



# Montana Fish Wildlife & Parks

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LEGISLATIVE ENVIRONMENTAL  
POLICY OFFICE  
September 16, 2004

Helena Area Resource Office  
PO Box 200701  
930 Custer Avenue  
Helena MT 59620-0701

TO: Governor's Office, Todd O'Hair, Rm. 204, State Capitol, P.O. Box 200801, Helena, MT 59620-0801  
Environmental Quality Council, Capitol Building, Room 106, P.O. Box 201704, Helena, MT 59620  
Dept. Environmental Quality, Metcalf Building, P.O. Box 200901, Helena, MT 59620-0901  
Dept. of Natural Resources and Conservation, Bud Clinch, PO Box 201601, Helena, MT 59620  
Water Resources Division, 48 N. Last Chance Gulch, P.O. Box 201601, Helena, MT 59620-1601  
Montana Fish, Wildlife & Parks, 1420 E. 6<sup>th</sup> Ave. Helena, MT 59620  
Director's Office  
Fisheries Division  
Parks Division  
Design and Construction Bureau  
MT Historical Society, State Historic Preservation Office, P.O. Box 201202, Helena, MT 59620-1202  
MT State Library, 1515 E. Sixth Ave., P.O. Box 201800, Helena, MT 59620  
James Jensen, Montana Environmental Information Center, POB 1184, Helena, MT 59624  
Janet Ellis, Montana Audubon Council, P.O. Box 924, Helena, MT 59624  
Northern Plains Resource Council, 2401 Montana Ave. Suite 200, Billings, MT 59101-2336  
Jefferson County Commissioners, P.O. Box H, Boulder, MT 59632  
Jefferson County Disaster and Emergency Services Coordinator, P.O. Box H, Boulder, MT 59632  
MT Wildlife Federation, P.O. Box 1175, Helena, MT 59624  
Trout Unlimited, P.O. Box 7186, Missoula, MT 59807  
MT State Parks Association, P.O. Box 699, Billings, MT 59103  
George Ochenski, P.O. Box 689, Helena, MT 59624  
Rep. Jill Coheneour, 2610 Colt Drive, East Helena, MT 59635  
Rep. Dave Gallik, 120 E Lyndale Avenue, Helena, MT 59602  
Rep. Christine Kaufmann, PO Box 1566, Helena, MT 59624  
Rep. Hal Jacobson, 4813 US Highway 12 West, Helena, MT 59601  
Rep. Dave Lewis, 5871 Collins Drive, Helena, MT 59602  
Rep. Mike Cooney, 713 Pyrite Court, Helena, MT 59601  
Sen. Ken Toole, PO Box 1462, Helena, MT 59624  
Sen. Duane Grimes, 4 Hole In the Wall, Clancy, MT 59634.  
Rep Scott Mendenhall, McKeown Ln, Cardwell, MT 59721

Ladies and Gentlemen:

The enclosed supplement has been prepared for the Park Lake Dam Rehabilitation Project Environmental Assessment. It addresses changes in the construction timeframes from the original Decision Notice that was issued in July 2004. Please contact Craig Marr, Helena Area Park Manager at (406) 495-3270 should you have any questions about this document or the original EA. Copies of the original EA and/or the supplement are available upon request. Thank you.

Sincerely,

Michael Korn  
Helena Area Coordinator



# *Montana Fish, Wildlife & Parks*

## SUPPLEMENTAL TO THE PARK LAKE DAM REHABILITATION ENVIRONMENTAL ASSESMENT

### PROPOSAL

Park Lake Dam and Reservoir is located in Jefferson County, (section 13, township 8 north, range 5 west), approximately 10 miles southwest of Helena, Montana. The dam and reservoir are owned by the Montana Fish, Wildlife and Parks (MFWP). The US Forest Service (Helena Ranger District) manages lands and roads around Park Lake and a developed campground, which accommodates about 4500 campers from May through late November. The Montana Department of Natural Resources and Conservation (DNRC) is providing assistance by overseeing the design and construction work for this project.

Park Lake Dam does not currently meet dam safety standards due to an undermined spillway culvert, eroded upstream face, downstream slope instability, and other potential deficiencies. The proposed project will rehabilitate the dam so that it meets current dam safety specifications and standards. The rehabilitation will also bring the dam into compliance with the requirements of the Montana Dam Safety Act.

The proposed action involves the removal of and reconstruction of the dam embankment, the replacement of the primary spillway (road culvert), and the placement of riprap on the outlet channel. Approximately 30,000 cubic yards of material will be used in the cut and fill operations, with approximately 5 acres disturbed. The reservoir elevation would be lowered during construction, with the majority of the work conducted above the water level. Any disturbed areas would be reclaimed upon completion of the project, with the exception of the maintenance access to the main dam, which would be maintained for future use. The normal pool elevation at the spillway crest is 6354 feet, with 225 acre-feet of storage. Equipment used for the project will include bulldozers, backhoes, front-end loaders, tracked excavators, graders, and dump trucks.

The goal of this project is to maintain the highest possible level of protection for the public and property located downstream from the dam, protect downstream water quality, and protect and enhance wildlife, fisheries and recreational resources associated with the reservoir. Park Lake dam is designated a High Hazard dam. A High Hazard dam is one whose failure would endanger lives. It is not a reflection of the actual current condition of the dam. Work is anticipated to begin in the spring of 2005 and end in the fall of 2005.

## CHANGES FROM THE ORIGINAL EA

The original EA was released to the public on June 11, 2004 and proposed beginning construction during the fall of 2004. A decision notice to that effect was issued on July 15, 2004. Following the decision, further discussion ensued on issues related to the Artic grayling population in the reservoir. Lake-dwelling grayling are found in a number of sites in Western Montana and do not share the status of the river-dwelling population of the Big Hole River (which is unique to the lower 48 states.) It is, however, a self-sustaining population and is not augmented by hatchery stock. This fishery has become popular over the years and there is a great deal of public support and investment in it. Further discussion and research concluded that a spring starting date would better protect the grayling population by reducing the risk of winter kill resulting from the reservoir not refilling before freeze up.

The normal summer level is 6354' to 6352'. The original plan called for a draw down of the lake to an elevation of 6345'. Work would have required drawing the level lower than the current summer level. A cofferdam would be constructed and work will take place against a bank. The modified plan is to take the level down to 6348', and use the lower portion of the upstream face of the dam as a cofferdam. This method will leave an approximate 11' deep section in the old natural lake location to aid in the protection of fish. The surface area of the lake will go from 43 acres to approximately 14 acres. From an engineering perspective, the original proposal was preferable as it optimized dam construction activities using a more severe draw down. Although some minor biological and recreational impacts still can be expected from the revised proposal, this action would represent a significant compromise designed to minimize impacts on aquatic life as well as recreational site users.

Below is an evaluation of impacts associated with the proposed changes. Potential impacts to fisheries resources and potential impacts to recreation at Park Lake FAS were not fully addressed in the original EA.

## A. Physical Environment (Fisheries)

**Table 1.** Potential impacts of complete dewatering, partial summer draw down and partial fall/winter draw down to fish and aquatic resources in Park Lake.

	<i>Alternative #1</i>	<i>Preferred Alternative</i>	<i>Alternative #3</i>
	<b>Complete dewatering Impacts</b>	<b>Partial Summer draw down Impacts</b>	<b>Partial Fall/Winter draw down Impacts</b>
1. Overwinter fish survival	Significant	No Impact	Significant
2. Grayling spawn impacts	Significant	Minor	Minor
3. Amphibian impacts	Significant	Minor	Significant
4. Yellowstone cutthroat impacts	Significant	No Impact	No Impact
5. Dissolved oxygen impacts	No Impact	Minor	Significant

1. Park Lake has experienced winter fish-kills associated with low dissolved oxygen due to extended periods of ice and snow cover. Low fall and winter lake levels would increase the probability of fish kill.

2. Park Lake grayling generally spawn early- to mid-May, depending on water temperatures. Assuming a hatching time of 11 to 22 days, some eggs may become exposed during a summer draw down. If a year class of grayling is lost, there should be enough spawning-age adults to produce progeny the spring following construction.

3. A fall/winter draw down could expose refuge/hibernation areas used during winter months. A partial summer draw down may affect un-hatched eggs if the lake is lowered prior to mid-June.

4. Yellowstone cutthroat will not be stocked during dam construction. Complete dewatering will require an overall re-evaluation of the stocking of Park Lake (e.g., type of species stocked, number of fish needed).

5. Increased fish concentrations during low summer pool may reduce dissolved oxygen, however, lethal levels likely would not be reached. Dissolved oxygen impacts would be much greater with a fall/winter draw down.

6. To protect fish while the lake is drawn down, which will increase water temperatures, A MFWP Commission action may be needed to temporarily close Park Lake to fishing.

Partial summer draw down is the preferred alternative to protect Park Lake aquatic resources. Summer draw down would have little/no impact on over-winter fish survival and minimal impacts to the Yellowstone cutthroat trout. Delaying draw down until June could mitigate minor impacts to spawning grayling and to amphibians by providing

enough time for eggs to hatch. Minor impacts due to low dissolved oxygen can be mitigated through monitoring dissolved oxygen levels during low pool and providing aeration if dissolved oxygen approaches lethal levels.

Potential impacts would be more significant during a fall/winter draw down, due mostly to increased probability of winter fish kill. Complete dewatering of Park Lake would result in significant impacts to nearly all aquatic resources. In the long term, this project will benefit people who recreate at Park Lake by protecting the vulnerable fisheries resource for the future.

### **B. Human Environment (Recreation)**

Another minor impact that was not clearly addressed in the original EA is that a spring/summer project period would require Park Lake Fishing Access Site to be closed to the public from approximately June 1, 2004 through September 30, 2004. It would be critical to close the site for public safety, to efficiently complete the project and to protect the fishery that will be vulnerable due to drawing down the lake. Park Lake would reopen to the public earlier if the work is completed sooner than anticipated.

Minor impacts would occur to people who use Park Lake for recreational purposes during the summer and to people who use the area during September to hunt. Impacts could be mitigated by informing the public well in advance of the project and by providing the public with a list of alternative recreation opportunities. Signs will be placed on the USFS road (#4009) leading to Park Lake informing the public of the closure at the intersection of Frohner Meadows road (#1878).

The USFS is preparing an Environmental Analysis to disclose the effects of actions occurring on National Forest lands and roads. Additional information can be obtained by contacting the Helena Ranger District at (406) 449-5201.

### **PUBLIC COMMENT**

Public comments will be accepted through October 16, 2004 on the proposed changes to the original EA. A copy of the original EA and/or the supplemental EA can be obtained from the Helena Area Resource Office of MFWP, 930 Custer Ave, Helena, MT 59620, (406) 495-3260.



United States  
Department of  
Agriculture

Forest  
Service

Helena National Forest

Helena Ranger District  
2001 Poplar Street  
Helena, MT 59601  
406-449-5490

File Code: 1950/2720-1/2720-2

Date: September 21, 2004

Dear Sir or Madame:

The Montana Department of Fish, Wildlife, and Parks (MFWP), in cooperation with the Helena National Forest, are planning dam rehabilitation efforts next summer (2005) on the Park Lake Dam, located approximately 12 miles southwest of Helena, Montana. The work would consist of removal and reconstruction of the main dam, replacement of the principal spillway, and reconstruction of the emergency spillway. Some of these activities would take place on Helena NF lands, and the Forest Service is seeking public comments on these actions. **Comments would be most useful if received by October 16, 2004.**

Park Lake and the dam are owned by MFWP. The surrounding lands and the Park Lake Campground are owned and managed by the U.S. Forest Service. The dam does not currently meet state dam safety standards, and the rehabilitation work would bring the dam back into compliance with the requirements of the Montana Dam Safety Act. MFWP completed an Environmental Assessment in July of 2004 that addresses the rehabilitation work. A Supplemental EA is being prepared by MFWP that addresses changes in the construction timeframes. Reference to that Supplemental EA is also included in this information package.

Park Lake itself would be temporarily drawn down approximately eight feet to accommodate work on the dam. Both the road to Park Lake, at the Frohner Meadows junction, and the Park Lake Campground, would be closed to the public during the construction. It is expected closures would go into effect June 1, 2005, and run through September 30, 2005. The timing of this work (and the public closures) is necessary to provide for safety of both the public and the contractor working on the job, and to preserve the fishery in Park Lake. Those planning on recreating in the area next summer should become familiar with the temporary restrictions, and make alternate plans if necessary.

The Forest Service is seeking public comments on the activities occurring on National Forest lands. They include: 1) Construction of approximately 360 feet of temporary road along the north end of the lake. This road would be used to haul materials that would be incorporated into the re-built dam. This road would be re-contoured and re-vegetated following use. 2) The principal spillway (culvert) would be removed and a new culvert with concrete inlet and outlet would be installed. 3) The emergency spillway, located at the southeast end of the lake, would be reconstructed. This spillway, occupying an area 40 feet in width by 200 feet in length, would be cleared of timber and rip rapped with rock. A short concrete retaining wall would be installed here. 4) Minor improvements would be made to the existing road accessing the main dam, and a permanent gate would be installed in place of the boulders currently barricading that road. 5) The



Forest Service plans to implement a temporary road and area closure at Park Lake, beginning June 1, 2005, and running through approximately September 30, 2005. The Park Lake road would likely be closed at its intersection with the Frohner Meadows Road, about one half mile north of Park Lake. Park Lake Campground, and a buffer area around the lake, would be closed to public use. The duration of the road, campground, and area closure would depend on weather and the progress of the contractor.

Comments or questions related to the construction activities occurring on National Forest lands can be directed to Larry Cole at the Helena Ranger District, 2001 Poplar, Helena, Montana 59601, (406) 495-3912. Additional information regarding the dam rehabilitation work can be obtained by contacting Craig Marr (MFWP), (406) 495-3270, or Kenneth Phillips (MFWP), (406) 841-4002.

Sincerely,

A handwritten signature in black ink that reads "Duane H. Harp". The signature is written in a cursive style with a large, stylized initial "D".

DUANE H. HARP  
District Ranger