DRAFT

ENVIRONMENTAL ASSESSMENT

Yellow Bay Unit of Flathead State Park

Dynamic Gravel Beach Shoreline Erosion Protection Proposal

(FWP-SEA-POR-R1-23-017)

01/17/2024

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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: Dynamic Gravel Beach Shoreline Erosion Protection Proposal	
LOCATION: Yellow Bay Unit of Flathead Lake State Park	**COUNTY:** Lake
PROPERTY OWNERSHIP: ☐ **FEDERAL** ☒ **STATE** ☐ **COUNTY** ☐ **PRIVATE**	
EA PREPARER: Amy Grout	**DATE ISSUED:** 01/17/2024

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 Project: FHLSP-YB Dynamic Gravel Beach Shoreline Protection Proposal

Flathead Lake State Park-Yellow Bay Unit (FHLSP-YB) is one of six units that comprise Flathead Lake State Park (FHLSP) and is managed by FWP. FHLSP-YB is a subset of the University of Montana's Flathead Lake Biological Station (FLBS) and was designated by the Montana legislature in 1941. The FLBS is a year-round facility that conducts ecological research and education, with an emphasis on fresh water, particularly Flathead Lake and the Flathead River watershed. FLBS also provides field ecology courses for college students, natural resource professionals and educators from around the state and nation; trains graduate students for professional and teaching careers; and provides scientific data, interpretation and outreach to help resolve environmental problems and inform public policy.[1]

FHLSP-YB's current footprint is approximately 14.26 acres within the 80-acre FLBS campus. The FLBS is located on the east shore of Flathead Lake in Lake County and lies within the exterior boundaries of the Flathead Indian Reservation.

Wave erosion, to the banks and beaches of FHLSP-YB on the east shore of Flathead Lake, has been a chronic problem since the park was first established in 1941, three years after Kerr Dam, now the Seli'š Ksanka Qlispe' (SKQ) dam became operational. Currently there is not enough gravel beach remaining to support public recreation or to absorb wave action that erodes the bank and undermines infrastructure (Fig. 1). (Lorang 2023)

***Figure 1**. This photograph shows how narrow the remaining beach is at the boat launch when the lake is 6" below full pool (2893' Somers Datum). At full pool the beach disappears allowing waves to break directly against the bank. At lower lake levels breaking waves erode the bank and undermine the park bench and other infrastructure at the State Park. (Lorang 2023)*

[1] Flathead Lake Biological Station, University of Montana Flathead Lake Facts.

FHLSP-YB receives wave action from south-western prevailing winds which have caused severe shoreline erosion and loss of gravelly lakebed material as it migrates to the north and into the concrete boat launch. The shoreline directly north of the boat ramp is severely eroded as part of the old roadbed and the existing parking lot is now being claimed by the lake. Larger boulders forming riprap were previously placed along the southern shoreline of the property to slow the rate of erosion, especially along a privately held easement of the south end of the park road. Riprap and seawalls are the traditional approach used to combat wave erosion (Fig. 2). Unfortunately, that approach eliminates recreational opportunities that a natural gravel beach affords. Moreover, trying to walk across to go for a swim and return becomes a dangerous venture by increasing the risk of slips and falls. During storms these traditional structures, while protecting the land behind them, create new or exasperate existing shoreline erosion problems on the structure ends through a process called end-scouring. Affected neighbors often respond by building seawalls and riprap resulting in a domino effect of passing the erosion problem down the shoreline and further hardening the shoreline. In addition, these structures cause increased erosion and armoring of the lakebed fronting the structures which has negative effects on the nearshore ecology of the lake. (Lorang 2023)

Yellow Bay is exposed to large storm waves that interact with many existing seawalls, riprap, and solid docks as they enter the bay (Fig. 2). This wave-infrastructure interaction interferes with gravel transport thereby exacerbating the erosion problem at FHLSP-YB. Finding a solution is challenging. The challenges arise from physical hydrodynamic forces associated with large waves entering the bay at an angle to the orientation of the shoreline that creates a gradient in the longshore transport of gravel and cobble material. This impact is coupled with the fact that the beach design must accommodate the existing use of the public boat launch, which is impacted by gravel and cobble transport. (Lorang 2023)

Figure 2*. This photograph of storm waves at Yellow Bay State Park shows the size of waves the Park is often exposed to and the interaction with seawalls and docks built in Yellow Bay.*

These specific site conditions at Yellow Bay State Park create a complex problem to solve and can be summarized with these design challenges for construction of a dynamic gravel beach. (Lorang 2023)

- Beach and bank erosion at FHLSP-YB has been and continues to be severe.
- Longshore gravel transport by waves is a significant design factor.
- The location of the boat launch further complicates the beach design requiring that gravel transport be contained and not allowed to wash across the concrete ramp.
- Yellow Bay Creek entering the bay near the boat launch complicates beach design. (Lorang 2023)

Under the proposed action, FWP would build a dynamic gravel beach to limit or eliminate shoreline erosion at FHLSP-YB. Shoreline protection structures have been permitted and used as an accepted approach to the problem of shoreline erosion on Flathead Lake since 1989, when the first perched-gravel beach was built in the lake (Lorang 1991). To date, approximately 2.5 miles of eroding shoreline on the north shore of the lake has been stabilized by building gravel beaches. These shorelines are now dynamically stable and undergoing a natural restoration process as new aquatic and riparian vegetation recolonize the area associated with the beaches. In this sense development of a dynamic gravel beach, as proposed, constitutes a living shoreline solution to the erosion problem.

The Confederated Salish and Kootenai Tribes (CSKT) have also adopted this approach to deal with their shoreline erosion problems at Salish Point, located in Polson and along the Blue Bay campground shoreline (Lorang 2003 and 2006b). Now, both projects are popular public recreational beaches that also serve the purpose of providing a natural landscape (beach) transition from the lake environment to the terrestrial or wetland fringing shoreline (Fig. 3). The result of the proposed action would be a shift from a net erosion dominated system to a net depositional system. The landscape would be composed of complex curved shorelines rather than conventional riprap.

Figure 3. *A September 2018 photograph looking north over the gravel beach fronting the CSKT campground at Blue Bay (right photo). This beach was constructed in 2007 and has functioned as a shore protection structure for over a decade now. It currently exists in a state of dynamic equilibrium where it adjusts and shifts in profile to summer storm waves while at the same time not washing away. It does this because wave action pushes gravel up the beach face forming a crest rather than washing it offshore (Lorang 2000, 2002). The waterline shows the height to which wave swash runs up the beach face. Before 2007 this shoreline was eroding with the lake level extending all the way to the vegetation line seen here at the top of the gravel beach (left photo). (Lorang 2023)*

The proposed dynamic gravel beach design (Fig. 4) incorporates the need for the south neighbor to access, with ample room, their existing boat facilities while still protecting the most eroded section of that neighbor's easement access road through the installation of a curved spit. A 12' wide by 60' long fixed dock with an 8' wing would be constructed on the south side of the boat launch (Fig. 5). This dock will have a steel-screen gravel fence under and attached to the dock piers. This screen will create a physical barrier that will catch northerly moving gravel and prevent it from interfering with the boat launch. The proposed pier-dock would be usable only when lake levels are full pool to approximately two-feet below full pool. The existing floating dock would remain on the north side of the boat ramp thus allowing continued access to a boat dock during the spring and fall when lake levels are lower. The proposed project would be funded by state special revenue. If funds are not sufficient, the pier-dock would be replaced with a gravel spit which would catch gravel similarly to the proposed pier-dock.

The interaction between wave action and the outflow of water at the mouth of Yellow Bay Creek creates design complexities (Fig. 4). Each year Yellow Bay Creek cuts a channel through the beach during lake drawdown. Some years wave action pushes gravel shoreward during lake level rise, and over the full pool season, to nearly close the mouth of Yellow Bay Creek. Other years this dynamic process completely closes the creek mouth. When this happens, the creek flows on to the gravel and infiltrates into the beach matrix then out into the lake. Beach design for the area between the mouth of Yellow Bay Creek and the boat ramp considers these creek-beach dynamics so that they can continue to act naturally yet not allow wave erosion to erode the beach and undermine the bank. (Lorang 2023) The proposed project would utilize larger cobble to armor a corridor that contains the creek's movement to prevent further erosion, while still allowing the creek to have some ability to migrate seasonally.

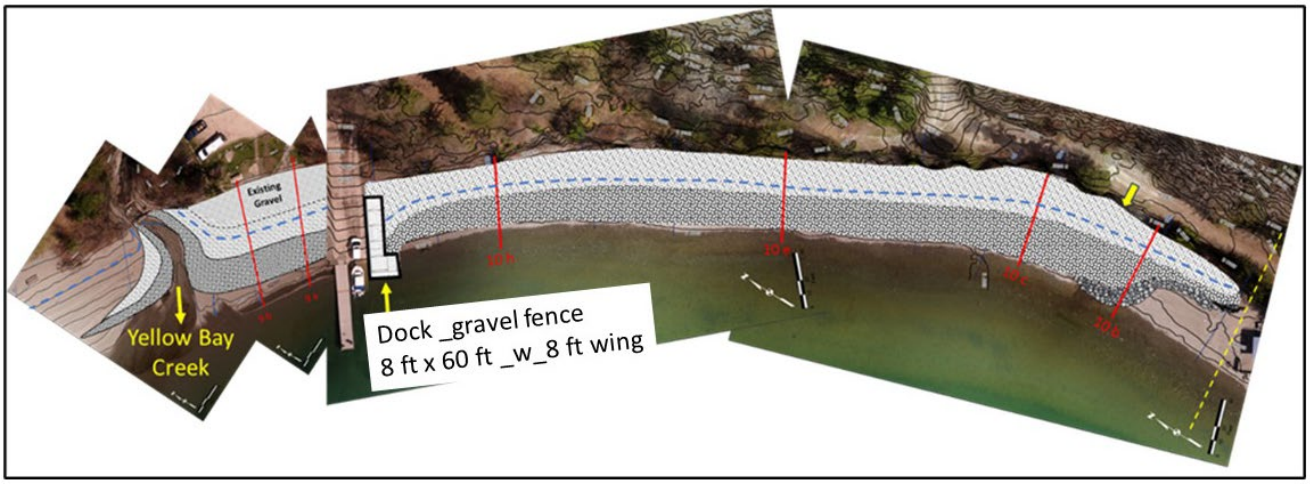
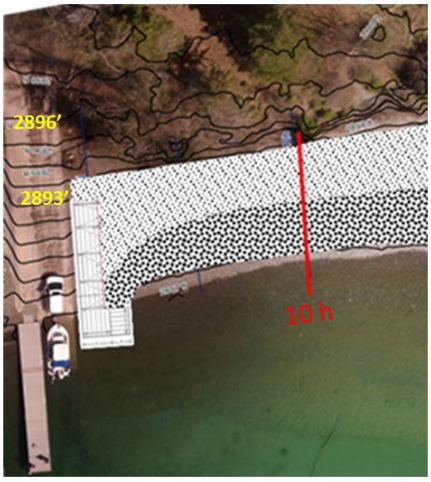


Figure 4*. This is a schematic of the final beach design showing the location of a new dock that will be incorporated into the beach. The dock will have a gravel fence to contain the gravel from washing over the boat launch. Normal operation of the boat launch and floating dock will not be affected by the new solid dock built on steel pilings. The blue dotted line shows the approximate initial full pool shoreline (2893' ft. Somers Datum). This full pool shoreline will change over time. Yellow Bay Creek enters the Lake on the northwest end of the beach. This design allows the mouth of the creek to remain in its natural condition. The yellow arrow on the far right shows the location of the worst historical wave erosion that has threatened to take out the access road used by the neighbor to the south. It also points to the location of where future renourishment of gravel should occur. (Note the schematic is rotated to allow presentation of the beach plan to fit the page, white arrows point to north with scale bars). (Lorang 2023)*



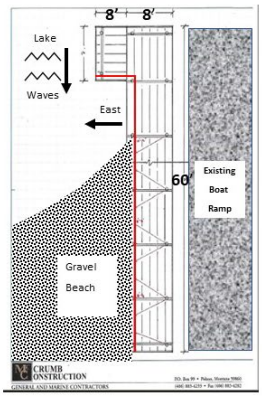


Figure 5. *This schematic shows the location of the dock relative to the boat launch (left panel) with a photograph of the same dock constructed at Volunteer Park in Lakeside (middle photo) that shows the placement of steel-screen gravel fence. The red arrow shows the location of the steel screen for Yellow Bay. That location is shown as a red line in the far-right top view schematic of the dock. The dock was designed by Brett McCrumb and then checked and certified by John K. Schlegelmilch, Licensed Professional Engineer by the State of Montana, 6068 E.*

The proposed project would require approximately 4,683 cubic yards of gravel material in total covering an area of 43,133 square feet, (~ 1 acre) over a shoreline distance of 775 ft resulting in approximately 6 CY/ft of gravel. This is less gravel material per foot than has been used on similar beach projects permitted in the past. For example, Salish Point in Polson (~13 CY/ft); Volunteer Park in Lakeside (~10 CY/ft); and the USFWS, Waterfowl Production Area east of the Flathead River mouth (~8 CY/ft). The area between the boat launch and Yellow Bay Creek will require ~678 CY of gravel to cobble sized material (2" minus and 3" to 6" minus screened drain rock), 3,123 CY of (2" minus and 3" to 6" minus screened drain rock), 661 CY of pit run, and 221 CY of boulders and cobbles will be used for the spit. In addition, 6 to 8 large trees, root wads with 10 to 20 ft attached stems will be used as part of the spit design and to enhance juvenile fish habitat. (Lorang 2023)

Development of the dynamic gravel beach would cause a shift from a net erosion dominated system to a net depositional system and the affected landscape would transition to a complex of curved shorelines rather than conventional riprap. More specifically, the proposed action would facilitate the following:

Shoreline Erosion Prevention
The proposed dynamic gravel beach would stop erosion occurring at FHLSP-YB, thus halting the loss of park vegetation and property and in turn would reduce water turbidity during storm events that erode the soil bank. Additionally, this would preserve the legal access road for the adjacent neighbor to the south.

Riparian Area Preservation
The proposed dynamic gravel beach would ensure a healthy riparian area exists between the lake and the adjacent vegetative areas of FLSP-YB. Dynamic gravel beaches promote the growth of riparian species thereby partially reclaiming previously lost vegetative areas.

Visitor Experience
The proposed dynamic gravel beach would be built wide enough to accommodate recreational activities like swimming and sunbathing, without impacting adjacent vegetative areas. Dynamic gravel beaches provide a safe, comfortable recreation space that is in high demand at FHLSP-YB.

Aesthetics
The proposed dynamic gravel beach would result in a more aesthetically pleasing and attractive shoreline. It would also represent a more natural shoreline, which existed at the affected location on Flathead Lake prior to the control of lake level. The proposed dynamic gravel beach would change naturally through the movement of the gravel as it absorbs wave energy.

The best time to construct the proposed beach would be during Flathead Lake's low pool, which historically occurs in March and April. Therefore, ideally, the dynamic gravel beach at FHLSP-YB would be completed in March/April 2024, if all required permitting can be secured by that time (see Section IV, Table 1). If not, implementation of the proposed project would move to March/April 2025.

Affected Area / Location of Proposed Project

- Legal Description
    - Latitude/Longitude: 47.87538, -114.02888
    - Section, Township, and Range: Section 4, 24N 19W
    - Town/City, County, Montana: Yellow Bay, Lake County, Montana

- Location Map

***Figure 6**. FHLSP-YB Location Map*

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.

Under the proposed action, FWP would build a dynamic gravel beach at FHLSP-YB. The purpose of the proposed project is to:

- Stop the loss of existing shoreline and vegetation due to wave erosion.
- Provide a natural transition from the aquatic environment along the shoreline to the adjacent vegetative areas.
- Improve recreational opportunities along the shore of FHLSP-YB.

The intended result of building the dynamic gravel beach would be a shift from a net erosion dominated system to a net depositional system. The landscape would be composed of complex curved shorelines rather than conventional riprap.

If FWP prepared a cost/benefit analysis before completion of the EA, the EA must contain the cost/benefit analysis or a reference to it. ARM 12.2.432(3)(b).

	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. **Table 1** provides a summary of state requirements but 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
U.S. Army Corp of Engineers	Section 404 Permit Section 10 Permit	Permit authorizing the owner to dredge or fill material into Waters of the US. Permit authorizing the owner to construct any structure in or over navigable water bodies in the US.
Local Floodplain Administrator	Floodplain Permit	Permit authorizing the property owner to construct within the floodplain.
Confederated Salish and Kootenai Tribes	64-A Revised Clean Water Act: 401 Certification Request from the Tribal Water Quality Office	Permit authorizing the property owner to conduct activity within the lakeshore area generally along the south half of Flathead Lake. Permit authorizing the property owner to conduct activity that may result in any discharge into water of the US.

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**	
Permit Issuance, Enforcement Action, Fines	USACOE	Section 404 of the Clean Water Act	To protect, reduce or eliminate pollution in the Nation's water in order to maintain its integrity.	

Permit Issuance, Enforcement Action, Fines	USACOE	Section 10 of the Rivers and Harbors Act	To regulate work in a navigable water of the U.S. that would affect the course, location or condition of the waterbody.
Permit Issuance, Enforcement Action, Fines	Lake County Floodplain Administrator	2013 Lake County Floodplain Management Regulations	See Lake County Regulations Section 1.4 In general, to protect human life and health and manage environmental and economic impacts caused by flooding in mapped flood areas.
Permit Issuance	EPA and Confederated Salish and Kootenai Tribes	Clean Water Act Section 401 Certification Request	To establish the CSKT as the authority to manage water quality in waters of the U.S.
Permit Issuance, Enforcement Action, Fines	Confederated Salish and Kootenai Tribes	Shoreline Protection Office Permit 64A (Revised)	To protect the shoreline of water bodies within the Flathead Indian Reservation from impacts to water quality, fish and wildlife habitat, navigation and recreation, and the general character of the area.

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 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.

Alternative A: No Action

The “No Action” alternative represents the status quo and would therefore result in the continued erosion of the shoreline at FHLSP-YB. Specifically, the erosion would likely result in the eventual loss of the only access road for the neighboring residential property to the south. The shore north of the boat ramp would continue to erode and eventually result in the loss of parking and a road located within the boat launch area, which could impact the size of vehicle and trailer that could safely maneuver and launch at FHLSP-YB. The boat launch area would continue to require routine maintenance to remove cobble and debris after every moderate wind event.

Alternative B: Proposed Project

Under Alternative B, the proposed project, FWP would install a dynamic gravel beach at FHLSP-YB’s lake shore to halt shoreline erosion and provide a visitor friendly recreational beach. The dynamic gravel beach would include a spit on the south end of the property, ensuring space for the neighbor to access their private boating facilities. The proposal also includes the installation of a pier-dock on the south side of the boat ramp equipped with a screen to catch and prevent gravel from migrating north and onto the concrete boat ramp. The creek channel on the northside of the boat ramp would be armored to ensure creek and wave caused erosion halt while still providing for some natural creek movement. For design graphic, please refer to Figures 5 & 6 in *Section II: Background and Description of Proposed Project*.

	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. 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, prepare 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

VIII. General Setting of the Affected Environment

The analysis area for direct, secondary, and cumulative impacts on the physical environment and human population resources analyzed by this Draft EA includes FHLSP-YB, FLBS, and more broadly Lake County. Lake County covers approximately 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. (Wikipedia, Lake County, MT). The footprint of FHLSP-YB is approximately 14.26 acres within the 80-acre FLBS campus. The FLBS is located on the east side of Flathead Lake in Lake County and lies within the exterior boundaries of the Flathead Indian Reservation.

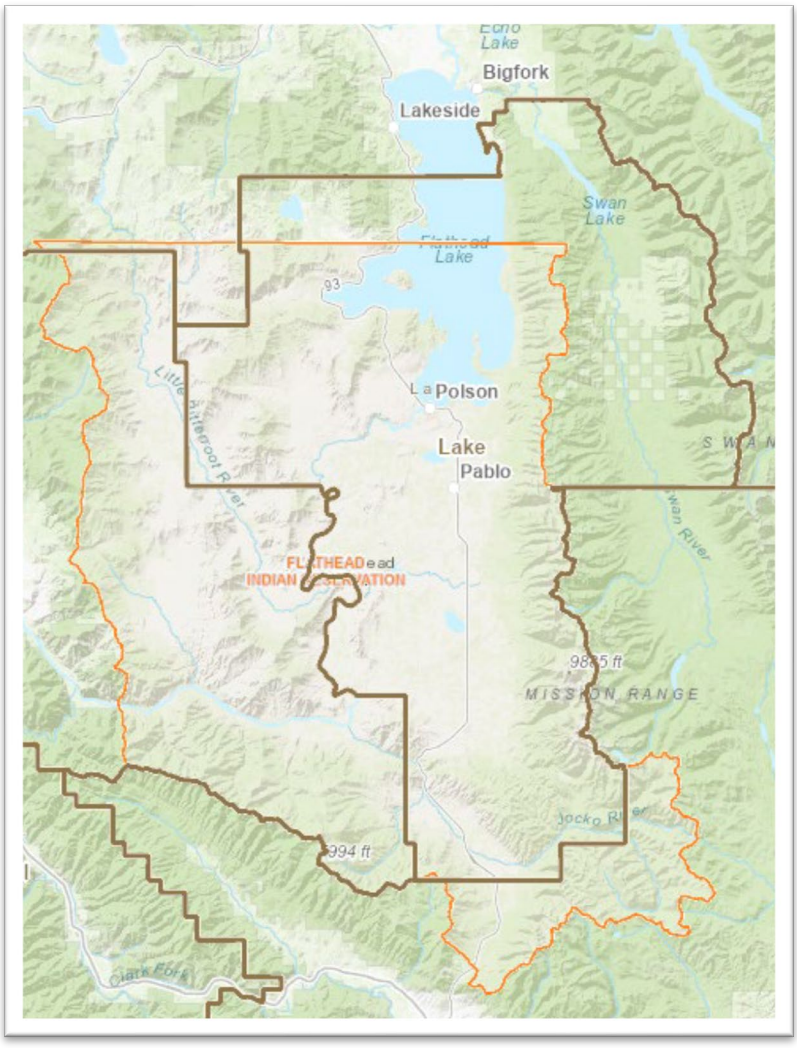


***Figure 7**. Lake County and Flathead Indian Reservation Boundaries.*

Physical Environment:
Lake County, like most counties in western Montana, is characterized by river valleys divided by rugged mountain ranges. Major drainages include the Flathead River, which forms Flathead Lake and ultimately flows into the Clark Fork River and the Swan River which flows into Flathead Lake near Bigfork, 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.

Twenty-two species of mammals, 4 species of reptile, and 2 species of amphibians have been documented in the vicinity of FHLSP-YB. Several species of native and non-native fish have also been documented in or adjacent to the park in Yellow Bay Creek and Flathead Lake.[2] Thirteen species of mammals and birds that are listed as species of concern have been observed in the vicinity of FHLSP-YB and are listed in *part 8, Unique, Endangered, Fragile or Limited Environmental Resources*, of this impacts analysis. Numerous avian species occur routinely or sporadically in the vicinity of FHLSP-YB, including 4 species of concern, as highlighted in *part 8* of this impacts analysis.

Human Population:
As of 2022, an estimated 1,122,867 people lived in Montana of which an estimated 32,853 resided in Lake County. The 2022 population estimate for Lake County reflects greater than a 2.4% annual growth rate since 2021, which surpasses the statewide growth rate of 1.5% for the same time period (Montana.gov; People and Housing, https://ceic.mt.gov/People-and-Housing/Population).

Over two-thirds of Lake County's land lies within the Flathead Indian Reservation; therefore, the human population of Lake County includes a large percentage of Native Americans. The demographic make-up of Lake County is identified in Table 4 below.

Race	Percent of Total (%)
White	67.9
Native American	29.8
Other	2.3

***Table 3** Lake County Demographics*

Economics:
In 2021, the median household income in the United States was $69,717. In Montana, median per household income was somewhat lower, at $63,357. For comparison, in 2021, the median per household income for Lake County was $53,154 (US Census 2021, ACS 5-Year Survey).

[2] Montana Natural Heritage Program – Montana Field Guide.

Lake County total is 1,651 square miles in size and is comprised of the following: Tribal Land 1,124 square miles or 68%, Federal Land 361 square miles or 22%, State Land 102 square miles or 6%. Most of the remaining land is privately owned.

Agriculture:
Montana supports a large agricultural economy and Lake County is no different. In 2017, there were an estimated 27,048 farms and ranches across Montana. The most common agricultural activities of these farms and ranches include raising beef cattle, growing forage (hay) for cattle, and growing grain crops (wheat, oats, barley). Sheep, hogs, and dairy cattle were also raised in smaller numbers.

Timber/Wood Products:
Most of Montana's forested lands (23 million acres) are located within the western part of the state. Nearly four million acres of these forest 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 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 and in 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 (Figure12).

Mining:
Large mineral deposits, ranging from talc to gold, are located throughout western Montana. 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, 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. Western Montana is nationally renowned for its high-quality fishing, hunting, camping, hiking, river floating, 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 and private landowners.

IX. 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 B, the Proposed Project (Section XI.A and B).

No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. The information below identifies past, present, and related 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.

Related Past, Present, and Future Actions:

The FHLSP-YB is one of six units that comprise FHLSP. The FHLSP-YB is a subset of the University of Montana’s FLBS, which was created by the Montana legislature in 1941. Cumulative impacts from past state actions at FLBS, FHLSP, and more specifically FHLSP-YB, 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 the creation, development, maintenance, and improvement of FHLSP-YB is to provide high quality and safe recreational opportunities for visitors. Therefore, FWP expects that any cumulative impacts associated with the proposed project would be long-term, negligible to moderate, and beneficial.

The following list identifies collective impacts on the affected human environment of the proposed action when considered in conjunction with other past, present, and known future actions related to the proposed action by location or generic type:

- Flathead Lake State Park – Yellow Bay Unit Road and Tent Camping Improvements (2023, FWP-SEA-POR-R1-23-007). The purpose of this project, which has not been implemented, to date, is to improve existing FHLSP-YB roads (pave), improve air quality by limiting fugitive dust from vehicle traffic on unpaved roads, improve safety conditions at the park’s vehicle entrance, relocate the existing campground/tent sites, and to enhance the overall FHLSP-YB user experience. With consideration for potential impacts associated with the proposed project, no significant adverse cumulative impacts would be expected. Any cumulative impacts associated with the proposed project would be long-term, negligible to moderate, and beneficial.

Based on the environmental review conducted for the above-referenced project(s), and with consideration of potential 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. 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.

State designation or “listing” of *species of concern* and *species of special concern* and federal “listing” of *threatened* under the ESA constitute prior actions subject to cumulative impacts analysis pursuant to MEPA. Specific to the ESA-listed *threatened* grizzly bear 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. 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.

In order to find that habitat modification, such as that proposed, 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 *significant adverse impact* to occur to grizzly bears or bull trout (USFWS, FWS/AES/067974, April 26, 2018):

- *Is the modification of habitat significant*? Yes. Under the proposed action, FWP would build a dynamic gravel beach at FHLSP-YB, which would significantly and beneficially alter the ecology of the FHLSP-YB shoreline environment. The purpose of the proposed project is to stop the loss of existing shoreline and vegetation due to wave erosion; provide a natural transition from the aquatic environment along the shoreline to the

adjacent vegetative areas; and improve recreational opportunities along the shore of FHLSP-YB. The intended effect of the proposed project is more fully described in *Section II, Background and Description of Proposed Action*." Grizzly bear and bull trout are listed as "threatened" under the federal endangered species act. While grizzly bears may pass through FHLSP- YB, the park does not include critical habitat; therefore, grizzly bears would not be expected to occupy or otherwise routinely use the affected area, including the proposed dynamic gravel beach, and no impacts would be expected. Further, while bull trout do inhabit Flathead Lake and may use Yellow Bay Creek for part of their life cycle, the proposed project would not be expected to adversely impact the species because the project would be occurring at the lake's low pool and not during potential spawning use by bull trout. The project will result in a natural habitat by the time bull trout may use the creek for fall spawning. Therefore, no significant adverse cumulative impacts to the identified ESA listed species would be expected because of the proposed project.

- *If so, does that modification also significantly impair an essential behavior pattern of an ESA-listed species*? No.
- *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*? No.

Therefore, no significant, adverse cumulative impacts to the identified ESA-listed species would be expected because of the proposed project. Further, FWP determined it is appropriate to apply the same federal ESA guidance when evaluating the potential for *significant adverse impacts* (harm) to state-listed *species of concern* and/or *species of special status*. When the federal ESA guidance and associated process is applied to the identified state-listed species, again, no *significant adverse cumulative impacts* would be expected because of the proposed project.

Further, several guiding documents inform, have informed, and will continue to inform actions at state parks across Montana, including FHLSP-YB. 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:

- FWP – Enhancing Montana's Outdoor Recreation Legacy – 2020-2024 Statewide Comprehensive Outdoor Recreation Plan
- FWP – Montana State Parks Strategic Plan 2018
- FWP – Parks in Focus Commission Final Recommendations 2018
- FWP – Montana State Parks Heritage Resources Strategic Plan 2017-2024
- FWP – Montana FWP Noxious Weed Management Plan
- USFWS – Endangered Species Act

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 FHLSP-YB and would thereby limit the potential for any adverse cumulative impact to the affected human environment. Therefore, FWP expects that any cumulative impacts associated with the proposed project would be long-term, negligible to moderate, and beneficial.

FWP is unaware of any other past, present, or future related projects occurring within, or in the vicinity of, FHLSP-YB. Again, 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.

X. 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.

XI. 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):
FHLSP-YB is predominantly Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest with riparian habitat associated with Yellow Bay Creek and Alpine-Montane Wet Meadow in the park's southeastern corner associated with seasonal seepage. A broad array of terrestrial and avian animals may utilize the park or surrounding habitats either continuously or sporadically.

Twenty-two species of mammals, 4 species of reptile, and 2 species of amphibians have been documented in the vicinity, several species of native and non-native fish have been documented in or adjacent to the park in Yellow Bay Creek and Flathead Lake.[3] Thirteen species of mammals and birds that are listed as species of concern have been observed in the vicinity of FHLSP-YB and are listed in part 8 of this impacts analysis. Numerous avian species occur routinely or sporadically in the vicinity of FHLSP-YB, including 4 species of concern, as highlighted in *part 8, Unique, Endangered, Fragile or Limited Environmental Resources*, of this impacts analysis.

Direct Impacts:
No significant adverse direct impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project. Some temporary adverse direct impacts from increased water turbidity caused by construction and development of the dynamic gravel beach may occur. However, any such direct impacts would be short-term and minor, lasting only as long as the construction period for the proposed project. Also, the use of heavy equipment and vehicles for development and construction of the dynamic gravel beach may temporarily displace certain wildlife species from the affected area by causing them to avoid the affected areas while the dynamic gravel beach is constructed. However, because FHLSP-YB constitutes an existing recreational resource, the presence of people and vehicles would be consistent with the current and historic use of the affected area. Therefore, any adverse direct impacts would be short-term, negligible to minor, and consistent with historic impacts.

Secondary Impacts:
No significant adverse secondary impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project. Some adverse secondary impacts from turbidity may occur once the water level rises and initially enters the disturbed area following construction activities

[3] Montana Natural Heritage Program – Montana Field Guide.

associated with the proposed project. However, any adverse secondary impacts would be temporary and negligible to minor.

Ultimately, the proposed project would be expected to benefit the riparian ecosystem of FHLSP-YB by halting shoreline erosion, thereby stabilizing it, and creating conditions conducive to a more natural shoreline habitat for affected plant and animal species. More specifically, the proposed dynamic gravel beach would stop significant erosion from occurring at FHLSP-YB, thus halting further loss of park vegetation and riparian habitats which in turn would reduce water turbidity during storm events that erode the soil bank and ultimately benefit terrestrial, avian, and aquatic species located in the affected area. The proposed dynamic gravel beach would ensure a healthy riparian area exists between the lake and the adjacent vegetative areas of FHLSP-YB, which would further support and improve conditions for affected species. Dynamic gravel beaches promote the growth of riparian plant species thereby partially reclaiming previously lost vegetative areas and associated important animal and plant habitats at FHLSP-YB. Water turbidity would also be reduced with the halt of soil and bank erosion thereby improving the natural aquatic environment and associated near-shore habitats for affected plant and animal species. 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. FWP's acquisition of the land now encompassing the FHLSP-YB occurred in 1941. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Further, no significant adverse impacts to fish, wildlife, and associated habitats have been identified through prior related environmental review and no significant adverse cumulative impact would be expected because of the proposed project. Therefore, with consideration for any past, present, or known future, related environmental review associated with FHLSP-YB, any adverse cumulative impacts would be short-term and negligible to moderate. Any beneficial cumulative impacts would 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. For a more detailed discussion of potential cumulative impacts associated with the proposed project see Section VIII, Cumulative Impacts Analysis.

2. Water Quality, Quantity, and Distribution

Existing Environment/Baseline Conditions (No Action Alternative):
Flathead Lake is the largest natural freshwater lake in the western US (by surface area) outside of Alaska. Flathead Lake is currently described as oligotrophic which means lacking in plant nutrients, but FLBS (Flathead Lake Biological Station) monitoring indicates that nutrient inputs are increasing. Flathead Lake's biological community is much different today than when FLBS was founded in 1941. The Lake originally supported 11 native fish species, most notably westslope cutthroat trout and bull trout. Today, the fish community is more like the Great Lakes than rocky mountain lakes, as it is dominated by nonnatives, particularly lake trout, lake whitefish and yellow perch. Decreases in water quality have led federal and state agencies to classify Flathead Lake as "Impaired" due to human caused increases in nutrient and sediments, and to work on creating a long-term plan for water quality protection. Yellow Bay Creek flows through FHLSP-YB into Flathead Lake.

Direct Impacts:

No significant adverse direct impacts to water quality, quantity, and distribution would be expected because of the proposed project. In fact, no direct impacts to water quantity or distribution would be expected. However, some temporary, adverse direct impacts from increased water turbidity caused by construction and development of the dynamic gravel beach may occur. Any such direct impacts would be short-term and minor, lasting only as long as the construction period for the proposed project.

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. However, some adverse secondary impacts to water quality from increased turbidity may occur once the water level initially rises to full pool during the spring following construction activities associated with the proposed project. As water levels initially rise during the spring, construction disturbance to the lakebed from project construction activities may increase water turbidity. However, any adverse secondary impacts would be temporary, negligible to minor, and limited to the first time the lake reaches full pool following implementation of the proposed project.

Further, the proposed project would stabilize the affected shoreline at FHLSP-YB. The stabilized shoreline would reduce sediment load to the lake and ultimately limit water turbidity in the affected area when the lake is at full pool. The design of the dynamic beach includes spits and bays which would reduce or interrupt longshore currents and encourage depositional conditions thereby further limiting water turbidity associated with shoreline erosion. Ultimately, the proposed project would be expected to benefit the riparian ecosystem of FHLSP-YB by halting shoreline erosion and creating conditions conducive to a more natural shoreline. More specifically, the proposed dynamic gravel beach would stop significant erosion from occurring at FHLSP-YB, thus halting further loss of park vegetation and riparian habitats which in turn would reduce water turbidity during storm events that erode the soil bank, ultimately benefiting water quality in the affected area. 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. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects, including the proposed project. As applicable, each historic FWP action or project has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to water quality, quantity, and distribution would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts associated with the proposed project see Section VIII, Cumulative Impacts Analysis.

3. Geology

Existing Environment/Baseline Conditions (No Action Alternative):
Geology in the affected area is mapped by the Montana Bureau of Mines and Geology. The 2004 report describes surficial geology as roughly 50-100 feet of till overlying bedrock. In this general area, located along the east side of Flathead Lake, the till can be intermixed with glacial lake deposits and alluvium, but the local well logs indicate glacial till is predominant in the FHLSP-YB area. The bedrock underlying the till is associated with the Piegan Group which consists of dolomite (slightly altered limestone), limestone and argillite (shale).

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 FHLSP-YB. Further, the proposed project does not entail any excavation, only gravel deposits; therefore, no impacts to geology would occur because of the proposed project.

Secondary Impacts:
No significant adverse secondary impacts to geology would be expected because of the proposed project. The proposed project does not entail any excavation, only gravel deposits; therefore, no impacts to geology would occur because of the proposed project.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. Since FWP's acquisition of the SDWMA property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to geology would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

4. Soil Quality, Stability, and Moisture

Existing Environment/Baseline Conditions (No Action Alternative):
Existing soils are described by the USDA as Courville gravelly silt loam ranging from 4% to 15% slopes. The soils are moderately to well drained and have moderate infiltration rates when thoroughly wet. Mucky peat can be found in the first few inches, and gravelly or ashy silt loam is generally found to a depth of 15". Soils at 15-33" contain very gravelly loam, very gravelly fine sandy loam, and very gravelly sandy loam. Soils from 33-60" are listed as very gravelly loam, very gravelly, silt loam and very gravelly, fine sandy loam. Soil chemistry is slightly acidic with an average pH of 5.6-7.3. There are no apparent signs of instability such as slides or depressions. The main park property adjacent to the shoreline is heavily vegetated.

Direct Impacts:
No significant adverse direct impacts to soil quality, stability, and moisture would be expected because of the proposed project. No impacts to soil quality and moisture would be expected; however, some impacts to soil stability would occur because of the proposed project. The proposed dynamic gravel beach would stabilize and limit or halt the loss of shoreline soil at FHLSP-YB, particularly during storm events that currently erode the soil bank. Further, the proposed project consists of gravel deposits and no excavation activity or deposition of soils would occur. Gravel trucks necessary to implement the proposed project (gravel transport) would travel on existing FHLSP-YB roads and the existing boat ramp to deposit gravel along the shoreline. Also, construction and development activities would take place when the lake is at low pool. Therefore, all shoreline traffic would occur over existing gravel beaches located below the normal high-water mark. Therefore, no loss of soil or soil compaction would be expected because of the proposed project. Any direct impacts to soil stability would be short- and long-term, minor to moderate, and beneficial.

Secondary Impacts:
No significant adverse secondary impacts to soil quality, stability, and moisture would be expected because of the proposed project. No impacts to soil quality and moisture would be expected. The proposed project would have a beneficial long-term effect on lakeshore bank/soil stability and soil retention by preventing further soil erosion. The proposed dynamic gravel beach would stabilize and limit or halt the loss of shoreline soil at FHLSP-YB, particularly during storm events that currently destabilize and erode the soil bank. Any secondary impacts to soil stability would be short- and long-term, minor to moderate, and beneficial.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects, including the proposed project. As applicable, each historic FWP action or project has been subject to, and complied with, MEPA.

As a result of ongoing human infrastructure development on or near Flathead Lake (riprap, seawalls, docks, dams, etc.), shoreline soil stability has been degraded and soil erosion has dramatically increased. To date, approximately 2.5 miles of eroding shoreline on the north shore of Flathead Lake has been stabilized by building dynamic gravel beaches, such as that proposed. These shorelines are now dynamically stable and undergoing a natural restoration process as new aquatic and riparian vegetation recolonize the area associated with the beaches. In this sense development of a dynamic gravel beach, as proposed, constitutes a living shoreline solution to the shoreline stability and soil erosion problem. The CSKT have also adopted this approach to deal with their shoreline erosion problems at Salish Point, located in Polson and along the Blue Bay campground shoreline (Lorang 2003 and 2006b). The result of the proposed action would further objectives to improve shoreline soil stability and limit soil loss to erosion.

Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to soil quality, stability and moisture would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

5. Vegetation Cover, Quantity, and Quality

Existing Environment/Baseline Conditions (No Action Alternative):
Vegetation at FHLSP-YB is predominantly Rocky Mountain dry-mesic montane mixed conifer forest and riparian habitat associated with Yellow Bay Creek. Additionally alpine-montane wet meadow occurs in FHLSP-YB's southeastern corner associated with seasonal seepage.

Direct Impacts:
No significant adverse direct impacts to vegetation cover, quantity, and quality would be expected because of the proposed project. Because the proposed project consists of gravel deposits and no excavation activity would occur, no disturbance to terrestrial vegetation would be expected because of the proposed project. Gravel trucks would be used to implement the proposed project (gravel transfer) and would travel on existing FHLSP-YB roads and the existing boat ramp before driving on and depositing gravel along the shoreline. Further, the proposed project would be implemented during low pool; therefore, all shoreline travel necessary to implement the proposed project would occur on

existing gravel beaches located below the high-water mark. Some adverse direct impacts to aquatic vegetation may occur because of the proposed project, as staff and heavy equipment used to develop the gravel beach may disturb the aquatic environment during project construction activities. However, the work area is generally void of vegetation and any adverse direct impacts to aquatic vegetation would be short-term, minor, and would be expected to regenerate within a single growing season.

Secondary Impacts:
No significant adverse secondary impacts to vegetation cover, quantity, and quality would be expected because of the proposed project. Vegetation along the shoreline would become more stable and likely expand as a result of the proposed project, which will stabilize the shoreline bank while providing a more natural transition from land to water preferred by native vegetation. In addition, development and construction activities associated with the proposed project would increase the potential for the spread of noxious weeds leading to increased potential for noxious weed infestation of FHLSP-YB. Any potential establishment or spread of noxious weeds would be mitigated by annual weed monitoring followed by chemical and/or biological treatment according to weed management practices contained in FWP's Integrated Noxious Weed Management Plan. Therefore, any adverse direct impacts associated with the increased potential for noxious weed infestation would be long-term, negligible to minor, and mitigated by travel on existing roads/boat launch and ongoing active monitoring for and removal of noxious weeds, as needed.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects, including the proposed project. As applicable, each historic FWP action or project has been subject to, and complied with, MEPA.

The beach at FHLSP-YB primarily consists of gravel cobble. However, there are sections of riprap, primarily on the south end of the property, that were historically placed in the gap between the gravel cobble and shoreline vegetation to prevent shoreline erosion and support existing shoreline vegetation. However, rather than preventing erosion and the inevitable loss of vegetation, these sections of shoreline have experienced severe erosion around the riprap revealing soil cut banks bare of vegetation. The proposed dynamic gravel beach would limit or eliminate such erosion and further support the objective to maintain existing shoreline vegetation. Therefore, any cumulative impacts to existing shoreline vegetation would be long-term, moderate to major, and beneficial.

Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to vegetation cover, quantity, and quality would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

6. Aesthetics

Existing Environment/Baseline Conditions (No Action Alternative):
The beach at FHLSP-YB primarily consists of gravel cobble. There are sections of riprap, primarily on the south end of the property, that were placed in the gap between the gravel cobble and the vegetation on the shore. This riprap was placed decades ago to prevent shoreline erosion. In these sections, severe erosion has occurred around the riprap revealing soil cut banks bare of vegetation. The shoreline on the

north end of the property, specifically north of the boat ramp, has a one- to two- foot bank that eroded out of historic roadway and pavement infrastructure.

Direct Impacts:
No significant adverse direct impacts to aesthetics would be expected because of the proposed project. Some adverse direct impacts may result from construction activities due to increased levels of noise, odors, dust, and the presence of equipment. Any adverse direct impacts would be short-term and minor, lasting only as long as the construction phase of the proposed project.

Secondary Impacts:
No significant adverse secondary impacts to aesthetics would be expected because of the proposed project. The proposed project would re-establish a more natural shoreline that would promote vegetation growth in the long-term, thus providing a more aesthetically pleasing shoreline. Also, the proposed project would use local materials to develop a natural appearance. Further, the existing eroding banks have become unnatural and unsightly. The proposed project would return the shoreline and bank sections to a more natural state and appearance. Any secondary impacts would be long-term, minor to moderate, and beneficial.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects, including the proposed project. As applicable, each historic FWP action or project has been subject to, and complied with, MEPA.

The beach at FHLSP-YB primarily consists of gravel cobble. However, there are sections of riprap, primarily on the south end of the property, that were historically placed in the gap between the gravel cobble and shoreline vegetation to prevent shoreline erosion and support existing shoreline vegetation. However, rather than preventing erosion and the inevitable loss of vegetation, these sections of shoreline have experienced severe erosion around the riprap revealing soil cut banks bare of vegetation. The proposed dynamic gravel beach would limit or eliminate such erosion and further support the objective to maintain existing shoreline vegetation thereby improving the aesthetic nature of the affected area. Any cumulative impacts to aesthetics would be long-term, moderate, and beneficial.

Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to aesthetics would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

7. Air Quality

Existing Environment/Baseline Conditions (No Action Alternative):
According to the 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 unpaved roads (fugitive

dust), vehicle exhaust emissions, and various agricultural practices (vehicle exhaust emissions and fugitive dust)..

Four areas in the general vicinity of 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 PM_{10} Maintenance Areas include the following: Whitefish, Columbia Falls, and Kalispell. In addition, the town of Polson is currently classified as a PM_{10} nonattainment area. Therefore, Montana's SIP includes requirements applicable to sources of PM_{10} located within or near (~ 2 km) the Polson PM_{10} nonattainment area boundary. Because the proposed project would not be located within or near an existing PM_{10} Maintenance Area or PM_{10} Nonattainment Area, no air quality restrictions currently exist for the area affected by the proposed project.

Direct Impacts:
No significant adverse direct impacts to air quality would be expected because of the proposed project. Air quality in the area affected by the proposed project is currently unclassifiable or in compliance with all applicable NAAQS. Therefore, no air quality restrictions currently exist for 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 unpaved roads (fugitive dust), vehicle exhaust emissions, and various agricultural practices (vehicle exhaust emissions and fugitive dust). Vehicle and heavy equipment would be used for construction of the dynamic gravel beach; therefore, increased fugitive dust emissions may be generated during the construction phase due to heavy equipment travel/hauling over unpaved roads and the dumping of gravel materials. Combustion of fossil fuels to operate vehicles and heavy equipment used to implement the proposed project would also generate vehicle exhaust emissions (primarily CO, $PM_{2.5}$, and ground level O_3). However, because the construction phase of the proposed project would be short-term, and the number of vehicles and heavy equipment needed to complete construction activities would be limited, any adverse direct impacts to air quality would be short-term, negligible, and mitigated by dust control practices, as necessary. The proposed project would not be expected to cause or contribute to a NAAQS violation in the affected area.

Secondary Impacts:
No significant adverse secondary impacts to air quality would be expected because of the proposed project. Following construction activities, no 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. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to air quality would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

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

Existing Environment/Baseline Conditions (No Action Alternative):
According to a search of the Montana Natural Heritage Program database, 13 state designated wildlife species of concern have been identified within or within the vicinity of FHLSP-YB, including the following: fisher, grizzly bear, long-eared myotis, little brown myotis, long-legged myotis, western pygmy shrew, pileated woodpecker, Lewis's woodpecker, yellow billed cuckoo, westslope cutthroat trout, bull trout, and pygmy whitefish. Bald eagles, which are listed as a special status species have also been observed within and nearby FHLSP-YB. Grizzly bear and bull trout are listed as "threatened" under the federal endangered species act. While grizzly bears may pass through FHLSP- YB, the park does not include critical habitat; therefore, grizzly bears would not be expected to occupy or otherwise routinely use the affected area. Further, while bull trout do inhabit Flathead Lake and may use Yellow Bay Creek for part of their life cycle, the proposed project would not be expected to adversely impact the species because the project would be occurring at the lake's low pool and not during potential spawning use by bull trout. According to a search of the Montana Natural Heritage Program database, 6 plant species of concern have been identified within or within the vicinity of FHLSP-YB, including the following: Clustered Lady Slipper, Giant Helleborine, Adder's Tongue, Desert Groundsel, Giant Golden Moss, and Douglas' Neckera Moss. None of the above listed species occur within the proposed project area of the gravel beach or mouth of Yellow Bay Creek.

Direct Impacts:
No significant adverse direct impacts to unique, endangered, fragile, or limited environmental resources would be expected because of the proposed project. The presence of any animal and/or plant species of concern, species of special status, species federally listed as threatened or endangered, or any lands classified as important or critical habitat located within or near the affected area were assessed through the Montana Natural Heritage Program. As noted above under the section titled "Existing Environment/Baseline Conditions (No Action Alternative)," 13 wildlife "species of concern," including two species listed as "threatened" under the federal ESA, and a single species listed as a "species of special concern," have been identified within or within the vicinity of FHLSP-YB. Also, 6 plant "species of concern" have been identified within or within the vicinity of FHLSP-YB.

Flathead Lake is designated as critical habitat for Bull Trout. The shallow water habitat adjacent to the project area is not frequently used by Bull Trout and this project is not expected to affect them. All construction would be completed when the lake level is low preventing fish from occupying the area.

Because FHLSP-YB has historically been used for recreational purposes any direct impacts to unique, endangered, fragile, or limited environmental resources 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. These practices would support limiting potential adverse direct impacts to the identified unique, endangered, fragile, or limited environmental resources as well as many other wildlife species located within or periodically using FHLSP-YB. 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.

Secondary Impacts:
No significant adverse secondary impacts to unique, endangered, fragile, or limited environmental resources would be expected because of the proposed project. The proposed project would generally improve affected FHLSP-YB's existing water resources (Flathead Lake, Yellow Bay Creek) and their associated riparian habitats. Therefore, FWP expects affected wildlife, including any species of concern,

species of special concern, ESA-listed species, and/or ESA-delisted species inhabiting or using the FHLSP-YB, would benefit from the proposed project.

State designation or "listing" of *species of concern* and *species of special concern* and federal "listing" of *threatened* under the ESA constitute prior actions subject to cumulative impacts analysis pursuant to MEPA. Specific to the ESA-listed *threatened* grizzly bear 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. 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.

In order to find that habitat modification, such as that proposed, constitutes a taking or a *significant adverse impact* to 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 *significant adverse secondary impact* to occur to grizzly bears and/or or bull trout (USFWS, FWS/AES/067974, April 26, 2018):

- *Is the modification of habitat significant*? Yes. Under the proposed action, FWP would build a dynamic gravel beach at FHLSP-YB, which would significantly and beneficially alter the ecology of the FHLSP-YB shoreline environment. The purpose of the proposed project is to stop the loss of existing shoreline and vegetation due to wave erosion; provide a natural transition from the aquatic environment along the shoreline to the adjacent vegetative areas; and improve recreational opportunities along the shore of FHLSP-YB. The intended effect of the proposed project is more fully described in *Section II, Background and Description of Proposed Action*." Grizzly bear and bull trout are listed as "threatened" under the federal endangered species act. While grizzly bears may pass through FHLSP- YB, the park does not include critical habitat; therefore, grizzly bears would not be expected to occupy or otherwise routinely use the affected area, including the proposed dynamic gravel beach, and no impacts would be expected. Further, while bull trout do inhabit Flathead Lake and may use Yellow Bay Creek for part of their life cycle, the proposed project would not be expected to adversely impact the species because the project would be occurring at the lake's low pool and not during potential spawning use by bull trout. Therefore, no significant adverse cumulative impacts to the identified ESA listed species would be expected because of the proposed project.
- *If so, does that modification also significantly impair an essential behavior pattern of an ESA-listed species*? No.
- *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*? No.

Therefore, no significant, adverse secondary impacts to the identified ESA-listed species would be expected because of the proposed project. Further, FWP determined it is appropriate to apply the same federal ESA guidance when evaluating the potential for *significant adverse impacts* (harm) to state-listed *species of concern* and/or *species of special status*. When the federal ESA guidance and associated process is applied to the identified state-listed species, again, no *significant adverse cumulative impacts* would be expected because of the proposed project.

Overall, the proposed project would not be expected to impede recovery of any of the listed species and may establish conditions that are more conducive to their recovery. Any secondary impacts would be long-term, minor, and beneficial.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA.

Because FHLSP-YB has historically been used for recreational purposes any cumulative impacts to the identified species of concern, species of special concern, ESA-listed species, and/or ESA-delisted 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. These practices would support limiting adverse cumulative impacts to the identified species as well as many other wildlife species located within or periodically using FHLSP-YB. 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.

Further, the proposed project would not be expected to impede the recovery of any species of concern, species of special status, ESA-listed species, and/or ESA-delisted species and may establish conditions that are more conducive to their recovery. Therefore, any adverse cumulative impacts to wildlife, including any species of concern, species of special status, ESA-listed species, and/or ESA-delisted species would be short-term, negligible to minor, and consistent with historic impacts. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

9. Historical and Archaeological Sites

Existing Environment/Baseline Conditions (No Action Alternative):
In keeping with the Montana Antiquities Act and related regulations, all undertakings within State Parks are assessed for their potential to affect cultural resources. Any temporary or permanent developments within FHLSP-YB will require prior cultural resource assessment. Where indicated, cultural resource inventories including pedestrian survey and/or subsurface testing will occur through consultation with the State Historic Preservation Office. The process for cultural resource inventory and consultation is outlined in Administrative Rules 12.8.501-12.8.510. FWP also consults with all Tribal Historic Preservation Offices affiliated with each park in accordance with FWP's tribal consultation guidelines.

In 2023, FWP hired a private company to complete a cultural resource inventory of FHLSP-YB, including the beach. No previous cultural resource inventory had occurred within Yellow Bay State Park. This inventory revealed that several of the structures within the park, including the shower house and bathrooms, are over 50 years old. Of those structures, the only two that meet the criteria of eligibility for the National Register of Historic Places, as outlined in the National Historic Preservation Act, are the memorial bridge and plaque built to commemorate the 1969 death of five local mountaineers. All of the other built structures in the park do not meet the criteria of eligibility for the National Register of Historic Places. The current proposed action does not impact the memorial bridge and plaque, nor does it impact any other known cultural resources that are eligible for the National Register of Historic Places.

The cultural resource inventory and consultation with the SHPO and relevant Tribal Historic Preservation Offices will determine whether cultural resource monitoring is required during implementation. In addition, FWP is committed to working with the Kootenai Culture Committee and Selis-Qlispe Culture Committee to develop educational and interpretive material regarding the cultural significance of FHLSP-YB.

Direct Impacts:
No significant adverse direct impacts to historic and archaeological sites would be expected because of the proposed project. In keeping with the Montana Antiquities Act and related regulations (12.8.501-12.8.510), all undertakings on state lands are assessed by a qualified archaeologist for their potential to affect cultural resources. The process for this assessment may include a cultural resource inventory and evaluation of cultural resources within or near the project area, in consultation with the State Historic Preservation Office (SHPO). FWP also consults with all Tribal Historic Preservation Offices (THPO) affiliated with each affected property in accordance with FWP's Tribal Consultation Guidelines. If cultural resources within or near the project area are recorded that are eligible for the National Register of Historic Places, they will be protected from adverse effects through adjustments to the project design or cancellation of the project if no design alternatives are available. If cultural resources are unexpectedly discovered during project implementation, FWP will cease implementation, and contact FWP's Heritage Program and/or SHPO and affected THPOs for further evaluation. Therefore, no adverse direct impacts would be expected because of the proposed project.

In 2023, FWP hired a private company to complete a cultural resource inventory of FHLSP-YB, including the beach. No previous cultural resource inventory had occurred within Yellow Bay State Park. This inventory revealed that several of the structures within the park, including the shower house and bathrooms, are over 50 years old. Of those structures, the only two that meet the criteria of eligibility for the National Register of Historic Places, as outlined in the National Historic Preservation Act, are the memorial bridge and plaque built to commemorate the 1969 death of five local mountaineers. All of the other built structures in the park do not meet the criteria of eligibility for the National Register of Historic Places. The current proposed action does not impact the memorial bridge and plaque, nor does it impact any other known cultural resources that are eligible for the National Register of Historic Places.

Secondary Impacts:
No significant adverse secondary impacts to historic and archaeological sites would be expected because of the proposed project. In keeping with the Montana Antiquities Act and related regulations (12.8.501-12.8.510), all undertakings on state lands are assessed by a qualified archaeologist or historian for their potential to affect cultural resources. The process for this assessment may include a cultural resource inventory and evaluation of cultural resources within or near the project area, in consultation with the SHPO. FWP also consults with all THPOs affiliated with each affected property in accordance with FWP's Tribal Consultation Guidelines. If cultural resources within or near the project area are recorded that are eligible for the National Register of Historic Places, they will be protected from adverse effects through adjustments to the project design or cancellation of the project if no design alternatives are available. If cultural resources are unexpectedly discovered during project implementation, FWP will cease implementation, and contact FWP's Heritage Program and/or SHPO and affected THPOs for further evaluation. Therefore, no adverse secondary impacts would be expected because of the proposed project.

In 2023, FWP hired a private company to complete a cultural resource inventory of FHLSP-YB, including the beach. No previous cultural resource inventory had occurred within Yellow Bay State Park. This inventory revealed that several of the structures within the park, including the shower house and bathrooms, are over 50 years old. Of those structures, the only two that meet the criteria of eligibility for the National Register of Historic Places, as outlined in the National Historic Preservation Act, are the memorial bridge and plaque built to commemorate the 1969 death of five local mountaineers. All of the other built structures in the park do not meet the criteria of eligibility for the National Register of Historic Places. The current proposed action does not impact the memorial bridge and plaque, nor does it impact any other known cultural resources that are eligible for the National Register of Historic Places.

Cumulative Impacts:

No significant adverse cumulative impacts would be expected because of the proposed project. Since FWP's acquisition of the property, FWP has proposed and implemented several projects on the affected property, including the proposed project. Each historic FWP project or action has been subject to, and complied with, MEPA. Pursuant to prior environmental review for FHLSP-YB, a cultural resource inventory has been previously developed and evaluated for the area affected by the proposed project. A recent cultural resource inventory revealed that several of the structures within the park, including the shower house and bathrooms, are over 50 years old. Of those structures, the only two that meet the criteria of eligibility for the National Register of Historic Places, as outlined in the National Historic Preservation Act, are the memorial bridge and plaque built to commemorate the 1969 death of five local mountaineers. All of the other built structures in the park do not meet the criteria of eligibility for the National Register of Historic Places. The current proposed action does not impact the memorial bridge and plaque, nor does it impact any other known cultural resources that are eligible for the National Register of Historic Places.

To date, no significant adverse cumulative impacts to any identified heritage properties have been documented in association with previous projects conducted at the affected site. When cultural resources within or near the project area are recorded and are deemed eligible for the National Register of Historic Places, they must be protected from adverse impacts through adjustments to the project design or cancellation of the project if no design alternatives are available. Further, no new ground disturbing activities are proposed at the affected site under the proposed action. Therefore, no adverse cumulative impacts to any known cultural resources located on or near the project area would be expected because of the proposed project.

If, in the future, FWP undertakes any ground disturbing activities at the affected site, additional consultation with SHPO and affected THPOs would occur prior to project approval and additional review and analysis of potential impacts to any identified cultural resources would be conducted at that time, in accordance with the applicable requirements described previously. Any necessary mitigations would also be identified and implemented prior to project approval. If additional cultural resources are unexpectedly discovered during project implementation, FWP would cease any implementation practices with the potential to impact such resources and contact FWP's Heritage Program for further evaluation.

For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

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

Existing Environment/Baseline Conditions (No Action Alternative):
FHLSP-YB's current land footprint is approximately 14.26 acres located on the east shore of Flathead Lake in Lake County and lies within the exterior boundaries of the Flathead Indian Reservation. FHLSP-YB is available for day use, including the boat ramp, year-round, and overnight use from April 1 to October 31 of each year. During the camping season, the park provides public drinking water. The park utilizes two RV campsites to accommodate seasonal park hosts. The RV sites provide electrical service, drinking water and sewage connection to the FLBS sewage treatment facility. There is one restroom with flushing toilets available for public use approximately May 1- October 1 of each year. Total Park electrical consumption has seen a three-year average of 600-kilowatt hour per month for the camping season, with peak usage in August. The August three-year average is 1,200 kilowatt hours for the month. Water usage at the park in 2022 was approximately 136,000 gallons.

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. The proposed project would not change the existing land footprint of FHLSP-YB and would not require or change existing water use at FHLSP-YB; therefore, no impacts to the environmental resources of land and water would be expected because of the proposed project. Further, some short-term, negligible to minor adverse direct impacts to air quality may be realized during the construction phase of the proposed project; however, no ongoing adverse impacts or demands for air would occur because of the proposed project. Fuel would be required to operate equipment and vehicles used to develop the proposed project. However, any adverse direct impacts or demands for energy resources would be short-term and negligible, as the proposed project and associated construction activities are relatively small and the construction phase 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.

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. As identified previously through the analyses of potential direct impacts to terrestrial, avian, and aquatic life and habitats; water quality, quantity, and distribution; soil quality, stability, and moisture; air quality; some adverse impacts to the environmental resources of water, land, and air may occur because of the proposed project. However, as noted previously, any such impacts would be short- and long-term, negligible to minor, and adequately mitigated. The proposed project would not change the existing land footprint of FHLSP-YB and would not require or change existing water or energy use at FHLSP-YB. Further, as identified previously through the analyses of potential secondary impacts to water quality, quantity, and distribution; geology; soil quality, stability, and moisture; and air quality (see cited impacts analyses above), following the construction phase of the proposed project, no ongoing or new adverse impacts 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. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to demands on the environmental resources of land, water, air, and energy would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, 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):

FHLSP – YB is located within the FLBS campus, and within the interior boundaries of the Flathead Indian Reservation. The most recent visitation data for this park unit indicates a three-year average of 30,158 visits per year.[4] The park currently provides 5 tent camping sites; therefore, the preponderance of visitation is day use associated with swimming, picnicking, and boating. Non-resident visitation primarily occurs during the peak summer season of Memorial Day through Labor Day, while shoulder season visitation is primarily local traffic.

Direct Impacts:
No significant adverse direct impacts to pre-project social structures and mores would be expected because of the proposed project. Many Montanans and those visiting the state for outdoor recreational purposes hold high regard for conservation of and access to public lands, including state parks. FHLSP-YB is an existing state park managed by FWP and located within the larger FBLS managed by the University of Montana. As such, recreation, and related services support the existing social structure, customs, values, and conventions of the affected human population in and around FLBS and FHLSP-YB as well as any visitors to the affected area. Some adverse impacts to pre-project social structure and mores may occur because of the construction phase of the proposed project. More specifically, during the construction phase, nearby residents, and visitors to FHLSP-YB may realize adverse impacts to access and the general enjoyment of FHLSP-YB. However, because Flathead Lake State Park incorporates 5 additional units (Big Arm, Finley Point, Wayfarers, West Shore, Wild Horse Island), similar nearby recreational opportunities exist and would likely be used in lieu of FHLSP-YB. Further, the construction phase for the proposed project would occur over a relatively short period of time. Therefore, any adverse direct impacts would be short-term and negligible to minor.

Secondary Impacts:
No significant adverse secondary impacts to pre-project social structures and mores would be expected because of the proposed project. FHLSP-YB is an existing park managed by FWP and located within the larger FBLS managed by the University of Montana. As such, recreation, and related services support the existing social structure, customs, values, and conventions of the affected human population in and around FLBS and FHLSP-YB, as well as any visitors to the affected area. The proposed project at both locations would improve access to the shore of Flathead Lake and thus further support the existing social structures and mores in the affected area. Therefore, any secondary impacts would be long-term, minor to moderate, consistent with existing impacts, and beneficial to pre-project social structures and mores.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. However, under the proposed action, cumulative impacts would occur. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA.

Because FHLSP-YB has historically been used for recreational purposes and the intent of the proposed project would be to stop the loss of existing shoreline and vegetation, provide a natural transition from the aquatic environment along the shoreline to the adjacent vegetative area, and ultimately improve recreational opportunities at FHLSP-YB, any cumulative impacts associated with the proposed project would be long-term, minor to moderate, and beneficial. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

[4] Based on 2021 Montana State Parks Annual Visitation Report.

2. Cultural Uniqueness and Diversity

Existing Environment/Baseline Conditions (No Action Alternative):
FHLSP-YB is located adjacent to FLBS. FLBS has been located on Yellow Bay since 1908 and is an internationally renowned center for limnology, ecology, and environmental science research and education, which researches and monitors water quality in Flathead Lake. In 1941, the Montana legislature authorized the Montana State Park Commission to establish and maintain a state scientific and recreational park on approximately 15 acres of the FLBS campus. FHLSP-YB is located within the exterior boundaries of Flathead Indian Reservation which is administered by the Confederated Salish and Kootenai Tribes (CSKT).

Direct Impacts:
No significant adverse direct impacts to cultural uniqueness and diversity would be expected because of the proposed project. The proposed project would improve various shoreline stability and halt shoreline erosion. No land use changes would occur because of the proposed project. Further, 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 the existing cultural uniqueness and diversity of the affected area would be expected because of the proposed project.

Secondary Impacts:
No significant adverse secondary impacts to cultural uniqueness and diversity would be expected because of the proposed project. The proposed project would improve various shoreline stability and halt shoreline erosion while providing easier access to the lakeshore. While the proposed project would be expected to improve the existing visitor experience, it would not be expected to appreciably result in the immigration or emigration of people to or from the affected area or otherwise change the social and cultural make-up of the affected area. Therefore, no secondary impacts to the pre-project 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. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to pre-project cultural uniqueness and diversity would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

3. Access to and Quality of Recreational and Wilderness Activities

Existing Environment (No Action Alternative):
FHLSP-YB is one of five mainland units of FHLSP that provides public access to the nationally significant Flathead Lake for public recreation. Approximately 89% of the lake's shoreline is in private ownership, and public access at these locations are very important. Additional public access is provided by FWP, USFS, CSKT, MT Dept of Natural Resources and Conservation (DNRC), Lake County, and local municipalities.

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. The proposed project may result in short-term loss of access or restricted access to Flathead Lake via FHLSP-YB during the construction phase of the proposed project.

FWP would minimize such impacts, to the degree possible, by scheduling work outside of the peak visitation season and providing traffic control where necessary to accommodate visitor use. Furthermore, FWP and Flathead Lake State Park provide multiple additional access facilities to accommodate recreational use of Flathead Lake, including the Big Arm Unit, Finley Point Unit, Wayfarers Unit, and West Shore Unit of Flathead Lake State Park. The Wild Horse Island unit also provides recreational facilities but must be accessed by boat. Multiple other public and private access points to Flathead Lake are also available to accommodate the short-term closure of FHLSP-YB during the construction phase. Therefore, any adverse direct impacts would be short-term, minor, and mitigated by the public's ability to use other Flathead Lake access points.

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. FWP expects that recreational opportunities at FHLSP-YB would be improved because of the proposed project. Following completion of the proposed project the affected facilities would be open to the public with improved shoreline access thus resulting in enhanced visitor experience. Therefore, FWP expects that any secondary impacts would be long term, moderate, and beneficial.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to pre-project access to recreational and wilderness activities would be expected because of the proposed project. Further, as with other past and present FWP actions affecting FHLSP-YB, FWP expects the quality of recreational opportunities at FHLSP-YB to improve because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

4. Local and State Tax Base and Tax Revenue

Existing Environment/Baseline Conditions (No Action Alternative):
FWP is required to pay accommodation taxes based on annual camping revenue generation. Estimates for fiscal year 2023 accommodation tax due is $520.00. FWP is required by law to make tax payments to counties equal to the amount that a private landowner would be required to pay per § 87-1-603, Montana Code Annotated.

Direct Impacts:
No significant adverse direct 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, including state special revenue. No impacts to the applicable tax burden and FWP tax payments to Lake County would be realized because of the proposed project. A limited amount of revenue may be lost due to restricted access to FHLSP-YB during the construction phase of the proposed project. Lost revenue associated with lost state park fees, and associated impacts to local and state tax revenue, would depend on the timing of construction and related closures (i.e., more impactful during typical high use seasons). The proposed project timing would be in early spring; therefore, FWP expects very little, if any, loss of revenue would be realized because of the proposed project. Further, the proposed project would be expected to increase state and local tax revenues from the sale of fuel, supplies and/or equipment to complete the project. Any adverse or beneficial direct impacts would be short-term and negligible to minor.

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, including state special revenue. No impacts to the applicable tax burden and FWP tax payments to Lake County would be realized because of the proposed project. Increased use of the improved shoreline access to FHLSP-YB facilities may result in an increase in state park use and associated state park fees. Also, recreational spending in affected nearby communities may be increased by increased use of FHLSP-YB, which would beneficially impact local tax revenue. Any secondary impacts would be long-term, negligible to minor, and beneficial.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to state and local tax base and tax revenue would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

5. Industrial, Commercial, and Agricultural Activities and Production

Existing Environment/Baseline Conditions (No Action Alternative):
No industrial activities occur within FSHLSP-YB or the immediate vicinity. Agriculture supporting commercial fruit production is common in the general vicinity of FHLSP-YB, with cherries being the predominant crop.

Direct Impacts:
No significant adverse direct impacts to industrial, commercial, and agricultural activities and production would be expected because of the proposed project. FHLSP-YB is an existing state park established primarily for the purposes of public recreation, thus the area affected by the proposed project does not support industrial activities and/or production. Because the affected area is not used for such purposes, no direct impacts to industrial activities or production within or near FHLSP-YB would be expected

because of the proposed project. Agriculture to support commercial fruit production is common in the general vicinity of FHLSP-YB (primarily cherries); however, again, because the proposed project would occur within an existing state park, no land used for agricultural and commercial purposes would be directly affected and no impacts to agricultural or commercial activities would be expected because of the proposed project.

FHLSP-YB does periodically facilitate commercial activity for varied interests in accordance with the FWP commercial use permitting policy and associated administrative rules 12.14.101 through 12.14.170. Examples include, but are not limited to, service providers commercial use permits. Furthermore, FWP would hire local/in-state contractor(s) for the design and construction phase of the proposed projects, thereby directly and beneficially impacting local and/or state commercial activity and production. Any direct impacts to commercial activity and production in the affected area would be short-term, minor, and beneficial. There would be a short-term minor beneficial impact to commercial and industrial production associated with the proposed construction activities. FWP does not anticipate any impacts to surrounding agricultural production.

Secondary Impacts:
No significant adverse secondary impacts to industrial, commercial, and agricultural activities and production would be expected because of the proposed project. FHLSP-YB is an existing state park established primarily for the purposes of public recreation, thus the area affected by the proposed project does not support industrial activities and/or production. Because the affected area is not used for such purposes, no secondary impacts to industrial activities or production within or near FHLSP-YB would be expected because of the proposed project.

The proposed FHLSP-YB improvements would be intended to facilitate improved state park resources and thereby potentially increase participation and enjoyment of commercial activities, service providers commercial use permits, within FHLSP-YB, which may beneficially impact (i.e., increase) future participation in such events at FHLSP-YB. Any secondary impacts to commercial activity and production in the affected area would be long-term, minor, and beneficial.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to industrial, commercial, and agricultural activities and production would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

6. Human Health and Safety

Existing Environment/Baseline Conditions (No Action Alternative):
FHLSP-YB is the oldest unit of FHLSP, and the existing development footprint, including the boat ramp and beach area, has been in place for several decades. The boat dock is a floating, moveable boat dock, commonly utilized at state park units on Flathead Lake and other parks in northwest Montana. The configuration of the boat dock, ramp, and current gravel movement from waves cause a buildup of

gravel cobble on the concrete boat ramp making it difficult and dangerous at times to launch a boat. Routine maintenance after wind events is needed to clear cobble and debris from the concrete boat ramp.

Direct Impacts:
No significant adverse direct impacts to human health and safety would be expected because of the proposed project. Affected government staff and/or contractors hired to conduct the project may realize increased risk to human health and safety associated with the construction phase of the proposed project; however, FWP would require affected staff and/or contractors to operate in a safe manner and utilize best management practices, including the use of available and appropriate safety precautions.

The proposal would add a pier-dock, which would catch cobble and debris south of the boat ramp area and prevent the build-up of material in the boat ramp area, thus making a safer boat launch for the affected public. The construction phase of the proposed action would result in short-term, altered conditions at FHLSP-YB, which would increase risks to public health and safety. These conditions would be mitigated through temporary, partial, or total closure of FHLSP-YB during the construction phase of the proposed project to lessen risk to human health and safety and ensure public safety. Therefore, any adverse direct impacts to human health and safety associated with the proposed project would be short-term and negligible to minor. Any beneficial impacts would be short-term and minor to moderate.

Secondary Impacts:
No significant adverse secondary impacts to human health and safety would be expected because of the proposed project. The addition of the pier-dock to the south side of the ramp would greatly reduce or eliminate cobble and debris from piling up in the boat ramp area and thus reduce risk and improve safety associated with use of the boat ramp by the affected public. Also, the floating, moveable dock would remain, thus allowing continued use of a boat dock during spring and fall when lake levels are lower. Any secondary impacts would be long-term, minor to moderate, and beneficial. 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. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to human health and safety would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

7. Quantity and Distribution of Employment

Existing Environment/Baseline Conditions (No Action Alternative):
The staffing model for FHLSP – YB includes allocated time from the park's administrative and maintenance personnel who provide year-round oversight and operation of the park. During the peak operating season of May 1 through October 1, two volunteer campground hosts are stationed at the park to provide customer service and operational assistance. In accordance with the FWP commercial

use policy and administrative rules, commercial use permits are issued to provide economic opportunities and visitor services at the units of FHLSP. These permits are typically associated with recreational equipment rentals or guided fishing trips on Flathead Lake.

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. Existing government staff and/or local contractors would be used to complete the construction phase of the proposed dynamic equilibrium beach. Commercial permit holders that use FHLSP-YB for operations may be adversely and directly impacted by the construction phase of the proposed project, as FHLSP-YB may be closed or have restricted access during this time.

To mitigate potential direct impacts to contractors using FHLSP-YB, commercial permittees would be notified well in advance of the initiation of construction activities. Early notification would facilitate the ability to plan for alternative facilities to accommodate their commercial activities, including the use of different, yet similar, Flathead Lake State Park access locations. Therefore, any direct impacts to commercial operations associated with FHLSP-YB would be short-term, minor, and mitigated by early notification of closure and restricted access to facilitate commercial use of other similar alternative facilities on Flathead Lake including the Big Arm Unit, Finley Point Unit, Wayfarers Unit, and West Shore Unit of Flathead Lake State Park.

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. FWP expects that recreational opportunities at FHLSP-YB would be improved because of the proposed project. Most commercial activities that take place at FHLSP-YB constitute permitted recreational pursuits and more specifically recreational equipment rentals and/or guided fishing trips on Flathead Lake. Following completion of the proposed project the affected facilities would re-open to the public with improved recreational facilities and would therefore likely result in enhanced visitor experience, including commercial opportunities, which may beneficially impact such services. Therefore, FWP expects that any secondary impacts would be long term, moderate, and beneficial.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to human health and safety would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

8. Density and Distribution of Human Population and Housing

Existing Environment/Baseline Conditions (No Action Alternative):
FLBS staff include approximately 125-150 combined staff, students, and visiting researchers who either commuted to, or resided on campus during the summer of 2023. Lands surrounding the FHLSP-YB are

rural and lightly populated. The park averages an estimated 40,000 annual visits, the bulk of which occur during the peak summer season.

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 be implemented by existing government staff or contractors and would not otherwise require or result in the movement of existing or new population into or out of the affected area. The campground would remain open during the time of construction, thus not displacing, disrupting, or changing any necessary temporary human housing needs during implementation of the proposed project. Therefore, no adverse 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. The amount of time needed to complete the construction phase of the proposed project would be relatively limited. Further, the proposed project would use existing government staff and/or local contractors to accomplish the proposed projects and thus would not require or likely result in the immigration or emigration of long-term residents to or from the affected area. Also, existing FWP staff currently responsible for managing FHLSP-YB would continue to manage the improved facilities once the proposed project is completed. 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. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to the density and distribution of human population and housing in the affected area would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

9. Demands for Government Services

Existing Environment/Baseline Conditions (No Action Alternative):
FHLSP-YB is served by Yellow Bay Volunteer Fire Department for first response to wildfire or structural fire. The park is located within the jurisdiction of the CSKT police department and the Lake County Sheriff's Office. FWP game wardens conduct routine patrols of the park and provide the majority of law enforcement coverage. The Montana Department of Environmental Quality (DEQ) regulates public drinking water and septic systems. FWP staff manage FHLSP-YB facilities, year-round.

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 local private contractors rather than existing FWP staff. However, some short-term and minor adverse direct impacts to government services and financial resources would be

realized because the privately contracted work would be funded by FWP. Any adverse direct impacts to existing government staff and/or financial resources would be short-term, minor, and consistent with pre-project duties and expenditures. Also, some short term, minor, adverse direct impacts to Lake County and CSKT staff may occur associated with required review and permitting of the proposed project plans and subsequent issuance of lakeshore permitting. No additional demands for government services would be expected because of the proposed project. Therefore, any adverse direct impacts would be short-term, minor, and consistent with pre-project impacts.

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 routine maintenance costs associated with the maintenance and operation of FHLSP-YB, including monitoring and control of noxious weeds and day-to-day operations. These day-to-day operations include regularly monitoring the area for any resource damage, litter, etc. No staffing increases would be required for the proposed project. 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. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to demands for government services would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

10. Locally Adopted Environmental Plans and Goals

Existing Environment/Baseline Conditions (No Action Alternative):
FHLSP-YB constitutes an existing state park. The role of Montana State Parks is to create and maintain opportunities for a wide range of outdoor recreation for the enjoyment of current and future generations of Montanans and visitors to the state. FHLSP-YB currently provides remarkable opportunities for residents and visitors alike to get outside and enjoy Flathead Lake and the forest landscape that surrounds the lake.

In addition, 13 wildlife species that are listed as "species of concern" have been observed within or in the vicinity of FHLSP-YB. These species include bull trout and grizzly bears, which are also listed as "threatened" under the federal ESA, and the following: fisher, long-eared myotis, little brown myotis, long-legged myotis, western pygmy shrew, pileated woodpecker, Lewis's woodpecker, yellow billed cuckoo, westslope cutthroat trout, and pygmy whitefish. Bald eagles, which are listed as a "special status species" and have been de-listed under the ESA have also been observed within and nearby FHLSP-YB. Six plant species of concern have also been identified within or near FHLSP-YB, including the following: Clustered Lady Slipper, Giant Helleborine, Adder's Tongue, Desert Groundsel, Giant Golden Moss, and Douglas' Neckera Moss.

Direct Impacts:

No significant adverse direct impacts to locally adopted environmental plans and goals would be expected because of the proposed project. FHLSP-YB was established to provide Montanans and those visiting the state with varied recreational opportunities in a remote setting, unspoiled by human impacts to the environment. The state park continues to be managed to support this objective. The primary objective of the proposed project would be to improve the existing setting of FHLSP-YB by limiting the loss of existing shoreline and vegetation due to wave erosion, provide a natural transition from the aquatic environment along the shoreline to the adjacent vegetative area, and ultimately improve recreational opportunities at FHLSP-YB.

Construction activities associated with the proposed project would directly and adversely impact recreational opportunities associated with FHLSP-YB, as the site would be closed or have restricted access to public recreation during this time. However, any adverse direct impacts to local recreation would be short-term, minor, and mitigated by the ongoing availability of similar recreational opportunities provided by Flathead Lake State Park including the nearby Big Arm Unit, Finley Point Unit, Wayfarers Unit, and West Shore Unit.

Further, construction activities associated with the proposed project may adversely impact some wildlife species, including the 13 species of concern that have been observed within or in the vicinity of FHLSP-YB, and 6 plant species of concern. These affected species include bull trout and grizzly bears, which are also listed as "threatened" under the federal ESA, and the following: fisher, long-eared myotis, little brown myotis, long-legged myotis, western pygmy shrew, pileated woodpecker, Lewis's woodpecker, yellow billed cuckoo, westslope cutthroat trout, and pygmy whitefish. Plant species include: Clustered Lady Slipper, Giant Helleborine, Adder's Tongue, Desert Groundsel, Giant Golden Moss, and Douglas' Neckera Moss.

Bald eagles, which are listed as a "special status species" and have been de-listed under the federal ESA have also been observed within and nearby FHLSP-YB. It is FWP's objective to re-establish habitats and species-specific populations to a condition and level that would allow for the de-listing of bull trout and grizzly bears from the ESA as well as de-listing of all "species of concern" and/or "species of special concern."

The operation of heavy equipment may result in the temporary displacement of these affected species of concern. However, again, any adverse direct impacts would be short-term and minor, lasting only as long as the construction phase of the proposed project. FWP is unaware of any other locally adopted environmental plans or goals that would be directly impacted by the proposed project.

Secondary Impacts:
No significant adverse secondary impacts to locally adopted environmental plans and goals would be expected because of the proposed project. FHLSP-YB was established to provide Montanans and those visiting the state with varied, high quality recreational opportunities in a remote setting, relatively unspoiled by human impacts to the environment. Following completion of the proposed project, FHLSP-YB would continue to be managed to support this objective and the proposed project would not change the purpose and intent of FHLSP-YB. Therefore, FWP expects any secondary impacts associated with Montana State Park recreational objectives, and more specifically those objectives applied to the local setting associated with FHLSP-YB, to improve because of the proposed project. Therefore, any impacts to local recreational plans and goals associated with recreating in FHLSP-YB would be long-term, beneficial, and minor.

Once completed, FWP does not expect the proposed project would result in any additional adverse impacts to the species of concern that have been observed within or in the vicinity of FHLSP-YB (See Section XI.A.8, Unique Endangered, Fragile or Limited Environmental Resources). Therefore, in-line with

federal, state, and local plans and goals related to wildlife and wildlife protections, no adverse secondary impacts to such wildlife resources would be expected because of the proposed project. FWP is unaware of any other locally adopted environmental plans or goals that would be impacted by the proposed project.

Cumulative Impacts:
No significant adverse cumulative impacts would be expected because of the proposed project. Since FWP's acquisition of the FHLSP-YB property, FWP has proposed and implemented several projects on the property, including the proposed project. Each historic FWP action has been subject to, and complied with, MEPA. Based on the environmental review conducted for historic and present day FHLSP-YB project(s), and with consideration of potential impacts to the affected human environment from the proposed project, FWP determined no significant adverse cumulative impacts to any locally adopted environmental plans and goals would be expected because of the proposed project. 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. For a more detailed discussion of potential cumulative impacts see Section VIII, Cumulative Impacts Analysis.

XII. 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 6** 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 4: 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

XIII. 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 5: 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.			

XIV. 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

- Montana State Historic Preservation Office (SHPO)
- Montana Department of Environmental Quality (DEQ)
- County Jurisdiction
- USGS National Hydrography Data
- Montana Natural Heritage Program
- Montana Cadastral
- 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 on Montana Fish, Wildlife & Parks website. 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: 15 days

  Public Comment Period Begins: January 17, 2024

  Public Comment Period Ends: January 31, 2024

Comments must be addressed to the FWP contact listed below.

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

  Name: AMY GROUT

  Email: agrout@mt.gov

  Mailing Address:

  8600 MT Hwy 35

  Bigfork, MT 59911

XV. Recommendation for Further Environmental Analysis

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

XVI. EA Preparation and Review

	Name	Title
EA prepared by:	Amy Grout	Flathead Lake Recreation Manager
EA reviewed by:	Eric Merchant	MEPA Coordinator

XVII. References

Lorang, M.S. 2023. Yellow Bay State Park Gravel Beach Design. 1-7.

Lorang, M.S. 2002. Predicting the crest height of a gravel beach. Geomophology 48: 87-101.

Lorang, M. S. 2000. Predicting threshold mass and stable boulder mass for a beach. Journal of Coastal Research 16(2):432-445

Lorang M.S. 2006b. Final report for the East Bay and Blue Bay project. Final report to the Confederated Salish and Kootenai Tribes. 22 pp.

Lorang M.S. 2003. Salish Point Waterfront Redevelopment Project: Designing a Natural Gravel Beach for the Waterfront area. Final report to the Confederated Salish and Kootenai Tribes. 18 pp.