~~DRAFT~~ Final

ENVIRONMENTAL ASSESSMENT

Lake Trout Suppression at Swan Lake to Improve Bull Trout and Kokanee Salmon Populations

(FWP-SEA-FSH-R1-24-11)

~~05/17/2024~~ 08/15/2024

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Environmental Assessment

The Montana Department of Fish, Wildlife and Parks (FWP) has prepared this Draft Environmental Assessment (EA) in accordance with the requirements of the Montana Environmental Policy Act (MEPA). The purpose of an EA is to identify, analyze, and disclose the impacts of a proposed state action. This document may disclose impacts that have no required mitigation measures, or over which FWP, more broadly, has no regulatory authority.

Local governments and other state agencies may have authority over different resources and activities under separate regulations. FWP actions will only be approved if the proposed action complies with applicable regulations. FWP has a separate obligation to comply with any federal, state, or local laws and to obtain any other permits, licenses, or approvals required for any part of the proposed action.

This EA was prepared for the following action:

PROJECT NAME: Lake Trout Suppression at Swan Lake to Improve Bull Trout and Kokanee Salmon populations	
LOCATION: Swan Lake	**COUNTY:** Flathead
PROPERTY OWNERSHIP: ☐ **FEDERAL** **X STATE** ☐ **COUNTY** **X PRIVATE**	
EA PREPARER: Mike Hensler/Leo Rosenthal	**DATE ISSUED:** 05/17/2024

I. Compliance with the Montana Environmental Policy Act

Before a proposed *project* may be approved, environmental review must be conducted to identify and consider potential impacts of the proposed project on the human and physical environment affected by the project. The Montana Environmental Policy Act (MEPA) and its implementing rules and regulations require different levels of environmental review, depending on the proposed project, significance of potential impacts, and the review timeline. § 75-1-201, Montana Code Annotated ("MCA"), and the Administrative Rules of Montana ("ARM") 12.2.430, General Requirements of the Environmental Review Process.

FWP must prepare an EA when:

- It is considering a "state-proposed project," which is defined in § 75-1-220(8)(a) as:
  (i) a project, program, or activity initiated and directly undertaken by a state agency.
  (ii) … a project or activity supported through a contract, grant, subsidy, loan, or other form of funding assistance from a state agency, either singly or in combination with one or more other state agencies; or
  (iii) … a project or activity authorized by a state agency acting in a land management capacity for a lease, easement, license, or other authorization to act.
- It is not clear without preparation of an EA whether the proposed project is a major one significantly affecting the quality of the human environment. ARM 12.2.430(3)(a));
- FWP has not otherwise implemented the interdisciplinary analysis and public review purposes listed in ARM 12.2.430(2) (a) and (d) through a similar planning and decision-making process (ARM 12.2.430(3)(b));
- Statutory requirements do not allow sufficient time for the FWP to prepare an EIS (ARM 12.2.430(3)(c));
- The project is not specifically excluded from MEPA review according to § 75-1-220(8)(b) or ARM 12.2.430(5); or
- As an alternative to preparing an EIS, prepare an EA whenever the project is one that might normally require an EIS, but effects which might otherwise be deemed significant appear to be mitigable below the level of significance through design, or enforceable controls or stipulations or both imposed by the agency or other government agencies. For an EA to suffice in this instance, the agency must determine that all the impacts of the proposed project have been accurately identified, that they will be mitigated below the level of significance, and that no significant impact is likely to occur. The agency may not consider

compensation for purposes of determining that impacts have been mitigated below the level of significance (ARM 12.2.430(4)).

MEPA is procedural; its intent is to ensure that impacts to the environment associated with a proposed project are fully considered and the public is informed of potential impacts resulting from the project.

II. Background and Description of Proposed Project

This section includes background information and a description of the proposed project including the responsible party, the type of proposed action and the anticipated schedule of the proposed project.

Name of Proposed Project: Lake Trout Suppression at Swan Lake to Improve Bull Trout and Kokanee Salmon Populations

The Swan Valley was historically home to a large, stable, and healthy bull trout (*Salvelinus confluentus*) population. Swan Lake, one of several lakes located in the Swan Valley, had popular recreational fisheries for bull trout, kokanee (*Oncorhynchus nerka*), and northern pike (*Esox Lucius*). However, in 1998 anglers began to occasionally catch adult-sized (20-30 inch) lake trout (*Salvelinus namaycush*) from Swan Lake and the Swan River. This raises concern because lake trout are not native to Swan Lake, which also has a thriving population of non-native opossum shrimp (*Mysis diluviana*) stocked in the mid-1970's to improve kokanee lengths. Lake trout, in the presence of opossum shrimp, are known for rapidly expanding and eventually dominating fish communities as apex predators. In northwest Montana lakes it is quite often at the expense of bull trout and/or kokanee salmon.

Bull trout are one of the handful of native fish species that has adapted over thousands of years to conditions in northwest Montana. However, the relatively recent introduction of non-native species like brook trout (*Salvelinus fontinalis*), northern pike and especially lake trout threaten the persistence of native bull trout through hybridization (interbreeding), competition for resources and predation.

Bull trout in Swan Lake are mostly adfluvial, meaning adults migrate from the lake to the tributaries to spawn, then back to the lake to feed and grow. The Swan Lake population consists of fish that hatch in one of ten to twelve tributary streams in the Swan River Valley and reside there for 1-3 years. The fish then migrate to Swan Lake to mature and return to their natal streams to spawn when they are 5-6 years old. They continue to spawn on consecutive or alternate years and can live 10 – 12 years in the affected environment.

A series of population status reviews compiled in the late 1990s noted that Swan Lake was one of the most vital bull trout core areas remaining in Montana (Montana Bull Trout Scientific Group 1996). In 1998, bull trout were listed as endangered under the federal Endangered Species Act (ESA) and although recreational fishing for bull trout had been restricted since then for most populations, the Swan Lake population was still considered robust enough to support limited recreational harvest until 2012.

Lake trout arrived in Swan Lake by either unauthorized introduction or migration through a now-closed fish ladder. In addition to Swan Lake, lake trout are known to be significant threat to many other bull trout core areas (Martinez et al. 2009). Lake trout have a strong habitat and niche overlap with bull trout in Swan Lake, resulting in competition for resources and predation. In 2003, FWP personnel documented juvenile lake trout in Swan Lake, confirming that wild reproduction had occurred. Additional data in subsequent years confirmed that the lake trout population within Swan Lake was established and growing.

In the years following the original discovery, catch rates of lake trout increased and natural reproduction was documented. A graduate study from Montana State University examined the population size and structure of the expanding lake trout population from 2006-2008. FWP then initiated an experimental lake trout

suppression project from 2009-2016. Unfortunately, results from the study and unpredictable funding led to the termination of the suppression project. Efforts since 2016 have concentrated on monitoring of the lake trout and bull trout populations to determine trends while future management strategies were developed.

The Swan Lake bull trout population was historically monitored using several methods. These include gillnetting in Swan Lake, juvenile bull trout electrofishing in select tributaries, and redd counts in all known spawning tributaries. This latter method (redd counts) provides the best metric for examining trends in adult bull trout numbers over time. Redd count surveys have been conducted for the Swan Lake bull trout population since 1982 (Figure 1). Redd counts were conducted in select (index) tributaries annually until 1994, and then additional tributaries were added to better examine the entire drainage. Efforts since 1995 are considered "basin-wide" surveys, in which all spawning tributaries are counted. Adult bull trout numbers in the 1980's were relatively low. However, restrictive angling regulations, the establishment of opossum shrimp, and an abundant kokanee population collectively resulted in high redd counts (i.e., large population of adult bull trout) from 1994-1997. The adult bull trout trend since the discovery of lake trout in 1998 has shown considerable decline. The basin-wide count total of 135 redds (58 index) in 2023 represents the lowest counts in the 42 years of data.

Recognizing the need for improved lake trout population data, FWP initiated a lake trout population monitoring strategy in 2017. This survey was modeled after work conducted by the Ontario Ministry of Natural Resources, and their efforts to monitor lake trout in small and large water bodies (Sandstrom and Lester 2009). The Summer Profundal Index Netting (SPIN) strategy systematically divides the lake surface area into cells which are randomly sampled. Effort is split between the north and south basins, and locations are sampled in two depth strata (60-90' and >90'). While some information on lake trout density was collected in the 2017 pilot year, the 2018 data is considered the first comprehensive assessment of lake trout density in Swan Lake. Lake trout catch per net has increased annually since 2018, and the 2023 netting reveals a density of lake trout approximately three times higher than 2018 (Figure 2). This indicates that the lake trout population continues to increase since suppression efforts were halted in 2016.

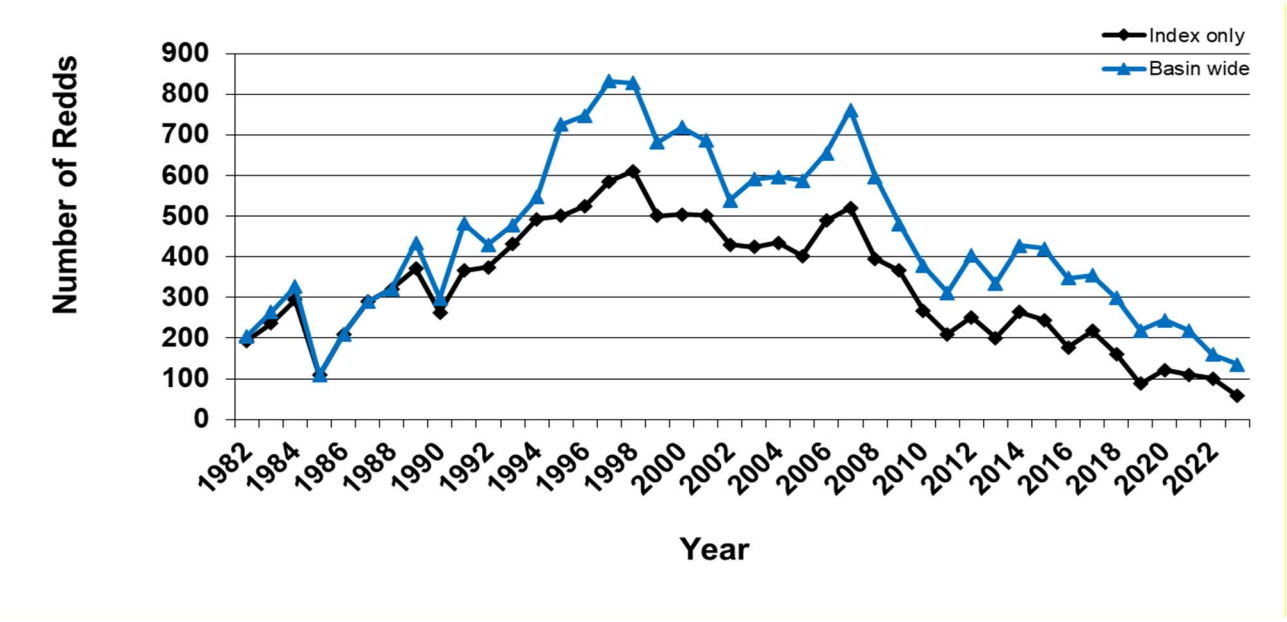


Figure 1. Bull trout redd counts for the Swan Lake population 1982-2023. Blue line represents consistent effort on four index streams. Prior to 1995 other streams were sparsely inventoried. After 1995, effort typically focused on about 10 streams and deferred one or two minor ones which were done periodically.

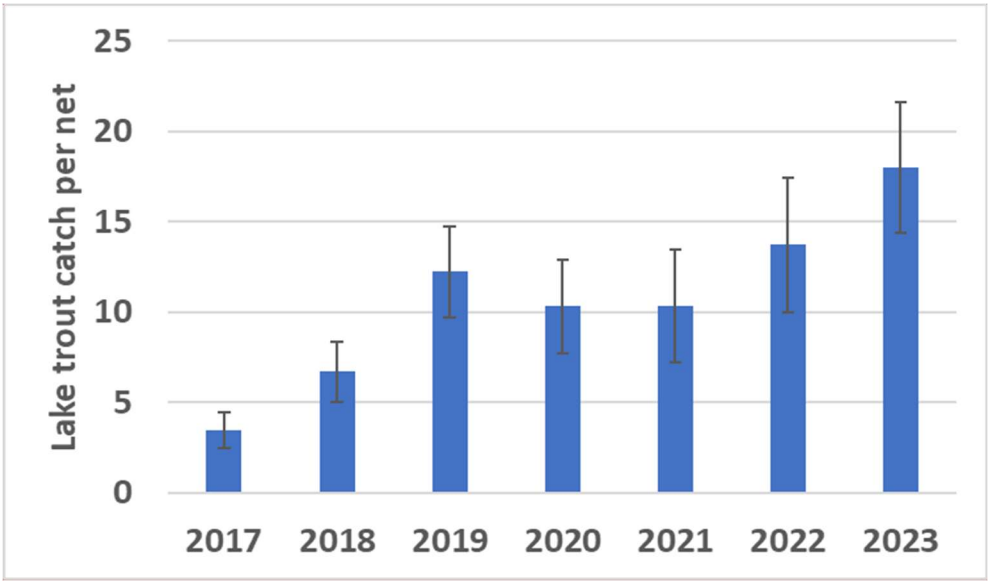


Figure 2. Lake trout catch per net from SPIN nets surveys in Swan Lake 2017-2023. Error bars represent 95% confidence intervals.

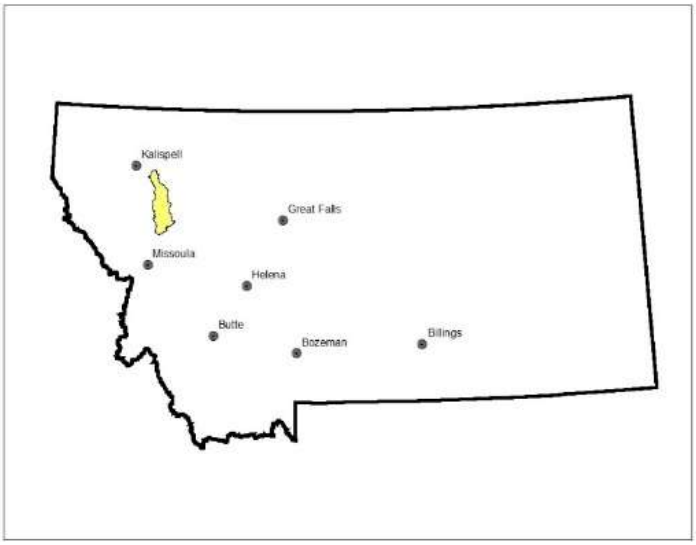
Since the initial lake trout suppression efforts ended, the lake trout population in Swan Lake has grown and will likely approach or exceed carrying capacity. Similarly, lake trout numbers are presumably increasing in the interconnected Holland and Lindbergh Lakes. The increase in lake trout in the three core areas threatens the long-term persistence of bull trout in the Swan River Valley. The proliferation of lake trout and the subsequent decline of vulnerable native species is not unique to the Swan drainage, as shown by Martinez et al. (2009). Expansion of the range of lake trout range and populations is considered the primary cause for bull trout decline in multiple northwestern U.S. lakes: Flathead Lake (Confederated Salish and Kootenai Tribes 2014); Lake McDonald, Logging Lake, Bowman Lake, Kintla Lake, Harrison Lake (Fredenberg 2000; Downs and McCubbins 2018); Idaho lakes: Lake Pend Oreille (Hansen et al. 2019); Priest Lake (Ng et al. 2015); Upper Priest Lake (Ryan 2016); and Alberta, Canada lakes: Bow Lake, Hector Lake, Spray Lake (Donald and Alger 1993). They are also the probable cause for bull trout declines in Upper Waterton Lake, Middle Waterton Lake, and Glacier Lake (Donald and Alger 1993). Bull trout extirpation at Lake Chelan was not due to Lake trout but their presence prevents any meaningful consideration for reintroducing bull trout (Martinez et al 2009).

- The proposed project represents a progression of previous lake trout suppression efforts in Swan Lake. FWP proposes to conduct a lake trout removal effort in Swan Lake, Montana, to reduce the lake trout population. This action is consistent with the management direction in the Statewide Fish Management Plan Section 2.03 (2023), USFWS/FWP Section 6 Cooperative Agreement, 2024(Appendix B) and is an action supported in the USFWS Recovery Unit Implementation Plan for bull trout in the Columbia Headwaters Recovery Unit. The proposed action would involve contracting with professional fishery consultants to conduct gillnetting beginning 2025. These activities would be conducted annually until lake trout numbers are sufficiently low to improve bull trout and kokanee salmon numbers. Success of the program will be measured by achieving specific benchmarks. Examples from other lake trout suppression programs (Yellowstone Lake and Lake Pend Oreille) have shown benefits to native fish when lake trout harvest has exceeded 1.5 kg/ha on juvenile lake trout, and 2.0 kg/ha on adult lake trout. These targets will be used to evaluate whether contracted netting is removing enough lake trout biomass. Annual SPIN netting results will also be used to evaluate efficacy of lake trout removal. This survey was initiated in 2017 after the suppression project from 2009-2016 had ended.
- The lake trout density in 2017 will be used as a target to reduce current density to that level or lower. The final measure of success will be a stabilization or increase in the trend of bull trout redds in the Swan system. Bull

trout redds have declined since the previous suppression project was completed in 2016, and future trends will be measured against the record low numbers observed in 2023.
Funding has been secured for the first seven years of the project and will be pursued for future efforts. Obtaining additional funding will likely depend on the relative success. FWP will assess success of the project ~~through independent index netting for lake trout~~ as described above, as well as bull trout and kokanee redd counts. All lake trout netted during the project will be killed; those that are salvageable and of suitable size for consumption will be field dressed and donated to food banks or other organizations; those that are not suitable for human consumption will either be donated to wildlife rehabilitation facilities or ~~gas bladders punctured and sunk in place in Swan Lake~~ disposed of in local landfills.

Affected Area / Location of Proposed Project

- Legal Description
    - Latitude/Longitude: 47.94611 -113.87858
    - Section, Township, and Range: 25N 18W 15
    - Town/City, County, Montana: Swan Lake, Lake County, Montana
- Location Map (Figure 3)



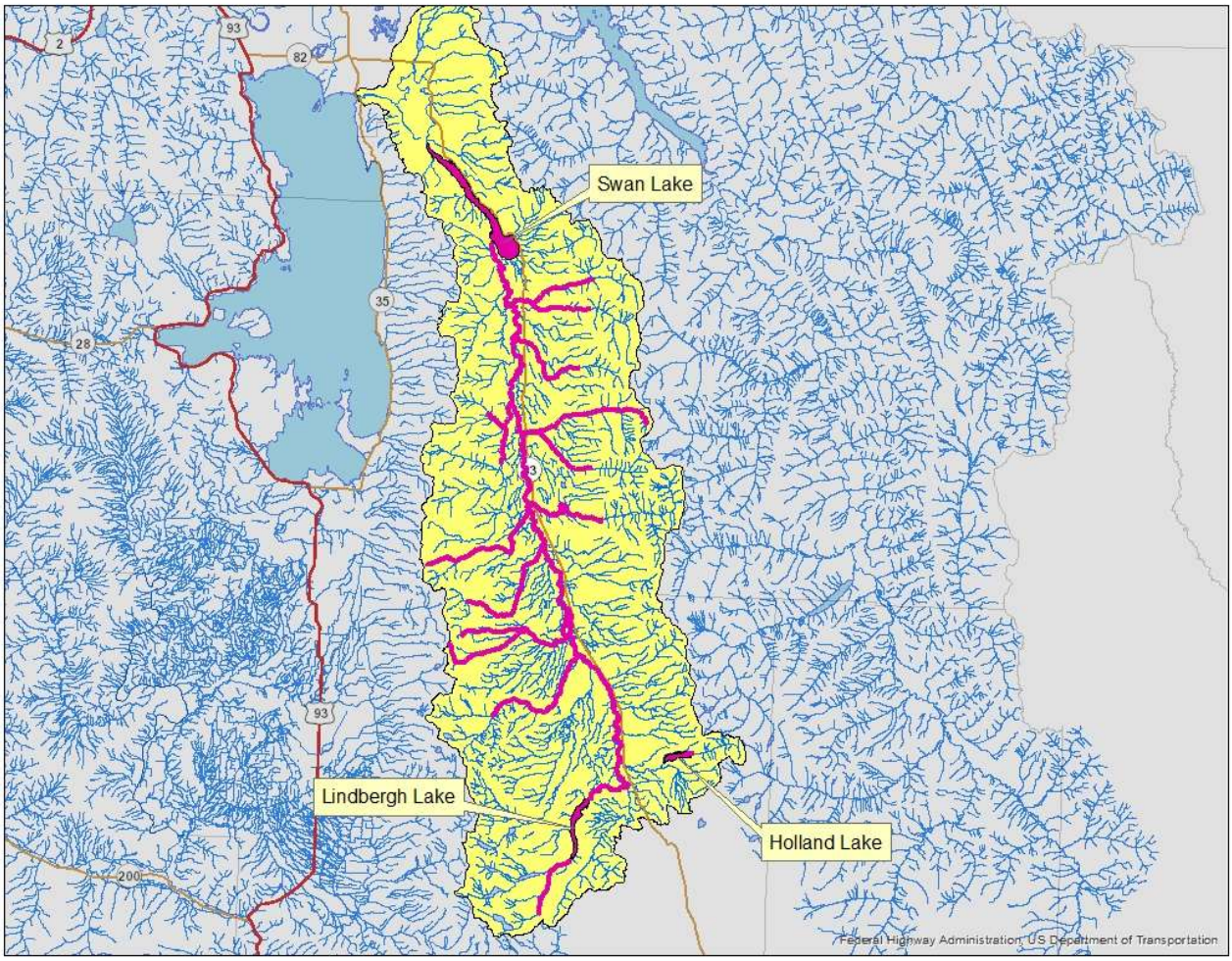


Figure 3. General Project Location

III. Purpose and Benefits of Proposed Project

The EA must include a description of the purpose and need or benefits of the proposed project. ARM 12.2.432(3)(b). Benefits of the proposed project refer to benefits to the resource, public, department, state, and/or other.

Swan Lake represents one of just a few remaining bull trout core areas in Montana. FWP proposes to conduct a lake trout removal project in Swan Lake to suppress the population for the purpose of improving conditions for bull trout and kokanee salmon.

More specifically, the proposed project would:

- Mitigate the loss of traits that have evolved locally in bull trout. These traits have helped native bull trout persist in the affected environment for thousands of years.
- Improve overall ecosystem health by retaining the ecological role served by bull trout.
- Re-establish bull trout and kokanee salmon as valued sportfish in Swan Lake.
- Reduce the likelihood of the need for additional federal ESA actions to protect bull trout and further support state and federal efforts to de-list Montana's bull trout populations.

- This action is consistent with the management direction in the Statewide Fish Management Plan and is an action supported in the USFWS Recovery Unit Implementation Plan for bull trout in the Columbia Headwaters Recovery Unit.

The proposed action would be accomplished by FWP contracting with professional fishery consultants to conduct gillnetting beginning in 2025. These activities would be conducted annually until lake trout numbers are sufficiently low to improve bull trout and kokanee salmon numbers.

Funding has been secured for the first seven years of the project and will be pursued for future efforts. Obtaining additional funding will likely depend on the relative success. FWP will assess success of the project through independent index netting for lake trout, as well as bull trout and kokanee redd counts. All lake trout netted during the project will be killed; those that are salvageable and of suitable size for consumption will be field dressed and donated to food banks or other organizations; those that are not suitable for human consumption will either be donated to wildlife rehabilitation facilities or gas bladders punctured and sunk in place in Swan Lake.

	Yes*	No
Was a cost/benefit analysis prepared for the proposed project?	☐	☒

* If yes, a copy of the cost/benefit analysis prepared for the proposed project is included in Attachment A to this Draft EA

IV. Other Agency Regulatory Responsibilities

FWP must list any federal, state, and/or local agencies that have overlapping or additional jurisdiction, or environmental review responsibility for the proposed project, as well as permits, licenses, and other required authorizations. ARM 12.2.432(3)(c).

A list of other required local, state, and federal approvals, such as permits, certificates, and/or licenses from affected agencies is included in Table 1 below. Though Table 1 provides a summary of state requirements it does not necessarily represent a complete and comprehensive list of all permits, certificates, or approvals needed. Rather, Table 1 lists the primary state agencies with regulatory responsibilities, the applicable regulation(s) and the purpose of the regulation(s). Agency decision-making is governed by state and federal laws, including statutes, rules, and regulations, that form the legal basis for the conditions the proposed project must meet to obtain necessary permits, certificates, licenses, or other approvals. Further, these laws set forth the conditions under which each agency could deny the necessary approvals.

Table 1: Federal, State, and/or Local Regulatory Responsibilities

Agency	Type of Authorization (permit, license, stipulation, other)	Purpose
USFWS	USFWS Section 6 Cooperative Agreement	provides a mechanism for cooperation between US Fish and Wildlife Service (USFWS) and Montana for the purposes of conserving endangered and threatened species

V. List of Mitigations, Stipulations

Mitigations, stipulations, and other *enforceable* controls required by FWP, or another agency, may be relied upon to limit potential impacts associated with a proposed Project. **Table 2** below lists and evaluates enforceable conditions FWP may rely on to limit potential impacts associated with the proposed Project. ARM 12.2.432(3)(g).

Table 2: Listing and Evaluation of Enforceable Mitigations Limiting Impacts

Are enforceable controls limiting potential impacts of the proposed action? If not, no further evaluation is needed.			**Yes ☒**	**No ☐**
If yes, are these controls being relied upon to limit impacts below the level of significance? If yes, list the enforceable control(s) below			**Yes ☒**	**No ☐**
Enforceable Control	**Responsible Agency**	**Authority (Rule, Permit, Stipulation, Other)**	**Effect of Enforceable Control on Proposed Project**	
Limiting the incidental bycatch of bull trout during gillnetting operations	FWP and USFWS	USFWS Section 6 Cooperative Agreement for incidental take	Minimize impacts to ESA-*threatened* bull trout in Swan Lake and the overall Swan River drainage.	

VI. Alternatives Considered

In addition to the proposed Project, and as required by MEPA, FWP analyzes the "No-Action" alternative in this Draft EA. Under the No Action alternative, the proposed project would not occur. Therefore, no additional impacts to the physical environment or human population (human environment) in the affected area would occur. The No Action alternative forms the baseline from which the potential impacts of the proposed project can be measured.

Alternative 1: No Action

Under the No Action Alternative, FWP would not conduct lake trout suppression and bull trout conservation in the Swan Lake drainage. In Swan Lake, lake trout populations are expected to expand to where they reach equilibrium with the environment. Lake trout would likely replace bull trout as the Swan system's apex aquatic predator over the next 25 years, as observed in other lake systems within the Flathead drainage. Eventually, the Swan Lake kokanee salmon population would likely become functionally extinct. Under this alternative, bull trout would not be conserved in Swan Lake.

Further, the no action alternative would not achieve the purpose and need for the proposed action and as such would not achieve a primary goal of FWP's Fisheries Division, to conserve core populations of native bull trout. This goal is backed by FWP policy, state law, and the 2023 Statewide Fisheries Management Plan (SFMP Part 2.03). This is particularly important as it relates to wild and native fish populations and populations listed under the ESA, such as bull trout. Additionally, the no action alternative would not represent a commitment to bull trout ESA recovery, as identified in the USFWS Recovery Unit Implementation Guide for bull trout in the Columbia Headwaters.

Alternative 2: Proposed Project

- FWP proposes to conduct a lake trout removal effort in Swan Lake, Montana, to reduce the lake trout population. This action is consistent with the management direction in the Statewide Fish Management Plan Section 2.03 (2023), USFWS/FWP Section 6 Cooperative Agreement, 2024(Appendix B) and is an action supported in the USFWS Recovery Unit Implementation Plan for bull trout in the Columbia Headwaters Recovery Unit. The proposed action would involve contracting with professional fishery consultants to conduct gillnetting beginning 2025. These activities would be conducted annually until lake trout numbers are sufficiently low to improve bull trout and kokanee salmon numbers. Success of the program will be measured by achieving specific benchmarks. Examples from other lake trout suppression programs (Yellowstone Lake and Lake Pend Oreille) have shown benefits to native fish when lake trout harvest has exceeded 1.5 kg/ha on juvenile lake trout, and 2.0 kg/ha on adult lake trout. These targets will be used to evaluate whether contracted netting is removing

enough lake trout biomass. Annual SPIN netting results will also be used to evaluate efficacy of lake trout removal. This survey was initiated in 2017 after the suppression project from 2009-2016 had ended.

- The lake trout density in 2017 will be used as a target to reduce current density to that level or lower. The final measure of success will be a stabilization or increase in the trend of bull trout redds in the Swan system. Bull trout redds have declined since the previous suppression project was completed in 2016, and future trends will be measured against the record low numbers observed in 2023.

Funding has been secured for the first seven years of the project and will be pursued for future efforts. Obtaining additional funding will likely depend on the relative success. FWP will assess success of the project as described above, as well as bull trout and kokanee redd counts. All lake trout netted during the project will be killed; those that are salvageable and of suitable size for consumption will be field dressed and donated to food banks or other organizations; those that are not suitable for human consumption will either be donated to wildlife rehabilitation facilities or disposed of in local landfills.

~~FWP proposes to conduct a lake trout removal effort in Swan Lake, Montana, to suppress the population for the purpose of conserving native bull trout and kokanee salmon. The proposed action would involve contracting with professional fishery consultants to conduct gillnetting beginning 2025. These activities would be conducted annually until lake trout numbers are sufficiently low to improve bull trout and kokanee salmon numbers. Funding has been secured for the first seven years of the proposed project and will be pursued for future efforts, as deemed appropriate. Obtaining additional funding will likely depend on the relative success. FWP will assess success of the project through independent index netting for lake trout, and bull trout and kokanee salmon redd counts. All lake trout netted during the project will be killed; those that are salvageable and of suitable size for consumption will be field dressed and donated to food banks or other organizations; those that are not suitable for human consumption will either be donated to wildlife rehabilitation facilities or gas bladders punctured and sunk in place in Swan Lake.~~

		Yes*	No
Were any additional alternatives considered and dismissed?		☒	☐

* If yes, a list and description of the other alternatives considered, but not carried forward for detailed review, is included below

VII. Alternatives Considered but Eliminated from Detailed Review

Alternative 3: Piscicide Removal of Lake Trout from Swan Lake (Rotenone)

Use of the piscicide rotenone, a naturally derived chemical from plants in the bean family that is highly effective at killing fish, with few impacts to most non-target organisms was not considered for further review. Rotenone would lethally remove all fish from Swan Lake, including bull trout and kokanee salmon. Rotenone acts by inhibiting oxygen transfer at the cellular level. It is especially effective on fish at low concentrations because it is readily absorbed into the bloodstream through the gills. There is little risk to terrestrial and avian animals that consume rotenone treated waters or dead fish because rotenone is readily broken down by digestive processes and is not readily absorbed through the digestive system; therefore, terrestrial and avian animals can tolerate exposure to concentrations much higher than those used to kill fish. Rotenone does also have adverse impacts on most aquatic invertebrates, particularly those that breath through gills. However, multiple studies have shown, at the concentrations necessary to kill fish, invertebrates would be expected to recover within one year after treatment with rotenone. Similarly, zooplankton communities may see temporary reductions but would be expected to rebound in less than one year (Kiser et al. 1963, Hughey 1975). Rotenone would be administered by trained FWP personnel following requirements and guidance on the label, FWP's Standard Operating Procedures Manual, and the FWP Piscicide Policy.

Specific to the ESA-listed bull trout, the ESA defines "take" as follows: to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct. 16 U.S. C. 1542(b). The term

harm in the definition of 'take' means an act which actually kills or injures wildlife. Such an act may include *significant habitat modification or degradation* where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering." 50 C.F.R. § 17.3.

To find that habitat modification, such as adding rotenone to Swan Lake, constitutes a taking of listed species under the federal definition of *harm*, all aspects of the *harm* definition must be triggered. Therefore, for the purposes of the proposed project, the following conditions must all be met for a *taking* or a *significant adverse impact* to occur to the *threatened* bull trout (USFWS, FWS/AES/067974, April 26, 2018):

- Is the modification of habitat significant? Yes. The proposed action would, temporarily, change the water chemistry of Swan Lake such that all fish present would be lethally eliminated, including ESA-*threatened* bull trout.
- If so, does that modification also significantly impair an essential behavior pattern of an ESA-listed species? Yes. The use of rotenone, if administered appropriately and in accordance with application guidelines, would eliminate bull trout from Swan Lake. However, juvenile (ages 0-3) would be present in Swan River tributaries and would eventually return to Swan Lake after detoxification.
- If so, is the significant modification of the habitat, with a significant impairment of an essential behavior pattern, likely to result in the actual killing or injury of wildlife? Yes. The use of rotenone, if administered appropriately and in accordance with application guidelines, would eliminate bull trout from Swan Lake. However, juvenile (ages 0-3) would be present in Swan River tributaries and would eventually return to Swan Lake after detoxification.

Significant adverse cumulative impacts would be realized by the implementation of Alternative 3, as all fish species currently existing in Swan Lake would be lethally eliminated by the application of rotenone, including bull trout and kokanee salmon. Selection and implementation of Alternative 3 directly conflicts with the stated purpose and need for the proposed action. Also, pursuant to the applicable requirements of the federal ESA, selection, and implementation of Alternative 3 would constitute unacceptable levels of take for the purposes of the ESA. Additionally, while rotenone use is commonly used to remove fish species from small-medium lakes with simple fish assemblages, Swan Lake is considerably larger than any rotenone project FWP has attempted. Therefore, Alternative 3, Piscicide Removal of Lake Trout from Swan Lake (Rotenone), is eliminated from detailed analysis and further consideration under the proposed action.

VIII. General Setting of the Affected Environment

Physical Environment

The footprint of the proposed gill net suppression of lake trout is entirely within Swan Lake, approximately 15.5 miles upstream of the Swan River confluence with Flathead Lake. The analysis area for direct, secondary, and cumulative impacts on the affected human environment analyzed by this Draft EA includes Swan Lake, Swan River and more broadly Lake County (Figure 4).

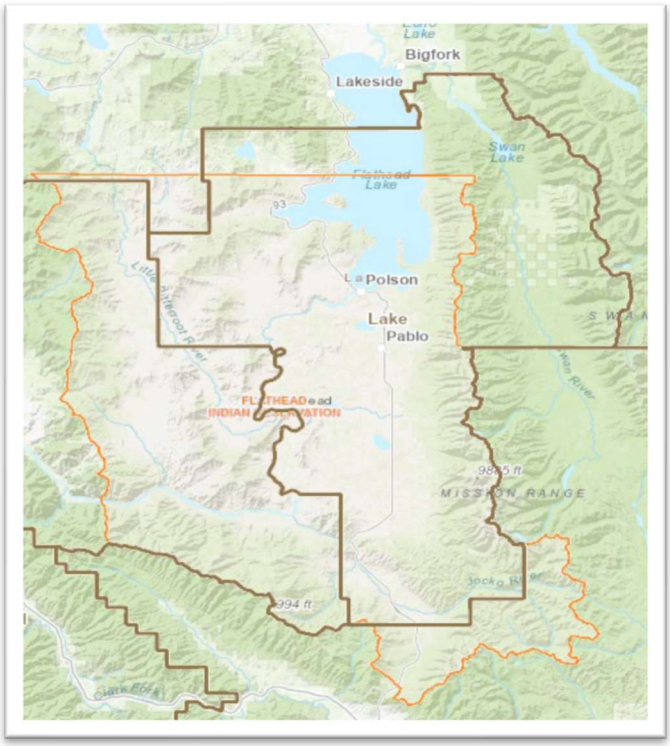


Figure 4. *Lake County (brown line)*

Lake County covers ~ 1,654 square miles (4,280 km^2), of which ~ 1490 square miles (~ 3,900 km^2) is land and 164 square miles (420 km^2) (9.9%) is water with the largest water body being Flathead Lake; Swan Lake being second largest (3270 acres). (Wikipedia, Lake County, MT). The Flathead Indian Reservation lies mostly within the boundaries of Lake County.

Major drainages include the Swan River which flows through Swan Lake (the site of the proposed action and into Flathead Lake near the town of Bigfork and ultimately flows into the Clark Fork River and a multitude of smaller drainages characterized as creeks are also present. Lower elevation habitats (below 6,000 ft., 1,829 m) vary greatly and include large areas of shortgrass/sagebrush prairie, mountain foothills, intensively cultivated areas (grain and hay field agriculture), natural wetlands/lakes, riparian plant communities ranging from narrow stream bank zones to extensive cottonwood river bottoms, man-made reservoirs, and small communities to moderately sized towns.

The mountainous portion of Lake County (above 6,000 ft., 1,829 m) contain all, or portions of 2 mountain ranges including the Rattlesnake Mountains and the Mission Mountains range. Mountainous habitats are dominated by coniferous forest (Douglas fir, lodgepole pine, Engelman spruce, western cedar, hemlock, whitebark pine, limber pine, ponderosa pine, juniper), and rocky sub-alpine/alpine communities found above timberline.

Human Population

As of July 1, 2022, an estimated 1,122,878 people lived in Montana of which an estimated 32,853 resided in Lake County. The 2022 population estimate for Lake County reflects a population increase of 5.5% since April 1, 2020, which surpasses the statewide growth rate of 3.6% for the same time-period (U.S. Census, 2022).

The demographic make-up of *race* for Lake County residents, as related to the overall population of Montana, are identified in **Table 3**. Over two-thirds of Lake County's land lies within the Flathead Indian Reservation; therefore, the human population of Lake County includes a relatively large percentage of Native Americans.

Race	Lake County, Percent of Total (%)	State of Montana, Percent of Total (%)
White	65.5	85.3
Hispanic or Latino	4.8	4.5
Native American	23.7	6.5
Asian	0.9	1.1
Black or African American	0.5	0.6
Other	4.6	2.0

Table 3. **Lake County, and related State of Montana race demographics (U.S. Census, 2022)**

The demographic make-up of *age and sex* for Lake County residents related to the overall population of Montana is identified in **Table 4**, below.

Age and Sex	Lake County, Percent of Total (%)	State of Montana, Percent of Total (%)
Under 5 years	5.1	5.2
Under 18 years	21.7	20.8
65 years and over	23.9	20.0
Female	50.6	49.3
Male	49.4	50.7

Table 4. Lake County and related State of Montana age and sex demographics (U.S. Census, 2022)

The demographic make-up for the *level of education* demographic in Lake County related to the overall state of Montana is reflected in **Table 5**, below:

Level of Education	Lake County, Percent of Total (%)	State of Montana, Percent of Total (%)
High School Graduation or higher (age 25 years +, 2018-22)	92.3	94.5
Bachelor's Degree or higher (age 25 years +, 2018-22)	31.9	34.0

Table 5. Lake County and related State of Montana education-level demographics (U.S. Census, 2022)

Economics

The *median household income and percent of persons in poverty* demographic for Lake County related to the overall state of Montana are reflected in **Table 6**, below:

	Lake County	State of Montana
Median household income in 2022 dollars (2018-2022)	$58,009	$66,341

Per capita income in past 12 months in 2022 dollars (2018-2022)	$31,177	$37,827
Persons in poverty	18.2%	12.1%

Table 6. Flathead County, Lake County, and related State of Montana income and poverty demographics (U.S. Census, 2022)

Agriculture

Montana, Lake County, supports a large agricultural economy. In 2022, there were an estimated 27,100 farms and ranches totaling 58,122,878 acres of land in agricultural use across Montana. Lake County includes 1,170 farms and ranches totaling 641,471 acres of land in agricultural use (*U.S. Census, 2017, 2022*).

Montana's approximate 58 million acres of land in farms and ranches ranks second in the nation behind Texas. The most common agricultural activities of Montana farms and ranches, including those located Lake County, raise beef cattle, grow forage (hay) for cattle, and grow grain crops (wheat, oats, barley). Sheep, hogs, and dairy cattle were also raised in smaller numbers (*U.S. Census, 2017, 2022*).

Timber/Wood Products

Most of Montana's forested lands (~ 23 million acres) are located within the western part of the state, including Lake County. Nearly four million acres of these forested lands are permanently reserved as either wilderness areas or national parks. Eleven million acres of the remaining forested land is administered by the USFS, with 5.2 million acres of this public estate designated by current federal forest plans as suitable for timber production. Private forest lands occupy approximately 6 million acres, with 2 million owned and managed by large timber companies. Another four million acres of private forest lands are owned by some 11,000-plus individuals. Timber production across Montana, including Lake County, has declined since the late 1980s (http://www.bber.umt.edu/fir/s_mt.asp). In 1988, an estimated 1,163 million board feet (MMBF) were produced state-wide; this declined to approximately 352 MMBF in 2009, before recovering slightly to 367 MMBF in 2018.

Mining

Large mineral deposits, ranging from talc to gold, are located throughout western Montana, including within Lake County. Of these, metallic minerals provide the largest share of Montana's non-fuel mining income, with copper, palladium, and platinum leading the list of important metals (these latter two being mined nowhere else in the United States). In 2012 (last available data), there were a total of 53 mines in production, development, standby permitting, or reclamation status, all but seven of which were located within the western half of the state.

Recreation

Outdoor recreation and tourism are major components of Montana's economy, particularly in the mountainous western part of the state, including within Lake County. Western Montana is nationally renowned for its high-quality fishing, hunting, camping, hiking, boating, skiing, snowmobiling, wildlife viewing, and sightseeing opportunities. Many of these outdoor activities are made possible by public ownership of large tracts of land and public access provided by land management agencies, such as FWP, and private landowners. The proposed project would suppress lake trout in Swan Lake thereby improving bull trout and kokanee salmon populations in the lake and thereby preserving, and enhancing existing recreational opportunities within Lake County, at Swan Lake, and the upper Swan River drainage. Swan Lake currently provides a wide range of water-based recreational activities. The

primary activities include motorized and non-motorized recreational boating, fishing, and hunting for migratory birds.

Fish species present in the project area and listed by the state of Montana as *Species of Concern* (SOC) or listed as *threatened* or *endangered* under the federal ESA, include westslope cutthroat trout, and bull trout, respectively.

Westslope cutthroat trout *(Oncorhynchus clarki lewisi)* are a subspecies of cutthroat trout native to Montana. The westslope cutthroat trout is found in the Clark Fork River watershed, including the Swan River drainage at the proposed project site, the Kootenai River watershed, and the headwaters of the Missouri River and the headwaters of the Saskatchewan River. The US Fish and Wildlife Service has been petitioned to include the westslope cutthroat trout under protection of the ESA. In 2000, the US Fish and Wildlife Service determined that listing was not warranted at that time due to the species wide distribution, available habitat in public lands and conservation efforts underway by state and federal agencies. Primarily adfluvial westslope cutthroat trout exist in the vicinity of the proposed project. The term *adfluvial* defines *fish that spawn in tributary streams where the young rear from 1 to 4 years before migrating to a lake system, where they grow to maturity ~~(USFS)~~* . Adfluvial westslope cutthroat trout migrate out of and into the project area in two separate and distinct time frames: Spring (March-May) during upstream migration and the rest of the year (June-February) after downstream return, respectively. Juveniles will spend the entire year in the project area.

Bull trout (*Salvelinus confluentus*) are long-lived fish that do not reach breeding age until at least five years of age. Sub-adult and adult bull trout feed primarily on other fish (i.e., piscivore). Bull trout spawn in the fall, and their eggs remain up to six inches deep in spawning gravels until spring, when the fry emerge. Young bull trout remain in the stream for one to four years, among bottom rocks and other cover. Bull trout grow up to lengths of 37 inches and can weigh 20 pounds or more. Sub-adult and adult fluvial bull trout reside in larger streams and rivers (Flathead River) and spawn in smaller tributary streams. The term *fluvial* defines *fish that spawn in tributary streams where the young rear from 1 to 4 years before migrating to a river system, where they grow to maturity; relating to or inhabiting a river or stream; produced by the action of a river or stream.* Adfluvial bull trout reside in lakes (Swan Lake) and spawn in tributaries. Primarily adfluvial bull trout exist in the vicinity of the proposed project. The lake provides feeding and overwintering habitat for juvenile and adult bull trout. Most adults migrate out of and into the project area in two separate and distinct time frames; Spring (March-June), during upstream migration and fall (October through March), after downstream return, respectively. Juveniles will spend the entire year in the project area.

Bull trout are native to the Swan River drainage, are currently present in low numbers in Swan Lake, and are currently listed as *threatened* under the federal ESA. Pursuant to USFWS/FWP Section 6 Cooperative Agreement (Appendix B), FWP and the USFWS established and maintain an adequate and active program for the conservation of endangered species and threatened species, including bull trout.

Because bull trout are currently listed as *threatened* under the federal ESA, intentional fishing for bull trout is not allowed in Swan Lake nor throughout their native range in Montana, except for the nearby Lake Koocanusa and Hungry Horse Reservoir/South Fork Flathead River where the populations are stable, and a regulated fishing season applies. The removal of lake trout from Swan Lake would constitute an important factor supporting the potential for future ESA-delisting of bull trout and thereby help to facilitate improved recreational opportunity (i.e., legal fishing).

IX. Terms Used to Describe Potential Impacts on the Physical Environment and Human Population

The impacts analysis identifies and evaluates **direct**, **secondary**, and **cumulative impacts**.

- **Direct impacts** are those that occur at the same time and place as the action that triggers the effect.

- **Secondary impacts** "are further impacts to the human environment that may be stimulated or induced by or otherwise result from a direct impact of the action." ARM 12.2.429(18).

- **Cumulative impacts** "means the collective impacts on the human environment of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures." ARM 12.2.429(7).

Where impacts are expected to occur, the impact analysis estimates the **extent, duration, frequency,** and **severity** of the impact. The duration of an impact is quantified as follows:

- **Short-Term**: impacts that would not last longer than the proposed project.

- **Long-Term**: impacts that would remain or occur following the proposed project.

The severity of an impact is measured using the following:

- **No Impact**: there would be no change from current conditions.

- **Negligible**: an adverse or beneficial effect would occur but would be at the lowest levels of detection.

- **Minor**: the effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.

- **Moderate**: the effect would be easily identifiable and would change the function or integrity of the resource.

- **Major**: the effect would irretrievably alter the resource.

Some impacts may require mitigation. As defined in ARM 12.2.429, mitigation means:

- Avoiding an impact by not taking a certain action or parts of a project.

- Minimizing impacts by limiting the degree or magnitude of a project and its implementation.

- Rectifying an impact by repairing, rehabilitating, or restoring the affected environment; or

- Reducing or eliminating an impact over time by preservation and maintenance operations during the life of a project or the time period thereafter that an impact continues.

FWP may, as an alternative to preparing an EIS, prepares an EA whenever the action is one that might normally require an EIS, but effects which might otherwise be deemed significant appear to be mitigable below the level of significance through design, or enforceable controls or stipulations, or both, imposed by the agency or other government agencies. For an EA to suffice in this instance, the agency must determine that all the impacts of the proposed action have been accurately identified, that they will be mitigated below the level of significance, and that no significant impact is likely to occur. The agency may not consider compensation for purposes of determining that impacts have been mitigated below the level of significance. ARM 12.2.430(4).

A list of any mitigation strategies including, but not limited to, design, enforceable controls, or stipulations, or both, as applicable to the proposed project is included in **Section VI**, above.

FWP must analyze impacts to the physical and human environment for each alternative considered. The proposed project considered the following alternatives:

- Alternative 1: No Action
- Alternative 2: Proposed Project

X. Cumulative Impacts Analysis

For the purposes of MEPA, "cumulative impact" means the collective impacts on the human environment of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location or generic type. Related future actions must also be considered when such actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. ARM 12.2.429(7).

Under the "No Action" alternative, the proposed project would not occur. Therefore, no cumulative impacts to the affected human environment would occur. The "No Action" alternative forms the baseline from which the potential impacts of the proposed project are measured. For the purposes of the proposed project, the cumulative impacts analysis below applies to all resources analyzed under Alternative 2, the proposed project (Section XI.A and B).

The information below identifies *related* past, present, and future actions (i.e., activities to be considered under the cumulative impacts analysis). Actions considered in these analyses were identified by FWP and other subject matter experts. Past and present actions are accounted for as part of the existing, or "baseline," environmental conditions. MEPA is forward-looking, with analyses focused on the potential impacts of the proposed action with consideration for any past, present, or future related actions.

No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. Pursuant to MEPA, because FWPs proposed action is *related* to other past, present, and future state projects in the affected area, the environmental review prepared for these *related* projects, and the associated potential impacts to the affected human environment, must be considered in the context of potential collective impacts resulting from the proposed project.

Narrative Discussion of *Related* Past, Present, and Future Actions:

Once FWP determined the invasive lake trout population was established and growing in Swan Lake, a collaborative group called the "Swan Valley Bull Trout Working Group" (SVBTWG) was formed in 2005 to address the increasing lake trout population in Swan Lake and to potentially pool resources. Members of the SVBTWG included the USFWS, FWP, USFS Flathead National Forest, Montana State Cooperative Fisheries Research Unit, Montana Trout Unlimited (MTU), the Confederated Salish and Kootenai Tribes (CSKT), and the Montana Department of Natural Resources and Conservation (DNRC). The SVBTWG created a Memorandum of Understanding or MOU to identify specific objectives toward the overall purpose of conserving bull trout within the Swan River Basin (Swan Valley Bull Trout Working Group 2005).

The SVBTWG conducted a graduate study through Montana State University from 2006-2008. The purpose of the graduate study was to examine lake trout population demographics and develop potential harvest scenarios to suppress lake trout using gill nets (Cox 2010). Then, in 2009-2011, FWP and the SVBTWG conducted a pilot study that utilized gill nets to remove lake trout. An environmental assessment was conducted for this initial action (Montana Fish, Wildlife and Parks 2009). From 2009-2011, over 20,000 lake trout were removed, and the SVBTWG unanimously decided to extend the efforts. In 2012, FWP authorized an extension of the pilot study through 2016 in a subsequent EA (Montana Fish, Wildlife and Parks 2012). Gillnetting from 2009 through 2016 was accomplished in

a consistent, systematic fashion to determine the efficacy of the program (Fredenberg and Rosenthal 2017). During the suppression efforts, three specific objectives were used to evaluate the lake trout removal program: 1) to maintain a minimum lake trout population mortality rate of 50%; 2) to provide evidence of a reduction in the lake trout density; and 3) to avoid further bull Trout and kokanee salmon declines while maintaining the density of *Mysis diluviana* (an abundant, nonnative zooplankton).

From 2009-2016, over 59,700 lake trout were removed at an average annual project cost of $150,000, including contract labor, agency labor, equipment and supplies, and funding from the SVBTWG pooled resources. Rosenthal and Fredenberg (2017) summarized the results of the 8-year project, including the program's ability to meet the three defined objectives. The authors noted mixed success in meeting the evaluation criteria established by the SVBTWG in 2009. Total lake trout mortality hovered around the 50% objective, but did not consistently achieve it; therefore, the first objective was not met. Similarly, the second objective was not clearly met as evidenced by a failure to show a decline in lake trout catch-per-unit-effort and relative weight. Finally, the third objective was partially achieved in that kokanee redd counts and *Mysis* densities remained stable throughout the 8-year span. However, bull trout redd counts continued to decline.

Rosenthal and Fredenberg (2017) suggested the 2009-2016 effort failed to achieve a declining trend in the lake trout population. Limited resources, funding, and contractual opportunities may have been too restrictive. Concern over excessive bull trout bycatch also constrained flexibility and dampened willingness to increase the program's effort. Also, the discovery of additional lake trout spawning areas in 2014 (Rosenthal, Fredenberg and Steed 2016) suggested lake trout may explore new spawning areas over time. Therefore, successful suppression would require routine monitoring to ensure that all spawning areas are identified and included in the netting program. The 2009-2016 project was intentionally designed to have consistent annual effort. To ensure consistent efforts, a contract was awarded to an independent gillnetting company (Hickey Brothers Research, LLC [Hickey Brothers]). Although not discussed by Rosenthal and Fredenberg (2017), some constraints limited the program's efficacy, specifically, because the suppression netting was also used to determine lake trout population trends, the project design may have been too inflexible to react to new findings.

Because the 2009-2016 project failed to meet all three evaluation criteria, and because funding for the Hickey Brothers contract and the MEPA coverage expired, the project was suspended indefinitely. Lake trout have since been reported in Holland and Lindbergh Lakes, presumably due to emigration from Swan Lake up the Swan River, and bull trout redd counts in the Swan River drainage have continued to decline.
Alternative 3 in this Draft EA, or the use of the piscicide, rotenone to manage lake trout populations in the Swan River drainage, was dismissed from detailed consideration by this Draft EA and by SVBTWG because such an action would significantly and adversely impact existing bull trout populations in the affected area, as all fish in Swan Lake would be eradicated using rotenone, including bull trout.

The intent of the proposed project and *related* past, present, and future actions associated with the suppression of lake trout in Swan Lake are expected to improve bull trout and kokanee populations and therefore create high-quality recreational opportunities for residents and visitors to the affected area. Therefore, FWP expects any beneficial cumulative impacts associated with the proposed project would be long-term, consistent with current and historic impacts to the affected human environment, and minor to moderate. Any expected adverse cumulative impacts would be long-term, consistent with current and historic impacts to the affected human environment, and minor.

Based on the environmental review conducted for the above-referenced project(s), and with consideration of potential cumulative impacts to the affected human environment from the proposed project (see Section XI.A and B), FWP determined no significant adverse cumulative impacts would be expected because of the proposed project. Beneficial cumulative impacts would be expected to be long-term and moderate. Any unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis

pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation.

Cumulative Impacts to State-Listed Plant and Animal *Species of Concern* and Federal ESA-listed *Threatened* Species.

Cumulative impacts from past state actions to suppress lake trout in Swan Lake have occurred over time and impacts to the ecology, conservation, and recreational value of the affected landscape and actions from other related programs are, have been, and will continue to be considered prior to approval and implementation of any actions that may impact the affected human environment, such as the proposed project.

The base-intent of the proposed project and all past, present, and future actions associated with suppression of lake trout is to provide protection and increased densities of ESA-*threatened* bull trout, and for kokanee salmon that could provide recreational opportunities for residents and visitors to the affected area. Overall, the proposed project would not be expected to impede recovery of any other listed wildlife species.

The act of designating a species as a "*species of concern*" or a "*threatened*" species, and the act of de-listing such species, constitute actions subject to cumulative impacts analysis pursuant to MEPA and as it relates to the proposed action. *Species of concern* are plants and animals that are rare, threatened, and/or have declining populations and as a result are at risk or potentially at risk of extirpation in Montana. Approximately 18 Montana fish and wildlife *species of concern* have been documented using habitats in or near the project area or have potential habitat near the project area or occupy immediately adjacent waters (Table 7). (Montana Natural Heritage Program [MTNHP] data, 26 February 2024).

Table 7**.** Montana Fish and Wildlife Species of Concern and ESA-Listed Threatened Species with Potential Habitat in or Near the Project Area

Common Name	Scientific Name	Common Name	Scientific Name
Mammals		Lewis's Woodpecker	*Melanerpes lewis*
Grizzly Bear	*Ursus arctos*	Pacific Wren	*Troglodytes pacificus*
Little Brown Myotis	*Myotis lucifugus*	Pileated Woodpecker	*Dryocopus pileatus*
Long-legged Myotis	*Myotis volans*	Varied Thrush	*Ixoreus naevius*
North American Wolverine	*Gulo gulo*		
Canada Lynx	*Lynx canadensis*		
Birds		**Fish**	
Brewer's Sparrow	*Spizella breweri*	Bull Trout	*Salvelinus confluentus*
Brown Creeper	*Certhia americana*	Westslope Cutthroat Trout	*Oncorhynchus clarkii lewisi*
Cassin's Finch	*Haemorhous cassinii*		
Common Tern	*Sterna hirundo*	**Invertebrates**	
Common Loon	*Gavia immer*	Suckley Cuckoo Bumble Bee	*Bombus suckleyi*
Great Blue Heron	*Ardea herodias*	Oblique Ambersnail	*Oxyloma nuttallianum*

Further, a "*threatened species*" is one that is likely to become endangered in the foreseeable future throughout all or a significant portion of its range. For the purposes of wildlife species listed as *threatened* or *endangered* under the federal ESA, MEPA considers a "take" to constitute a significant adverse impact. Specific to the ESA-listed *threatened* grizzly bear , North American wolverine, Canada lynx, and bull trout, the ESA defines "take" as follows: to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such

conduct. 16 U.S. C. 1542(b). The term *harm* in the definition of 'take' means an act which actually kills or injures wildlife. .

To find that the proposed action (i.e., gillnetting to remove lake trout) constitutes a *taking* of a listed species under the federal definition of *harm*, all aspects of the *harm* definition must be triggered. Therefore, for the purposes of the proposed project, the following conditions must all be met for a *taking* or a *significant adverse impact* to occur to the *threatened* grizzly bear and bull trout because of the proposed project (USFWS, FWS/AES/067974, April 26, 2018):

- Is the modification of habitat significant? No. The proposed action is being planned and implemented to gillnet lake trout and remove them from Swan Lake. No grizzly bear or bull trout habitat would be altered during these activities. Therefore, no adverse impacts to the affected area and associated habitats would be expected because of the proposed action.

- If so, does that modification also significantly impair an essential behavior pattern of an ESA-listed species? No. The proposed project would not significantly impact behavioral patterns of the affected ESA-listed *threatened* bull trout or grizzly bear. The proposed project would take place during times and at places when and where adult bull trout would generally not be present. Further, because the affected area is currently, and would continue to experience a high-level of human use, the grizzly bear would be unlikely to use the affected area in its current state or following completion of the proposed project(s). Therefore, no adverse cumulative impacts to the behavioral patterns of any of the affected ESA-listed species would be expected because of the proposed project.

- Is the proposed project likely to "take" ESA-listed *threatened* species? Yes. Lake trout and bull trout tend to occupy the same habitats in Swan Lake. Gillnetting does not discriminate between the two species. During operations to net lake trout, bull trout would also be captured, and some would be expected to die. Therefore, some adverse cumulative impacts from incidental bycatch of bull trout during netting operations would be expected. However, suppression netting would be an iterative process whereby placement, timing and mesh sizes would be adjusted over time to reduce bull trout bycatch, thereby mitigating against incidental take. Additionally, the proposed project would be expected to lead to a long-term improvement of bull trout populations, which would beneficially offset the direct loss of individuals that would necessarily occur because of the proposed project. Pursuant to Section 6 USFWS/FWP Section 6 Cooperative Agreement (Appendix B), FWP and the USFWS established and maintain an adequate/approved and active program for the conservation of endangered species and threatened species, including bull trout.

  Grizzly bears, wolverine, and Canada lynx would not be adversely impacted by the proposed project. The proposed project is located near their habitats, and they may inhabit the area affected by the proposed action. However, gillnetting lake trout for the purpose of removal from the affected water body would not be expected to impact grizzly bear, wolverine, or lynx in any way because planned mitigation to limit the availability of fish carcasses as a source of food for any ESA listed terrestrial species, and specifically for grizzly bears would occur. More specifically, the mishandling of fish killed for the purposes of the proposed project could result in grizzly bears seeking fish carcasses as a food source and becoming habituated, thereby adversely impacting grizzly bears. However, all fish killed for the purposes of the proposed project will be managed in a manner that eliminates such potential. Therefore, gillnetting lake trout for the purpose of removal from the affected water body would not be expected to impact ESA listed terrestrial animals in any way.

  Therefore, any adverse cumulative impacts relative to the take of an ESA-listed species (specifically bull trout) would be long term, minor, and reported to the USFWS, as required.

Like the conclusions made for ESA-listed species, as discussed above, because the affected area currently experiences, and would continue to experience a high-level of human use, any ESA-delisted species or state-listed *species of concern* that use the affected area for all or part of their life cycle would experience the same or similar impacts pre- and post-project. Therefore, no significant adverse secondary impacts to any of the identified ESA-listed *threatened* species, ESA-delisted species, or state-listed *species of concern* that use or may use the affected area would be expected because of the proposed project.

Further, several guiding documents inform, have informed, and will continue to inform actions for native and non-native fishes. These guiding documents outline strategies and considerations for taking management action and addressing any potential impacts (adverse or beneficial) from such management actions. These guiding documents, and affected regulatory entities, include the following:

- Swan Valley Bull Trout Working Group – MOU
- FWP – Statewide Fisheries Management Plan 2023-2026
- USFWS - Endangered Species Act; Columbia Headwaters Recovery Unit Implementation Plan for Bull Trout; ESA Section 6 USFWS/FWP Section 6 Cooperative Agreement (Appendix B)
- FWP - Annual and final reports from the 2009-2016 lake trout suppression work in Swan Lake

The proposed project would be conducted according to guidance and requirements provided by the documents and affected agencies listed above. These guiding documents and oversight from affected agencies would ensure the proposed project is conducted in a manner that is consistent with similar past, present, and future actions at Swan Lake and would thereby limit the potential for any significant adverse cumulative impacts to the affected human environment. Therefore, FWP expects that any cumulative impacts associated with the proposed project would be long-term, moderate, and beneficial. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated by best practices outlined by the documents cited above, and minor.

FWP is unaware of any other past, present, or future related projects occurring at Swan Lake that have/would affect this analysis. Any unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation.

XI. Alternative 1: No Action. Evaluation and Summary of Potential Impacts on the Physical Environment and Human Population

Under the “No Action” alternative, the proposed project would not occur. Therefore, no additional impacts to the physical or human environment in the analysis area would occur. The “No Action” alternative forms the baseline from which the potential impacts of the proposed Project can be measured.

Under the No Action Alternative, FWP would not conduct lake trout suppression and bull trout conservation in the Swan Lake drainage. The lake trout populations would be expected to expand to the point where they reach equilibrium with the environment. Lake trout would likely replace bull trout as the Swan system’s top-level aquatic predator, as observed in other lake systems within the Flathead drainage. Under this alternative, bull trout would not be conserved in Swan Lake. Additionally, kokanee salmon would likely become extirpated from Swan Lake as has been the case in other systems.

This action would not achieve a primary goal of FWP’s Fisheries Division, which is “to protect, maintain, and restore native fish populations and their genetic diversity.” This goal is backed by FWP policy and state law, which require FWP to “implement programs that manage sensitive species in a manner that assists in the maintenance or recovery of those species, and that prevents the need to list the species under ESA” (FWP 2018).

XII. Alternative 2: Proposed Project. Evaluation and Summary of Potential Impacts on the Physical Environment and Human Population

A. Evaluation and Summary of Potential Impacts on the Physical Environment

1. Terrestrial, Avian, and Aquatic Life and Habitats

Existing Environment/Baseline Conditions (No Action Alternative):
The affected area and associated wildlife habitat are predominantly Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest with riparian habitat associated with the Flathead River. A broad array of terrestrial and avian animals may utilize habitats in and around the proposed gill net suppression sets either continuously or sporadically. Fish and amphibians would also be expected to use the affected area, specifically, in Swan Lake.

Among the plant species confirmed, suspected, or possibly found in the affected area, 5 species are listed by the state of Montana as *species of concern* (Table 7). Approximately 17 Montana fish and wildlife *Species of Concern* have been documented using affected area, have potential habitat on the property or occupy immediately adjacent waters including westslope cutthroat trout, bull trout, and terrestrial habitats including little brown bat, pileated woodpecker, varied thrush and oblique ambersnail (Table 7). (Montana Natural Heritage Program [MTNHP] data, 26 February 2024). Furthermore, grizzly bears, wolverine, and Canada lynx listed as *threatened* under ESA and ESA-delisted bald eagles may potentially use the affected area. Impacts to the identified *threatened* species, *species of concern*, and *species of special concern* are evaluated more thoroughly in *part 8, Unique, Endangered, Fragile or Limited Environmental Resources*, of this Impacts Analysis. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project. However, adverse direct impacts to bull trout and other non-target fish species from incidental bycatch may occur. More specifically, the use of multi-mesh size gillnets does not discriminate by species so bull trout and fish species present, other than lake trout, would likely be captured, and some will die. However, because mesh size, and timing of net sets will be an iterative process to specifically capture more lake trout and limit bycatch, including bull trout, direct impacts to aquatic species would be mitigated. Further, the USFWS/FWP Section 6 Cooperative Agreement (Appendix B) outlines the required mitigations to limit such impacts.

Further, any wildlife species displaced from the affected site(s) would likely re-locate, temporarily to other nearby and suitable habitats or to avoid the affected area during netting operations. Nets would typically be set when traveling or migrating adult bull trout would likely not be in the affected area. The lands immediately surrounding the proposed action on Swan Lake are generally public and characterized as rural, with natural vegetation, including similar riparian environments to those of the affected site(s). Therefore, any adverse direct impacts would be short-term, negligible to minor, consistent with existing and historic impacts, and mitigated, as required.

Secondary Impacts:

No significant adverse secondary impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project. However, some adverse secondary impacts from bycatch of bull trout and other fish present, excluding lake trout, during netting operations would be expected. Also, as intended, the proposed project would be expected to lead to a long-term increase of bull trout and kokanee salmon populations in Swan Lake, which may beneficially offset the initial loss of individuals that would necessarily occur because of the proposed project.

Overall, with consideration for mesh sizes and timing of the planned netting operation, any adverse secondary impacts from the proposed project would be long-term, negligible to minor, and mitigated. Any beneficial secondary impacts would be long-term and moderate.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. Bull trout would be captured, and some would die during gill net suppression efforts, but those impacts can be mitigated by adjusting mesh sizes and timing and placement of nets. With consideration for potential cumulative impacts from the proposed project, no significant adverse cumulative impacts would be expected. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section X, Cumulative Impacts Analysis*.

2. Water Quality, Quantity, and Distribution

Existing Environment/Baseline Conditions (No Action Alternative):
The Swan River flows directly into Swan Lake. The proposed netting operation will be during ice-free summer to fall. Swan Lake is one of the larger natural freshwater lakes in the Flathead drainage and is described as *oligotrophic* which means lacking in plant nutrients. Monitoring downstream at the Flathead Lake Biological Station or FLBS located in nearby Yellow Bay of Flathead Lake indicates that nutrient inputs to the lake are increasing. Swan Lake's biological community is likely much different today than prior to invasion by lake trout. Swan Lake originally supported 11 native fish species, most notably westslope cutthroat trout and bull trout. Today, the fish community has changed from the original rocky mountain lakes constituency, as it is dominated by nonnatives like northern pike, rainbow trout and particularly lake trout. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to water quality, quantity, and distribution would be expected because of the proposed project. However, some temporary, adverse direct impacts from the use of large gas-powered boats, may occur. Operation of netting boats will be consistent with other recreational boats on the lake. Therefore, any direct impacts to water quality would be short-term, minor, consistent with existing impacts, and mitigated.

Secondary Impacts:
No significant adverse secondary impacts to water quality, quantity, and distribution would be expected because of the proposed project. In fact, no secondary impacts to water quantity or distribution would

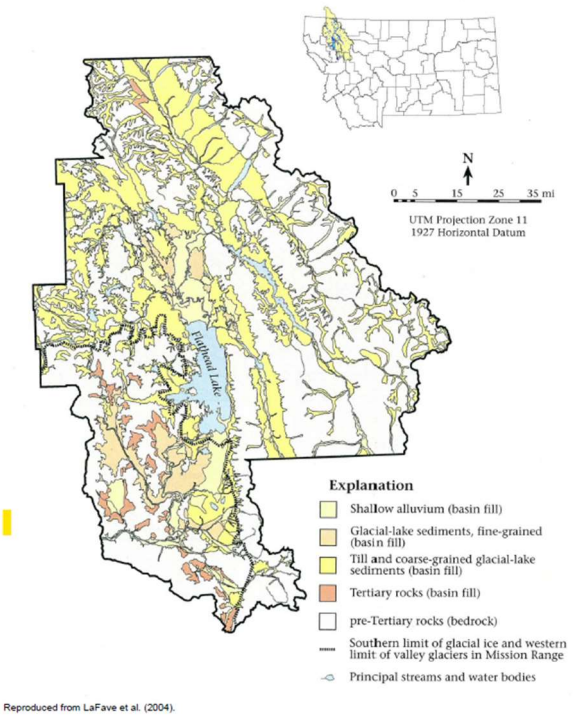
be expected because of the proposed action. The launching and landing of motorized boats and other motorized and non-motorized watercraft at/from the existing boat access points may temporarily increase water turbidity in the affected area, but no long-term impacts would be expected because of the proposed action. Any adverse secondary impacts to water quality from recreational use of the existing boating access points would be long-term, negligible, and consistent with existing impacts.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

3. Geology

Existing Environment/Baseline Conditions (No Action Alternative):
The proposed location lays in the Flathead Lake basin which is characterized by north-trending mountain ranges separated by down-dropped intermontane valleys (Figure 5). Metasedimentary rocks of the Belt Supergroup form the mountains and underlie the valleys. The intermontane valleys are filled with thick sequences of Tertiary sediments, unconsolidated glacial or glacial-lake deposits and post-glacial alluvial sediments. Since the retreat of glacial ice, modern streams have deposited alluvium along their channels and floodplains. Most stream valleys in the area are lined with alluvial materials that range from 10 to several 10's of feet in thickness. See below geological map categorizing the area as shallow alluvium. (LaFave et al (2004)). For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.



Reproduced from LaFave et al. (2004).

Figure 2. Geologic map of the Flathead Lake Basin.

Figure 5. Flathead Lake basin

Direct Impacts:
No significant adverse direct impacts to geology would be expected because of the proposed project. No unique or important geologic features exist within the proposed project area. No excavation or landfill is proposed. Therefore, no impacts to geology would be expected because of the proposed project.

Secondary Impacts:
No significant adverse secondary impacts to geology would be expected because of the proposed project. No excavation or landfill is proposed during or after the proposed netting operations. Therefore, no secondary impacts to geology in the affected area would be expected because of the proposed project.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

4. Soil Quality, Stability, and Moisture

Existing Environment/Baseline Conditions (No Action Alternative):
The proposed site is located in close proximity to the USDA Flathead Soils Series location SW of NW Sec. 20,T. 29 N., R. 20 W. USDA Flathead series consists of deep, well drained soils that formed in glacial outwash or alluvium. Flathead drainage soils are used mainly as cropland. Potential native vegetation is mainly bluebunch wheatgrass, needle and thread, rough fescue, and fringed sagewort. The Flathead soils are on fans and terraces. Elevations are 2,600 to 3,400 feet. Slopes are 0 to 25 percent. These soils formed in outwash and alluvium. Taxonomic class of Coarse-loamy, mixed, superactive, frigid Pachic Haplustolls.

The climate is characterized by long, cold winters, moist springs and falls, and warm summers. Mean annual precipitation is 15 to 19 inches. Mean annual temperature is 40 to 45 degrees F. The frost-free period is 100 to 120 days.

Soils 0 to 24 inches described as very dark grayish brown (10YR 3/2) fine sandy loam, very dark brown (10YR 2/2) moist; moderate fine granular structure in the upper part grading to weak coarse prismatic in the lower part; soft, very friable, nonsticky and nonplastic; many fine roots, few fine pores; neutral (pH 7.2); clear smooth boundary. (16 to 30 inches thick)

Soils 24 to 34 inches; brown (7.5YR 4/2) fine sandy loam; dark brown (7.5YR 3/2) moist; weak coarse prismatic structure parting to weak medium subangular blocky; soft, very friable, nonsticky and nonplastic; many fine roots, few medium pores; neutral (pH 7.2); gradual smooth boundary. (8 to 12 inches thick)

Soils 34 to 44 inches; pale brown (10YR 6/3) loamy fine sand, brown (10YR 4/3) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; slightly alkaline (pH 7.4); clear smooth boundary. (6 to 10 inches thick)

Soils 44 to 60 inches; pale brown (10YR 6/3) loamy fine sand, brown (10YR 5/3) moist; single grained; soft, very friable, nonsticky and nonplastic; common fine soft masses of lime; strongly effervescent; moderately alkaline (pH 8.2).

For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to soil quality, stability, and moisture would be expected because of the proposed project. No activities would directly and adversely impact soils in the affected area due to soil compaction.

Secondary Impacts:
No significant adverse secondary impacts to soil quality, stability, and moisture would be expected because of the proposed project. Soil moisture content in the affected area would not be reduced by the compacted gravel surface to accommodate the proposed vehicle-boat trailer combination parking area, access road, vault latrine, and boat ramp as they already exist. Therefore, no adverse secondary impacts would are expected.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

5. Vegetation Cover, Quantity, and Quality

Existing Environment/Baseline Conditions (No Action Alternative):
The affected area is predominantly a forested lakeshore. The adjacent lakeshore of Swan Lake is a mixture of undeveloped, forested vegetation typical of many northwest Montana lakes, and lakeshore developed with small and large houses. Where houses have been built, seawalls and other erosion control measures have been constructed. Montana Highway 83 is adjacent to the lake and is in close proximity to the lakeshore for ~1 mile near the southern end of the lake. Vegetation in this area is largely absent and has been replaced with highway infrastructure. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to vegetation cover, quantity, and quality would be expected because of the proposed project. There will be no construction activities associated with the proposed project. More specifically, removal of existing vegetation would not be necessary to accommodate the

proposed vehicle-boat trailer combination parking area, access road and boat ramp as they already exist. Therefore, there would be no adverse direct impacts to vegetation, cover, quantity and quality.

Secondary Impacts:
No significant adverse secondary impacts to vegetation cover, quantity, and quality would be expected because of the proposed project. There will be no construction activities associated with the proposed project. More specifically, removal of existing vegetation would not be necessary to accommodate the proposed vehicle-boat trailer combination parking area, access road and boat ramp as they already exist. Therefore, there would be no adverse direct impacts to vegetation cover, quantity and quality.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

6. Aesthetics

Existing Environment/Baseline Conditions (No Action Alternative):
The existing site is Swan Lake, a 3270-acre lake. Swan Lake aesthetics are a mixture of undeveloped lakeshore and areas with small and large houses. Swan Lake has one public boat launch on the southern end of the lake and experiences considerable visitation during the summer months. Boating is popular on the lake, and it is common to see boats on the entire length of the lake. Netting will occur during summer to fall and may include a considerable length of netting during later afternoon to early morning. Nets are set on the bottom so only floating buoys will be visible. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to aesthetics would be expected because of the proposed project. Some adverse direct impacts may result from the placement of nets and resulting buoys that will be visible. This impact would be limited to mostly close distance from recreating boaters on the lake. Nets will typically not be set in the same place on consecutive nights. Therefore, any adverse direct impacts would be long-term and minor.

Secondary Impacts:
No significant adverse secondary impacts to aesthetics would be expected because of the proposed project. In fact, following project completion, no impacts to the aesthetic nature of the affected area would be expected because of the proposed project.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

7. Air Quality

Existing Environment/Baseline Conditions (No Action Alternative):
According to the Montana Department of Environmental Quality (DEQ), air quality in the area affected by the proposed project is currently unclassifiable or in compliance with applicable national ambient air quality standards (NAAQS). No significant point-sources of air pollution exist in the area affected by the proposed project. Existing sources of air pollution in the area are limited and generally include fugitive dust associated with high wind events and exposed ground, vehicle travel on paved and unpaved roads (fugitive dust), vehicle exhaust emissions, and various agricultural practices (vehicle exhaust emissions and fugitive dust).

Four areas in the general vicinity of nearby Flathead Lake have historically exceeded the NAAQS for particulate matter less than or equal to 10 microns in aerodynamic diameter (PM_{10}) but have since attained the NAAQS under requirements contained in air quality maintenance plans required by Montana's Air Quality State Implementation Plan or SIP. These nearby PM10 Maintenance Areas include the following: Whitefish, Columbia Falls, and Kalispell. In addition, the town of Polson is currently classified as a PM10 nonattainment area. Therefore, Montana's SIP includes requirements applicable to sources of PM10 located within or near (~ 2 km) the Polson PM10 nonattainment area boundary. Because the proposed project would not be located within or near the affected existing PM10 Maintenance Areas or the PM10 Nonattainment Area, no air quality restrictions currently exist for the area affected by the proposed project. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant impacts to air quality would be expected because of the proposed project. The proposed project would employ the use of fuel to operate boats, which would result in limited fossil fuel emissions and associated air pollution; however, any impacts to air quality would be short-term and negligible, lasting only as long as the proposed project.

Therefore, any adverse direct impacts to air quality would be short-term, negligible, consistent with existing impacts, and mitigated by dust control practices associated with the deconstruction and construction activities, as necessary. The proposed project would not be expected to cause or significantly contribute to a NAAQS violation in the currently unclassified area.

Secondary Impacts:
No significant adverse secondary impacts to air quality would be expected because of the proposed project. In fact, following project completion, no ongoing impacts to air quality would be expected because of the proposed project.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

8. Unique, Endangered, Fragile, or Limited Environmental Resources

Existing Environment/Baseline Conditions (No Action Alternative):
Among the plant species confirmed, suspected, or possibly found in the affected area, 5 species are listed by the state of Montana as *species of concern* (Table 6). Approximately 18 Montana fish and wildlife *Species of Concern* have been documented using the property, have potential habitat on the property or occupy immediately adjacent waters including westslope cutthroat trout, bull trout (ESA-threatened), and habitats including little brown bat, pileated woodpecker, varied thrush and oblique ambersnail (Table 6). (Montana Natural Heritage Program [MTNHP] data, 26 February 2024). Furthermore, Grizzly bears, wolverine, and Canada lynx listed as *threatened* under ESA and ESA-delisted bald eagles may potentially use the affected area. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to unique, endangered, fragile, or limited environmental resources would be expected because of the proposed project.

Swan Lake and the upper Swan River are designated as critical habitat for bull trout. Critical habitat is defined as:

(1) The specific areas within the geographical area occupied by the species, at the time it was listed in accordance with the Act, on which are found those physical or biological features essential to the conservation of the species, and which may require special management considerations or protection.
(2) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

In the USFWS rule published in the Federal Register on 1/14/2010, Critical habitat designation provides additional protection to habitat (1) only where there is a federal nexus; (2) the protection is relevant only when, in the absence of designation, destruction or adverse modification of the critical habitat would in fact take place; and (3) designation of critical habitat triggers the prohibition of destruction or adverse modification of that habitat, but it does not require specific actions to restore or improve habitat

Because the affected area has historically been used for recreational purposes, and gillnetting activities have historically been conducted to remove invasive lake trout; any direct impacts to unique, endangered, fragile, or limited environmental resources or critical habitat located within or periodically using the affected area, including the identified species of concern, species of special concern, ESA-delisted, and ESA-listed species, would be consistent with current and historic impacts.

FWP would adhere to all applicable requirements related to management, preservation, and recovery of listed species as outlined by the federal ESA and applicable state guidance and requirements. This has typically been accomplished through USFWS/FWP Section 6 Cooperative Agreement (Appendix B). These practices would support limiting potential adverse direct impacts to the identified unique, endangered,

fragile, or limited environmental resources and critical habitats as well as many other wildlife species located within or periodically using the new site. Therefore, any adverse direct impacts to wildlife, including any *species of concern*, *species of special concern*, ESA-listed species, and/or ESA-delisted species would be short-term, negligible to minor, and consistent with historic impacts.

Lake trout and bull trout tend to occupy the same habitats in Swan Lake. Gillnetting does not discriminate between the two species. During operations to net lake trout, bull trout would also be captured, and some would die. Therefore, some adverse direct impacts from bycatch of bull trout during netting operations would be expected because of the proposed project. However, suppression netting would be an iterative process whereby placement, timing and mesh sizes would be adjusted over time to reduce by-catch of bull trout. Pursuant to USFWS/FWP Section 6 Cooperative Agreement (Appendix B), FWP and the USFWS established and maintain an adequate and active program for the conservation of endangered species and threatened species, including bull trout.

Additionally, the proposed project is intended and would be expected to lead to a long-term increase of bull trout and kokanee salmon populations in Swan Lake, which would beneficially offset the initial loss of individuals that would necessarily occur because of the proposed project. Therefore, any adverse direct impacts relative to take of ESA-listed species (specifically bull trout) would be long term and minor.

Secondary Impacts:
No significant adverse secondary impacts to unique, endangered, fragile, or limited environmental resources would be expected because of the proposed project. For the purposes of wildlife species listed as *threatened* or *endangered* under the federal ESA, MEPA considers a “take” to constitute a significant adverse impact. Specific to the ESA-listed *Threatened* grizzly bear , North American wolverine, Canada lynx, and bull trout, the ESA defines "take" as follows: to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct. 16 U.S. C. 1542(b). The term *harm* in the definition of 'take' means an act which actually kills or injures wildlife.

To find that the proposed action (i.e., gillnetting) constitutes a *taking* of a listed species under the federal definition of *harm*, all aspects of the *harm* definition must be triggered. Therefore, for the purposes of the proposed project, the following conditions must all be met for a *taking* or a *significant adverse impact* to occur to the *threatened* grizzly bear, wolverine, Canada lynx, and bull trout (USFWS, FWS/AES/067974, April 26, 2018):

- Is the modification of habitat significant? No. The proposed action is being planned and implemented to gillnet lake trout and remove them from Swan Lake. No habitat will be altered during these activities. Therefore, there would be no adverse impacts to the affected area and associated habitats.

- If so, does that modification also significantly impair an essential behavior pattern of an ESA-listed species? No. The proposed project would not significantly impact the habitat(s) of the affected ESA-listed *threatened* bull trout, wolverine, Canada lynx, or grizzly bear. The proposed projects would take place during times and at places when and where adult bull trout would generally not be present. Further, because the affected area is currently, and would continue to experience a high-level of human use, the wolverine, Canada lynx, and grizzly bear would be unlikely to use the affected area in its current state or following completion of the proposed project(s). Therefore, no adverse cumulative impacts to the behavioral patterns of any of the affected ESA-listed species would be expected because of the proposed project.

- Is the proposed project likely to "take" ESA-listed *threatened* species? Yes. Lake trout and bull trout tend to occupy the same habitats in Swan Lake. Gillnetting does not discriminate between the two species. During operations to net lake trout, bull trout would also be captured, and some would be expected to die. Therefore, some adverse cumulative impacts from incidental bycatch of bull trout during netting operations would be expected. However, suppression netting would be an iterative process whereby placement, timing and mesh sizes would be adjusted over time to reduce bull trout bycatch, thereby mitigating against incidental take. Additionally, the proposed project would be expected to lead to a long-term improvement of bull trout populations, which would beneficially offset the direct loss of individuals that would necessarily occur because of the proposed project. Pursuant to USFWS/FWP Section 6 Cooperative Agreement (Appendix B), FWP and the USFWS established and maintain an adequate/approved and active program for the conservation of endangered species and threatened species, including bull trout.

  Grizzly bears, wolverine, and Canada lynx would not be adversely impacted by the proposed project. The proposed project is located near potential grizzly bear, wolverine, and lynx habitat and these species may utilize habitat near the area affected by the proposed action. However, gillnetting lake trout for the purpose of removal from the affected water body would not be expected to impact them in any way.

  Therefore, any adverse cumulative impacts relative to the take of an ESA-listed species (specifically bull trout) would be long term minor, and reported to the USFWS, as required.

Similar to conclusions made for the ESA-listed species, as discussed above, because the affected area currently experiences, and would continue to experience, a high-level of human use, any ESA-delisted species or state-listed *species of concern* that do use the affected area for all or part of their life cycle would experience the same or similar impacts pre- and post-project. Therefore, no significant adverse secondary impacts to any of the identified ESA-listed *threatened* species, ESA-delisted species, or state-listed *species of concern* that use or may use the affected area would be expected because of the proposed project.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

9. Historical and Archaeological Sites

Existing Environment/Baseline Conditions (No Action Alternative):
The only known historical site located in the project area is a historic house/structure located on the west shore of Swan Lake. The structure is known locally as "The Rock House" and is owned and maintained by the USFS Flathead National Forest. The house is located on a rocky cliff above the shores of Swan Lake. The house is not included in the federal rental program and sees very little use annually.

Direct Impacts:
No significant adverse direct impacts to historic and archaeological sites would be expected because of the proposed project. No construction or other ground disturbing activities would occur because of the proposed project; therefore, no impacts would be expected to any such resources that may be located in the affected area. Therefore, consultation with the State Historical Preservation Office or SHPO is not required pursuant to MEPA.

Secondary Impacts:
No significant adverse secondary impacts to historic and archaeological sites would be expected because of the proposed project. No construction or other ground disturbing activities would occur because of the proposed project; therefore, no secondary impacts would be expected to any such resources that may be located in the affected area. Therefore, consultation with the State Historical Preservation Office or SHPO is not required pursuant to MEPA.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

10. Demands on Environmental Resources of Land, Water, Air, and Energy

Existing Environment/Baseline Conditions (No Action Alternative):
The proposed project will occur entirely within the confines of Swan Lake. There is one public boat launch and numerous private boat launches on the lake. Boating is a popular activity on Swan Lake, especially during the summer months of June, July, and August. The proposed project will utilize existing access sites and private mooring sites. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to demands on environmental resources of land, water, air, and energy would be expected because of the proposed project. Fuel would be required to operate equipment and boats used to set and pull nets. However, any adverse direct impacts or demands for energy resources would be short-term and negligible, as the proposed project and associated activities are relatively small and the netting timing would be relatively short; therefore, the amount of fuel necessary to complete the proposed project would be minimal. No other direct demands or impacts on the environmental resources of land, water, air, and energy would be expected because of the proposed project. Any direct impacts would be short-term and negligible.

Secondary Impacts:
No significant adverse secondary impacts to demands on environmental resources of land, water, air, and energy would be expected because of the proposed project. Fuel would be required to operate equipment and boats used to set and pull nets. However, any adverse direct impacts or demands for energy resources would be short-term and negligible, as the proposed project and associated activities

are relatively small and the netting timing would be relatively short; therefore, the amount of fuel necessary to complete the proposed project would be minimal. No other direct demands or impacts on the environmental resources of land, water, air, and energy would be expected because of the proposed project. Therefore, no adverse secondary impacts to the environmental resources of land, water, air, and energy would be expected because of the proposed project.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

B. Evaluation and Summary of Potential Impacts of the Proposed Project on the Human Environment

1. Social Structures and Mores

Existing Environment/Baseline Conditions (No Action Alternative):
Swan Lake is a popular recreational lake for northwest Montana. It is located a short drive from the Kalispell and Bigfork communities. There is a good access point for water-based recreation. Boating is a popular activity for waterskiing, pleasure cruising, and angling. Swan Lake contains a diverse assemblage of fish species, both native and non-native to the state of Montana. The lake provides popular sport-fish opportunities for rainbow trout, northern pike, kokanee salmon, yellow perch, and lake trout.

Direct Impacts:
No significant adverse direct impacts to pre-project social structures and mores would be expected because of the proposed project. Swan Lake is an existing recreational lake used by many resident and non-resident anglers and recreationists. Existing recreational opportunities would remain in place but would be altered because of the intended removal/reduction of the invasive lake trout population. As such, recreation, and related services that support the existing social structure, customs, values, and conventions of the affected human population in and around Swan Lake, as well as any visitors to the affected area, would remain but would be altered.

Many Montanans and those visiting the state for outdoor recreational purposes hold high regard for conservation of and access to native fishes, including bull trout. Bull trout restoration projects in northwestern Montana generally have the support of indigenous tribes and many whom enjoy fishing for and otherwise appreciate native species on the landscape. Others who recreate on Swan Lake may view the loss of the existing and invasive lake trout fishery as an adverse impact. However, any adverse direct impacts associated with the elimination of lake trout from Swan Lake would be mitigated by other nearby opportunities to fish for the species, as numerous nearby lakes (Flathead, Whitefish, McGregor) would continue to provide lake trout fisheries. Therefore, any beneficial direct impacts would be short-term and moderate. Any adverse direct impacts would be long-term and mitigated by the existence of other nearby similar fisheries and associated opportunities to fish for and harvest lake trout.

Secondary Impacts:

No significant adverse secondary impacts would be expected because of the proposed project. The expected reduction of lake trout to protect native bull trout populations in Swan Lake would not be expected to result in any ongoing, long-term impacts to current land use or human activities in the affected area. However, many Montanans, indigenous populations, and those visiting the state for outdoor recreational purposes, hold high regard for the conservation of native species on the landscape, including bull trout. Under the no action alternative, it is possible bull trout would be extirpated from Swan Lake. Therefore, because the proposed project would sustain and improve bull trout populations and associated recreational opportunities in the affected area, the proposed project would preserve important pre-project social structures, customs, values, and conventions associated with native bull trout in Swan Lake.

Again, others who recreate on Swan Lake may view the loss of the existing and invasive lake trout fishery as an adverse impact. However, any secondary impacts associated with the elimination of lake trout from Swan Lake would be mitigated by other opportunities to fish for the species, as numerous nearby lakes would continue to provide lake trout fisheries, such as Flathead Lake. Any adverse secondary impacts would be long-term, minor, and mitigated by the existence and available use of other nearby lake trout fisheries.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

2. Cultural Uniqueness and Diversity

Existing Environment/Baseline Conditions (No Action Alternative):
The Flathead Valley and the greater Kalispell area exemplify the fast-growing portions of Montana. Kalispell, Whitefish, Columbia Falls, and Bigfork represent cities centers, however considerable population growth is occurring in the rural/urban interface. The valley contains several small, medium, and large lakes that contain public and private access points. Many of the lakes have a mixture of undeveloped land and private homes. Swan Lake is located within the sparsely populated Swan River drainage of northwest Montana, in Lake County. The area is generally characterized by public forest lands interspersed with small, rural towns located along the Swan River drainage. The proposed project location is typical of most northwestern Montana lakes and does not represent cultural uniqueness. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:

No significant adverse direct impacts to the cultural uniqueness and diversity of the existing human population would be expected because of the proposed project. The proposed project would reduce non-native lake trout in Swan Lake to increase native bull trout and recreational kokanee salmon populations. The proposed action would not be expected to result in the immigration or emigration of people into or out of the affected area. Therefore, no direct impacts to existing cultural uniqueness and diversity of the affected human population would be expected because of the proposed project.

Secondary Impacts:
No significant adverse secondary impacts would be expected because of the proposed project. The proposed project would reduce non-native lake trout in Swan Lake to increase native bull trout and recreational kokanee salmon populations and would not be expected to result in any relocation of people into or out of the affected area. Therefore, no secondary impacts to the existing cultural uniqueness and diversity of the affected area would be expected because of the proposed project.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

3. Access to and Quality of Recreational and Wilderness Activities

Existing Environment (No Action Alternative):
Swan Lake provides opportunity for a wide range of water-based recreational activities including motorized and non-motorized boating, fishing, and hunting. There is one federal, USDA recreational access site on Swan Lake and numerous private homes and launches. Boating is a popular activity for waterskiing, pleasure cruising, and angling. Swan Lake contains a diverse assemblage of fish species, both native and non-native to the state of Montana. The lake provides popular sport-fish opportunities for rainbow trout, northern pike, kokanee salmon, yellow perch, and lake trout. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to access to and quality of recreational and wilderness activities would be expected because of the proposed project. No congressionally designated Wilderness Areas would be affected by the proposed action. Therefore, no impacts to wilderness activities would be expected because of the proposed project. Netting activities associated with lake trout suppression may affect recreational access from the existing Swan Lake boat ramp managed by the US Department of Agriculture (USDA) when netting operations are taking place; however, other access points managed by private interests also exist on Swan Lake and the proposed project would not impact any access points managed by other entities. Fishing and other recreational pursuits on Swan Lake would not be closed or otherwise impacted directly by netting operations. Therefore, any adverse direct impacts would be short-term, negligible, and mitigated by the existence of numerous access resources. Netting activities may affect certain types of angling in Swan Lake. Gill nets are typically 4-6' tall and angling equipment

can become entangled. Education, outreach, and signage can direct anglers to other fishing methods and locations to avoid nets. Therefore, any adverse direct impacts would be short-term, minor, and mitigated.

Secondary Impacts:
No significant adverse secondary impacts to access to and quality of recreational and wilderness activities would be expected because of the proposed project. Following completion of the proposed netting operations, no impacts to access would be expected.

Bull trout restoration projects in northwestern Montana generally have the support of indigenous tribes and many whom enjoy fishing for and otherwise appreciate native species on the landscape. Others who recreate on Swan Lake may view the loss of the existing and invasive lake trout fishery as an adverse impact to recreational fishing opportunities in Swan Lake. However, any adverse secondary impacts associated with the reduction or elimination of lake trout from Swan Lake, for the purpose of long-term bull trout and kokanee salmon recovery, would be mitigated by other nearby opportunities to fish for the lake trout. Numerous nearby lakes would continue to provide lake trout fisheries, such as Flathead Lake, Whitefish Lake, and McGregor Lake. Therefore, any beneficial secondary impacts would be long-term and moderate. Any adverse secondary impacts would be long-term, minor, and mitigated by the existence of other nearby similar fisheries and associated opportunities to fish for and harvest lake trout.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate and would be observed as increased bull trout numbers and an improved recreational fishery for kokanee. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

4. Local and State Tax Base and Tax Revenue

Existing Environment/Baseline Conditions (No Action Alternative):
Swan Lake provides recreational opportunities for boating and angling. As such, commercial activities exist for boat rentals and guided fishing trips. Outfitter use on Swan Lake is regulated by the USFS Flathead National Forest. The number of outfitters is limited; however, some revenue is generated through guided fishing trips. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to local and state tax base and tax revenues would be expected because of the proposed project. The proposed project does not involve the acquisition of land or property, production of any products, or displacement of any existing businesses. Angling opportunity for species like rainbow trout, northern pike, and yellow perch would not be affected. The lake trout population is expected to be reduced. However, reductions in lake trout are expected to be offset by increased opportunity for kokanee salmon. Angler use is anticipated to remain similar despite a shift in

species preference. Therefore, no impacts to the existing local and state tax base and tax revenues would be expected because of the proposed project.

The proposed project would, in part, further the ongoing objective to conserve this native species for the enjoyment of future fishing recreation Ongoing use of Swan Lake as a recreational fishery for the various fish species present would be expected to maintain the status quo related to taxes. Funding to support the proposed project would be sourced from FWP funding sources, state wildlife grant revenue. Therefore, no direct impacts to the local and state tax base and tax revenue would be expected because of the proposed action.

Secondary Impacts:
No significant adverse secondary impacts to local and state tax base and tax revenues would be expected because of the proposed project. Funding to support the proposed project would be sourced from FWP funding sources, state wildlife grant revenue. Also, recreational spending in affected nearby communities may increase due to increased densities of bull trout and kokanee salmon, which would beneficially impact local tax revenue. Conversely, such recreational spending may be decreased because of the loss of or reduction in lake trout population at Swan Lake. Ongoing use of Swan Lake as a recreational fishery for the various fish species present would be expected to maintain the status quo related to taxes. Therefore, no secondary impacts to the existing local and state tax base would be expected because of the proposed action.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

5. Industrial, Commercial, and Agricultural Activities and Production

Existing Environment/Baseline Conditions (No Action Alternative):
No industrial activities occur at the proposed site or in the immediate vicinity of either. No agricultural crops are grown in the vicinity of the proposed project. Some commercial activity including outfitting and guiding, occurs at Swan Lake and is controlled by USFS special use permits. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to industrial, commercial, and agricultural activities and production would be expected because of the proposed project. The proposed project would not disturb or otherwise impact any agricultural or industrial land; therefore, no impacts to agricultural or industrial production would be expected because of the proposed project.

Commercial outfitters and guides pursuing lake trout for their clients may realize adverse impacts associated with a reduction in the species. However, as noted above under Access to and Quality of

Recreational and Wilderness Activities, other nearby lake trout fisheries exist and would not be impacted by the proposed action. Conversely, outfitters and guides interested in pursuing kokanee salmon may realize increased business. Therefore, any expected adverse direct impacts would be short- and long-term and negligible. Similarly, any expected beneficial direct impacts would be short- and long-term and negligible.

Secondary Impacts:
No significant adverse secondary impacts to industrial, commercial, and agricultural activities and production would be expected because of the proposed project. The proposed project would not disturb or otherwise impact any agricultural or industrial land; therefore, no impacts to agricultural or industrial production would be expected because of the proposed project.

Certain commercial outfitters and guides who operate on Swan Lake may view the loss of the existing and invasive lake trout fishery as an adverse impact to potential business opportunities. However, any adverse secondary impacts associated with the reduction or elimination of lake trout from Swan Lake would be mitigated by other nearby opportunities to fish for the species, as numerous nearby lakes would continue to provide lake trout fisheries, such as Flathead Lake, Whitefish Lake, and McGregor Lake. Further, some outfitters and guides may realize increased business opportunities as a result of the expected increase in kokanee salmon and, if/when de-listed, a healthy and stable bull trout population. Therefore, any beneficial secondary impacts would be long-term and moderate. Any adverse secondary impacts would be long-term, minor, and mitigated by the existence of other nearby similar fisheries and associated opportunities to fish for and harvest lake trout.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

6. Human Health and Safety

Existing Environment/Baseline Conditions (No Action Alternative):
Swan Lake is a large (3,270 surface acres) with deep basins (>100') on both the north and south ends of the lake. Boating is a popular activity on Swan Lake and the location of nets and buoys could affect human health and safety. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to human health and safety would be expected because of the proposed project. FWP and contracted staff conducting the gillnetting activities may realize increased risk to human health and safety; however, FWP would require affected staff and contractors to operate in a safe manner and utilize best management practices, including the use of available and appropriate safety precautions. The proposed gillnetting project to suppress lake trout employs sinking gillnets in

water greater than 60 ft. Only buoys that mark the nets will be visible and at the surface. All buoys would be well marked and signage at the USDA Swan Lake boat ramp access point would describe the project and cautions for which anglers should be aware. Therefore, any potential impacts to human health and safety would be long-term and negligible, lasting as long as the proposed project.

Secondary Impacts:
No significant adverse secondary impacts to human health and safety would be expected because of the proposed project. Following completion of gillnetting activities, no additional impacts or potential impacts to human health and safety because of the proposed project would be expected. Therefore, no secondary impacts would be expected because of the proposed action.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

7. Quantity and Distribution of Employment

Existing Environment/Baseline Conditions (No Action Alternative):
Employment opportunities on Swan Lake consist of government employees and private business owners. Government employees are typically FWP staff conducting fisheries management work and AIS inspections. USDA (Forest Service) employees maintain the day use site and boat launch and have concessionaires that acquire the fees. Private dock companies install and maintain docks for private homeowners. Limited opportunities for outfitter use also exist on Swan Lake. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to the quantity and distribution of employment in the affected area would be expected because of the proposed project. The proposed project would utilize existing FWP staff to conduct activities as part of their normal business operations; therefore, no impacts to the quantity and distribution of employment in the area affected by the proposed project would be expected because of the proposed project.

Secondary Impacts:
No significant adverse secondary impacts to the quantity and distribution of employment in the affected area would be expected because of the proposed project. Following completion of the proposed gillnetting activities, existing FWP staff would conduct ongoing related activities as part of their normal business operations; therefore, no secondary impacts to the quantity and distribution of employment in the area affected by the proposed project would be expected because of the proposed project.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial

cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

8. Density and Distribution of Human Population and Housing

Existing Environment/Baseline Conditions (No Action Alternative):
Swan Lake has relatively low human population density but does have a considerable number of homes along the shorelines. The town of Swan Lake has one small hotel and a USDA (Forest Service) campground. Two small private campgrounds also exist. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to the density and distribution of human population and housing in the affected area would be expected because of the proposed project. The proposed project would utilize existing FWP staff, contractors, and volunteers to conduct activities and would not otherwise require or result in any new employment opportunities or the movement of existing or new population into or out of the affected area. Therefore, no direct impacts would be expected because of the proposed project.

Secondary Impacts:
No significant adverse secondary impacts to the density and distribution of human population and housing in the affected area would be expected because of the proposed project. FWP would not expect any new employment opportunities or the immigration or emigration of long-term residents to or from the affected area because of the proposed project. Therefore, no secondary impacts would be expected because of the proposed project.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

9. Demands for Government Services

Existing Environment/Baseline Conditions (No Action Alternative):
The existing access at Swan Lake is owned and operated by USDA's USFS. Therefore, USFS currently provides government services in response to activities occurring at the existing Swan Lake access site. These government services include law enforcement, fire protection, and other emergency services in the affected area. USFS staff manage and maintain the existing FAS, year-round. For additional

information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to demands for government services would be expected because of the proposed project. FWP expects most of the work necessary to complete the proposed project would be accomplished by existing FWP staff and affected FWP staff would conduct the proposed project as part of their normal business operations. Therefore, no adverse direct impacts would be expected because of the proposed project.

Secondary Impacts:
No significant adverse secondary impacts to demands for government services would be expected because of the proposed project. Following completion of the proposed project FWP staff would continue to manage the affected resource as part of their normal business operations. Therefore, no adverse secondary impacts would be expected because of the proposed project.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

10. Locally Adopted Environmental Plans and Goals

Existing Environment/Baseline Conditions (No Action Alternative):
Bull trout are native to Montana, and they have been designated an ESA *threatened* species. Bull trout management in the Swan River drainage is described in FWP's Statewide Fisheries Management Plan and the USFWS Columbia Headwaters Recovery Unit Implementation Plan for Bull Trout. Many Montanans and visitors historically held high regard for bull trout as an angling resource, an icon of the northwest rivers of the state, and a valuable component of the ecosystems in which it resides. As such, bull trout are deeply engrained in the customs and lifestyles of residents and visitors of Montana. FWP is unaware of any other locally adopted environmental plans or goals that would be impacted by the proposed project. For additional information related to the affected environment see *Section VII, General Setting of the Affected Environment*.

Direct Impacts:
No significant adverse direct impacts to locally adopted environmental plans and goals would be expected because of the proposed project. Lake trout and bull trout tend to occupy the same habitats in Swan Lake. Gillnetting does not discriminate between the two species. During operations to net lake trout, bull trout would also be captured, and some would die. Therefore, short-term and minor adverse direct impacts to native bull trout and FWP's objective to sustain and improve the native bull trout population in Swan Lake and the Swan River drainage from bycatch of native bull trout would be expected because of the proposed project.

Secondary Impacts: No significant adverse secondary impacts would be expected because of the proposed project. The proposed project would preserve and enhance a native bull trout population in Swan Lake by reducing the existing and invasive lake trout population, thereby sustaining, and improving the bull trout and enhancing fishing opportunities for kokanee salmon. The proposed action may also support the potential for anglers to once again fish for native bull trout, if/when they are de-listed under the ESA, or the population becomes sufficiently large to warrant a permitted fishery similar to those of Lake Koocanusa and Hungry Horse Reservoir/South Fork Flathead River. Because the proposed project would be expected to lead to a long-term increase of native bull trout in Swan Lake, the proposed project would also be expected to beneficially offset any initial loss of individuals that would necessarily occur because of the proposed project. These actions are consistent with the direction of FWP's Statewide Fisheries Management Plan and the USFWS Columbia Headwaters Recovery Unit Implementation Plan for Bull Trout. Any secondary impacts would be long-term, beneficial, and moderate.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. FWP expects that any beneficial cumulative impacts associated with the proposed project would be long-term and moderate. Any adverse cumulative impacts would be long-term, consistent with existing impacts, mitigated, and minor.

Any currently unknown future projects and associated cumulative impacts to the affected human environment would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation. For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section IX, Cumulative Impacts Analysis*.

XIII. Determining the Significance of Impacts

If the EA identifies impacts associated with the proposed action FWP must determine the significance of the impacts. This determination forms the basis for FWP's decision as to whether it is necessary to prepare an environmental impact statement. FWP considered the criteria identified in **Table 9** below to determine the significance of each impact on the quality of the physical and human environment. ARM 12.2.431.

The significance determination is made by giving weight to these criteria in their totality. For example, impacts identified as moderate or major in severity may not be significant if the duration is short-term. However, moderate or major impacts of short-term duration may be significant if the quantity and quality of the resource is limited and/or the resource is unique or fragile. Further, moderate or major impacts to a resource may not be significant if the quantity of that resource is high or the quality of the resource is not unique or fragile.

Table 9: Determining the Significance of Impacts

	Criteria Used to Determine Significance
1	The **severity, duration, geographic extent,** and **frequency** of the occurrence of the impact **"Severity"** describes the density of the potential impact, while **"extent"** describes the area where the impact will likely occur, e.g., a project may propagate ten noxious weeds on a surface area of 1 square foot. Here, the impact may be high in severity, but over a low extent. In contrast, if ten noxious weeds were distributed over ten acres, there may be low severity over a larger extent.

	"Duration" describes the time period during which an impact may occur, while **"frequency"** describes how often the impact may occur, e.g., an operation that uses lights to mine at night may have frequent lighting impacts during one season (duration).
2	The probability that the impact will occur if the proposed project occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur
3	Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts
4	The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values
5	The importance to the state and to society of each environmental resource or value that would be affected
6	Any precedent that would be set as a result of an impact of the proposed project that would commit FWP to future actions with significant impacts or a decision in principle about such future actions
7	Potential conflict with local, state, or federal laws, requirements, or formal plans

XIV. Private Property Impact Analysis (Takings)

The 54th Montana Legislature enacted the Private Property Assessment Act, now found at § 2-10-101. The intent was to establish an orderly and consistent process by which state agencies evaluate their proposed projects under the "Takings Clauses" of the United States and Montana Constitutions. The Takings Clause of the Fifth Amendment of the United States Constitution provides: "nor shall private property be taken for public use, without just compensation." Similarly, Article II, Section 29 of the Montana Constitution provides: "Private property shall not be taken or damaged for public use without just compensation..."

The Private Property Assessment Act applies to proposed agency projects pertaining to land or water management or to some other environmental matter that, if adopted and enforced without due process of law and just compensation, would constitute a deprivation of private property in violation of the United States or Montana Constitutions.

The Montana State Attorney General's Office has developed guidelines for use by state agencies to assess the impact of a proposed agency project on private property. The assessment process includes a careful review of all issues identified in the Attorney General's guidance document (Montana Department of Justice 1997). If the use of the guidelines and checklist indicates that a proposed agency project has taking or damaging implications, the agency must prepare an impact assessment in accordance with Section 5 of the Private Property Assessment Act.

Table 10: Private Property Assessment Act (Taking and Damaging Assessment)

PRIVATE PROPERTY ASSESMENT CHECKLIST			
Does the Proposed Action Have Takings Implications under the PPAA?	**Question #**	**Yes**	**No**
Does the project pertain to land or water management or environmental regulations affecting private property or water rights?	1	☐	☒
Does the action result in either a permanent or an indefinite physical occupation of private property?	2	☐	☒
Does the action deprive the owner of all economically viable uses of the property?	3	☐	☒
Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 4a and 4b and continue with question 6.)	4	☐	☒
Is there a reasonable, specific connection between the government requirement and legitimate state interest?	4a	☐	☐
Is the government requirement roughly proportional to the impact of the proposed use of the property?	4b	☐	☐

Does the action deny a fundamental attribute of ownership?	5	☐	☒
Does the action have a severe impact of the value of the property?	6	☐	☒
Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public general? (If the answer is NO, skip questions 7a-7c.)	7	☐	☒
Is the impact of government action direct, peculiar, and significant?	7a	☐	☐
Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?	7b	☐	☐
Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?	7c	☐	☐
Does the proposed action result in taking or damaging implications?		☐	☒
Taking or damaging implications exist if **YES** is checked in response to Question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if **NO** is checked in response to question 4a or 4b.			
If taking or damaging implications exist, the agency must comply with MCA § 2-10-105 of the PPAA, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.			
Alternatives: The analysis under the Private Property Assessment Act, §§ 2-10-101-112, MCA, indicates no impact. FWP does not plan to impose conditions that would restrict the regulated person's use of private property to constitute a taking.			

XV. Public Participation

Scoping

Scope is the full range of issues that may be affected if an agency implements a proposed action or alternatives to the proposed action. The scope of the environmental review is described through a definition of those issues, a reasonable range of alternatives considered, a description of the impacts to the physical and human environments, and a description of reasonable mitigation measures that would ameliorate the impacts. Scoping is the process used to identify all issues that are relevant to the proposed action.

Depending on the level of impact associated with a proposed action, the scoping process may include a request for public participation in the identification of issues.

Because FWP determined the proposed action will result in limited environmental impact, and little public interest has been expressed, FWP determined the proposed project did not meet the criteria for a public scoping meeting. Therefore, a public scoping meeting was not held for the proposed action.

Scoping also includes efforts to engage internal and affected external agencies. For the proposed project, these scoping efforts included queries to the following websites/databases/personnel:

AGENCIES CONSULTED

- United States Fish and Wildlife Service
- United States Forest Service
- Montana Department of Natural Resources and Conservation
- Confederated Salish and Kootenai Tribes (CSKT)

Public Review of Environmental Assessments

The level of analysis in an EA will vary with the complexity and seriousness of environmental issues associated with a proposed action. The level of public interest will also vary. FWP is responsible for adjusting public review to match these factors (ARM 12.2.433(1)). For the proposed project, FWP determined the following public notice strategy will provide an appropriate level of public review:

- An EA is a public document and may be inspected upon request. Any person may obtain a copy of an EA by making a request to FWP.
- Public notice will be served on the Montana Fish, Wildlife and Parks website at: https://fwp.mt.gov/public-notices.
- Public notice will be served on the Montana Environmental Quality Council's MEPA Document List website at: https://leg.mt.gov/mepa/search/.
- As applicable, copies will be distributed to neighboring landowners to ensure their knowledge of the proposed project and opportunity for review and comment on the proposed action.
- FWP maintains a mailing list of persons interested in a particular action or type of action. FWP will notify all interested persons and distribute copies of the EA to those persons for review and comment (ARM 12.2.433(3)).

Public notice announces availability of the Draft EA for public review, summarizes the proposed project, identifies the time-period available for public comment, and provides direction for submitting comments.

- **Duration of Public Comment Period:** The public comment period begins on the date of publication of legal notice in area newspapers (see above). Written or e-mailed comments will be accepted until 5:00 p.m., Mountain Time, on the last day of public comment, as listed below:

  Length of Public Comment Period: 30 days

  Public Comment Period Begins: 05/17/2024

  Public Comment Period Ends: 06/15/2024 at 5:00pm MST

Comments must be addressed to the FWP contact listed below.

- **Where to Mail or Email Comments on the Draft EA:**

  Name: LEO ROSENTHAL/MIKE HENSLER

  Email: lrosenthal@mt.gov; mhensler@mt.gov

  Mailing Address:

  490 North Meridian Road
  Kalispell, MT 59901

XVI. Recommendation for Further Environmental Analysis

NO further analysis is needed for the proposed action	☒
FWP must conduct **EIS** level review for the proposed action	☐

XVII. EA Preparation and Review

	Name	Title

EA prepared by:	Mike Hensler, Leo Rosenthal	FWP Region One Staff
EA reviewed by:	Eric Merchant, Ben Rowe	MEPA Coordinator, Legal Division

Appendix A: Literature Cited

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Appendix B. Section 6 Cooperative Agreement Chart USFWS/FWP, 2024

Endangered Species						
Species	**Species Scientific Name**	**ESA Status Federal/State**	**Population Goal**	**Current Status**	**Current Activities**	**Comments/ Recommendations**
Black-footed Ferret	*Mustela Nigripes*	Endangered (non-essential experimental northcentral MT) / endangered	Two populations with 50 breeding adults separated by 100 km.	Current estimated minimum = 48 ferrets across all sites: Northern Cheyenne reservation = 0 Fort Belknap reservation = 32 including wild born kits Crow reservation = 16 UL Bend = 0 2022 estimate of acres of prairie dog colonies = 7749 ac	Active reintroduction of ferrets occurred in northcentral MT from 1994 to 2005. Releases are conducted at restoration sites when ferrets are available and site conditions are adequate. Ferret monitoring and plague mitigation continue at all tribal release sites.	FWP is participating in implementation of the Black-footed Ferret Recovery Plan by seeking ways to limit prairie dog losses to plague and working with local partners to develop and implement a plan for ferret reintroductions. FWP has developed a landowner incentive program for prairie dog tolerance, which could provide for ferret habitat. FWP and its partners have developed conservation and management guidelines for this species.
Whooping Crane	*Grus Americana*	Endangered/ Endangered	N/A	In Montana no breeding activity. Spring/fall migrant. Nationally the population is at ≅500.	We respond to sighting reports and stand ready to act if a conflict develops while cranes are migrating.	
White Sturgeon (Kootenai River population)	*Acipenser transmontanus*	Endangered/ game fish	N/A	Few seen in Montana for 20 years, and those are limited to hatchery stocked fish and a few wild adults. About 1,000 adult fish are found in the Kootenai River ecosystem with an estimated 10,000-15,000 juveniles; only 150-200 total fish estimated to exist in Montana.	A Recovery Plan has been developed in cooperation with MT/ID/USFWS. Fish are being stocked in Idaho and Montana.	Need to determine necessary flows out of Libby Dam to promote reproduction.

Endangered Species						
Species	**Species Scientific Name**	**ESA Status Federal/State**	**Population Goal**	**Current Status**	**Current Activities**	**Comments/ Recommendations**
Pallid Sturgeon	*Scaphirhynchus albus*	Endangered/ game fish	5 secure populations	Thousands occupy the Yellowstone River and the Missouri River above and below Fort Peck Dam owing to hatchery supplementation; few naturally produced fish remain in the upper Missouri River basin.	A revised Recovery Plan was completed by the USFWS in January 2014. Research projects are underway above & below Ft. Peck and on the Yellowstone. Stocking, tagging, and propagation plans have been developed, submitted to the USFWS, and will be implemented.	This species is currently being maintained by hatchery augmentation, which started in 1998. Recovery solutions may include releasing warm water below Fort Peck Reservoir, increasing spring discharge throughout the system, reducing irrigation canal entrainment, and removing or mitigating hindrances to migration.
American Burying Beetle	*Nicrophorus americanus*	Endangered/Not listed	3 populations with 500+ adults for 5 yrs. in 3 of 4 geographic regions (one of which includes Montana)	Unknown	There is a single record from the early 1900s in the area around Havre, but this specimen has not been verified. There have been other possible sightings.	This species is not listed for MT; it is listed nationally. Surveys for occurrence should be conducted.
Northern Myotis	*Myotis septentrionalis*	Endangered	N/A	A total of 66 individuals have been captured in northeast Montana since capture efforts began in 2016, the majority caught as part of graduate research project in 2022 (16 bats) and 2023 (23 bats).	FWP supported a graduate research project in 2022 – 23 to provide more information on the distribution, habitat use, and roost preference to provide information needed for managing the species.	Surveys are needed to better understand the distribution of this species in Montana. We are working with partners to record bat calls and refine the classifier so that acoustic analyses to identify the species are more accurate.

Threatened Species						
Species	**Species Scientific Name**	**ESA Status Federal/ State**	**Population Goal**	**Current Status**	**Current Activities**	**Comments Recommendations**
Piping Plover	*Charadrius melodus*	Threatened	60 breeding pairs	2011 International Census conducted in Montana. Few birds observed due to high water limiting breeding habitat.	Annual surveys are conducted on the Missouri and lower Yellowstone when possible. In 2022 staff were able to monitor the lower Yellowstone River from Fallon to Glendive (the portion of river with consistent observations in the past); no piping plovers were observed.	State management plan completed in April 2006. Critical habitat designated Alkali Lakes in Sheridan Co., riverine and reservoir shorelines in Garfield, McCone, Phillips, Richland, Roosevelt, and Valley Counties.
Yellow billed cuckoo	Western population *Coccyeus americanus*	Threatened	No current recovery plan. None of the 69 designated critical habitat units are in MT	Population west of the Continental Divide, riparian areas with cottonwoods and willows	No specific YBCU surveys were conducted. No new information is available.	Surveys are needed for occurrence west of the Continental Divide and to identify potential problems and management needs.
Grizzly Bear - Greater Yellowstone	*Ursus arctos horribilus*	Threatened /State game animal	Recovery goals met for over a decade.	Approximately 1,000 Grizzly Bears in GYE. Population assessments indicate that beginning in 2002 the population has stabilized at carrying capacity within the GYE Demographic Monitoring Area (DMA). Continued expansion outside of DMA.	Conservation Strategy updated and signed December 2016. GYE delisted 2017 and relisted 2018. Long-term research and monitoring continue. The population is growing and continuing to expand into new areas outside the recovery zone and demographic monitoring area. Programs are in place to address human-bear conflicts. Hunting season framework established with allowable mortality limits to allow population growth and expansion. Governor's Council established to provide sideboards for a statewide grizzly management plan in anticipation of delisting of GYE and NCDE.	Recommend delisting. Tri State MOU for post-delsting management of the GYE population segment was updated and signed in 2022. Will be updated again after adoption of Integrated Population Model for estimating the population. Working on interagency committee to update the GYE Conservation Strategy to incorporate most recent population estimator and adjust mortality thresholds (recalibration). Additional bear specialist was hired for Red Lodge Area and Deer Lodge Area, and Bitterroot.

Threatened Species						
Species	**Species Scientific Name**	**ESA Status Federal/ State**	**Population Goal**	**Current Status**	**Current Activities**	**Comments Recommendations**
Grizzly Bear - Northern Continental Divide	*Ursus arctos horribilus*	Threatened State game animal	1993 Recovery Plan established goals related to number of females with cubs, distribution of females with young, and limits on mortality.	Recovery goals have been met more than 8 years. ~1,100 grizzly bears increasing in numbers and distribution including significant numbers entering areas outside of those set forth as grizzly recovery zones.	Trend monitoring with radio collared bears is underway. Many ongoing management programs are in place. Plan calls for maintaining the population at a level where there is at least a 90% probability of >800 grizzly bears in the DMA. Conservation Strategy for NCDE completed in 2019. Governor's Council established to provide sideboards for a statewide grizzly management plan in anticipation of delisting of GYE and NCDE. Extensive resources being expended on conflict prevention and management, especially east of the Rocky Mtn. Front.	Recommend Delisting – recovery criteria have been met for >8 years. The state management plan for this area was revised under the MEPA process and completed in December 2006. Administrative Rule 12.9.1403 was revised to clarify hunting and translocation out of the NCDE would count against mortality thresholds for the NCDE. Petition for delisting of the NCDE DPS was submitted to the USFWS in December 2021.
Grizzly Bear - Cabinet/ Yaak	*Ursus arctos horribilus*	Threatened State game animal	State goal 90-120.	~50 grizzly bears. Slowly Increasing.	Augmentation of subadults to the Cabinets will continue. One subadult male bear was translocated during 2018. Programs are in place to address human-bear conflicts.	Continue recovery efforts.
Grizzly Bear - Bitterroot-Selway	*Ursus arctos horribilus*	Threatened State game animal	To be decided via Governors Council and statewide management plan	A grizzly bear was documented here in 2007 for the first time since 1941. No verified residents at this time.	The USFWS has finished leading development of an EIS to provide for reintroduction of grizzlies to this area. This plan is currently on hold. FWP hired a bear specialist to work proactively on bear conflict prevention and conflict response in the Bitterroot.	Grizzly populations are continuing to expand and will likely reoccupy this area in time. Bear conflict prevention programs (focused on black bears now) are needed to minimize conflict once the area is reoccupied. Bear specialist hired to work on outreach ahead of permanent presence of grizzly bears in the Bitterroot.

Threatened Species						
Species	**Species Scientific Name**	**ESA Status Federal/ State**	**Population Goal**	**Current Status**	**Current Activities**	**Comments Recommendations**
Meltwater Lednian Stonefly	*Lednia tumana*	November 2019 USFWS listed as Threatened Nongame-Species of Concern (S1)	N/A	Only known to occur in small alpine streams with glacial runoff within Glacier National Park, Montana and Banff National Park, Alberta	In 2020, a species biological report was written to utilize in understanding current threats and in recovery planning.	Monitoring is needed for occurrences at known sites and to identify potential conservation and management needs.
Bull Trout	*Salvelinus confluentus*	Listed throughout range in lower 48 (coterminous)/State game fish	Maintain viable populations	Distributed in Western MT. Numbers and distribution have declined in some areas and have increased in others.	Continue working with federal, state, tribal and private partners to develop and implement conservation and recovery efforts including a) fish passage and habitat enhancement projects in the Clark Fork, Blackfoot, Kootenai, and Flathead River drainages, b) protective fishing regulation, c) survey & inventory (including genetics) efforts, and d) monitoring movement of resident life forms.	Recovery programs underway and showing success in some areas, but habitat changes and nonnative species (e.g., lake trout) remain significant threats towards some populations.
Lynx	*Felis lynx canadensis*	Threatened despite 2017 SSA recommendation of Not Warranted.	Maintain widely distributed population in western Montana.	~300-500	Completed camera survey effort in the NW Montana and the GYE in 2022 – only lynx detected in NW MT. Camera survey will be conducted in NW Montana in 2023-24. We collect observation reports from agencies and the public. Lynx Protection Zones put in place with restrictions on fur-trapping intended to minimize incidental take of lynx. Mandatory trapper education program initiated in 2022 that will emphasize avoidance of incidental captures and equipment features that result in fewer potential injuries.	Participated on USFWS lynx post-delisting monitoring plan development team. Post delisting monitoring plan is ready for implementation if lynx are delisted as recommend in the most current Status Assessment. FWP staff will participate in recovery planning as allowed.

Threatened Species						
Species	**Species Scientific Name**	**ESA Status Federal/ State**	**Population Goal**	**Current Status**	**Current Activities**	**Comments Recommendations**
Shovelnose Sturgeon	*Scaphirhynchus platorynchus*	Threatened under Similarity of Appearance Provisions/State game fish	N/A	Maintain widely distributed populations in the Missouri River basin and Yellowstone River basin. Montana is the species' upstream distribution extent	No specific surveys were conducted; however, annual routine monitoring occurs as part of fish community sampling in the Missouri River above and below Fort Peck Reservoir as well as in the lower Yellowstone River.	Fish community monitoring is needed to continue to assess sturgeon population trends and range expansions/losses. Recommendations for improving or maintaining sturgeon populations and habitats are being considered to improve conservation and management. Additionally, identifying major threats to sturgeon populations and habitats is needed.
Western Glacier Stonefly	*Zapada glacier*	November 2019 USFWS listed as Threatened, Nongame-Species of Concern (S1)	N/A	Only known to occur in glacially influenced streams within Glacier National Park, Montana and Waterton National Park, Alberta, as well as streams and springs in the Absaroka-Beartooth Wilderness, Montana and Grand Teton National Park, Wyoming.	In 2020, a species biological report was written to utilize in understanding current threats and in recovery planning.	Monitoring is needed for occurrences at known sites and to identify potential conservation and management needs.

Candidate Species (formerly Category 1 candidates)						
Species	**Species Scientific Name**	**ESA Status Federal/ State**	**Population Goal**	**Current Status**	**Current Activities**	**Comments/ Recommendations**
Wolverine	*Gulo gulo*	Candidate Species of Concern (S3)	Maintain widely distributed population in western Montana.	Widely distributed throughout western Montana.	On-going collaborative monitoring across the western U.S. through the WAFWA Forest Carnivore subcommittee. Plans to involve Canadian partners in the 2026 wolverine survey.	Results from the 2021-22 survey compared to the 2016-17 survey show a relatively stable distribution and occupancy of wolverines in the western U.S. On-going monitoring will continue to inform our understandings of any change in wolverine distribution, space-use, occupancy, and anthropogenic effects. Wolverines continue to show up outside of areas previous thought to be suitable habitat.