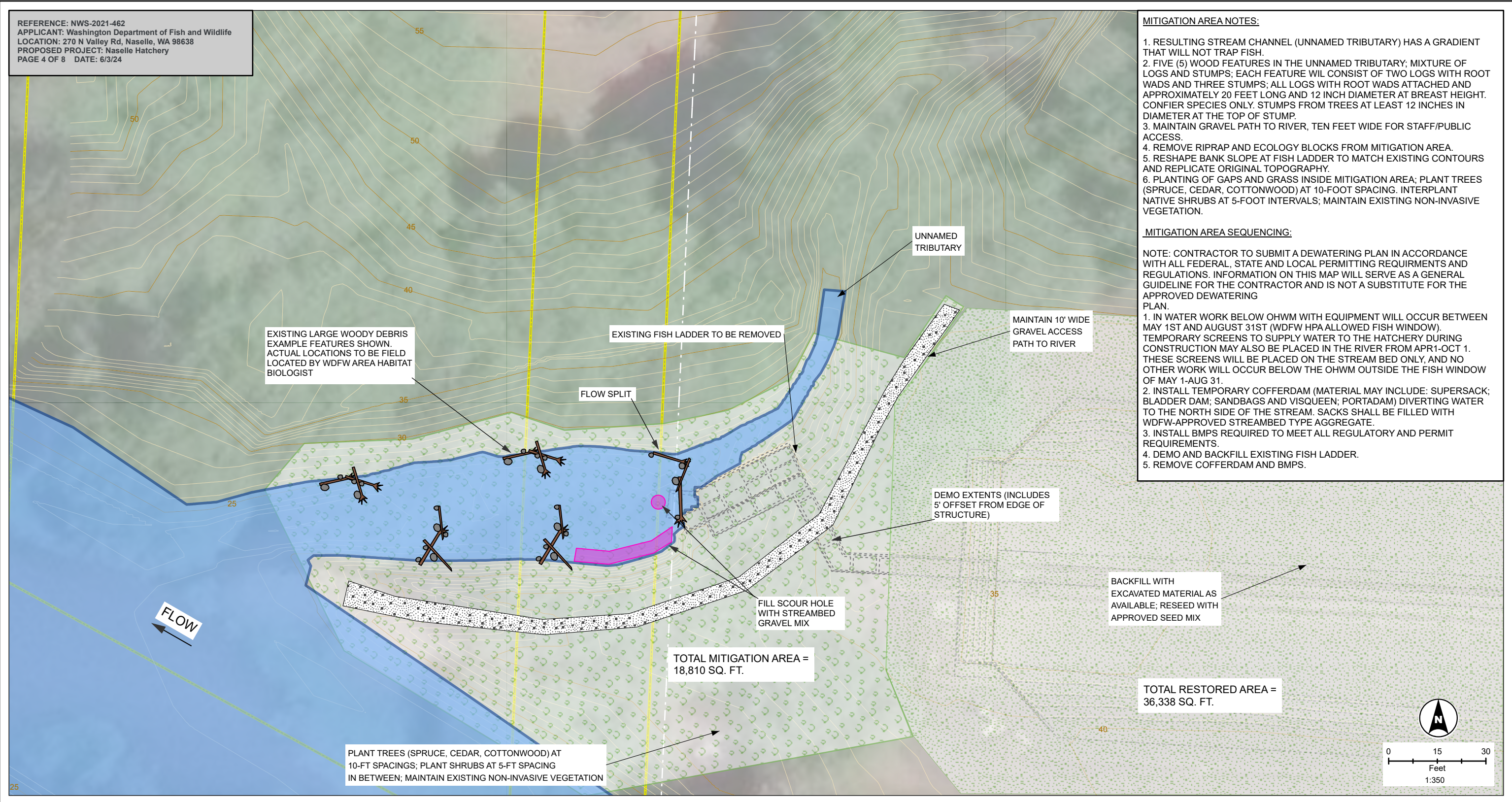
MITIGATION AREA NOTES:

1. RESULTING STREAM CHANNEL (UNNAMED TRIBUTARY) HAS A GRADIENT THAT WILL NOT TRAP FISH.
2. FIVE (5) WOOD FEATURES IN THE UNNAMED TRIBUTARY; MIXTURE OF LOGS AND STUMPS; EACH FEATURE WILL CONSIST OF TWO LOGS WITH ROOT WADS AND THREE STUMPS; ALL LOGS WITH ROOT WADS ATTACHED AND APPROXIMATELY 20 FEET LONG AND 12 INCH DIAMETER AT BREAST HEIGHT. CONIFER SPECIES ONLY. STUMPS FROM TREES AT LEAST 12 INCHES IN DIAMETER AT THE TOP OF STUMP.
3. MAINTAIN GRAVEL PATH TO RIVER, TEN FEET WIDE FOR STAFF/PUBLIC ACCESS.
4. REMOVE RIPRAP AND ECOLOGY BLOCKS FROM MITIGATION AREA.
5. RESHAPE BANK SLOPE AT FISH LADDER TO MATCH EXISTING CONTOURS AND REPLICATE ORIGINAL TOPOGRAPHY.
6. PLANTING OF GAPS AND GRASS INSIDE MITIGATION AREA; PLANT TREES (SPRUCE, CEDAR, COTTONWOOD) AT 10-FOOT SPACING. INTERPLANT NATIVE SHRUBS AT 5-FOOT INTERVALS; MAINTAIN EXISTING NON-INVASIVE VEGETATION.

MITIGATION AREA SEQUENCING:

NOTE: CONTRACTOR TO SUBMIT A DEWATERING PLAN IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL PERMITTING REQUIREMENTS AND REGULATIONS. INFORMATION ON THIS MAP WILL SERVE AS A GENERAL GUIDELINE FOR THE CONTRACTOR AND IS NOT A SUBSTITUTE FOR THE APPROVED DEWATERING PLAN.

1. IN WATER WORK BELOW OHWM WITH EQUIPMENT WILL OCCUR BETWEEN MAY 1ST AND AUGUST 31ST (WDFW HPA ALLOWED FISH WINDOW). TEMPORARY SCREENS TO SUPPLY WATER TO THE HATCHERY DURING CONSTRUCTION MAY ALSO BE PLACED IN THE RIVER FROM APR1-OCT 1. THESE SCREENS WILL BE PLACED ON THE STREAM BED ONLY, AND NO OTHER WORK WILL OCCUR BELOW THE OHWM OUTSIDE THE FISH WINDOW OF MAY 1-AUG 31.
2. INSTALL TEMPORARY COFFERDAM (MATERIAL MAY INCLUDE: SUPERSACK; BLADDER DAM; SANDBAGS AND VISQUEEN; PORTADAM) DIVERTING WATER TO THE NORTH SIDE OF THE STREAM. SACKS SHALL BE FILLED WITH WDFW-APPROVED STREAMBED TYPE AGGREGATE.
3. INSTALL BMPS REQUIRED TO MEET ALL REGULATORY AND PERMIT REQUIREMENTS.
4. DEMO AND BACKFILL EXISTING FISH LADDER.
5. REMOVE COFFERDAM AND BMPS.



EXISTING LARGE WOODY DEBRIS
 EXAMPLE FEATURES SHOWN.
 ACTUAL LOCATIONS TO BE FIELD
 LOCATED BY WDFW AREA HABITAT
 BIOLOGIST

EXISTING FISH LADDER TO BE REMOVED

FLOW SPLIT

UNNAMED
 TRIBUTARY

MAINTAIN 10' WIDE
 GRAVEL ACCESS
 PATH TO RIVER

DEMO EXTENTS (INCLUDES
 5' OFFSET FROM EDGE OF
 STRUCTURE)

FILL SCOUR HOLE
 WITH STREAMBED
 GRAVEL MIX

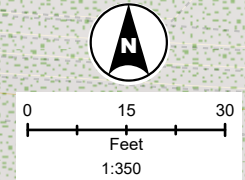
TOTAL MITIGATION AREA =
 18,810 SQ. FT.

BACKFILL WITH
 EXCAVATED MATERIAL AS
 AVAILABLE; RESEED WITH
 APPROVED SEED MIX

TOTAL RESTORED AREA =
 36,338 SQ. FT.

PLANT TREES (SPRUCE, CEDAR, COTTONWOOD) AT
 10-FT SPACINGS; PLANT SHRUBS AT 5-FT SPACING
 IN BETWEEN; MAINTAIN EXISTING NON-INVASIVE VEGETATION

FLOW



Legend

- Reseed Area
- Gravel Access Path
- Existing Structures
- Plant Trees
- Scour Hole
- State of Washington Parcel
- Ordinary High Water Mark (OHWM)

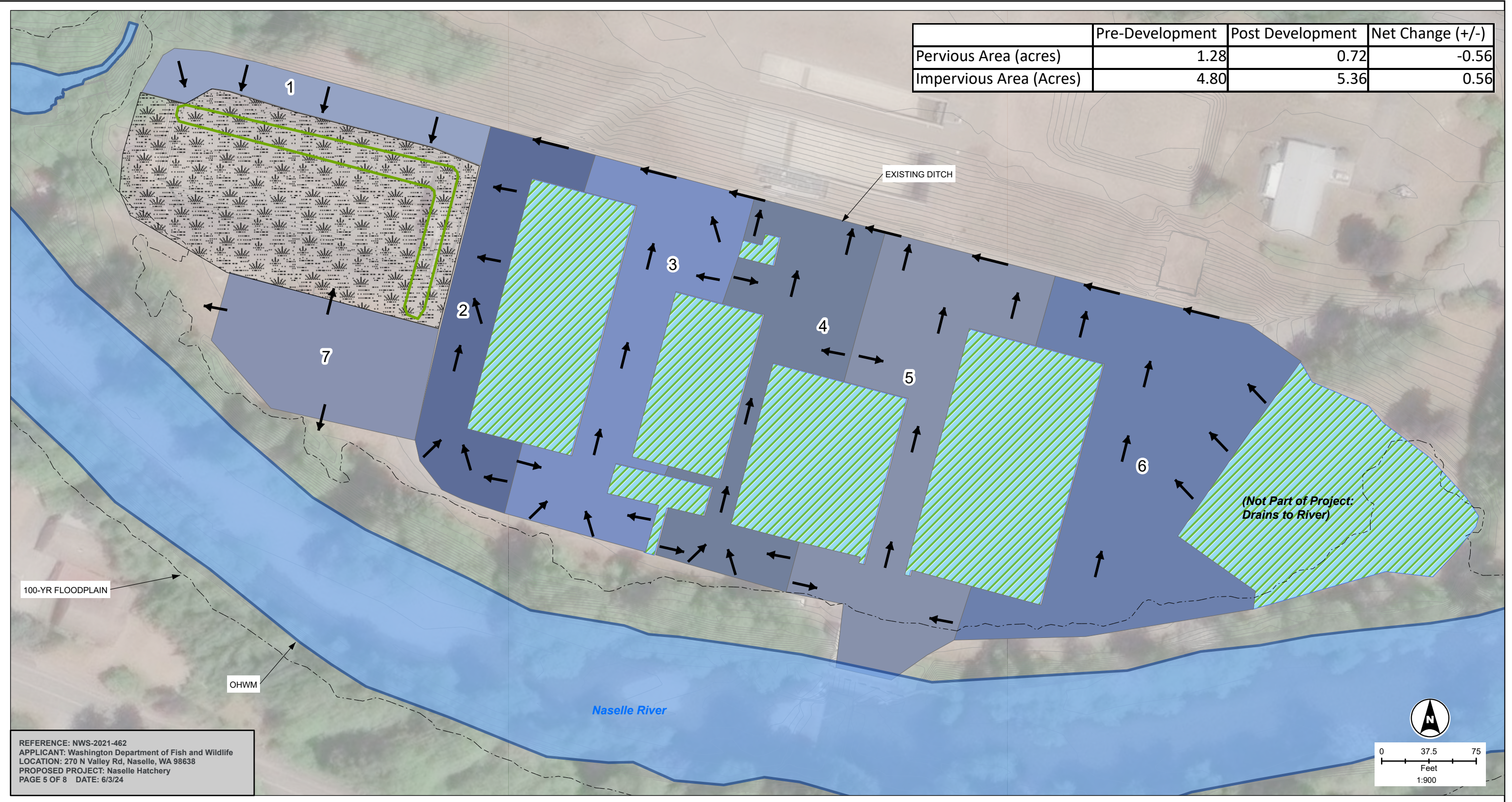
AUGUST 2024

Map 4 - Mitigation Area

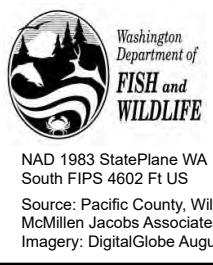
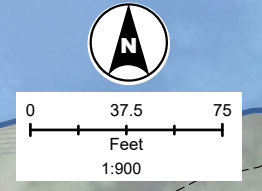
Notes:
 1) Approximate distances and structure locations for permitting and planning purposes only. See Design Drawing Package for additional information.

Naselle Fish Hatchery Renovation Project

	Pre-Development	Post Development	Net Change (+/-)
Pervious Area (acres)	1.28	0.72	-0.56
Impervious Area (Acres)	4.80	5.36	0.56



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 LOCATION: 270 N Valley Rd, Naselle, WA 98638
 PROPOSED PROJECT: Naselle Hatchery
 PAGE 5 OF 8 DATE: 6/3/24



- Legend**
- Ordinary High Water Mark (OHWM)
 - 100-Yr Floodplain
 - Contributing Pervious (0.72 acres)
 - Impervious Non-Contributing (2.27 acres)
 - Filter Strip (340 ft)
 - Downward Slope Direction

- Drainage Basins**
- 1 (0.18 acres)
 - 2 (0.33 acres)
 - 3 (0.48 acres)
 - 4 (0.38 acres)
 - 5 (0.54 acres)
 - 6 (0.83 acres)
 - 7 (0.35 acres)

AUGUST 2024
Map 5 - Stormwater Site Plan

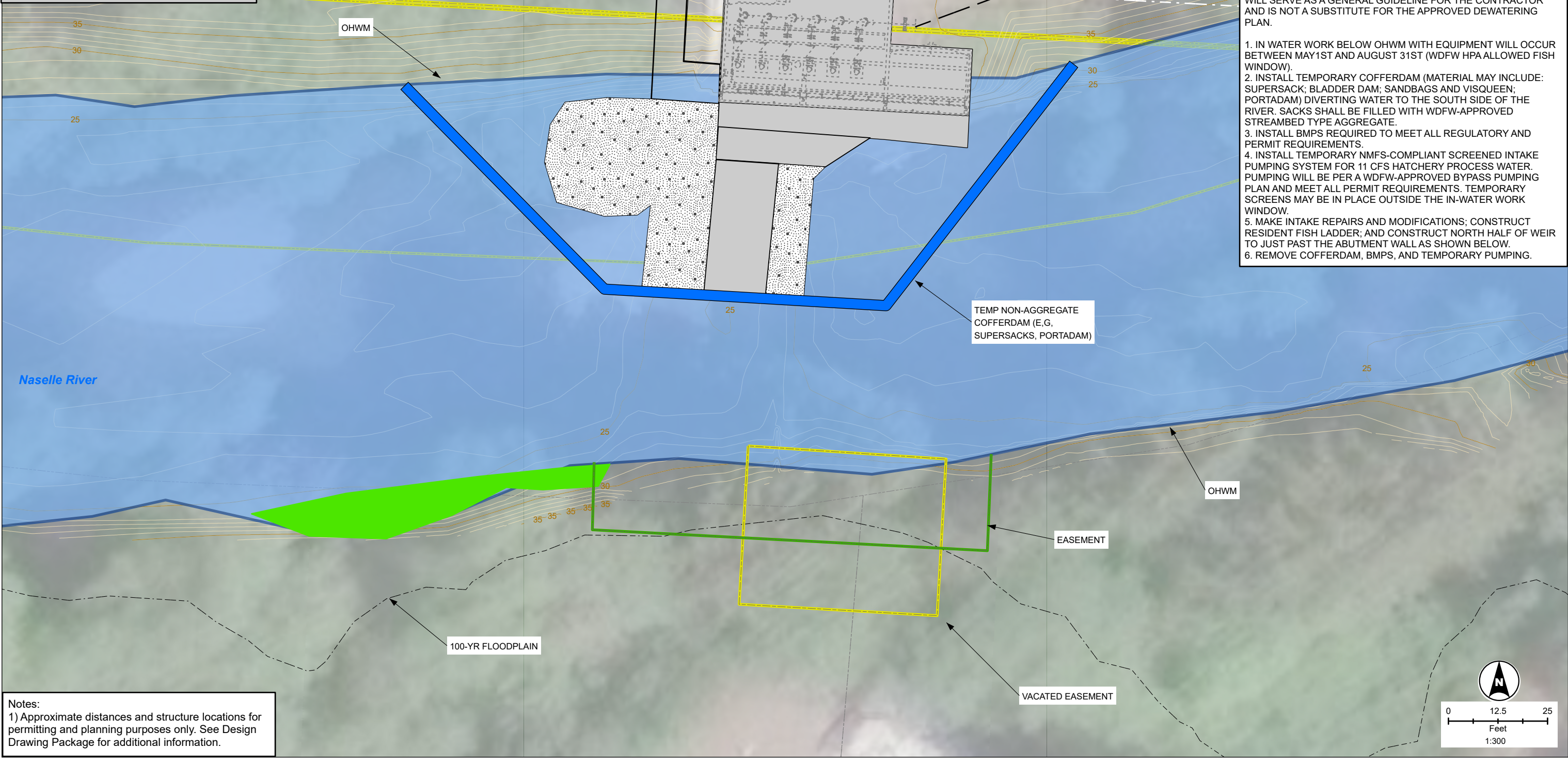
Naselle Fish Hatchery Renovation Project

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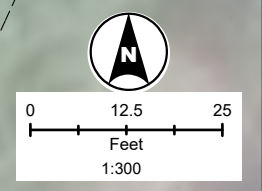
REFERENCE: NWS-2021-462
 APPLICANT: Washington Department of Fish and Wildlife
 LOCATION: 270 N Valley Rd, Naselle, WA 98638
 PROPOSED PROJECT: Naselle Hatchery
 PAGE 6 OF 8 DATE: 6/3/24

SEASON 1 SEQUENCING:
 NOTE: CONTRACTOR TO SUBMIT A DEWATERING PLAN IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL PERMITTING REQUIREMENTS AND REGULATIONS. INFORMATION ON THIS MAP WILL SERVE AS A GENERAL GUIDELINE FOR THE CONTRACTOR AND IS NOT A SUBSTITUTE FOR THE APPROVED DEWATERING PLAN.

1. IN WATER WORK BELOW OHWM WITH EQUIPMENT WILL OCCUR BETWEEN MAY1ST AND AUGUST 31ST (WDFW HPA ALLOWED FISH WINDOW).
2. INSTALL TEMPORARY COFFERDAM (MATERIAL MAY INCLUDE: SUPERSACK; BLADDER DAM; SANDBAGS AND VISQUEEN; PORTADAM) DIVERTING WATER TO THE SOUTH SIDE OF THE RIVER. SACKS SHALL BE FILLED WITH WDFW-APPROVED STREAMBED TYPE AGGREGATE.
3. INSTALL BMPS REQUIRED TO MEET ALL REGULATORY AND PERMIT REQUIREMENTS.
4. INSTALL TEMPORARY NMFS-COMPLIANT SCREENED INTAKE PUMPING SYSTEM FOR 11 CFS HATCHERY PROCESS WATER. PUMPING WILL BE PER A WDFW-APPROVED BYPASS PUMPING PLAN AND MEET ALL PERMIT REQUIREMENTS. TEMPORARY SCREENS MAY BE IN PLACE OUTSIDE THE IN-WATER WORK WINDOW.
5. MAKE INTAKE REPAIRS AND MODIFICATIONS; CONSTRUCT RESIDENT FISH LADDER; AND CONSTRUCT NORTH HALF OF WEIR TO JUST PAST THE ABUTMENT WALL AS SHOWN BELOW.
6. REMOVE COFFERDAM, BMPS, AND TEMPORARY PUMPING.



Notes:
 1) Approximate distances and structure locations for permitting and planning purposes only. See Design Drawing Package for additional information.



Legend

 Delineated Wetland	 Proposed Structures
 State of Washington Parcel	 Rip Rap
 Existing Structures	 Ordinary High Water Mark (OHWM)

AUGUST 2024

Map 6 - Dewatering Plan, Season 1

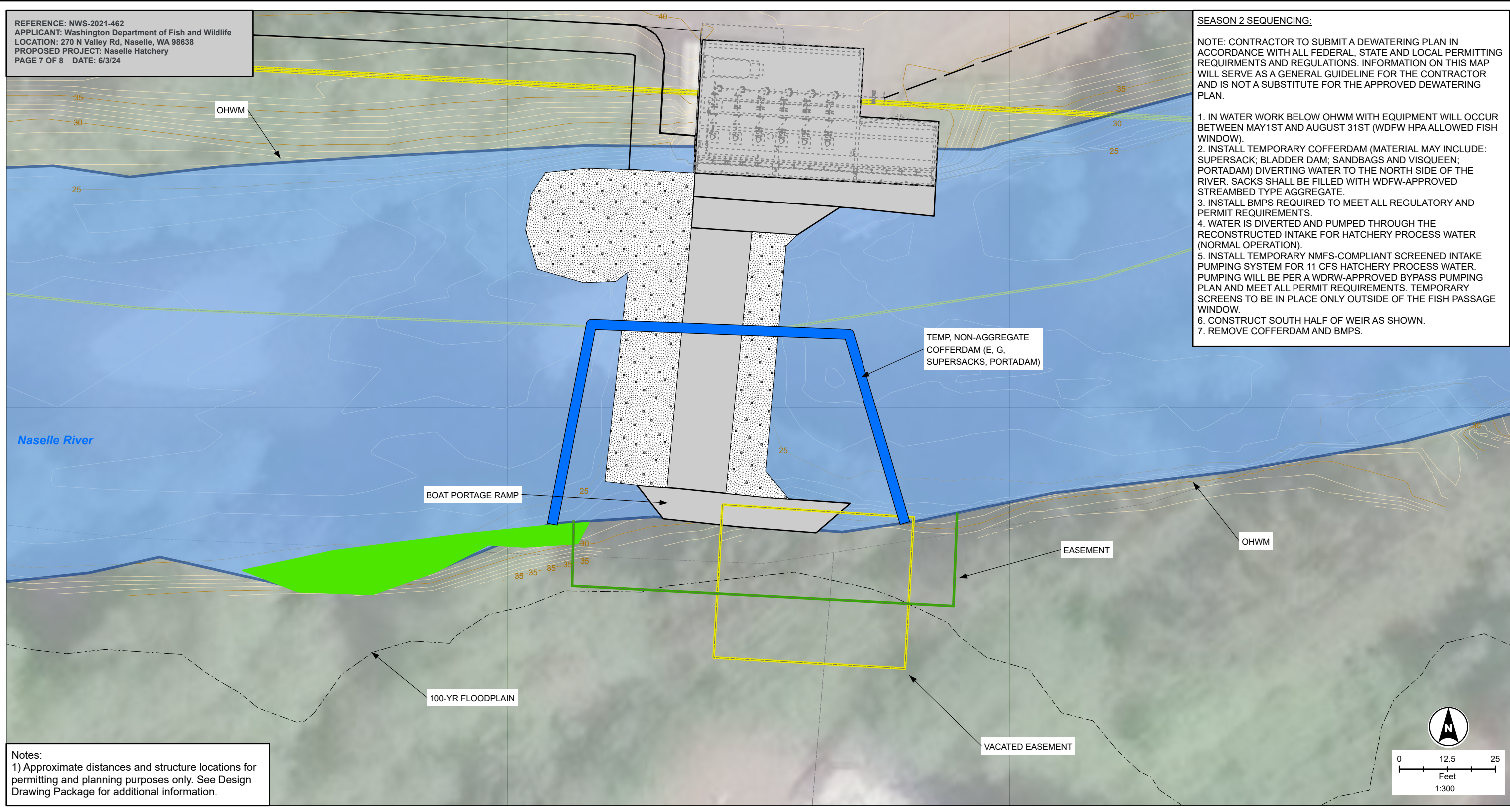
Naselle Fish Hatchery Renovation Project

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 PROPOSED PROJECT: Naselle Hatchery
 PAGE 7 OF 8 DATE: 6/3/24

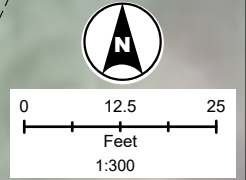
SEASON 2 SEQUENCING:

NOTE: CONTRACTOR TO SUBMIT A DEWATERING PLAN IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL PERMITTING REQUIREMENTS AND REGULATIONS. INFORMATION ON THIS MAP WILL SERVE AS A GENERAL GUIDELINE FOR THE CONTRACTOR AND IS NOT A SUBSTITUTE FOR THE APPROVED DEWATERING PLAN.

1. IN WATER WORK BELOW OHWM WITH EQUIPMENT WILL OCCUR BETWEEN MAY1ST AND AUGUST 31ST (WDFW HPA ALLOWED FISH WINDOW).
2. INSTALL TEMPORARY COFFERDAM (MATERIAL MAY INCLUDE: SUPERSACK; BLADDER DAM; SANDBAGS AND VISQUEEN; PORTADAM) DIVERTING WATER TO THE NORTH SIDE OF THE RIVER. SACKS SHALL BE FILLED WITH WDFW-APPROVED STREAMBED TYPE AGGREGATE.
3. INSTALL BMPS REQUIRED TO MEET ALL REGULATORY AND PERMIT REQUIREMENTS.
4. WATER IS DIVERTED AND PUMPED THROUGH THE RECONSTRUCTED INTAKE FOR HATCHERY PROCESS WATER (NORMAL OPERATION).
5. INSTALL TEMPORARY NMFS-COMPLIANT SCREENED INTAKE PUMPING SYSTEM FOR 11 CFS HATCHERY PROCESS WATER. PUMPING WILL BE PER A WDRW-APPROVED BYPASS PUMPING PLAN AND MEET ALL PERMIT REQUIREMENTS. TEMPORARY SCREENS TO BE IN PLACE ONLY OUTSIDE OF THE FISH PASSAGE WINDOW.
6. CONSTRUCT SOUTH HALF OF WEIR AS SHOWN.
7. REMOVE COFFERDAM AND BMPS.



Notes:
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Legend

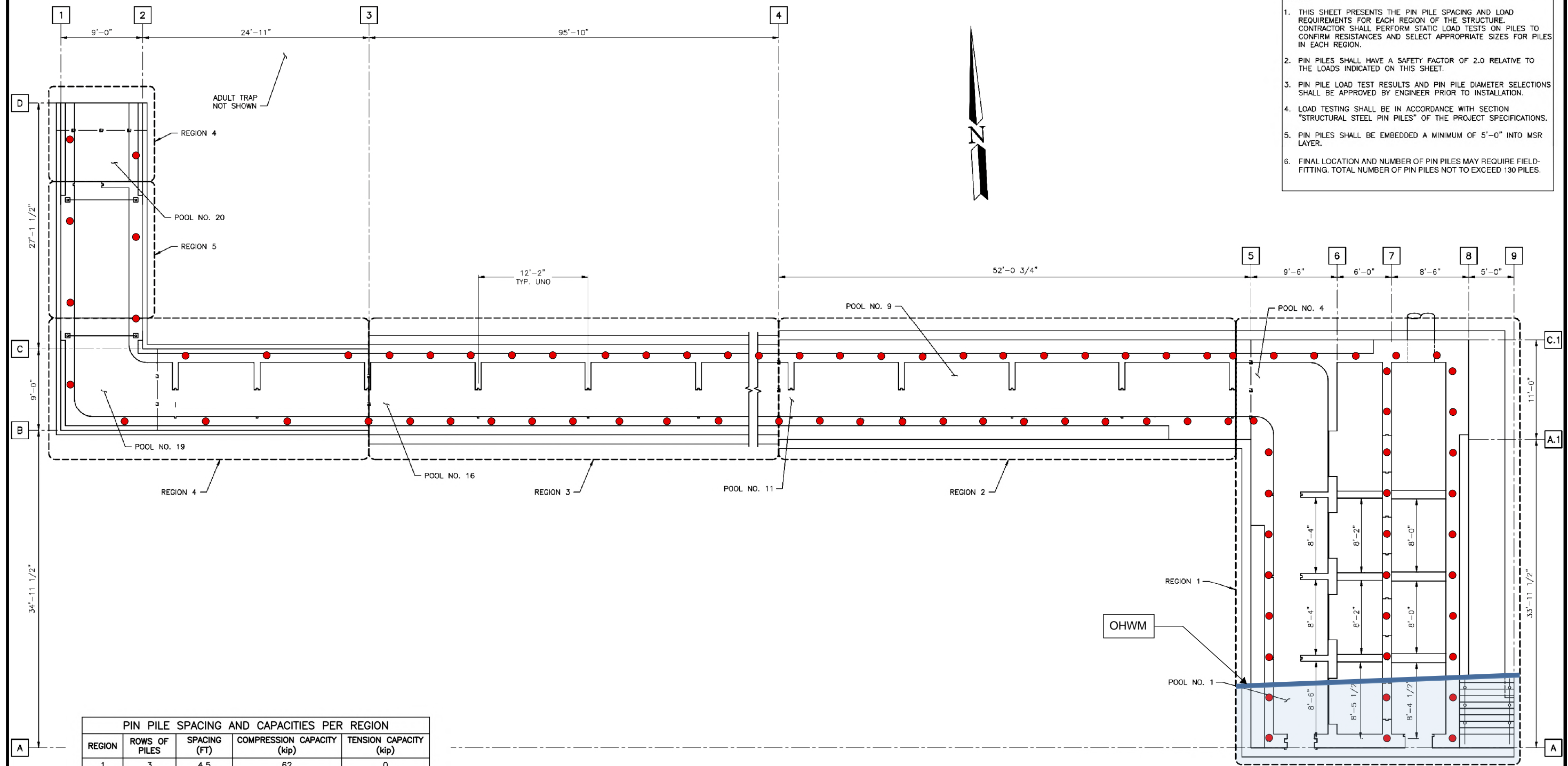
Ordinary High Water Mark (OHWM)	Existing Structures
Delineated Wetland	Proposed Structures
State of Washington Parcel	Rip Rap

AUGUST 2024

Map 7 - Dewatering Plan, Season 2

Naselle Fish Hatchery Renovation Project

- NOTES:**
1. THIS SHEET PRESENTS THE PIN PILE SPACING AND LOAD REQUIREMENTS FOR EACH REGION OF THE STRUCTURE. CONTRACTOR SHALL PERFORM STATIC LOAD TESTS ON PILES TO CONFIRM RESISTANCES AND SELECT APPROPRIATE SIZES FOR PILES IN EACH REGION.
 2. PIN PILES SHALL HAVE A SAFETY FACTOR OF 2.0 RELATIVE TO THE LOADS INDICATED ON THIS SHEET.
 3. PIN PILE LOAD TEST RESULTS AND PIN PILE DIAMETER SELECTIONS SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION.
 4. LOAD TESTING SHALL BE IN ACCORDANCE WITH SECTION "STRUCTURAL STEEL PIN PILES" OF THE PROJECT SPECIFICATIONS.
 5. PIN PILES SHALL BE EMBEDDED A MINIMUM OF 5'-0" INTO MSR LAYER.
 6. FINAL LOCATION AND NUMBER OF PIN PILES MAY REQUIRE FIELD-FITTING. TOTAL NUMBER OF PIN PILES NOT TO EXCEED 130 PILES.



PIN PILE SPACING AND CAPACITIES PER REGION				
REGION	ROWS OF PILES	SPACING (FT)	COMPRESSION CAPACITY (kip)	TENSION CAPACITY (kip)
1	3	4.5	62	0
2	2	4.5	38	0
3	2	4.5	30	0
4	2	9	51	0
5	2	4.5	30	0

ADULT FISHWAY AND AWS PILE PLAN



NAD 1983 StatePlane WA
 South FIPS 4602 FT US
 Source: Pacific County, Wilson Engineering,
 McMillen Jacobs Associates
 Imagery: DigitalGlobe August 2017

- Legend**
- Pile Location
 - Ordinary High Water Mark (OHWM)

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 PAGE 8 OF 8 DATE: 6/3/24

AUGUST 2024

Map 8 - Adult Fishway and AWS

Naselle Fish Hatchery Renovation Project