

Appendix B. Aquatic Resource Inventory:

<i>Aquatic Resource Name</i>	<i>State</i>	<i>Cowardin System</i>	<i>Cowardin Class</i>	<i>HGM Class</i>	<i>Local Waterway Name</i>	<i>Measurement Type</i>	<i>Measurement Amount</i>	<i>Measurement Units</i>	<i>Waters Type</i>	<i>Latitude</i>	<i>Longitude</i>
Secret Creek à Complex 1	Nevada	RIVERINE	R4SB-RIVERINE, INTERMIT, STREAMBED	RIVERINE	Secret Creek	Area	0.06	ACRE	DELIN.CONC	41.2692	-116.8511
Secret Creek à Complex 2	Nevada	RIVERINE	R4SB-RIVERINE, INTERMIT, STREAMBED	RIVERINE	Secret Creek	Area	0.034	ACRE	DELIN.CONC	41.2588	-116.8529
Secret Creek à Complex 3	Nevada	RIVERINE	R4SB-RIVERINE, INTERMIT, STREAMBED	RIVERINE	Secret Creek	Area	0.038	ACRE	DELIN.CONC	41.2415	-116.8562
Secret Creek à Complex 4	Nevada	RIVERINE	R4SB-RIVERINE, INTERMIT, STREAMBED	RIVERINE	Secret Creek	Area	0.033	ACRE	DELIN.CONC	41.2311	-116.8598
SF Little Humboldt à Complex 1	Nevada	RIVERINE	R2UB-RIVERINE, LOWER PEREN, UNCONSOLBOT	RIVERINE	South Fork Little Humboldt River	Area	0.042	ACRE	DELIN.CONC	41.2771	-116.8519
SF Little Humboldt à Complex 2	Nevada	RIVERINE	R2UB-RIVERINE, LOWER PEREN, UNCONSOLBOT	RIVERINE	South Fork Little Humboldt River	Area	0.06	ACRE	DELIN.CONC	41.2679	-116.8715
SF Little Humboldt à Complex 3	Nevada	RIVERINE	R2UB-RIVERINE, LOWER	RIVERINE	South Fork Little Humboldt	Area	0.057	ACRE	DELIN.CONC	41.2581	-116.8924

			PEREN, UNCONSOL BOT		River						
Sheep Creek à Complex 1	Nevada	RIVERIN E	R4SB- RIVERINE, INTERMIT, STREAMBE D	RIVERINE	Sheep Creek	Area	0.017	ACRE	DELIN.CONC	41.2785	-116.8523
Sheep Creek à Complex 2	Nevada	RIVERIN E	R4SB- RIVERINE, INTERMIT, STREAMBE D	RIVERINE	Sheep Creek	Area	0.05	ACRE	DELIN.CONC	41.2704	-116.8791
Sheep Creek à Complex 3	Nevada	RIVERIN E	R4SB- RIVERINE, INTERMIT, STREAMBE D	RIVERINE	Sheep Creek	Area	0.064	ACRE	DELIN.CONC	41.262801	-116.903979

Appendix C. Impact Inventory:

<i>Water Name</i>	<i>Impact Name</i>	<i>Activity</i>	<i>Type of Material Being Discharged</i>	<i>Resource Type</i>	<i>Permanent Loss (Y/N)</i>	<i>Impact Duration</i>	<i>Amount Type</i>	<i>Proposed Length</i>	<i>Proposed Width</i>	<i>Proposed Amount</i>	<i>Amount Units</i>
Sheep Creek à Complex 1	Instream Restoration Structures Footprint	Ecological restoration	Natural untreated wood posts, native willow and aspen brush cuttings, and local stream bed sediment	River/Stream	No	Temporary	Fill Area	79	9.35	0.016957	Acres
Sheep Creek à Complex 2	Instream Restoration Structures Footprint	Ecological restoration	Natural untreated wood posts, native willow and aspen brush cuttings, and local stream bed sediment	River/Stream	No	Temporary	Fill Area	279	7.87	0.050407	Acres
Sheep Creek à Complex 3	Instream Restoration Structures Footprint	Ecological restoration	Natural untreated wood posts, native willow and aspen brush cuttings, and local stream bed sediment	River/Stream	No	Temporary	Fill Area	374	7.45	0.063965	Acres
SF Little Humboldt à Complex 1	Instream Restoration Structures Footprint	Ecological restoration	Natural untreated wood posts, native willow and aspen brush cuttings, and local stream bed sediment	River/Stream	No	Temporary	Fill Area	220	8.33	0.042071	Acres
SF Little Humboldt à Complex 2	Instream Restoration Structures Footprint	Ecological restoration	Natural untreated wood posts, native willow and aspen brush cuttings, and local stream bed sediment	River/Stream	No	Temporary	Fill Area	308	8.46	0.059818	Acres
SF Little Humboldt à Complex 3	Instream Restoration Structures Footprint	Ecological restoration	Natural untreated wood posts, native willow and aspen brush cuttings, and local stream bed	River/Stream	No	Temporary	Fill Area	292	8.53	0.05718	Acres

			sediment								
Secret Creek â Complex 1	Instream Restoration Structures Footprint	Ecological restoration	Natural untreated wood posts, native willow and aspen brush cuttings, and local stream bed sediment	River/Stream	No	Temporary	Fill Area	348	7.55	0.060317	Acres
Secret Creek â Complex 2	Instream Restoration Structures Footprint	Ecological restoration	Natural untreated wood posts, native willow and aspen brush cuttings, and local stream bed sediment	River/Stream	No	Temporary	Fill Area	180	8.24	0.03405	Acres
Secret Creek â Complex 3	Instream Restoration Structures Footprint	Ecological restoration	Natural untreated wood posts, native willow and aspen brush cuttings, and local stream bed sediment	River/Stream	No	Temporary	Fill Area	239	6.96	0.038187	Acres
Secret Creek â Complex 4	Instream Restoration Structures Footprint	Ecological restoration	Natural untreated wood posts, native willow and aspen brush cuttings, and local stream bed sediment	River/Stream	No	Temporary	Fill Area	194	7.48	0.033313	Acres

Provide any additional information you may have about the proposed quantity of wetlands, streams, or other types of waters directly affected by the proposed activity. This level of detail is helpful to better understand the type of impacts that are proposed for your project.

The Jake's Creek Fire Restoration Project operates strictly as an aquatic environmental enhancement and restoration initiative under Regional General Permit 16 (RGP 16). The planned manual installation of up to 766 low-tech instream structures (consisting of 381 Beaver Dam Analogs, 130 Post-Assisted Log Structures, and 255 Wood Jams) is a direct, process-based response to the devastating August 2025 Jake's Fire. The fire burned approximately 82,217 acres across the drainage basin, destroying critical upland groundcover, structural riparian ribbons, and canopy cover. This severe environmental degradation left massive volumes of post-fire fine sediment and ash highly mobile and vulnerable to washing into the stream channels during seasonal runoff events. The 10 individual impact rows detailed in this section correspond directly on a 1-to-1 structural level with the mapped complexes in our Aquatic Resource Inventory. By introducing clean, completely organic, fire-killed woody material, native willow brush cuttings, and localized stream bed sediment/sedge plugs, these non-permanent features establish vital geomorphic roughness. This structural roughness will effectively trap the shifting post-fire sediment pulse, reverse chronic vertical channel incision, raise local groundwater tables, and successfully reconnect the incised stream channels to their historical meadow floodplains. A primary driver for this restoration effort is to expand, optimize, and safeguard critical

deep pool refugia and complex instream cover for the federally listed threatened Lahontan Cutthroat Trout (LCT). There are 33.4 miles of active, designated LCT occupied stream habitat within the immediate fire perimeter that directly benefit from these localized pool-forming structures. The project is fully supported by an active interagency consensus to ensure absolute environmental compliance. The U.S. Fish and Wildlife Service (USFWS) has issued a formal Biological Opinion addressing special status aquatic species protection, and the Bureau of Land Management (BLM) is rendering the corresponding Biological Assessment for the surrounding upland watershed. Additionally, both the NDEP Bureau of Water Pollution Control and the Nevada Division of Water Resources have reviewed the low-impact, hand-built scope of this restoration design and determined that separate state working-in-waters or water rights permits are not triggered by these activities.

Definitions and help text

Water Name: The name of the wetland, stream, or other type of water that would be impacted.

Impact Name: Useful if entering more than one impact for the same or multiple waters (e.g., linear projects) and name accordingly. This may be different than the Water Name; keep it short and simple. For example, if Stream-1 is the water, the impact name could be “Crossing-1,” “Crossing-2,” “Crossing-3.” A short name helps describe the impact and is useful when looking at a list of impacts.

Activity: Options are:

- Conversion of waters type (forested wetland to emergent wetland, stream to lake)
- Discharge of dredged material
- Discharge of fill material
- Dredging (Section 10)
- Ecological restoration
- Other (Aquaculture, Work, Aerial or Submarine cable crossings)
- Removal (Sec 10 structures)
- Structure (Sec 10 only)
- Transport of dredged material (Sec 103)

Type of Material Being Discharged: Describe the material to be discharged within USACE jurisdiction. Make sure this description is consistent with your illustrations. Discharge material includes: rock, sand, clay, concrete, etc.

Resource Type: Options are Harbor/Ocean, Lake, Non-Tidal wetland, Other, Pond, River/Stream, and Tidal wetland.

Permanent Loss (Y/N): Only enter “YES” when the ‘discharge of dredged or fill material’ activity types are chosen. A permanent loss means the conversion of an aquatic resource to dry land.

Impact Duration: Options are Permanent or Temporary. An example of a temporary impact is the discharge of fill for temporary access roads that are later removed and returned to pre-construction contours.

Amount Type: Options are Area or Volume.

Amount Units: Options are Acre or Square Feet if Amount Type=Area, Cubic Yards if Amount Type=Volume.

Proposed Length and Proposed Width: Unit is linear feet.

Proposed Amount: Unit is square feet.

Appendix H. Supporting Information:

<i>Document Type</i>	<i>Document Created Date (YYYY-MM-DD)</i>	<i>Document Label</i>	<i>Information Source/Citation</i>	<i>Uploaded file name</i>
Applicable Supporting Scientific Literature	2019-01-29	Low-Tech Process-Based Restoration Manual	LOW-TECH PROCESS-BASED RESTORATION OF RIVERSCAPES DESIGN MANUAL	Copy of Low-tech_process-based_restoration_manual_2019_v1.pdf
Project Plans	2026-06-10	Jakes Fire Design Report	Jakes Fire Design Report	Jakes Fire Design Report.pdf
USDS NRCS Soil Survey Map	2026-04-07	Jakes_Soil_Report	USDA NRCS Soil Survey	Jakes_Soil_Report.pdf
Threatened Endangered Species Report	2026-06-29	Species List_ Reno Fish And Wildlife Office	US Fish and Wildlife Service	Species List_ Reno Fish And Wildlife Office.pdf
National Wetland Inventory Map	2026-06-10	USFWS National Wetlands Inventory Map	U.S. Fish and Wildlife Service	USFWS National Wetlands Inventory Map.pdf

U.S. Army Corps of Engineers (USACE)
NATIONWIDE PERMIT PRE-CONSTRUCTION NOTIFICATION (PCN)

For use of this form, see 33 CFR 330; the proponent agency is CECW-CO-R.

Form Approved -
OMB No. 0710-
0003
Expires: 2027-10-31

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Program of the Corps of Engineers (Corps); Final Rule 33 CFR 320-332.

Principal Purpose Information provided on this form will be used in evaluating the nationwide permit pre-construction notification.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of the agency coordination process.

Disclosure Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can

The public reporting burden for this collection of information, 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR RESPONSE TO THE ABOVE EMAIL.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see *sample drawings and/or instructions*) and be submitted to the district engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED 06/29/2026	4. DATE APPLICATION COMPLETE
--------------------	----------------------	--------------------------------	------------------------------

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First – Matt Middle – E Last – Berry Company – Anabranh Solutions Company Title – E-mail Address – Matt.berry@anabranhsolutions.com	8. AUTHORIZED AGENT'S NAME AND TITLE (<i>agent is not required</i>) First – Middle – Last – Company – E-mail Address –
6. APPLICANT'S ADDRESS Address – 11164 Newtown Road City – Nevada City State – CA ZIP – 95959 Country – US	9. AGENT'S ADDRESS Address – City – State – ZIP – Country –
7. APPLICANT'S PHONE NOS. with AREA CODE a. Mobile b. c. Fax +15302056505	10. AGENT'S PHONE NOS. with AREA CODE a. b. c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, to act in my behalf as my agent in the processing of this nationwide permit pre-construction notification and to furnish, upon request, supplemental information in support of this nationwide permit pre-construction notification.

SIGNATURE OF APPLICANT_____
DATE**NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY**12. PROJECT NAME or TITLE (*see instructions*)

Jake's Fire Restoration Project

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY13. NAME OF WATERBODY, IF KNOWN (*if applicable*)14. PROPOSED ACTIVITY STREET ADDRESS (*if applicable*)15. LOCATION OF PROPOSED ACTIVITY (*see instructions*)Latitude: 41.2623194 °N Longitude: -116.8750568
°W

Address:

City: Mountain City State: NV Zip: 89831

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (*see instructions*)

Section –

Township –

Range –

County – Elko County

Project Area – 9492.06793 Acres

State Tax Parcel ID –

17. DIRECTIONS TO THE SITE

18. IDENTIFY THE SPECIFIC NATIONWIDE PERMIT(S) YOU PROPOSE TO USE

RGP #16 - Aquatic Habitat Restoration and Enhancement Activities

19. DESCRIPTION OF PROPOSED NATIONWIDE PERMIT ACTIVITY (*see instructions*)

The primary purpose of the Jake's Creek Fire Restoration Project is to mitigate, halt, and reverse the severe geomorphic and ecological degradation caused by the August 2025 Jake's Fire. The fire burned approximately 82,217 acres across the watershed, destroying critical riparian zones, canopy cover, and upland vegetation. This loss of groundcover has left massive volumes of fine sediment and ash highly mobile and vulnerable to washing into stream channels during post-fire runoff events. The intended use of this activity is to execute a Low-Tech Process-Based Restoration (LTPBR) strategy across roughly 6 linear miles of degraded stream network (encompassing Sheep Creek, South Fork Little Humboldt River, and Secret Creek). By strategically reintroducing structural elements into the channels, the project will capture this post-fire sediment pulse, reverse chronic channel incision, raise the local water table, and restore natural floodplain-channel connectivity. Cultivating a dynamic, complex, and self-sustaining riverscape will expand and safeguard critical pool refugia for the federally listed threatened Lahontan Cutthroat Trout (LCT), which relies on these streams as a critical population stronghold. 2. Construction Methods and Materials. All restoration work will be entirely manual, low-impact, and completed by ground crews utilizing hand tools and lightweight power equipment (e.g., chainsaws and hand-held pneumatic/hydraulic post-pounders). No heavy tracked or wheeled machinery, earthmoving vehicles, or heavy construction equipment will operate inside or near the defined stream banks, completely eliminating mechanical disturbance to the bed and banks. Crews will construct a maximum of 766 instream structures, field-fitted to match local geomorphic variations. The structural components rely strictly on clean, natural, untreated materials, including fire-killed timber, aspen, willow cuttings, and native soil or sedge plugs: Beaver Dam Analogs (BDAs): Built by driving untreated wooden posts or arborist stakes into the streambed. Aspen, willow branches, and brush are tightly packed, and a downstream brush mattress is laid parallel to the flow to dissipate spillway energy. The upstream face is backfilled with local bed sediment or native turf plugs to seal excessive through-flow and force upstream ponding. Post-Assisted Log Structures (PALS) & Wood Jams (WJ): Built as porous woody debris

accumulations designed to mimic natural log jams. PALS are pinned into place using angled, driven wooden posts to wedge the wood and prevent material from rafting away during high flows. In select sections lined with aspen, trees will be passively felled directly into the channel to simulate natural wood loading efficiency. 3. Direct and Indirect Adverse Environmental Effects. Because this activity is strictly an environmental enhancement project designed under RGP 16, no permanent, long-term adverse environmental effects are expected. The total direct structural footprint in Waters of the U.S. (WOTUS) totals a highly localized 0.5 acres across 2,513 cumulative linear feet of total structural contact. Direct Temporary Effects: Minor, highly localized, and short-term elevations in stream turbidity will occur immediately downstream of active construction sites as crews step into the channel and place organic materials. These temporary sediment plumes are self-limiting and dissipate rapidly. Indirect Effects: The structures are designed to intentionally block downstream transport of post-fire ash and silts. While this induces localized sediment deposition (aggradation) and minor baseflow pooling immediately upstream of structures, these are beneficial geomorphic forces meant to reconnect the incised stream to its historical meadow floodplain.

The Jake's Creek Fire Restoration Project is a Low-Tech Process-Based Restoration (LTPBR) initiative designed to facilitate riverscape recovery across approximately 6 linear miles of degraded stream network within the headwaters of the South Fork Little Humboldt River basin. The project specifically targets three priority reaches: Sheep Creek (2.8% average gradient), South Fork Little Humboldt River (2.5% to 3.5% average gradient), and Secret Creek (3.8% to 6.8% average gradient). The primary activity is the manual installation of up to 766 low-tech instream structures divided across 10 distinct restoration complexes. These structures are designed to capture a post-fire pulse of fine sediment and ash, reverse widespread channel incision, expand deep pool refugia for the federally threatened Lahontan Cutthroat Trout (LCT), and restore historical channel-floodplain connectivity. Dimensions of Structures and Fills All project structures are hand-built trapezoidal features using completely organic, natural materials (untreated wood posts, conifer branches, willow cuttings, and native soil/sedge plugs). The cumulative physical footprint inside Waters of the U.S. (WOTUS) totals an immediate area impact of 0.5 acres and a total structural contact distance of 2,513 linear feet. 1. Generalized Individual Structure Dimensions To calculate material demands and structure counts, dimensions are standardized based on localized channel geometries and field-fitted to dynamic conditions: Height / Depth: Equivalent to the local channel depth or a maximum height of 1.0 meter (3.28 feet), whichever is less. Across the reaches, average channel depths range tightly between 0.14 meters and 0.28 meters. Width: Equivalent to the active channel width, which ranges from 2.12 meters to 2.85 meters depending on the specific complex. Length (Upstream to Downstream): Standardized at 1.0 meter at the base and tapering to 0.5 meters at the top. 2. Cumulative Material Fill Volumes The project involves a conservative maximum of 483.2 cubic yards of total structural fill discharged across the 10 complexes. There is no structural excavation; local bed sediment used to seal the structures is classified as internal fill. The breakdown of materials includes: Untreated Woody Material / Posts: 352.2 cubic yards Native Vegetation / Willow / Brush: 96.8 cubic yards Native Soil / Bed Sediment / Sedge Sod: 34.2 cubic yards The specific breakdown of structures can be found in the Design plans attached. Platforms, Piles, or Floats N/A: This project does not include the construction of any filled, pile-supported, or float-supported platforms, nor will any buildings or artificial structures be erected on the fill. All materials placed in the channel serve exclusively as porous geomorphic anchors designed to mimic natural woody debris loading and encourage biological beaver activity. No staging areas or permanent infrastructural developments will take place within the riparian corridor as part of this project.

20. DESCRIPTION OF PROPOSED MITIGATION MEASURES (*see instructions*)

Avoidance and minimization metrics are deeply integrated into the Low-Tech Process-Based Restoration (LTPBR) framework for the Jake's Creek Fire Restoration Project. The project design completely avoids the significant environmental impacts typically associated with traditional heavy engineering by entirely eliminating the use of heavy construction vehicles, tracked or wheeled earthmoving machinery, mechanical channel excavations, or intrusive stream dewatering bypasses. All work is executed manually by ground crews utilizing hand tools and lightweight power equipment (e.g., chainsaws and hand-held pneumatic or hydraulic post-pounders). To minimize potential temporary impacts to the local aquatic environment, the following strict Best Management Practices (BMPs) will be enforced: Fish Protection & Seasonal Timing: All instream manual work will strictly occur within the summer and fall low-flow window (typically July 1 to October 31) to completely avoid spawning, egg incubation, and migration constraints for the federally threatened Lahontan Cutthroat Trout. Construction Sequencing: Crew progress will move systematically from a downstream to upstream direction. This ensures that minor, localized turbidity plumes generated during manual bed manipulation immediately settle out over stable, newly completed downstream features instead of escaping into lower, high-quality stream reaches. Spill Prevention: Small machine maintenance and fueling will occur exclusively at designated staging zones established a minimum of 100 feet away from the Ordinary High-Water Mark (OHWM), backed by active containment kits. Handheld power tools will run strictly on non-toxic, bio-based biodegradable hydraulic fluid. Material Selection: No chemically treated lumber, concrete, or synthetic bindings will be discharged. Only clean, untreated wood posts and native vegetation cuttings are approved for construction, eliminating chemical leaching risks. Compensatory mitigation is not applicable (N/A) and is not proposed for this project. Under USACE regulatory guidelines and the specific terms of Regional General Permit 16 (RGP 16), compensatory mitigation is explicitly not required for activities where the primary objective and net result are the enhancement, recovery, and ecological restoration of aquatic resource functions. The project is designed solely to reverse channel incision, trap post-fire sediment pulses, and expand critical pool refugia for the threatened Lahontan Cutthroat Trout. Because the entire structural footprint results in a net upgrade to ecosystem services and riverscape health, no permanent adverse environmental losses will occur to trigger a mitigation requirement.

21. PURPOSE OF NATIONWIDE PERMIT ACTIVITY (*Describe the reason or purpose of the project, see instructions*)

The purpose of the Jake's Creek Fire Restoration Project is to mitigate and reverse the severe environmental degradation caused by the August 2025 Jake's Fire, which burned approximately 82,217 acres across north-central Nevada. The fire destroyed upland groundcover, canopy, and vital riparian zones. This loss of

vegetation has made massive volumes of post-fire fine sediment and ash highly mobile, increasing the stream channels' vulnerability to accelerated vertical incision, erosion, and severe habitat degradation.

The project is critically needed to trap this shifting sediment pulse, stabilize the vertical grade of the channels, raise local groundwater tables, and reconnect the incised streams to their historical meadow floodplains.

Intended Use: What and Why?

The project will be used to deploy Low-Tech Process-Based Restoration (LTPBR) methods across roughly 6 linear miles of a degraded stream network encompassing Sheep Creek, Secret Creek, and the mainstem South Fork Little Humboldt River.

This will be achieved by manually installing up to 766 clean, organic instream structures such as Beaver Dam Analogs (BDAs) and Post-Assisted Log Structures (PALS) to slow, split, and spread seasonal flows.

Why This Strategy is Implemented:

Lahontan Cutthroat Trout Stronghold: Reoccupied and active complexes directly protect and expand deep pool refugia, complex instream cover, and optimal water temperatures for the federally listed threatened Lahontan Cutthroat Trout (LCT).

Ecosystem and Vegetation Rehydration: Raising the subterranean water table expands soil moisture, which stimulates the natural recruitment and growth of obligate meadow species like willow and aspen.

Long-Term Watershed Resiliency: Restoring natural geomorphic and depositional processes slows down the escape of water, building multi-threaded channels that function as broad natural firebreaks and resilient water buffers against future drought and flood events.

Related Activities and Future Development

As a direct result of establishing these process-based geomorphic anchors, several related ecological and land-management activities are anticipated to develop across the action area:

Natural Beaver Expansion and Migration: Because the hand-built BDAs mimic natural structures, they are explicitly intended to encourage the active resident beaver population to safely migrate, colonize, and naturally maintain these complexes over time. This transitions the watershed from short-term manual maintenance to a long-term, self-sustaining biological regime.

On-Site Revegetation and Willow Staking: Crews will perform localized willow staking utilizing native cuttings harvested directly on-site. These plantings will leverage the expanded soil moisture to secure the newly formed stream banks and provide an immediate food source for expanding beaver colonies.

Adaptive Management Grazing Strategies: Rehydrating the valley bottom promotes robust sedge, grass, and rush forage production. This expanded vegetation will support the development of adaptive management grazing allotments on adjacent Bureau of Land Management (BLM) lands, balancing livestock management with critical riparian ecosystem preservation.

22. QUANTITY OF WETLANDS, STREAMS, OR OTHER TYPES OF WATERS DIRECTLY AFFECTED BY PROPOSED NATIONWIDE PERMIT ACTIVITY

(see instructions)

See Appendix B

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.

25. List any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. (see instructions)

26. If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and/or the loss of greater than 3/100-acre of stream bed and requires pre-construction notification, explain how the compensatory mitigation requirement in paragraph (c) and/or paragraph (d) of general condition 23 will be satisfied, or explain why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required for the proposed activity.

27. Is any portion of the nationwide permit activity already complete? Yes No

If Yes, describe the completed work:

28. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. (see instructions)

ADDITIONAL AFFECTED SPECIES:

The project area serves as an active, critical stronghold for the Lahontan Cutthroat Trout (*Oncorhynchus clarkii henshawi*), which is federally listed as Threatened under the Endangered Species Act (ESA). Population data indicates that LCT occurrences are heavily and positively correlated with existing beaver complexes in the action area. To ensure absolute compliance and protection, the U.S. Fish and Wildlife Service (USFWS) has issued a Biological Opinion for this scope of restoration work, and the Bureau of Land Management (BLM) is rendering a corresponding Biological Assessment. The low-tech techniques are custom-tailored to minimize physical disruptions and expand deep pool refugia to support species recovery.

29. List any historic properties that have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic property or properties. (*see instructions*)

None

30. For a proposed NWP activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, identify the Wild and Scenic River or the "study river":

31. If the proposed NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, have you submitted a written request for section 408 permission from the Corps district having jurisdiction over that project? Yes No

If "yes", please provide the date your request was submitted to the Corps district:

32. If the terms of the NWP(s) you want to use require additional information to be included in the PCN, please include that information in this space or provide it on an additional sheet of paper marked Block 30. (*see instructions*)

33. Pre-construction notification is hereby made for one or more nationwide permit(s) to authorize the work described in this notification. I certify that the information in this pre-construction notification 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.

Matt E Berry

06/29/2026

SIGNATURE OF APPLICANT

DATE

SIGNATURE OF AGENT

DATE

The pre-construction notification must be signed by the person who desires to undertake the proposed activity (applicant) and, if the statement in Block 11 has been filled out and signed, the authorized agent.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency 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.

**Instructions for Preparing a
Department of the Army
Nationwide Permit (NWP) Pre-Construction Notification (PCN)**

Blocks 1 through 4. To be completed by the Corps of Engineers.

Block 5. Applicant's Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the preconstruction notification, please attach a sheet of paper with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the PCN. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant's Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by the applicant, if an agent is to be employed.

Block 12. Proposed Nationwide Permit Activity Name or Title. Please provide a name identifying the proposed NWP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 13. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the NWP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Activity Street Address. If the proposed NWP activity is located at a site having a street address (not a box number), please enter it in Block 14.

Block 15. Location of Proposed Activity. Enter the latitude and longitude of where the proposed NWP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area requiring evaluation. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality where the site is located.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide a description of the location of the proposed NWP activity, such as lot numbers, tract numbers, or you may choose to locate the proposed NWP activity site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed NWP activity site if known. If there are multiple locations, please indicate directions to each location on a separate sheet of paper and mark as Block 17.

Block 18. Identify the Specific Nationwide Permit(s) You Propose to Use. List the number(s) of the Nationwide Permit(s) you want to use to authorize the proposed activity (e.g., NWP 29).

Block 19. Description of the Proposed Nationwide Permit Activity. Describe the proposed NWP activity, including the direct and indirect adverse environmental effects the activity would cause. The description of the proposed activity should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal. Identify the materials to be used in construction, as well as the methods by which the work is to be done.

Provide sketches when necessary to show that the proposed NWP activity complies with the terms of the applicable NWP(s). Sketches usually clarify the activity and result in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed NWP activity (e.g., a conceptual plan), but do not need to be detailed engineering plans.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 19.

Block 20. Description of Proposed Mitigation Measures. Describe any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed NWP activity. The description of any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or additional mitigation measures.

Block 21. Purpose of Nationwide Permit Activity. Describe the purpose and need for the proposed NWP activity. What will it be used for and why? Also include a brief description of any related activities associated with the proposed project. Provide the approximate dates you plan to begin and complete all work.

Block 22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by the Proposed Nationwide Permit Activity. For discharges of dredged or fill material into waters of the United States, provide the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained by the proposed NWP activity. For structures or work in navigable waters of the United States subject to Section 10 of the Rivers and Harbors Act of 1899, provide the amount of navigable waters filled, dredged, or occupied by one or more structures (e.g., aids to navigation, mooring buoys) by the proposed NWP activity.

For multiple NWPs, or for separate and distant crossings of waters of the United States authorized by NWPs 12 or 14, attach an extra sheet of paper marked Block 21 to provide the quantities of wetlands, streams, or other types of waters filled, flooded, excavated, or drained (or dredged or occupied by structures, if in waters subject to Section 10 of the Rivers and Harbors Act of 1899) for each NWP. For NWPs 12 and 14, include the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained for each separate and distant crossing of waters or wetlands. If more space is needed, attach an extra sheet of paper marked Block 22.

Block 23. Identify Any Other Nationwide Permit(s), Regional General Permit(s), or Individual Permit(s) Used to Authorize Any Part of Proposed Activity or Any Related Activity. List any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. For linear projects, list other separate and distant crossings of waters and wetlands authorized by NWPs 12 or 14 that do not require PCNs. If more space is needed, attach an extra sheet of paper marked Block 23.

Block 24. Compensatory Mitigation Statement for Losses of Greater Than 1/10-Acre of Wetlands and/or of Greater Than 3/100-Acre of Stream Bed When Pre-Construction Notification is Required. Paragraphs (c) and (d) of NWP general condition 23 require compensatory mitigation at a minimum one-for-one replacement ratio for all wetland losses that exceed 1/10-acre and/or for all losses of stream bed that exceed 3/100-acre, unless the district engineer determines in writing that either some other form of mitigation is more environmentally appropriate or the adverse environmental effects of the proposed NWP activity are no more than minimal without compensatory mitigation, and provides an activity-specific waiver of this requirement. Describe the proposed compensatory mitigation for wetland losses greater than 1/10 acre and/or for losses of stream bed that exceed 3/100-acre, or provide an explanation of why the district engineer should not require wetland and/or stream compensatory mitigation for the proposed NWP activity. If more space is needed, attach an extra sheet of paper marked Block 24.

Block 25. Is Any Portion of the Nationwide Permit Activity Already Complete? Describe any work that has already been completed for the NWP activity.

Block 26. List the Name(s) of Any Species Listed As Endangered or Threatened under the Endangered Species Act that Might be Affected by the Nationwide Permit Activity. If you are not a federal agency, and if any listed species or designated critical habitat might be affected or is in the vicinity of the proposed NWP activity, or if the proposed NWP activity is located in designated critical habitat, list the name(s) of those endangered or threatened species that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 7 of the Endangered Species Act.

Block 27. List Any Historic Properties that Have the Potential to be Affected by the Nationwide Permit Activity. If you are not a Federal agency, and if any historic properties have the potential to be affected by the proposed NWP activity, list the name(s) of those historic properties that have the potential to be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

Block 28. List the Wild and Scenic River or Congressionally Designated Study River if the Nationwide Permit Activity Would Occur in such a River. If the proposed NWP activity will occur in a river in the National Wild and Scenic River System or in a river officially designated by Congress as a "study river" under the Wild and Scenic Rivers Act, provide the name of the river. For a list of Wild and Scenic Rivers and study rivers, please visit <http://www.rivers.gov/>.

Block 29. Nationwide Permit Activities that also Require Permission from the Corps Under 33 U.S.C. 408. If the proposed NWP activity also requires permission from the Corps under 33 U.S.C. 408 because it will temporarily or permanently alter, occupy, or use a Corps federal authorized civil works project, indicate whether you have submitted a written request for section 408 permission from the Corps district having jurisdiction over that project.

Block 30. Other Information Required For Nationwide Permit Pre Construction Notifications. The terms of some of the Nationwide Permits include additional information requirements for preconstruction notifications:

- * NWP 3, Maintenance –information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.
- * NWP 31, Maintenance of Existing Flood Control Facilities –a description of the maintenance baseline and the dredged material disposal site.
- * NWP 33, Temporary Construction, Access, and Dewatering –a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre project conditions.
- * NWP 44, Mining Activities –if reclamation is required by other statutes, then a copy of the final reclamation plan must be submitted with the pre construction notification.
- * NWP 45, Repair of Uplands Damaged by Discrete Events –documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration.
- * NWP 48, Commercial Shellfish Aquaculture Activities –(1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the species that will be cultivated during the period this NWP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area (a detailed survey is not required).
- * NWP 49, Coal Remining Activities –a document describing how the overall mining plan will result in a net increase in aquatic resource functions must be submitted to the district engineer and receive written authorization prior to commencing the activity.
- * NWP 50, Underground Coal Mining Activities –if reclamation is required by other statutes, then a copy of the reclamation plan must be submitted with the pre construction notification.

If more space is needed, attach an extra sheet of paper marked Block 30.

Block 31. Signature of Applicant or Agent. The PCN must be signed by the person proposing to undertake the NWP activity, and if applicable, the authorized party (agent) that prepared the PCN. The signature of the person proposing to undertake the NWP activity shall be an affirmation that the party submitting the PCN possesses the requisite property rights to undertake the NWP activity (including compliance with special conditions, mitigation, etc.).

DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. The 45 day PCN review period will not start until the delineation is submitted or has been completed by the Corps.

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross Section Map. Identify each illustration with a figure or attachment number. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient

drawings should also be included. Please submit one original, or good quality copy, of all drawings on 8½x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

ADDITIONAL INFORMATION AND REQUIREMENTS

For proposed NWP activities that involve discharges into waters of the United States, water quality certification from the State, Tribe, or EPA must be obtained or waived (see NWP general condition 25). Some States, Tribes, or EPA have issued water quality certification for one or more NWPs. Please check the appropriate Corps district web site to see if water quality certification has already been issued for the NWP(s) you wish to use. For proposed NWP activities in coastal states, state Coastal Zone Management Act consistency concurrence must be obtained, or a presumption of concurrence must occur (see NWP general condition 26). Some States have issued Coastal Zone Management Act consistency concurrences for one or more NWPs. Please check the appropriate Corps district web site to see if Coastal Zone Management Act consistency concurrence has already been issued for the NWP(s) you wish to use.

U.S. Army Corps of Engineers (USACE)

PERMIT INFORMATION SHEET

PERMIT FORM TYPE

ENG 6082

DATE RECEIVED

06/29/2026

TYPE OF PERMIT YOU'RE REQUESTING

Standard

Letter Of Permission

General Permit

APPLICABLE STATUTORY AUTHORITY

Section 404 Clean Water Act

Section 10 Rivers and Harbors Act

Section 103 of the Marine Protection, Research, and Sanctuaries Act

DO YOU PROPOSE COMPENSATORY MITIGATIONS?

No

COASTAL DISTRICT

WOULD THE PROJECT OCCUR IN THE TERRITORIAL SEAS OR OCEAN WATERS?

No

DESCRIBE THE ACTIVITY'S RELATIONSHIP TO THE BASELINE FROM WHICH THE TERRITORIAL SEA IS MEASURED

SECTION 408 USACE CIVIL WORKS PROJECTS

WILL THE PROPOSED ACTIVITY REQUIRES PERMISSION FROM THE USACE PURSUANT TO 33 U.S.C. 408 BECAUSE IT WILL ALTER OR TEMPORARILY OR PERMANENTLY OCCUPY OR USE A U.S. ARMY CORPS OF ENGINEERS FEDERALLY AUTHORIZED CIVIL WORKS PROJECT?

Yes

No

I'm not sure

IF YES, HAVE YOU SUBMITTED A WRITTEN REQUEST FOR SECTION 408 PERMISSION FROM THE USACE DISTRICT HAVING JURISDICTION OVER THAT PROJECT?

Yes

No

GENERAL PERMIT INFORMATION

WILL THE PROPOSED ACTIVITY RESULT IN A LOSS TO WETLANDS OR WATERS THAT EXCEEDS NATIONAL OR DISTRICT THRESHOLDS?

No



United States
Department of
Agriculture

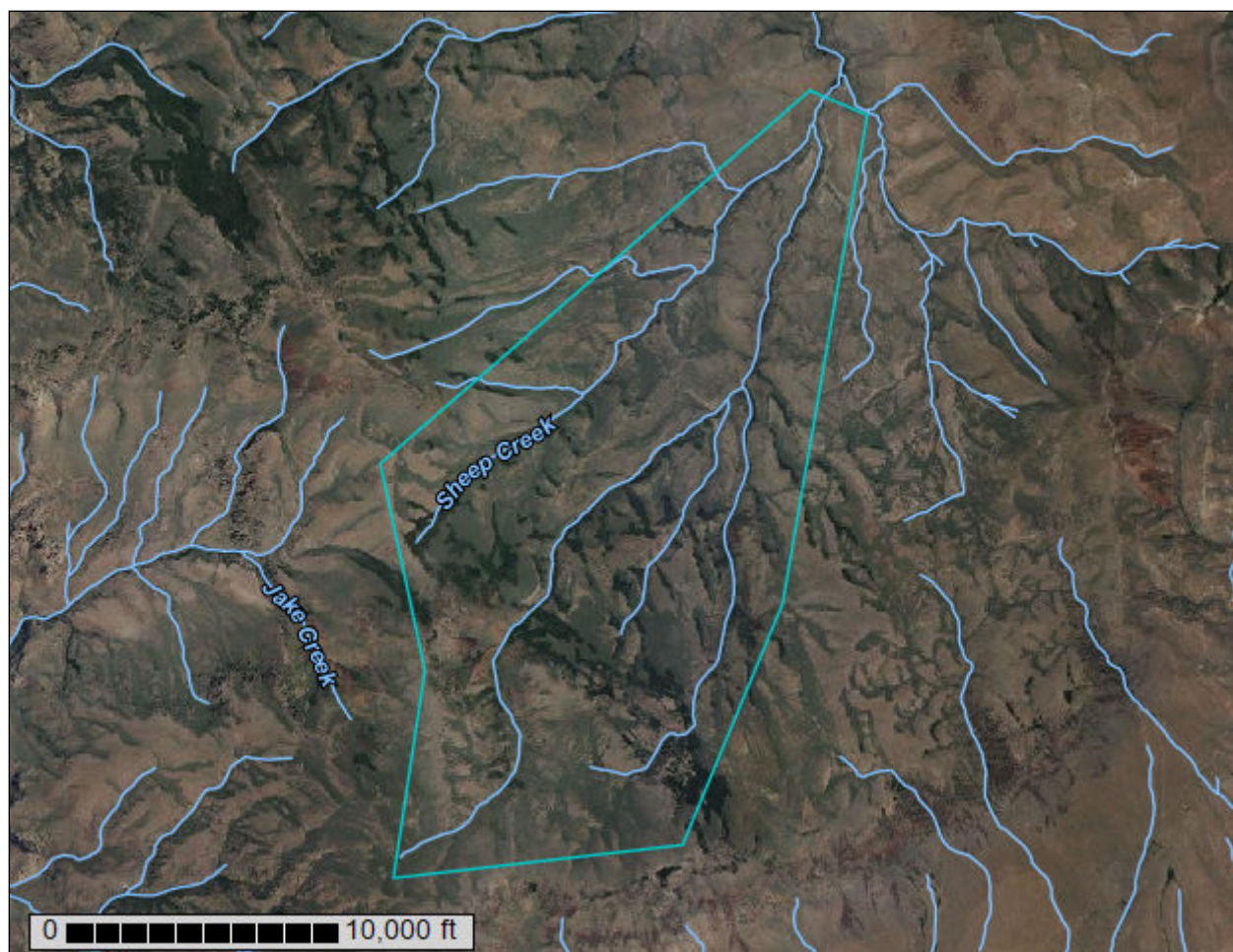
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Northwest Elko County Area, Nevada, Part of Elko and Eureka Counties

Jake's Creek



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Northwest Elko County Area, Nevada, Part of Elko and Eureka Counties.....	13
1621—Cleavage-Graley-Cleavage, moderately steep association.....	13
1640—Tusk-Cleavage-Hackwood association.....	16
1650—Ninemile-Tusk-Ninemile, steep association.....	19
1651—Ninemile-Reluctan-Ninemile, moderately steep association.....	22
1711—Reluctan-Ninemile-Cleavage association.....	25
1810—Shively-Ninemile-Hackwood association.....	28
References	32

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

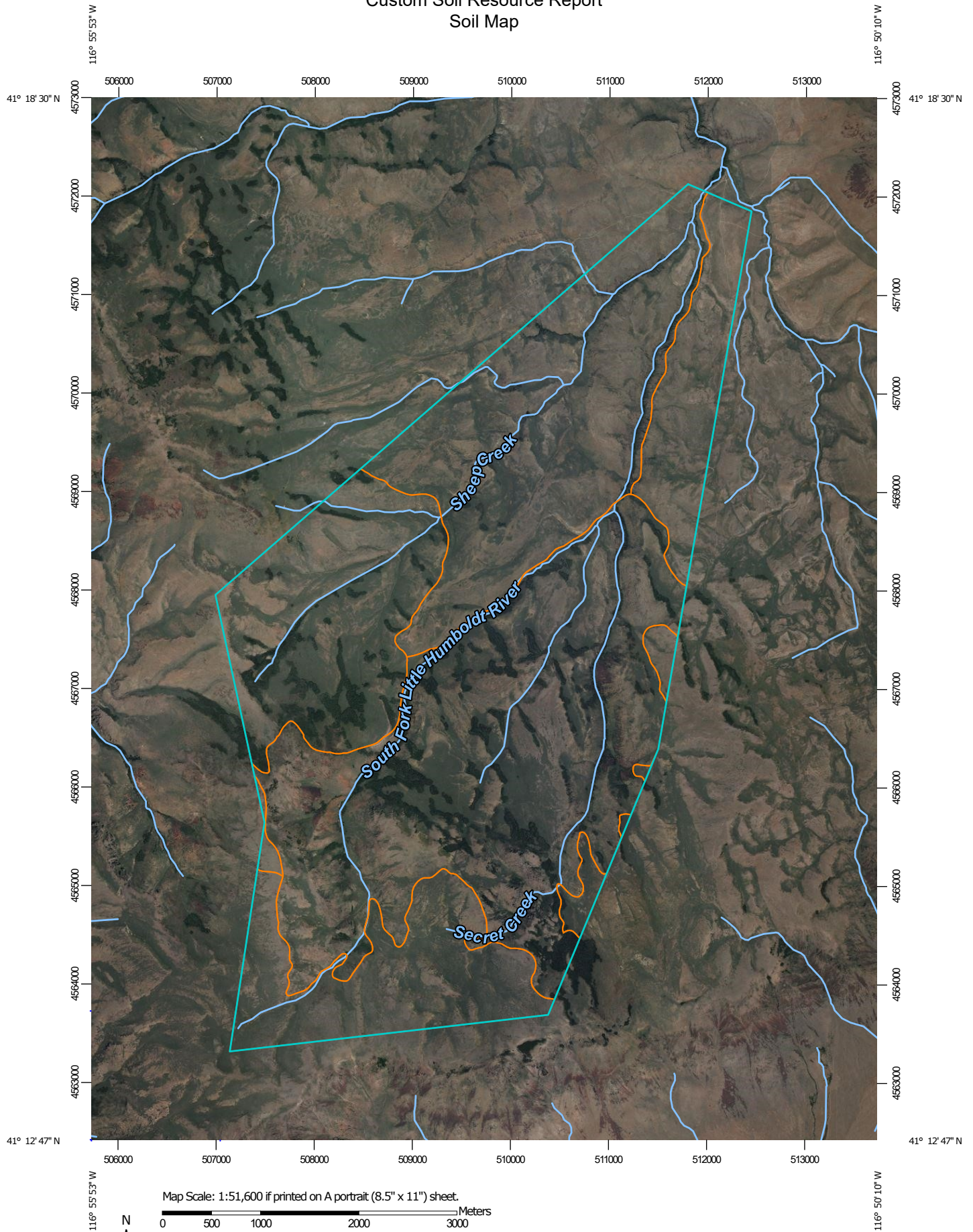
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

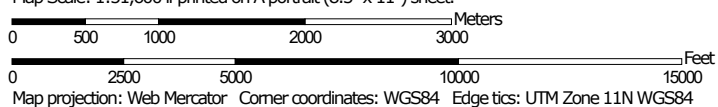
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:51,600 if printed on A portrait (8.5" x 11") sheet.



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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: Northwest Elko County Area, Nevada, Part of Elko and Eureka Counties

Survey Area Data: Version 19, Sep 2, 2025

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

Date(s) aerial images were photographed: Jun 22, 2022—Oct 7, 2022

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
1621	Cleavage-Graley-Cleavage, moderately steep association	1,296.6	18.3%
1640	Tusk-Cleavage-Hackwood association	1,125.9	15.9%
1650	Ninemile-Tusk-Ninemile, steep association	21.6	0.3%
1651	Ninemile-Reluctan-Ninemile, moderately steep association	1,693.7	23.9%
1711	Reluctan-Ninemile-Cleavage association	101.7	1.4%
1810	Shively-Ninemile-Hackwood association	2,854.7	40.2%
Totals for Area of Interest		7,094.6	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Northwest Elko County Area, Nevada, Part of Elko and Eureka Counties

1621—Cleavage-Graley-Cleavage, moderately steep association

Map Unit Setting

National map unit symbol: j0fl
Landscape: Mountains
Elevation: 6,000 to 7,500 feet
Mean annual precipitation: 13 to 19 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 75 to 95 days
Farmland classification: Not prime farmland

Map Unit Composition

Cleavage and similar soils: 35 percent
Graley and similar soils: 30 percent
Cleavage and similar soils: 20 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cleavage

Setting

Landscape: Mountains
Landform: Upper part of mountains
Landform position (two-dimensional): Summit
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Colluvium derived from igneous and sedimentary rock over residuum weathered from igneous and sedimentary rock

Typical profile

H1 - 0 to 4 inches: very gravelly loam
H2 - 4 to 18 inches: very gravelly loam
R - 18 to 28 inches: bedrock

Properties and qualities

Slope: 4 to 15 percent
Depth to restrictive feature: 14 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R025XY017NV - CLAYPAN 12-16 P.Z.
Hydric soil rating: No

Description of Graley

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Residuum derived from volcanic rocks

Typical profile

H1 - 0 to 12 inches: stony loam
H2 - 12 to 17 inches: very gravelly clay
R - 17 to 27 inches: bedrock

Properties and qualities

Slope: 4 to 15 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: 14 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R025XY012NV - LOAMY SLOPE 12-16 P.Z.
Hydric soil rating: No

Description of Cleavage

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Colluvium derived from igneous and sedimentary rock over residuum weathered from igneous and sedimentary rock

Typical profile

H1 - 0 to 4 inches: extremely gravelly loam
H2 - 4 to 18 inches: very gravelly loam
R - 18 to 28 inches: bedrock

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: 14 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: R025XY024NV - MOUNTAIN RIDGE

Hydric soil rating: No

Minor Components

Tusel

Percent of map unit: 6 percent

Landform: Upper part of mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: R025XY010NV - STEEP NORTH SLOPE

Hydric soil rating: No

Rock outcrop

Percent of map unit: 4 percent

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Convex

Hydric soil rating: No

Welch

Percent of map unit: 3 percent

Landform: Drainageways

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R025XY005NV - WET MEADOW

Hydric soil rating: Yes

Sumine

Percent of map unit: 2 percent

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: R025XY009NV - SOUTH SLOPE 12-14 P.Z.

Hydric soil rating: No

1640—Tusk-Cleavage-Hackwood association

Map Unit Setting

National map unit symbol: j0fs
Landscape: Mountains
Elevation: 6,500 to 8,500 feet
Mean annual precipitation: 13 to 19 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 50 to 95 days
Farmland classification: Not prime farmland

Map Unit Composition

Tusk and similar soils: 40 percent
Cleavage and similar soils: 30 percent
Hackwood and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tusk

Setting

Landscape: Mountains
Landform: Lower part of mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Colluvium derived from volcanic rocks

Typical profile

H1 - 0 to 14 inches: gravelly loam
H2 - 14 to 38 inches: gravelly clay loam
H3 - 38 to 60 inches: very gravelly clay loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 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 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: C
Ecological site: R025XY004NV - LOAMY SLOPE 16+ P.Z.
Hydric soil rating: No

Description of Cleavage

Setting

Landform: Upper part of mountains
Landform position (two-dimensional): Summit
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Colluvium derived from igneous and sedimentary rock over residuum weathered from igneous and sedimentary rock

Typical profile

H1 - 0 to 4 inches: very cobbly loam
H2 - 4 to 18 inches: very gravelly clay loam
R - 18 to 28 inches: bedrock

Properties and qualities

Slope: 4 to 15 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: 14 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R025XY024NV - MOUNTAIN RIDGE
Hydric soil rating: No

Description of Hackwood

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Colluvium derived from volcanic rocks

Typical profile

H1 - 0 to 26 inches: silt loam
H2 - 26 to 34 inches: gravelly loam
H3 - 34 to 60 inches: very gravelly loam

Properties and qualities

Slope: 4 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained

Custom Soil Resource Report

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 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 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6c

Hydrologic Soil Group: B

Ecological site: F025XY065NV - Backslope Aspen

Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 6 percent

Landform: Upper part of mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Convex

Hydric soil rating: No

Reluctan

Percent of map unit: 3 percent

Landform: Lower part of mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: R025XY012NV - LOAMY SLOPE 12-16 P.Z.

Hydric soil rating: No

Sumine

Percent of map unit: 3 percent

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: R025XY009NV - SOUTH SLOPE 12-14 P.Z.

Hydric soil rating: No

Welch

Percent of map unit: 3 percent

Landform: Drainageways

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R025XY005NV - WET MEADOW

Hydric soil rating: Yes

1650—Ninemile-Tusk-Ninemile, steep association

Map Unit Setting

National map unit symbol: j0ft
Landscape: Mountains
Elevation: 7,000 to 8,300 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 75 to 95 days
Farmland classification: Not prime farmland

Map Unit Composition

Ninemile and similar soils: 35 percent
Tusk and similar soils: 30 percent
Ninemile and similar soils: 20 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ninemile

Setting

Landscape: Mountains
Landform: Mountains
Landform position (two-dimensional): Summit
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum derived from volcanic rocks

Typical profile

H1 - 0 to 4 inches: very cobbly loam
H2 - 4 to 19 inches: gravelly clay
R - 19 to 29 inches: bedrock

Properties and qualities

Slope: 4 to 15 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R025XY017NV - CLAYPAN 12-16 P.Z.
Hydric soil rating: No

Description of Tusk

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Colluvium derived from volcanic rocks

Typical profile

H1 - 0 to 14 inches: gravelly loam
H2 - 14 to 38 inches: gravelly clay loam
H3 - 38 to 60 inches: very gravelly clay loam

Properties and qualities

Slope: 15 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 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 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R025XY004NV - LOAMY SLOPE 16+ P.Z.
Hydric soil rating: No

Description of Ninemile

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum derived from volcanic rocks

Typical profile

H1 - 0 to 4 inches: very cobbly loam
H2 - 4 to 19 inches: gravelly clay
R - 19 to 29 inches: bedrock

Properties and qualities

Slope: 30 to 50 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent

Custom Soil Resource Report

Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R025XY017NV - CLAYPAN 12-16 P.Z.
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 5 percent
Landform: Upper part of mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Tusel

Percent of map unit: 5 percent
Landform: Upper part of mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R025XY010NV - STEEP NORTH SLOPE
Hydric soil rating: No

Graley

Percent of map unit: 3 percent
Landform: Lower part of mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R025XY012NV - LOAMY SLOPE 12-16 P.Z.
Hydric soil rating: No

Welch

Percent of map unit: 2 percent
Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R025XY006NV - DRY MEADOW
Hydric soil rating: Yes

1651—Ninemile-Reluctan-Ninemile, moderately steep association

Map Unit Setting

National map unit symbol: j0fv
Landscape: Mountains
Elevation: 6,000 to 7,000 feet
Mean annual precipitation: 11 to 15 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 75 to 95 days
Farmland classification: Not prime farmland

Map Unit Composition

Ninemile and similar soils: 40 percent
Reluctan and similar soils: 30 percent
Ninemile and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ninemile

Setting

Landscape: Mountains
Landform: Upper part of mountains
Landform position (two-dimensional): Summit
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum derived from volcanic rocks

Typical profile

H1 - 0 to 4 inches: very cobbly loam
H2 - 4 to 19 inches: gravelly clay
R - 19 to 29 inches: bedrock

Properties and qualities

Slope: 4 to 15 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: R025XY017NV - CLAYPAN 12-16 P.Z.

Hydric soil rating: No

Description of Reluctan

Setting

Landform: Lower part of mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Residuum and colluvium derived from volcanic rocks

Typical profile

H1 - 0 to 9 inches: cobbly loam

H2 - 9 to 27 inches: gravelly clay loam

R - 27 to 37 inches: bedrock

Properties and qualities

Slope: 15 to 50 percent

Surface area covered with cobbles, stones or boulders: 2.0 percent

Depth to restrictive feature: 20 to 39 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: C

Ecological site: R025XY012NV - LOAMY SLOPE 12-16 P.Z.

Hydric soil rating: No

Description of Ninemile

Setting

Landform: Mountains

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum derived from volcanic rocks

Typical profile

H1 - 0 to 4 inches: very cobbly loam

H2 - 4 to 19 inches: gravelly clay

R - 19 to 29 inches: bedrock

Properties and qualities

Slope: 15 to 30 percent

Custom Soil Resource Report

Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R025XY017NV - CLAYPAN 12-16 P.Z.
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 6 percent
Landform: Upper part of mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Tusel

Percent of map unit: 3 percent
Landform: Upper part of mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R025XY010NV - STEEP NORTH SLOPE
Hydric soil rating: No

Welch

Percent of map unit: 3 percent
Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R025XY006NV - DRY MEADOW
Hydric soil rating: Yes

Quarz

Percent of map unit: 3 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R025XY009NV - SOUTH SLOPE 12-14 P.Z.
Hydric soil rating: No

1711—Reluctan-Ninemile-Cleavage association

Map Unit Setting

National map unit symbol: j0gk
Landscape: Mountains
Elevation: 6,000 to 7,500 feet
Mean annual precipitation: 11 to 15 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 75 to 95 days
Farmland classification: Not prime farmland

Map Unit Composition

Reluctan and similar soils: 35 percent
Ninemile and similar soils: 30 percent
Cleavage and similar soils: 25 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reluctan

Setting

Landscape: Mountains
Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Residuum and colluvium derived from volcanic rocks

Typical profile

H1 - 0 to 9 inches: cobbly loam
H2 - 9 to 27 inches: gravelly clay loam
R - 27 to 37 inches: bedrock

Properties and qualities

Slope: 15 to 30 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: 20 to 39 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: R025XY012NV - LOAMY SLOPE 12-16 P.Z.
Hydric soil rating: No

Description of Ninemile

Setting

Landform: Lower part of mountains
Landform position (two-dimensional): Summit
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum derived from volcanic rocks

Typical profile

H1 - 0 to 4 inches: cobbly loam
H2 - 4 to 19 inches: gravelly clay
R - 19 to 29 inches: bedrock

Properties and qualities

Slope: 4 to 15 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R025XY017NV - CLAYPAN 12-16 P.Z.
Hydric soil rating: No

Description of Cleavage

Setting

Landform: Upper part of mountains
Landform position (two-dimensional): Summit
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Colluvium derived from igneous and sedimentary rock over residuum weathered from igneous and sedimentary rock

Typical profile

H1 - 0 to 4 inches: gravelly loam
H2 - 4 to 18 inches: very gravelly clay loam
R - 18 to 28 inches: bedrock

Custom Soil Resource Report

Properties and qualities

Slope: 4 to 15 percent
Depth to restrictive feature: 14 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R025XY024NV - MOUNTAIN RIDGE
Hydric soil rating: No

Minor Components

Welch

Percent of map unit: 3 percent
Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R025XY003NV - LOAMY BOTTOM 8-14 P.Z.
Hydric soil rating: No

Hackwood

Percent of map unit: 3 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: F025XY065NV - Backslope Aspen
Hydric soil rating: No

Welch

Percent of map unit: 2 percent
Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R025XY005NV - WET MEADOW
Hydric soil rating: Yes

Welch

Percent of map unit: 2 percent
Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R025XY006NV - DRY MEADOW
Hydric soil rating: Yes

1810—Shively-Ninemile-Hackwood association

Map Unit Setting

National map unit symbol: j0h4
Landscape: Mountains
Elevation: 6,500 to 7,500 feet
Mean annual precipitation: 13 to 19 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 50 to 95 days
Farmland classification: Not prime farmland

Map Unit Composition

Shively and similar soils: 35 percent
Ninemile and similar soils: 30 percent
Hackwood and similar soils: 20 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shively

Setting

Landscape: Mountains
Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum and colluvium derived from tuffaceous rocks

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 21 inches: loam
H3 - 21 to 41 inches: sandy loam
Cr - 41 to 60 inches: bedrock

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: 39 to 59 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 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: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R025XY010NV - STEEP NORTH SLOPE
Hydric soil rating: No

Description of Ninemile

Setting

Landform: Mountains
Landform position (two-dimensional): Summit
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum derived from volcanic rocks

Typical profile

H1 - 0 to 4 inches: very cobbly loam
H2 - 4 to 19 inches: gravelly clay
R - 19 to 29 inches: bedrock

Properties and qualities

Slope: 4 to 15 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R025XY017NV - CLAYPAN 12-16 P.Z.
Hydric soil rating: No

Description of Hackwood

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Colluvium derived from volcanic rocks

Typical profile

H1 - 0 to 26 inches: silt loam
H2 - 26 to 34 inches: gravelly loam
H3 - 34 to 60 inches: very gravelly loam

Properties and qualities

Slope: 15 to 30 percent

Custom Soil Resource Report

Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 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 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F025XY065NV - Backslope Aspen
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 10 percent
Landform: Mountains
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Tusk

Percent of map unit: 3 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R025XY004NV - LOAMY SLOPE 16+ P.Z.
Hydric soil rating: No

Rubble land

Percent of map unit: 1 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Inpendence

Percent of map unit: 1 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R025XY002NV - ASPEN THICKET
Hydric soil rating: No

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301



In Reply Refer To:

06/29/2026 19:13:17 UTC

Project Code: 2026-0109580

Project Name: Jake's Fire Restoration Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see [Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service \(fws.gov\)](#).

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

PROJECT SUMMARY

Project Code: 2026-0109580

Project Name: Jake's Fire Restoration Project

Project Type: Stream Preservation

Project Description: The Jake's Creek Fire Restoration Project will manually install up to 766 clean, low-tech instream structures across approximately 6 linear miles of degraded stream channels within the South Fork Little Humboldt River Basin in Elko County, Nevada, over an 8-to-12-week operational window during the summer and fall of 2026 and 2027 to capture post-fire sediment and expand threatened Lahontan Cutthroat Trout habitat.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.26477825,-116.88265432293781,14z>



Counties: Elko County, Nevada

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

FISHES

NAME	STATUS
Lahontan cutthroat trout <i>Oncorhynchus clarkii henshawi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964 General project design guidelines: https://ipac.ecosphere.fws.gov/project/YHYGWLDT7FF37FSUUSRAYFKXGY/documents/generated/11040.pdf	Threatened

INSECTS

NAME	STATUS
Monarch butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743 General project design guidelines: https://ipac.ecosphere.fws.gov/project/YHYGWLDT7FF37FSUUSRAYFKXGY/documents/generated/11040.pdf	Proposed Threatened
Suckley's cuckoo bumble bee <i>Bombus suckleyi</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10885	Proposed Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act ² and the Migratory Bird Treaty Act (MBTA) ¹. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

1. The [Bald and Golden Eagle Protection Act](#) of 1940.
2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

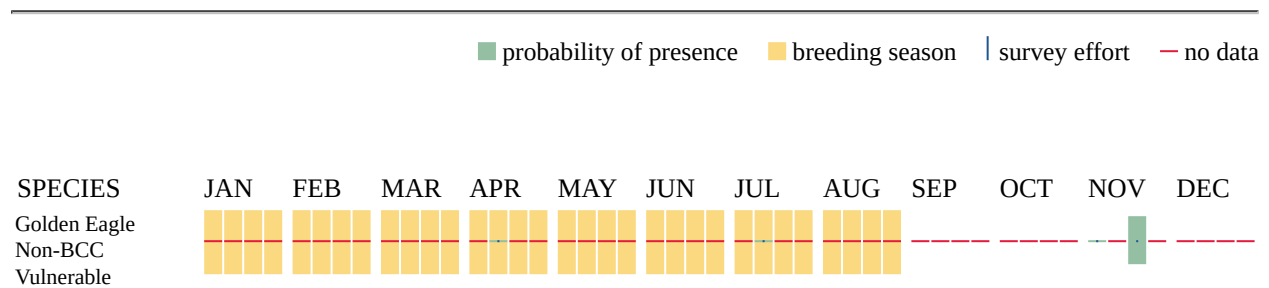
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>

- Nationwide avoidance and minimization measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Long-eared Owl <i>asio otus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds Mar 1 to Jul 15
Northern Harrier <i>Circus hudsonius</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper

Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

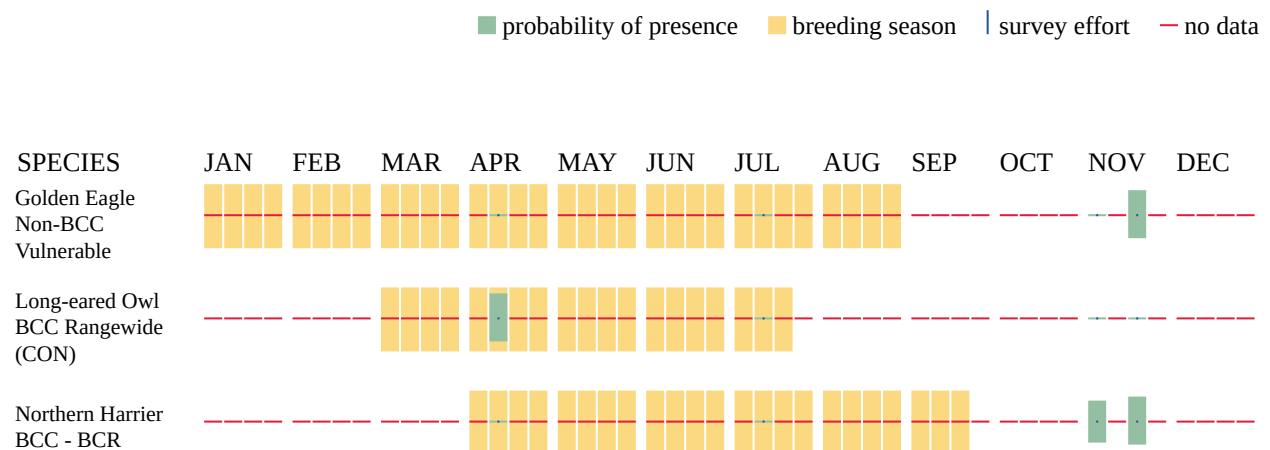
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1B
- PSS1C

RIVERINE

- R4SBA
- R4SBC
- R3UBF

FRESHWATER POND

- PUBHb

FRESHWATER EMERGENT WETLAND

- PEM1B

IPAC USER CONTACT INFORMATION

Agency: Nevada Department of Wildlife

Name: Matt Berry

Address: PO Box 8071

City: Moscow

State: ID

Zip: 83843

Email: mattedmondberry@gmail.com

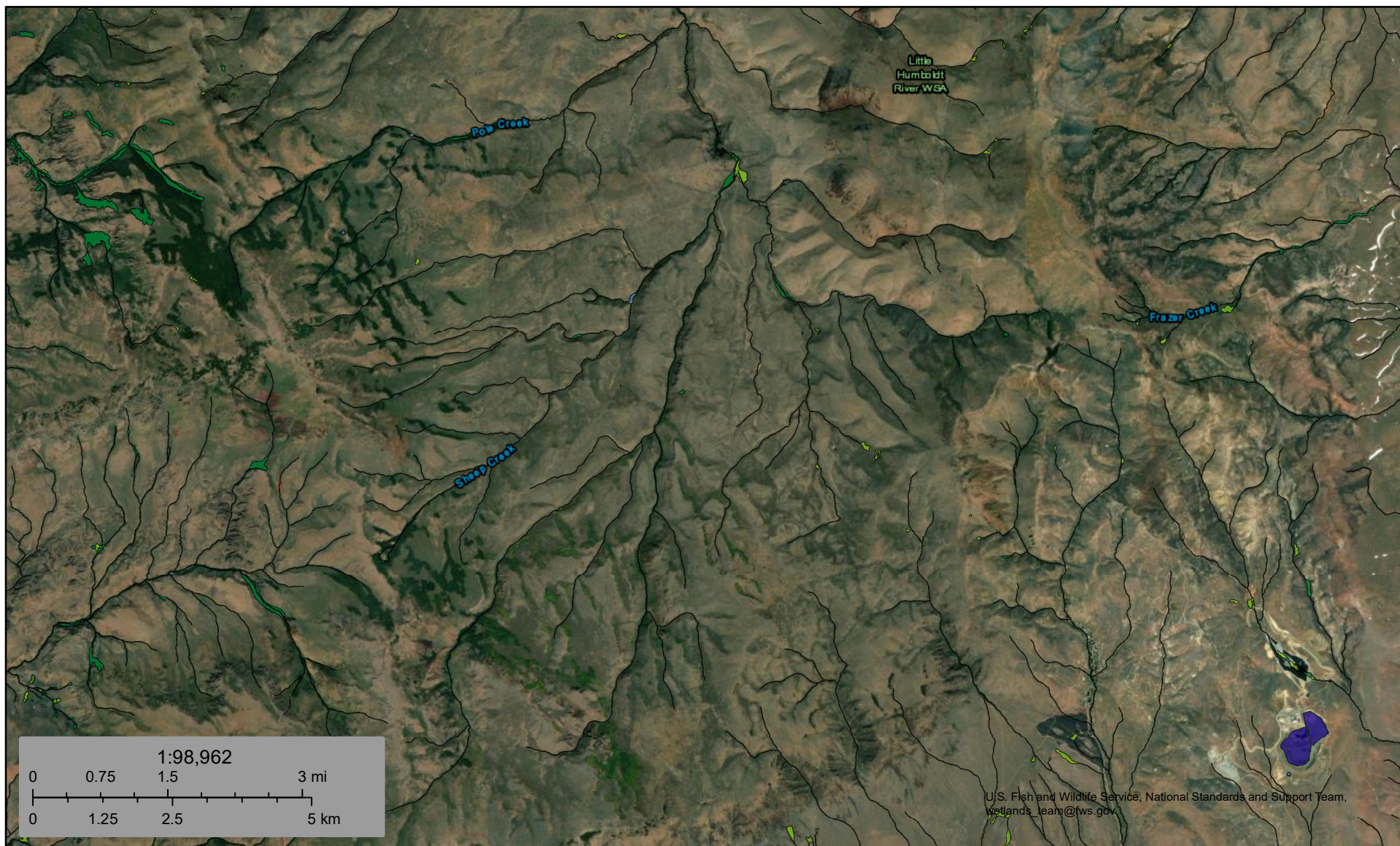
Phone: 5302056505



U.S. Fish and Wildlife Service

National Wetlands Inventory

Jakes Fire Restoration Project



June 29, 2026

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.