

WESTERN CLAY MANUFACTURING TILE PLANT

2915 COUNTRY CLUB ROAD, HELENA

Notice of Public Comment—Montana State Historic Office (SHPO) Grant

The Montana State Historic Preservation Office (SHPO) invites public comment related to a proposed SHPO Grant for the Archie Bray Tile Plant Structural Stabilization Project. The Tile Plant is located on the Archie Bray Foundation campus at 2915 Country Club Avenue in Helena, Lewis and Clark County, Montana (S23, T10 N, R04 W, M&B TRACT PER BK.243-PG.200, IN NW4NW4). The grant would assist in rehabilitating the historic building's physical features and restoring the building to usable conditions. A draft environmental checklist is available upon request and online at <https://mhs.mt.gov/shpo/news>. Interested public is invited to register on the same page for the online to be held on May 21, 2025, and/or to submit public comment between April 21, 2025 and May 21, 2025 by emailing SHPOGrant@mt.gov or sending written comments to Montana SHPO, 225 North Roberts St, Helena, MT 59620. Comments must be submitted to the Montana SHPO no later than 5:00 pm on Wednesday, May 21.

Scope of Work

Western Clay established its operation the 1860s and became a leading brick and tile producer until its closing in the early 1950s. The Archie Bray Foundation, dedicated to ceramic arts first occupied the property in 1951. The organization wishes to stabilize the tile plant as phase 1 of a redevelopment plan. The scope of work includes: 1) bracing and capping the brick walls; 2) shoring up failing beams, columns, joists, and rafters; 3) sheathing and re-roofing; and 4) sealing exposed wood elements.

Award: \$41,720



— Archie Bray Foundation Historic Boundary
— Outline of Tile Plant





ENVIRONMENTAL ANALYSIS

MEPA NEPA Checklist

MISSION. Montana Fish, Wildlife & Parks, through its employees and citizen commission, provides for the stewardship of the fish, wildlife, parks and recreational resources of Montana, while contributing to the quality of life for present and future generations

All Montanans have the right to live in a clean and healthful environment. This environmental analysis is intended to provide an evaluation of the likely impacts to the human environment from proposed actions of the project cited below. This analysis will help Montana Fish, Wildlife & Parks to fulfill its oversight obligations and satisfy rules and regulations of both the Montana Environmental Policy Act (MEPA) and the National Environmental Policy Act (NEPA). Please provide a discussion for each section. If no impacts are likely, be sure to discuss the reasoning that led to your determination.

PART I. PROPOSED ACTION DESCRIPTION

1. Type of proposed action.

Development	_____
Renovation	__X__
Maintenance	_____
Land Acquisition	_____
Equipment Acquisition	_____
Other (Describe)	_____

2. If appropriate, agency responsible for the proposed action.

Montana Historical Society—SHPO

3. Name, address phone number and E-mail address of project sponsor.

Lindsay Tran, MT SHPO, 225 N Roberts, Helena, MT 59620-1201

4. Name of project.

“Archie Bray Tile Plant Structural Stabilization Project”

5. If applicable:

Estimated construction/commencement date

June 15, 2025

Estimated completion date

November 30, 2025

Current status of project design (% complete)

100%

6. Location affected by proposed action (county, range and township).

S23, T10 N, R04 W, M&B TRACT PER BK.243-PG.200, IN NW4NW4

7. Project size: estimate the numbers of acres that would be directly affected that are currently:

(a) Developed:

residential..... 0 acres

industrial 0 acres

commercial..... 1 acres

(b) Open Space/Woodlands/

Recreation..... 0 acres

(c) Wetlands/Riparian

Areas 0 acres

(d) Floodplain 0 acres

(e) Productive:

irrigated cropland 0 acres

dry cropland 0 acres

forestry 0 acres

rangeland 0 acres

other..... 0 acres

8. Map/site plan: attach an original 8 1/2" x 11" or larger section of the most recent USGS 7.5' series topographic map showing the location and boundaries of the area that would be affected by the proposed action. A different map scale may be substituted if more appropriate or if required by agency rule. If available, a site plan should also be attached.

9. Narrative summary of the proposed action or project including the benefits and purpose of the proposed action.

The draft project specifications, drawings, and photos are enclosed. Attached materials describe work that includes:

- 1) Shoring failed structural beams, columns, joists, and roof rafters;**
- 2) Bracing and capping exposed brick walls;**
- 3) Securing sheathing and reroofing north and west portions of “drying room” of tile plant;**
- 4) Sealing wooden floors and floor joists;**
- 5) Clearing detritus and stored materials from tile plant interior;**
- 6) Clearing and salvaging collapsed roof material from “pug mill room” of tile plant and documenting construction of roof for future rehabilitation.**

The project will benefit the community by stabilizing a historic building and bringing it back into productive use as a meeting and exhibit space.

10. Description and analysis of reasonable alternatives (including the MEPA-required no action alternative). At a minimum, the following three alternatives must be presented.

a). Preferred Alternative: Fund project as described in narrative and application materials.

b). No-action Alternative: No funding provided by SHPO, stabilization does not occur, and future phased work to bring building back into use is not possible.

c). Additional Alternatives: Project moves forward as described in application but without SHPO funding or state environmental oversight. Timeline for work is extended, project may not be completed, and building will continue to deteriorate, potentially becoming a hazard to the public who visit the property.

11. Listing of each local, state or federal agency that has overlapping or additional jurisdiction.

(a) Permits		
Agency Name: n/a	Permit: n/a	Date Filed: n/a

(b) Funding	
Agency Name: MTHS-SHPO	Funding Amount: \$41,720

(c) Other Overlapping or Additional Jurisdictional Responsibilities	
Agency Name: n/a	Type of Responsibility: n/a

12. List of agencies consulted during preparation of this Environmental Checklist:

Montana State Library

13. Name of Preparer(s) of this Environmental Checklist:

Lindsay Tran

14. Date submitted:

4/14/2025

PART II. ENVIRONMENTAL CHECKLIST

PHYSICAL ENVIRONMENT. At the bottom of this “Land Resources” checklist, provide a narrative description and evaluation of the cumulative and secondary effects on land resources. Even if you checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects of the action as well as the long-term effects. Attach additional pages of narrative if needed.

1. LAND RESOURCES Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Soil instability or changes in geologic substructure?		X				
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?		X				
c. Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?		X				
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other		X				

The project’s scope of work does not require excavation or ground disturbance and will not result in soil instability or changes in the geologic substructure. The project will not affect the productivity or fertility of potential agricultural land, as the project is confined to a developed commercial parcel. The project’s scope of work does not have the potential to destroy, cover, or modify unique geologic or physical features. The project location is not in proximity to any body of water, and does not have the potential to change siltation, deposition, or erosion patterns in a body of water. The project’s scope of work will not expose people or property to the risk of earthquakes, landslides, ground failure, or other natural hazards.

Because the project is limited to the existing building footprint of the tile plant, none of the three alternatives described in item ten (10) will result in alteration to land resources.

PHYSICAL ENVIRONMENT. At the bottom of this “Air” checklist, provide a narrative description and evaluation of the cumulative and secondary effects on air resources. Even if you checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects of the action as well as the long-term effects. Attach additional pages of narrative if needed.

2. AIR Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))			X		Y	
b. Creation of objectionable odors?			X		Y	
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. Any discharge that will conflict with federal or state air quality regs?		X				
f. Other		X				

Under alternatives one (1) and three (3), air quality may be temporarily and minorly affected due to dust and exhaust emissions from equipment but will be confined to construction days during daylight hours and will have no lasting effects to air quality beyond the duration of the project. Odors associated with the application of wood sealants will be temporary, localized, and will dissipate within a few days of application.

Because the scope of work is limited to an existing building’s footprint, none of the three alternatives will result in alteration of air movement, moisture, temperature patterns, change in climate, adverse vegetation effects, or discharges that will conflict with federal or state regs.

PHYSICAL ENVIRONMENT. At the bottom of this “Water” checklist, provide a narrative description and evaluation of the cumulative and secondary effects on water resources. Even if you checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects as well as the long-term effects. Attach additional pages of narrative if needed.

3. WATER Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?		X				
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of floodwater or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. Effects to a designated floodplain?		X				
m. Any discharge that will affect federal or state water quality regulations?		X				
n. Other:		X				

Because the project is limited to the footprint of the existing building, none of the three alternatives will impact water discharge, drainage, flooding, or groundwater. The property sits outside the floodplain, as shown on the attached FEMA firmette.

PHYSICAL ENVIRONMENT. At the bottom of this “Vegetation” checklist, provide a narrative description and evaluation of the cumulative and secondary effects on vegetative resources. Even if you checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects as well as the long-term effects. Attach additional pages of narrative if needed.

4. VEGETATION	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?		X				
b. Alteration of a plant community?		X				
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?			X		y	
f. Effects to wetlands or prime and unique farmland?		X				
g. Other:		X				

Although the project location is on a developed commercial parcel, the “species occurrences” chapter of the Montana Natural Heritage Summary Report (Report, attached) lists two native species of concern (SOC) and one native potential species of concern (PSOC) in the polygon that contains the project area. The SOC include *Astragalus convallarius* (Lesser Rushy Milkvetch) and *Atriplex truncata* (Wedge-leaf Saltbush). The PSOC is *Cypripedium parviflorum* (Small Yellow Lady’s-Slipper).

None of these species were observed in the parcel where work will be taking place. Due to the project area and scope of work, we do not anticipate impacts to SOC or PSOC. The project is limited to the footprint of the existing building, and workers’ vehicles will be limited to established roads and parking lots. As such, the project will not have direct impacts to vegetation.

The Report notes several other SOC and PSOC that have the potential to be in the area. These include *Dichanthelium acuminatum* (Panic Grass), *Eleocharis rostellata* (Beaked Spikerush), *Impatiens aurella* (Pale-yellow Jewel-weed), *Oxytropis lagopus* var. *conjugans* (Hares-foot Locoweed), *Potentilla plattensis* (Platte Cinquefoil), *Utricularia intermedia* (Flatleaf Bladderwort), *Adoxa moschatellina* (Musk-root), *Carex crawei* (Crawe’s Sedge), *Elodea bifoliata* (Long-sheath Waterweed), and *Meesia triquetra* (Meesia Moss).

The Report lists several noxious weeds in the polygon that contains the project area. Priority 1A species include *Centaurea solstitialis* (Yellow Starthistle), *Isatis tinctoria* (Dyer’s Woad), and *Phragmites australis* ssp. *Australis* (European Common Reed). Priority 1B species include *Lythrum salicaria* (Purple Loosestrife), *Polygonum cuspidatum* (Japanese Knotweed), *Cytisus scoparius* (Scotch Broom), *Echium vulgare* (Blueweed), and *Polygonum x bohemicum* (Bohemian Knotweed). Other noxious weeds with a predicted model of 100% optimal occurrence in the polygon area include *Rhamnus cathartica* (Common Buckthorn), *Berteroa incana* (Hoary False-alyssum), and *Lepidium draba* (Whitetop). Other noxious weeds in the area are listed in the Report.

In either Alternative 1 or Alternative 3, there is a risk of inadvertently transporting seeds and noxious plant material inadvertently with vehicle tires and worker foot traffic. The short duration of the work time, limited disturbance, and use of paved and compacted roads and lots, will minimize the potential spread. No action (Alternative 2) would not increase the number of vehicles or pedestrians in the project area and would not increase the already-present risk of spreading noxious weeds with the traffic that the site already experiences.

PHYSICAL ENVIRONMENT. At the bottom of this “Fish/Wildlife” checklist, provide a narrative description and evaluation of the cumulative and secondary effects on fish and wildlife resources. Even if you checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects as well as the long-term effects. Attach additional pages of narrative if needed.

5. FISH/WILDLIFE	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Deterioration of critical fish or wildlife habitat?		X				
b. Changes in the diversity or abundance of game animals or bird species?		X				
c. Changes in the diversity or abundance of nongame species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?			X		y	
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				
h. Adverse effects to threatened/endangered species or their habitat?			X		y	
i. Introduction or exportation of any species not presently or historically occurring in the affected location?		X				
j. Other:		X				

The Report lists several SOC, PSOC, and Species of Special Status (SSS) in the polygon that contains the project area. These include *Myotis lucifugus* (Little Brown Myotis), *Haliaeetus leucocephalus* (Bald Eagle), *Bombus suckleyi* (Suckley’s Cuckoo Bumble Bee), *Lasiurus cinereus* (Northern Hoary Bat), *Euderma maculatum* (Spotted Bat), *Dolichonyx oryzivorus* (Boblink), *Melanerpes lewis* (Lewis’s Woodpecker), *Neminius americanus* (Long-billed Curlew), *Catharus fuscescens* (Veery), *Ursus arctos* (Grizzly Bear), *Haemorhous cassinii* (Cassin’s Finch), *Coccythraustes vespertinus* (Evening Grosbeak), *Dryocopus pileatus* (Pileated Woodpecker), and *Gymnorhinus cyanocephalus* (Pinyon Jay). None of these species were observed in the project area, but their known presence in the general area will be considered leading up to and during the project. Other observed species and potential species in the general area are listed in the Report. None of these species have been observed in the project area.

Based on a review of the Montana Sage Grouse Habitat Conservation Program Mapper the proposed project is not mapped in an Executive Order (EO) Area for Sage Grouse Habitat. The project’s location indicates Sage Grouse are not anticipated to be adversely affected.

Under Alternatives 1 and 3, there is minor risk of adverse effects to SOC, PSOC or SSS and their habitats. The project entails structural stabilization of a dilapidated historic building, which may or may not be home to some of the species in the occurrence list. Mitigation will entail posting visual and written information about the potential for these species to be present in and around the building, along with directions to stop work and inform a supervisor if specimens or specimen nests are encountered. Additional mitigation measures will include limiting vehicles to paved roads and previously disturbed parking lots and driveways, and prompt clean-up of project-related spills and debris. Under Alternative 2, the risks for adverse effects to these species and their habitats remains unchanged.

HUMAN ENVIRONMENT. At the bottom of this “Noise/Electrical Effects” checklist, provide a narrative description and evaluation of the cumulative and secondary effects of noise and electrical activities. Even if you checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects as well as the long-term effects. Attach additional pages of narrative if needed.

6. NOISE/ELECTRICAL EFFECTS	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Increases in existing noise levels?			X		y	
b. Exposure of people to severe or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other:		X				

Under Alternatives 1 and 3, there will be construction noise related to the project. No additional permanent increase in noise will occur due to construction activities; these activities are anticipated to be short-term and will occur during daylight hours. Because the project will involve structural stabilization work only, no equipment will interfere with electrostatic or electromagnetic levels. No impacts are anticipated regarding radio/television interference. Under Alternative 2, no increase in existing noise level is anticipated.

HUMAN ENVIRONMENT. At the bottom of this “Land Use” checklist, provide a narrative description and evaluation of the cumulative and secondary effects on land use. Even if you checked “none” in the above table, explain how you came to that conclusion. Attach additional pages of narrative if needed. Consider the immediate, short-term effects as well as the long-term effects.

7. LAND USE	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. A conflict with a designated natural area or area of unusual scientific or educational importance?		X				
c. A conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on, or relocation of, residences?		X				
e. Compliance with existing land policies for land use, transportation, and open space?		X				
f. Increased traffic hazards, traffic volume, or speed limits or effects on existing transportation facilities or patterns of movement of people and goods?			X		y	
g. Other:		X				

The project area is a developed commercial parcel in Lewis & Clark County, northwest of the Helena city boundaries. The parcel is owned by the Archie Bray Foundation, an arts nonprofit who uses the buildings on the property for educational purposes. The proposed action will not alter or interfere with the productivity of existing land use of the area. It will not conflict with a designated natural area or area of unusual scientific or education importance. It will not conflict with existing land use, but rather, will facilitate that existing land use; the owner uses the property for educational purposes, and will potentially be able to expand this use as a result of the project. There will be no adverse effects to or relocation of residences. The project complies with existing land policies. Due to the building being placed back in use as a result of the project, there may be increased foot and vehicular traffic volume related to improved build accessibility.

Alternatives 1 and 3 may result in increased foot and vehicular traffic within the bounds of the parcel on a long-term basis, which can be mitigated with safety signage on the property. Alternative 2 would not result in increased traffic hazards or volume.

HUMAN ENVIRONMENT. At the bottom of this “Risk/Health Hazards” checklist, provide a narrative description and evaluation of the cumulative and secondary effects of risks and health hazards. Even if you checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects of the action as well as the long-term effects. Attach additional pages of narrative if needed.

8. RISK/HEALTH HAZARDS	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Effects on existing emergency response or emergency evacuation plan or create need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?			X		y	
d. Disturbance to any sites with known or potential deposits of hazardous materials?		X				
e. The use of any chemical toxicants?		X				
f. Other:		X				

Work will be limited to the building’s original footprint and the area immediately surrounding the building. The project scope of work does not include the use of hazardous substances. Refinishing chemicals will be used and disposed of according to manufacturer’s instructions and local refuse rules.

Due to the existing vacant and deteriorating condition of the building and its historic use as a clay tile production plant, workers and visitors to the site under Alternatives 1 and 3 may encounter animal refuse or metal/wood detritus in the building. All people on the site should take standard safety precautions, such as wearing appropriate Personal Protective Equipment (PPE) when working in spaces where exposure to such materials is possible. Under Alternative 2, visitors to the building may still encounter these risks.

HUMAN ENVIRONMENT. At the bottom of this “Community Impact” checklist, provide a narrative description and evaluation of the cumulative and secondary effects on the community. Even if you checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects as well as the long-term effects. Attach additional pages of narrative if needed.

9. COMMUNITY IMPACT	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?			X		y	
f. Other:		X				

The creation of construction jobs in the community will be an immediate short-term impact of the project. The structural stabilization of the building will contribute towards making the building usable as an educational and exhibit space for future community classes and events. The reactivation of this space will have a long-term beneficial impact for community members who participate in Archie Bray’s course and event offerings, and for other community members who may be able to rent the reactivated space for other events.

Under Alternatives 1 and 3, the reactivation of the building may result in increased vehicular and foot traffic hazards and effects upon the Archie Bray campus and in the immediate area. This impact can be mitigated with safety signage. Under Alternative 2, traffic hazards and effects will remain unchanged.

HUMAN ENVIRONMENT. At the bottom of this “Public Services/Taxes/Utilities” checklist, provide a narrative description and evaluation of the cumulative and secondary effects on public services, taxes and utilities. Even if you checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects as well as the long-term effects. Attach additional pages of narrative if needed.

10. PUBLIC SERVICES/TAXES/UTILITIES	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. An effect upon, or result in a need for new or altered, governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If so, specify:		X				
b. Effects on the local or state tax base and revenues?		X				
c. A need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Increased used of any energy source?		X				
e. Other.		X				
Additional information requested:						
f. Define projected revenue sources.	Class and programming revenue, event space rental, private donations, public funding					
g. Define projected maintenance costs.						

The proponents for the project (Alternatives 1 and 3) do not anticipate an effect upon or need for new or altered governmental services in the short term or the long term. The project will not require changes or upgrades to fire/police protection or other public maintenance facilities or utilities. The project will result in improvements to the appearance and stability of the building. While the use of power tools may increase electricity consumption for the property during the project, that increase will be minimal and temporary. Gasoline consumption necessitated by travel for the work crews again will be minimal and temporary.

Alternative 2 will not result in these temporary increases in electricity and gasoline consumption.

HUMAN ENVIRONMENT. At the bottom of this “Aesthetics/Recreation” checklist, provide a narrative description and evaluation of the cumulative and secondary effects on aesthetics & recreation. Even if you checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects as well as the long-term effects. Attach additional pages of narrative if needed.

11. AESTHETICS/RECREATION	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		X				
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report)		X				
d. Adverse effects to any designated or proposed wild or scenic rivers, trails or wilderness areas?		X				
e. Other:		X				

The project entails structural stabilization of the historic features on an existing building. Under Alternatives 1 and 3, the project will not alter scenic vistas or create an aesthetically offensive site or effect open to public view. The aesthetic character of the surrounding community and neighborhood will not be altered, as extant historic features on the building will not be changed or removed, but rather stabilized and preserved. The quality and quantity of recreational and tourism opportunities will not be adversely altered, as the Archie Bray campus is already a tourist destination in its current state. No designated or proposed Wilderness Areas, Wild and Scenic Rivers, or trails are in the project area (https://data.fs.usda.gov/geodata/other_fs/wilderness/stateMap.php?stateID=MT and <https://www.rivers.gov>). Given the contained nature of the project work, no impacts to wilderness, rivers, nor trails is anticipated.

HUMAN ENVIRONMENT. At the bottom of this “Cultural/historical Resources” checklist, provide a narrative description and evaluation of the cumulative and secondary effects on cultural/historical resources. Even if you checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects as well as the long-term effects. Attach additional pages of narrative if needed.

12. CULTURAL/HISTORICAL RESOURCES	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		x				
b. Physical changes that would affect unique cultural values?			x		y	
c. Effects on existing religious or sacred uses of a site or area?		x				
d. Adverse effects to historic or cultural resources?		x				
e. Other:		x				

The project will take place on an existing developed parcel and will adhere to the Secretary of the Interior’s Standards for the Treatment of Historic Properties (Standards). As such, no adverse effects to historic or cultural resources are anticipated, and no destruction or alteration of sites, structures, or objects of prehistoric, historic, or paleontological importance are anticipated. No religious or sacred uses of the site are known, but were there to be such uses in existence, no effects are anticipated.

The physical changes to the building that would result under Alternatives 1 and 3 will enhance the unique cultural values of the property. These physical changes will be of benefit to the cultural/historical resources in the area, both the tile building itself and to the National Register-listed Archie Bray campus at large. In following the Standards, the project will result in the historic character of the building being preserved; repair of historic materials wherever feasible; replacement of unrepairable features with in-kind materials where possible, or with substitute materials that match the original in composition, design, color and texture; retention of character-defining features, spaces, materials, finishes, and construction techniques; and evaluation of existing condition of historic features to determine the appropriate level of intervention.

In short, Alternatives 1 and 3 will have physical changes to the building that will result in a net benefit to historic/cultural resources. Alternative 2 will not result in physical changes, but will also entail further deterioration of the resource, with a high likelihood of its loss altogether.

HUMAN ENVIRONMENT. At the bottom of this “Summary Evaluation of Significance” checklist, provide a narrative description and evaluation of the cumulative and secondary effects. Even if you have checked “none” in the above table, explain how you came to that conclusion. Consider the immediate, short-term effects as well as the long-term effects. Attach additional pages of narrative if needed.

13. SUMMARY EVALUATION OF SIGNIFICANCE	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action, considered as a whole:						
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. Have organized opposition or generate substantial public controversy?		X				
Additional information requested:						
g. List any federal or state permits required.						

The relatively limited potential area of effect and limited scope of the project contribute to the determination that Alternatives 1 and 3 will have no substantial cumulative effect to the area environment. Significant effects identified throughout this checklist/report consistently bear a beneficial effect to the human environment. Overall, however, the project seeks to contribute to the stabilization of a single building, rather than a largescale transformation and development.

PART III. ENVIRONMENTAL CHECKLIST CONCLUSION SECTION

1. Discuss the cumulative and secondary effects of this project as a whole. These are impacts to the human environment that, individually, may be minor for a specific project, but, when considered in combination to other actions, may result in significant impacts.

The secondary effects of this project, as described in the checklists above, will be temporary and minor. Temporary dust emissions, exhaust emissions, construction-related noise, and increased vehicle and roof traffic in the project area will occur, but will be short in duration, limited to daylight hours, and minor in scale. Potential spread of noxious weeds or disturbance of wildlife in the course of the project will be mitigated by keeping vehicles to paved or previously-disturbed parking areas, and by posting notices in and around the building about SSS, SOC, and PSOC that may be encountered in and around the building over the course of the project.

The cumulative effects of the project will result in net benefit for the building and for the community. The vacant and deteriorating tile plant will be stabilized, eventually rehabilitated and reactivated as an exhibit/event space, and will no longer be in danger of deteriorating to the point that it is no longer financially or technically feasible to repair and reuse the building. The community will benefit from expanded resources available to them at the Archie Bray campus, which is an arts center of local, state, and national importance in terms of the visitors and artists it attracts. The cultural benefits of expanded space at Archie Bray are long-ranging at all these scales—including but not limited to the local scale, as local residents may be able to rent the exhibit space for other events.

2. Based on the significance criteria evaluated in this Environmental Checklist (Part II), is an EIS required?

YES _____

NO X _____

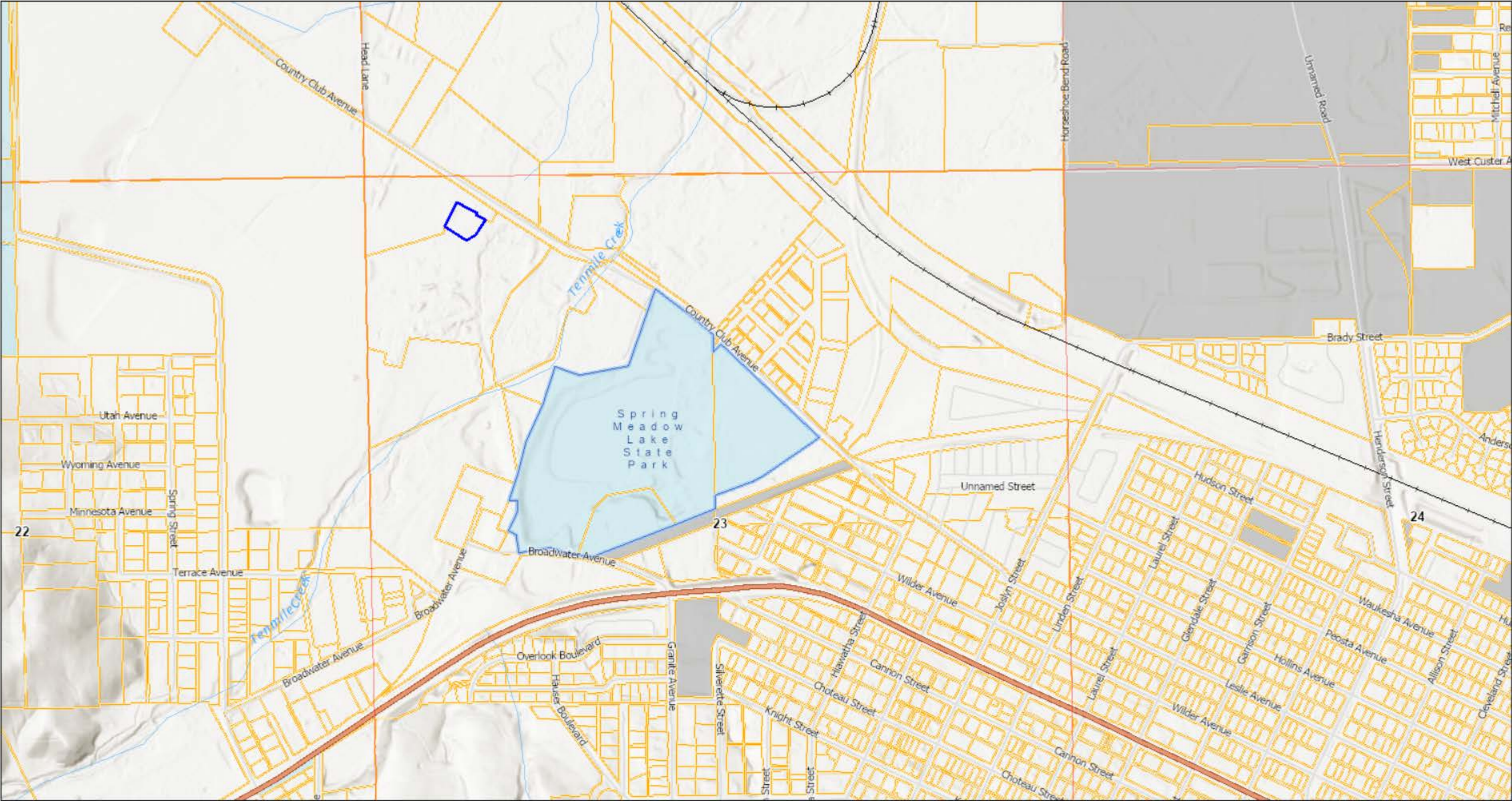
If an EIS is not required, explain why the current checklist level of review is appropriate.

The checklist process allowed for consideration of the project's potential for effects on the environment. Through the course of the research required, no substantial or unmitigable potential adverse effects were identified. Instead, several benefits to resource were summarized in the review. The project (Alternatives 1 and 3) will provide a long-term positive benefit to the cultural resource and the community.

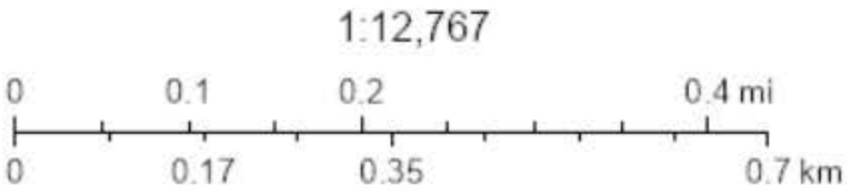
The Montana Historical Society State Historic Preservation Office will initiate a 30-day public comment period for the project, a dedicated webpage with links to relevant documents, and a public meeting. All public comments will be duly considered and integrated in the final environmental checklist for the project. That final document will include: a description of the nature of the public comments received during the official public comment period; a number tally of comments in support of the project and the numbers

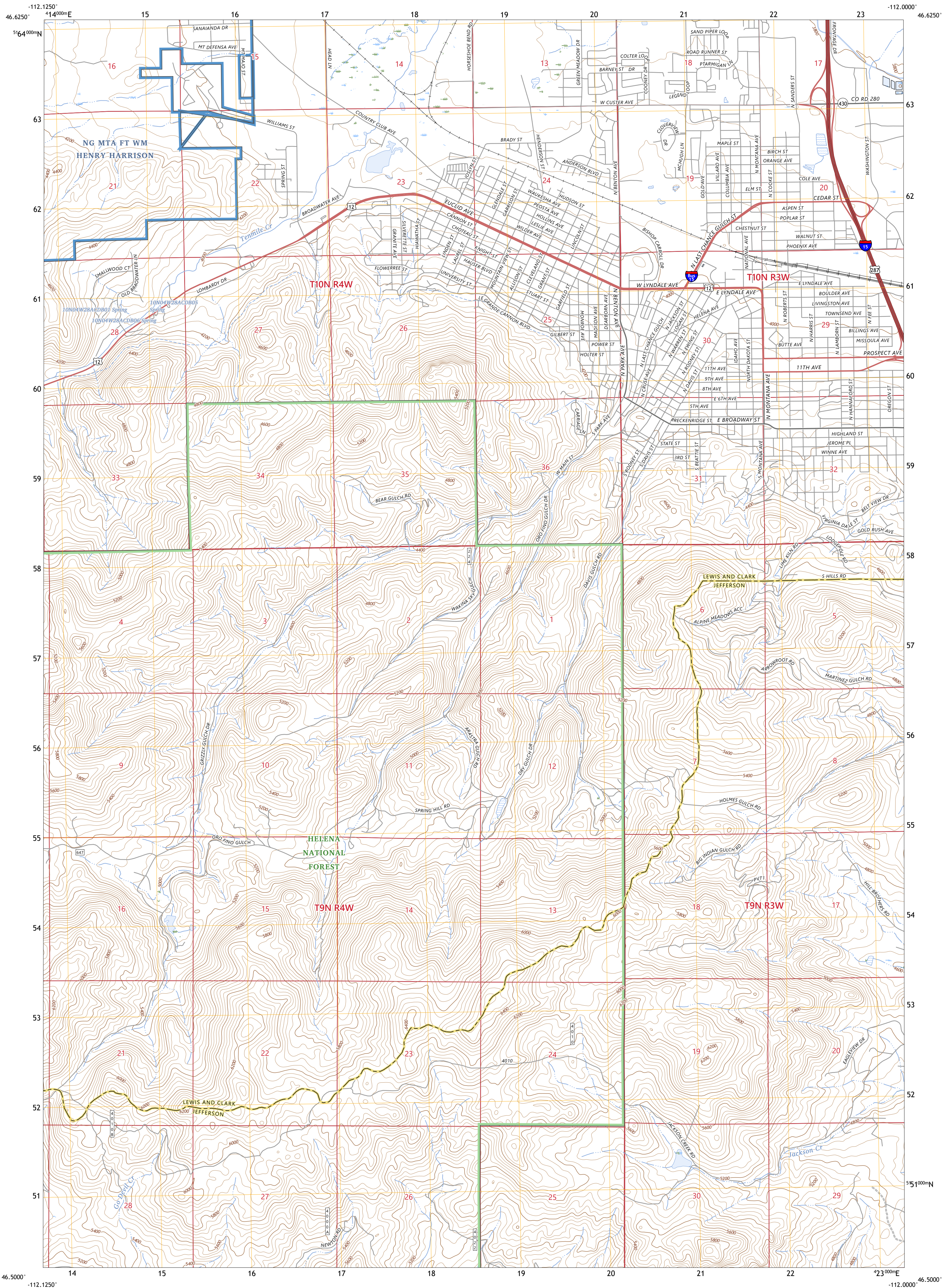
against; and a summary of the most important comments received and responses to these comments. Copies of all public notices and comments received will be kept on file.

ArcGIS Web Map



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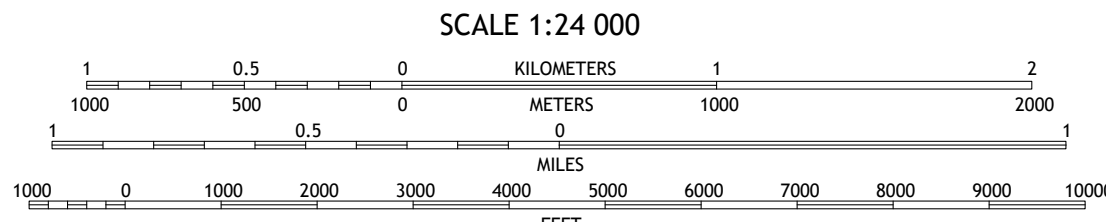
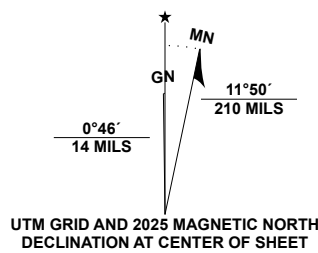


Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1 000-meter grid: UNIVERSAL TRANSVERSE MERCATOR, ZONE 12T
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USER DEFINED CONTENT



Quadrangle	Location
Austin	Blackfoot
Blackfoot	Helena
Helena	East Helena
East Helena	Chesman
Chesman	Jefferson
Jefferson	Clancy

ADJOINING QUADRANGLES

ROAD CLASSIFICATION	
Expressway	Local Connector
Secondary Hwy	Local Road
Ramp	4WD
Interstate Route	US Route
FS Primary Route	FS Passenger Route
	FS High Clearance Route

Check with local Forest Service unit
for current travel conditions and restrictions.

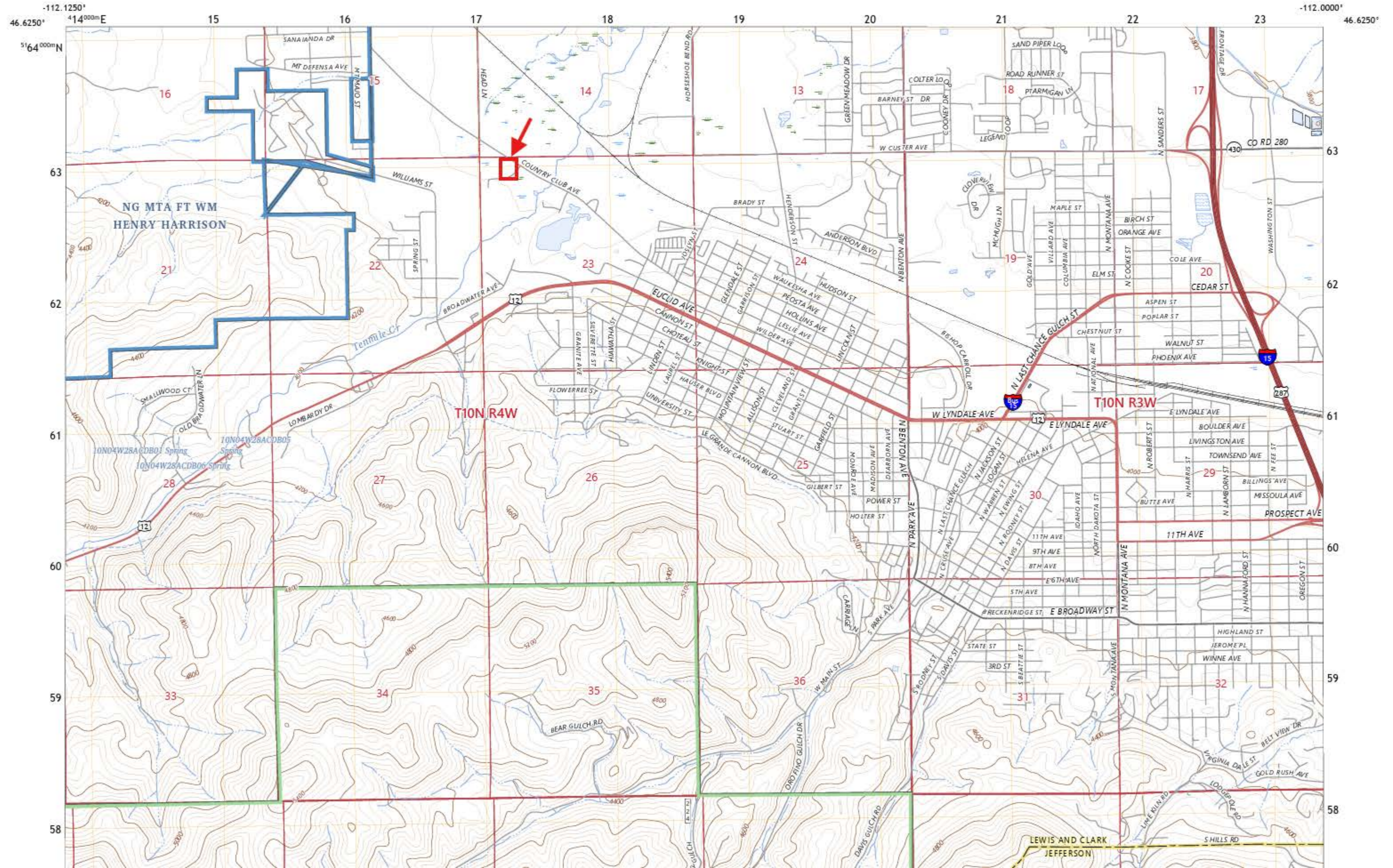
HELENA, MT
2025



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



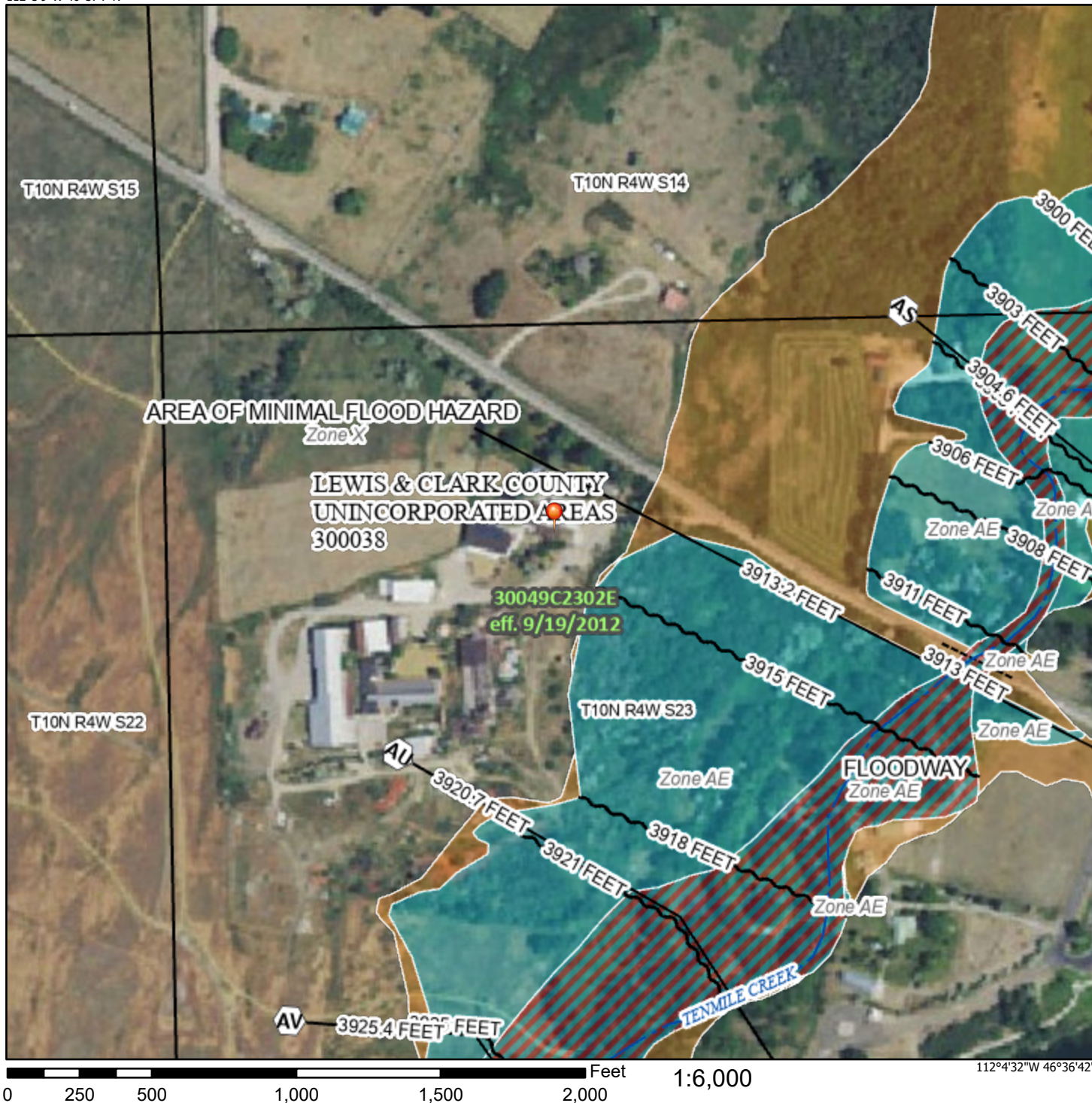
HELENA QUADRANGLE
MONTANA
7.5-MINUTE TOPO



National Flood Hazard Layer FIRMette



112°5'9"W 46°37'7"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/11/2025 at 3:44 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Basemap Imagery Source: USGS National Map 2023

Application Form

Property name:	Western Clay Manufacturing Tile Plant	Request Amount:	41,720
Address:	2915 Country Club Rd	Matching Funds:	46,334
City:	Helena	Total Project Cost:	88,054
Zip Code:	59602		

Check boxes that apply:

☒ Property is listed in the National Register individually or as contributing to a district.

Check [here](#) to see if your property is listed.

Name of historic district if within a district: Western Clay Manufacturing Co./Archie Bray Foundation

☐ Property is not listed in the National Register; the owner consents to their property being listed.

☐ The applicant is pursuing Federal Rehabilitation Tax Credits and has submitted a final draft Part 2 to SHPO.

☒ Applicant is the property's sole owner.

☐ Applicant co-owns the property and has attached a letter(s) approving this application signed by all co-owners.

☐ Applicant does not own the property and has attached an owner(s) letter(s) approving this application.

☒ Optional letters of support are attached.

☒ The owner(s)/applicant are aware of SHPO Grant stipulations that include:


- compliance with The Secretary of the Interior's Standards and Guidelines for Archaeology and Preservation;
- nomination of the property to the National Register if property is not already listed;
- installation of a SHPO-provided National Register interpretive panel on grant-funded property;
- SHPO review and inspection of property treatments for a duration based on the grant award;
- the property and project are insured.
- Subject property has no liens on it.

☒ Applicant understands that if selected, they will complete the Montana Environmental Protection Act (MEPA) process prior to SHPO awarding a grant.

☐ Applicant is submitting MEPA documents from a previous review of the same scope of work presented here.

☐ A copy of the fiscal sponsor's board resolution to sponsor this application is attached (if applicable).

☒ All application materials and supporting documents must be submitted through [SHPO's Cultural Resources Database](#).

Applicant's name:	Archie Bray Foundation	Email:	rharvey@archiebray.org
Signature and date:	 Feb 6th, 2025	Phone:	406-443-3502
Address:	2915 Country Club Rd	City, State, Zip	Helena, MT 59602

Photos: The first four (4) photos should capture the building exterior from all four sides. Captions should indicate which side of the building is shown, e.g. *North Elevation*. An “elevation” is an exterior wall of a building.



Photo # 1 **Photo subject:** Tile Plant, north elevation



Photo #2 **Photo subject:** Tile Plant, west elevation



Photo #3 Photo subject: Tile Plant, south elevation



Photo # 4 Photo subject: Tile plant, east elevation



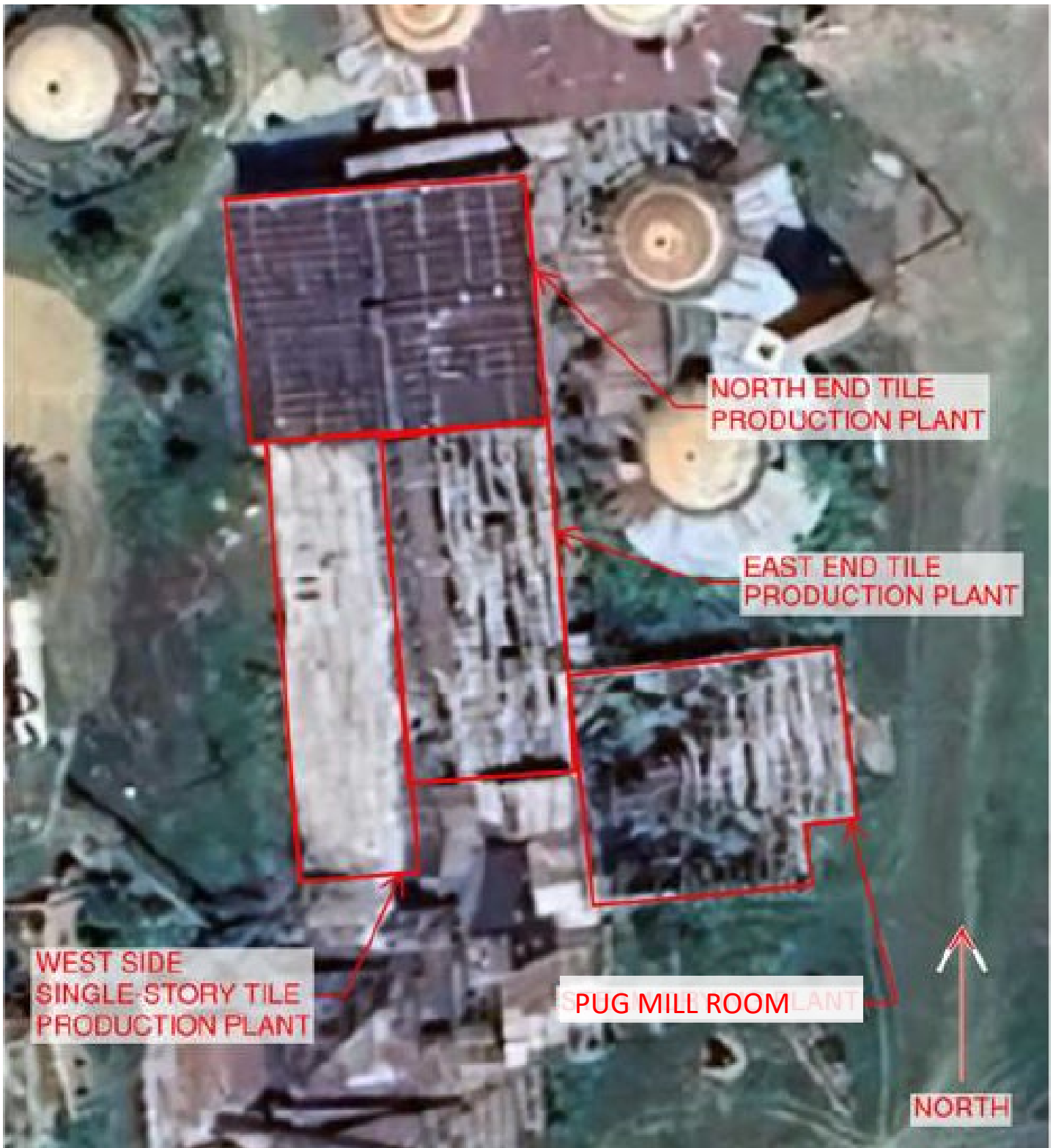
Photo #5 Photo subject: Tile Plant from the southeast corner of the factory



Photo #6 Photo subject: Historic view of tile plant, same vantage point, 1908

Site Plan: Depict the property's physical context. Google maps are acceptable. Mark the property clearly on the map.





Aerial View of Tile Plant identifying the various sections of the building where work will take place

Historic Significance: What qualities make the property significant? Explain the property’s significant associations with any (a) significant events or patterns of history, (b) significant persons, and/or (c) significant achievements or representative examples of architectural styles, trends, architects, or engineering. *Limit: 2500 characters*

SUMMARY STATEMENT OF SIGNIFICANCE

The Western Clay Manufacturing Co./Archie Bray Foundation is one of Montana’s most outstanding, nationally significant historic properties – a late-19th/early-20th c. brick, tile and terra cotta factory that evolved to become one of the ceramic art world’s most prominent institutions.

In the 1860s a brickyard was established here which grew to become Western Clay, the leading 20th c. brick manufacturer in Montana. Nine decades later, in 1951, a ceramic arts facility was founded here. Named for brickyard owner and patron, the Archie Bray Foundation (the Bray) was an early ceramic arts center housing the first ceramic arts residency program in the U.S. Over time this sprawling brick factory evolved to be a widely regarded, international incubator for prominent ceramists.

The first resident artists, Peter Voulkos and Rudy Autio, transformed the world of art ceramics by joining the Abstract Expressionist movement with clay as their medium. Following a 1952 visit to the Bray by Bernard Leach and Shoji Hamada, the most influential potters of the era, these founding Bray artists led a revolution in ceramics as production-based pottery gave way to figurative and sculptural ceramic work of all kinds.

The Bray’s founders and successive directors became leading artists and teachers in the American Studio Ceramics Movement from the mid-20th century on. Together, their direction for the Bray and the strength of their artwork influenced generations of ceramists and the course of ceramic arts across the globe.

In 1985, Western Clay Manufacturing Co. was listed in the National Register of Historic Places for its industrial values (NR #85001052). In 2017, its National Register significance was elevated to the national level to recognize the Bray’s stature as an arts center (12/1/2017). The evolution of the Bray, from its industrial origins to stature as an internationally renowned ceramics center, symbolizes the path of the American Studio Ceramics Movement as studio ceramics went from rigid industrial-based traditions to an expressive art medium of its own.

Today the 1951 “Pottery” and 30 historic resources comprise the Western Clay/Archie Bray property - most notably a fully equipped hollow clay tile plant, two updraft scotch kilns, five downdraft “beehive” kilns, and a tunnel kiln. The Bray is committed to preserving this legacy property, and with NPS support and guidance a National Historic Landmark to memorialize the Bray’s exceptional historic significance is underway.

Architectural Description: An architectural description reflects the building's setting, shape and form, number of stories, structural, cladding, and finish materials, and architectural features such as windows, brackets, porches, built-ins, etc. Describe the property as it looks today and its condition. List dates of original construction, historic, or contemporary modifications. *Limit: 3000 characters*

The tile production plant and kilns of the Western Clay Manufacturing Co. are the centerpiece to a late 19th - early 20th c. assemblage of clay manufacturing resources that reflect the evolution of brick-making technology across nine decades. The oldest resources date to ca. 1885 with successive additions to the brickyard made into the 1960s. Post-1960s elements were added as the brickyard was transformed by the artists working here. Three new buildings for artists and gallery work were added in the 21st century; and several deteriorated brickyard buildings were removed. Still the integrity remains extraordinary for an abandoned factory of this kind. With 30 contributing historic buildings and structures, and hundreds of artworks comprising a rich cultural, historic district, it stands out among the remaining brickyards in this country.

This project will address the highly deteriorated tile production plant, constructed ca. 1885-1930 for production of hollow clay products from start to finish. This included a pug mill room, clay processing areas, tile production shop, drying shop, boiler room, engine room and machine shop (see floor plan). Within these walls, clay was processed from native material to finished products ready for firing. The buildings originally had wooden framing and walls, upgraded to brick bearing walls with wood post-and-beam interior framing supporting gable roofs and a wooden elevator tower that rises above the plant.

This stabilization project will focus on two sections of the tile plant: the two story drying shop with gable roofs over the center, east side and north end, and long shed roof over the west side; and the pug mill room - a square brick-walled, shed-roofed room on the east side of the tile shop.

Within the tile plant, the ca. 1885 tile drying shop was long, rectangular and a single story high. The walls were of wood with board and batten siding, with a gable roof and two tall chimneys. This original section was expanded prior to 1908 with addition of a two-story north end with brick walls and a stepped parapet roofline. A long single-story shed-roofed space with a brick exterior bearing wall was added along the west side of the building by the 1920s, and finally, shortly after 1930, the east half of the drying room was raised to two stories with a brick outer wall and encompassed a second floor for more drying capacity.

Fenestration throughout includes segmental arched window openings with 6-over-6 double hung sash units. On the interior, masonry walls and wood post-and-beam structural framing and stout wooden joists support floors constructed of 2x6 boards spaced an inch apart to enable steam heated air to circulate for drying. The drying shop houses the area where Peter Voulkos and Rudy Autio set up a workshop in 1951 to create their own work while assisting in the brickyard. At the north end, drying shop doors access the kiln sheds via a series of wooden ramps for the transport of raw ware to the outdoor kilns.

Project Summary: Describe the scope of work, its importance to the property and community, and how you will accomplish it. *Limit: 750 characters*

The tile production plant is in an advanced state of deterioration, with a failing roof and significant ongoing water damage. To address urgent stabilization needs, this project will reinforce the structure and protect highest priority areas which must be stabilized, preserved and secured from further damage. Guided by in-depth architectural/engineering assessments and shoring plans, we will brace and cap brick walls; shore up failing structural beams, columns, joists and roof rafters; secure sheathing and reroof the north and west portions of the drying room; seal wooden floors and joists from further water exposure. This launches a multi-year process to preserve this rare industrial resource and rehabilitate it for active use.

Budget Table & Narrative: Provide a budget overview including estimates based on verifiable, reasonable, and allowable costs. Explain the basis of estimates listed in the table, how you plan to fund the project combining SHPO funds and other sources. List all other sources and whether they are secured. The value for in-kind services is \$30.84 per hour, and up to \$100 per hour for professional in-kind services. *Limit: 1000 characters*

	SHPO Funds	Matching Cash	Matching In-Kind	Total
Labor	\$41,720			\$41,720
Materials		\$35,961		\$35,961
Reporting/Planning		\$ 1,436	\$ 5,084	\$ 6,520
Other (Rental Equip)		\$ 2,603	\$ 1,250	\$ 3,853
Total	\$41,720	\$40,000	\$ 6,334	\$88,054

This budget is based on 6 months of diligent architectural/engineering assessment and design. Preserve MT's restoration director provided cost estimates and committed their scaffolding to the project for 5 weeks. (See attached estimate and rental valuation.) In addition, Bray staff/facilities personnel anticipate 100 hours for planning/reporting. Please note all Phase 1 match is firmly secured.

Phase 1 stabilization:

\$41,720 MT SHPO brick & mortar funding (requested)
 \$40,000 Private donation for materials, consulting architect/engineers (pledged July 2024)
 \$ 5,084 Bray staff & facilities committee professionals prep/reporting/MEPA/planning/meetings w SHPO
 \$ 1,250 PMT scaffolding donated use for 5 weeks

Pending for Fall 2025 strategic planning:

\$15,000 National Trust for Historic Preservation
 In-Kind NPS/EPA Strategic Plan/Design Charette (pending with EPA/Denver office)

Proposed for Phase 2 2026 stabilization:

\$50,000 1772 Foundation
 \$50,000 JM Kaplan Fund
 \$50,000 Private Dollars

Project timeline: List the start of work, estimate project milestones, and completion of work. Describe future phases beyond SHPO-funded work. Limit: 2500 characters

<u>Pre-Phase 1</u>	Planning supported by \$30,000 Murdock Trust / \$10,000 NHL work by NPS, Preserve MT
Sept 2024 - Feb 2025	Architectural/engineering assessment with Gilmore Preservation & DCI Engineers
Dec-Jan 2024	Workplan and cost estimating
Feb-March 2025	Source materials
April 2025	SHPO-led MEPA public comment
Spring 2025	Targeted Brownfields Assessment (EPA)
May 2025	Final Western Clay/Archie Bray NHL draft to NPS
July 2025	Bray Summer Gala with Phase 1 tours and highlights
<hr/>	
<u>Phase 1: 2025</u>	Supported by \$41,720 SHPO grant/\$40,000 Private Funds/ \$4,314 In-Kind
May	Grant start, sign contract, project launch, news releases Site preparation, remove chimney stacks from generator room roof Purchase materials
June	Project mobilization, site prep, trainee orientation
June – July	Install temporary shoring throughout, brace and cap masonry walls, overlay rotted floor areas Secure/replace sheathing; rebuild west and north roofs Treat exposed rafters/joists with linseed oil/WaterSeal
Aug - Nov	Wrap up, final project reporting Pursuit of funding for Phase 2 stabilization
<hr/>	
<u>Post SHPO Project</u>	
Fall 2025	Design charette w Bray personnel, NPS NHL staff, EPA design team, MT SHPO, et al on stabilization and long-term reuse plans for remaining tile plant areas Grant proposals and fundraising for Phase 2: stabilize south tower, repair roofs on generator and machine shops Architectural scope and engineering plans for Phase 2
Summer 2026	Celebrate at Bray 75 th Anniversary – major capital campaign kick-off, tours Conduct Phase 2: 2026 stabilization project Design work with historic architecture/engineering team
2027 and beyond	Capital campaign ongoing Continued phased rehabilitation
2030	Place building into service
2031	Grand Gala Opening at Bray 80 th Anniversary

Project Feasibility: Demonstrate how you will complete the project within the grant’s timeframe and with the given resources, while meeting SHPO Grant requirements. Justify your budget to show costs as necessary, reasonable, and allowable. Indicate whether the project will rely on professional or non-professional labor. *Limit: 3500 characters*

The Archie Bray staff and board has been determined to save and repurpose the tile production plant for many years. In early 2024 we unanimously approved a motion to rescue of the facility and strategically plan for its future reuse. This process relies on the Bray’s highly experienced facilities committee and staff and seasoned outside professionals, and looks to repurpose the tile plant as an interpretive site, public gathering space, galleries for collections, and other long-term needs.

In preparation for this first phase of stabilization work, in June 2024 we contracted DCI Engineers and Gilmore Preservation Architects to conduct a facilities assessment of the tile plant and a dozen other structures on the campus. Due to its hazardous current condition, the primary focus was on the tile plant building, and two subsequent assessment reports were produced that thoroughly evaluated the structural needs to stabilize the facility, its presumed options for rehabilitated future use, and code compliance for placing the building back into active service.

Based upon these assessments, shoring plans were drawn up to address highest priority repairs in keeping with SoI Standards for Historic Preservation and future needs that the Bray staff and board envision.

Shoring plans and historic architectural scoping to stabilize the most threatened parts of the tile plant were drawn and finalized over a 4-month period, to ensure they were appropriate, cost-effective and feasible. We then secured the first \$40,000 pledge to preserve the structure and are requesting a MT SHPO brick and mortar grant to match our committed funds. This will enable us to procure the services of a skilled preservation crew to carry out the repairs. To further the Bray’s mission as an educational and cultural organization, we intend to include a crew of young preservation trainees to learn and work alongside the preservation carpentry crew.

With plans and guidance of our structural engineers/preservation team, we designed this project to address urgent needs, and comply with IEBC and NPS/SHPO/NHL requirements. Preserve MT assisted us to craft a budget that is pragmatic and enables us to begin Phase 1 stabilization in 2025 and complete it by the end of the building season. This will align with a July fundraising kick-off at our summer gala so we may immediately move to strategic planning in the fall and Phase 2 stabilization work in 2026.

Our Bray staff includes experienced development and grants personnel, our board and facilities committee include legal, historic preservation, facilities management, and historic architectural professionals. These individuals respect the process and the requirements of the IEBC, SoI Standards for Historic Preservation and MEPA, and will welcome a dialog with MT SHPO staff to review these and future plans to ensure we meet preservation standards while creatively breathing new life into the building.

The Bray has an exemplary track record of successfully managing grants and funding for large capital projects, having completed the Shaner Resident Studio (2005), stabilized Kilns 7&8 and their sheds (2013), rehabilitation of “The Pottery” and other buildings (2018), the Senska Education Building (2017) and the Main Gallery (2021). Tile Plant rehabilitation will be undertaken with the same energy and enthusiasm.

PLEASE REFER TO ARCHITECTURAL SCOPE AND ENGINEERED SHORING PLANS TO REVIEW A DETAILED DESCRIPTION OF THE PROJECT WE PROPOSE TO UNDERTAKE.

Project Urgency: How will the project address needs of and threats to the property and the surrounding community? What would become of the property if the project does not move forward? What preservation challenges exist in the community, and how will the project address those factors? *Limit: 2500 characters including spaces.*

The Bray staff and board, the artists and the public community all understand the magnitude of preservation challenges presented by the Western Clay brickyard. The brickyard is an intact industrial factory with many complex, heavily constructed structures. The Bray has been dedicated to preserving this incredible place and made enormous efforts to do so since we reacquired the factory in 1984. During this time span we have had tremendous public support as we stabilized many portions of the site and succeeded in repurposing the historic pottery, office, scotch kilns, tunnel kiln building, warehouses, and garages as Bray ceramic arts facilities, and have stabilized two kilns and kiln sheds for public interpretation via tours and self-guided visitation.

In honoring the property's significance through the National Register in 1985 and now as a pending National Historic Landmark, we have long sought to commemorate the legacy of what the Bray stands for, and to preserve as much of this rarified complex as is possible, with an eye to the organic qualities whereby the Bray bridged the wide canyon between our industrial origins and our artistic present.

The tile plant is now the last, the largest, the most complex, and most challenging structure we must tackle. And due to its failing condition, it is imperative to act now, and quickly.

The tile plant is currently in a severely stressed condition and things are moving. The roofs are in need of replacement and are no longer holding water out of the building. Due to these unstable conditions, the boiler stacks on the generator room toppled over a couple of years ago and last year an upper floor in the tower fell down. In the areas for Phase 1 shoring and repair, the roofing is mostly gone, and water is infiltrating the supporting post footings. We worry, as do our structural engineers, about what a snowy winter or extra wet spring could do to this increasingly fragile building.

This project will arrest the decline. By installing temporary shoring on walls and the post and beam framework, and repairing two major sections of roof that are still salvageable, we will protect remaining areas from further stress and deflection. If we do not do this work this year, there is grave danger of collapse in various parts of the building. One of the biggest challenges is funding. A SHPO grant will enable us to begin a carefully phased undertaking to fully enclose and weatherize the tile plant and ultimately, repurpose this facility.

Project Sustainability: Explain the project's long-lasting benefits to the property, and how the property owner intends to maintain the property. How will the project sustain its economic benefit to the community? *Limit: 2500 characters including spaces.*

The Archie Bray Foundation has been maintaining, stabilizing, repurposing and interpreting portions of its historic factory since reacquiring the brickyard in 1984. Since then, we have incorporated the preservation of the brickyard into our strategic plans and proven our dedication to keeping the legacy of our origins alive by honoring the full history of this complex site. By rehabilitating many buildings to be functional parts of Bray operations, creating walking tours, hosting events, and stabilizing our beehive kilns, kiln sheds, and many of the challenging resources on the grounds we express this dedication.

Our commitment is further reflected by our support for a full-time facilities director, an invaluable staff member who oversees stewardship of all the buildings, structures and equipment on our campus. The facilities director makes note of any threats to these resources, and directs their repair and cyclical maintenance. Most recently, he has overseen an architectural and structural engineering assessment to provide due diligence to guide this work. Produced by a highly qualified team, the report identifies priorities for maintaining and sustaining the historic brickyard resources, and potential for future use. Due to its scale, precarious condition, and importance, the Bray's top facilities priority now is to repair, stabilize and rehabilitate the tile production plant.

Our plan to place the tile plant back into service is highly intentional, as it will renew its purpose and generate income that can be used for sustaining it long into the future. One of the outstanding needs at the Bray is for an exhibit space for the permanent collections and for large galleries to host gatherings for ceramists and the public. Our project is the first step toward placing the tile plant back into use with an eye on how this facility at the heart of our campus can advance our economic targets and broadly benefit the community.

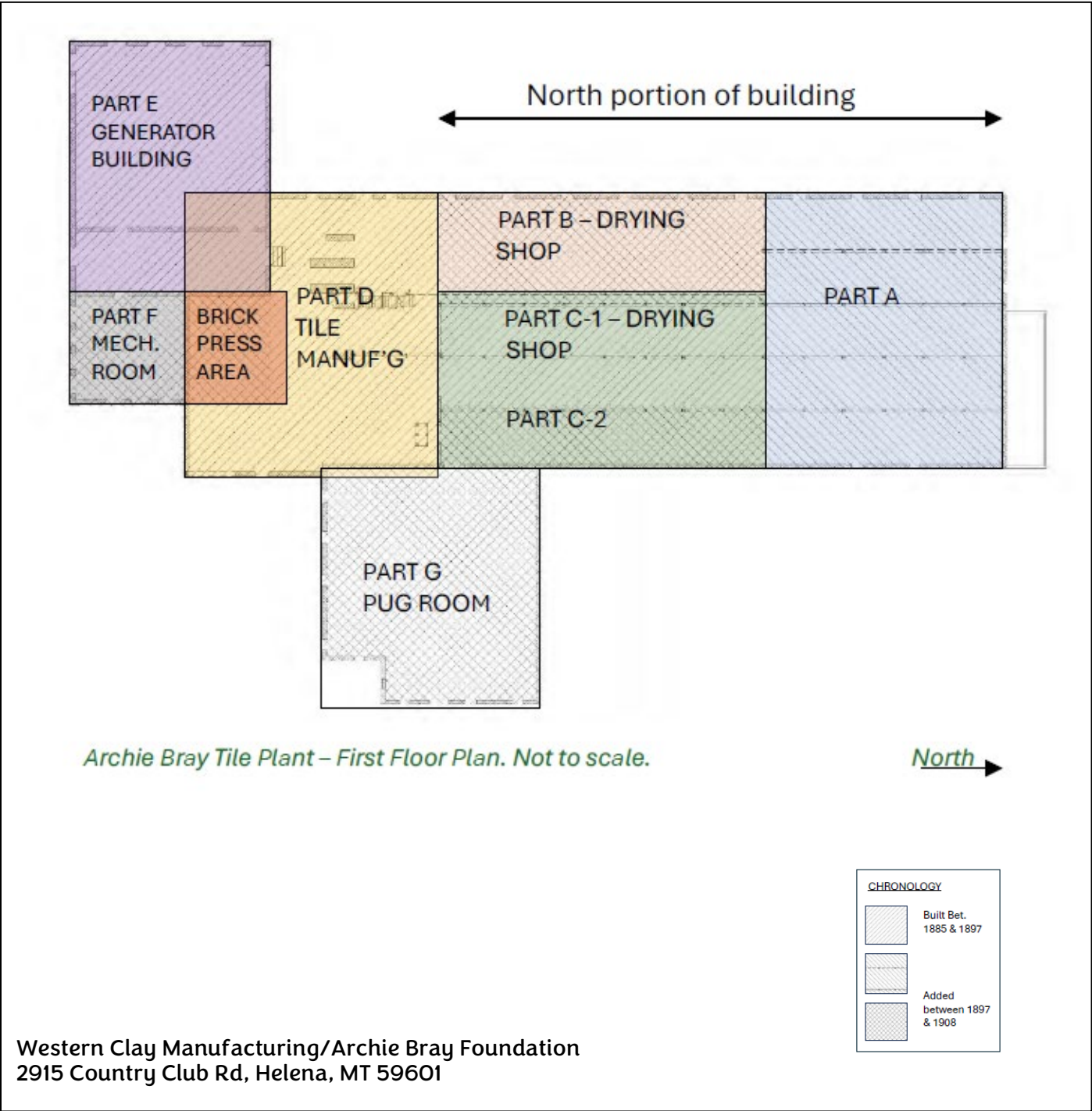
The Archie Bray is a long-standing cultural institution in Montana and holds great import to the larger Helena and statewide communities. Our diverse programming provides cultural enrichment for Montanans and draws artists and visitors from across the world. A 2013 economic impact study concluded the Bray creates 26 year-round jobs, generates over \$1.4M in annual income for Montana households, has a robust gallery program that supports more than \$2.8M in annual sales, and connects our regional community to a large audience far beyond Montana.

Photo Key: Photos are necessary to show the architectural features described in the **Detailed Project Description** in the next section. Plot each photo location on the relevant floorplan with the photo number and view direction.



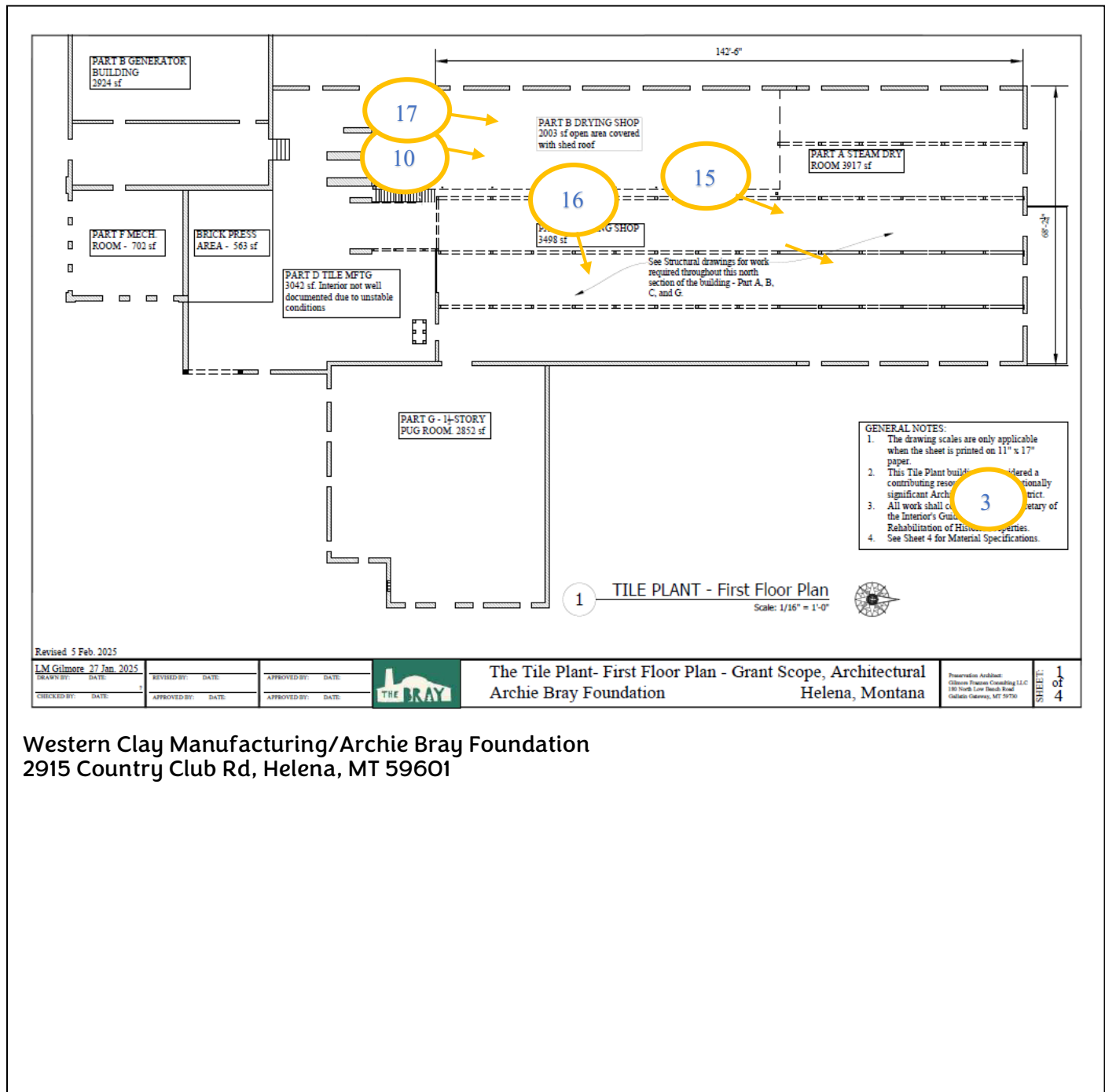
Site plan with exterior photo locations

Photo Key: Photos are necessary to show the architectural features described in the **Detailed Project Description** in the next section. Plot each photo location on the relevant floorplan with the photo number and view direction.



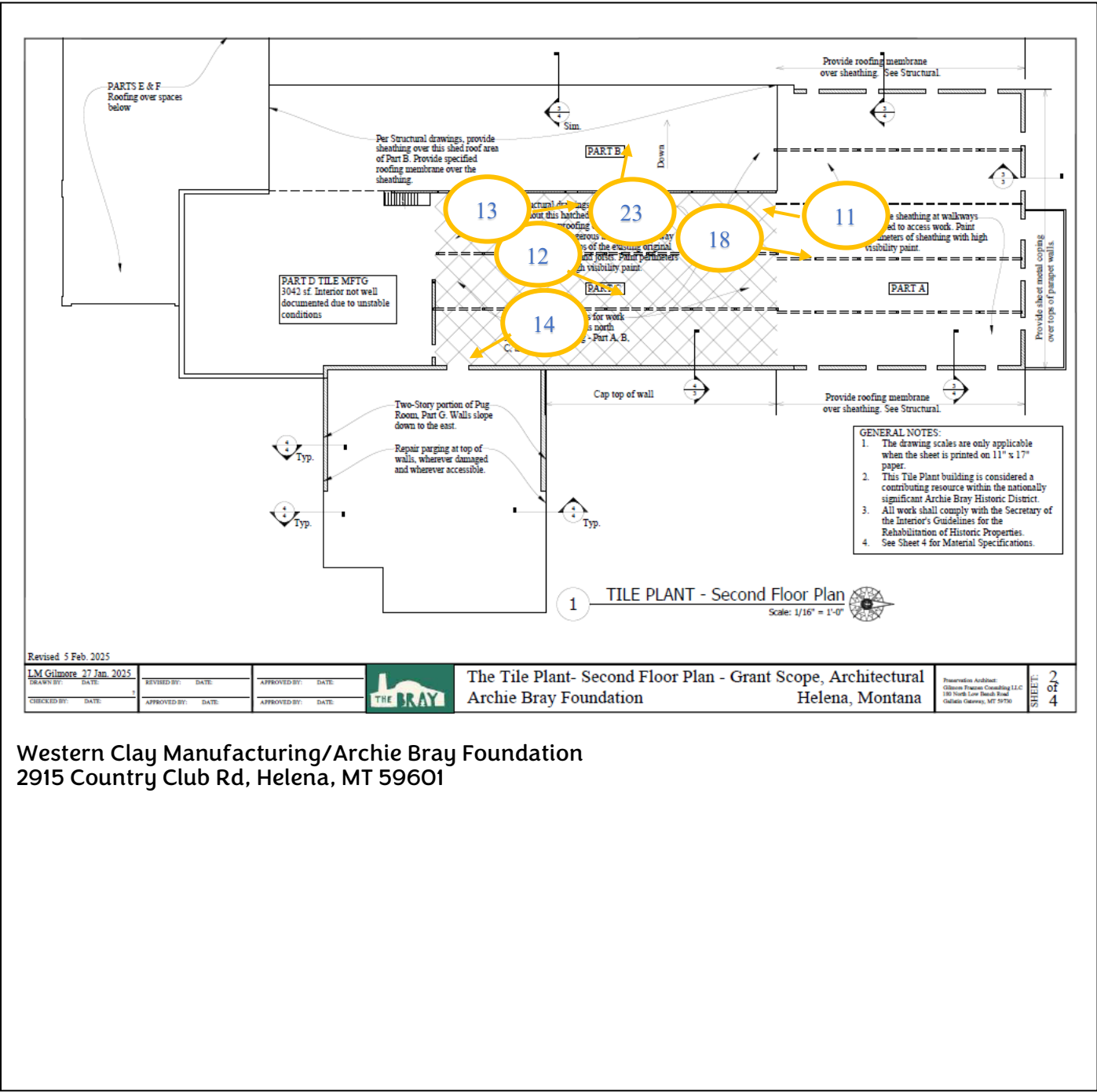
Floor level: Building Floorplan

Photo Key: Photos are necessary to show the architectural features described in the **Detailed Project Description** in the next section. Plot each photo location on the relevant floorplan with the photo number and view direction.



Floor level: 1st floor

Photo Key: Photos are necessary to show the architectural features described in the Detailed Project Description in the next section. Plot each photo location on the relevant floorplan with the photo number and view direction.



Floor level: 2nd floor

Photo Key: Photos are necessary to show the architectural features described in the **Detailed Project Description** in the next section. Plot each photo location on the relevant floorplan with the photo number and view direction.



Floor level: roof

Detailed Project Description – Describe all aspects of the project by feature, including items not paid for by SHPO funds. Examples of features are foundation, masonry, siding, roof, windows, entries, finishes, flooring, trim, stairs, mechanical, electrical, plumbing, interior spaces, etc. Copy and renumber tables as needed. Drawings are optional and may be provided as a PDF attachment and referenced in the “drawing number(s).”

1. Feature:	Boiler Stacks	Date of feature:	ca. 1885
Photo Number(s):	7	Drawing Number(s):	



Describe the feature and its condition:

Remove to metal stacks from generator room roof: These twin boiler stacks formerly stood upright above the boilers. They fell over in 2023, onto the roof of the generator room. The roof is deteriorated and the tall stacks were not well anchored when a wind storm hit them and knocked them over.

Describe proposed work and the impact that work will have on the feature:

Using a lift, the stacks will be carefully pulled up and off the roof structure, placed on the ground near the building or another secure location, documented and stored under cover.

2. Feature: Pug Mill Room
Photo Number(s): 8 (above), 9 (below)

Date of feature: Ca. 1920
Drawing Number(s):



Describe the feature and its condition:

The roof over the Pug Mill Room is a wooden, shed roof element that formerly capped this room that projects to the east of the tile plant. The wood is extensively rotted, and in 2023 the remains of this roof fell in.

Describe proposed work and the impact that work will have on the feature:

Remove the remaining wood debris; salvage any sound wood; document the construction for future rehabilitation.

3. Feature: Interior Drying Room Tile Plant

Date of feature: 1885/ca. 1900/1930

Photo Number(s): 10

Drawing Number(s):



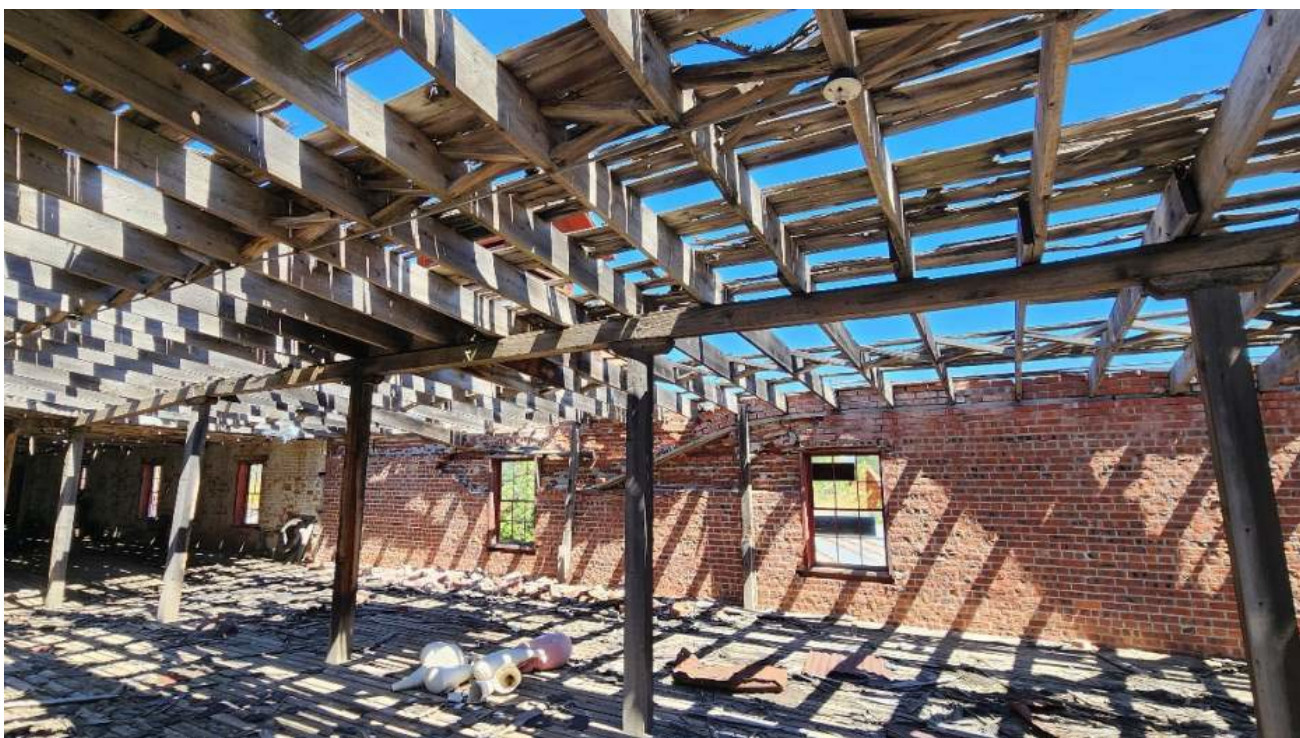
Describe the feature and its condition:

Site Preparation: Interior of the tile plant has been used as a convenient space to warehouse unwanted items: some is simply trash such as the non-historic such as cable and sonotubes, others are historic items remaining from operation of the plant such as flower pot molds and boiler stack segments. In addition, artworks have been installed into the space such as Light Cistern by Nick Bonner (the stacked pallets in the background of this photo) and the sculpture of the small seated girl by Kensuke Yamada.

Describe proposed work and the impact that work will have on the feature:

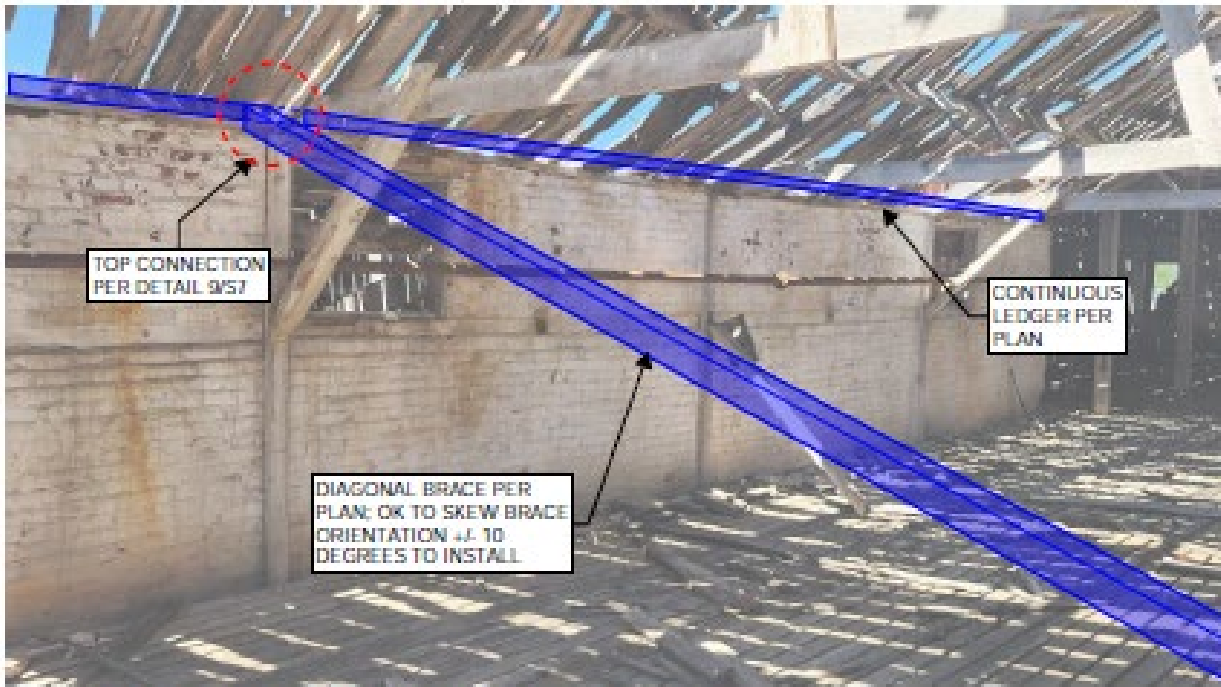
Work proposed is to remove modern materials to storage elsewhere; to document historic items that date to operation of the factory and remove to a safe storage area; document artwork in situ and stabilize in place, or remove and replace following tile plant repair work. This will protect industrial and cultural aspects remaining within the interior, and enable work crews to work safely in the cleared spaces.

4. Feature:	Masonry Walls of Tile Drying Room	Date of feature:	Brick walls date to ca. 1925
Photo Number(s):	11 (above), 12 (below)	Drawing Number(s):	Engineers Shoring Plans, S6 & S7

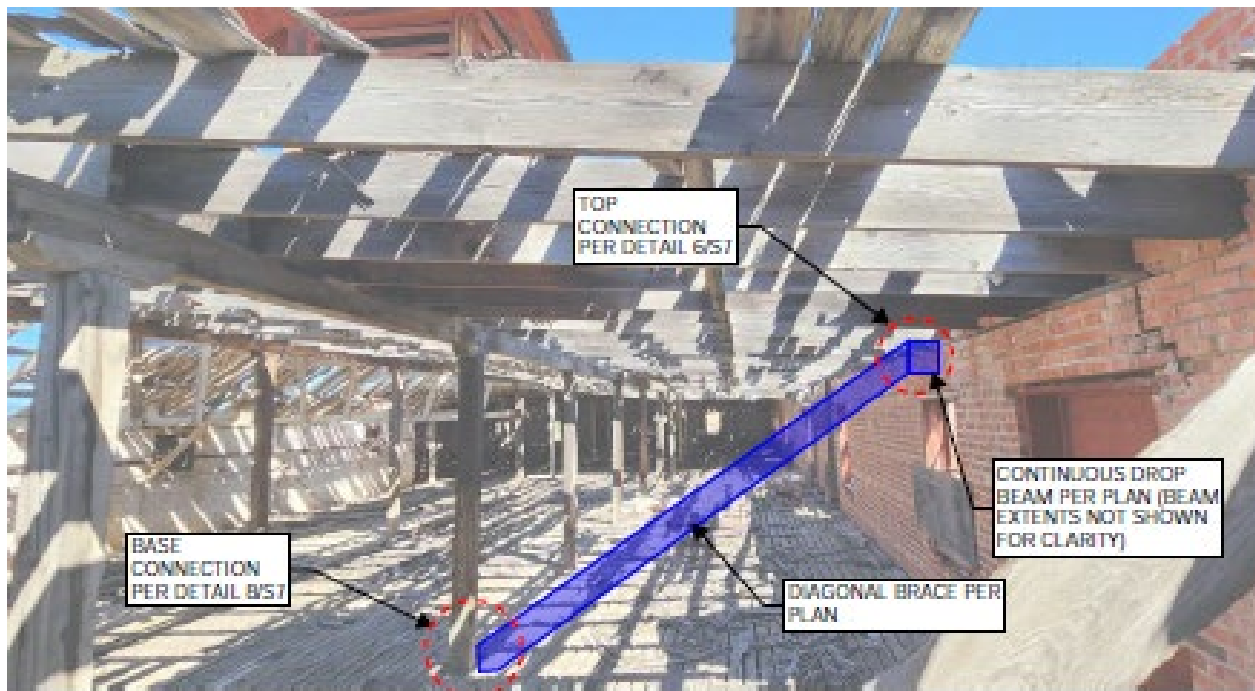


Describe the feature and its condition:

Masonry walls all around tile drying room, east, north and west are beginning to deteriorate at the tops where roofing is no longer intact. They remain plumb but precarious at this time due to exposure and roofing instability.



3 TYP. INTERIOR WALL BRACE



2 TYP. EXTERIOR EAST WALL BRACE

Describe proposed work and the impact that work will have on the feature:

Temporary bracing using rough-milled lumber anchored to existing columns on interior. See detail above from shoring plans.

5. Feature:	Masonry Walls of Tile Plant	Date of feature:	Brick walls date to ca. 1925
Photo Number(s):	13 (above), 14 (below)	Drawing Number(s):	Architectural Scope, Sheets 3, 4



Describe the feature and its condition:

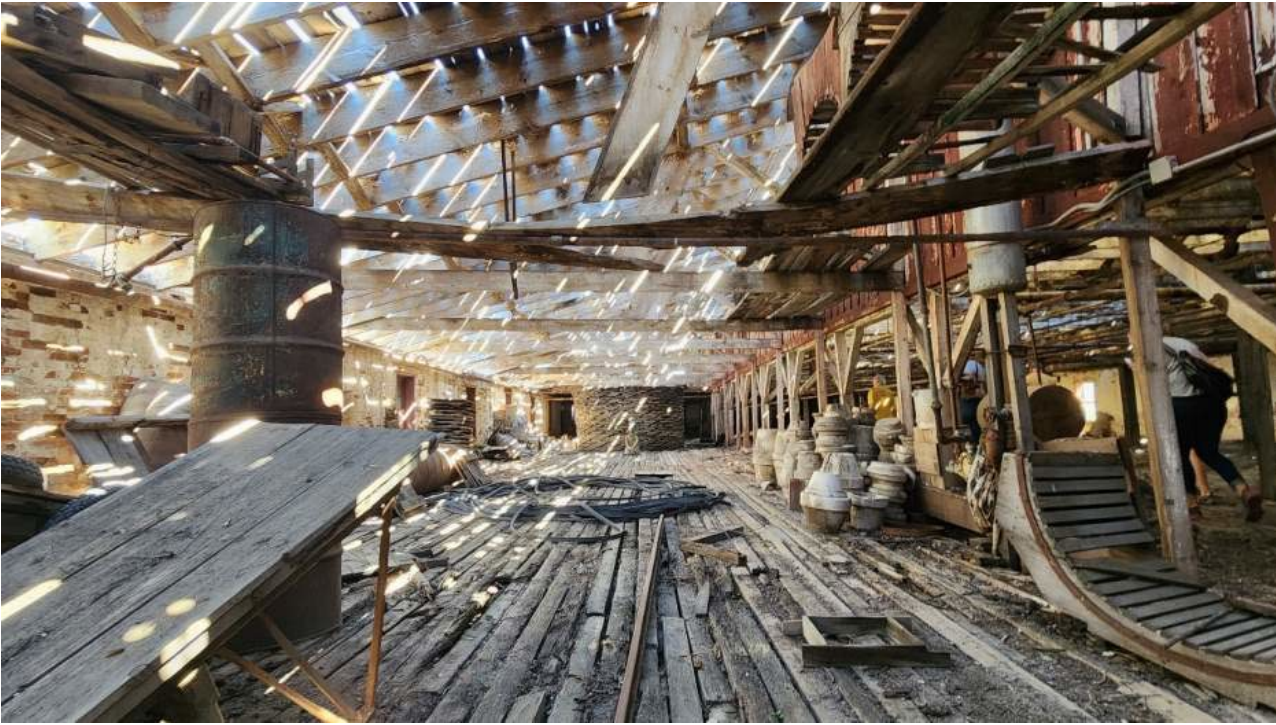
Masonry walls of tile plant, all around: east, west, south. These are bearing walls and still holding but exposed to weather at top where roofing is deteriorated.

Describe proposed work and the impact that work will have on the feature:

Membrane flashing to cap tops of exposed masonry walls will be installed wherever wall tops are open and unprotected, until new roofing can be installed over exposed wall sections in future phases.

6. Feature:	Post & Beam Structure of Tile Plant	Date of feature:	ca. 1900/early 1930s
Photo Number(s):	15 (above) 16 (below) next page: 17 (above) 18 (below)	Drawing Number(s):	Engineers Shoring Plans, S1-S6





Describe the feature and its condition:

Internal Tile Plant Framing: 4x4 and 6x6 columns support floor and roof structure throughout. First floor columns rest on concrete footings below floor level on rubble base. Some areas of water damage and beam breakage.

Describe proposed work and the impact that work will have on the feature:

Install temporary shoring beams along column line at the mid-span of first floor beams, top chords of shed roof and roof joists. Supplement/replace 4x4s on columns where material has been removed or is missing.

7. Feature:	Tile Plant roof	Date of feature:	Ca. 1900
Photo Number(s):	19 west side (above), 20 north (below)	Drawing Number(s):	Engineers Shoring Plans, S5, S6



Describe the feature and its condition:

West Side Roof (above) North End Roof (below, north area two stories at center): Both are still intact with sheathing in place but roofing material missing or gone. We do not have roof access for a good photo of the north roof, so used a side view. Both roofs structures are still sound, although moisture has migrated into the structures.

Describe proposed work and the impact that work will have on the feature:

Reinforce/Replace sheathing at roofs of North Gable and West Shed Roof:

- Remove roof decking, address damaged beams where needed.
- Provide ½”-thick sheathing at north gable roof and west shed roof (on top of existing sheathing).
- Provide one layer of self-adhering underlayment at the north gable roof and the west shed roof.
- Install roll roofing.

This is a repair with sheathing to be permanent and roll roofing that will last several years until permanent roof installed as part of larger building campaign.

8. Feature:	Roof Eaves and Parapet	Date of feature:	Ca. 1900
Photo Number(s):	21 (above), 22 (below)	Drawing Number(s):	Architectural Scope Sheets 3, 4



Describe the feature and its condition:

Eaves and parapet of north end and pug mill room roof. Currently exposed to weather, roof deteriorating above.

Describe proposed work and the impact that work will have on the feature:

Remove deteriorated sheathing and any adhesives, repair missing brick, cap masonry with membrane roofing

9. Feature:	Floor joists, upper wooden flooring	Date of feature:	1985-1930
Photo Number(s):	23	Drawing Number(s):	



Describe the feature and its condition:

Floorboards and joists are exposed to moisture where roof will be repaired in future Phase 2. They are in relatively sound condition, due to clear grain and strength of historic wood.

Describe proposed work and the impact that work will have on the feature:

Second Floor: Seal floorboards with linseed oil; seal tops of joists with Thompsons WaterSeal or 3 coats of linseed oil.

10. Feature: Brick Walls, exterior drying room

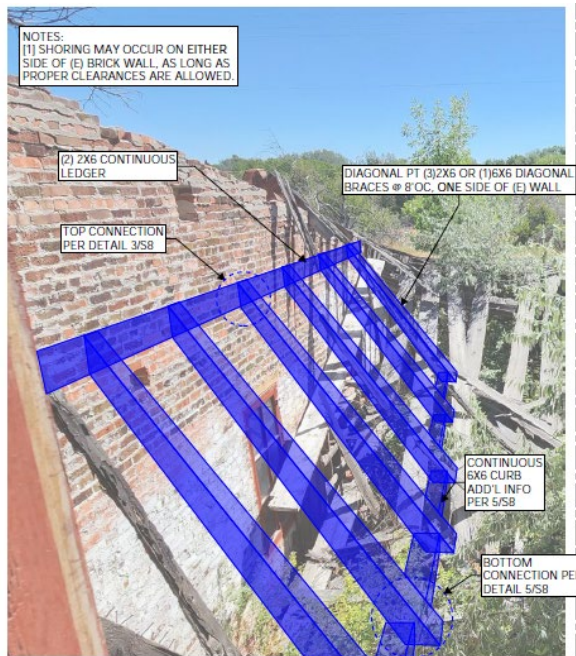
Date of feature:

Ca. 1900

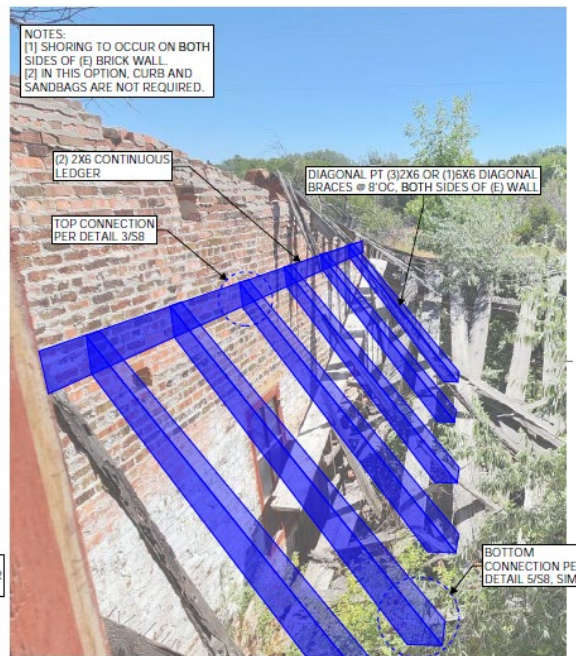
Photo Number(s): 24

Drawing Number(s):

Engineers Shoring Plans, S8



① STEAM DRYING PLANT WALL SHORING OPTION 1



② STEAM DRYING PLANT WALL SHORING OPTION 2

Describe the feature and its condition:

Exterior brick walls on tile drying area. Stable but deteriorating, still plumb and load bearing.

Describe proposed work and the impact that work will have on the feature:

Install temporary bracing, only in places where other shoring and repairs do not address the stability. Per details above from the engineers shoring plans, there are options for where and whether this is needed.



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NATURAL HERITAGE PROGRAM

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Latitude	Longitude
46.61250	-112.07211
46.63090	-112.09530

Summarized by:

(Custom Area of Interest)



Suggested Citation

Montana Natural Heritage Program. Environmental Summary Report.

for Latitude 46.61250 to 46.63090 and Longitude -112.07211 to -112.09530. Retrieved on 4/11/2025.

The Montana Natural Heritage Program is part of the Montana State Library's Natural Resource Information System. Since 1985, it has served as a neutral and non-regulatory provider of easily accessible information on Montana's species and biological communities to inform all stakeholders in environmental review, permitting, and planning processes. The program is part of the NatureServe network that is composed of over 60 member programs across North America that work to provide current and comprehensive distribution and status information on species and biological communities.



Environmental Summary

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- [Introduction to Native Species](#)
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Introduction to Environmental Summary Report

Environmental Summary Reports from the Montana Natural Heritage Program (MTNHP) provide information on species and biological communities to inform all stakeholders in environmental review, permitting, and planning processes. For information on environmental permits in Montana, please see permitting overviews by the [Montana Department of Environmental Quality](#), the [Montana Department of Natural Resources and Conservation](#), the [Index of Environmental Permits for Montana](#) and our [Suggested Contacts for Natural Resource Management Agencies](#). The report for your area of interest consists of introductory and related materials in this PDF and an Excel workbook with worksheets summarizing information managed in the MTNHP databases for: (1) species occurrences; (2) other observed species without species occurrences; (3) other species potentially present based on their range, presence of associated habitats, or predictive distribution model output if available; (4) structured surveys that follow a protocol capable of detecting one or more species; (5) land cover mapped as ecological systems; (6) wetland and riparian mapping; (7) land management categories; and (8) biological reports associated with plant and animal observations. If your area of interest corresponds to a statewide polygon layer (e.g., watersheds, counties, or public land survey sections) information summaries in your report will exactly match those boundaries. However, if your report is for a custom area, users should be aware that summaries do not correspond to the exact boundaries of the polygon they have specified, but instead are a summary across a layer of hexagons intersected by the polygon they specified as shown on the report cover. Summarizing by these hexagons which are one square mile in area and approximately one kilometer in length on each side allows for consistent and rapid delivery of summaries based on a uniform grid that has been used for planning efforts across North America.

In presenting this information, MTNHP is working towards assisting the user with rapidly assessing the known or potential species and biological communities, land management categories, and biological reports associated with the report area. Users are reminded that this information is likely incomplete and may be inaccurate as surveys to document species are lacking in many areas of the state, species' range polygons often include regions of unsuitable habitat, methods of predicting the presence of species or communities are constantly improving, and information is constantly being added and updated in our databases. **Field verification by professional biologists of the absence or presence of species and biological communities in a report area will always be an important obligation of users of our data. Users are encouraged to only use this environmental summary report as a starting point for more in depth analyses and are encouraged to contact state, federal, and tribal resource management agencies for additional data or management guidelines relevant to your efforts. Please see the Appendix for introductory materials to each section of the report, additional information resources, and a list of relevant agency contacts.**

Legend

Model Icons

- Suitable (native range)
- Optimal Suitability
- Moderate Suitability
- Low Suitability
- Suitable (introduced range)

Habitat Icons

- Common
- Occasional

Range Icons

- Native / Year-round
- Summer
- Winter
- Migratory
- Non-native
- Historical

Num Obs
Count of obs with
'good precision'
(≤1000m)
+ indicates
additional 'poor
precision' obs
(1001m-
10,000m)



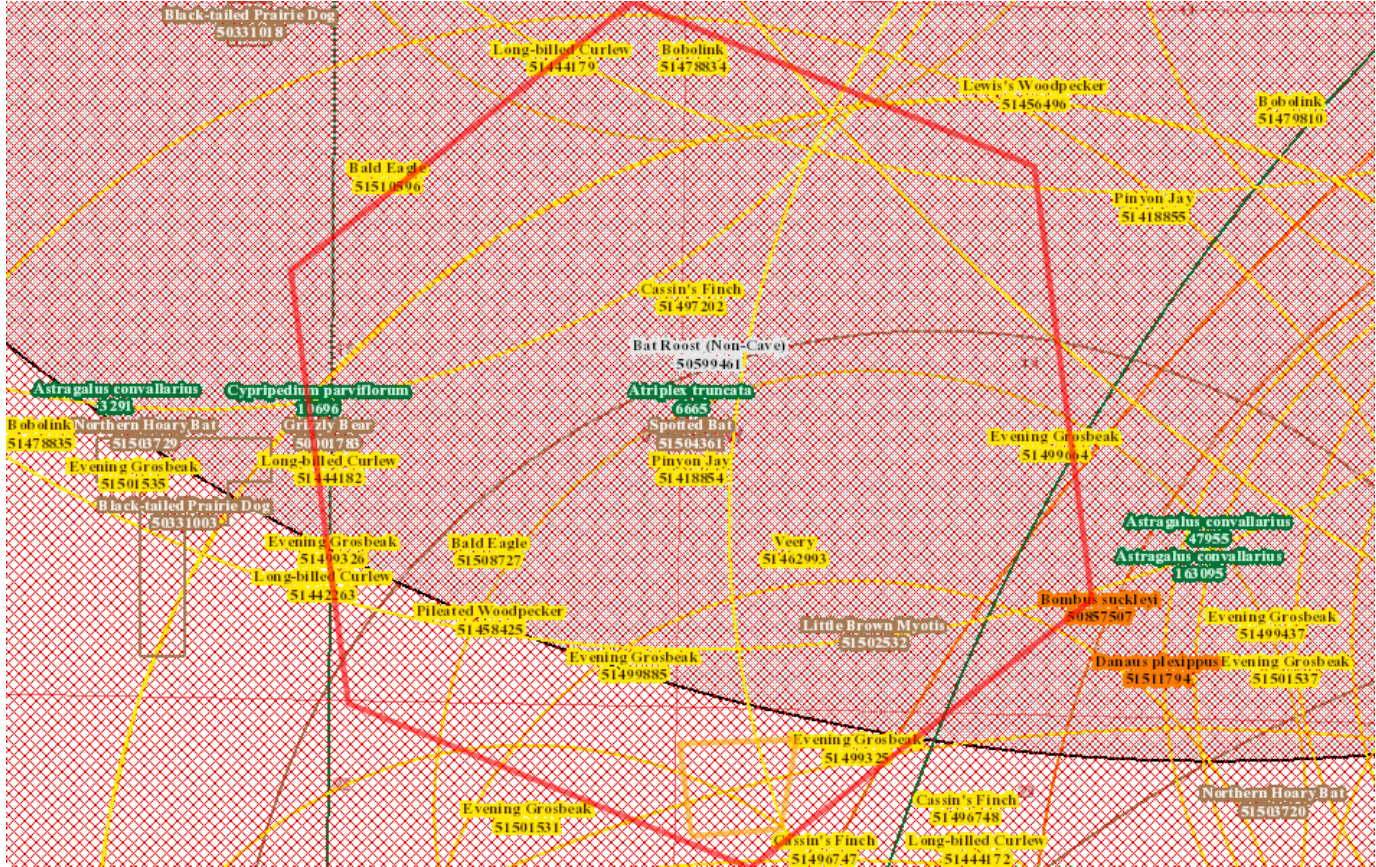
Latitude 46.61250
Longitude -112.07211
46.63090 -112.09530

Native Species

Summarized by: (Custom Area of Interest)

Filtered by:

Native Species reports are filtered for Species with MT Status = Species of Concern, Special Status, Important Animal Habitat, Potential SOC



Species Occurrences

	USFWS Sec7	# SO	# Obs	Predicted Model	Range
M - Little Brown Myotis (<i>Myotis lucifugus</i>) SOC		1			 Y
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G3G4 State: S2S3 USFS: Sensitive - Known in Forests (BD, BRT, KOOT) FWP SWAP: SGCN3 Delineation Criteria Confirmed area of occupancy based on the documented presence (mistnet captures, definitively identified acoustic recordings, or definitively identified roosting individuals) of adults or juveniles. Point observation location is buffered by a distance of 1,600 meters in order to encompass the greater than 1,500 meters foraging distance reported for the species in New Brunswick, Canada and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. When cave locations are involved, point observations are mapped in the center of a one-square mile hexagon to protect the exact location of the cave entrance as per the Federal Cave Resource Protection Act and associated regulations (U.S. Code Title 16 Chapter 63, Code of Federal Regulations Title 43 Subtitle A Part 37). The outer edges of the hexagon are then buffered by a distance of 1,600 meters and otherwise by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. All of the one-square mile hexagons intersecting this buffered area are presented as the Species Occurrence record. (Last Updated: Dec 26, 2024) Predicted Models: 100% Moderate (inductive)					
B - Bald Eagle (<i>Haliaeetus leucocephalus</i>) SSS		2	27		 Y
View in Field Guide View Predicted Models View Range Maps Special Status Species - Native Species Global: G5 State: S4 USFWS: BGEPA; MBTA USFS: Sensitive - Known in Forests (LOLO) BLM: SENSITIVE PIF: 2 Delineation Criteria Confirmed nesting area buffered by a minimum distance of 2,000 meters in order to be conservative about encompassing the breeding territory and area commonly used for re-nesting. Only nesting observations with a locational uncertainty of 1,000 meters or less will be used to delineate a nesting area. (Last Updated: Feb 12, 2025) Predicted Models: 100% Moderate (inductive)					
I - Bombus suckleyi (<i>Suckley's Cuckoo Bumble Bee</i>) SOC		1			 Y
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G2G3 State: S1 USFWS: P Delineation Criteria Confirmed breeding area based on the presence of a resident animal of any age. Point observation location is buffered by a minimum distance of 1700 meters in order to encompass the home range of the individual as well as adjacent habitat likely to support other individuals and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters. (Last Updated: Jun 22, 2022) Predicted Models: 100% Moderate (inductive)					

M - Northern Hoary Bat

(*Lasiurus cinereus*)

SOC

[View in Field Guide](#)

[View Predicted Models](#)

[View Range Maps](#)

Species of Concern - Native Species

Global: **G3G4** State: **S3B** BLM: **SENSITIVE** FWP SWAP: **SGCN3**

Delineation Criteria

Confirmed area of occupancy based on the documented presence (mistnet captures, definitively identified acoustic recordings, and definitively identified roosting individuals) of adults or juveniles during the active season. Point observation location is buffered by a minimum distance of 3,500 meters in order to be conservative about encompassing the maximum reported foraging distance for the congeneric *Lasiurus borealis* and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Dec 26, 2024)

Predicted Models:

100% Moderate (inductive)

M - Spotted Bat

(*Euderma maculatum*)

PSOC

[View in Field Guide](#)

[View Predicted Models](#)

[View Range Maps](#)

Potential Species of Concern - Native Species

Global: **G4** State: **S4** BLM: **SENSITIVE** FWP SWAP: **SGCN3, SGIN**

Predicted Models:

100% Moderate (inductive)

B - Bobolink

(*Dolichonyx oryzivorus*)

SOC

[View in Field Guide](#)

[View Predicted Models](#)

[View Range Maps](#)

Species of Concern - Native Species

Global: **G5** State: **S3B** USFWS: **MBTA; BCC10; BCC11; BCC17** FWP SWAP: **SGCN3** PIF: **3**

Delineation Criteria

Confirmed breeding area based on the presence of a nest, chicks, or territorial adults during the breeding season. Point observation location is buffered by a minimum distance of 150 meters in order to conservatively encompass male territory size reported for the species and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Dec 20, 2024)

Predicted Models:

100% Moderate (inductive)

B - Lewis's Woodpecker

(*Melanerpes lewis*)

SOC

[View in Field Guide](#)

[View Predicted Models](#)

[View Range Maps](#)

Species of Concern - Native Species

Global: **G4** State: **S2B** USFWS: **MBTA; BCC10; BCC17** USFS: **Species of Conservation Concern in Forests (HLC)** BLM: **SENSITIVE** FWP SWAP: **SGCN2** PIF: **2**

Delineation Criteria

Confirmed breeding area based on the presence of a nest, chicks, or territorial adults during the breeding season. Point observation location is buffered by a minimum distance of 300 meters in order to encompass the likely foraging area used by breeding adults around the nest tree and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Dec 20, 2024)

Predicted Models:

100% Moderate (inductive)

B - Long-billed Curlew

(*Numenius americanus*)

SOC

[View in Field Guide](#)

[View Predicted Models](#)

[View Range Maps](#)

Species of Concern - Native Species

Global: **G4** State: **S3B** USFWS: **MBTA; BCC11** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**

Delineation Criteria

Confirmed breeding area based on the presence of a nest, chicks, or territorial adults during the breeding season. Point observation location is buffered by a minimum distance of 200 meters in order to approximate the breeding territory size reported for the species in Idaho and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Dec 18, 2024)

Predicted Models:

100% Moderate (inductive)

B - Veery

(*Catharus fuscescens*)

SOC

[View in Field Guide](#)

[View Predicted Models](#)

[View Range Maps](#)

Species of Concern - Native Species

Global: **G5** State: **S3B** USFWS: **MBTA** BLM: **SENSITIVE** FWP SWAP: **SGCN3** PIF: **2**

Delineation Criteria

Observations with evidence of breeding activity buffered by a minimum distance of 300 meters in order to be conservative about encompassing home ranges and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Dec 20, 2024)

Predicted Models:

100% Moderate (inductive)

M - Grizzly Bear

(*Ursus arctos*)

SOC

[View in Field Guide](#)

[View Predicted Models](#)

[View Range Maps](#)

Species of Concern - Native Species

Global: **G4** State: **S3** USFWS: **LT** BLM: **THREATENED** FWP SWAP: **SGCN2-3**

Delineation Criteria

Species Occurrence polygons represent areas delineated by the U.S. Fish and Wildlife Service (USFWS) that encompass both home ranges and potential transitory movements based on verified sightings. Within these areas, the USFWS wants project proponents to consider whether the species "may be present" when evaluating the potential impacts of a project and to work with the USFWS to develop and implement best management practices to minimize or eliminate project effects on the species. (Last Updated: Dec 26, 2024)

Predicted Models:

100% Low (inductive)

B - Cassin's Finch

(*Haemorhous cassinii*)

SOC

[View in Field Guide](#)

[View Predicted Models](#)

[View Range Maps](#)

Species of Concern - Native Species

Global: **G5** State: **S4** USFWS: **MBTA; BCC10** FWP SWAP: **SGCN3** PIF: **3**

Delineation Criteria

Observations with evidence of breeding activity buffered by a minimum distance of 300 meters in order to be conservative about encompassing the courtship and foraging distance from nesting areas and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Dec 26, 2024)

Predicted Models:

100% Low (inductive)

B - Evening Grosbeak

(*Coccothraustes vespertinus*)

SOC

[View in Field Guide](#)

[View Predicted Models](#)

[View Range Maps](#)

Species of Concern - Native Species

Global: **G5** State: **S3** USFWS: **MBTA; BCC10** FWP SWAP: **SGCN3**

Delineation Criteria

Confirmed breeding area based on the presence of a nest, chicks, or territorial adults during the breeding season. Point observation location is buffered by a minimum distance of 1,000 meters in order to encompass the maximum foraging distance from nests reported for the species and otherwise is buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Dec 26, 2024)

Predicted Models:

100% Low (inductive)

B - Pileated Woodpecker

(*Dryocopus pileatus*)

SOC

[View in Field Guide](#)

[View Predicted Models](#)

[View Range Maps](#)

Species of Concern - Native Species

Global: **G5** State: **S3** USFWS: **MBTA** FWP SWAP: **SGCN3** PIF: **2**

Delineation Criteria

Observations with evidence of breeding activity buffered by a minimum distance of 1,500 meters in order to be conservative about encompassing home ranges and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Dec 20, 2024)

Predicted Models:

100% Low (inductive)

V - Astragalus convallarius

(*Lesser Rushy Milkvetch*)

SOC

[View in Field Guide](#)

[View Predicted Models](#)

[View Range Maps](#)

Species of Concern - Native Species

Global: **G5** State: **S3** USFS: **Species of Conservation Concern in Forests (HLC)** Plant Threat Score: **Medium - Low** CCVI: **Moderately Vulnerable**

Delineation Criteria

Individual occurrences are generally based upon a discretely mapped area provided by an observer and are not separated by any pre-defined distance. Individual clusters of plants mapped at fine spatial scales (separated by less than approximately 25-50 meters) may be grouped together into one occurrence if they are not separated by distinct areas of habitat or terrain features. Point observations are buffered to encompass any locational uncertainty associated with the observation. (Last Updated: Jul 09, 2024)

Predicted Models:

100% Low (inductive)

</

V - <i>Atriplex truncata</i> (Wedge-leaf Saltbush) SOC		1		Y
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3 Plant Threat Score: Unknown Delineation Criteria Individual occurrences are generally based upon a discretely mapped area provided by an observer and are not separated by any pre-defined distance. Individual clusters of plants mapped at fine spatial scales (separated by less than approximately 25-50 meters) may be grouped together into one occurrence if they are not separated by distinct areas of habitat or terrain features. Point observations are buffered to encompass any locational uncertainty associated with the observation. (Last Updated: Jan 20, 2023) Predicted Models: 100% Low (inductive)				
V - <i>Cypripedium parviflorum</i> (Small Yellow Lady's-slipper) PSOC		1		Y
View in Field Guide View Predicted Models View Range Maps Potential Species of Concern - Native Species Global: G5 State: S3S4 USFS: Sensitive - Known in Forests (LOLO) Species of Conservation Concern in Forests (CG, HLC) Predicted Models: 100% Low (inductive)				
B - Pinyon Jay (<i>Gymnorhinus cyanocephalus</i>) SOC		2		Not Assessed: Y
View in Field Guide View Range Maps Species of Concern - Native Species Global: G3 State: S3 USFWS: MBTA; BCC10; BCC17 FWP SWAP: SGCN3 Delineation Criteria Observations with evidence of breeding activity buffered by a minimum distance of 4,500 meters in order to be conservative about encompassing the home ranges reported for flocks and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Sep 25, 2024)				
O - Bat Roost (Non-Cave) (<i>Bat Roost (Non-Cave)</i>) IAH		1		Not Assessed:
View in Field Guide Important Animal Habitat - Native Species Global: GNR State: SNR Delineation Criteria Confirmed area of occupancy based on the documented presence of adults or juveniles of any bat species at non-cave natural roost sites (e.g. rock outcrops, trees), below ground human created roost sites (e.g. mines), and above ground human created roost sites (e.g., bridges, buildings). Point observation locations are buffered by a distance of 4,500 meters in order to encompass the 95% confidence interval for nightly foraging distance reported for Townsend's Big-eared Bat (a resident Montana bat Species of Concern) and otherwise by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Oct 22, 2019)				

Legend

Model Icons

- Suitable (native range)
- Optimal Suitability
- Moderate Suitability
- Low Suitability
- Suitable (introduced range)

Habitat Icons

- Common
- Occasional

Range Icons

- Native / Year-round
- Summer
- Winter
- Migratory
- Non-native
- Historical

Num Obs
Count of obs with
'good precision'
(≤1000m)
+ indicates
additional 'poor
precision' obs
(1001m-
10,000m)



Latitude 46.61250
Longitude -112.07211
46.63090 -112.09530

Native Species

Summarized by: (Custom Area of Interest)

Filtered by:

Native Species reports are filtered for Species with MT Status = Species of Concern, Special Status, Important Animal Habitat, Potential SOC

Other Observed Species

	USFWS Sec7	# Obs	Predicted Model	Range
B - Barrow's Goldeneye (<i>Bucephala islandica</i>) PSOC		2		
View in Field Guide View Predicted Models View Range Maps Potential Species of Concern - Native Species Global: G5 State: S4 USFWS: MBTA FWP SWAP: SGIN PIF: 2 Predicted Models: 100% Moderate (inductive)				
B - Great Blue Heron (<i>Ardea herodias</i>) SOC		17		
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3 Predicted Models: 100% Moderate (inductive)				
B - Hooded Merganser (<i>Lophodytes cucullatus</i>) PSOC		9		
View in Field Guide View Predicted Models View Range Maps Potential Species of Concern - Native Species Global: G5 State: S4 USFWS: MBTA FWP SWAP: SGIN PIF: 2 Predicted Models: 100% Moderate (inductive)				
B - Trumpeter Swan (<i>Cygnus buccinator</i>) SOC		2		
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G4 State: S3 USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 1 Predicted Models: 100% Moderate (inductive)				
B - American White Pelican (<i>Pelecanus erythrorhynchos</i>) SOC		5		
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G4 State: S3B USFWS: MBTA FWP SWAP: SGCN3 PIF: 3 Predicted Models: 100% Moderate (inductive)				
B - Rufous Hummingbird (<i>Selasphorus rufus</i>) PSOC		3		
View in Field Guide View Predicted Models View Range Maps Potential Species of Concern - Native Species Global: G4 State: S4B USFWS: MBTA ; BCC10 PIF: 3 Predicted Models: 100% Moderate (inductive)				
B - Clark's Nutcracker (<i>Nucifraga columbiana</i>) SOC		2		
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA USFS: Species of Conservation Concern in Forests (FLAT) FWP SWAP: SGCN3 PIF: 3 Predicted Models: 100% Low (inductive)				
B - Sharp-tailed Grouse (<i>Tympanuchus phasianellus</i>) SOC		1		
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3S4 FWP SWAP: SGCN1 PIF: 2 Predicted Models: 100% Low (inductive)				
B - Caspian Tern (<i>Hydroprogne caspia</i>) SOC		4		
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S2B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN2 PIF: 2 Predicted Models: 100% Low (inductive)				
B - Common Tern (<i>Sterna hirundo</i>) SOC		2		
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 Predicted Models: 100% Low (inductive)				
B - Harlequin Duck (<i>Histrionicus histrionicus</i>) SOC		1		
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G4 State: S2B USFWS: MBTA USFS: Sensitive - Known in Forests (BD, KOOT, LOLO) Sensitive - Migratory in Forests (BRT) FWP SWAP: SGCN2 PIF: 1 Predicted Models: 100% Low (inductive)				
M - Black-tailed Prairie Dog (<i>Cynomys ludovicianus</i>) SOC		2	Not Assessed	
View in Field Guide View Range Maps Species of Concern - Native Species Global: G4 State: S3 BLM: SENSITIVE FWP SWAP: SGCN3				

<div> <div></div> <div>B - American Goshawk</div> <div>(<i>Accipiter atricapillus</i>)</div> </div>	SOC	3	Not Assessed	<div>Y</div> <div>WM</div>
<div> <div>View in Field Guide</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> </div>				
Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3 PIF: 2				
<div> <div></div> <div>B - Brown Creeper</div> <div>(<i>Certhia americana</i>)</div> </div>	SOC	1	Not Assessed	<div>Y</div>
<div> <div>View in Field Guide</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> </div>				
Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN3 PIF: 1				
<div> <div></div> <div>B - Gray-crowned Rosy-Finch</div> <div>(<i>Leucosticte tephrocotis</i>)</div> </div>	SOC	1	Not Assessed	<div>Y</div> <div>WM</div>
<div> <div>View in Field Guide</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> </div>				
Global: G5 State: S2 USFWS: MBTA FWP SWAP: SGCN2, SGIN				
<div> <div></div> <div>B - Black-crowned Night Heron</div> <div>(<i>Nycticorax nycticorax</i>)</div> </div>	SOC	2	Not Assessed	<div>S</div> <div>M</div>
<div> <div>View in Field Guide</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> </div>				
Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN3 PIF: 3				
<div> <div></div> <div>B - Brewer's Sparrow</div> <div>(<i>Spizella breweri</i>)</div> </div>	SOC	3	Not Assessed	<div>S</div> <div>M</div>
<div> <div>View in Field Guide</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> </div>				
Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2				
<div> <div></div> <div>B - Thick-billed Longspur</div> <div>(<i>Rhynchophanes mccownii</i>)</div> </div>	SOC	1	Not Assessed	<div>S</div> <div>M</div>
<div> <div>View in Field Guide</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> </div>				
Global: G4 State: S3B USFWS: MBTA; BCC10; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2				
<div> <div></div> <div>B - Common Loon</div> <div>(<i>Gavia immer</i>)</div> </div>	SOC	6	Not Assessed	<div>M</div>
<div> <div>View in Field Guide</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> </div>				
Global: G5 State: S3B USFWS: MBTA USFS: Sensitive - Known in Forests (LOLO) FWP SWAP: SGCN3 PIF: 1				
<div> <div></div> <div>B - Horned Grebe</div> <div>(<i>Podiceps auritus</i>)</div> </div>	SOC	3	Not Assessed	<div>M</div>
<div> <div>View in Field Guide</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> </div>				
Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2				
<div> <div></div> <div>B - Solitary Sandpiper</div> <div>(<i>Tringa solitaria</i>)</div> </div>	SOC	6	Not Assessed	<div>M</div>
<div> <div>View in Field Guide</div> <div>View Range Maps</div> <div>Species of Concern - Native Species</div> </div>				
Global: G5 State: S2B USFWS: MBTA				
<div> <div></div> <div>B - Tennessee Warbler</div> <div>(<i>Leiothlypis peregrina</i>)</div> </div>	PSOC	1	Not Assessed	<div>M</div>
<div> <div>View in Field Guide</div> <div>View Range Maps</div> <div>Potential Species of Concern - Native Species</div> </div>				
Global: G5 State: S3S4B USFWS: MBTA				

Legend

Model Icons

- Suitable (native range)
- Optimal Suitability
- Moderate Suitability
- Low Suitability
- Suitable (introduced range)

Habitat Icons

- Common
- Occasional

Range Icons

- Native / Year-round
- Summer
- Winter
- Migratory
- Non-native
- Historical

Num Obs
Count of obs with
'good precision'
(≤1000m)
+ indicates
additional 'poor
precision' obs
(1001m-
10,000m)



Latitude 46.61250
Longitude -112.07211
46.63090 -112.09530

Native Species

Summarized by: (Custom Area of Interest)

Filtered by:

Native Species reports are filtered for Species with MT Status = Species of Concern, Special Status, Important Animal Habitat, Potential SOC

Other Potential Species

	USFWS Sec7	Predicted Model	Range
<div> <div></div> M - North American Porcupine (<i>Erethizon dorsatum</i>) PSOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Potential Species of Concern - Native Species </div> <div> Global: G5 State: S3S4 FWP SWAP: SGIN </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> M - Western Pygmy Shrew (<i>Sorex eximius</i>) SOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species </div> <div> Global: G4 State: S3 FWP SWAP: SGCN3 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> V - Dichanthelium acuminatum (<i>Panic Grass</i>) SOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species </div> <div> Global: G5 State: S2S3 Plant Threat Score: Unknown </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> V - Eleocharis rostellata (<i>Beaked Spikerush</i>) SOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species </div> <div> Global: G5 State: S3 USFS: Species of Conservation Concern in Forests (CG, FLAT, HLC) Plant Threat Score: Unknown </div> <div> CCVI: Less Vulnerable </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> V - Impatiens aurella (<i>Pale-yellow Jewel-weed</i>) SOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species </div> <div> Global: G4 State: S3 Plant Threat Score: No Known Threats </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> V - Oxytropis lagopus var. conjugans (<i>Hare's-foot Locoweed</i>) PSOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Potential Species of Concern - Native Species </div> <div> Global: G4G5T3T4 State: S3S4 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> V - Potentilla plattensis (<i>Platte Cinquefoil</i>) SOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species </div> <div> Global: G4 State: S3 Plant Threat Score: No Known Threats CCVI: Highly Vulnerable </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> V - Utricularia intermedia (<i>Flatleaf Bladderwort</i>) SOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species </div> <div> Global: G5 State: S2 USFS: Sensitive - Known in Forests (KOOT) Plant Threat Score: No Known Threats </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> B - Broad-tailed Hummingbird (<i>Selasphorus platycercus</i>) PSOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Potential Species of Concern - Native Species </div> <div> Global: G5 State: S4B USFWS: MBTA; BCC10 FWP SWAP: SGIN </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> B - White-faced Ibis (<i>Plegadis chihi</i>) SOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species </div> <div> Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> B - Yellow-billed Cuckoo (<i>Coccyzus americanus</i>) SOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species </div> <div> Global: G5 State: S3B USFWS: PS: LT; MBTA BLM: THREATENED FWP SWAP: SGCN3, SGIN PIF: 2 </div> <div> Predicted Models: 100% Moderate (inductive) </div>			
<div> <div></div> I - Danaus plexippus (<i>Monarch</i>) SOC </div> <div> View in Field Guide View Predicted Models View Range Maps </div> <div> Species of Concern - Native Species </div> <div> Global: G4 State: S2S3 USFWS: P USFS: Sensitive - Migratory in Forests (BD, BRT, KOOT) </div> <div> Predicted Models: 100% Moderate (inductive) </div>			

<div><div></div><div></div></div> <div>M - Canada Lynx</div> <div><i>(Lynx canadensis)</i></div> <div>SOC</div> <div>7</div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G5 State: S3 USFWS: LT; CH BLM: THREATENED FWP SWAP: SGCN3</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>M - Dwarf Shrew</div> <div><i>(Sorex nanus)</i></div> <div>PSOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Potential Species of Concern - Native Species</div> <div>Global: G4 State: S2S3 FWP SWAP: SGCN2-3</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>M - Fringed Myotis</div> <div><i>(Myotis thysanodes)</i></div> <div>SOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G4 State: S3 BLM: SENSITIVE FWP SWAP: SGCN3</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>M - Long-eared Myotis</div> <div><i>(Myotis evotis)</i></div> <div>SOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G5 State: S3</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>M - Long-legged Myotis</div> <div><i>(Myotis volans)</i></div> <div>SOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G4G5 State: S3</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>M - Silver-haired Bat</div> <div><i>(Lasionycteris noctivagans)</i></div> <div>SOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G3G4 State: S3</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>M - Western Spotted Skunk</div> <div><i>(Spilogale gracilis)</i></div> <div>PSOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Potential Species of Concern - Native Species</div> <div>Global: G5 State: SU FWP SWAP: SGIN</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>B - Short-eared Owl</div> <div><i>(Asio flammeus)</i></div> <div>PSOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Potential Species of Concern - Native Species</div> <div>Global: G5 State: S4 USFWS: MBTA; BCC11; BCC17 PIF: 3</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>B - Western Screech-Owl</div> <div><i>(Megascops kennicottii)</i></div> <div>PSOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Potential Species of Concern - Native Species</div> <div>Global: G4G5 State: S3S4 USFWS: MBTA FWP SWAP: SGIN PIF: 3</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>I - Leucotrichia notosa</div> <div><i>(A Caddisfly)</i></div> <div>SOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G2G4 State: S3</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>I - Margaritifera falcata</div> <div><i>(Western Pearlshell)</i></div> <div>SOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G3G4 State: S2 USFS: Sensitive - Known in Forests (BD, BRT, KOOT, LOLO) Species of Conservation Concern in Forests (CG, HLC) BLM: SENSITIVE FWP SWAP: SGCN2</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>V - Adoxa moschatellina</div> <div><i>(Musk-root)</i></div> <div>SOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G5 State: S3 USFS: Sensitive - Known in Forests (BD, LOLO) Species of Conservation Concern in Forests (CG, HLC) Plant Threat Score: Low CCVI: Highly Vulnerable</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>V - Carex crawei</div> <div><i>(Crawe's Sedge)</i></div> <div>SOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G5 State: S2S3 Plant Threat Score: Low</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>V - Elodea bifoliata</div> <div><i>(Long-sheath Waterweed)</i></div> <div>SOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G4G5 State: S2? Plant Threat Score: No Known Threats</div> <div>Predicted Models: 100% Low (inductive)</div>
<div><div></div><div></div></div> <div>V - Primula incana</div> <div><i>(Mealy Primrose)</i></div> <div>SOC</div> <div></div> <div></div> <div>Y</div>	<div>View in Field GuideView Predicted ModelsView Range Maps</div> <div>Species of Concern - Native Species</div> <div>Global: G5 State: S3 Plant Threat Score: High CCVI: Highly Vulnerable</div> <div>Predicted Models: 100% Low (inductive)</div>

B - Meesia triquetra (<i>Meesia Moss</i>)	SOC			
	View in Field Guide	View Predicted Models	View Range Maps	
	USFS: Sensitive - Known in Forests (BD, BRT, KOOT) Sensitive - Suspected in Forests (LOLO) Species of Conservation Concern in Forests (CG, FLAT) Global: G5 State: S2 Predicted Models: 100% Low (inductive)			
B - American Bittern (<i>Botaurus lentiginosus</i>)	SOC			
	View in Field Guide	View Predicted Models	View Range Maps	
	USFS: Sensitive - Known in Forests (BD, BRT, KOOT) Sensitive - Suspected in Forests (LOLO) Species of Conservation Concern in Forests (CG, FLAT) Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 3 Predicted Models: 100% Low (inductive)			
B - Black Tern (<i>Chlidonias niger</i>)	SOC			
	View in Field Guide	View Predicted Models	View Range Maps	
	USFS: Sensitive - Known in Forests (BD, BRT, KOOT) Sensitive - Suspected in Forests (LOLO) Species of Conservation Concern in Forests (CG, FLAT) Global: G4G5 State: S3B USFWS: MBTA; BCC10; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 Predicted Models: 100% Low (inductive)			
B - Black-necked Stilt (<i>Himantopus mexicanus</i>)	SOC			
	View in Field Guide	View Predicted Models	View Range Maps	
	USFS: Sensitive - Known in Forests (BD, BRT, KOOT) Sensitive - Suspected in Forests (LOLO) Species of Conservation Concern in Forests (CG, FLAT) Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN3 PIF: 3 Predicted Models: 100% Low (inductive)			
B - Common Poorwill (<i>Phalaenoptilus nuttallii</i>)	PSOC			
	View in Field Guide	View Predicted Models	View Range Maps	
	USFS: Sensitive - Known in Forests (BD, BRT, KOOT) Sensitive - Suspected in Forests (LOLO) Potential Species of Concern - Native Species Global: G5 State: S4B USFWS: MBTA FWP SWAP: SGIN PIF: 3 Predicted Models: 100% Low (inductive)			
B - Ferruginous Hawk (<i>Buteo regalis</i>)	SOC			
	View in Field Guide	View Predicted Models	View Range Maps	
	USFS: Sensitive - Known in Forests (BD, BRT, KOOT) Sensitive - Suspected in Forests (LOLO) Species of Conservation Concern in Forests (CG, FLAT) Global: G4 State: S3B USFWS: MBTA; BCC17 BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 Predicted Models: 100% Low (inductive)			
B - Loggerhead Shrike (<i>Lanius ludovicianus</i>)	SOC			
	View in Field Guide	View Predicted Models	View Range Maps	
	USFS: Sensitive - Known in Forests (BD, BRT, KOOT) Sensitive - Suspected in Forests (LOLO) Species of Conservation Concern in Forests (CG, FLAT) Global: G4 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 2 Predicted Models: 100% Low (inductive)			
B - Ovenbird (<i>Seiurus aurocapilla</i>)	PSOC			
	View in Field Guide	View Predicted Models	View Range Maps	
	USFS: Sensitive - Known in Forests (BD, BRT, KOOT) Potential Species of Concern - Native Species Global: G5 State: S4B USFWS: MBTA PIF: 3 Predicted Models: 100% Low (inductive)			
B - Sage Thrasher (<i>Oreoscoptes montanus</i>)	SOC			
	View in Field Guide	View Predicted Models	View Range Maps	
	USFS: Sensitive - Known in Forests (BD, BRT, KOOT) Sensitive - Suspected in Forests (LOLO) Species of Conservation Concern in Forests (CG, FLAT) Global: G4 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 3 Predicted Models: 100% Low (inductive)			
M - Wolverine (<i>Gulo gulo</i>)	SOC			
	View in Field Guide	View Range Maps		
	USFS: Sensitive - Known in Forests (LOLO) BLM: THREATENED FWP SWAP: SGCN3 Global: G4 State: S3 USFWS: LT			
B - Sprague's Pipit (<i>Anthus spragueii</i>)	SOC			
	View in Field Guide	View Range Maps		
	USFS: Sensitive - Known in Forests (LOLO) BLM: SENSITIVE FWP SWAP: SGCN3 PIF: 1 Global: G3G4 State: S3B USFWS: MBTA; BCC11; BCC17			

Structured Surveys

Summarized by: *(Custom Area of Interest)*

The Montana Natural Heritage Program (MTNHP) records information on the locations where more than 80 different types of well-defined repeatable survey protocols capable of detecting an animal species or suite of animal species have been conducted by state, federal, tribal, university, or private consulting biologists. Examples of structured survey protocols tracked by MTNHP include: visual encounter and dip net surveys for pond breeding amphibians, point counts for birds, call playback surveys for selected bird species, visual surveys of migrating raptors, kick net stream reach surveys for macroinvertebrates, visual encounter cover object surveys for terrestrial mollusks, bat acoustic or mist net surveys, pitfall and/or snap trap surveys for small terrestrial mammals, track or camera trap surveys for large mammals, and trap surveys for turtles. Whenever possible, photographs of survey locations are stored in MTNHP databases.

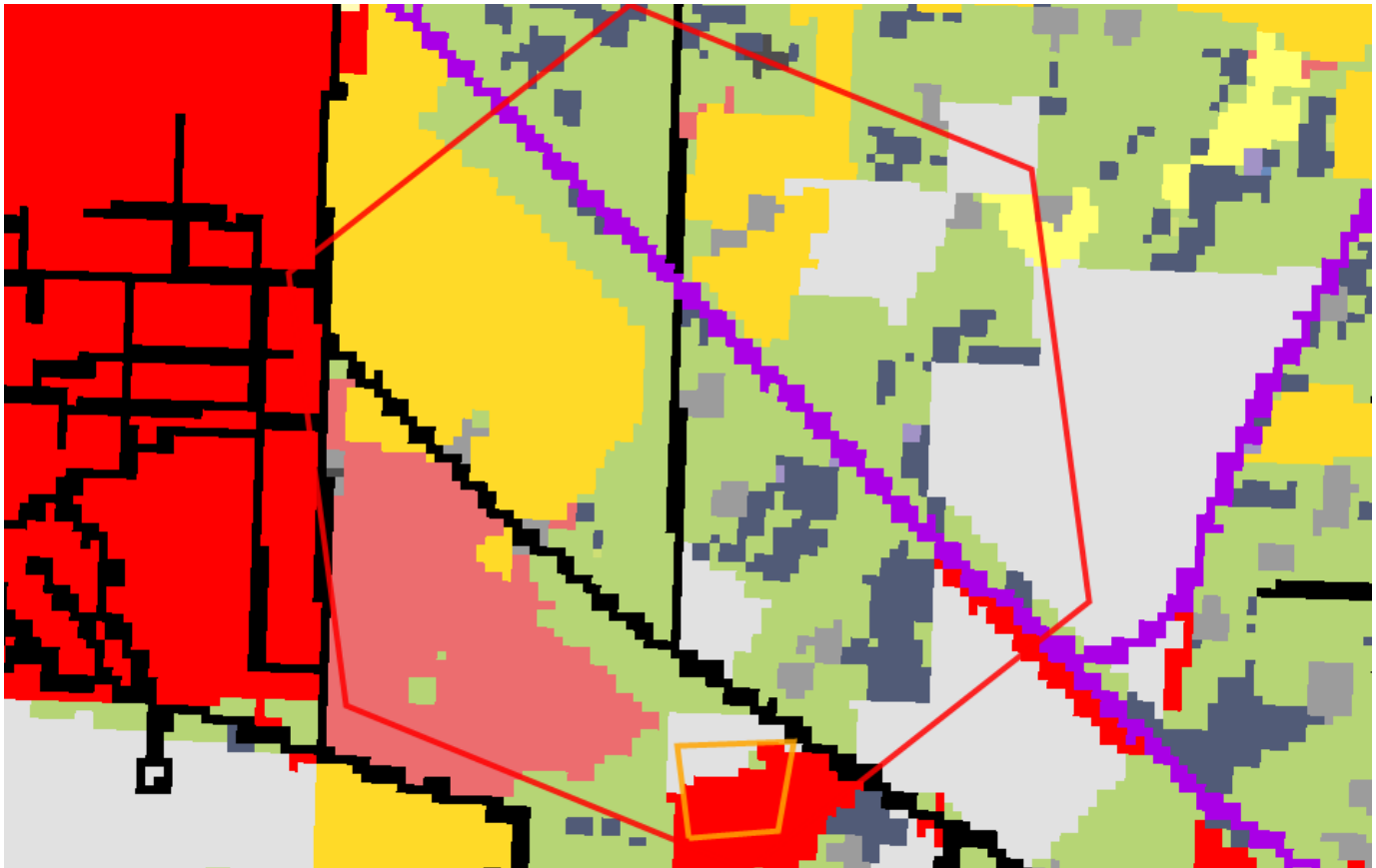
MTNHP does not typically manage information on structured surveys for plants; surveys for invasive species may be a future exception.

Within the report area you have requested, structured surveys are summarized by the number of each type of structured survey protocol that has been conducted, the number of species detections/observations resulting from these surveys, and the most recent year a survey has been conducted.

B-Long-billed Curlew <i>(Long-billed Curlew, Road-based, Point Count)</i>	Survey Count: 16	Obs Count:	Recent Survey: 2022
F-Fish Electrofishing <i>(Fish Electrofishing Surveys)</i>	Survey Count: 1	Obs Count: 1	Recent Survey: 2022

Land Cover

Summarized by: (Custom Area of Interest)



**32% (202
Acres)**

Grassland Systems Montane Grassland

Rocky Mountain Lower Montane, Foothill, and Valley Grassland

This grassland system of the northern Rocky Mountains is found at lower montane to foothill elevations in mountains and valleys throughout Montana. These grasslands are floristically similar to Big Sagebrush Steppe but are defined by shorter summers, colder winters, and young soils derived from recent glacial and alluvial material. They are found at elevations from 548 - 1,650 meters (1,800-5,413 feet). In the lower montane zone, they range from small meadows to large open parks surrounded by conifers; below the lower treeline, they occur as extensive foothill and valley grasslands. Soils are relatively deep, fine-textured, often with coarse fragments, and non-saline. Microphytic crust may be present in high-quality occurrences. This system is typified by cool-season perennial bunch grasses and forbs (>25%) cover, with a sparse shrub cover (<10%). Rough fescue (*Festuca campestris*) is dominant in the northwestern portion of the state and Idaho fescue (*Festuca idahoensis*) is dominant or co-dominant throughout the range of the system. Bluebunch wheatgrass (*Pseudoroegneria spicata*) occurs as a co-dominant throughout the range as well, especially on xeric sites. Western wheatgrass (*Pascopyrum smithii*) is consistently present, often with appreciable coverage (>10%) in lower elevation occurrences in western Montana and virtually always present, with relatively high coverages (>25%), on the edge of the Northwestern Great Plains region. Species diversity ranges from a high of more than 50 per 400 square meter plot on mesic sites to 15 (or fewer) on xeric and disturbed sites. Most occurrences have at least 25 vascular species present. Farmland conversion, noxious species invasion, fire suppression, heavy grazing and oil and gas development are major threats to this system.



**21% (131
Acres)**

Human Land Use Agriculture

Cultivated Crops

These areas used for the production of crops, such as corn, soybeans, small grains, sunflowers, vegetables, and cotton, typically on an annual cycle. Agricultural plant cover is variable depending on season and type of farming. Other areas include more stable land cover of orchards and vineyards.



**15% (94
Acres)**

Human Land Use Developed

Developed, Open Space

Vegetation (primarily grasses) planted in developed settings for recreation, erosion control, or aesthetic purposes. Impervious surfaces account for less than 20% of total cover. This category often includes highway and railway rights of way and graveled rural roads.



**13% (83
Acres)**

Recently Disturbed or Modified Introduced Vegetation

Introduced Upland Vegetation - Annual and Biennial Forbland

Land cover is significantly altered/disturbed by introduced annual and biennial forbs. Natural vegetation types are no longer recognizable. Typical species that dominate these areas are knapweed, oxeye daisy, Canada thistle, leafy spurge, pepperweed, and yellow sweetclover.

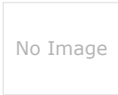


6% (38 Acres)

Wetland and Riparian Systems
Floodplain and Riparian

 **Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland**

This ecological system is found throughout the Rocky Mountain and Colorado Plateau regions. In Montana, sites occur at elevations of 609-1,219 meters (2,000-4,000 feet) west of the Continental Divide. East of the Continental Divide, this system ranges up to 1,676 meters (5,500 feet). It generally comprises a mosaic of multiple communities that are tree-dominated with a diverse shrub component. It is dependent on a natural hydrologic regime with annual to episodic flooding, so it is usually found within the flood zone of rivers, on islands, sand or cobble bars, and along streambanks. It can form large, wide occurrences on mid-channel islands in larger rivers, or narrow bands on small, rocky canyon tributaries and well-drained benches. It is also typically found in backwater channels and other perennially wet but less scoured sites, such as floodplains, swales and irrigation ditches. In some locations, occurrences extend into moderately high intermountain basins where the adjacent vegetation is sage steppe. Black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) is the key indicator species. Other dominant trees may include boxelder maple (*Acer negundo*), narrowleaf cottonwood (*Populus angustifolia*), eastern cottonwood (*Populus deltoides*), Douglas-fir (*Pseudotsuga menziesii*), peachleaf willow (*Salix amygdaloides*), or Rocky Mountain juniper (*Juniperus scopulorum*). Dominant shrubs include Rocky Mountain maple (*Acer glabrum*), thinleaf alder (*Alnus incana*), river birch (*Betula occidentalis*), redbarked dogwood (*Cornus sericea*), hawthorne (*Crataegus* species), chokecherry (*Prunus virginiana*), skunkbush sumac (*Rhus trilobata*), willows (*Salix* species), rose (*Rosa* species), silver buffaloberry (*Shepherdia argentea*), or snowberry (*Symphoricarpos* species).

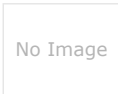


5% (32 Acres)

Human Land Use
Developed

 **Other Roads**

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

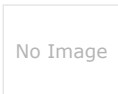


4% (24 Acres)

Human Land Use
Developed

 **Commercial / Industrial**

Businesses, industrial parks, hospitals, airports; utilities in commercial/industrial areas.



3% (18 Acres)

Human Land Use
Developed

 **Railroad**

Railroad tracks and railroad berms/rights of way, currently in use or capable of use







2% (13 Acres)

Human Land Use
Developed

 **Low Intensity Residential**

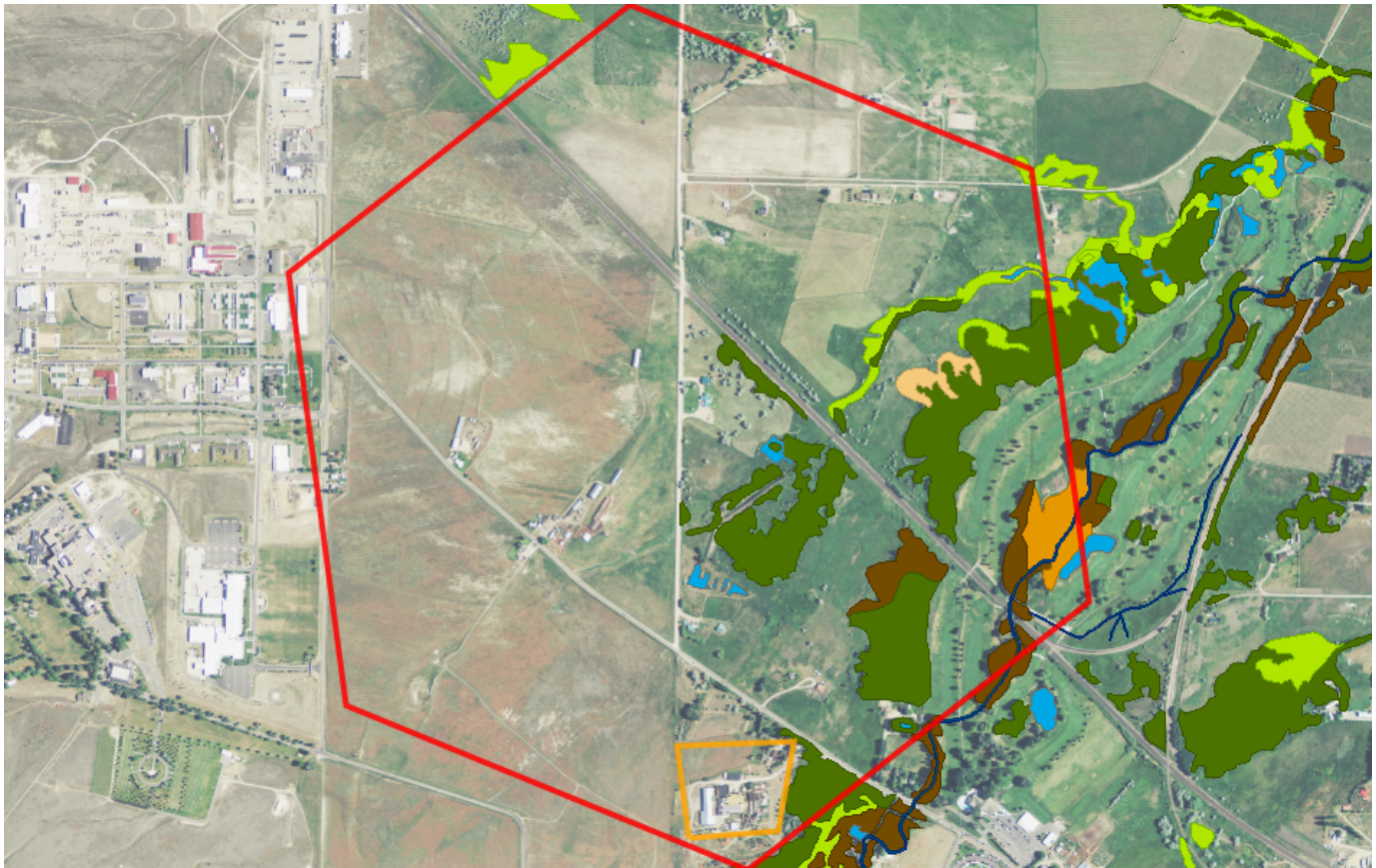
Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20-50% of total cover. These areas most commonly include single-family housing units in rural and suburban areas. Paved roadways may be classified into this category.

Additional Limited Land Cover

- <1% (3 Acres)  **Pasture/Hay**
- <1% (1 Acres)  **High Intensity Residential**
- <1% (1 Acres)  **Alpine-Montane Wet Meadow**
- <1% (0 Acres)  **Rocky Mountain Subalpine-Montane Mesic Meadow**

Wetland and Riparian

Summarized by: (Custom Area of Interest)



Wetland and Riparian Mapping

P - Palustrine

■ AB - Aquatic Bed	
F - Semipermanently Flooded	1 Acres
b - Beaver	<1 Acres PABFb
x - Excavated	1 Acres PABFx
G - Intermittently Exposed	<1 Acres
x - Excavated	<1 Acres PABGx

P - Palustrine, AB - Aquatic Bed
Wetlands with vegetation growing on or below the water surface for most of the growing season.

■ EM - Emergent	
A - Temporarily Flooded	2 Acres
(no modifier)	2 Acres PEMA
C - Seasonally Flooded	3 Acres
(no modifier)	3 Acres PEMC

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

■ SS - Scrub-Shrub	
A - Temporarily Flooded	1 Acres
(no modifier)	1 Acres PSSA
C - Seasonally Flooded	44 Acres
(no modifier)	44 Acres PSSC

P - Palustrine, SS - Scrub-Shrub
Wetlands dominated by woody vegetation less than 6 meters (20 feet) tall. Woody vegetation includes tree saplings and trees that are stunted due to environmental conditions.

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.

4 - Intermittent

■ SB - Stream Bed	
A - Temporarily Flooded	<1 Acres
x - Excavated	<1 Acres R4SBAx

R - Riverine (Rivers), 4 - Intermittent, SB - Stream Bed
Active channel that contains periodic water flow.

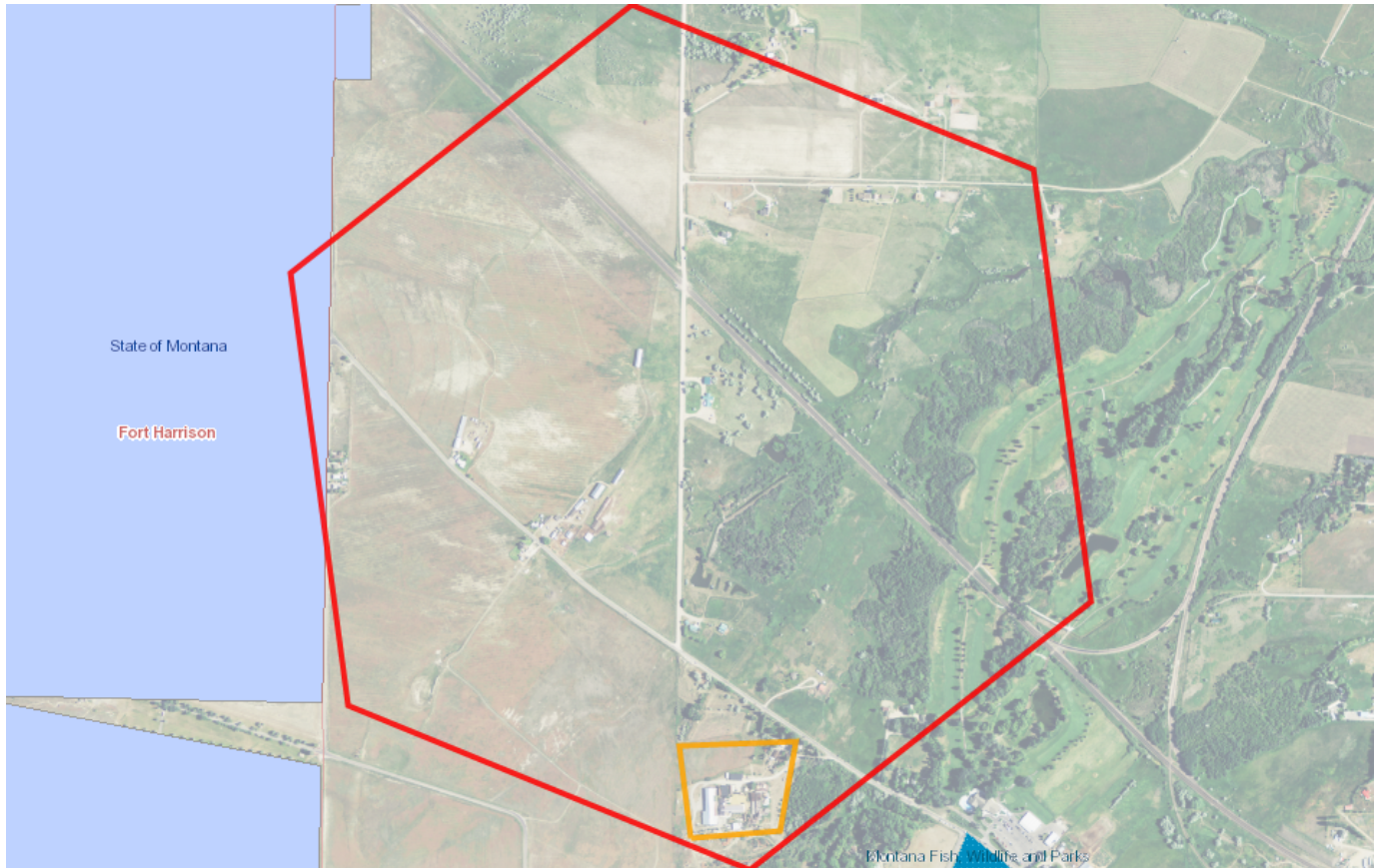
Rp - Riparian

1 - Lotic

<div><div></div><div>SS - Scrub-Shrub</div><div>(no modifier)</div></div>	<div>5 Acres</div> <div>Rp1SS</div>	<div>Rp - Riparian, 1 - Lotic, SS - Scrub-Shrub</div> <div><i>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.</i></div>
<div><div></div><div>FO - Forested</div><div>(no modifier)</div></div>	<div>8 Acres</div> <div>Rp1FO</div>	<div>Rp - Riparian, 1 - Lotic, FO - Forested</div> <div><i>This riparian class has woody vegetation that is greater than 6 meters (20 feet) tall.</i></div>
<div><div></div><div>EM - Emergent</div><div>(no modifier)</div></div>	<div>2 Acres</div> <div>Rp1EM</div>	<div>Rp - Riparian, 1 - Lotic, EM - Emergent</div> <div><i>Riparian areas that have erect, rooted herbaceous vegetation during most of the growing season.</i></div>

Land Management

Summarized by: (Custom Area of Interest)



Land Management Summary

	Ownership	Tribal	Easements	Other Boundaries (possible overlap)
Public Lands	8 Acres (1%)			
Federal				
US Department of Defense				
USDOD Military Reserve				8 Acres
Fort Harrison				8 Acres
State	8 Acres (1%)			
State of Montana	8 Acres (1%)			
State of Montana Owned	8 Acres (1%)			
Private Lands or Unknown Ownership	631 Acres (99%)			



Biological Reports

Summarized by: *(Custom Area of Interest)*






Within the report area you have requested, citations for all reports and publications associated with plant or animal observations in Montana Natural Heritage Program (MTNHP) databases are listed and, where possible, links to the documents are included.

The MTNHP plans to include reports associated with terrestrial and aquatic communities in the future as allowed for by staff resources. If you know of reports or publications associated with species or biological communities within the report area that are not shown in this report, please let us know: mtnhp@mt.gov

- Faunawest Wildlife Consultants. 1998. Status of the black-tailed and white-tailed prairie dog in Montana. Prepared for Montana Department of Fish, Wildlife & Parks.

Legend

Model Icons

-  Suitable (native range)
-  Optimal Suitability
-  Moderate Suitability
-  Low Suitability
-  Suitable (introduced range)

Habitat Icons

-  Common
-  Occasional

Range Icons

-  Non-native

Num Obs
Count of obs with
'good precision'
(≤1000m)
+ indicates
additional 'poor
precision' obs
(1001m-
10,000m)



Latitude 46.61250
Longitude -112.07211
46.63090 -112.09530

Invasive and Pest Species


Summarized by: (Custom Area of Interest)

	# Obs	Predicted Model	Range
Aquatic Invasive Species			
<input checked="" type="checkbox"/> V - Iris pseudacorus (<i>Yellowflag Iris</i>) N2A/AIS			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2A - Aquatic Invasive Species - Non-native Species Global: GNR State: SNA Predicted Models:  100% Low (inductive)			
<input checked="" type="checkbox"/> V - Myriophyllum spicatum (<i>Eurasian Water-milfoil</i>) N2A/AIS			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2A - Aquatic Invasive Species - Non-native Species Global: GNR State: SNA Predicted Models:  100% Low (inductive)			
<input checked="" type="checkbox"/> V - Nymphaea odorata (<i>American Water-lily</i>) AIS			
View in Field Guide View Predicted Models View Range Maps Aquatic Invasive Species - Non-native Species Global: G5 State: SNA Predicted Models:  100% Suitable (introduced range) (deductive)			
Noxious Weeds: Priority 1A			
<input checked="" type="checkbox"/> V - Centaurea solstitialis (<i>Yellow Starthistle</i>) N1A			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1A - Non-native Species Global: GNR State: SNA Predicted Models:  100% Moderate (inductive)			
<input checked="" type="checkbox"/> V - Isatis tinctoria (<i>Dyer's Woad</i>) N1A			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1A - Non-native Species Global: GNR State: SNA Predicted Models:  100% Moderate (inductive)			
<input checked="" type="checkbox"/> V - Phragmites australis ssp. australis (<i>European Common Reed</i>) N1A			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1A - Non-native Species Global: G5T5 State: SNA Predicted Models:  100% Low (inductive)			
Noxious Weeds: Priority 1B			
<input checked="" type="checkbox"/> V - Lythrum salicaria (<i>Purple Loosestrife</i>) N1B			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1B - Non-native Species Global: G5 State: SNA Predicted Models:  100% Moderate (inductive)			
<input checked="" type="checkbox"/> V - Polygonum cuspidatum (<i>Japanese Knotweed</i>) N1B			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1B - Non-native Species Global: GNRTNR State: SNA Predicted Models:  100% Moderate (inductive)			
<input checked="" type="checkbox"/> V - Cytisus scoparius (<i>Scotch Broom</i>) N1B			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1B - Non-native Species Global: GNR State: SNA Predicted Models:  100% Low (inductive)			
<input checked="" type="checkbox"/> V - Echium vulgare (<i>Blueweed</i>) N1B			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1B - Non-native Species Global: GNR State: SNA Predicted Models:  100% Low (inductive)			
<input checked="" type="checkbox"/> V - Polygonum x bohemicum (<i>Bohemian Knotweed</i>) N1B			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1B - Non-native Species Global: GNA State: SNA Predicted Models:  100% Low (inductive)			
Noxious Weeds: Priority 2A			
<input checked="" type="checkbox"/> V - Rhamnus cathartica (<i>Common Buckthorn</i>) N2A			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA Predicted Models:  100% Optimal (inductive)			
<input checked="" type="checkbox"/> V - Hieracium caespitosum (<i>Meadow Hawkweed</i>) N2A			
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA Predicted Models:  100% Moderate (inductive)			





<div><div></div><div>V - <i>Lepidium latifolium</i> (Perennial Pepperweed) N2A</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2A - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Moderate (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Ranunculus acris</i> (Tall Buttercup) N2A</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2A - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Moderate (inductive)</div></div>	Global: G5 State: SNA		
<div><div></div><div>V - <i>Ventenata dubia</i> (Ventenata) N2A</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2A - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Moderate (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Hieracium aurantiacum</i> (Orange Hawkweed) N2A</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2A - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Low (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Hieracium praealtum</i> (Kingdevil Hawkweed) N2A</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2A - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Low (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Iris pseudacorus</i> (Yellowflag Iris) N2A/AIS</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2A - Aquatic Invasive Species - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Low (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Myriophyllum spicatum</i> (Eurasian Water-milfoil) N2A/AIS</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2A - Aquatic Invasive Species - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Low (inductive)</div></div>	Global: GNR State: SNA		
Noxious Weeds: Priority 2B			
<div><div></div><div>V - <i>Berteroa incana</i> (Hoary False-allysum) N2B</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2B - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Optimal (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Lepidium draba</i> (Whitetop) N2B</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2B - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Optimal (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Centaurea diffusa</i> (Diffuse Knapweed) N2B</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2B - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Moderate (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Centaurea stoebe</i> (Spotted Knapweed) N2B</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2B - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Moderate (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Cirsium arvense</i> (Canada Thistle) N2B</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2B - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Moderate (inductive)</div></div>	Global: G5 State: SNA		
<div><div></div><div>V - <i>Convolvulus arvensis</i> (Field Bindweed) N2B</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2B - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Moderate (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Cynoglossum officinale</i> (Common Hound's-tongue) N2B</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2B - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Moderate (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Euphorbia virgata</i> (Leafy Spurge) N2B</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2B - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Moderate (inductive)</div></div>	Global: GNR State: SNA		
<div><div></div><div>V - <i>Linaria dalmatica</i> (Dalmatian Toadflax) N2B</div></div>		<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div><div>View in Field Guide</div><div>View Predicted Models</div><div>View Range Maps</div></div><div>Noxious Weed: Priority 2B - Non-native Species</div><div>Predicted Models: <div><div></div></div> 100% Moderate (inductive)</div></div>	Global: G5 State: SNA		

<div> <div></div> <div>V - Tanacetum vulgare (Common Tansy) N2B</div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Noxious Weed: Priority 2B - Non-native Species </div> <div> Predicted Models:  100% Moderate (inductive) </div>	Global: GNR State: SNA		
<div> <div></div> <div>V - Acroptilon repens (Russian Knapweed) N2B</div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Noxious Weed: Priority 2B - Non-native Species </div> <div> Predicted Models:  100% Low (inductive) </div>	Global: GNR State: SNA		
<div> <div></div> <div>V - Hypericum perforatum (Common St. John's-wort) N2B</div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Noxious Weed: Priority 2B - Non-native Species </div> <div> Predicted Models:  100% Low (inductive) </div>	Global: GNR State: SNA		
<div> <div></div> <div>V - Leucanthemum vulgare (Oxeye Daisy) N2B</div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Noxious Weed: Priority 2B - Non-native Species </div> <div> Predicted Models:  100% Low (inductive) </div>	Global: GNR State: SNA		
<div> <div></div> <div>V - Linaria vulgaris (Yellow Toadflax) N2B</div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Noxious Weed: Priority 2B - Non-native Species </div> <div> Predicted Models:  100% Low (inductive) </div>	Global: GNR State: SNA		
<div> <div></div> <div>V - Potentilla recta (Sulphur Cinquefoil) N2B</div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Noxious Weed: Priority 2B - Non-native Species </div> <div> Predicted Models:  100% Low (inductive) </div>	Global: GNR State: SNA		
<div> <div></div> <div>V - Tamarix ramosissima (Salt Cedar) N2B</div> </div>			
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Noxious Weed: Priority 2B - Non-native Species </div> <div> Predicted Models:  100% Low (inductive) </div>	Global: GNR State: SNA		

Regulated Weeds: Priority 3

<div> <div></div> <div>V - Bromus tectorum (Cheatgrass) R3</div> </div>		<div> <div></div> <div></div> <div></div> </div>
<div> View in Field Guide View Predicted Models View Range Maps </div> <div> Regulated Weed: Priority 3 - Non-native Species </div> <div> Global: GNR State: SNA </div> <div> Predicted Models:  100% Moderate (inductive) </div>		

Biocontrol Species

-	I - <i>Aphthona lacertosa</i> (Brown-legged Leafy Spurge Flea Beetle) BIOCNTL		N
	View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predicted Models:  100% Moderate (inductive)		
-	I - <i>Aphthona nigriscutis</i> (Black Dot Leafy Spurge Flea Beetle) BIOCNTL		N
	View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predicted Models:  100% Moderate (inductive)		
-	I - <i>Oberea erythrocephala</i> (Red-headed Leafy Spurge Stem Borer) BIOCNTL		N
	View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predicted Models:  100% Moderate (inductive)		
-	I - <i>Cyphocleonus achates</i> (Knapweed Root Weevil) BIOCNTL		N
	View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predicted Models:  100% Low (inductive)		
-	I - <i>Mecinus janthiniformis</i> (Dalmatian Toadflax Stem-boring Weevil) BIOCNTL		N
	View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predicted Models:  100% Low (inductive)		
-	I - <i>Mecinus janthinus</i> (Yellow Toadflax Stem-boring Weevil) BIOCNTL		N
	View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predicted Models:  100% Low (inductive)		

Introduction to Montana Natural Heritage Program



PO Box 201800 • 1201 11th Avenue • Helena, MT 59620-1800 • fax 406.444.0266 • phone 406.444.3989 • mtnhp.org

INTRODUCTION

The Montana Natural Heritage Program (MTNHP) is Montana's source for reliable and objective information on Montana's native species and habitats, emphasizing those of conservation concern. MTNHP was created by the Montana legislature in 1983 as part of the Natural Resource Information System (NRIS) at the Montana State Library (MSL). MTNHP is "a program of information acquisition, storage, and retrieval for data relating to the flora, fauna, and biological community types of Montana" (MCA 90-15-102). MTNHP's activities are guided by statute as well as through ongoing interaction with, and feedback from, principal data source agencies such as Montana Fish, Wildlife, and Parks, the Montana Department of Environmental Quality, the Montana Department of Natural Resources and Conservation, the Montana University System, the US Forest Service, and the US Bureau of Land Management. Since the first staff was hired in 1985, the Program has logged a long record of success, and developed into a highly respected, service-oriented program. MTNHP is widely recognized as one of the most advanced and effective of over 60 natural heritage programs that are distributed across North America.

VISION

Our vision is that public agencies, the private sector, the education sector, and the general public will trust and rely upon MTNHP as the source for information and expertise on Montana's species and habitats, especially those of conservation concern. We strive to provide easy access to our information to allow users to save time and money, speed environmental reviews, and make informed decisions.

CORE VALUES

- We endeavor to be a single statewide source of accurate and up-to-date information on Montana's plants, animals, and aquatic and terrestrial biological communities.
- We actively listen to our data users and work responsively to meet their information and training needs.
- We strive to provide neutral, trusted, timely, and equitable service to all of our information users.
- We make every effort to be transparent to our data users in setting work priorities and providing data products.

CONFIDENTIALITY

All information requests made to the Montana Natural Heritage Program are considered library records and are protected from disclosure by the Montana Library Records Confidentiality Act (MCA 22-1-11).

INFORMATION MANAGED

Information managed at the Montana Natural Heritage Program is botanical, zoological, and ecological information that describes the distribution (e.g., observations, structured surveys, range polygons, predicted habitat suitability models), conservation status (e.g., global and state conservation status ranks, including threats), and other supporting information (e.g., accounts and references) on the biology and ecology of species and biological communities.

Data Use Terms and Conditions


- Montana Natural Heritage Program (MTNHP) products and services are based on biological data and the objective interpretation of those data by professional scientists. MTNHP does not advocate any particular philosophy of natural resource protection, management, development, or public policy.
- MTNHP has no natural resource management or regulatory authority. Products, statements, and services from MTNHP are intended to inform parties as to the state of scientific knowledge about certain natural resources, and to further develop that knowledge. The information is not intended as natural resource management guidelines or prescriptions or a determination of environmental impacts. MTNHP recommends consultation with appropriate state, federal, and tribal resource management agencies and authorities in the area where your project is located.
- Information on the status and spatial distribution of biological resources produced by MTNHP are intended to inform parties of the state-wide status, known occurrence, or the likelihood of the presence of those resources. **These products are not intended to substitute for field-collected data, nor are they intended to be the sole basis for natural resource management decisions.**
- MTNHP does not portray its data as exhaustive or comprehensive inventories of rare species or biological communities. **Field verification of the absence or presence of sensitive species and biological communities will always be an important obligation of users of our data.**
- MTNHP responds equally to all requests for products and services, regardless of the purpose or identity of the requester.
- Because MTNHP constantly updates and revises its databases with new data and information, products will become outdated over time. Interested parties are encouraged to obtain the most current information possible from MTNHP, rather than using older products. We add, review, update, and delete records on a daily basis. Consequently, we strongly advise that you update your MTNHP data sets at a minimum of every four months for most applications of our information.
- MTNHP data require a certain degree of biological expertise for proper analysis, interpretation, and application. Our staff is available to advise you on questions regarding the interpretation or appropriate use of the data that we provide. See [Contact Information for MTNHP Staff](#)
- The information provided to you by MTNHP may include sensitive data that if publicly released might jeopardize the welfare of threatened, endangered, or sensitive species or biological communities. This information is intended for distribution or use only within your department, agency, or business. Subcontractors may have access to the data during the course of any given project, but should not be given a copy for their use on subsequent, unrelated work.
- MTNHP data are made freely available. Duplication of hard-copy or digital MTNHP products with the intent to sell is prohibited without written consent by MTNHP. Should you be asked by individuals outside your organization for the type of data that we provide, please refer them to MTNHP.
- MTNHP and appropriate staff members should be appropriately acknowledged as an information source in any third-party product involving MTNHP data, reports, papers, publications, or in maps that incorporate MTNHP graphic elements.
- Sources of our data include museum specimens, published and unpublished scientific literature, field surveys by state and federal agencies and private contractors, and reports from knowledgeable individuals. MTNHP actively solicits and encourages additions, corrections and updates, new observations or collections, and comments on any of the data we provide.
- MTNHP staff and contractors do not enter or cross privately-owned lands without express permission from the landowner. However, the program cannot guarantee that information provided to us by others was obtained under adherence to this policy.

Suggested Contacts for Natural Resource Management Agencies

As required by Montana statute (MCA 90-15), the Montana Natural Heritage Program works with state, federal, tribal, nongovernmental organizations, and private partners to ensure that the latest animal and plant distribution and status information is incorporated into our databases so that it can be used to inform a variety of permitting and planning processes and management decisions. We encourage you to contact state, federal, and tribal resource management agencies in the area where your project is located and review the permitting overviews by the [Montana Department of Environmental Quality](#), the [Montana Department of Natural Resources and Conservation](#) and the [Index of Environmental Permits for Montana](#) for guidelines relevant to your efforts. In particular, we encourage you to contact the Montana Department of Fish, Wildlife, and Parks for the latest data and management information regarding hunted and high-profile management species and to use the U.S. Fish and Wildlife Service's [Information Planning and Consultation \(IPAC\) website regarding](#) U.S. Endangered Species Act listed Threatened, Endangered, or Candidate species.

For your convenience, we have compiled a list of relevant agency contacts and links below:

Montana Fish, Wildlife, and Parks

Fish Species	Zachary Shattuck zshattuck@mt.gov (406) 444-1231 or Eric Roberts eroberts@mt.gov (406) 444-5334
American Bison Black-footed Ferret Black-tailed Prairie Dog Bald Eagle Golden Eagle Common Loon Least Tern Piping Plover Whooping Crane	Kristina Smucker KSmucker@mt.gov (406) 444-5209
Grizzly Bear Greater Sage Grouse Trumpeter Swan Big Game Upland Game Birds Furbearers	Brian Wakeling brian.wakeling@mt.gov (406) 444-3940
Managed Terrestrial Game Data	Adam Messer – MFWP GIS Coordinator amesser@mt.gov (406) 444-0095
Fisheries Data and Nongame Animal Data	Adam Messer – MFWP GIS Coordinator amesser@mt.gov (406) 444-0095
Wildlife and Fisheries Scientific Collector's Permits	https://fwp.mt.gov/buyandapply/commercialwildlifeandscientificpermits/scientific Kristina Smucker for Wildlife ksmucker@mt.gov (406) 444-5209 Dave Schmetterling for Fisheries dschmetterling@mt.gov (406) 542-5514
Fish and Wildlife Recommendations for Subdivision Development	Stevie Burton stevie.burton@mt.gov (406) 594-7354 See https://fwp.mt.gov/conservation/living-with-wildlife/subdivision-recommendations
Regional Contacts 	<div> <div>Region 1</div> <div>(Kalispell)</div> <div>(406) 752-5501</div> <div>fwprg12@mt.gov</div> </div> <div> <div>Region 2</div> <div>(Missoula)</div> <div>(406) 542-5500</div> <div>fwprg22@mt.gov</div> </div> <div> <div>Region 3</div> <div>(Bozeman)</div> <div>(406) 577-7900</div> <div>fwprg3@mt.gov</div> </div> <div> <div>Region 4</div> <div>(Great Falls)</div> <div>(406) 454-5840</div> <div>fwprg42@mt.gov</div> </div> <div> <div>Region 5</div> <div>(Billings)</div> <div>(406) 247-2940</div> <div>fwprg52@mt.gov</div> </div> <div> <div>Region 6</div> <div>(Glasgow)</div> <div>(406) 228-3700</div> <div>fwprg62@mt.gov</div> </div> <div> <div>Region 7</div> <div>(Miles City)</div> <div>(406) 234-0900</div> <div>fwprg72@mt.gov</div> </div>

Montana Department of Agriculture

General Contact Information: <https://agr.mt.gov/About/Office-Locations/Office-Locations-and-Field-Offices>

Noxious Weeds: <https://agr.mt.gov/Noxious-Weeds>

Montana Department of Environmental Quality

Permitting and Operator Assistance for all Environmental Permits: <https://deq.mt.gov/Permitting>

Opencut Mining Web Mapping Application for review of opencut mining applications

<https://gis.mtdeq.us/portal/apps/webappviewer/index.html?id=7b60084bc4c444a19c9a7a0867e7635a>

Montana Department of Natural Resources and Conservation

Overview of, and contacts for, licenses and permits for state lands, water, and forested lands:

<https://dnrc.mt.gov/Permits-Services>

Stream Permitting (310 permits) and an overview of various water and stream related permits (e.g., Stream Protection Act 124, Federal Clean Water Act 404, Federal Rivers and Harbors Act Section 10, Short-term Water Quality Standard for Turbidity 318 Authorization, etc.).

<https://dnrc.mt.gov/Licenses-and-Permits/Stream-Permitting>

Wildfire Resources: <https://dnrc.mt.gov/Forestry/Wildfire>

Bureau of Land Management

Montana Field Office Contacts:	Billings	(406) 896-5013
	Butte	(406) 533-7600
	Dillon	(406) 683-8000
	Glasgow	(406) 228-3750
	Havre	(406) 262-2820
	Lewistown	(406) 538-1900
	Malta	(406) 654-5100
	Miles City	(406) 233-2800
	Missoula	(406) 329-3914

United States Army Corps of Engineers

Montana Regulatory Office for federal permits related to construction in water and wetlands

<https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Montana/> (406) 441-1375

United States Environmental Protection Agency

Environmental information, notices, permitting, and contacts <https://www.epa.gov/mt>

Gateway to state resource locators <https://www.envcap.org/srl/index.php>

United States Fish and Wildlife Service

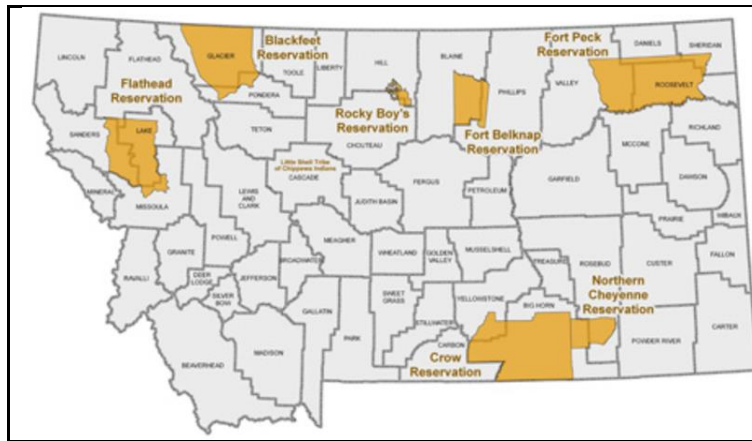
Information Planning and Conservation (IPAC) website: <https://ipac.ecosphere.fws.gov>

Montana Ecological Services Field Office: <https://www.fws.gov/office/montana-ecological-services> (406) 449-5225

United States Forest Service

Regional Office – Missoula, Montana Contacts			
Wildlife Program Leader	Tammy Fletcher	tammy.fletcher2@usda.gov	(406) 329-3086
Aquatic Ecologist	Justin Jimenez	justin.jimenez@usda.gov	(435) 370-6830
TES Program	Lydia Allen	lydia.allen@usda.gov	(406) 329-3558
Interagency Grizzly Bear Coordinator	Scott Jackson	scott.jackson@usda.gov	(406) 329-3664
Regional Botanist	Amanda Hendrix	amanda.hendrix@usda.gov	(651) 447-3016
Regional Vegetation Ecologist	Mary Manning	marry.manning@usda.gov	(406) 329-3304
Invasive Species Program Manager	Michelle Cox	michelle.cox2@usda.gov	(406) 329-3669

Tribal Nations



[Assiniboine & Gros Ventre Tribes – Fort Belknap Reservation](#)

[Assiniboine & Sioux Tribes – Fort Peck Reservation](#)

[Blackfeet Tribe - Blackfeet Reservation](#)

[Chippewa Creek Tribe - Rocky Boy's Reservation](#)

[Crow Tribe – Crow Reservation](#)

[Little Shell Chippewa Tribe](#)

[Northern Cheyenne Tribe – Northern Cheyenne Reservation](#)

[Salish & Kootenai Tribes - Flathead Reservation](#)

Natural Heritage Programs and Conservation Data Centers in Surrounding States and Provinces

[Alberta Conservation Information Management System](#)

[British Columbia Conservation Data Centre](#)

[Idaho Natural Heritage Program](#)

[North Dakota Natural Heritage Program](#)

[Saskatchewan Conservation Data Centre](#)

[South Dakota Natural Heritage Program](#)

[Wyoming Natural Diversity Database](#)

Invasive Species Management Contacts and Information

Aquatic Invasive Species

[Montana Fish, Wildlife, and Parks Aquatic Invasive Species staff](#)

[Montana Department of Natural Resources and Conservation's Aquatic Invasive Species Grant Program](#)

[Montana Invasive Species Council \(MISC\)](#)

[Western Montana Conservation Commission](#)

Noxious Weeds

[Montana Weed Control Association Contacts Webpage](#)

[Montana Biological Weed Control Coordination Project](#)

[Montana Department of Agriculture - Noxious Weeds](#)

[Montana Weed Control Association](#)

[Montana Fish, Wildlife, and Parks - Noxious Weeds](#)

[Montana State University Integrated Pest Management Extension](#)

[Integrated Noxious Weed Management after Wildfires](#)

[Fire Management and Invasive Plants](#)

Introduction to Native Species

Within the report area you have requested, separate summaries are provided for: (1) Species Occurrences (SO) for plant and animal Species of Concern, Special Status Species (SSS), Important Animal Habitat (IAH) and some Potential Plant Species of Concern; (2) other observed non Species of Concern or Species of Concern without suitable documentation to create Species Occurrence polygons; and (3) other non-documented species that are potentially present based on their range, predicted suitable habitat model output, or presence of associated habitats. Each of these summaries provides the following information when present for a species: (1) the number of [Species Occurrences](#) and associated delineation criteria for construction of these polygons that have long been used for considerations of documented Species of Concern in environmental reviews; (2) the number of observations of each species; (3) the geographic range polygons for each species that the report area overlaps; (4) predicted relative habitat suitability classes that are present if a predicted suitable habitat model has been created; (5) the percent of the report area that is mapped as commonly associated or occasionally associated habitat as listed for each species in the [Montana Field Guide](#); and (6) a variety of conservation status ranks and links to species accounts in the [Montana Field Guide](#). Details on each of these information categories are included under relevant section headers below or are defined on our [Species Status Codes](#) page. In presenting this information, the Montana Natural Heritage Program (MTNHP) is working towards assisting the user with rapidly determining what species have been documented and what species are potentially present in the report area. We remind users that this information is likely incomplete as surveys to document native and introduced species are lacking in many areas of the state, information on introduced species has only been tracked relatively recently, the MTNHP's staff and resources are restricted by budgets, and information is constantly being added and updated in our databases. **Thus, field verification by professional biologists of the absence or presence of species and biological communities will always be an important obligation of users of our data.**

If you are aware of observation datasets that the MTNHP is missing, please report them to the Program Botanist apipp@mt.gov or Senior Zoologist dbachen@mt.gov. If you have animal or plant observations that you would like to contribute, you can also submit them via Excel spreadsheets, geodatabases, iNaturalist, or a Survey123 form. Various methods of data submission are reviewed in this playlist of videos:

<https://www.youtube.com/playlist?list=PLRaydtZpHu2qOHPoSPq9cnM9uXGmEXACx>

Observations

The MTNHP manages information on several million animal and plant observations that have been reported by professional biologists and private citizens from across Montana. The majority of these observations are submitted in digital format from standardized databases associated with research or monitoring efforts and spreadsheets of incidental observations submitted by professional biologists and amateur naturalists. At a minimum, accepted observation records must contain a credible species identification (i.e. appropriate geographic range, date, and habitat and, if species are difficult to identify, a photograph and/or notes on key identifying features), a date or date range, observer name, locational information (ideally with latitude and longitude in decimal degrees), notes on numbers observed, and species behavior or habitat use (e.g., is the observation likely associated with reproduction). Bird records are also required to have information associated with date-appropriate breeding or overwintering status of the species observed. MTNHP reviews observation records to ensure that they are mapped correctly, occur within date ranges when the species is known to be present or detectable, occur within the known seasonal geographic range of the species, and occur in appropriate habitats. MTNHP also assigns each record a locational uncertainty value in meters to indicate the spatial precision associated with the record's mapped coordinates. Only records with locational uncertainty values of 10,000 meters or less are included in environmental summary reports and number summaries are only provided for records with locational uncertainty values of 1,000 meters or less.

Species Occurrences

The MTNHP evaluates plant and animal observation records for species of higher conservation concern to determine whether they are worthy of inclusion in the [Species Occurrence](#) (SO) layer for use in environmental reviews; observations not worthy of inclusion in this layer include long distance dispersal events, migrants observed away from key migratory stopover habitats, and winter observations. An SO is a polygon depicting what is known about a species occupancy from direct observation with a defined level of locational uncertainty and any inference that can be made about adjacent habitat use from the latest peer-reviewed science. If an observation can be associated with a map feature that can be tracked (e.g., a wetland boundary for a wetland associated plant) then this polygon feature is used to represent the SO. Areas that can be inferred as probable occupied habitat based on direct observation of a species location and what is known about the foraging area or home range size of the species may be incorporated into the SO. Species Occurrences generally belong to one of the following categories:

Plant Species Occurrences

A documented location of a specimen collection or observed plant population. In some instances, adjacent, spatially separated clusters are considered subpopulations and are grouped as one occurrence (e.g., the subpopulations occur in ecologically similar habitats, and their spatial proximity likely allows them to interbreed). Tabular information for multiple observations at the same SO location is generally linked to a single polygon. Plant SO's are only created for Species of Concern and Potential Species of Concern.

Animal Species Occurrences

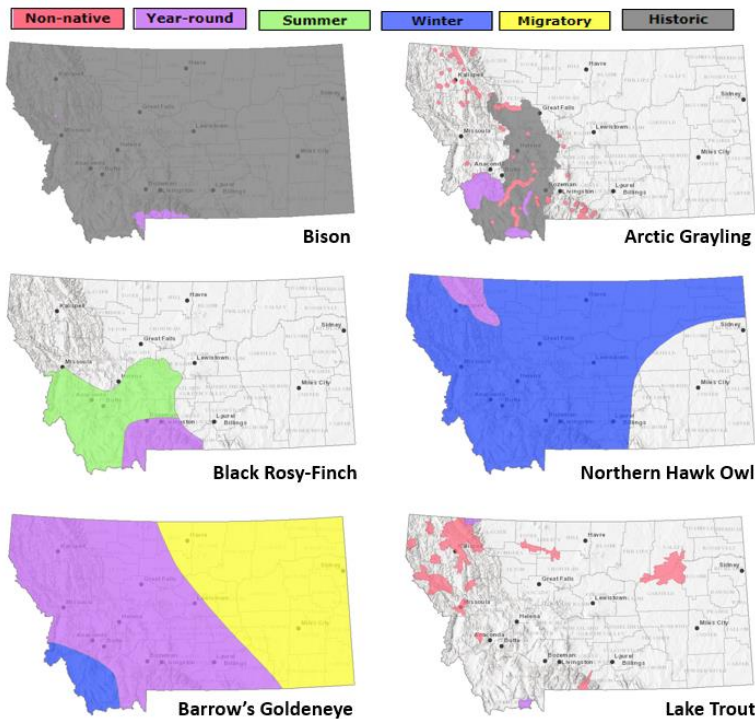
The location of a verified observation or specimen record typically known or assumed to represent a breeding population or a portion of a breeding population. Animal SO's are generally: (1) buffers of terrestrial point observations based on documented species' home range sizes; (2) buffers of stream segments to encompass occupied streams and immediate adjacent riparian habitats; (3) polygonal features encompassing known or likely breeding populations (e.g., a wetland for some amphibians or a forested portion of a mountain range for some wide-ranging carnivores); or (4) combinations of the above. Tabular information for multiple observations at the same SO location is generally linked to a single polygon. Species Occurrence polygons may encompass some unsuitable habitat in some instances in order to avoid heavy data processing associated with clipping out habitats that are readily assessed as unsuitable by the data user (e.g., a point buffer of a terrestrial species may overlap into a portion of a lake that is obviously inappropriate habitat for the species). Animal SO's are only created for Species of Concern and Special Status Species (e.g., Bald Eagle).

Other Occurrence Polygons

These include significant biological features not included in the above categories, such as Important Animal Habitats like bird rookeries and bat roosts, and peatlands or other wetland and riparian communities that support diverse plant and animal communities.

Geographic Range Polygons

Geographic range polygons are still under development for most plant and invertebrate species. Native year-round, summer, winter, migratory and historic geographic range polygons as well as polygons for introduced



populations have been defined for most vertebrate animal species for which there are enough observations, surveys, and knowledge of appropriate seasonal habitat use to define them (see examples to left). These native or introduced range polygons bound the extent of known or likely occupied habitats for non-migratory and relative sedentary species and the regular extent of known or likely occupied habitats for migratory and long-distance dispersing species; polygons may include unsuitable intervening habitats. For most species, a single polygon can represent the year-round or seasonal range, but breeding ranges of some colonial nesting water birds and some introduced species are represented more patchily when supported by data. Some ranges are mapped more broadly than actual distributions in order to be visible on statewide maps (e.g., fish).

Predicted Suitable Habitat Models

Predicted habitat suitability models have been created for plant and animal Species of Concern and are undergoing development for non-Species of Concern. For species for which models have been completed, the environmental summary report includes simple rule-based associations with streams for aquatic species and seasonal habitats for game species as well as mathematically complex Maximum Entropy models (Phillips et al. 2006, *Ecological Modeling* 190:231-259) constructed from a variety of statewide biotic and abiotic layers and presence only data for individual species for most terrestrial species. For the Maximum Entropy models, we reclassified 90 x 90-meter continuous model output into suitability classes (unsuitable, low, moderate, and optimal) then aggregated that into the one square mile hexagons used in the environmental summary report; this is the finest spatial scale we suggest using this information in management decisions and survey planning. Full model write ups for individual species that discuss model goals, inputs, outputs, and evaluation in much greater detail are posted on the MTNHP's [Predicted Suitable Habitat Models](#) webpage. Evaluations of predictive accuracy and specific limitations are included with the metadata for models of individual species.

Model outputs should not be used in place of on-the-ground surveys for species. Instead model outputs should be used in conjunction with habitat evaluations to determine the need for on-the-ground surveys for species. We suggest that the percentage of predicted optimal and moderate suitable habitat within the report area be used in conjunction with geographic range polygons and the percentage of commonly associated habitats to generate lists of potential species that may occupy broader landscapes for the purposes of landscape-level planning.

Associated Habitats

Within the boundary of the intersected hexagons, we provide the approximate percentage of commonly or occasionally associated habitat for vertebrate animal species that regularly breed, overwinter, or migrate through the state; a detailed list of commonly and occasionally associated habitats is provided in individual species accounts in the [Montana Field Guide](#). We assigned common or occasional use of each of the ecological

systems mapped in Montana by: (1) using personal knowledge and reviewing literature that summarizes the breeding, overwintering, or migratory habitat requirements of each species; (2) evaluating structural characteristics and distribution of each ecological system relative to the species' range and habitat requirements; (3) examining the observation records for each species in the state-wide point observation database associated with each ecological system; and (4) calculating the percentage of observations associated with each ecological system relative to the percent of Montana covered by each ecological system to get a measure of numbers of observations versus availability of habitat. Species that breed in Montana were only evaluated for breeding habitat use, species that only overwinter in Montana were only evaluated for overwintering habitat use, and species that only migrate through Montana were only evaluated for migratory habitat use. In general, species were listed as associated with an ecological system if structural characteristics of used habitat documented in the literature were present in the ecological system or large numbers of point observations were associated with the ecological system. However, species were not listed as associated with an ecological system if there was no support in the literature for use of structural characteristics in an ecological system, even if point observations were associated with that system. Common versus occasional association with an ecological system was assigned based on the degree to which the structural characteristics of an ecological system matched the preferred structural habitat characteristics for each species as represented in the scientific literature. The percentage of observations associated with each ecological system relative to the percent of Montana covered by each ecological system was also used to guide assignment of common versus occasional association.

We suggest that the percentage of commonly associated habitat within the report area be used in conjunction with geographic range polygons and the percentage of predicted optimal and moderate suitable habitat from predictive models to generate lists of potential species that may occupy broader landscapes for the purposes of landscape-level planning. Users of this information should be aware that land cover mapping accuracy is particularly problematic when the systems occur as small patches or where the land cover types have been altered over the past decade. Thus, particular caution should be used when using the associations in assessments of smaller areas (e.g., evaluations of public land survey sections).

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.

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.

Introduction to Land Management

Within the report area you have requested, land management information is summarized by acres of federal, state, and local government lands, tribal reservation boundaries, private conservation lands, and federal, state, local, and private conservation easements. Acreage for “Owned”, “Tribal”, or “Easement” categories represents non-overlapping areas that may be totaled. However, “Other Boundaries” represents managed areas such as National Forest boundaries containing private inholdings and other mixed ownership which may cause boundaries to overlap (e.g. a wilderness area within a forest). Therefore, acreages may not total in a straight-forward manner.

Because information on land stewardship is critical to effective land management, the Montana Natural Heritage Program (MTNHP) began compiling ownership and management data in 1997. The goal of the Montana Land Management Database is to manage a single, statewide digital data set that incorporates information from both public and private entities. The database assembles information on public lands, private conservation lands, and conservation easements held by state and federal agencies and land trusts and is updated on a regular basis. Since 2011, the Information Management group in the Montana State Library’s Digital Library Division has led the Montana Land Management Database in partnership with the MTNHP.

Public and private conservation land polygons are attributed with the name of the entity that owns it. The data are derived from the statewide [Montana Cadastral Parcel layer](#). Conservation easement data shows land parcels on which a public agency or qualified land trust has placed a conservation easement in cooperation with the landowner. The dataset contains no information about ownership or status of the mineral estate. For questions about the dataset or to report errors, please contact the Montana Natural Heritage Program at (406) 444-5363 or mtnhp@mt.gov. You can download various components of the Land Management Database and view associated metadata at the Montana State Library’s [GIS Data List](#) at the following links:

[Public Lands](#)

[Conservation Easements](#)

[Private Conservation Lands](#)

[Managed Areas](#)

Map features in the Montana Land Management Database or summaries provided in this report are not intended as a legal depiction of public or private surface land ownership boundaries and should not be used in place of a survey conducted by a licensed land surveyor. Similarly, map features do not imply public access to any lands. The Montana Natural Heritage Program makes no representations or warranties whatsoever with respect to the accuracy or completeness of this data and assumes no responsibility for the suitability of the data for a particular purpose. The Montana Natural Heritage Program will not be liable for any damages incurred as a result of errors displayed here. Consumers of this information should review or consult the primary data and information sources to ascertain the viability of the information for their purposes.

Introduction to Invasive and Pest Species

Within the report area you have requested, separate summaries are provided for: Aquatic Invasive Species, Noxious Weeds, Agricultural Pests, Forest Pests, and Biocontrol species that have been documented or potentially occur there based on the predicted suitability of habitat. Definitions for each of these invasive and pest species categories can be found on our [Species Status Codes](#) page.

Each of these summaries provides the following information when present for a species: (1) the number of observations of each species; (2) the geographic range polygons for each species, if developed, that the report area overlaps; (3) predicted relative habitat suitability classes that are present if a predicted suitable habitat model has been created; (4) the percent of the report area that is mapped as commonly associated or occasionally associated habitat as listed for each species in the [Montana Field Guide](#); and (5) links to species accounts in the [Montana Field Guide](#). Details on each of these information categories are included under relevant section headers under the Introduction to Native Species above or are defined on our [Species Status Codes](#) page. In presenting this information, the Montana Natural Heritage Program (MTNHP) is working towards assisting the user with rapidly determining what invasive and pest species have been documented and what species are potentially present in the report area. We remind users that this information is likely incomplete as surveys to document introduced species are lacking in many areas of the state, information on introduced species has only been tracked relatively recently, the MTNHP's staff and resources are limited, and information is constantly being added and updated in our databases. **Thus, field verification by professional biologists of the absence or presence of species will always be an important obligation of users of our data.**

If you are aware of observation or survey datasets for invasive or pest species that the MTNHP is missing, please report them to the Program Coordinator bmaxell@mt.gov Program Botanist apipp@mt.gov or Senior Zoologist dbachen@mt.gov If you have animal or plant observations that you would like to contribute, you can also submit them via Excel spreadsheets, geodatabases, iNaturalist, or a Survey123 form. Various methods of data submission are reviewed in this playlist of videos:

<https://www.youtube.com/playlist?list=PLRaydtZpHu2qOHPoSPq9cnM9uXGmEXACx>

Additional Information Resources

[Effects of Recreation on Rocky Mountain Wildlife](#)

[Laws, Treaties, Regulations, and Agreements on Animals and Plants](#)

[MTNHP Staff Contact Information](#)

[Montana Field Guide](#)

[MTNHP Species of Concern Report - Animals and Plants](#)

[MTNHP Species Status Codes - Explanation](#)

[MTNHP Predicted Suitable Habitat Models](#) (for select Animals and Plants)

[MTNHP Request Information page](#)

[Montana Cadastral](#)

[Montana Code Annotated](#)

[Montana Fisheries Information System](#)

[Montana Fish, Wildlife, and Parks Subdivision Recommendations](#)

[Montana Forestry Best Management Practices](#)

[Montana GIS Data Layers](#)

[Montana GIS Data Bundler](#)

[Montana Greater Sage-Grouse Project Submittal Site](#)

[Montana Guide to Streamside Management Zone Law and Rules](#)

[Montana Ground Water Information Center](#)

[Montana Index of Environmental Permits, 21st Edition \(2018\)](#)

[Montana Environmental Policy Act \(MEPA\)](#)

[Montana Environmental Policy Act Analysis Resource List](#)

[Montana Native Plant Conservation Strategy](#)

[Montana Spatial Data Infrastructure Layers](#)

[Montana State Historic Preservation Office Review and Compliance](#)

[Montana Stream Permitting: a guide for conservation district supervisors and others](#)

[Montana Water Information System](#)

[Montana Web Map Services](#)

[National Environmental Policy Act](#)

[Penalties for Misuse of Fish and Wildlife Location Data](#) (MCA 87-6-222)

[U.S. Fish and Wildlife Service Information for Planning and Consultation](#) (Section 7 Consultation)

[Uses of Information from the Montana Natural Heritage Program](#)

[Web Soil Survey Tool](#)

[Xerces Society for Invertebrate Conservation Resources](#)