

**Draft
Environmental Assessment**

**PAIR-A-DICE FISHING ACCESS SITE
DEVELOPMENT**



April 2010



***Montana Fish,
Wildlife & Parks***

**Pair-A-Dice Fishing Access Site (FAS) Development
Draft Environmental Assessment
MEPA, NEPA, MCA 23-1-110 CHECKLIST**

PART I. PROPOSED ACTION DESCRIPTION

1. Proposed state action:

Montana Fish, Wildlife, & Parks (FWP) proposes development of the Pair-A-Dice Fishing Access Site (FAS) along the Clark Fork River in Sanders County near Paradise, Montana, to improve public access to this stretch of river. Proposed development includes site signage, improvements to the access road, boundary fencing, a concrete vault latrine, a designated parking area for 15-20 vehicles, and a concrete boat ramp.

2. Agency authority for the proposed action:

The 1977 Montana Legislature enacted Statute 87-1-605, Montana Code Annotated (MCA), which directs FWP to acquire, develop, and operate a system of fishing accesses. FWP has the authority to develop outdoor recreational resources in the state per 23-2-101, MCA: *“for the purpose of conserving the scenic, historic, archaeological, scientific, and recreational resources of the state and providing their use and enjoyment, thereby contributing to the cultural, recreational, and economic life of the people and their health.”*

Furthermore, state Statute 23-1-110 MCA and 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 users and 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 project in relation to this rule. See Appendix 1 for HB 495 qualification.

3. Name of project: Pair-A-Dice FAS Development

4. Project sponsor:

Montana Fish, Wildlife & Parks
490 North Meridian Road
Kalispell, MT 59101
406-752-5501

5. Estimated schedule of events:

Public Comment Period: April 2010
Decision Notice Published: May 2010
Estimated Construction/Commencement Date: Summer 2010
Estimated Completion Date: Fall 2010
Current Status of Project Design (% complete): 15%

6. Location:

Sanders County, Township 19 North, Range 25 West, Sections 21 and 28

Figure 1: Approximate location of Pair-A-Dice FAS.



Figure 2: Highway map of area around Pair-A-Dice FAS.

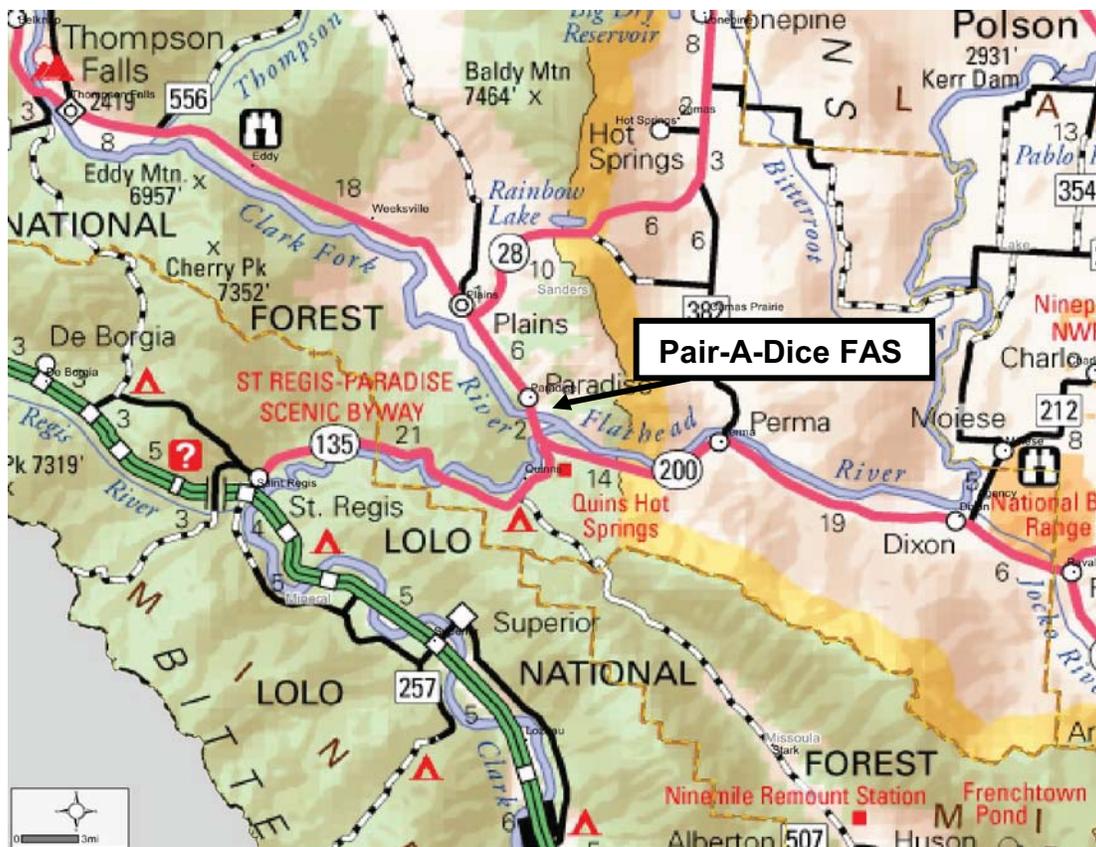


Figure 3: Map of Pair-A-Dice FAS showing other fishing access sites in the area.

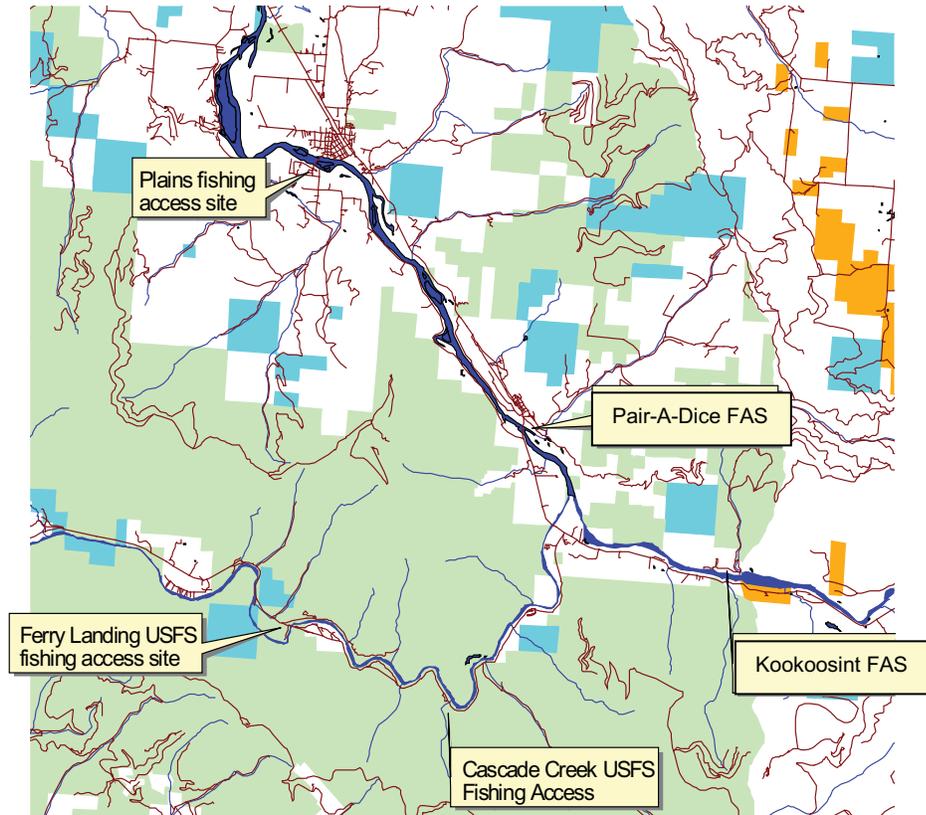
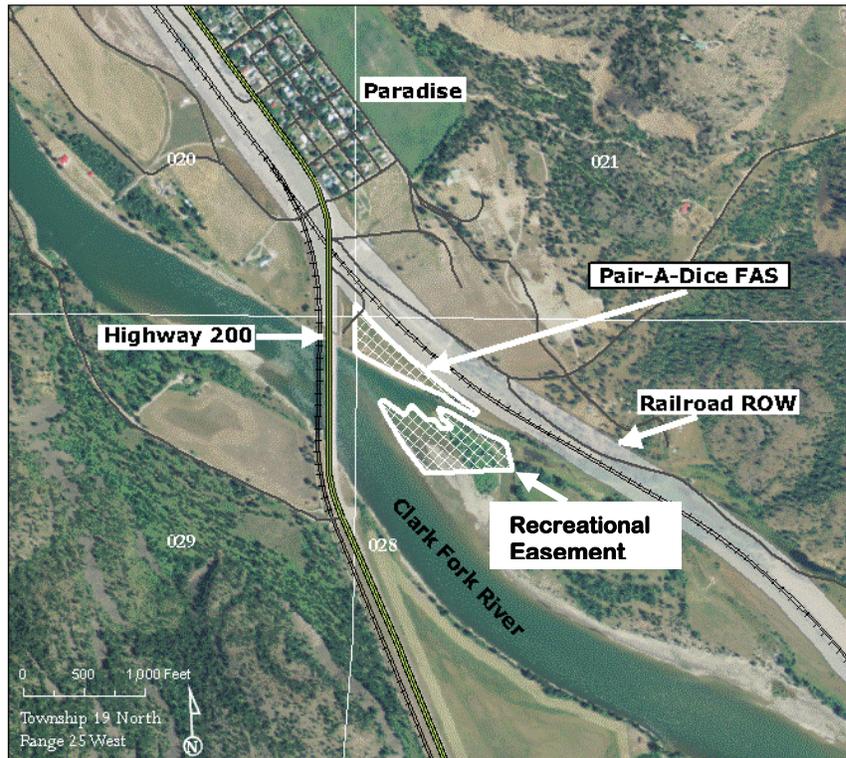


Figure 4: Aerial view of Pair-A-Dice FAS parcel.



7. Area affected:

	<u>Acres</u>		<u>Acres</u>
(a) Developed:		(d) Floodplain/Riparian	<u>1</u>
Residential	<u>0</u>		
Industrial	<u>0</u>	(e) Productive:	
(b) Open Space/	<u>4</u>	Irrigated cropland	<u>0</u>
Woodlands/Recreation		Dry cropland	<u>0</u>
(c) Wetlands/Riparian	<u>0</u>	Forestry	<u>0</u>
Areas		Rangeland	<u>3</u>
		Other	<u>0</u>

8. Other local, state or federal overlapping or additional jurisdiction:

a) Permits (Permits will be filed 60 days prior to work.):

<u>Agency Name</u>	<u>Permit</u>
Montana Rail Link	Right of Way Permit
Montana Fish, Wildlife & Parks (FWP)	124 Montana Stream Protection Act
Montana Dept. of Environmental Quality	318 Short Term Water Quality Standard for Turbidity
Montana Department of Transportation	Approach permit
Sanders County	Floodplain Permit and Sanitation Permit
US Corps of Engineers	404 Federal Clean Water Act

b) Funding: MT Fish Wildlife & Parks FAS Development \$75,000

c) Other overlapping or additional jurisdictional responsibilities:

<u>Agency Name</u>	<u>Type of Responsibility</u>
Natural Heritage Program	Species of Concern (See Appendix 2)
State Historic Preservation Office	Cultural Clearance
US Fish & Wildlife Service	Bald & Golden Eagle Protection Act
US Fish & Wildlife Service	Migratory Bird Treaty Act
Montana Bald Eagle Working Group	Montana Bald Eagle Management Plan
Sanders County Weed District	Weed Management Coordination and Approval of Weed Management Plan

9. Summary of the proposed action:

Montana Fish, Wildlife & Parks proposes to develop the Pair-A-Dice Fishing Access Site (FAS). The property is just south of Paradise along State Highway 200, entering the parcel at the northeast side of the Highway 200 bridge. Pair-A-Dice FAS consists of two parcels (see Figure 4 on page 4) with 4.29 acres of upland grasslands and just over 8.31 acres of recreational easement, consisting of several river channels and islands. The property contains some ponderosa pine and cottonwoods, as well as willows and shrubs, and shows use by geese and other waterfowl, shorebirds and songbirds, furbearers, and white-tailed deer. The parcel is bounded by railroad right of way on the north, Highway 200 right of way on the west, and the Clark Fork of the Columbia River on the south. Proposed development includes improving the existing approach from Highway 200 with a private commercial approach, establishing a new access road to the

parking lot, boundary fencing, and adding a new concrete vault latrine and concrete boat ramp with cable mat.

Need and Benefits:

It is anticipated the Pair-A-Dice FAS, once fully developed, would be used by anglers both for bank and float fishing as well as launching and taking out both nonmotorized and motorized watercraft. The purpose of the proposed development is to improve public access along the Clark Fork River and prevent pioneered use from degrading the habitat in the area. The lower Clark Fork River is a very popular river for float and bank angling, as well as a variety of recreational uses including floating, swimming, walking, picnicking, and wildlife viewing. The proposed development would provide access for floaters from both the Clark Fork and Flathead Rivers (the confluence of the Flathead River is about 1.6 miles upstream). Over 5½ miles of the Clark Fork River just upstream of the confluence of the Flathead River is excellent trout fishing and currently well used, but lacks adequate public access for floaters who wish to take-out near the confluence with the Flathead River. The proposed development at Pair-A-Dice FAS (Clark Fork river mile 101.2) would also facilitate as a take-out location from the FWP Kookoosint FAS on the lower Flathead River that is about 3.8 miles upstream of the confluence of the Flathead River, as well as access for a float down to Plains (Clark Fork river mile 94.1).

According to FWP 2007 survey data, the section of river from the mouth of the Flathead River to the Idaho border received nearly 19,000 days of fishing, and the upstream section from the mouth of the Bitterroot River to the mouth of the Flathead River received almost 30,000 days of fishing. Game fish opportunities in the river include rainbow, westslope cutthroat, and rainbow cutthroat hybrids, with the lower end of the Flathead containing smallmouth and largemouth bass, northern pike, and a few trout.

Improvements, Maintenance and Public Use:

Development would include an improved access road, a concrete vault latrine, a parking area for ten vehicle/boat trailer combinations plus seven standard-vehicles, and a concrete boat ramp and cable mat. See Appendix 5 for the preliminary draft concept site plan. FWP has consulted with the Montana Department of Transportation (MDT) regarding the approach to the access road to the property. FWP would install directional, information and regulation signs, and boundary or right-of-way fences would be built and maintained. FWP Parks Maintenance would implement the FWP Statewide Integrated Noxious Weed Management Plan to mitigate the spread of noxious weeds.

The property would be regulated under existing FWP public use regulations. Management of the proposed development includes routine maintenance and enforcement of department recreation regulations as outlined in the

Administrative Rules of Montana (ARM). Protection of the natural resources, the health and safety of visitors, and consideration of neighboring properties would be considered and incorporated into development plans for this site. Development of the parking area and latrine will enhance visitor use of this site as well as provide long-term protection for the resources not impacted by the development footprint. While there are no current plans to develop campsites at this time, camping may be added in the future if funding becomes available and if the need becomes apparent. The site would be managed for day-use only and would be open year-round.

FWP Commercial Use Rules for commercial outfitters who use the site for river access and the Special Recreation Permit (SRP) permitting commercial, competitive and organized groupings would also apply. Waterfowl hunting would be assessed for safety and would be permitted and posted if conditions allow.

10. Alternatives:

Alternative A: No Action

If FWP were not to develop the Pair-A-Dice FAS new access road into the property, the property would only be accessible to the public from the river and would be restricted to float-in access only. Boat launching would not be possible without development of the access road and boat ramp. Without a latrine, health and safety issues would likely develop over time if visitors pioneered primitive toilet areas.

Preferred Alternative B: Proposed Action

FWP proposes to develop the Pair-A-Dice FAS including necessary boundary fencing, site signage, and new access road as well as a new concrete vault latrine, designated parking area for 15-20 vehicles, and a concrete boat ramp with a cable mat. The proposed highway approach would be safer with a better line of sight for vehicles entering and leaving the property. The proposed development would enhance visitor use of this site as well as provide long-term protection for the resources not impacted by the development footprint.

11. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

The Montana Bald Eagle Management Guidelines recommend a buffer of at least ½ mile for construction of access sites. The proposed development of the Pair-A-Dice FAS falls outside of these recommended buffers for all bald eagle nests in the area. There is an observation of a bald eagle aerie located upstream and nearly one mile from the FAS, and therefore the site would likely have no impact on the aerie. There was also a bald eagle nest located downstream more than a mile from the proposed access site on an island in the Clark Fork River. The nest

tree blew down and was reported as no longer useable in 2007. While bald eagles were officially delisted in 2007, the US Fish and Wildlife Service has jurisdiction protecting this species under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). Furthermore, state pesticide use laws and regulations will be followed. Application records will be submitted to the Montana Department of Agriculture as required, and these records will be available upon request.

Control measures are associated with the proposed actions for decreasing the impacts of the construction work during the ramp construction. Control measures include timing the earthwork to coincide with the period of lowest flow to minimize bed-load transport of redistributed bank materials and of channel materials during the construction the boat ramp so that any materials mobilized into the stream channel would have minimum energy for transport. Thus, while sediment will be mobilized, only the silt, clay, and fine sand-sized particles will move any distance downstream, and it is unlikely these particles will travel more than 200-300 yards before dropping out.

State Historic Preservation Office (SHPO) has given their clearance for the proposed development work to proceed based on a cultural survey conducted at the Pair-A-Dice FAS and meetings with FWP staff and tribal members agreeing to the following mitigation: An on-site cultural resource staff will be present the entire time during the excavation and construction work. If cultural materials are discovered during the project, the on-site cultural resource staff will issue a cease-work order to allow time to notify appropriate agencies and conduct a more in-depth investigation to determine how to proceed.

FWP held a public scoping meeting in February 2010 to determine initial public interest and concerns with the proposed development of the Pair-A-Dice FAS. The public comments received at that meeting were considered throughout the development of this environmental assessment and the planning of work involved for the proposed development at Pair-A-Dice FAS.

PART II. ENVIRONMENTAL REVIEW CHECKLIST

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

The analysis of the physical and human environments discussed on the following pages is limited to **Alternative B** as the proposed action and preferred alternative.

A. PHYSICAL ENVIRONMENT

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

1a. Soil and geologic substructure would remain stable during and after the proposed work. Developing a boat ramp will help ensure soil stability along the bank.

1b. There currently is not a boat ramp at this location and to prevent pioneered use of the site, the proposed boat ramp is intended to prevent the bank from eroding and from pioneered boat launches from becoming established.

Furthermore, providing a designated parking area would prevent uncontrolled/pioneered parking and prevent degrading the vegetation, which would result in compaction of the soil and increase the spread of noxious weeds.

1d. When the concrete boat ramp is added, the ramp may slightly change the current deposition pattern in a short reach of the river, but will have no long-term effects on the river channel.

2. <u>AIR</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Emission of air pollutants or deterioration of ambient air quality? (Also see 13 (c).)			X		YES	2a.
b. Creation of objectionable odors?			X		Positive	2b.
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 regs? (Also see 2a.)		NA				

2a. During the construction work, temporary amounts of dust may be generated during the soil excavation and placement in the flood plain. If additional materials are needed offsite, loading at the source site will generate minor amounts of dust. There would be a temporary increase of diesel exhaust from the construction equipment during the road improvements, but this would be short-term and minor. FWP follows the Best Management Practices (BMPs) during all phases of construction to minimize risks and reduce dust. See Appendix 4 for the BMPs. See Appendix 5 for the preliminary concept site plan.

Increase in gravel surface and traffic may increase dust levels to adjacent lands. Alternative A (no action) does not correct the dust and particulate issues generated by indiscriminate vehicle use and lack of a designated parking area. In the long term, the Alternative B (proposed development) would improve dust and particulate issues by eliminating indiscriminate vehicle use.

2b. The latrine would be installed and maintained regularly to avoid offensive odors. A county sanitation permit would be obtained prior to installation. Placement of a vault latrine at this FAS would reduce public health problems if visitors were to pioneer primitive toilet areas.

3. WATER Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X		YES	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				
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.)		NA				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.)		NA				

3a. The ramp work would cause temporary and minor amounts of turbidity during construction. Construction is planned during low flow to ensure minimal impact. FWP will follow the permit requirements for the Montana Department of Environmental Quality for Permit 318 for Short-Term Water Quality Standard for Turbidity.

3b. There would be minor increases in the amount and rate of runoff from the site due to the change from an “undisturbed” area to compact gravel. The historic drainage pattern would be preserved as much as possible and no nearby facilities would be negatively impacted.

3h. FWP follows the Best Management Practices during all phases of construction to minimize sediment delivery to the river. See Appendix 4 for the BMPs.

The noxious weeds are managed in conjunction with the Sanders county Weed District for the application of herbicides within the guidelines of the FWP Statewide Integrated Noxious Weed Management Plan.

3l. The site includes a portion of the floodplain and will be protected by statewide floodplain regulations under state ownership/easement holdings.

4. VEGETATION Will the proposed action result in?	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
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			4b.
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				4c.
d. Reduction in acreage or productivity of any agricultural land?		X				
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?		NA				4f.

- 4a. Construction of the boat ramp, parking lot, latrine, and new access road would have a minor impact on the vegetation, removing existing vegetation in the area of construction and altering the diversity of the plant community on the site. Species known to exist on-site primarily includes willows and cottonwoods and grasses. Without designated parking, the vegetation would be degraded from haphazard, indiscriminate parking, which would likely increase the spread of noxious weeds. Some grassland vegetation may be removed to develop a designated parking area and access road, but overall will positively impact vegetation by restricting parking to designated areas.
- 4b. This area is characterized by open stands of cottonwoods and willows, mixed grasses and mustard, and also a few ponderosa pines. Noxious weeds include knapweed and hounds tongue. The vegetation in the area previously used as pasture land is nonnative.
- 4c. A search of the Montana Natural Heritage Program's (MNHP) species of concern database found no vascular or nonvascular plants of significance within the boundaries of the FAS.
- 4e. Approximately 5-10% of this property currently has a limited infestation of knapweed and a minor amount of houndstongue. FWP utilizes the Statewide Integrated Noxious Weed Management Plan to control the noxious weeds on the property by using chemical, biological, and mechanical methods in conjunction with the Sanders County Weed District, which FWP has worked with for many years. Pair-A-Dice FAS is included in the county weed contract. Sanders County estimated 30% of the parcel was originally infested with noxious weeds, but their treatment last year has reduced the infestation by over half. Furthermore, adding designated parking spaces will help deter motorized vehicles from indiscriminate parking, which disturbs the natural vegetation and results in the spread of weeds. Informative signs should also help prevent the spread of weeds.
- 4f. This area is not considered prime or unique farmland. The property has been used as private pasture land previously for several horses and is not native vegetation. Wetlands occur along the river and will be afforded wetland protection under state ownership and federal laws. No construction is planned in wetlands.

5. <u>FISH/WILDLIFE</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Deterioration of critical fish or wildlife habitat?		X				
b. Changes in the diversity or abundance of game animals or bird species?		X				
c. Changes in the diversity or abundance of nongame species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				5f.
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?			X		YES	5g.
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.)		NA				
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.)		NA				

The development of the FAS will not affect the abundance of game and nongame species that move through the property according to FWP Wildlife Biologist Bruce Sterling. White-tailed deer are known to use the property. The river bottom area is also habitat for numerous small mammals and a variety of birds. A portion of the land is in a floodplain and riparian area that serves as important habitat for a variety of mammal, bird, and fish species. This stretch of the Clark Fork River is not considered critical fish habitat according to FWP Fisheries Biologist Jon Hanson.

5f. A search of the Natural Resources Information System provided by the Montana Natural Heritage Program revealed nine species of concern known to be generally distributed in the vicinity of the Pair-A-Dice FAS. Seven of the species identified are ranked as sensitive including the Coeur d' Alene salamander, bald eagle, peregrine falcon, westslope cutthroat trout, gray wolf, fisher, and wolverine, and two species listed as threatened are the Canada lynx and the bull trout. There are no endangered species found to be in the area of the parcel.

There is an observation of a bald eagle aerie located upstream and nearly one mile from the proposed development, and therefore the site would likely have no impact on the aerie. There was also a bald eagle nest located downstream more than a mile from the proposed access site on an island in the Clark Fork River. The nest tree blew down and was reported as no longer useable in 2007. Eagles are known to use the river corridor year-round for forage and as a travel route. The development should not impact the eagles that use the river area.

There is a peregrine falcon aerie that is located more than one mile upstream from the proposed development in Section 34, beyond the recommended buffer distance

recommended in the peer-reviewed literature for disturbance. The primary concern with peregrine falcons, bald eagles, and other raptors is their tolerance to human activities. Research has shown that raptors are less tolerant of stationary human activities within view of their nest. As long as recreationists float by nests and do not stop to rest or recreate with ¼ mile of nests, then impacts should not be significant.

Gray wolves are currently listed as delisted and monitored in the Northwest Montana recovery area by USFWS, considered Sensitive by the USFS, and a Special Status species by BLM, in Tier 1 of the FWP Comprehensive Fish and Wildlife Conservation Strategy (CFWCS) and S3/G4 by MNHP. The ranking by MNHP indicates the species is potentially at risk of extirpation in the state and uncommon but not rare globally. In 2002, wolves met the recovery criteria set by the USFWS and are therefore biologically recovered. The gray wolf was officially delisted from the federal Endangered Species Act as of May 4, 2009. Montana's state laws, regulations, and management plan replace federal regulations. Gray wolves are protected and managed as a Montana species in need of management. According to Kent Laudon, FWP wolf management specialist, the closest known wolf packs are the Camas Prairie pack about 10 miles to the north and the Mineral Mountain pack about 12 miles to the east that may 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 in the immediate area. The wolf population in western Montana is strong, and wolves may pass through just about any area including this site. FWP Wolf Management Specialist Kent Laudon has no concerns with this project impacting gray wolves.

Westslope cutthroat trout are rare in this stretch, but do use the main river for some overwintering habitat. Bull trout primarily use the area as a migratory corridor mainly during the spring or early summer periods. Their abundance in this section of the river is extremely low and would not be impacted by the development. There may be minor, short-term impact to the fish during the construction of the boat ramp, but this would be temporary, and once construction is completed, should not impact the fishery.

Fishers, Canada lynx, and wolverines are typically found in upper elevation habitat consisting of dense timber, yet there may be an occasional animal that passes through the valley bottom. The nearest documented sightings of wolverines and fishers would be about 8-10 miles south in Siegel Creek and the Siegel Pass area. There is no documentation of Canada lynx anywhere in eastern Sanders County. The nearest sighting would be north of Thompson Falls and west into the Cabinet Mountains. Due to their habitat associations and limited use of the river bottom riparian areas, these species will not be significantly impacted by the development. Coeur d'Alene salamanders have very specific habitat requirements associated with cool, damp environments and the location of the FAS does not contain any of these microhabitats. Therefore, impacts to Coeur d'Alene salamanders from the development are not likely.

Please see Appendix 2, Montana Natural History Program (MNHP) Native Species Report.

- 5g. The land has previously been privately owned and was used for grazing. The proposed development should not increase negative conditions that stress wildlife populations and should have a neutral impact on the fishery. Regulation and information signs and routine presence of Parks and Enforcement staff should help prevent undesirable human activities.

B. HUMAN ENVIRONMENT

6. <u>NOISE/ELECTRICAL EFFECTS</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Increases in existing noise levels?			X			6a.
b. Exposure of people to severe or nuisance noise levels?			X			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 increase in noise levels at this site. Proximity to the highway and the railroad, with much higher sustained noise levels, will likely mask any increase in noise level at the site. The existing train crossing over Highway 200 does have a crossing signal and the train whistles when passing through.
- 6b. If construction noise levels exceed a level deemed unsafe over a workday time frame, all workers will be required to wear proper ear protection. FWP will follow the Best Management Practices during all phases of construction to minimize risks. See Appendix 4 for BMPs.

7. <u>LAND USE</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
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				

- 7a. The proposed development would alter the historic use of the property from private grazing to a public recreation area. Vegetation will be left in a natural state with the exception of noxious weeds, which will be managed per the FWP Statewide Integrated Noxious Weed Management Plan. There may be a temporary inconvenience during the proposed improvements to the access road, designated parking, and boat ramp. A portion of the land is in a floodplain and riparian area that serves as important habitat for a variety of mammal, bird, and fish species.

8. RISK/HEALTH HAZARDS Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
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				
d. For P-R/D-J, will any chemical toxicants be used? (Also see 8a)		NA				

8a. FWP already manages for noxious weeds on the property following the Statewide Integrated Noxious Weed Management Plan utilizing a combined method of managing weeds in conjunction with the Sanders County Weed District, which FWP has worked successfully with for many years. The use of herbicides would be in compliance with application guidelines and applied by people trained in safe handling techniques in accordance with product labels and as provided for under state law. Weeds would also be controlled using mechanical or biological means in certain areas to reduce the risk of chemical spills or water contamination. The proposed project includes revegetation to reduce the spreading of noxious weeds. Weed management will continue, but if no action is taken, the potential for indiscriminate parking increases the spread of the noxious weeds, requiring more weed management. Sanders County Weed Coordinator Mike Chenoweth estimates 30% of the parcel was infested when the property was acquired, but has been able to reduce the infestation to 5-10% after application of herbicides.

Operation of heavy equipment proximal to a surface water body presents a temporary potential risk of fuel or lubricating oil release into the surface water. Contractors would have on-site absorbent materials 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 will follow the Best Management Practices during all phases of construction to minimize risks. See Appendix 4 for BMPs.

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

9e. The new boat ramp will give boaters and floaters another opportunity in this area to access the Clark Fork River. The proposed development would have no effect on the community of Paradise to increase traffic hazards or alter the distribution of population in the area. Development of the site would likely have a positive economic benefit to retail and service businesses in the Paradise and Plains, as well as the surrounding, area since visitors might purchase supplies and gasoline from local vendors.

FWP would install highway signs identifying the site and a stop sign at the approach coming out of the site back onto Highway 200, as well as informational signs of “no camping,” “pack it in, pack it out,” “respect the river and adjacent property,” “aquatic nuisance species,” “noxious weeds,” and relevant regulations. The site will be managed for day-use only.

*

10. PUBLIC SERVICES/TAXES/UTILITIES	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
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				
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.						10f.

10b. No change in tax base as FWP pays property taxes in an amount equal to that of a private individual.

10e. Commercial outfitters that may use this FAS and others along the Clark Fork already pay for a Commercial Use Permit, so it is not likely that new revenue would be generated, but the outfitters will have another location to use under their existing permits.

In the future, if camping is developed at this site, fees would be the same as all other fishing access sites that allow camping. The campsite fees are currently \$12 without a fishing license, \$7 with a fishing license, and half price for Montana residents over age 62.

10f. Expenditures associated with the maintenance of the site are anticipated to be \$4,000 annually from the FWP Region 1 maintenance budget. This expense will be for noxious weed management, latrine maintenance, caretaker work including litter removal, and routine patrols and enforcement at the site.

*

11. <u>AESTHETICS/RECREATION</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?			X		YES	11a.
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report.)			X		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.)		NA				

11a. The new boat ramp and parking lot would be visible from the river and the highway. The access road, parking lot, and FAS signage will also be visible from the highway. The current access road is visible from the highway. The proposed concrete vault latrine would have a brown exterior to blend in with the natural environment.

11c. The public access to this stretch of the Clark Fork River would be improved by creating intermediate access between the FWP Kookoosint FAS on the lower Flathead River that is about 3.8 miles upstream of the confluence of the Flathead River, as well as access for a float down to Plains (Clark Fork river mile 94.1) and beyond, allowing for more use of the Clark Fork and Flathead Rivers just upstream and providing a better distribution of recreational use.

As a result of the proposed action, it is likely that there would be an increase in opportunity for recreationists for fishing and floating activities in this section of the Clark Fork. While there are no plans to develop campsites at this location at this time, primitive camping would be developed in the future if funding allows. Furthermore, the property will be closed to hunting due to the proximity to the highway and railroad; however, waterfowl hunting by the water will be assessed for safety and would be posted whether it is or is not permitted. Firearms use would be restricted and would be posted on regulation signs for the protection of both recreationists and neighboring land use.

FWP would expand their routine maintenance to include this site to keep the latrine clean and the area litter-free. The area would be posted with informational signs including "pack it in, pack it out," "day-use only," and "no camping allowed," as well as "respect the river and adjacent private property."

During construction, there will be a temporary inconvenience to the general public using the site. See Appendix 3 for the Department of Commerce Tourism Report.

*

12. CULTURAL/HISTORICAL RESOURCES Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Destruction or alteration of any site, structure or object of prehistoric, historic, or paleontological importance?		X				
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.)		NA				

A cultural survey has been conducted at the Pair-A-Dice FAS. State Historic Preservation Office (SHPO) has given their clearance for the work to proceed with the following mitigation: An on-site cultural resource staff will be present the entire time during the excavation and construction work. If cultural materials are discovered during the project, the on-site cultural resource staff will issue a cease-work order to allow time to notify appropriate agencies and conduct a more in-depth investigation to determine how to proceed.

*

C: SIGNIFICANCE CRITERIA

13. <u>SUMMARY EVALUATION OF SIGNIFICANCE</u> Will the proposed action, considered as a whole:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
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					13a.
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				
g. For P-R/D-J, list any federal or state permits required.		X				

13a. The proposed improvements would improve accessibility with an improved access road, designated parking, boat ramp, and addition of a latrine. In the future, when funding is available, camping may be developed. FWP evaluated taking no action to leave the site undeveloped, but believes the proposed improvements will enhance visitor experience at this site and will prevent unnecessary degradation and prevent sanitation issues at the site.

During the construction of the proposed improvements, there may be minor and temporary impact to the physical environment, but the impact will be short-term and the improvements will benefit the community and recreational opportunities over the long term.

The proposed action is expected to generate very little public controversy, set a precedent, or have considerable impacts to the physical and human environment. During the construction work there would be a cultural resource manager on-site to facilitate if cultural materials are discovered. Work would cease to allow an in-depth investigation and notification of appropriate agencies. Fill will be utilized when feasible to minimize the disturbance to the ground.

*

PART III. NARRATIVE EVALUATION AND COMMENT

The proposed development of the Pair-A-Dice FAS along the Clark Fork River will provide FWP with the opportunity to establish a formal recreation area for anglers, vacationers, and other recreationists traveling along Highway 200.

The development will not have significant impacts on the physical environment (i.e., geological features, fish and wildlife, and water resources) and would be minor and temporary during construction. This area is characterized by open stands of cottonwoods and willows, and mixed grasses and mustard. Developing a boat ramp would help ensure soil stability along the bank. The proposed boat ramp is intended to prevent the bank from eroding and from pioneered boat launches from becoming established. When the boat ramp is added, the ramp may slightly change the current deposition pattern in a short reach of the river, but would have no long-term effects on the river channel. Furthermore, providing a designated parking area would prevent uncontrolled/pioneered parking and prevent degrading the vegetation and the spread of noxious weeds. The application of herbicides to manage the existing noxious weeds would be done per the guidelines presented in the FWP Statewide Integrated Noxious Weed Management Plan. Increase in gravel surface and traffic may increase dust levels to adjacent lands. In the long term, the proposed development would improve dust and particulate issues by eliminating indiscriminate vehicle use.

The proposed project will affect the human environment (i.e., land use, recreation, and utilities) in a limited fashion. Most of these effects will be positive in quality, in that additional public access along the Clark Fork River will become available for the enjoyment of the natural surroundings and water-based activities. The minor impacts to the current environment are needed for noxious weed management on the property and to ensure the public's safety when accessing the area. The proposed development would alter the historic use of the property from grazing to a public recreation area. Vegetation will be left in a natural state with the exception of noxious weeds. There may be a temporary inconvenience during the proposed improvements. A portion of the land is in a floodplain and riparian area under the protection of statewide floodplain regulations and serves as important habitat for a variety of mammal, bird, and fish species.

State Historic Preservation Office (SHPO) has given their clearance for the proposed development work to proceed based on a cultural survey conducted at the Pair-A-Dice FAS and meetings with FWP staff and tribal members agreeing to having an on-site cultural resource staff present the entire time during the excavation and construction work to allow a more in-depth investigation to determine how to proceed.

PART IV. PUBLIC PARTICIPATION

1. Public Involvement:

The public will be notified in the following manners to comment on this current EA, the proposed action and alternatives:

- Two public notices in the *Sanders County Ledger*
- One public notice in the *Helena Independent Record* and *Kalispell Daily Inter Lake*
- One statewide press release
- Direct mailing to adjacent landowners and interested parties
- Public notice on the Fish, Wildlife & Parks web page: <http://fwp.mt.gov>
- Copies will be available for public review at FWP Region 1 Headquarters

This level of public notice and participation is appropriate for a project of this scope, having few limited physical and human impacts. If requested within the comment period, the department may arrange a public meeting.

2. Duration of comment period:

The public comment period will extend for (30) thirty days. Written comments will be accepted until 5:00 p.m., May 7, 2010, and can be mailed to:

Pair-A-Dice FAS Development
Montana Fish, Wildlife & Parks
490 N Meridian Road
Kalispell, MT 59901

Or email comments to: dbennetts@mt.gov

PART V. EA PREPARATION

1. Based on the significance criteria evaluated in this EA, is an EIS required? (YES/NO)? No

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.

Based upon the above assessment, which has identified a very limited number of minor impacts from the proposed action, an EIS is not required and an environmental assessment is the appropriate level of review.

2. Persons responsible for preparing the EA:

Dave Bennetts, Park Manager
Montana Fish, Wildlife & Parks
490 N Meridian Road
Kalispell, MT 59901
406-751-4590

Pam Boggs
EA Coordinator
Montana Fish, Wildlife & Parks
PO Box 200701
Helena MT 59620-0701

3. Agencies/organizations consulted during preparation of the EA:

Montana Department of Commerce – Tourism

Montana Department of Transportation

Montana Fish, Wildlife & Parks

 Director's Office Lands Unit

 Director's Office Legal Unit

 Fish & Wildlife Division

 Parks Division

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

Montana State Historical Preservation Office

Sanders County Weed District

Appendices

1. HB 495 Project Qualification Checklist
2. Montana Natural Heritage Program (MNHP) Native Species Report
3. Tourism Report Department of Commerce
4. Best Management Practices Final FAS BMPs Department of Fish Wildlife & Parks
5. Draft Preliminary Concept Plan of Pair-A-Dice FAS Proposed Development

APPENDIX 1

HB495

PROJECT QUALIFICATION CHECKLIST

Date: March 6, 2010

Person Reviewing Pam Boggs

Project Location: Pair-A-Dice FAS is along the Clark Fork River next to Highway 200 and just east of the town of Paradise. It is located within T19N, R25W, Sections 21 and 28 in Sanders County.

Description of Proposed Work: Montana Fish, Wildlife & Parks proposes to improve the access road, develop a parking lot, boat ramp, and latrine on the Clark Fork River at Pair-A-Dice FAS.

The following checklist is intended to be a guide for determining whether a proposed development or improvement is of enough significance to fall under HB 495 rules. (Please check all that apply and comment as necessary.)

[Y] A. New roadway or trail built over undisturbed land?

Comments: The access road will be improved and a portion will be new roadway.

[] B. New building construction (buildings <100 sf and vault latrines exempt)?

Comments: No new buildings other than vault latrine.

[Y] C. Any excavation of 20 c.y. or greater?

Comments: Some excavation for the parking lot, boat ramp, latrine, and access road.

[Y] D. New parking lots built over undisturbed land or expansion of existing lot that increases parking capacity by 25% or more?

Comments: There is no parking lot currently so a designated parking lot will be developed to accommodate up 15-20 parking spaces.

[] E. Any new shoreline alteration that exceeds a doublewide boat ramp or handicapped fishing station?

Comments: A new single-wide concrete boat ramp with cable mat will be installed.

[Y] F. Any new construction into lakes, reservoirs, or streams?

Comments: A new single-wide gravel boat ramp will be added at this site.

[] G. Any new construction in an area with National Registry quality cultural artifacts (as determined by State Historical Preservation Office)?

Comments: A cultural survey has been conducted and sent to SHPO for clearance. If artifacts are discovered in areas excavated, work would cease and be brought to the attention of the on-site cultural resource manager, and SHPO and other appropriate agencies would be contacted.

[] H. Any new above ground utility lines?

Comments: None.

[] I. Any increase or decrease in campsites of 25% or more of an existing number of campsites?

Comments: Day-use only. Camping would not be allowed. In the future, camping may be developed if funding allows.

[Y] J. Proposed project significantly changes the existing features or use pattern; including effects of a series of individual projects?

Comments: The proposed work will improve an access road and develop a new parking area, boat launch, and latrine, where none currently exist. The access road was previously private.

If any of the above are checked, HB 495 rules apply to this proposed work and should be documented on the MEPA/HB495 CHECKLIST. Refer to MEPA/HB495 Cross Reference Summary for further assistance.

Appendix 2

SENSITIVE PLANTS AND ANIMALS IN THE PAIR-A-DICE FAS AREA

Species of Concern Terms and Definitions

A search of the Montana Natural Heritage Program (MNHP) element occurrence database (<http://nris.mt.gov>) indicates no known occurrences of federally listed threatened, endangered, or proposed threatened or endangered plant species in the proposed project. The search did indicate the project area is within habitat for Coeur d'Alene Salamander, Bald Eagle, Peregrine Falcon, Westslope Cutthroat Trout, Bull Trout, Gray Wolf, Fisher, Wolverine, and Canada Lynx. Please see the next page for more information on these species.

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.

Tier I of the FWP CFWCS is the greatest conservation need. Montana Fish, Wildlife & Parks has an obligation to use its resources to implement conservation actions that provide direct benefit to these species. Species identified in this section have included the tier level to help identify those in greatest need of conservation.

▼ **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)

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.

SENSITIVE PLANTS AND ANIMALS IN THE VICINITY OF PAIR-A-DICE FAS ALONG THE CLARK FORK RIVER

1. *Plethodon idahoensis* (Coeur d'Alene Salamander)

Natural Heritage Ranks:

State: **S2**

Global: **G4**

Federal Agency Status:

U.S. Fish and Wildlife Service:

U.S. Forest Service: **Sensitive**

U.S. Bureau of Land Management: **Sensitive**

FWP CFWCS Tier: 1

One Element Occurrence data reported of Coeur d'Alene salamander in the proximate area north east of this parcel. Last observation date was 1988.

2. *Haliaeetus leucocephalus* (Bald Eagle)

Natural Heritage Ranks:

State: **S3**

Global: **G5**

Federal Agency Status:

U.S. Fish and Wildlife Service: **DM**

U.S. Forest Service: **Threatened**

U.S. Bureau of Land Management: **Sensitive**

FWP CFWCS Tier: 1

Four Element Occurrence data reported of bald eagle in the proximate area of this parcel. Last observation date was 2006.

3. *Falco peregrinus* (Peregrine Falcon)

Natural Heritage Ranks:

State: **S3**

Global: **G4**

Federal Agency Status:

U.S. Fish and Wildlife Service: **DM**

U.S. Forest Service: **Sensitive**

U.S. Bureau of Land Management: **Sensitive**

FWP CFWCS Tier: 2

Two Element Occurrence of the peregrine falcon was reported in the proximate area to the north and south of this parcel.

4. *Oncorhynchus clarkii lewisi* (Westslope Cutthroat Trout)

Natural Heritage Ranks:

State: **S2**

Global: **G4T3**

Federal Agency Status:

U.S. Fish and Wildlife Service:

U.S. Forest Service: **Sensitive**

U.S. Bureau of Land Management: **Sensitive**

FWP CFWCS Tier: 1

Two Element Occurrence data reported of westslope cutthroat trout along this stretch of river.

5. *Salvelinus confluentus* (Bull Trout)

Natural Heritage Ranks:

State: **S2**

Global: **G3**

Federal Agency Status:

U.S. Fish and Wildlife Service: **LT**

U.S. Forest Service: **Threatened**

U.S. Bureau of Land Management: **Special Status**

FWP CFWCS Tier: 1

Two Element Occurrence data reported of bull trout in this stretch of river.

6. *Canis lupus* (Gray Wolf)

Natural Heritage Ranks:

State: **S3**

Global: **G4**

Federal Agency Status:

U.S. Fish and Wildlife Service: **DM**

U.S. Forest Service: **Sensitive**

U.S. Bureau of Land Management: **Sensitive**

FWP CFWCS Tier: 1

Element Occurrence data reported of wolves in the proximate area of this parcel between 1860 and 2006.

7. *Martes pennanti* (Fisher)

Natural Heritage Ranks:

State: **S3**

Global: **G5**

Federal Agency Status:

U.S. Fish and Wildlife Service:

U.S. Forest Service: **Sensitive**

U.S. Bureau of Land Management: **Sensitive**

FWP CFWCS Tier: 2

Element Occurrence data reported of fisher between 1976 and 2006 southwest of this parcel.

8. *Gulo gulo* (Wolverine)

Natural Heritage Ranks:

State: **S3**

Global: **G4**

Federal Agency Status:

U.S. Fish and Wildlife Service:

U.S. Forest Service: **Sensitive**

U.S. Bureau of Land Management: **Sensitive**

FWP CFWCS Tier: 2

Element Occurrence data reported for wolverine southwest of this parcel between 1952 and 2005.

9. *Lynx canadensis* (Canada Lynx)

Natural Heritage Ranks:

State: **S3**

Global: **G5**

Federal Agency Status:

U.S. Fish and Wildlife Service: **LT**

U.S. Forest Service: **Threatened**

U.S. Bureau of Land Management: **Special Status**

FWP CFWCS Tier: 1

The Element Occurrence shows observations of Canada lynx between 1910 and 2004, west of this parcel.

Information courtesy of Montana Natural Heritage Program.

NOTE: This appendix is information provided by the Montana Natural Heritage Program from their database of the Natural Resources Information System. FWP Biologists have addressed the species identified in this appendix in this EA in PART II. ENVIRONMENTAL REVIEW CHECKLIST in section 5. Fish/Wildlife. FWP R1 Biologists have no concerns with the project impacting wildlife in the area. This stretch of the Clark Fork River is not considered critical fish habitat.

Appendix 4
MONTANA FISH, WILDLIFE AND PARKS
BEST MANAGEMENT PRACTICES FOR FISHING ACCESS SITES
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. Road Design

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. Drainage from Road Surface

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 reseeded 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.

Appendix 5

Draft FWP Preliminary Concept Plan for Pair-A-Dice FAS

