Joint Application for Proposed Work in Montana's Streams, Wetlands, Floodplains, and Other Waterbodies

Project: Bank Stabilization
Location: Mystic Dam, Stillwater County
Stream or Water Body: West Rosebud Creek outfall from West Rosebud Lake

Prepared for:

- Stillwater Conservation District
- US Army Corps of Engineers, Omaha District

Prepared by:
Janelle Garza, Environmental Compliance Specialist, NorthWestern Energy
9 West Granite Street
Butte, MT 59701

August 2026

CONTENTS

NorthWestern® Energy

Application

Joint Application for Proposed Work in Montana's Streams, Wetlands, Floodplains, and Other Waterbodies

CD/Agency Use Only

Application Number: Date Received:

Stream or Waterbody:

Date Accepted: Initials: Date Forwarded to FWP:

This section is for all Department of Transportation and SPA 124 Permits (government projects)

Project Name:

Control Number: Contract Letting Date:

MEPA/NEPA Compliance: ☐Yes ☐No If yes, #C5 of this application does not apply.

Applicant Use

This is a standardized application to apply for one or all local, state, or federal permits listed below. Check the box(s) for each permit being applied for.

- Refer to the instructions to determine which permits apply to your project and submit an application to each applicable agency.
- Incomplete applications will result in a delay of application processing.
- The applicant is responsible for obtaining all necessary permits and landowner permission before beginning work.
- Other laws may apply.

	Permit	**Agency**	**Required Application Sections:**	**Fee**
☒	NSLPA 310 Permit	Local Conservation District	A-E and G	No fee
☐	SPA 124 Permit	Department of Fish, Wildlife & Parks (FWP)	A-E and G	No fee
☒	318 Authorization 401 Certification	Department of Environmental Quality (DEQ)	A-E and G	$250 (318); $400-$20,000 (401)
☐	Navigable Rivers Land Use License, Lease, or Easement	Department of Natural Resources and Conservation (DNRC), Trust Lands Management Division	A-E and G	$50, plus additional fee
☒	Section 404 Permit, Section 10 Permit	U.S. Army Corps of Engineers (USACE)	A-G and F1-10	Varied ($0-$100)
☐	Floodplain Permit	Local Floodplain Administrator	A-G	Varied ($25-$500+)

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A. APPLICANT INFORMATION

APPLICANT (*party responsible for project)* Janelle Garza, NorthWestern Energy (NWE), Environmental Compliance Specialist

Has the landowner consented to the project? ☒ Yes ☐ No

Mailing Address: 11 E Park St City, State: Butte, MT Zip: 59701

Physical Address: 9 W Granite St City, State: Butte, MT Zip: 59701

Daytime Phone: (406) 497-3382 Email: janelle.garza@northwestern.com

LANDOWNER NAME (*if different from applicant)* Annette Smits, Custer National Forest

Mailing Address: 5001 Southgate Dr City, State: Billings, MT Zip: 59101-4669

Physical Address: 6811 Highway 212 City, State: Red Lodge, MT Zip: 59068

Daytime Phone: Office – (406) 446-2103, Mobile – (406) 425-2563 Email: annette.smits@usda.gov

CONTRACTOR/COMPANY NAME (*if applicable)* Jody Klessens / Klessen Contracting

Mailing Address: 218 Lower Luther Rd City, State: Red Lodge, MT Zip: 59068

Physical Address: 218 Lower Luther Rd City, State: Red Lodge, MT Zip:

Daytime Phone: (406) 425-1687 Email: jjklessens@aol.com

B. PROJECT SITE INFORMATION

Refer to section B1 of the instructions

1. NAME OF STREAM OR WATERBODY at project location: West Rosebud Creek

Project Address/Location: W Rosebud Rd Nearest Town: Fishtail/Absarokee/Columbus

County: Stillwater Geocode: 32-0352-01-1-01-01-0000

Township: 07S Range: 16E Section: 01 ¼ Section: PB 37 ¼ Section:

Latitude: 45.252083N Longitude: 109.707743W

Driving directions or other instructions needed for finding the site: From Nye Rd & W Rosebud Rd, just SW of Fishtail, MT: Head SE on W Rosebud Rd, continue 6.4 mi. Slight left to stay on W Rosebud Rd, continue 361 ft. Turn left to stay on W Rosebud Rd, continue 11.1 mi. Continue onto W Rosebud Lake Rd, continue 0.6 mi. Continue onto W Rosebud Rd, continue 1.0 mi.

Refer to section B2 of the instructions

2. Is the proposed activity within **SAGE GROUSE** areas designated as general, connected, or core habitat?

☐ Yes ☒ No Attach consultation letter if required.

Refer to section B3 of the instructions

3. Is this a **STATE NAVIGABLE WATERWAY**? The state owns the beds of certain navigable waterways.

☐ Yes ☒ No If yes, send a copy of this application to the appropriate DNRC land office.

Refer to section B4 of the instructions

4. **WHAT IS THE CURRENT CONDITION** of the proposed project site? What vegetation is present? Describe the existing bank condition, bank slope, height, nearby structures, and wetlands.

GEOLOGY: Gneissic rocks (Agqf) – Predominantly granitic gneiss and migmatite; commonly consists of alternating bands of more felsic and more mafic gneiss; contains inlusions of metasedimentary rocks. Alluvium (Qal) and glacial deposit (Qg).
SOILS: No USDA NRCS WSS data available.
LAND COVER: See Appendix B4a.
RIPARIAN AND WETLANDS: See Appendix B4b.

C. PROJECT ACTIVITY INFORMATION

Refer to section C1 of the instructions

1. **TYPE OF PROJECT** (check all that apply)

☐ **Agricultural and Irrigation Projects:** Diversions, Headgates, Flumes, Riparian Fencing, Ditches, etc.

☐ **Buildings/Structures:** Accessory Structures, Manufactured Homes, Residential or Commercial Buildings, etc.

☐ **Channel/Bank Projects:** Stabilization, Restoration, Alteration, Dredging, Fish Habitat, Vegetation or Tree Removal, or any other work that modifies existing channels or banks.

☐ **Crossing/Roads:** Bridge, Culvert, Fords, Road Work, Temporary Access, or any project that crosses over or under a stream or channel.

☐ **Mining Projects:** All mining related activities including, Placer Mining, Aggregate Mining, etc.

☐ **Recreation Related Projects:** Boat Ramps, Docks, Marinas, etc.

☒ **Other Projects:** Cisterns, Debris Removal, Excavation/Pit/Pond, Placement of Fill, Drilling or Directional Boring, Utilities, Wetland Alteration. Any other project type not listed here.

Refer to section C2 of the instructions

2. Is this application for an **ANNUAL MAINTENANCE PERMIT**? ☐ Yes ☒ No

If yes, attach an annual plan of operations to this application

Refer to section C3 of the instructions

3. Why is this project necessary? State the **PURPOSE OR GOAL** of the proposed project.

This project is to repair the existing riprap downstream of the West Rosebud Lake Dam outlet control structure. The riprap on the right bank immediately downstream of the outlet structure has been dislodged by hydraulic forces.

Refer to section C4 of the Instructions

4. Provide a brief description of the **PROPOSED PROJECT PLAN** and how it will be accomplished.

The contractor will haul riprap materials to the left side of the dam for staging. Materials will be transferred from the left side of the dam across the control structure to the repair areas using a skid steer. Material will be placed in the repair area using an excavator on the creek bank.

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Refer to section C5 of the instructions

5. What **OTHER ALTERNATIVES** were considered to accomplish the stated purpose of the objective? Why was the proposed alternative selected?

Riprap design to USACE 1110-2-1601 Plate B-30.

Refer to section C6 of the instructions

6. What are the **NATURAL RESOURCE BENEFITS** or **POTENTIAL IMPACTS**? Please complete the information requested below to the best of your ability:

6a. Explain any temporary or permanent changes in erosion, sedimentation, turbidity, or increases of potential contaminants. What will be done to minimize impacts?

The riprap installation/repair will reduce erosion, sedimentation, and turbidity. There are no anticipated increases on potential contaminants.

6b. Will the project cause temporary or permanent impacts to fish and/or aquatic habitat? What will be done to protect the fisheries and habitat?

The riprap installation/repair will improve fish and/or aquatic habitat by reducing erosion, sedimentation, and turbididty.

6c. What will be done to minimize temporary or permanent impacts to the floodplain, wetlands, or riparian habitat?

There is no floodplain or riparian habitat present in the work area(s). The riprap installation/repair will improve wetland habitat by reducing erosion, sedimentation, and turbidity.

6d. What efforts will be made to decrease flooding potential upstream and downstream of the project?

Flow is controlled and there are no anticipated impacts to flooding potential.

6e. Explain any potential temporary or permanent changes to the water flow or to the bed and banks of the waterbody. What will be done to minimize those changes?

There are no anticipated temporary or permanent changes to the water flow. The riprap installation/repair will improve the stability of the bed and banks of the creek against erosion.

6f. How will existing vegetation be protected and its removal minimized? Explain how the site will be revegetated, including weed control plans.

There is no anticipated vegetation removal or new disturbance.

D. CONSTRUCTION DETAILS

Refer to section D1 of the instructions

1. Proposed **CONSTRUCTION DATES:** Start: 9/1/2026 End: 12/31/2026

Is any portion of the work already completed? ☐ Yes ☒ No If yes, please describe previously completed work:

Work will begin upon receipt of all applicable permits.

Refer to section D2 of the instructions

2. **PROJECT DIMENSIONS**. Describe the length and width of the project.

Approximately 30'x30' repair area. Access roads and staging area are existing disturbance.

Refer to section D3 of the instructions

3. **MATERIALS.** Provide the total quantity and source of materials proposed to be used or removed. Note: this may be modified during the permitting process, therefore it is recommended that you do not purchase materials until all permits are issued. List soil/fill type, cubic yards and source, culvert size, rip-rap size, and any other materials to be used or removed on the project.

Cubic yards/ Linear Feet	Size and Type	Source
12-18 cy riprap	D50 (2' diameter quartzite stone)	local quarry – shot rock

Refer to section D4 of the Instructions

4. **EQUIPMENT**. List all equipment that will be used for this project. How will the equipment be used on the bank and/or in the water? Note: all equipment used in the water must be **CLEANED, DRAINED, AND DRY**.

Dump truck, excavator, skid steer. Equipment will operate on level and stable ground above riprap. No equipment will be used in the water.

Will equipment from out of state be used?	☐ Yes	☒ No	☐ Unknown
Will the equipment cross west over the Continental Divide to the project site?	☐ Yes	☒ No	☐ Unknown
Will equipment enter the Flathead Basin?	☐ Yes	☒ No	☐ Unknown

E. REQUIRED ATTACHMENTS

1. Plans and/or drawings of the proposed project should include:
    a. Plan/Aerial View
    b. An elevation or cross-section view
    c. Dimensions of the project (height, width, depth in linear feet)
    d. Location of storage stockpile materials and location of fill or excavation sites
    e. Drainage facilities
    f. Location of existing/proposed structures, such as buildings, utilities, roads or, bridges
    g. An arrow indicating north
    h. Site photos
2. Attach a vicinity map or a sketch, which includes: The water body where the project is located, roads, tributaries, and other landmarks. Plan an "X" on the project location. Provide written directions to the site. This is a plan view (looking at the project from above).
3. If requesting a Maintenance 310 Permit, attach an Annual Plan of Operation.
4. Attach an Aquatic Resource Map, which documents the location and boundary of all waters of the U.S. in the project vicinity and includes wetlands and other special aquatic sites. Show the location of the ordinary high-

water mark of streams or waterbodies if requesting a Section 404 or Section 10 Permit. Include the ordinary high-water mark delineation on plans or drawings and/or a separate wetland delineation.

F. ADDITIONAL INFORMATION FOR US ARMY CORPS OF ENGINEERS (USACE) SECTION 404, SECTION 10, AND FLOODPLAIN PERMITS

Refer to section F of the instructions

Section F should only be filled out by those needing Section 404, Section 10, and/or Floodplain permits.

Applicants applying for Section 404 and/or Section 10 permits must complete questions F1-10. For questions on Section 404 and/or Section 10 permits, contact the USACE by telephone at 406-441-1375 or by email at montana.reg@usace.army.mil.

Applicants applying for Floodplain permits must complete all of Section F.

Refer to section F1 of the instructions

1. Does the proposed activity and/or property have permitting history with USACE? If yes, and available, provide the USACE project number(s) associated with the previous permits, including no permit required letters and approved jurisdictional determinations.

NWP 3: NWO-2021-00199

Refer to section F2 of the instructions

2. Identify the specific **Nationwide Permit(s)** that you want to use to authorize the proposed activity.

NWP 13: Bank Stabilization

Refer to section F3 of the instructions

3. Provide the footprint of impacts and the quantity of materials proposed to be placed in wetlands and/or below the ordinary high-water mark in waters of the United States. Delineations are required of wetland and other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.

3a. What is the length and width (or square footage/acreage) for each impact occurring within the waters of the United States, including wetlands?

900 sq ft

3b. How many cubic yards of fill material will be placed below the ordinary high-water mark, in a wetland, stream, or other waters of the United States?

Spillway = 84.5 ft. Max gage height = 80.0 ft. Bottom of riprap repair = 74.4 ft.

Approximately 6.6-9.9 cy.

Refer to section F4 of the instructions

4. How will the proposed project avoid or minimize **impacts to waters of the United States**? Attach additional sheets if necessary.

No equipment will be used on or in the water.

Refer to section F5 of the instructions

5. Will the project impact(s) be equal to or greater than 0.10 acre of wetland and/or 0.03 acre of stream or other waters? If yes, describe how the applicant is going to **compensate (mitigation bank, in-lieu fee program, or permittee responsible)** for these unavoidable impacts to waters of the United States.

No.

Refer to section F6 of the instructions

6. Is the proposed activity within any component of the **National Wild and Scenic Rivers System**, or a river that has been officially designated by Congress as a "**study river**?" ☐ Yes ☒ No

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Refer to section F7 of the instructions

7. Does this activity require permission from the **USACE because it will alter or temporarily or permanently occupy or use a USACE authorized civil works project**? (Examples include USACE owned levees, Fort Peck Dam, and others). ☐ Yes ☒ No

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Refer to section F8 of the instructions

8.List the **ENDANGERED AND THREATENED SPECIES** and **CRITICAL HABITAT(S)** that might be present in the project location.

See Appendix F8.

Refer to section F9 of the instructions

9. List any **HISTORIC PROPERTY(S)** that are listed, determined to be eligible or are potentially eligible (over 50 years old) for listing on the National Register of Historic Places.

Mystic Dam.

Refer to section F10 of the instructions

10. List all **APPLICABLE LOCAL, STATE, AND FEDERAL PERMITS** and indicate whether they were issued, waived, denied, or pending. Note: all required local, state, and federal, or proof of waiver must be issued prior to the issuance of a floodplain permit.

LOCAL: Stillwater Conservation District (SCD) – 310 permit (pending). Stillwater County Planning – floodplain permit NA (no floodplain).

STATE: DEQ – 318 Authorization pending SCD determination, 401 Certification pending USACE determination. DNRC – NRLU NA (not a navigable water). FWP – SPA 124 NA (NWE not a government entity).

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FEDERAL: USACE – Section 404 (NWP 13) pending.

Refer to section F10 of the instructions

11. List the **NAMES AND ADDRESS OF LANDOWNERS** adjacent to the project site. This includes properties to and across from the project site. Note: Some floodplain communities require certified adjoining landowner lists.

NAME/ADDRESS OF **Adjacent Landowner**: USDA Forest Service, Office of Regional Forester, Missoula, MT 59801

NAME/ADDRESS OF **Adjacent Landowner**:

NAME/ADDRESS OF **Adjacent Landowner**:

NAME/ADDRESS OF **Adjacent Landowner**:

Refer to section F11 of the instructions

12. **Floodplain Map Number**: 30095C1250D

Refer to section F11 of the instructions

13. **Does this project comply with local planning or zoning regulations?** ☒ Yes ☐ No

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G. SIGNATURE REQUIREMENTS

Refer to section G of the instructions

Some agencies require original signatures for an application to be considered complete. After completing the application form, make the required number of copies and sign each copy. Send the copies with original signatures and additional information required directly to each applicable agency.

The statements contained in this application are true and correct. The applicant possesses the authority to undertake the work described herein or is acting as the duly authorized agent of the landowner. The applicant understands that the granting of a permit does not include landowner permission to access land or construct a project. Inspections of the project site after notice by inspection authorities are hereby authorized.

**By signing or typing my name on the signature line below, I hereby swear and affirm that I am the applicant for this project and am responsible for all information contained in this application.*

*APPLICANT (party responsible for project)

Janelle Garza, NWE, Environmental Compliance Specialist

Print Name

Janelle Garza

Signature of Applicant

8/5/2026

Date

LANDOWNER (If different from applicant)

Matthew Jedra, Forest Supervisor, Custer Gallatin National Forest

Print Name

Matthew Jedra

Signature of Landowner

8/13/2026

CONTRACTOR (If applicable. Contact agency to determine if contractor signature is required)

Jody Klessens

Print Name of Primary Contract

Jody Klessens

Signature of Contractor

8/6/2026

Date

Klessens Contracting

Company/Entity Name (If applicable)

NorthWestern Energy

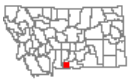
Attachment B4a

Project Site Information

Current Condition

Land Cover

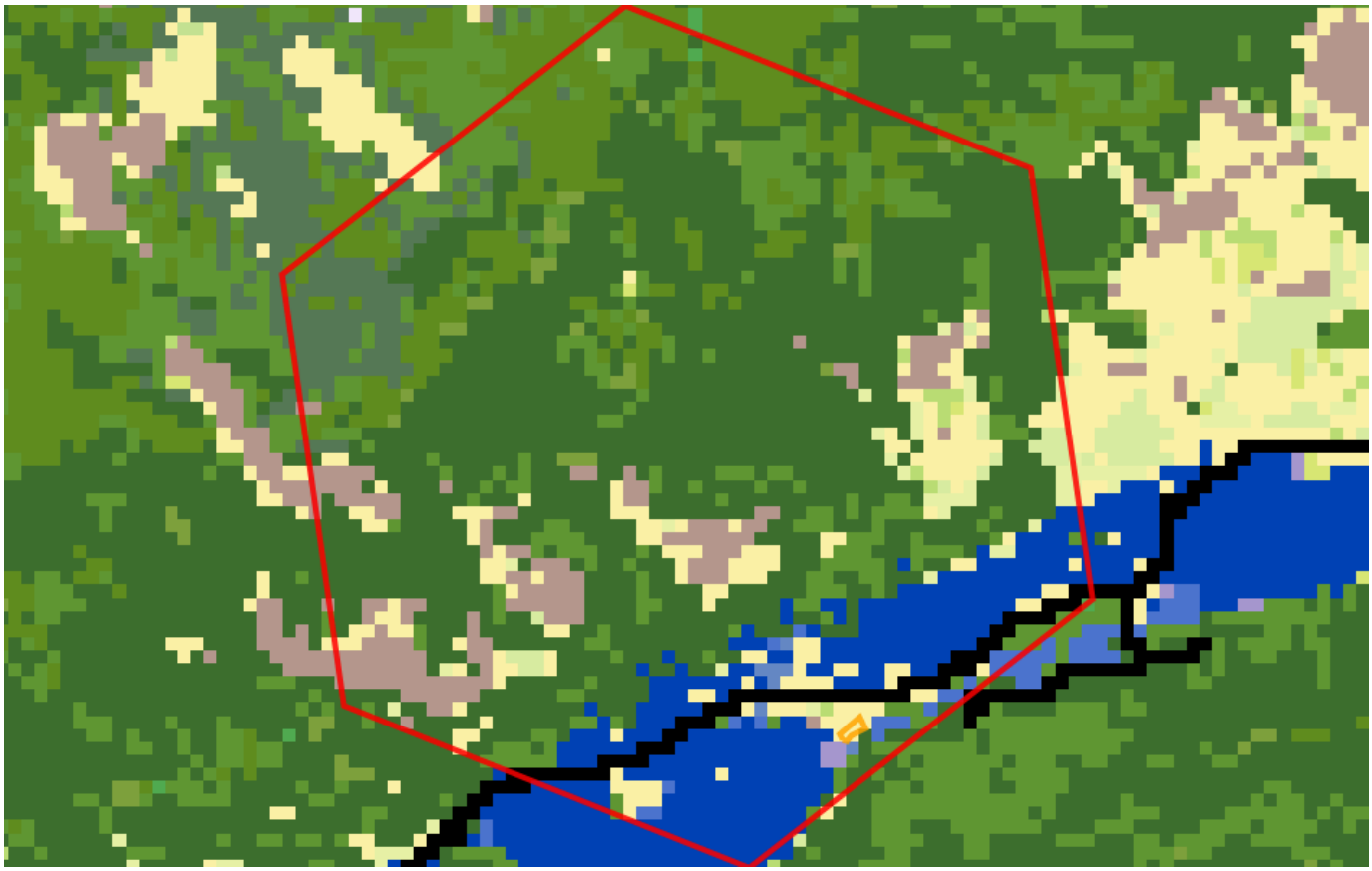
MONTANA STATE LIBRARY
NATURAL HERITAGE PROGRAM
A program of the **Montana State Library's Natural Resource Information System**



Latitude	Longitude
45.24941	-109.70050
45.26723	-109.72406

Land Cover

Summarized by: *(Custom Area of Interest)*



48% (*306 Acres*)

Forest and Woodland
Montane - Subalpine Forest and Woodland
Rocky Mountain Douglas-fir Forest

This National Vegetation Classification Group (G215) is dominated by Douglas-fir (*Pseudotsuga menziesii*). It occurs on the east side of the Continental Divide, north to about McDonald Pass and along the Rocky Mountain Front. It is associated with a dry to submesic continental climate regime with annual precipitation ranging from 51 to 102 centimeters (20-40 inches), with a maximum in winter or late spring. Winter snowpacks typically melt off in early spring at lower elevations. Elevations range from valley bottoms to 6,500 ft in northern Montana and up to 7,500 ft on warm aspects in southern Montana. It occurs on north-facing aspects in most areas, and south-facing aspects at higher elevations. This is a Douglas-fir dominated community without any maritime floristic composition. Fire disturbance intervals are as infrequent as 500 years and, as a result, individual trees and forests can attain great age on some sites (500 to 1,500 years). In Montana, this Group occurs from lower montane to lower subalpine environments and is prevalent on calcareous substrates. Common understory shrubs include Mallow-leaf Ninebark (*Physocarpus malvaceus*), Common Juniper (*Juniperus communis*), Rocky Mountain Juniper (*Juniperus scopulorum*), White Spiraea (*Spiraea betulifolia*), Snowberry (*Symphoricarpos* spp.), Creeping Oregon-grape (*Berberis repens*), and Canada Buffaloberry (*Shepherdia canadensis*). The Douglas-fir/Pinegrass (*Calamagrostis rubescens*) type is the most ubiquitous Association found within this Group in Montana.

This Group (G215) incorporates portions of the Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest Ecological System and the Rocky Mountain Montane Douglas-fir Forest and Woodland.

11% (*71 Acres*)

Forest and Woodland
Montane - Subalpine Forest and Woodland
Lodgepole Pine Forest

This National Vegetation Classification Group (G220) is composed of Lodgepole Pine (*Pinus contorta*) Forests. It is widespread in the upper montane and subalpine zones across the mountainous areas of the state, including the island ranges of north-central Montana and the Bighorn and Beartooth ranges of south-central Montana. Lodgepole Pine is the dominant tree in these communities, though other coniferous species such as Subalpine Fir (*Abies lasiocarpa*), Douglas-fir (*Pseudotsuga menziesii*), Engelmann Spruce (*Picea engelmannii*) and Whitebark Pine (*Pinus albicaulis*) are often present in many of the forests depending on location, site characteristics and successional status. These stands may be relatively open or occur as dense canopies, especially in young, even-aged, "doghair" stands. The understory is usually open and may be composed of short shrubs, graminoids, or forbs. In Montana, this forest ranges from 3,200-9,000 ft in elevation though it primarily occurs between 5,000 and 7,500 ft (Pfister et al. 1977). These forests occur on flats to slopes on all aspects. They generally occur on dry to intermediate sites. Conifer succession proceeds at different rates, moving relatively quickly on low-elevation mesic sites and particularly slowly in high-elevation forests such as those along the Continental Divide in Montana. Stand-replacing fires are common in these habitats. Following stand-replacing fires, Lodgepole Pine will rapidly colonize and develop into dense, even-aged stands. Most forests in this Group occur as early- to mid-successional forests persisting for 50-200 years on warmer, lower elevation forests, and 150-400 years in subalpine forests.

This Group (G220) encompasses the Rocky Mountain Lodgepole Pine Forest and the Rocky Mountain Poor Site Lodgepole Pine Forest Ecological Systems.

Image Not Available

10% (*63 Acres*)

Open Water

Open Water

Open Water Classified in 2025 Land Cover

Includes areas where open water is mapped in the 2025 state land cover layer. Water could be lentic (lakes, reservoirs, ponds) or lotic (rivers). The presence of water may be seasonal, especially along the shores of reservoirs where levels may fluctuate.

10% (*61 Acres*)

Forest and Woodland

Montane - Subalpine Forest and Woodland

Dry Spruce-fir Forest

This National Vegetation Classification Group (G219) is composed of forests dominated by Engelmann Spruce (*Picea engelmannii*) and Subalpine Fir (*Abies lasiocarpa*), either in mixed stands or individually. They occur frequently on both sides of the Continental Divide in the upper montane and subalpine zones. This Group occurs at the drier end of the Spruce-fir forest type and site characteristics and the understory vegetation should reflect that in relation to G218 - Mesic Spruce-Fir Forest. Other conifers are often present in these stands. Typical species include Lodgepole Pine (*Pinus contorta*, Douglas-fir (*Pseudotsuga menziesii*) or Whitebark Pine (*Pinus albicaulis*). The forest understory may be composed of low shrubs, graminoids, and/or forbs. Composition varies widely by geography, site characteristics and association. In some stands, the understory will be depauperate and mosses may be prevalent.

Dry to mesic spruce-fir dominated forests occur as low as 3,000 ft west of the Continental Divide, and up to 9,500 ft east of the Continental Divide, particularly in southwestern Montana. Some occurrences are found in locations with cold-air drainage or ponding, or where snowpacks lingers late into the summer, such as north-facing slopes and high-elevation ravines. They can extend down in elevation below the subalpine zone in places where cold-air ponding occurs, especially on north and east aspects. Spruce-fir forests are found on gentle to very steep mountain slopes, high-elevation ridge tops and upper slopes, plateau-like surfaces, basins, alluvial terraces, well-drained benches, and inactive stream terraces. Soils are derived from a variety of parent materials, and are usually rocky or gravelly with good aeration and drainage.

The drier Spruce-fir forests of this Group are especially common on steep slopes at upper elevations throughout the eastern Rocky Mountains, whereas the more mesic stands of G218 - Mesic Spruce-Fir Forest form substantial cover west of the Continental Divide in the Flathead, Lolo, Bitterroot and Kootenai river drainages.

This Group (G219) is equivalent to the Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland Ecological System.

6% (*41 Acres*)

Shrubland

Sagebrush Shrubland

Mountain Big Sagebrush Shrubland HGCN

This National Vegetation Classification Group is a semi-arid shrub and shrub-steppe group. It dominates the non-forested, montane and subalpine landscape of southwestern Montana from valley bottoms to subalpine ridges. It is found as far north as Glacier National Park and can also be seen in the island mountain ranges of the north-central and south-central portions of the state. The shrub component of this group is dominated by Mountain Big Sagebrush (*Artemisia tridentata ssp. vaseyana*). Rarely are sites dominated by Subalpine Big Sagebrush (Artemisia spiciformis, Artemisia tridentata ssp. spiciformis) in extreme southern Montana. Other co-dominant shrubs include Silver Sagebrush (*Artemisia cana* ssp. viscidula) and Mountain Snowberry (*Symphoricarpos oreophilus*). It primarily occurs on deep-soiled to stony flats, ridges, nearly flat ridgetops, and mountain slopes. In general, this group occurs in areas of gentle topography, fine soils, subsurface moisture or mesic conditions, within zones of higher precipitation and areas of snow accumulation. It occurs on all slopes and aspects, variable substrates and all soil types. Low Sagebrush (*Artemisia arbuscula*) shrublands may be found on adjacent sites in southwestern Montana on less productive, shallower, rockier soils. Graminoids and forbs are often common at these sites. In areas where sagebrush has been eliminated by human activities like burning, disking or poisoning, other shrubs may be dominant, especially rubber rabbitbrush (*Ericameria nauseosa*), and Green Rabbitbrush (*Chrysothamnus viscidiflorus*). Shrub canopy cover is extremely variable, ranging from 10 percent to as high as 50 percent at some sites.

This group is largely equivalent to the Montane Sagebrush Steppe Ecological System.

5% (*34 Acres*)

Sparse and Barren

Sparse and Barren

Rocky Mountain Cliff, Scree and Rock Outcrops

This National Vegetation Classification Group is composed of barren, rocky and sparsely vegetated landscapes from the foothills to the subalpine zone throughout the mountains of western and central MT, including the island mountain ranges. It includes steep cliff faces, rock outcrops, scree and talus slopes and areas of exposed bedrock on igneous, sedimentary, and metamorphic bedrock types. It is characteristically dry and sparsely vegetated, typically having less than 10% plant cover. There may be small patches of dense vegetation, or scattered plants within these communities. Because the elevation range is so broad, species composition may vary widely. Near timberline, this type may transition seamlessly into G571 Alpine Bedrock & Scree, especially along large scree and talus slopes that extend along a large elevational gradient.

This group is equivalent to the Rocky Mountain Cliff, Canyon and Massive Bedrock Ecological System.

4% (*23 Acres*)

Forest and Woodland

Montane - Subalpine Forest and Woodland

Whitebark Pine - Subalpine Larch Forest and Woodland HOC HGCN

This National Vegetation Classification Group (G223) is characterized by forests and woodlands dominated by Whitebark Pine (*Pinus albicaulis*) or Subalpine Larch (*Larix lyallii*), individually or in combination. Other conifers, primarily Subalpine Fir (*Abies lasiocarpa*) and Engelmann Spruce (*Picea engelmannii*) may be present, especially in Whitebark Pine stands. This Group occurs frequently on both sides of the Continental Divide in the subalpine zone of the higher mountain ranges and typically forms the highest elevation forested communities in many mountain ranges. Stands typically occur between elevations of 6,000 to 9,500 ft on mid to upper slopes, shoulder slopes, ridges, and exposed high-elevation benches on all aspects. Trees are often stunted and flagged as a result of harsh cold and wind at timberline. Stands in more protected sites or below timberline may reach 50 ft or more in height. The understory is variable depending on substrates ranging from sparse on rockier sites to dense on more mesic sites and is typically characterized by low-growing ericaceous shrubs, graminoids, and sparse forbs. Fire is infrequent in this Group, though it is important in maintaining some stands and removing competition from more shade tolerant conifers. However, sparse canopies and rocky terrain limits the spread of fire at many sites.

This Group is similar to the Rocky Mountain Subalpine Woodland and Parkland Ecological System.

2% (*13 Acres*)

Human Land Use

Transportation

Other Road

County, city and or rural roads generally open to motor vehicles.

Additional Limited Land Cover

1% (*7 Acres*) Lowland - Montane Shrubland **HGCN**

1% (*7 Acres*) Mesic Spruce-fir Forest

1% (*4 Acres*) Rocky Mountain Low Elevation - Dry Grassland **HOC HGCN**

1% (*4 Acres*) Montane - Subalpine Riparian Forest **HGCN**

<1% (*2 Acres*) Montane - Subalpine Dry Grassland

<1% (*2 Acres*) Lowland - Montane Riparian Shrubland **HGCN**

<1% (*1 Acres*) Montane Wet Meadow and Marsh **HGCN**

<1% (*0 Acres*) Montane - Subalpine Mesic Grassland and Meadow

<1% (*0 Acres*) Rocky Mountain Aspen Forest and Woodland **HOPC HGCN**

Introduction to Land Cover

Land Use/Land Cover is one of 15 Montana Spatial Data Infrastructure framework layers considered vital for making statewide maps of Montana and understanding its geography. The layer records all Montana natural vegetation, land cover and land use, classified from satellite and aerial imagery, mapped at a scale of 1:100,000, and interpreted with supporting ground-level data. The baseline map is adapted from the Northwest ReGAP (NWGAP) project land cover classification, which used 30m resolution multi-spectral Landsat imagery acquired between 1999 and 2001. Vegetation classes were drawn from the Ecological System Classification developed by NatureServe (Comer et al. 2003). The land cover classes were developed by Anderson et al. (1976). The NWGAP effort encompasses 12 map zones. Montana overlaps seven of these zones. The two NWGAP teams responsible for the initial land cover mapping effort in Montana were Sanborn and NWGAP at the University of Idaho. Both Sanborn and NWGAP employed a similar modeling approach in which Classification and Regression Tree (CART) models were applied to Landsat ETM+ scenes. The Spatial Analysis Lab within the Montana Natural Heritage Program was responsible for developing a seamless Montana land cover map with a consistent statewide legend from these two separate products. Additionally, the Montana land cover layer incorporates several other land cover and land use products (e.g., MSDI Structures and Transportation themes and the Montana Department of Revenue Final Land Unit classification) and reclassifications based on plot-level data and the latest NAIP imagery to improve accuracy and enhance the usability of the theme. Updates are done as partner support and funding allow, or when other MSDI datasets can be incorporated. Recent updates include fire perimeters and agricultural land use (annually), energy developments such as wind, oil and gas installations (2014), roads, structures and other impervious surfaces (various years): and local updates/improvements to specific ecological systems (e.g., central Montana grassland and sagebrush ecosystems). Current and previous versions of the Land Use/Land Cover layer with full metadata are available for download from the Montana State Library's GIS Data List More information on the land cover layer is available at: https://msl.mt.gov/geoinfo/msdi/land_use_land_cover/

Within the report area you have requested, land cover is summarized by acres of Level 1, Level 2, and Level 3 Ecological Systems.

Literature Cited

Anderson, J.R. E.E. Hardy, J.T. Roach, and R.E. Witmer. 1976. A land use and land cover classification system for use with remote sensor data. U.S. Geological Survey Professional Paper 964.

Comer, P., D. Faber-Langendoen, R. Evans, S. Gawler, C. Josse, G. Kittel, S. Menard, M. Pyne, M. Reid, K. Schulz, K. Snow, and J. Teague. 2003. Ecological systems of the United States: A working classification of U.S. terrestrial systems. NatureServe, Arlington, VA.

NorthWestern Energy

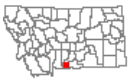
Attachment B4b

Project Site Information

Current Condition

Riparian & Wetlands

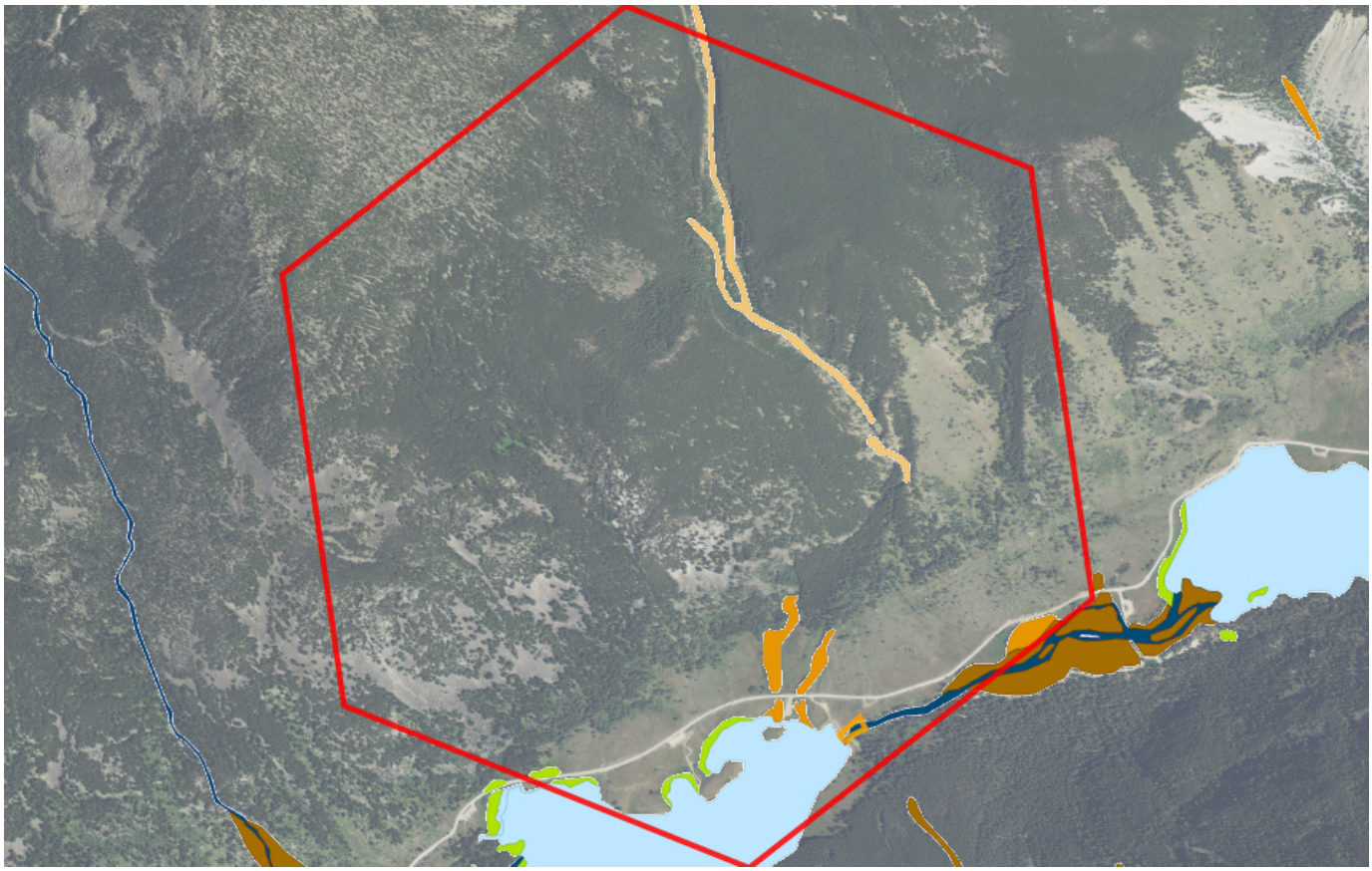
MONTANA STATE LIBRARY
NATURAL HERITAGE PROGRAM
A program of the **Montana State Library's Natural Resource Information System**



Latitude	Longitude
45.24941	-109.70050
45.26723	-109.72406

Wetland and Riparian

Summarized by: *(Custom Area of Interest)*



Wetland and Riparian Mapping

P - Palustrine

EM - Emergent

1 - Persistent

A - Temporarily Flooded	1 Acres	
h - Diked/Impounded	**1 Acres**	**PEM1Ah**
C - Seasonally Flooded	<1 Acres	
h - Diked/Impounded	**<1 Acres**	**PEM1Ch**

P - Palustrine, EM - Emergent
Wetlands with erect, rooted herbaceous vegetation present during most of the growing season.

L - Lacustrine (Lakes)

1 - Limnetic

UB - Unconsolidated Bottom

H - Permanently Flooded	22 Acres	
h - Diked/Impounded	**22 Acres**	**L1UBHh**

L - Lacustrine (Lakes), 1 - Limnetic, UB - Unconsolidated Bottom
Deep waterbodies with mud or silt covering at least 25% of the bottom.

R - Riverine (Rivers)

3 - Upper Perennial

UB - Unconsolidated Bottom

G - Intermittently Exposed	1 Acres	
(no modifier)	**1 Acres**	**R3UBG**

R - Riverine (Rivers), 3 - Upper Perennial, UB - Unconsolidated Bottom
Stream channels where the substrate is at least 25% mud, silt or other fine particles.

Rp - Riparian

1 - Lotic

SS - Scrub-Shrub
(no modifier) **4 Acres** **Rp1SS**

Rp - Riparian, 1 - Lotic, SS - Scrub-Shrub
This type of riparian area is dominated by woody vegetation that is less than 6 meters (20 feet) tall. Woody vegetation includes tree saplings and trees that are stunted due to environmental conditions.

FO - Forested
(no modifier) **1 Acres** **Rp1FO**

Rp - Riparian, 1 - Lotic, FO - Forested
This riparian class has woody vegetation that is greater than 6 meters (20 feet) tall.

EM - Emergent
(no modifier)

5 Acres **Rp1EM**

Rp - Riparian, 1 - Lotic, EM - Emergent
Riparian areas that have erect, rooted herbaceous vegetation during most of the growing season.

Introduction to Wetland and Riparian

Within the report area you have requested, wetland and riparian mapping is summarized by acres of each classification present. Summaries are only provided for modern MTNHP wetland and riparian mapping and not for outdated (NWI Legacy) or incomplete (NWI Scalable) mapping efforts; described here. MTNHP has made all three of these datasets and associated metadata available for separate download on the Montana Wetland and Riparian Framework web page.

Wetland and Riparian mapping is one of 15 Montana Spatial Data Infrastructure framework layers considered vital for making statewide maps of Montana and understanding its geography. The wetland and riparian framework layer consists of spatial data representing the extent, type, and approximate location of wetlands, riparian areas, and deep water habitats in Montana.

Wetland and riparian mapping is completed through photointerpretation of 1-m resolution color infrared aerial imagery acquired from 2005 or later. A coding convention using letters and numbers is assigned to each mapped wetland. These letters and numbers describe the broad landscape context of the wetland, its vegetation type, its water regime, and the kind of alterations that may have occurred. Ancillary data layers such as topographic maps, digital elevation models, soils data, and other aerial imagery sources are also used to improve mapping accuracy. Wetland mapping follows the federal Wetland Mapping Standard and classifies wetlands according to the Cowardin classification system of the National Wetlands Inventory (NWI) (Cowardin et al. 1979, FGDC Wetlands Subcommittee 2013). Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands differently than the NWI. Similar coding, based on U.S. Fish and Wildlife Service conventions, is applied to riparian areas (U.S. Fish and Wildlife Service 2009). These are mapped areas where vegetation composition and growth is influenced by nearby water bodies, but where soils, plant communities, and hydrology do not display true wetland characteristics. **These data are intended for use at a scale of 1:12,000 or smaller. Mapped wetland and riparian areas do not represent precise boundaries and digital wetland data cannot substitute for an on-site determination of jurisdictional wetlands.**

See detailed overviews, with examples, of both wetland and riparian classification systems and associated codes as a storymap and companion guide

Literature Cited

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79/31. Washington, D.C. 103pp.

Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, D.C.

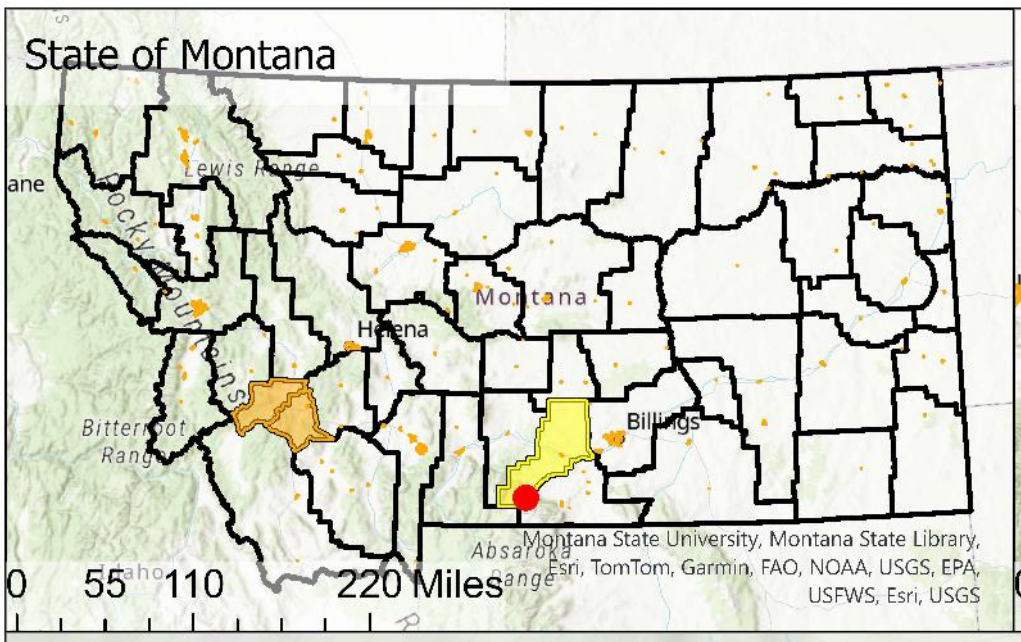
U.S. Fish and Wildlife Services. 2009. A system for mapping riparian areas in the western United States. Division of Habitat and Resource Conservation, Branch of Resource and Mapping Support, Arlington, Virginia.

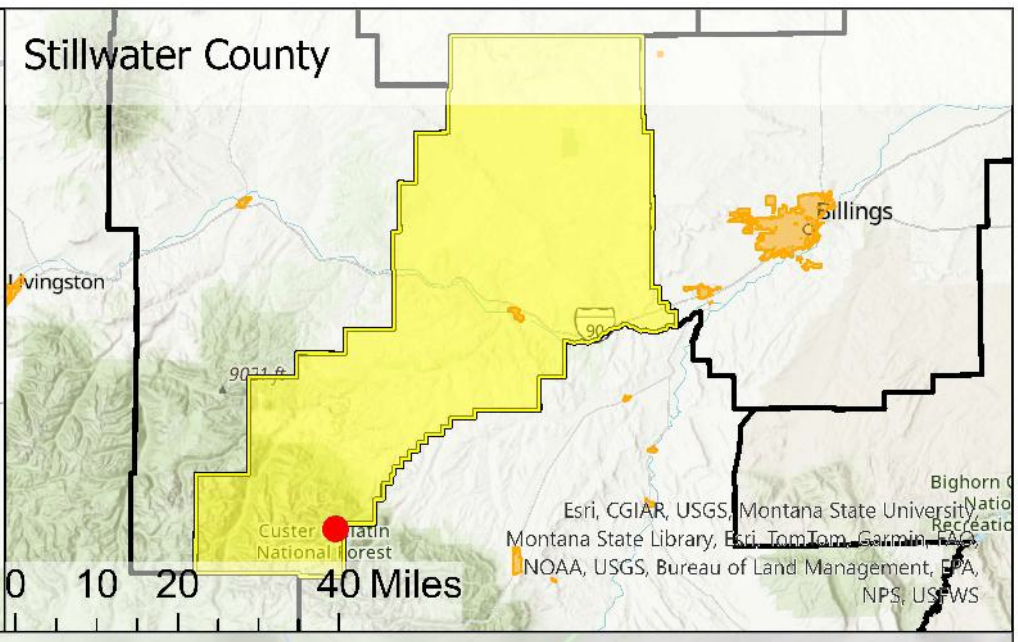
NorthWestern Energy

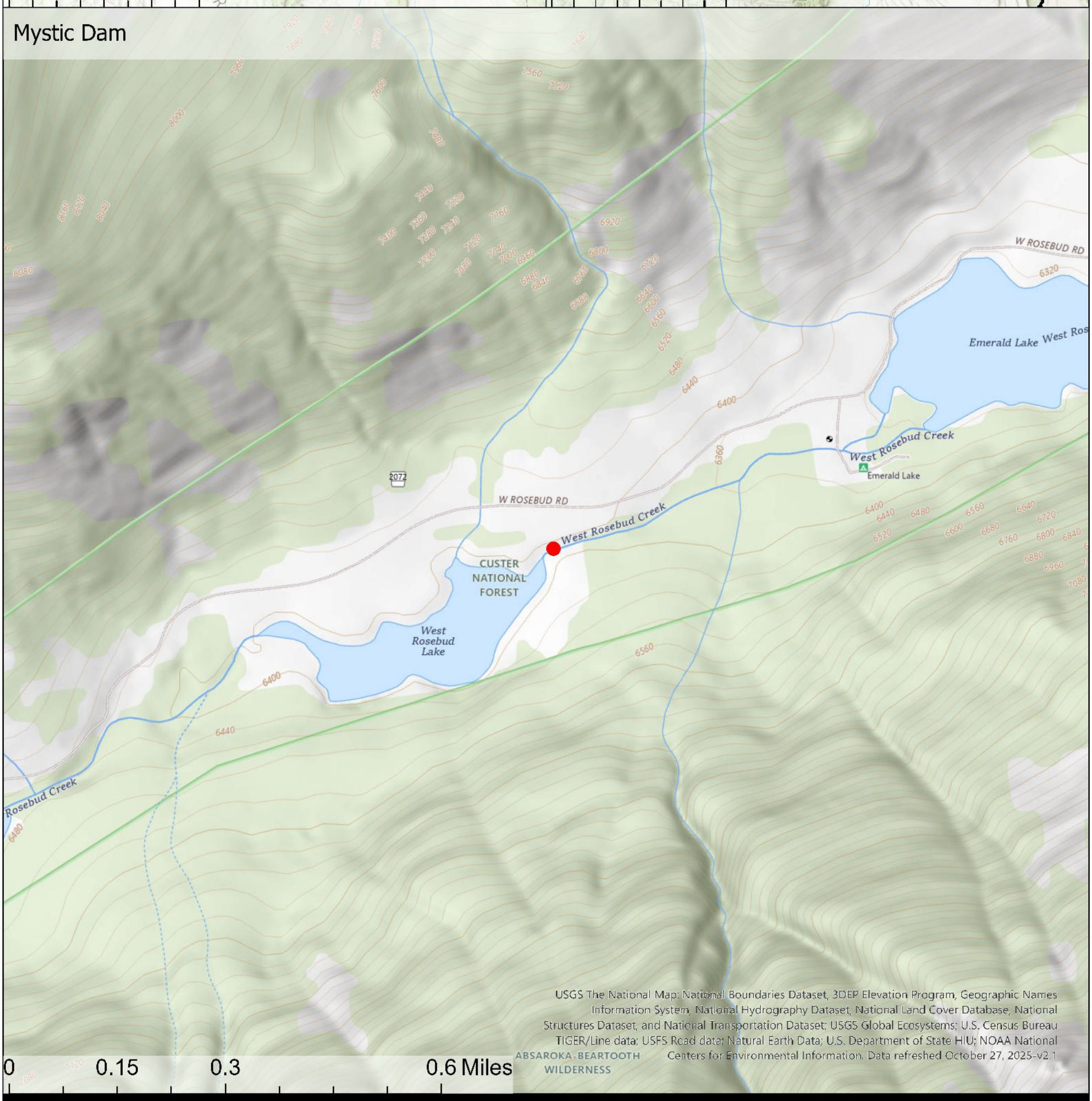
Attachment E2

Required Attachments

Vicinity Map







Vicinity Map (E2)

Legend

- Site Location
- City/Town Limits
- Stillwater County
- County Lines

N
W E
S

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Attachment E4

Required Attachments

Aquatic Resource Map

Aquatic Resource Map (E4)

Legend

- Riprap
- Wetlands
- Artificial Path
- Stream/River: Perennial
- Stream/River: Intermittent
- Stream/River: Ephemeral
- Canal Ditch; Canal Ditch: Aqueduct
- Connector
- Pipeline; Pipeline: Aqueduct; 42801; 42802; 42803; 42805; 42807; 42808; 42809; 42810; 42811; 42813
- Underground Conduit
- DamWeir
- Gaging Station
- SpringSeep
- Waterfall
- Well
- Other
- LakePond
- Reservoir
- Ice Mass
- Playa
- SwampMarsh

N W E S

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Attachment F8

Additional Information for USACE Section 404, Section 10, and Floodplain Permits

Endangered and Threatened Species and Critical Habitat(s)

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Stillwater County, Montana

Local office

Montana Ecological Services Field Office

(406) 449-5225

585 Shephard Way, Suite 1
Helena, MT 59601-6287

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. 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.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Canada Lynx Lynx canadensis There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3652	Threatened
Grizzly bear Ursus arctos horribilis There is **proposed** critical habitat for this species. https://ecos.fws.gov/ecp/species/7642	Threatened
North American wolverine Gulo gulo luscus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5123	Threatened

Insects

NAME	STATUS
Monarch butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Suckley's cuckoo bumble bee Bombus suckleyi No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10885	Proposed Endangered

Conifers and Cycads

NAME	STATUS
Whitebark pine Pinus albicaulis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1748	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

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 nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The data in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the Supplemental Information on Migratory Birds and Eagles document to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

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 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

Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate 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.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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.

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

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, 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 document, 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 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.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Cassin's Finch Haemorhous cassinii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 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 (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

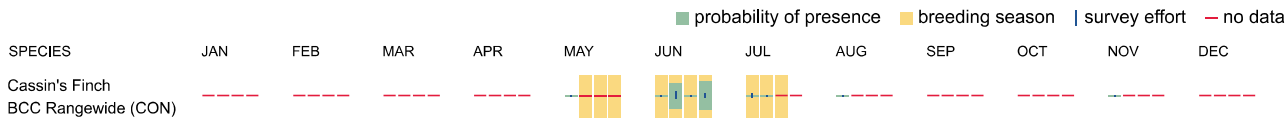
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas *off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more* sparse.



Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species

list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate 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.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

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 at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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.

This location overlaps the following wetlands:

RIVERINE
R3UBG

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.