

JOINT APPLICATION FOR PERMITS

U.S. ARMY CORPS OF ENGINEERS - IDAHO DEPARTMENT OF WATER RESOURCES - IDAHO DEPARTMENT OF LANDS

Authorities: The Department of Army Corps of Engineers (Corps), Idaho Department of Water Resources (IDWR), and Idaho Department of Lands (IDL) established a joint process for activities impacting jurisdictional waterways that require review and/or approval of both the Corps and State of Idaho. Department of Army permits are required by Section 10 of the Rivers & Harbors Act of 1899 for any structure(s) or work in or affecting navigable waters of the United States and by Section 404 of the Clean Water Act for the discharge of dredged or fill materials into waters of the United States, including adjacent wetlands. State permits are required under the State of Idaho, Stream Protection Act (Title 42, Chapter 38, Idaho Code and Lake Protection Act (Section 58, Chapter 13 et seq., Idaho Code). In addition the information will be used to determine compliance with Section 401 of the Clean Water Act by the appropriate State, Tribal or Federal entity.

Joint Application: Information provided on this application will be used in evaluating the proposed activities. Disclosure of requested information is voluntary. Failure to supply the requested information may delay processing and issuance of the appropriate permit or authorization. **Applicant will need to send a completed application, along with one (1) set of legible, black and white (8½"x11"), reproducible drawings that illustrate the location and character of the proposed project / activities to both the Corps and the State of Idaho.**

See Instruction Guide for assistance with Application. Accurate submission of requested information can prevent delays in reviewing and permitting your application. Drawings including vicinity maps, plan-view and section-view drawings must be submitted on 8-1/2 x 11 papers.

Do not start work until you have received all required permits from both the Corps and the State of Idaho

FOR AGENCY USE ONLY										
USACE NWW-		Date Received:		☐ Incomplete Application Returned		Date Returned:				
Idaho Department of Water Resources No.		Date Received:		☐ Fee Received DATE:		Receipt No.:				
Idaho Department of Lands No. NP220096		Date Received: 7/29/21		☒ Fee Received \$625 DATE:		Receipt No.:				
INCOMPLETE APPLICATIONS MAY NOT BE PROCESSED										
1. CONTACT INFORMATION - APPLICANT Required:					2. CONTACT INFORMATION - AGENT:					
Name: Gregory Schneider					Name: John McKervey, P.E.					
Company:					Company: JM Engineering					
Mailing Address: 14953 E Hayden Lake Road					Mailing Address: 2706 N Blue Raven Lane					
City: Hayden			State: ID	Zip Code: 83835		City: Spokane			State: WA	Zip Code: 99204
Phone Number (include area code): 208-755-5876		E-mail: greg@transplanet.net			Phone Number (include area code): 509-953-9771		E-mail: johnmckervey@yahoo.com			
3. PROJECT NAME or TITLE: Schneider Shoreline Retaining Wall					4. PROJECT STREET ADDRESS: 15053 E Hayden Lake Road					
5. PROJECT COUNTY: Kootenai		6. PROJECT CITY: Hayden		7. PROJECT ZIP CODE: 83835		8. NEAREST WATERWAY/WATERBODY: Hayden Lake				
9. TAX PARCEL ID#: 51N03W144020		10. LATITUDE: 47.7792 N LONGITUDE: -116.6793 E		11a. 1/4: SE	11b. 1/4: NE	11c. SECTION: 4		11d. TOWNSHIP: 51N	11e. RANGE: 03W	
12a. ESTIMATED START DATE: 11/01/2024		12b. ESTIMATED END DATE: 12/20/2024			13a. IS PROJECT LOCATED WITHIN ESTABLISHED TRIBAL RESERVATION BOUNDARIES? ☒ NO ☐ YES Tribe:					
13b. IS PROJECT LOCATED IN LISTED ESA AREA? ☒ NO ☐ YES					13c. IS PROJECT LOCATED ON/NEAR HISTORICAL SITE? ☒ NO ☐ YES					
14. DIRECTIONS TO PROJECT SITE: Include vicinity map with legible crossroads, street numbers, names, landmarks. From I-90 travel north on Highway 95 to Honeysuckle Ave, turn right and head east to E Hayden Lake Road, turn right and follow E Hayden Lake Road to the site.										
15. PURPOSE and NEED: ☐ Commercial ☐ Industrial ☐ Public ☒ Private ☐ Other Describe the reason or purpose of your project; include a brief description of the overall project. Continue to Block 16 to detail each work activity and overall project. This proposed project will replace an existing poured in place concrete retaining wall with a segmental block retaining wall. The existing wall is failing and will end up falling into the lake if not addressed. In addition, the shoreline to the southeast of the end of the concrete wall is eroding and rocks and debris are falling into the lake.										

16. DETAILED DESCRIPTION OF EACH ACTIVITY WITHIN OVERALL PROJECT. Specifically indicate portions that take place within waters of the United States, including wetlands: Include dimensions; equipment, construction, methods; erosion, sediment and turbidity controls; hydrological changes: general stream/surface water flows, estimated winter/summer flows; borrow sources, disposal locations etc.:

This project proposes to construct two retaining walls on the site. The first wall will be located along the shoreline of Hayden Lake. The proposed wall will be located in front of the existing failing, concrete, retaining wall and the existing concrete wall will remain. The shoreline wall is approximately 118 l.f. and 9 feet tall. The second wall will be located outside of the 25 foot setback from the OHWM and will be installed to support a parking area. The second wall is approximately 91 l.f. and 6 feet tall.

The work will be conducted when the water level is low and silt fencing will be installed to prevent any erosion from contaminating the lake. Once the walls are installed, all deleterious materials will be removed and permanent erosion control measures will be installed. For the shoreline wall, the permanent erosion control will consist of rip rap installed in front of the wall. For the upper wall, the permanent erosion control consists of seeding the disturbed ground and establishing vegetative ground cover.

The walls will be installed with an excavator as the main piece of equipment. A skid steer loader will be utilized to transport the segmental blocks and the drainrock to the location of each wall. A jumping jack compactor and/or plate compactor will be used to compact the subgrade and the base gravel.



17. DESCRIBE ALTERNATIVES CONSIDERED TO AVOID or MEASURES TAKEN to MINIMIZE and/ or COMPENSATE for IMPACTS to WATERS of the UNITED STATES, INCLUDING WETLANDS: See Instruction Guide for specific details.

With the failing concrete retaining wall, the only practical solution is to replace the retaining wall. To mitigate potential impacts from removal of the concrete retaining wall, this project proposes to construct a new retaining wall in front of the old wall and leave the existing wall in place.

As far as the eroding shoreline, beyond the existing concrete wall, while it is possible to install rip rap to prevent erosion, the most effective means of controlling the erosion is to extend the proposed segmental block retaining wall.

18. PROPOSED MITIGATION STATEMENT or PLAN: If you believe a mitigation plan is not needed, provide a statement and your reasoning why a mitigation plan is NOT required. Or, attach a copy of your proposed mitigation plan.

The proposed Site Disturbance Plan has been included.

19. TYPE and QUANTITY of MATERIAL(S) to be discharged below the ordinary high water mark and/or wetlands:

Dirt or Topsoil: _____ cubic yards

Dredged Material: _____ cubic yards

Clean Sand: _____ cubic yards

Clay: _____ cubic yards

Gravel, Rock, or Stone: 354 cubic yards

Concrete: _____ cubic yards

Other (describe): _____ : _____ cubic yards

Other (describe): _____ : _____ cubic yards

TOTAL: 354 cubic yards

20. TYPE and QUANTITY of impacts to waters of the United States, including wetlands:

Filling: _____ acres _____ sq ft. _____ cubic yards

Backfill & Bedding: _____ acres _____ sq ft. 354 cubic yards

Land Clearing: _____ acres _____ sq ft. _____ cubic yards

Dredging: _____ acres _____ sq ft. _____ cubic yards

Flooding: _____ acres _____ sq ft. _____ cubic yards

Excavation: _____ acres _____ sq ft. _____ cubic yards

Draining: _____ acres _____ sq ft. _____ cubic yards

Other: _____ : _____ acres _____ sq ft. _____ cubic yards

TOTALS: _____ acres _____ sq ft. 354 cubic yards

21. HAVE ANY WORK ACTIVITIES STARTED ON THIS PROJECT? ☐ NO ☒ YES If yes, describe ALL work that has occurred including dates.

The shoreline retaining wall has been installed and the existing failing concrete wall has been removed. Work started on September 15, 2023 and ended on November 30, 2023

22. LIST ALL PREVIOUSLY ISSUED PERMIT AUTHORIZATIONS:

There are no previously issued permits



23. ☐ YES, Alteration(s) are located on Public Trust Lands, Administered by Idaho Department of Lands

24. SIZE AND FLOW CAPACITY OF BRIDGE/CULVERT and DRAINAGE AREA SERVED: _____ Square Miles

25. IS PROJECT LOCATED IN A MAPPED FLOODWAY? ☒ NO ☐ YES If yes, contact the floodplain administrator in the local government jurisdiction in which the project is located. A Floodplain Development permit and a No-rise Certification may be required.

26a WATER QUALITY CERTIFICATION: Pursuant to the Clean Water Act, anyone who wishes to discharge dredge or fill material into the waters of the United States, either on private or public property, must obtain a Section 401 Water Quality Certification (WQC) from the appropriate water quality certifying government entity.

See Instruction Guide for further clarification and all contact information.

The following information is requested by IDEQ and/or EPA concerning the proposed impacts to water quality and anti-degradation:

- ☒ NO ☐ YES Is applicant willing to assume that the affected waterbody is high quality?
☒ NO ☐ YES Does applicant have water quality data relevant to determining whether the affected waterbody is high quality or not?
☒ NO ☐ YES Is the applicant willing to collect the data needed to determine whether the affected waterbody is high quality or not?

26b. BEST MANAGEMENT PRACTICES (BMP's): List the Best Management Practices and describe these practices that you will use to minimize impacts on water quality and anti-degradation of water quality. All feasible alternatives should be considered - treatment or otherwise. Select an alternative which will minimize degrading water quality

Silt fencing will be installed during construction. Following construction, rip rap will be installed in front of the shoreline wall and vegetation will be planted in front of the upper wall.

Through the 401 Certification process, water quality certification will stipulate minimum management practices needed to prevent degradation.

27. LIST EACH IMPACT to stream, river, lake, reservoir, including shoreline: Attach site map with each impact location.

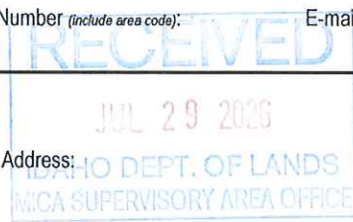
Activity	Name of Water Body	Intermittent Perennial	Description of Impact and Dimensions	Impact Length Linear Feet
Retaining Wall	Hayden Lake	Perennial	9.0 foot shoreline retaining wall	118 l.f.
TOTAL STREAM IMPACTS (Linear Feet):				118

28. LIST EACH WETLAND IMPACT include mechanized clearing, fill excavation, flood, drainage, etc. Attach site map with each impact location.

Activity	Wetland Type: Emergent, Forested, Scrub/Shrub	Distance to Water Body (linear ft)	Description of Impact Purpose: road crossing, compound, culvert, etc.	Impact Length (acres, square ft linear ft)
TOTAL WETLAND IMPACTS (Square Feet):				

29. ADJACENT PROPERTY OWNERS NOTIFICATION REQUIREMENT: Provide contact information of ALL adjacent property owners below.

Name: Douglas & Pkilana Mcinnis Family Trust Mailing Address: 15050 E Hayden Lake Road City: Hayden State: ID Zip Code: 83835 Phone Number (include area code): E-mail:	Name: L&M Olson LLC Mailing Address: 5403 S Quail Ridge Circle City: Spokane State: WA Zip Code: 99223 Phone Number (include area code): E-mail:
Name: Mailing Address: City: State: Zip Code: Phone Number (include area code): E-mail:	Name: Mailing Address: City: State: Zip Code: Phone Number (include area code): E-mail:
Name: Mailing Address: City: State: Zip Code: Phone Number (include area code): E-mail:	Name: Mailing Address: City: State: Zip Code: Phone Number (include area code): E-mail:
Name: Mailing Address: City: State: Zip Code: Phone Number (include area code): E-mail:	Name: Mailing Address: City: State: Zip Code: Phone Number (include area code): E-mail:



30. SIGNATURES: STATEMENT OF AUTHORIZATION / CERTIFICATION OF AGENT / ACCESS

Application is hereby made for permit, or permits, to authorize the work described in this application and all supporting documentation. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein; or am acting as the duly authorized agent of the applicant (Block 2). I hereby grant the agencies to which this application is made, the right to access/come upon the above-described location(s) to inspect the proposed and completed work/activities.

Signature of Applicant:  Date: 5/21/2025

Signature of Agent:  Date: 5/19/2025

This application must be signed by the person who desires to undertake the proposed activity AND signed by a duly authorized agent (see Block 1, 2, 30). Further, 18 USC Section 1001 provides that: "Whoever, in any manner within the jurisdiction of any department of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both".



Idaho Department of Lands

Single and Two Family Lot Encroachment Permit Application

Application Number: _____

\$625.00 ± 1185

07/29/2026

MP22 0096

This application and required documents must be completed when submitting an encroachment permit application. Incomplete applications will be returned without processing.

This form is three (3) pages, please read and complete all sections.

Encroachment Type(s) (Check all that apply):

- ☒ Single Family Dock
- ☐ Two Family Dock
- ☐ Mooring buoy
- ☐ Waterline
- ☐ Bank stabilization or Rip Rap
- ☐ Other – describe: _____

Applicant's Littoral Rights Are:

- ☒ Owned, fee simple title holder
- ☐ Leased
- ☐ Signature of littoral rights owner is obtained if Applicant is not the owner of the riparian/littoral rights
- ☐ Other – describe: _____

Provide a Copy of Each Required Document on 8½"x14" or Smaller Paper:

- ☐ County plat map showing both neighboring littoral lots.
- ☐ Tax record identifying the owner of the upland parcel(s).
- ☐ Lakebed profile with encroachment and water levels of winter and summer.
- ☒ General vicinity map that allows Department to find the encroachment.
- ☐ Scaled air photo or map showing lengths of nearby encroachments, distances to adjacent encroachments, and location and orientation of the proposed encroachment.



Are Existing Docks or Other Encroachment(s) Permitted On This Parcel(s)?

☐ No

☒ Yes. Please attach a current photograph and a "to scale" drawing (see Document Requirements Above)

Permit # Grandfathered / Jim Brady

Date of Construction: 1945-1965

What will happen to the existing dock or encroachment if this permit application is approved?

☒ Remain unchanged

☐ Complete removal

☐ Modification

☐ Other: _____

(Please note that old dock materials must be removed from the lake. Discarding these materials creates serious boating safety issues and offenders will be subject to prosecution and penalties.)

How Many Feet Does the Proposed Encroachment Extend Beyond the Ordinary (or Artificial) High Water Mark? _____ feet

The Proposed Dock Length Is:

☒ The same or shorter than the two adjacent docks

☐ Longer than the two adjacent docks

☐ Longer than the two adjacent docks, but within the line of navigability established by the majority of existing docks in the area.

☐ _____ feet and not located near any other docks or encroachments.

Does the Proposed Dock Exceed the Maximum Square Footage of 700 ft² for Single-Family Docks or 1,100 ft² for Two-Family Docks?

☐ No Total square footage: _____ ft²

☒ Yes 1480 ft²

Does the Property Have at Least 25 Feet of Littoral Frontage?

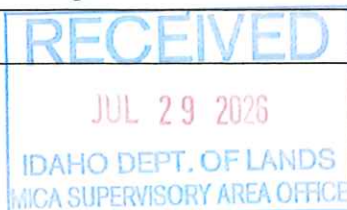
☐ No

☒ Yes Total front footage: 141 feet

Will the Proposed Encroachment Exceed the Maximum Width of 10 Feet?

☐ No

☒ Yes If yes, explain why: Because it was grandfathered and validated from old
aerials.



Will the Proposed Encroachment (besides riprap) Be Located Closer Than 10 Feet to the Riparian/Littoral Right Lines Established with Your Neighbors?

☒ No

☐ Yes If yes, what are the proposed distances?

Encroachment Type: _____ feet

Encroachment Type: _____ feet

Encroachment Type: _____ feet

☐ Consent of affected neighbor was attained

Determining Riparian/Littoral Right Lines

Littoral right lines are not simple extensions of the upland property lines. Littoral right lines are generally perpendicular, or at right angles, to the shoreline. Curved shorelines or unusual circumstances may require Department Staff, or other professionals, to closely examine littoral right lines and assess the potential for infringement on adjacent littoral property owners.

I hereby certify that I am the applicant or authorized representative of the applicant, and that the information contained in this application is true and correct to the best of my knowledge and further acknowledge that falsification or misrepresentation of any information contained herein or provided herewith will be grounds for denial of the application.



Applicant Signature

Greg Schneider

Applicant Print Name

7/28/26

Date

Co-Owner (Husband)

Applicant Title (if applicable)

Second Applicant (If applicable)



Applicant Signature

Sheree DiBiase

Applicant Print Name

7/28/26

Date

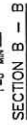
Co-Owner (Wife)

Applicant Title (if applicable)





1. INSTALLATION SHALL FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.
2. POSTS SHALL BE INSTALLED SO THAT A MIN OF 3'-0" EXTENDS ABOVE THE GROUND WITH A MIN OF 2'-0" EMBEDED.
3. FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL TO AVOID JOINTS.
4. SPLICE JOINTS AT SUPPORT POSTS ONLY WITH A MIN 6" OVERLAP.
5. IN AREAS OF THINNER SOIL OR ROCK THE LOWER EDGE OF THE SIFT FENCE WILL BE WEIGHTED DOWN AND STABILIZED WITH HAY BALES.



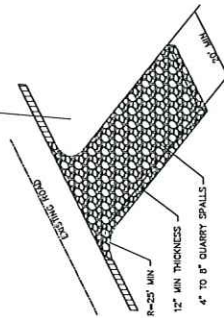
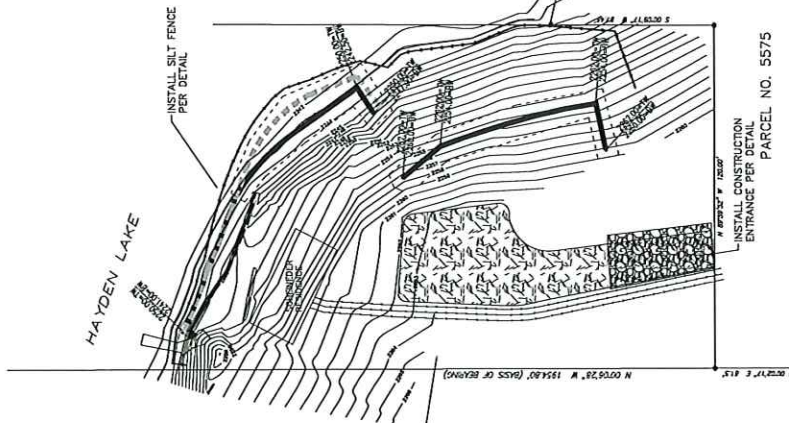
PLAN VIEW

Wood Stake

Diagram illustrating the construction of a straw wattle structure on a slope. The structure is built into an excavated trench, with the wattle itself being 3' high. The wattle is made of straw, and the structure is supported by wood stakes. The wattle is placed into the trench to provide a surface for growing plants. The slope is labeled as a 'Gentle Slope'.

GRAPHIC SCALE
(24 FEET)
1 inch = 20 ft.

CONSTRUCTION ENTRANCE



PARCEL NO. 5575

EROSION AND SEDIMENT CONTROL PLAN



JM Engineering

Site Disturbance Plan Narrative

of

Schneider Residence

15053 E Hayden Lake Road
Hayden, ID

For

Greg Schneider

15053 E Hayden Lake Road
Hayden, ID 83835



7/26/2026



SITE DISTURBANCE PLAN NARRATIVE

Overview

This project has a retaining wall constructed in 2024, part of which is located into the lake. 69 l.f. of the existing wall needs to be relocated behind the OHWM. This project also has a new segmental block retaining walls at a residential lot located at 15053 E Hayden Lake Drive in Hayden, Idaho.

Construction Details

The construction process will be as follows:

1. Move equipment in, construct the erosion control measures.
2. Move equipment in to de-construct the existing retaining wall.
3. Move materials in for re-construction of the existing wall and construction of the new wall.
(Blocks, washed rock, gravel, perforated pipe and filter fabric)
4. Excavate a trench at the location of the new wall and construct the new wall in accordance with the plans.
5. Finish grade the backfill at the top of the wall and remove any lasting debris.
6. Hydroseed or sod the disturbed soils at the top of the wall.
7. Replace any vegetation that is disturbed below the wall.
8. Remove the temporary erosion control measures.

Current Site Conditions

The site is currently partially treed with weeds and grasses. There is one retaining wall that was constructed in 2024. 69 l.f. of that wall must be re-located. The second retaining wall will provide additional flat area.

Soil Conditions

In the area of the proposed project there is one main soil type identified by the USDA. 2nq4 –Vassar ashy silt loam. This soil consists of ashy silt loam near the surface and coarse sandy loam below 22". The observed soil conditions on-site matched the above description.

Proposed Erosion Control and Stormwater Measures

Temporary erosion control measures proposed for this project consist of silt fencing and a construction entrance. Once the retaining wall is completed, the beach areas in front of the walls will be restored to existing condition. The disturbed areas above the wall will be hydroseeded or sodded.

Permanent Storm Water Control

This project will add a minimal amount of impervious surface and permanent storm water control is not required.

Methods for Handling Anticipated Groundwater

Because the proposed walls will be built well above the water elevation, groundwater is not anticipated.

Cut and Fill Slope Considerations

There will be no cut fill slopes associated with the retaining wall.

Amount of Area to be Disturbed

For this project I expect that we will disturb approximately 1,900 square feet of area.

Shoreline Management

There is a retaining wall constructed in 2024 that was constructed inside the 25 foot setback from the ordinary high water mark (OHWM) to replace an existing failing concrete wall. A portion of the wall was constructed beyond the OHWM and must be relocated behind the OHWM. Construction of the retaining wall will require equipment to operate within the buffer zone. According to Section 8.7.109 of the Kootenai County Site Disturbance Ordinance, ground disturbance within the 25 foot buffer zone except when the work is necessary for the safety of the lake or the residence. Installation of the proposed retaining wall is critical to the protection of the lake due to the failing concrete wall. Erosion and sediment control measures will be installed and the work will be conducted while the water level is low. The proposed work cannot be completed by hand as the retaining blocks required for this project are in excess of 1500 pounds each.

The second wall will be installed outside the 25 foot buffer zone.

Winterization Requirements

The proposed construction will take place when weather permits. If required, the site will be stabilized for the winter.

Inspection Schedule

An inspection will be required at the beginning of the project to ensure that the ESC measures have been installed. Depending on the timing of construction, a second inspection may be required to ensure that the site is stabilized for the winter. A final inspection is required at the end to ensure that the project has been constructed in accordance with the plans.

Construction Schedule

This project will commence immediately upon receipt of a permit and the weather permits. The work to be completed under this permit is expected to be completed by September 30th, 2026.

Cost Estimate

The erosion and sediment control work to be completed under this permit is expected to cost approximately \$2,050, re-locating the installed wall is expected to cost \$6,900 and the new retaining wall is expected to cost \$45,500. A complete cost estimate is included.

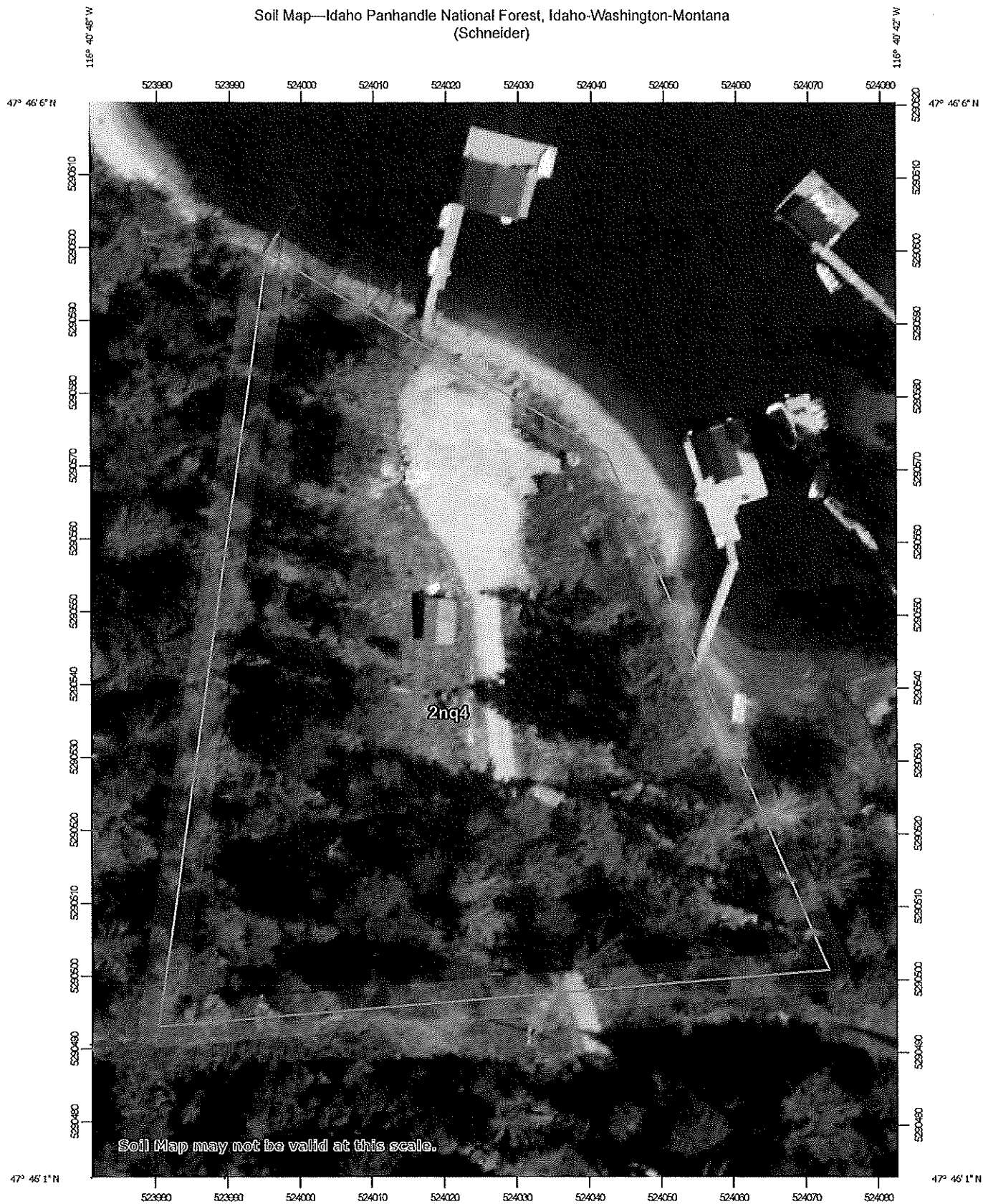
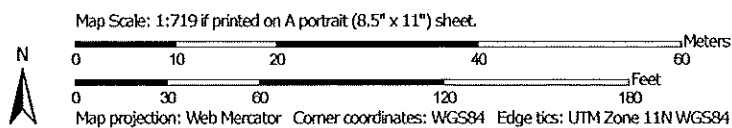
Operation and Maintenance

The operation and maintenance requirements for this project consist of maintenance of the erosion and sediment control measures. The erosion and sediment control measures requiring maintenance consists of silt fencing. These facilities shall be inspected once a week and after each major storm event. Any damage to these facilities shall be repaired immediately.

Schneider Residence SITE DISTURBANCE COST ESTIMATE

ITEM	Quantity	Unit Cost	Total Cost	Bond Amount
Silt Fence	205 lf	\$10 / lf	\$2,050	\$3,075
New Retaining Wall	91 lf	\$500 / lf	\$45,500	\$68,250
Relocate Retaining Wall	69 lf	\$100 / lf	\$6,900	\$10,350
TOTAL			\$54,450	
150% of TOTAL				\$81,675

Soil Map—Idaho Panhandle National Forest, Idaho-Washington-Montana
(Schneider)



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

9/20/2023
Page 1 of 3

MAP LEGEND

	Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		Area of Interest (AOI)		
---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	------------------------	---	--

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Idaho Panhandle National Forest, Idaho-Washington-Montana
Survey Area Data: Version 9, Sep 2, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2021—Oct 1, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2nq4	Vassar ashy silt loam, 5 to 30 percent slopes	1.5	100.0%
Totals for Area of Interest		1.5	100.0%



Idaho Panhandle National Forest, Idaho-Washington-Montana

2nq4—Vassar ashy silt loam, 5 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2nq4
Elevation: 2,130 to 4,530 feet
Mean annual precipitation: 23 to 45 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 95 to 120 days
Farmland classification: Not prime farmland



Map Unit Composition

Vassar and similar soils: 75 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vassar

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Volcanic ash over residuum weathered from granite and/or gneiss and/or schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
Oe - 1 to 2 inches: moderately decomposed plant material
Bw - 2 to 22 inches: ashy silt loam
2C - 22 to 62 inches: coarse sandy loam

Properties and qualities

Slope: 5 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B

Ecological site: F043AY574ID - Warm-Frigid, Udic, Unglaciaded,
Loamy, Hills and Mountains, Ashy surface (western redcedar)
Western Redcedar / Bride's Bonnet - Wild Ginger
Other vegetative classification: western redcedar/queencup
beadlily (CN530)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Idaho Panhandle National Forest, Idaho-Washington-
Montana
Survey Area Data: Version 9, Sep 2, 2022