Draft Environmental Assessment

KELLY ISLAND
FISHING ACCESS SITE
PROPOSED IMPROVEMENT PROJECT

JUNE 2014

Montana Fish, Wildlife & Parks

Kelly Island Fishing Access Site
Proposed Improvement
Draft Environmental Assessment
MEPA, NEPA, MCA 23-1-110 CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

1. **Type of proposed state action:**
   The 706-acre Kelly Island Fishing Access Site (FAS) has been a popular recreational site since its acquisition by Montana Fish, Wildlife and Parks (FWP) in 1973. The FAS is located along the Clark Fork River one mile west of Missoula, Montana. The site provides quality recreational opportunities for fishing, boating, floating, hunting, picnicking, hiking, photography, and wildlife viewing. Heavy spring flows of the Clark Fork River have scoured and eroded the boat ramp and the erodible soils of the adjacent riverbanks at the Spurgin Road access to the FAS. As a result, boat launching has become difficult and riverbank erosion has contributed to the overall site deterioration. FWP proposes to construct a new concrete boat ramp, stabilize the adjacent riverbank, expand and improve the parking area, and add a loop road to improve boat launching and parking. In addition, FWP proposes to pave the access road to the FAS property boundary, loop road and parking areas in order to comply with Missoula County Ambient Air Quality Standards.

2. **Agency authority for the Proposed Action:**
   The 1977 Montana Legislature enacted Section 87-1-605, Montana Code Annotated (MCA), which directs FWP to acquire, develop and operate a system of fishing accesses. The legislature earmarked a funding account to ensure that the fishing access site program would be implemented. Section 87-1-303, MCA, authorizes the collection fees and charges for the use of fishing access sites, and contains rule-making authority for their use, occupancy, and protection. Furthermore, Section 23-1-110, MCA, and Administrative Rules of Montana (ARM) 12.2.433 guides public involvement and comment for the improvements at state parks and fishing access sites, which this document provides.

   ARM 12.8.602 requires the Department to consider the wishes of the public, the capacity of the site for development, environmental impacts, long-range maintenance, protection of natural features and impacts on tourism as these elements relate to development or improvement to fishing access sites or state parks. This document will illuminate the facets of the Proposed Action in relation to this rule. See Appendix A for House Bill 495 (23-1-110, MCA) qualification.

3. **Name of project:**
   Kelly Island Fishing Access Site Proposed Improvement Project

4. **Project sponsor:**
   Montana Fish, Wildlife and Parks, Region 2
   3201 Spurgin Road
   Missoula, MT 59804

5. **Anticipated Schedule:**
   Estimated Public Comment Period: July 2014
   Estimated Decision Notice: August 2014
   Estimated Commencement Date: Fall 2014
   Estimated Completion Date: Fall 2014
   Current Status of Project Design (% complete): 65%

6. Location:

Kelly Island FAS is managed by Region 2 FWP and is located on the Clark Fork River one mile west of Missoula, Montana in Missoula County, Section 26 and 27, Township 13 North, Range 20 West (Figures 1 and 2).

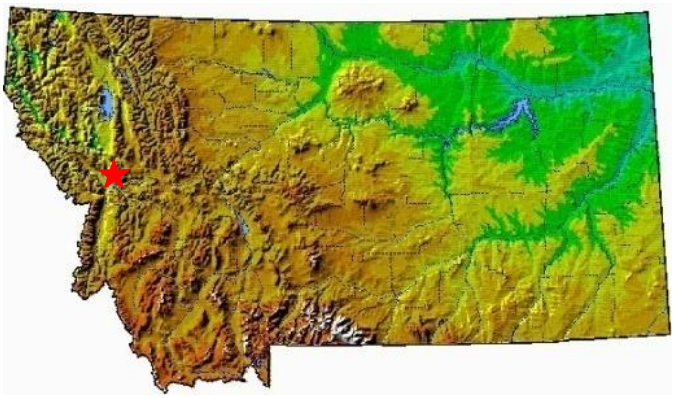

Figure 1. General location of Kelly Island FAS**.**

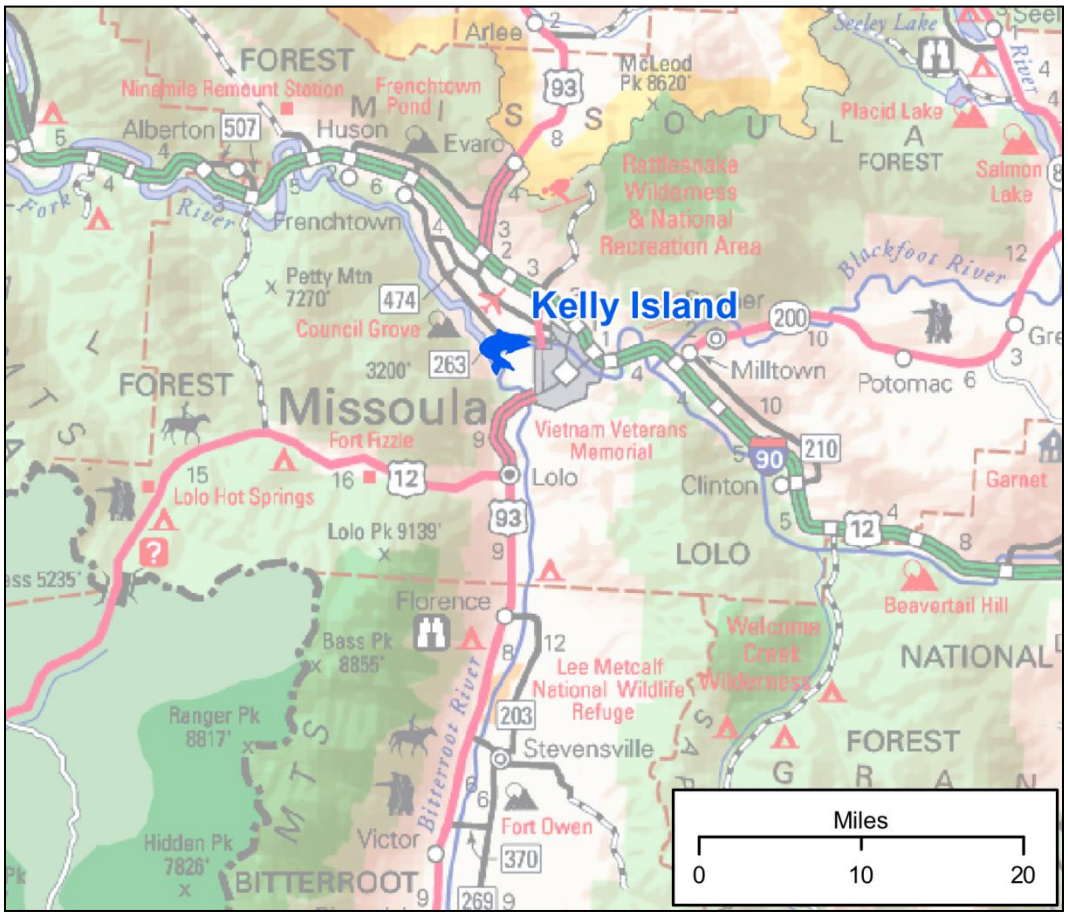

Figure 2. Highway location of Kelly Island FAS.

7. Project size -- estimate the number of acres that would be directly affected:

	Acres		Acres
(a) Developed:		(d) Floodplain	0
Residential	0		
Industrial	0	(e) Productive:	
		Irrigated cropland	0
(b) Open Space/ Woodlands/Recreation	0	Dry cropland	0
		Forestry	0
		Rangeland	0
(c) Wetlands/Riparian Areas	3	Other	0

8. Permits, Funding & Overlapping Jurisdiction.

(a) Permits: Permits would be filed at least 2 weeks prior to project start.

Agency Name	Permit
Missoula County	Floodplain Permit and Sanitation Permit
Montana Dept. of Environmental Quality	318 Short-Term Water Quality Standard for Turbidity
Montana Fish, Wildlife & Parks	124 Montana Stream Protection Act
US Army Corps of Engineers	404 Federal Clean Water Act

(b) Funding:

Agency Name	Funding Amount
Montana Fish, Wildlife & Parks Site Protection Fund	$ 80,750
Federal Wallop-Breaux Fund	$ 89,250
	$ 170,000

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

Agency Name	Type of Responsibility
Natural Heritage Program	Species of Concern (Appendix B)
State Historic Preservation Office	Cultural Clearance
Missoula County Weed District	Weed Management Coordination
Missoula County Air Pollution Control Program	Ambient Air Quality Standards

9. Narrative Summary of the Proposed Action:

Background

The Clark Fork River originates in the Highland Mountains at the confluence of Silver Bow and Warm Springs Creeks near Anaconda, Montana. The river flows north and west 350 miles through broad, semi-arid valleys, high mountain ranges, narrow canyons, and steep-sided valleys and terminates in Lake Pend Oreille, Idaho. The Upper Clark Fork River meanders through the flat, sparsely vegetated plains of the Deer Lodge Valley, where the effects of the mining boom are the greatest historical influence in the Upper Basin. Downstream from the mouth of the Little Blackfoot River, the river flows through a steep, narrow canyon where the river channel has been shortened by highway and railroad construction activities. From Jens to Milltown the Clark Fork River meanders away from the transportation corridor and native trees and shrubs appear along its banks. The Middle Clark Fork River extends about 115 river miles from Milltown to its confluence with the Flathead River and is entirely free flowing. Its drainage is mountainous and covered with large forested tracts, broken by grazing and cropland areas in the lower valleys. From the Thompson Falls Dam, the Lower Clark Fork River flows through sedimentary formations and a landscape sculptured by the massive outflows of glacial Lake Missoula. When the Clark Fork River crosses the Idaho border, it is Montana's largest river, carrying an average 22,060 cubic

feet of water per second. Today the river is important for agricultural and recreational use along its entire length through Montana and is heavily used for boating, floating, fishing, hunting, wildlife viewing, hiking, and picnicking.

Kelly Island FAS is located on the Clark Fork River 131 miles downstream of its headwaters and 1/3-mile upstream of its confluence with the Bitterroot River. The Clark Fork River is open to angling year round, although some portions of the year are open to catch and release only. According to recent FWP surveys, the average angler days per year from 2005 to 2009 on the 195-mile stretch from the Flathead River (river mile 27) to the Bitterroot River (river mile 222) was 50,092, with a low of 37,997 in 2009 and a high of 71,869 in 2005. The regional ranking for this stretch of river averaged the third most fished body of water, and ranged from second to fourth for the same period. The state ranking for this stretch of river averaged the twelfth most fished body of water in Montana and ranged from fifth to eighteenth during this same period. Kelly Island FAS is the only FWP FAS on the fifteen-mile stretch between Kona Bridge FAS (river mile 204) and Sha-Ron FAS (river mile 219) and is frequently used as a put-in and take-out site for floaters and boaters, as well as for anglers at the confluence of the Bitterroot and Clark Fork Rivers.

Game fish found in this reach of the Clark Fork River include mountain whitefish, rainbow trout, brown trout, and westslope cutthroat trout. Other fish species commonly found in this reach include bull trout, longnose dace, largescale sucker, longnose sucker, northern pikeminnow, northern pike, and sculpin and species rarely found in this reach of the Clark Fork River include largemouth bass, yellow perch, and peamouth.

Vegetation found in the vicinity of Kelly Island FAS consists of Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland, as defined by the Montana Natural Heritage Program[1] (MNHP), and is dominated by black cottonwood. A search of the MNHP Species of Concern database found no plant Montana Species of Concern[2] (SOC) on Kelly Island FAS.

Common wildlife species whose habitat distribution overlaps Kelly Island FAS include white-tailed deer, elk, moose, mountain lion, black bear, red fox, beaver, muskrat, northern river otter, hoary bat, bald eagle, and great blue heron. A wide variety of resident and migratory bird species use or travel through the area on a seasonal basis, including a variety of raptors, waterfowl, and songbirds. According to the MNHP, Species of Concern that have been observed on or in the vicinity of Kelly Island FAS include bull trout (listed as Threatened under the Federal Endangered Species Act [ESA] by the US Fish and Wildlife Service [USFWS]), bald eagle (listed as DM [recovered, delisted and being monitored] by the USFWS), wolverine (listed as a Candidate species by the USFWS), great blue heron, flammulated owl, Lewis's woodpecker, black-backed woodpecker, pileated woodpecker, veery, Cassin's finch, westslope cutthroat trout, fisher, fringed myotis, hoary bat, western skink, and a subterranean amphipod. (See Appendix B for the Native Species Report.)

The 706-acre Kelly Island FAS has been a popular recreational site since its acquisition by FWP in 1973. The FAS is located along the Clark Fork River one mile west of Missoula, Montana and provides quality recreational opportunities for fishing, boating, floating, hunting, picnicking, hiking, photography, and wildlife viewing. There are three main public entrances (accesses) to this FAS:

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[1] http://mtnhp.org/ Accessed 26 June 2014.

[2] A native animal breeding in Montana that is considered to be "at risk" due to declining population trends, threats to its habitats, and/or restricted distribution. The purpose of Montana's SOC listing is to highlight species in decline and encourage conservation efforts to reverse population declines and prevent the need for future listing as Threatened or Endangered Species under the Federal Endangered Species Act.

- northern access is via a parking area at the end of **Council Way** (west on Mullan Road from Missoula, then south on Cote Lane, then east on Toby Way to Council Way, then north and then southerly on Council);

- southeastern access is from **Humble Road** (in Missoula at Reserve Street and Third Street West, then west on Third to Clements Road, south on Clements to Humble, west on Humble to the parking area); and

- southern access is near the end of **Spurgin Road** (in Missoula at Reserve Street and Spurgin Road, then west on Spurgin to the FAS entrance opposite Lena Lane).

Existing facilities at the Spurgin Road access to the FAS include a single-wide concrete boat ramp, a gravel access road from the FAS property boundary, gravel parking areas accommodating approximately 22 single vehicles and three vehicles with trailers (hereafter, "truck/ trailers"), a concrete vault latrine, fencing, and informational, regulatory, and directional signs. Camping is not allowed at Kelly Island FAS. Limited hunting opportunities also exist.

Proposed Action

Heavy spring flows of the Clark Fork River have scoured and eroded the existing boat ramp and the erodible soils of the adjacent riverbanks. As a result, boat launching has become difficult and erosion of the riverbank has affected overall site deterioration (Figures 3 and 4). Kelly Island FAS falls within the Missoula County Air Stagnation Zone and High Impact Zone. In order to comply with Missoula County Ambient Air Quality Standards, all new roads, driveways, and parking areas must be paved to prevent dust particles from becoming airborne. As a result of the heavy traffic Kelly Island FAS receives, FWP proposes to pave all new and existing roads and parking areas to prevent airborne dust emissions. FWP also proposes to construct a new concrete boat ramp, stabilize the riverbank adjacent to the boat ramp, construct a loop road, and enlarge and improve the parking facilities (Figures 5 and 6).

Proposed improvements include:

1) removing the existing boat ramp and constructing a new single-wide concrete boat ramp with a lower grade to improve boat launching;

2) stabilizing the riverbank for approximately 150 feet upstream and 50 feet downstream of the ramp with a combination of hard and soft materials;

3) constructing a new loop road approximately 16 feet wide and 200 feet long connecting the existing access road with the boat launch staging area to improve vehicle movement through the FAS;

4) expanding and improving the parking areas to accommodate a total of approximately fourteen single vehicles and twelve truck/trailer vehicles; and

5) paving the existing access road from the FAS property boundary, the new loop road, and all existing and new parking areas (Figure 6). In order to insure public safety, this FAS entrance would be closed to the public during construction. All other Kelly Island FAS land and entrances would remain open to the public during construction.

Figure 3. Concrete blocks placed along eroded edge of boat ramp as a safety precaution.

Figure 4. Bank erosion adjacent to existing boat ramp.

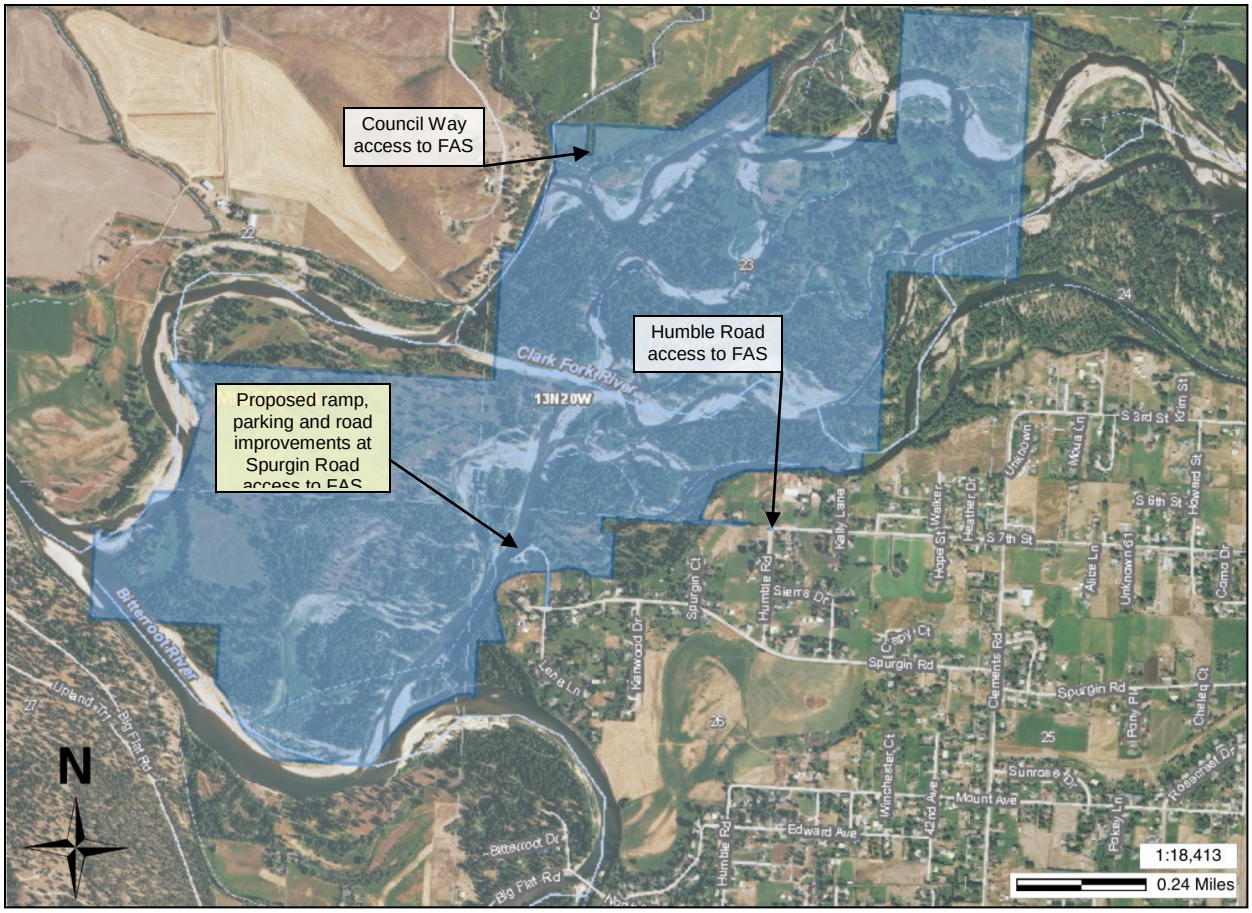

Figure 5. Proposed project location at Kelly island FAS (Spurgin Road access).

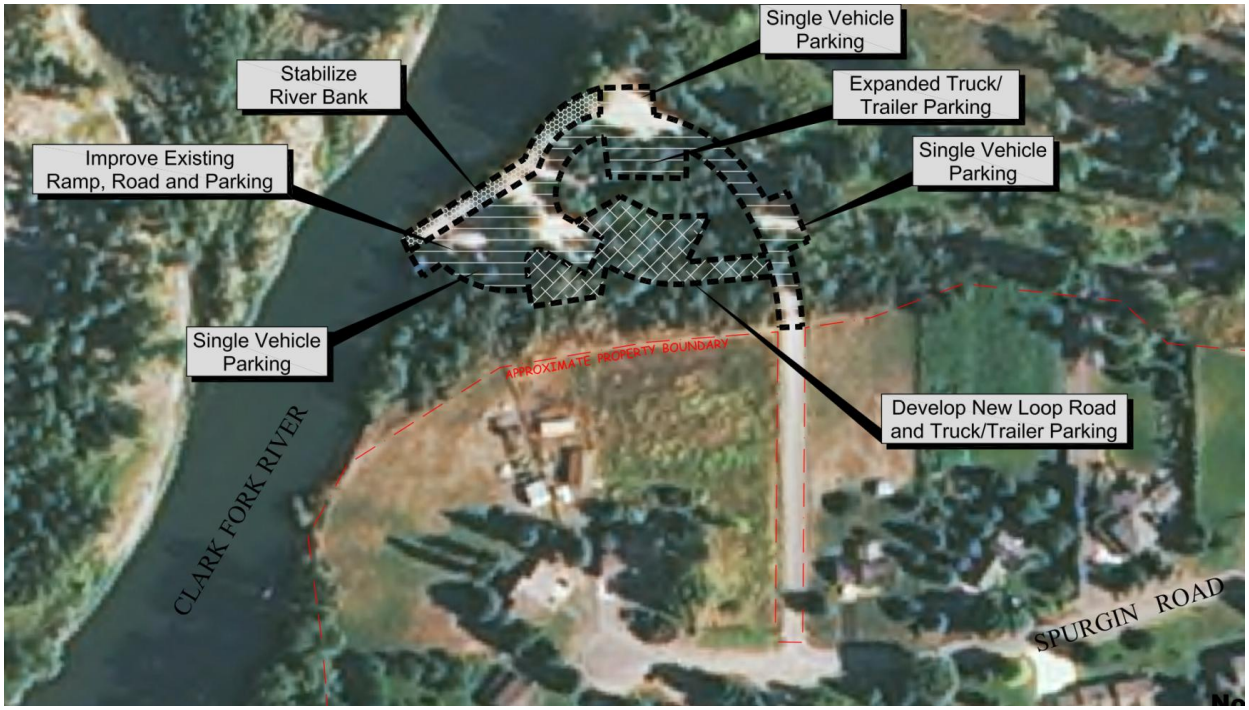

Figure 6. Preliminary concept site plan for Kelly Island FAS (Spurgin Road access).

The property would continue to be managed under existing FWP public use regulations, including routine maintenance, control of vehicles, restriction of firearms, and other accepted FWP recreation area management policies. Protection of the natural resources, the health and safety of visitors, and consideration of neighboring properties would all be considered and incorporated into improvement plans for this site. Construction of a new concrete boat ramp, loop road, expanded parking areas, bank stabilization, and paving roads and parking areas would enhance visitor use of this site as well as provide long-term protection of the resources. Paving of access roads and parking areas is not typical of FAS development but is being included in this project at the request of Missoula County to comply with their federally mandated Ambient Air Quality Standards. The FAS would continue to be used for day use only. The Proposed Action at Kelly Island FAS would improve recreational opportunities by improving safety and convenience for fishing, boating, floating, hunting, picnicking, photography, and wildlife viewing and fill a need for water recreation opportunities on the scenic and popular Clark Fork River near Missoula.

10. Description and analysis of reasonable alternatives:

Alternative A: No Action.
If no action was taken and the proposed improvements--consisting of a new concrete boat ramp, enlarged parking area, loop road, riverbank stabilization, and paved roads and parking areas--were not made, then public safety, resource and air quality degradation, and inadequate parking would continue to be issues at southern Kelly Island FAS access. Public safety would continue to be an issue, as visitors would continue to be forced to launch boats and rafts from the eroded boat ramp, while the condition of the boat ramp would continue to deteriorate. Continued deterioration of the ramp could necessitate closing the boat ramp to insure public safety. Parking would continue to be inconvenient and inadequate, causing visitors to park along the FAS access road and nearby Lena Lane during peak times. Airborne dust would continue to be created by those driving on graveled surfaces, violating Missoula County's Ambient Air Quality Standards. As a state agency, FWP is required to comply with all federal, state and local laws and permitting requirements.

Alternative B: Proposed Action.
In order to improve public safety and convenience and reduce resource and air quality degradation, FWP proposes to replace the existing boat ramp, expand and improve the parking areas to accommodate additional vehicles, construct a loop road to improve traffic flow, stabilize the riverbank adjacent to the boat ramp, and pave the access and loop roads and parking areas at the southern access to Kelly Island FAS. In order to ensure public safety, this FAS entrance (off Spurgin Road) would be closed to the public during construction. All other Kelly Island FAS land and entrances would remain open to the public during construction.

11. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:
FWP would employ Best Management Practices (BMP; see Appendix D), which are designed to reduce or eliminate sediment delivery to waterways during construction. FWP would develop the final design and specifications for the Proposed Action. All county, state and federal permits listed in Part I 8(a) above would be obtained by FWP as required. A private contractor selected through the State's contracting processes would complete the construction.

PART II. ENVIRONMENTAL REVIEW CHECKLIST

Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

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

1a. The Proposed Action would not affect existing soil stability. Soil and geologic substructure would remain stable during and after the proposed work.

1b. During construction, some minor modifications to the existing soil features would be required for the construction of the concrete boat ramp, loop road, and expanded parking areas. Disturbed areas would be seeded with a native seed mix to minimize erosion, sediment delivery to the Clark Fork River, and the spread of noxious weeds. The proposed project site is not under agricultural production and the Proposed Action would not affect agricultural production, soil productivity, or soil fertility. FWP Best Management Practices (BMP) would be followed during all phases of construction to minimize erosion (Appendix D).

1c. No unique geologic or physical features would be altered by the Proposed Action.

1d. Heavy annual spring runoff of the river has scoured and eroded the boat ramp and riverbank, causing erosion of those surfaces and sedimentation of the river. The proposed improvements to the boat ramp and stabilization of the riverbank would reduce erosion of those surfaces and reduce sedimentation of the river. Minor amounts of sediment may enter the river during construction of the concrete boat ramp, loop road, and parking area and during riverbank stabilization. However, upon completion, erosion and sedimentation to the river would be reduced. Paving all roads and parking areas would also reduce sediment delivery to the river.

2. AIR Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Emission of air pollutants or deterioration of ambient air quality? (Also see 13 (c).)			X		Yes Positive	2a.
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regulations? (Also see 2a.)			X		Yes Positive	2e

2a. Dust may be temporarily generated during construction of the boat ramp, loop road, parking area, and bank stabilization. If additional materials were needed off-site, loading at the source site would generate minor amounts of dust. FWP would follow FWP BMP during all phases of construction to minimize risks and reduce dust. See Appendix D for the BMPs. There would be a temporary increase in diesel exhaust from equipment used during construction. If the Proposed Action were implemented, odors from diesel exhaust would dissipate rapidly. These impacts would be short term and minor.

Kelly Island FAS falls within the Missoula County Air Stagnation Zone and High Impact Zone. In order to comply with Missoula County Ambient Air Quality Standards, as mandated by the federal Clean Air Act of 1990, all new roads, driveways, and parking areas must be paved to prevent dust particles from becoming airborne. Specific regulations are outlined in the Missoula City-County Air Pollution Control Program Regulations[3]. Paving of existing roads, driveways, and parking areas within the Air Stagnation Zone is not required. However, due to heavy public use of Kelly Island FAS and in order to comply with the Missoula County Ambient Air Quality Standards, FWP proposes to pave the existing gravel access road from the FAS property boundary, the new loop road, and existing and new parking areas. Though not paved, the new boat ramp will be constructed with cast-in-place concrete.

2e. FWP proposes to pave the access and loop roads and all parking areas in order to prevent particulate matter from becoming airborne and to comply with Missoula County Ambient Air Quality Standards. By paving existing graveled surfaces on the project site, including the existing access road and parking areas, airborne dust emissions from the site would be minimized.

[3] See Fugitive Particulate (Ch 8) and Maps (App A) in Missoula City-County Air Pollution Control Program Regulations. http://www.co.missoula.mt.us/airquality/AbouttheAirProgram/regulations.htm . Accessed 18 June 2014.

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

3a. Construction of the boat ramp, loop road, and parking areas and bank stabilization activities may cause a temporary, localized increase in turbidity in the Clark Fork River. FWP would obtain a Montana Department of Environmental Quality (DEQ) 318 Authorization Permit for Short Term Water Quality Standard for Turbidity and follow all permit requirements. FWP BMP would also be followed (Appendix D). Run-off from the paved surfaces, including the access and loop roads and parking areas, would be directed away from the river, reducing the sediment delivery to the river.

3b. Replacement of the existing eroded boat ramp and stabilization of the riverbank would reduce erosion from those surfaces and reduce sedimentation of the Clark Fork River. The Proposed Action would be designed to minimize any effect on surface water, surface runoff, and drainage patterns. FWP BMP would be followed (Appendix D).

Run-off water would flow faster over the paved surfaces than over the existing graveled surfaces, potentially further eroding the riverbank and increasing sedimentation of the river. Run-off would be directed away from the riverbank and ramp to one or more detention basins, which would slow the velocity of the run-off water and allow particulates to settle out of the water before eventually entering the river.

3d. There could be a minor, temporary increase of runoff during construction. FWP BMP would be followed (Appendix D).

3h. The use of heavy equipment during construction and bank stabilization may result in a slight risk of contamination from petroleum products and a temporary increase in sediment delivery to the Clark Fork River. FWP BMP would be followed during all phases of construction to minimize these risks (Appendix D).

3l. According to the Missoula County Floodplain Administrator, the Proposed Action site on Kelly Island FAS is located within a designated floodplain, as shown on the Federal Emergency Management Agency (FEMA) Map Panel #30063C1455D, Effective Date August 16, 1988. Because the FAS is located on the floodway, the elevation of the site cannot be changed with fill. Permits from FWP, Montana Department of Environmental Quality (DEQ), the US Army Corps of Engineers, and Missoula County will be obtained to insure the proposed project will be in compliance with federal, state, and county floodplain and water quality regulations.

3m. All impacts to water quality would be temporary resulting from construction. Water quality of the river could improve as a result of the proposed project by reducing sedimentation into the river from riverbank erosion.

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

4a. The Proposed Action would have no impact on the plant diversity or productivity of Kelly Island FAS and would have a minor impact on plant abundance. Because the construction area is small, impacts from construction would be minor. Any area disturbed during construction would be reseeded with a native seed mix. Construction of the boat ramp would have a minor impact on plant communities or diversity because little new soil would be disturbed. Construction of the loop road and parking areas would disturb small areas adjacent to the existing parking areas and access road that have likely been disturbed in the past by heavy public use of the site. Bank stabilization activities would improve plant diversity and productivity by planting native shrubs to help stabilize the riverbank soils. Paving would have no impact on plant communities.

4b. The proposed project would improve the plant community by planting native shrubs to help stabilize the riverbank. Vegetation found in the vicinity of Kelly Island FAS consists of Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland, as defined by the MNHP, and is dominated by black cottonwood. Common plant species found on the FAS include black cottonwood, Douglas-fir, thin-leaf alder, peachleaf willow, yellow willow, Douglas hawthorne, chokecherry, Wood's rose, Rocky Mountain maple, red osier dogwood, currant, common snowberry, bluejoint reedgrass, yarrow, and aster.

Common introduced species found on the FAS include orchard grass, smooth brome, timothy, cheatgrass, meadow foxtail, leafy spurge, common tansy, and curly dock. Noxious weeds found on the property include leafy spurge,

Dalmatian toadflax, spotted knapweed, common tansy, and perennial pepperweed. FWP would continue implementing the FWP Statewide Integrated Noxious Weed Management Plan to control noxious weeds on the property and weed control would continue to be a high management priority.

4c. A search of the MNHP Species of Concern database found no plant Species of Concern on Kelly Island FAS.

4d. Livestock grazing is not allowed on Kelly Island FAS and no portion of the FAS is in agricultural production. The proposed project would have no impact on the productivity or profitability of agricultural production on the FAS.

4e. Leafy spurge, common tansy, and perennial pepperweed are the most common noxious weeds found in the vicinity of the Proposed Action site. Soils disturbed during construction could colonize with weeds. Disturbed areas would be reseeded with a native reclamation seed mix where necessary to reduce the establishment of weeds. FWP would continue implementing the Statewide Integrated Weed Management Plan using chemical, biological, and mechanical methods to control weeds on the property. Weed management would include the establishment of native vegetation to prevent the spread of weeds. Vehicles would be restricted to the parking areas and access roads, which would be maintained as weed-free, and vehicles would not be allowed on undisturbed areas of the site to minimize the spread of noxious weeds.

4f. According to the MNHP Wetland and Riparian Mapping Project, the vegetation on the Proposed Action site is classified as Riparian Scrub-Shrub. No portion of the Proposed Action site is classified as a wetland. The soil on approximately 1.5 acres of the 2.5-acre Proposed Action site is loam and is classified as Prime Farmland If Irrigated by the U.S. Natural Resource and Conservation Service (NRCS), though the property has not been in agricultural production for at least 40 years. The remaining acre is classified as river wash and is not classified as Prime Farmland.

5. FISH/WILDLIFE **Will the proposed action result in:**	**IMPACT**					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Deterioration of critical fish or wildlife habitat?			X		Yes	5a.
b. Changes in the diversity or abundance of game animals or bird species?		X				5b.
c. Changes in the diversity or abundance of nongame species?		X				5c.
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?			X		Yes	5f.
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				
h. For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f.)		X				5h.
i. For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d.)		X				5i.

5a. The proposed improvements are designed to minimize impacts to wildlife habitat. A minimal number of trees and shrubs would be removed for construction of the boat ramp, parking area, and loop road and efforts would be made to preserve all large healthy trees and snags where possible. Construction would take place in fall and winter to avoid disturbance to nesting birds. The U.S. Fish and Wildlife Service (USFWS) has classified the Clark Fork River as Critical Habitat for bull trout. This stretch of the Clark Fork River is not considered critical habitat for any other fish or wildlife species.

5b/5c. The proposed project would have no impact on the diversity or abundance of game or non-game wildlife species. Common wildlife species whose habitat distribution overlaps Kelly Island FAS include white-tailed deer, elk, moose, mountain lion, black bear, red fox, beaver, muskrat, northern river otter, hoary bat, bald eagle, and great blue heron. A wide variety of resident and migratory bird species use or travel through the area on a seasonal basis, including a variety of raptors, waterfowl, and songbirds.

According to Ladd Knotek, FWP Region 2 Fisheries Biologist, game fish found in this reach of the Clark Fork River include mountain whitefish, rainbow trout, brown trout, and westslope cutthroat trout. Other fish species commonly found in this reach include bull trout, longnose dace, largescale sucker, longnose sucker, northern pikeminnow, northern pike, and sculpin. According to MFISH, fish species that are rarely found in this reach of the Clark Fork River include largemouth bass, yellow perch, and peamouth.

The Clark Fork River is open to angling year round, although some portions of the year are open to catch and release only. According to recent surveys by FWP, the average angler days per year from 2005 to 2009 on the 195-mile stretch from the Flathead River (river mile 27) to the Bitterroot River (river mile 222) was 50,092, with a low of 37,997 in 2009 and a high of 71,869 in 2005. The regional ranking for this stretch of river averaged the third most fished body of water, and range from second to fourth for the same period. The state ranking for this stretch of river averaged the twelfth most fished body of water in Montana and ranged from fifth to eighteenth during this same period.

5f. A search of the MNHP element occurrence database indicates occurrences of bull trout (listed as LT, Threatened, by the USFWS, Threatened by the US Forest Service (USFS), and Special Status by the US Bureau of Land Management (BLM)); bald eagle (listed as DM, Delisted and Monitored, by the USFWS and Sensitive by the BLM and USFS); and wolverine (listed as C, Candidate, by the USFWS and Sensitive by the BLM and USFS) within the vicinity of Kelly Island FAS (Appendix B). No other occurrences of federally ranked animal or plant species have been found within the vicinity of the Proposed Action site. The search indicates other Montana Species of Concern that have been observed in or near the Proposed Action site include great blue heron, flammulated owl, Lewis's woodpecker, black-backed woodpecker, pileated woodpecker, veery, Cassin's finch, westslope cutthroat trout, fringed myotis, hoary bat, fisher, western skink, and a subterranean amphipod. See Appendix B for Montana Species of Concern data.

According to Kristi DuBois, FWP Region 2 Non-Game Wildlife Biologist, the nearest bald eagle nest is located over ¾ mile from the Proposed Action site and is not visible from the FAS. While bald eagles were officially delisted in 2007, the USFWS has jurisdiction protecting this species under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). The *Management Guidelines* of the Montana Bald Eagle Management Plan recommend seasonal restrictions from February 1 through August 15 for construction and maintenance of roads and trails, among other activities, within direct line of sight of an active nest. In addition, in the absence of a visual buffer, there should be a distance buffer of at least .25 mile from any construction of infrastructure, such as roads and trails. There should also be a .25-mile distance buffer for recreation during the breeding season. Because construction would begin in fall 2014, after the recommended August 15 seasonal restriction date, the nest is over .25 mile from the construction site, and the nest is not visible from the FAS, the Proposed Action would not impact bald eagle nesting. In addition, increased public use of the FAS would have no impact on bald eagles, as they have been accustomed to human activity from recreation and residential development in the area for years. FWP would minimize the impacts from increased public use by implementing the recommendations outlined in the *Management Guidelines* of the Montana Bald Eagle Management Plan, including public education, signage, boating restrictions, and monitoring by FWP biologists.

There are no great blue heron rookeries near the FAS so the proposed project would have no impact on great blue heron nesting. Great blue herons would use the area for feeding and temporarily move away during construction. Veerys nest in wet riparian bottoms, usually near springs that have a heavy shrub cover. Any waterway near the Proposed Action site would be avoided during construction and the removal of vegetation minimized. Woodpeckers and secondary cavity nesters, such as chickadees and bluebirds, use snags for nesting. The removal of snags during construction would be minimized and any snags removed for safety purposes would be done in fall to avoid disturbance to eggs or nestlings.

The proposed project is unlikely to impact flammulated owl, Lewis's woodpecker, black-backed woodpecker, pileated woodpecker, veery, Cassin's finch, fringed myotis, hoary bat, fisher, western skink, and a subterranean amphipod, Montana Species of Concern, as these species are also likely accustomed to some level of disturbance. The area has been disturbed by nearby residential development and has had heavy recreational use for angling, boating, hunting, walking, picnicking, photography, and wildlife viewing for years.

According to Ladd Knotek, FWP Region 2 Fisheries biologist, bull trout and westslope cutthroat trout do not spawn in the Clark Fork River in the vicinity of Kelly Island FAS, though they migrate through this stretch of the river. The proposed project would not negatively impact bull trout or westslope cutthroat trout. In fact, the proposed project could improve habitat for these species by reducing the sediment delivery to the river by stabilizing the riverbank near the FAS.

According to Liz Bradley, FWP Wolf Management Specialist, Kelly Island FAS is within the habitat of the gray wolf. Currently there are no known radio-collared packs that have home ranges that could overlap the project area. While it is possible for wolves to travel through the project area, none have been sighted recently in the immediate area of Kelly Island FAS. The wolf population in Montana is strong and wolves may pass through just about any area including this site. According to Liz Bradley, FWP has no concerns with this project impacting gray wolves and no adverse impacts are anticipated from the proposed project on wolf populations.

5h. Bull trout is the only threatened or endangered species observed near the project area (Appendix B- Native Species Report). According to recent FWP surveys and Ladd Knotek, bull trout do not spawn in this reach of the Clark Fork River and only move through this reach. Even though the Clark Fork River is considered Critical Habitat for bull trout, the project area has been highly disturbed for years from recreational use, residential development, and proximity to Missoula. As a result, it is unlikely that the proposed project would have any negative impact on bull trout.

5i. No wildlife species would be imported or exported to the area as a result of the proposed development. This project only involves the improvement of the FAS and will not promote the introduction or spread of invasive species.

B. HUMAN ENVIRONMENT

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

6a. Construction equipment would cause a temporary, minor increase in noise levels at the project site. Any increase in noise level at the construction site would be short term and minor.

6b. Kelly Island FAS is located adjacent to a residential development and is within 1/2 mile of approximately 53 residences. The minor and temporary increase in noise levels during construction may disturb nearby neighbors and visitors. FWP would follow the guidelines of the good neighbor policy, all of which would mitigate increased noise levels and would limit construction to periods of low visitation to minimize disturbance to others.

7. LAND USE Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				7a.
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				7d.

7a. FWP does not lease any portion of Kelly Island FAS for livestock grazing and no portion of the FAS is under agricultural production. In addition, because camping is not allowed on the FAS, no revenue is derived from camping fees. The proposed project would have no impact on the productivity or profitability of the FAS or surrounding area.

7d. The Proposed Action only involves improving existing facilities and would have no adverse affect on nearby residences.

8. RISK/HEALTH HAZARDS Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?			X		Yes	8a.
b. Affect an existing emergency response or emergency evacuation plan, or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?			X		Yes Positive	8c.
d. For P-R/D-J, will any chemical toxicants be used? (Also see 8a)			X		Yes	8d.

8a. Physical disturbance of the soil during construction would encourage establishment of additional noxious weeds on the site. FWP would continue implementing an integrated approach to control noxious weeds, as outlined in the FWP Statewide Integrated Noxious Weed Management Plan. The integrated plan uses a combination of biological, mechanical, and herbicidal treatments to control noxious weeds. Use of herbicides would be in compliance with application guidelines to minimize risk of chemical spills or water contamination and would be applied by people trained in safe handling techniques.

There is a minor and temporary risk of fuel or oil from heavy equipment accidently releasing into the river during construction. Contractors would have absorbent materials on site to minimize any hydrocarbon releases, as well as conduct startup inspection of all hydraulic lines and cylinder seals daily to reduce the potential for a release. FWP would follow Best Management Practices during all phases of construction to minimize risks (Appendix D).

8c. The proposed project would improve public safety by constructing safe boat launch facilities, providing adequate parking, and improving traffic flow, thereby minimizing vehicle conflicts and overflow parking on Lena Lane.

8d. Use of herbicides to control noxious weeds could result in temporary water contamination from an inadvertent spill. The use of herbicides would be in compliance with application guidelines, outlined in the FWP Statewide Integrated Noxious Weed Management Plan, to minimize this risk and would be applied by people trained in safe handling techniques.

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

9c. The proposed improvements would have no impact on employment or community or personal income.

9d. There would be no change in commercial use of the site.

9e. The proposed improvements at Kelly Island FAS could result in a slight increase in traffic and traffic hazards through the residential developments on Spurgin Road and Lena Lane during peak times. Kelly Island FAS has received heavy use for years so it is unlikely any increase in traffic would disturb nearby residences. The additional parking could reduce disturbance to nearby residences by minimizing parking on the access road and Lena Lane.

10. PUBLIC SERVICES/TAXES/UTILITIES **Will the proposed action result in:**	**IMPACT**					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				10a.
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				10b.
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased use of any energy source?		X				
e. Define projected revenue sources		X				10e.
f. Define projected maintenance costs.		X				10f.

10a. The Proposed Action would have no impact on public services or utilities. The proposed improvements would require periodic maintenance by FWP and the site would continue to be patrolled by FWP.

10b. The Proposed Action would have no effect on the local and state tax base and revenue.

10e. Under the Proposed Action, Kelly Island FAS would be operated for day use only. Therefore, no revenue would be generated from camping fees.

10f. Projected maintenance costs include costs for annual operation and administration, maintenance, weed control, and personnel expense.

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

11a/b. The Proposed Action would not affect the aesthetic values of the FAS. The boat ramp and parking area are visible from the Clark Fork River, but not from nearby residences. Re-vegetating the riverbank with native vegetation would improve the aesthetic value of the area.

11b. The site is already developed and the proposed improvements would have no effect on the aesthetic character of the neighborhood or community.

11c. The Proposed Action may improve recreational use of the area by improving the public safety of the FAS, increasing and improving parking, and improving traffic flow through the site. This could benefit local retail and service businesses (see Appendix C, Tourism Report).

11d. No designated or proposed wild or scenic rivers, trails, or wilderness areas would be impacted by the proposed development.

12. CULTURAL/HISTORICAL RESOURCES Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significan t	Can Impact Be Mitigated	Comment Index
a. Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				12a.
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a.)		X				12a.

12a. A cultural resource consultant is currently under contract to complete a cultural resource inventory during summer 2014. The Confederated Salish-Kootenai Tribal Preservation Office has also been consulted and additional testing recommendations included in the cultural resource inventory contract. After the inventory is complete, FWP will contact the State Historic Preservation Office (SHPO) and seek a concurrence from SHPO on FWP recommendations for the project. If cultural materials are discovered during construction, work would cease and SHPO would be contacted for a more in-depth investigation.

SIGNIFICANCE CRITERIA

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

During construction of the proposed project, there may be minor and temporary impacts to the physical environment, but the impacts would be short-term and the improvements would benefit the community and recreational opportunities over the long-term. The Proposed Action would have no negative cumulative effects on the biological, physical, and human environments. When considered over the long-term, the Proposed Action positively impacts the public's recreational use of the Clark Fork River, an important, popular, and heavily used recreational river near Missoula.

13f. Kelly Island FAS is a very popular and heavily used FAS. The proposed project is designed to improve recreational facilities on the site and is not expected to generate organized opposition or substantial public controversy.

13g. The U.S. Army Corps of Engineer 404 Federal Clean Water Act is the only federal permit required for the proposed development. The Montana DEQ 318 Short Term Water Quality Standard for Turbidity and the FWP 124 Montana Stream Protection Act are the only state permits required for the proposed development. In addition, a Missoula County Floodplain and Sanitation Permit would also be required.

PART III. NARRATIVE EVALUATION AND COMMENT

During construction of the proposed project, there may be minor and temporary impacts to the physical environment, but the impacts would be short-term and the improvements would benefit the community and recreational opportunities over the long-term. The Proposed Action would have no negative cumulative effects on the biological, physical, and human environments. When considered over the long-term, the Proposed Action positively impacts the public's recreational use this stretch of the Clark Fork River, an important, popular, and heavily used river in Montana.

The minor impacts to the environment that were identified in the previous section are small in scale and would not influence the overall environment of the immediate area. The natural environment would continue to provide habitat to transient and permanent wildlife species and would be open to the public for river access.

The Proposed Action would not impact the local wildlife species that frequent the property, and the project would be designed to avoid conditions that stress wildlife populations. Though bull trout, bald eagle, wolverine, great blue heron, flammulated owl, Lewis's woodpecker, black-backed woodpecker, pileated woodpecker, veery, Cassin's finch, fisher, fringed myotis, hoary bat, westslope cutthroat trout, western skink, and a subterranean amphipod--all Montana Species of Concern--have been observed in the vicinity of the proposed project site, the proposed project is unlikely to impact these species. Construction would commence in Fall 2014, well after the critical nesting period. In addition, these species are likely accustomed to disturbance from recreation, agriculture, and residential development in the area for years. While it is possible for wolves to travel through the project area, none have been sighted and there is no pack located in the area, so it is unlikely that the Proposed Action would impact gray wolves. Even though the Clark Fork River is classified as Critical Habitat for bull trout, bull trout only migrate through this stretch of the Clark Fork River. The proposed project would not negatively impact bull trout and could improve bull trout habitat by reducing sediment delivery to the river.

Soils disturbed during construction could colonize with weeds. Disturbed areas would be reseeded with a native reclamation seed mix where necessary to reduce the establishment of weeds. FWP would continue implementing the Statewide Integrated Weed Management Plan using chemical, biological and mechanical methods to control weeds on the property. Run-off from paved surfaces would be directed away from the riverbank and ramp to one or more detention basins, which would slow the velocity of the run-off water and allow particulates to settle out of the water before eventually entering the river.

The proposed improvements of Kelly Island FAS would improve public safety hazards with convenient and safe boat launching facilities and would reduce erosion and overall site deterioration from the boat ramp and eroded riverbanks. In addition, the proposed improvements would improve recreational opportunities for fishing, boating, floating, hunting, picnicking, hiking, photography, and wildlife viewing on the very popular and scenic Clark Fork River.

PART IV. PUBLIC PARTICIPATION

1. Public involvement:

The public will be notified in the following manners about the opportunity to comment on the Kelly Island FAS Proposed Improvement Project, the Proposed Action and alternatives:

- Legal notice will be published twice each in these newspapers: *Missoulian* and *Independent Record* (Helena).

- Public notice on the Fish, Wildlife & Parks webpage: *http://fwp.mt.gov* (under Public Notices). The Draft EA will also be available on this webpage, along with the opportunity to submit comments online
- A news release will be prepared and distributed to a standard list of media outlets interested in FWP Region 2 issues.
- Draft EA will be available at the FWP Region 2 Headquarters in Missoula and the FWP State Headquarters in Helena.
- Copies of this environmental assessment will be distributed to adjacent landowners and interested parties to ensure their knowledge of the Proposed Action.

This level of public notice and participation is appropriate for a project of this scope having limited impacts, many of which can be mitigated.

If requested within the comment period, FWP may schedule and conduct a public meeting on this Proposed Action.

2. Duration of comment period:

The public comment period will extend for thirty (30) days. Written comments will be accepted until 5:00 p.m. on July 29, 2014 and can be emailed to Rory Zarling at rzarling@mt.gov or mailed to the address below:

Kelly Island FAS Improvement Project
Montana Fish, Wildlife & Parks
Region 2
3201 Spurgin Road
Missoula, MT 59804

PART V. EA PREPARATION

1. Based on the significance criteria evaluated in this EA, is an EIS required? NO
If an EIS is not required, explain why the EA is the appropriate level of analysis for this Proposed Action.

Based on an evaluation of impacts to the physical and human environment under MEPA, this environmental review revealed no significant negative impacts from the Proposed Action: therefore, an EIS is not necessary and an environmental assessment is the appropriate level of analysis. In determining the significance of the impacts, FWP assessed the severity, duration, geographic extent, and frequency of the impact, the probability that the impact would occur or reasonable assurance that the impact would not occur. FWP assessed the growth-inducing or growth-inhibiting aspects of the impact, the importance to the state and to society of the environmental resource or value effected, any precedent that would be set as a result of an impact of the Proposed Action that would commit FWP to future actions; and potential conflicts with local, federal, or state laws. As this EA revealed no significant impacts from the Proposed Actions, an EA is the appropriate level of review and an EIS is not required.

2. Person(s) responsible for preparing the EA:

Rory Zarling
Region 2 Fishing Access Site Manager
3201 Spurgin Road
Missoula, MT 59804
rzarling@mt.gov
(406) 542-5561

Andrea Darling
FWP EA Contractor
39 Big Dipper Drive
Montana City, MT 59634
apdarling@gmail.com

3. List of agencies or offices consulted during preparation of the EA:

Montana Department of Commerce--Tourism
Montana Fish, Wildlife & Parks
- Field Services Division
  - Design and Construction
  - Lands Bureau
  - Legal Bureau
- Fisheries Division
- Wildlife Division

Montana Natural Heritage Program--Natural Resources Information System (NRIS)

APPENDICES

A. MCA 23-1-110 Qualification Checklist

B. Native Species Report--Montana Natural Heritage Program

C. Tourism Report--Department of Commerce

D. Montana Fish, Wildlife and Parks Best Management Practices

APPENDIX A

23-1-110, MCA (ARM 12.8.602) PROJECT QUALIFICATION CHECKLIST

Date: June 3, 2014 **Person Reviewing:** Andrea Darling

Project Location: Kelly Island FAS is located on the Clark Fork River one mile west of Missoula, Montana in Missoula County, Section 26 and 27, Township 13 North, Range 20 West (Figure 1 and 2).

Description of Proposed Work: Heavy spring flows of the Clark Fork River have scoured and eroded the boat ramp and the erodible soils of the adjacent riverbanks. As a result, boat launching has become difficult and riverbank erosion has contributed to the overall site deterioration. FWP proposes to construct a new concrete boat ramp, stabilize the adjacent riverbank, expand and improve the parking areas, add a loop road, and pave the roads and parking areas to improve boat launching and parking.

The following checklist is intended to be a guide for determining whether a proposed action or improvement is of enough significance to fall under 23-1-110 rules. (Please check all that apply and comment as necessary.)

[X] A. New roadway or trail built over undisturbed land?
Comments: Expanded parking areas would be built over undisturbed land.

[ ] B. New building construction (buildings <100 sf and vault latrines exempt)?
Comments: No building construction.

[X] C. Any excavation of 20 c.y. or greater?
Comments: Yes, for the new boat ramp, expanded parking area, and loop road.

[X] D. New parking lots built over undisturbed land or expansion of existing lot that increases parking capacity by 25% or more?
Comments: The expanded parking area would increase parking capacity and would be constructed over undisturbed land.

[X] E. Any new shoreline alteration that exceeds a doublewide boat ramp or handicapped fishing station?
Comments: Bank stabilization along the Clark Fork River upstream and downstream of boat ramp of the boat ramp.

[X] F. Any new construction into lakes, reservoirs, or streams?
Comments: The new concrete boat ramp would be built into the Clark Fork River in place of the existing boat ramp.

[ ] G. Any new construction in an area with National Registry quality cultural artifacts (as determined by State Historical Preservation Office)?
Comments: A cultural resource consultant will conduct a cultural resource inventory during summer 2014. SHPO will be contact upon completion of the inventory.

[ ] H. Any new above ground utility lines?
Comments: No new utility lines.

[ ] I. Any increase or decrease in campsites of 25% or more of an existing number of campsites?
Comments: No campsites would be constructed.

[ ] J. Proposed project significantly changes the existing features or use pattern, including effects of a series of individual projects?
Comments: No. The proposed action would not affect existing features or use patterns.

APPENDIX B

NATIVE SPECIES REPORT – MONTANA NATURAL HERITAGE PROGRAM
Sensitive Plants and Animals in the Vicinity of
Kelly Island Fishing Access Site

Species of Concern Terms and Definitions

A search of the Montana Natural Heritage Program (MNHP) element occurrence database (http://nris.mt.gov) indicates occurrences of bull trout (listed as threatened by the US Fish and Wildlife Service), bald eagle (listed as DM by the US Fish and Wildlife Service), and wolverine (listed as a candidate for listing by the US Fish and Wildlife Service) within two miles of the Proposed Action site. No other occurrences of federally ranked animal or plant species have been found within the vicinity of the Proposed Action site. The search indicates that great blue heron, flammulated owl, Lewis's woodpecker, black-backed woodpecker, pileated woodpecker, veery, Cassin's finch, westslope cutthroat trout, fringed myotis, hoary bat, fisher, western skink, and a subterranean amphipod, Species of Concern, have also been observed in or near the Proposed Action site. More information on these species is included below. No plant Species of Concern have been observed on or near the Proposed Action site.

Montana Species of Concern. The term **"Species of Concern"** includes taxa that are at-risk or potentially at-risk due to rarity, restricted distribution, habitat loss, and/or other factors. The term also encompasses species that have a special designation by organizations or land management agencies in Montana, including: Bureau of Land Management Special Status and Watch species; U.S. Forest Service Sensitive and Watch species; U.S. Fish and Wildlife Service Threatened, Endangered and Candidate species.

Status Ranks (Global and State)

The international network of Natural Heritage Programs employs a standardized ranking system to denote global (**G** -- range-wide) and state status (**S**) (Nature Serve 2003). Species are assigned numeric ranks ranging from 1 (critically imperiled) to 5 (demonstrably secure), reflecting the relative degree to which they are "at-risk". Rank definitions are given below. A number of factors are considered in assigning ranks -- the number, size and distribution of known "occurrences" or populations, population trends (if known), habitat sensitivity, and threat. Factors in a species' life history that make it especially vulnerable are also considered (e.g., dependence on a specific Pollinator).

U.S. Fish and Wildlife Service (Endangered Species Act)- Terms and Definitions

LE. Listed endangered: Any species in danger of extinction throughout all or a significant portion of its range.

LT. Listed threatened: Any species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

C. Candidate: Those taxa for which sufficient information on biological status and threats exists to propose to list them as threatened or endangered.

DM. Recovered, delisted, and being monitored - Any previously listed species that is now recovered, has been delisted, and is being monitored.

BGEPA. The Bald and Golden Eagle Protection Act of 1940 (BGEPA) prohibits anyone, without a permit issued by the Secretary of the Interior, from taking bald or golden eagles, including their parts, nests, or eggs. The BGEPA provides criminal and civil penalties for persons who take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof.

MBTA. The Migratory Bird Treaty Act (MBTA) implements four treaties that provide for international protection of migratory birds. The statute's language is clear that actions resulting in a "taking" or possession (permanent or temporary) of a protected species is a violation of the MBTA.

BCC. Birds of Conservation Concern 2008. The 1988 amendment to the Fish and Wildlife Conservation Act mandates the U.S. Fish and Wildlife Service to identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act

Status Ranks	
Code	**Definition**
G1 S1	At high risk because of extremely limited and/or rapidly declining numbers, range, and/or habitat, making it highly vulnerable to global extinction or extirpation in the state.
G2 S2	At risk because of very limited and/or declining numbers, range, and/or habitat, making it vulnerable to global extinction or extirpation in the state.
G3 S3	Potentially at risk because of limited and/or declining numbers, range, and/or habitat, even though it may be abundant in some areas.
G4 S4	Uncommon but not rare (although it may be rare in parts of its range), and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern.
G5 S5	Common, widespread, and abundant (although it may be rare in parts of its range). Not vulnerable in most of its range.

MFWP Conservation Need. Under Montana's Comprehensive Fish and Wildlife Conservation Strategy of 2005, individual animal species are assigned levels of conservation need as follows:

Tier I. Greatest conservation need. Montana FWP has a clear obligation to use its resources to implement conservation actions that provide direct benefit to these species, communities and focus areas.

Tier II. Moderate conservation need. Montana FWP could use its resources to implement conservation actions that provide direct benefit to these species communities and focus areas.

Tier III. Lower conservation need. Although important to Montana's wildlife diversity, these species, communities and focus areas are either abundant or widespread or are believed to have adequate conservation already in place.

Tier IV. Species that are non-native, incidental or on the periphery of their range and are either expanding or very common in adjacent states.

SENSITIVE PLANTS AND ANIMALS IN THE VICINITY OF KELLY ISLAND FISHING ACCESS SITE

1. **Ardea herodias (Great Blue Heron)**

Vertebrate animal- Bird — *Habitat- Riparian Forests*

Natural Heritage Ranks
State: **S3**
Global: **G5**

Federal Agency Status:
U.S. Fish and Wildlife Service:
U.S. Forest Service**:**
U.S. Bureau of Land Management:

FWP CFWCS Tier: **3**

Element Occurrence data was reported of great blue heron within the project area. Last recorded observation date was 2009.

2. **Haliaeetus leucocephalus (Bald Eagle)**

Vertebrate animal- Bird — *Habitat- Riparian Forests*

Natural Heritage Ranks
State: **S4**
Global: **G5**

Federal Agency Status:
U.S. Fish and Wildlife Service: **DM; BGEPA; MBTA; BCC**
U.S. Forest Service**: Sensitive**
U.S. Bureau of Land Management: **Sensitive**

FWP CFWCS Tier: **1**

Element Occurrence data was reported of bald eagle within one mile of the project area. Last recorded observation date was 2009.

3. **Otus flammeolus (Flammulated Owl)**
Vertebrate animal- Bird *Habitat- Dry Conifer Forests*
Natural Heritage Ranks Federal Agency Status:
State: **S3B** U.S. Fish and Wildlife Service:
Global: **G4** U.S. Forest Service**: Sensitive**
U.S. Bureau of Land Management: **Sensitive**
FWP CFWCS Tier: **1**
Element Occurrence data was reported of flammulated owl within one mile of the project area. Last recorded observation date was 2005.

4. **Melanerpes lewis (Lewis's Woodpecker)**
Vertebrate animal- Bird *Habitat- Riparian Forests*
Natural Heritage Ranks Federal Agency Status:
State: **S2B** U.S. Fish and Wildlife Service:
Global: **G4** U.S. Forest Service**:**
U.S. Bureau of Land Management:
FWP CFWCS Tier: **2**
Element Occurrence data was reported of Lewis's woodpecker within the project area. Last recorded observation date was 2004.

5. **Picoides articus (Black-backed Woodpecker)**
Vertebrate animal- Bird *Habitat- Conifer Forest Burns*
Natural Heritage Ranks Federal Agency Status:
State: **S3** U.S. Fish and Wildlife Service:
Global: **G5** U.S. Forest Service**: Sensitive**
U.S. Bureau of Land Management: **Sensitive**
FWP CFWCS Tier: **1**
Element Occurrence data was reported of black-backed woodpecker within 1 mile of the project area. Last recorded observation date was 2005.

6. **Dryocopus pileatus (Pileated Woodpecker)**
Vertebrate animal- Bird *Habitat-Moist Conifer Forests*
Natural Heritage Ranks Federal Agency Status:
State: **S3** U.S. Fish and Wildlife Service:
Global: **G5** U.S. Forest Service**:**
U.S. Bureau of Land Management:
FWP CFWCS Tier: **2**
Element Occurrence data was reported of pileated woodpecker within the project area. Last recorded observation date was 2004.

7. **Catharus fuscescens (Veery)**
Vertebrate animal- Bird *Habitat- Riparian Forests*
Natural Heritage Ranks Federal Agency Status:
State: **S3B** U.S. Fish and Wildlife Service:
Global: **G5** U.S. Forest Service**:**
U.S. Bureau of Land Management:
FWP CFWCS Tier: **2**
Element Occurrence data was reported of veery within the project area. Last recorded observation date was 2003.

8. **Haemorhous cassinii (Cassin's Finch)**
Vertebrate animal- Bird *Habitat- Drier Conifer Forests*
Natural Heritage Ranks Federal Agency Status:
State: **S3** U.S. Fish and Wildlife Service:
Global: **G5** U.S. Forest Service**:**
U.S. Bureau of Land Management:
FWP CFWCS Tier: **3**
Element Occurrence data was reported of Cassin's finch within one mile of the project area. Last recorded observation date was 1989.

9. **Oncorhvnchus clarkii lewisi (Westslope Cutthroat Trout)**
Vertebrate animal- Fish *Habitat- Mountain Streams, Rivers, Lakes*
Natural Heritage Ranks Federal Agency Status:
State: **S2** U.S. Fish and Wildlife Service:
Global: **G4T3** U.S. Forest Service**: Sensitive**
U.S. Bureau of Land Management: **Sensitive**
FWP CFWCS Tier: **1**
Element Occurrence data was reported of westslope cutthroat trout within one mile of the project area. No observation date was recorded.

10. **Salvelinus confluentus (Bull Trout)**
Vertebrate animal- Fish *Habitat- Mountain Streams, Rivers, Lakes*
Natural Heritage Ranks Federal Agency Status:
State: **S2** U.S. Fish and Wildlife Service: **LT**
Global: **G4** U.S. Forest Service**: Threatened**
U.S. Bureau of Land Management: **Special Status**
FWP CFWCS Tier: **1**
Element Occurrence data was reported of bull trout within two miles of the project area. No observation date was recorded.

11. **Myotis thysanodes (Fringed Myotis)**
Vertebrate animal- Mammal *Habitat- Riparian and Dry Mixed Conifer Forests*
Natural Heritage Ranks Federal Agency Status:
State: **S3** U.S. Fish and Wildlife Service:
Global: **G4** U.S. Forest Service**:**
U.S. Bureau of Land Management: **Sensitive**
FWP CFWCS Tier: **2**
Element Occurrence data was reported of fringed myotis within one mile of the project area. Last recorded observation date was 1964.

12. **Lasiurus cinereus (Hoary Bat)**
Vertebrate animal- Mammal *Habitat- Riparian and Forests*
Natural Heritage Ranks Federal Agency Status:
State: **S3** U.S. Fish and Wildlife Service:
Global: **G5** U.S. Forest Service**:**
U.S. Bureau of Land Management:
FWP CFWCS Tier: **2**
Element Occurrence data was reported of hoary bat within two miles of the project area. Last recorded observation date was 1916.

13. **Martes pennanti (Fisher)**
Vertebrate animal- Mammal *Habitat- Mixed Conifer Forests*
Natural Heritage Ranks Federal Agency Status:
State: **S3** U.S. Fish and Wildlife Service:
Global: **G5** U.S. Forest Service**: Sensitive**
U.S. Bureau of Land Management: **Sensitive**
FWP CFWCS Tier: **2**
Element Occurrence data was reported of fisher within two miles of the project area. Last recorded observation date was 2011.

14. **Gulo gulo (Wolverine)**
Vertebrate animal- Mammal *Habitat- Boreal Forests and Alpine Habitats*
Natural Heritage Ranks Federal Agency Status:
State: **S3** U.S. Fish and Wildlife Service: **C**
Global: **G4** U.S. Forest Service**: Sensitive**
U.S. Bureau of Land Management: **Sensitive**
FWP CFWCS Tier: **2**
Element Occurrence data was reported of wolverine within two miles of the project area. Last recorded observation date was 2011.

15. Plestiodon skiltonianus (Western Skink)

Invertebrate animal- Reptile *Habitat- Open Conifer Forests and Adjacent Grasslands*

Natural Heritage Ranks
State: **S3**
Global: **G5**

Federal Agency Status:
U.S. Fish and Wildlife Service:
U.S. Forest Service**:**
U.S. Bureau of Land Management:

FWP CFWCS Tier: **2**

Element Occurrence data was reported of western skink within two miles of the project area. Last recorded observation date was 1929.

16. Stygobromus tritus (A Subterranean Amphipod))

Invertebrate animal- Crustacean *Habitat- Subterranean Aquatic Ecosystems*

Natural Heritage Ranks
State: **S1S2**
Global: **G1G2**

Federal Agency Status:
U.S. Fish and Wildlife Service:
U.S. Forest Service**:**
U.S. Bureau of Land Management:

FWP CFWCS Tier:

Element Occurrence data was reported of a subterranean amphipod within three miles of the project area. Last recorded observation date was 1986.

APPENDIX C
TOURISM REPORT

MONTANA ENVIRONMENTAL POLICY ACT (MEPA) & MCA 23-1-110

The Montana Department of Fish, Wildlife and Parks has initiated the review process as mandated by MCA 23-1-110 and the Montana Environmental Policy Act in its consideration of the project described below. As part of the review process, input and comments are being solicited. Please complete the project name and project description portions and submit this form to:

Carol Crockett, Visitor Services Manager
Montana Office of Tourism-Department of Commerce
301 S. Park Ave.
Helena, MT 59601

Project Name: Kelly Island Fishing Access Site Proposed Improvement Project

Project Description: Heavy spring flows of the Clark Fork River have scoured and eroded the boat ramp and the erodible soils of the adjacent riverbanks. As a result, boat launching has become difficult and riverbank erosion has contributed to the overall site deterioration. FWP proposes to construct a new concrete boat ramp, stabilize the adjacent riverbank, expand and improve the parking areas, add a loop road, and pave the roads and parking areas to improve boat launching and parking.

1. Would this site development project have an impact on the tourism economy?

NO **YES** If YES, briefly describe:

Yes, as described, this project has the potential to positively impact the tourism and recreation industry economy if properly maintained. We are assuming the agency has determined it has necessary funding for the on-going operations and maintenance once this project is complete.

2. Does this impending improvement alter the quality or quantity of recreation/tourism opportunities and settings?

NO **YES** If YES, briefly describe:

Yes, as described, the project has the potential to improve quality and quantity of tourism and recreational opportunities if properly maintained. We are assuming the agency has determined it has necessary funding for the on-going operations and maintenance once this project is complete.

Signature Carol Crockett, Visitor Services Manager Date February 24, 2014

APPENDIX D
MONTANA FISH, WILDLIFE AND PARKS

BEST MANAGEMENT PRACTICES
10-02-02
Updated May 1, 2008

I. ROADS

A. Road Planning and location

1. Minimize the number of roads constructed at the FAS through comprehensive road planning, recognizing foreseeable future uses.

    a. Use existing roads, unless use of such roads would cause or aggravate an erosion problem.

2. Fit the road to the topography by locating roads on natural benches and following natural contours. Avoid long, steep road grades and narrow canyons.

3. Locate roads on stable geology, including well-drained soils and rock formations that tend to dip into the slope. Avoid slumps and slide-prone areas characterized by steep slopes, highly weathered bedrock, clay beds, concave slopes, hummocky topography, and rock layers that dip parallel to the slope. Avoid wet areas, including seeps, wetlands, wet meadows, and natural drainage channels.

4. Minimize the number of stream crossings.

    a. Choose stable stream crossing sites. "Stable" refers to streambanks with erosion-resistant materials and in hydrologically safe spots.

B. <u>Road Design</u>

1. Design roads to the minimum standard necessary to accommodate anticipated use and equipment. The need for higher engineering standards can be alleviated through proper road-use management. "Standard" refers to road width.

2. Design roads to minimize disruption of natural drainage patterns. Vary road grades to reduce concentrated flow in road drainage ditches, culverts, and on fill slopes and road surfaces.

C. <u>Drainage from Road Surface</u>

1. Provide adequate drainage from the surface of all permanent and temporary roads. Use outsloped, insloped or crowned roads, installing proper drainage features. Space road drainage features so peak flow on road surface or in ditches will not exceed their capacity.

    a. Outsloped roads provide means of dispersing water in a low-energy flow from the road surface. Outsloped roads are appropriate when fill slopes are stable, drainage will not flow directly into stream channels, and transportation safety can be met.

    b. For insloped roads, plan ditch gradients steep enough, generally greater than 2%, but less than 8%, to prevent sediment deposition and ditch erosion. The steeper gradients may be suitable for more stable soils; use the lower gradients for less stable soils.

    c. Design and install road surface drainage features at adequate spacing to control erosion; steeper gradients require more frequent drainage features. Properly constructed drain dips can be an economical method of road surface drainage. Construct drain dips deep enough into the sub-grade so that traffic will not obliterate them.

2. For ditch relief/culverts, construct stable catch basins at stable angles. Protect the inflow end of cross-drain culverts from plugging and armor if in erodible soil. Skewing ditch relief culverts 20 to 30 degrees toward the inflow from the ditch will improve inlet efficiency.

3. Provide energy dissipators (rock piles, slash, log chunks, etc.) where necessary to reduce erosion at outlet of drainage features. Cross-drains, culverts, water bars, dips, and other drainage structures should not discharge onto erodible soils or fill slopes without outfall protection.

4. Route road drainage through adequate filtration zones, or other sediment-settling structures. Install road drainage features above stream crossings to route discharge into filtration zones before entering a stream.

D. Construction/Reconstruction

1. Stabilize erodible, exposed soils by seeding, compacting, riprapping, benching, mulching, or other suitable means.

2. At the toe of potentially erodible fill slopes, particularly near stream channels, pile slash in a row parallel to the road to trap sediment. When done concurrently with road construction, this is one method to effectively control sediment movement and it also provides an economical way of disposing of roadway slash. Limit the height, width and length of these "slash filter windrows" so not to impede wildlife movement. Sediment fabric fences or other methods may be used if effective.

3. Construct cut and fill slopes at stable angles to prevent sloughing and subsequent erosion.

4. Avoid incorporating potentially unstable woody debris in the fill portion of the road prism. Where possible, leave existing rooted trees or shrubs at the toe of the fill slope to stabilize the fill.

5. Place debris, overburden, and other waste materials associated with construction and maintenance activities in a location to avoid entry into streams. Include these waste areas in soil stabilization planning for the road.

6. When using existing roads, reconstruct only to the extent necessary to provide adequate drainage and safety; avoid disturbing stable road surfaces. Consider abandoning existing roads when their use would aggravate erosion.

E. Road Maintenance

1. Grade road surfaces only as often as necessary to maintain a stable running surface and to retain the original surface drainage.

2. Maintain erosion control features through periodic inspection and maintenance, including cleaning dips and cross-drains, repairing ditches, marking culvert inlets to aid in location, and clearing debris from culverts.

3. Avoid cutting the toe of cut slopes when grading roads, pulling ditches, or plowing snow.

4. Avoid using roads during wet periods if such use would likely damage the road drainage features. Consider gates, barricades or signs to limit use of roads during wet periods.

II. RECREATIONAL FACILITIES (parking areas, campsites, trails, ramps, restrooms)

A. Site Design

1. Design a site that best fits the topography, soil type, and stream character, while minimizing soil disturbance and economically accomplishing recreational objectives. Keep roads and parking lots at least 50 feet from water; if closer, mitigate with vegetative buffers as necessary.

2. Locate foot trails to avoid concentrating runoff and provide breaks in grade as needed. Locate trails and parking areas away from natural drainage systems and divert runoff to stable areas. Limit the grade of trails on unstable, saturated, highly erosive, or easily compacted soils

3. Scale the number of boat ramps, campsites, parking areas, bathroom facilities, etc. to be commensurate with existing and anticipated needs. Facilities should not invite such use that natural features will be degraded.

4. Provide adequate barriers to minimize off-road vehicle use

B. Maintenance: Soil Disturbance and Drainage

1. Maintenance operations minimize soil disturbance around parking lots, swimming areas and campsites, through proper placement and dispersal of such facilities or by reseeding disturbed ground. Drainage from such facilities should be promoted through proper grading.

2. Maintain adequate drainage for ramps by keeping side drains functional or by maintaining drainage of road surface above ramps or by crowning (on natural surfaces).

3. Maintain adequate drainage for trails. Use mitigating measures, such as water bars, wood chips, and grass seeding, to reduce erosion on trails.

4. When roads are abandoned during reconstruction or to implement site-control, they must be reseeded and provided with adequate drainage so that periodic maintenance is not required.

III. RAMPS AND STREAM CROSSINGS

A. Legal Requirements

1. Relevant permits must be obtained prior to building bridges across streams or boat ramps. Such permits include the SPA 124 permit, the COE 404 permit, and the DNRC Floodplain Development Permit.

B. Design Considerations

1. Placement of boat ramp should be such that boats can load and unload with out difficulty and the notch in the bank where the ramp was placed does not encourage bank erosion. Extensions of boat ramps beyond the natural bank can also encourage erosion.

2. Adjust the road grade or provide drainage features (e.g. rubber flaps) to reduce the concentration of road drainage to stream crossings and boat ramps. Direct drainage flow through an adequate filtration zone and away from the ramp or crossing through the use of gravel side-drains, crowning (on natural surfaces) or 30-degree angled grooves on concrete ramps.

3. Avoid unimproved stream crossings on permanent streams. On ephemeral streams, when a culvert or bridge is not feasible, locate drive-throughs on a stable, rocky portion of the stream channel.

4. Unimproved (non-concrete) ramps should only be used when the native soils are sufficiently gravelly or rocky to withstand the use at the site and to resist erosion.

C. Installation of Stream Crossings and Ramps

1. Minimize stream channel disturbances and related sediment problems during construction of road and installation of stream crossing structures. Do not place erodible material into stream channels. Remove stockpiled material from high water zones. Locate temporary construction bypass roads in locations where the stream course will have a minimal disturbance. Time the construction activities to protect fisheries and water quality.

2. Where ramps enter the stream channel, they should follow the natural streambed in order to avoid changing stream hydraulics and to optimize use of boat trailers.

3. Use culverts with a minimum diameter of 15 inches for permanent stream crossings and cross drains. Proper sizing of culverts may dictate a larger pipe and should be based on a 50-year flow recurrence interval. Install culverts to conform to the natural streambed and slope on all perennial streams and on intermittent streams that support fish or that provide seasonal fish passage. Place culverts slightly below normal stream grade to avoid culvert outfall barriers. Do not alter stream channels upstream from culverts, unless necessary to protect fill or to prevent culvert blockage. Armor the inlet and/or outlet with rock or other suitable material where needed.

4. Prevent erosion of boat ramps and the affected streambank through proper placement (so as to not catch the stream current) and hardening (riprap or erosion resistant woody vegetation).

5. Maintain a 1-foot minimum cover for culverts 18-36 inches in diameter, and a cover of one-third diameter for larger culverts to prevent crushing by traffic.