ADJACENT PROPERTY OWNERS:
1 - U.S. DEPARTMENT OF AGRICULTURE/ U.S. FOREST SERVICE
2 - SNOHOMISH COUNTY
3 - NORTH CENTRAL CONSTRUCTION, INC.

NAME: GOLD BASIN HABITAT RESTORATION
PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLLAGUAMISH RIVER.
DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
LATITUDE: 48.07982N
LONGITUDE: -121.73334W
S-T-R: 13/14-30N-8E

SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT IN SOUTH FORK STILLLAGUAMISH RIVER NEAR AT GRANITE FALLS, WA COUNTY OF SNOHOMISH STATE: WASHINGTON
DATE: DECEMBER 2020

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LEGEND:
- Existing Contours (5-Foot Intervals)
- OHWM
- Parcel Boundary
- Campground Road
- Existing River Flow Path
- Lobe Drainage Flow Path
- Wetland

ADJACENT PROPERTY OWNERS:
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2 - SNOHOMISH COUNTY
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NAME: GOLD BASIN HABITAT RESTORATION
PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAHMISH RIVER
DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
LATITUDE: 48.07982N
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S-T-R: 13/14-30N-8E
SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

PROPPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT IN SOUTH FORK STILLAGUAHMISH RIVER NEAR/AT GRANITE FALLS, WA COUNTY OF: SNOHOMISH STATE: WASHINGTON DATE: DECEMBER 2020

1605 Cornwall Avenue
Bellingham, WA 98225
360-733-4311
During Phase 1 of Water Control Plan, the New Channel Excavation can Proceed with Excavated Material Used to begin Fill Prism at Wetland Expansion Fill Area.

Install Temporary Flow Diversion Structure (bulk bags or similar) to Isolate Flow from New Channel Outlet Work Area.

Existing Wetland

Flow Path Diverted to inside Edge of New Channel

Gold Basin Campground (USFS)

Primary Site Access at Campground Main Entrance

During Phase 1 of Water Control Plan, the New Channel Excavation can Proceed with Excavated Material Used to begin Fill Prism at Upland Fill Area.
Water Control Plan: Phase 2

Water Control Note: Prior to Construction, Contractor will be Required to Produce a Detailed Water Control Plan and Submit for Approval.

LEGEND:

- OHWM (Existing)
- Parcel Boundary
- Existing River Flow Path
- Anticipated River Flow Path
- Lobe Drainage Flow Path
- Campground Roads to Remain
- Project Limits (Approx.)
- Proposed Water Control Isolation/Diversion Structure
- Proposed Grading Limits

During Phase 2 of Water Control Plan Diversion Structure to be Shifted to Isolate Existing Channel from Flow and Accommodate Fill in Remaining Portion of Upland Fill Area

Install Temporary Flow Division Structure (Bulk Bags or similar) to Isolate Flow from Existing Channel Upland Fill Area

Proposed: Placement of Large Woody Debris Structures, Existing Wetland Expansion, Reduction of Fine Sediments, and Channel Realignment


Pursuance: Restoration and Improvement of Salmon Habitat AND Water Quality, AND Wetland Expansion in the South Fork Stillaguamish River.

Datum: North American Vertical Datum of 1988

Latitude: 48.07982N

Longitude: -121.73334W

S-T-R: 13/14-30N-8E

Site Location Address: NF-4018 Granite Falls, WA 98252

Name: Gold Basin Habitat Restoration

Adjacent Property Owners:
1. U.S. Department of Agriculture/U.S. Forest Service
2. Snohomish County

Proposed: Placement of Large Woody Debris Structures, Existing Wetland Expansion, Reduction of Fine Sediments, and Channel Realignment


Sheet: 5 of 11

For Interpretation: ANCHOR QEA 1605 Cornwall Avenue

Bellingham, WA 98225 360-733-4311

5-9-2020
Purpose: Restoration and improvement of salmon habitat and water quality, and wetland expansion in the South Fork Stillaguamish River.

Datum: North American Vertical Datum of 1988

Latitude: 48.07982N
Longitude: -121.73334W

S-T-R: 13/14-30N-8E

Site Location Address: NF-4018 Granite Falls, WA 98252

Name: Gold Basin Habitat Restoration

Adjacent Property Owners:
1. U.S. Department of Agriculture/ U.S. Forest Service
2. Snohomish County

Proposed: Placement of large woody debris structures, existing wetland expansion, reduction of fine sediments, and channel realignment in South Fork Stillaguamish River near/ at Granite Falls, WA County of: Snohomish State: Washington Date: December 2020
Elevation in Feet

Horizontal Distance in Feet

1x Vertical Exaggeration

1040
1060
1080
1100
1120
1140

500 520 540 560 580 600 620 640 660 680 700 720 740 760 780 800 820 840 860 880 900 920 940 960 980 1000

A'

Elevation in Feet

Horizontal Distance in Feet

1x Vertical Exaggeration

1040
1060
1080
1100
1120
1140

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500

A

Cross Sections A-A'

LEGEND:

Existing Grade
Proposed Grade
Ordinary High Water (Existing)
Ordinary High Water (Proposed)
Proposed Upland Fill

Purpose: Restoration and improvement of salmon habitat and water quality, and wetland expansion in the South Fork Stillaguamish River.

Datum: North American Vertical Datum of 1988

Latitude: 48.07982N
Longitude: -121.73334W
ST-R: 13/14-30N-8E

Site Location Address: NF-4018 Granite Falls, WA 98252

Name: Gold Basin Habitat Restoration

Adjacent Property Owners:
1. U.S. Department of Agriculture/U.S. Forest Service
2. Snohomish County

Proposed: Placement of Large Woody Debris Structures, Existing Wetland Expansion, Reduction of Fine Sediments, and Channel Realignment

In: South Fork Stillaguamish River Near/At Granite Falls, WA

County of: Snohomish
State: Washington
Date: December 2020

Anchor OEA
1605 Cornwall Avenue
Bellingham, WA 98225
360-733-4311

7 of 11
Elevation in Feet
Horizontal Distance in Feet
1x Vertical Exaggeration

1040
1060
1080
1100
1120

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500

500 520 540 560 580 600 620 640 660 680 700 720 740 760 780 800 820 840 860 880 900 920 940 960 980 1000

LEGEND:

Existing Grade
Proposed Grade
Ordinary High Water (Existing)
Ordinary High Water (Proposed)

Cross Sections B-B'

NAME: GOLD BASIN HABITAT RESTORATION
PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.

NAME: GOLD BASIN HABITAT RESTORATION
PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.

ADJACENT PROPERTY OWNERS:
2. SNOHOMISH COUNTY
3. NORTH CENTRAL CONSTRUCTION, INC.

DATE: DECEMBER 2020
SHEET: 8 OF 11
LEGEND:
- Existing Grade
- Proposed Grade
- Ordinary High Water (Existing)
- Ordinary High Water (Proposed)

Cross Sections C-C'

PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.

DATE: NORTH AMERICAN VERTICAL DATUM OF 1988
LATITUDE: -121.73334W
LONGITUDE: 48.07982N
S-T-R: 13/14-30N-8E
SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

NAME: GOLD BASIN HABITAT RESTORATION

ADJACENT PROPERTY OWNERS:
2. SNOHOMISH COUNTY
3. NORTH-CENTRAL CONSTRUCTION, INC.

PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT IN SOUTH FORK STILLAGUAMISH RIVER NEAR AT GRANITE FALLS, WA COUNTY OF SNOHOMISH STATE: WASHINGTON
DATE: DECEMBER 2020

ADJACENT PROPERTY OWNERS:
2. SNOHOMISH COUNTY
3. NORTH-CENTRAL CONSTRUCTION, INC.

PROPOSED: PLACEMENT OF LARGE WOODY DEBRIS STRUCTURES, EXISTING WETLAND EXPANSION, REDUCTION OF FINE SEDIMENTS, AND CHANNEL REALIGNMENT IN SOUTH FORK STILLAGUAMISH RIVER NEAR AT GRANITE FALLS, WA COUNTY OF SNOHOMISH STATE: WASHINGTON
DATE: DECEMBER 2020
ADJACENT PROPERTY OWNERS:
2. SNOHOMISH COUNTY
3. NORTH CENTRAL CONSTRUCTION, INC.

NAME: GOLD BASIN HABITAT RESTORATION
PURPOSE: RESTORATION AND IMPROVEMENT OF SALMON HABITAT AND WATER QUALITY, AND WETLAND EXPANSION IN THE SOUTH FORK STILLAGUAMISH RIVER.
DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
LATITUDE: 48.07982N
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SITE LOCATION ADDRESS: NF-4018 GRANITE FALLS, WA 98252

Notes:
1. Drill 1" diameter hole at location shown on Layer 6. Make Threaded Rod Vertical Log Connection (1 Loc.) See Sheet 11.
2. Drill 1" diameter hole at location shown on Layer 7. Make Threaded Rod Vertical Log Connection (1 Loc.) See Sheet 11.
3. Start and finish each connection with steel plate and 2 nuts. See Threaded Rod Washer and Nut Connection Detail, Sheet 11.

Connection Details (1 of 2)

Live Crib Connection
Notes:
1. Drill 1" diameter hole at location shown on Layer 6. Make Threaded Rod Vertical Log Connection (1 Loc.) See Sheet 11.
2. Drill 1" diameter hole at location shown on Layer 7. Make Threaded Rod Vertical Log Connection (1 Loc.) See Sheet 11.
3. Start and finish each connection with steel plate and 2 nuts. See Threaded Rod Washer and Nut Connection Detail, Sheet 11.

Meander Jam Connection
Notes:
1. Drill 1" diameter hole in Layers 1 and 2 (3 Locs.).
2. Drill 1" diameter hole in buried log poles (3 Locs.).
4. Drill 1" diameter hole in Layers 7 and 8 (4 Locs.).
5. Drill 1" diameter hole in buried log poles (4 Locs.).
7. Start and finish each connection with stainless steel plate and 2 nuts. See Threaded Rod Washer and Nut Connection Detail, Sheet 11.

Timber Crib Cross Log Connection
Notes:
1. Drill 1" diameter hole at locations shown on Layer 1. Start Threaded Rod Stacked Vertical Connection (6 Locs.) See Sheet 11.
3. Start and finish each connection with steel plate and 2 nuts. See Threaded Rod Washer and Nut Connection Detail, Sheet 11.

Connection Details (1 of 2)
**General Notes:**
1. All connections shall be approved by the engineer.
2. Steel threaded rod shall be 7/8-inch grade 8 galvanized steel, meeting the requirements of ASTM 354BD.
3. Plates shall be galvanized steel and shall be sized to fit the threaded rod.
4. Nuts shall be zinc yellow chromate-plated grade 8 and be sized to fit the threaded rod.
5. Contractor shall submit shop drawings and product cut sheets for any proposed alterations to the details shown on this sheet for approval by the engineer. Proposed alterations to the details shown on this sheet shall in the opinion of the engineer meet or exceed the design intent of the connection.

**Connection Details (2 of 2)**

**Proposed Placement of Large Woody Debris Structures, Existing Wetland Expansion, Reduction of Fine Sediments, and Channel Realignment:**

**Purpose:** Restoration and improvement of salmon-habitat and water quality, and wetland expansion in the South Fork Stillaguamish River.

**Datum:** North American Vertical Datum of 1988

**Latitude:** 48.07982N

**Longitude:** -121.73334W

**PROP NO.:** 13/14-0364-JA-003

**ADJACENT PROPERTY OWNERS:**
2. SNOHOMISH COUNTY
3. NORTH CENTRAL CONSTRUCTION, INC.

**Mailing Address:** 4018 Granite Falls, WA 98252

**Site Location Address:** 4018 Granite Falls, WA 98252

**Date:** December 2020