

# ENVIRONMENTAL ASSESSMENT

## Wadsworth Lake Enhancement Project Montana Department of Fish, Wildlife and Parks

**General Purpose:** This project is proposed to enhance the fishery in Wadsworth Lake, a 40-acre body of water located approximately 2 miles west of Great Falls, Montana (Attachment 1). Wadsworth Lake and the surrounding parkland (approximately 100 acres total) are owned by the City of Great Falls. The lake was created around 1982 when the U.S. Army Corps of Engineers excavated the area to borrow material to build the Sun River flood control levee. The borrow area subsequently filled with groundwater to form a shallow lake. The City of Great Falls prepared a Master Plan for the lake and surrounding parkland in 1998. The City's Master Plan calls for development of trails, parking areas, a swimming area, shelters, restrooms, picnic facilities, fishing piers, and other amenities. Wadsworth Lake is the site of one of the largest "Kids Fishing Day" events in the state of Montana. Each year, local sporting groups and FWP collaborate to provide an event that attracts approximately 1,000 young anglers each year.

Currently, much of the lake is shallow and the growth of rooted aquatic plants is extensive during the summer. The lake quickly became populated with stunted yellow perch, black bullheads, white suckers, and pumpkinseed sunfish. Most of these fish probably entered the lake via the unscreened inlet/outlet canal, which connects the lake to the adjacent Sun River and is used occasionally to maintain lake water level. In an effort to control stunted panfish populations, FWP has regularly stocked walleye and largemouth bass since 1996, with the intent to control panfish numbers via predation. Though some quality-sized bass and walleye specimens have been produced, in general the lake remains overpopulated with small, slow growing perch, bullheads, and sunfish. This problem is common in shallow lakes in the Midwestern U.S. that have an overabundance of aquatic vegetation. The aquatic vegetation provides excellent spawning and hiding cover for panfish and limits the ability of predator fish to control panfish numbers by direct predation, resulting in overpopulation and slow growth of panfish due to competition for limited food resources.

The specific goal of this project is to deepen part of the western end of the lake. By deepening this area, aquatic plant growth will be reduced. This will reduce hiding cover for panfish and allow for more effective population control by predator fish. In addition to improving fish habitat in the lake, the deeper water will improve fishing conditions. Currently, the western end of the lake (which has the best public access) is often too shallow and too choked with aquatic vegetation to allow fishing.

PPL Montana (formerly Montana Power Company) obtained a new federal license in 2000 to operate its hydroelectric dams on the Missouri River. As part of the relicensing process, the Company was required to develop plans and projects to protect, mitigate and enhance fish, wildlife and recreational resources in their project area. In accordance, the Company has agreed to improve and create new fishing opportunities in the Great Falls area to offset impacts of their five dams on the Missouri River in the area. The Company has worked closely with the City of Great Falls, local sporting groups and FWP to develop a proposal to deepen the west end of the lake. FWP proposes to contribute approximately \$40,000 to this project, which is expected to cost in excess of \$150,000 in total. The Great Falls Chapter of Walleyes Unlimited has also committed funding to the project.

- I. Location of Project:** This project will be conducted on City of Great Falls property approximately 2 miles west of Great Falls, MT within Township 20 North, Range 3 East, Section 5 in Cascade County (Attachment 1).
- II. Need for the Project:** Urban fishing opportunities in the Great Falls area are very limited, especially on lakes and reservoirs, which are ideal for young anglers. The intent of this project is to create a quality fishing opportunity near town that would appeal to the area residents, especially area youth.

- III. Scope of the Project:** The proposal calls for dredging 1,000 – 2,000 feet of the western shoreline of the lake (Attachment 2). Dredging would begin at waters' edge and extend approximately 150 feet out from shore. Subsurface shoreline slope will be 1V:4H. It is expected a hydraulic dredge would be used to remove between 20,000 and 60,000 cubic yards of sediment from the bottom of the lake. The actual configuration will depend on substrate composition and ease of dredging, but all activity will be in the western end. The dredging would likely be completed by a floating hydraulic dredge launched onto the lake using a crane. An 8" plastic pipe laid on top of the ground would be used to deliver dredged material (slurry) from the lake to the disposal site. The disposal site would be located approximately 600-1,200 feet west of the lake, and would be approximately 8 acres in size, consisting of an excavated and bermed shallow pit to serve as a settling pond (Attachment 2).

Finally, water would flow back to the lake through a pipeline after sediments had settled out. After drying out, the settling pond area will be contoured and seeded with appropriate vegetation.

**IV. Environmental Impact Checklist:**

Please see attached checklist.

**V. Explanation of Impacts to the Physical Environment:**

**1. Terrestrial and aquatic life and habitats.**

Deepening the lake would create better fish habitat and a more balanced fish population. The proposed project calls for dredging the lake to provide for a sufficient depth to improve the quality of the fishery and reduce the amount of rooted aquatic vegetation. There would be some loss of shallow shoreline habitat, which could be seasonally important to waterfowl or wading birds. The total shoreline perimeter of Wadsworth Lake is approximately 6,500 feet. The project would affect 1/6 to 1/3 of this length and there is substantial shallow shoreline habitat over much of the remaining unaltered lake perimeter.

**2. Water quantity, quality and distribution.**

Two sources of water fill the lake, one is groundwater through submerged springs and the other is diverting water (through an overflow pipe) from the Sun River during high-flow events. The City of Great Falls has water rights (#41K 71890 00) for 9156 GPM (approximately 20 cubic feet per second) and 6489 acre-feet in this area for municipal and irrigation use. City personnel have indicated these rights can be applied to the lake. Dredging would increase lake volume by approximately 12-37 acre-feet. Dredging activities may temporarily cause higher turbidity in the lake. The higher turbidity is not expected to affect the aquatic resources since it will be temporary and localized. The elevated turbidity will not reach the Sun River as the connecting structure is normally closed and will be kept closed during the dredging operation. A 318 short-term turbidity exemption permit will be obtained from the Montana Department of Environmental Quality.

**4. Vegetation cover, quantity and quality.**

One objective of this project is to reduce aquatic vegetation in the western end of the lake. Terrestrial vegetation in the area of the settling basin will be temporarily removed during project operation. The dredged material will be contoured and reseeded with native grasses. The project is anticipated to reduce rooted aquatic vegetation in the lake by up to 20%.

**5. Aesthetics.**

The dredging activities may temporarily impair aesthetics in the area. The only noticeable difference in the lake after dredging is complete will be the reduction in aquatic vegetation in the dredged area. Landscaping and revegetation of the settling basin area may improve the aesthetics of the park.

**8. Demands on environmental resources of land, water, air and energy.**

The increased depth in the lake will increase the capacity of the lake by approximately 12- 37 acre-feet, depending on the amount of materials removed. Some of the dredged material will be sediments that have naturally accumulated since the creation of the lake, due to bank erosion (caused by wind action) and decomposition of aquatic vegetation.

**9. Historic and archaeological sites**

The Montana Historical Society was consulted regarding the cultural resources in the area and provided an opinion on the proposed project (Letter of 14 Feb 2003 from Damon Murdo, Cultural Records Manager, Montana Historical

Society to Paul Valle, FWP. SHPO Project #2003021408). The Historical Society reported there have been no previously recorded historic or archaeological sites within the designated search locale. They concluded that because the project is occurring within the lake and in an area that was completely disturbed and excavated to obtain material for the levee, this project has a low likelihood of impacting cultural properties. In addition, the Society stated that a cultural resource inventory was not warranted.

**VI. Explanation of Impacts on the Human Environment.**

**7. Access to & quality of recreational activities.**

It is anticipated that the dredging of this existing lake would improve fish habitat, angling opportunity, and the quality of the recreational fishing experience. The intent of the proposed project is to create an improved fishery that would provide recreational opportunities for area youth and others throughout the year.

**10. Demands for government services.**

Currently, Montana Fish, Wildlife and Parks annually stocks Wadsworth Lake with walleye, rainbow trout, and largemouth bass. This project is not expected to increase the demand for government services.

**VII. Discussion and Evaluation of Reasonable Alternatives.**

**1. No Action Alternative**

If no action is taken, urban fishing opportunities in the vicinity of Great Falls will remain limited. Wadsworth Lake will continue to have an undesirable panfish population, and fishing will be very difficult in the western end of the lake.

**2. The Proposed Alternative**

The proposed alternative is designed to improve the fishery and angling opportunity for community youth in an area with limited urban fishing opportunities. The proposed treatment is expected to increase fishable water in the lake and also to improve the size structure and composition of the fish populations.

**VIII. Environmental Assessment Conclusion Section**

**1. Is an EIS required?**

No. We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

**2. Other groups or agencies contacted or which may have overlapping jurisdiction:**

U.S. Army Corp of Engineers, Montana Historical Society, Cascade County Floodplain Administrator, Montana Department of Environmental Quality, City of Great Falls Park and Recreation Department, City of Great Falls Parks and Recreation Board, West Great Falls Flood Control and Drainage District.

**3. Level of public involvement.**

The City of Great Falls, PPL Montana, the Great Falls Chapter of Walleyes Unlimited, and the Missouri River Flyfishers have been involved and informed of the project for the past several years. All have written letters in support of the project in the past. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA will be published on the Montana Electronic Bulletin Board.

**4. Duration of comment period?**

Public comment will be accepted through 5 P.M. on May 21, 2004.

**5. Persons responsible for preparing the EA.**

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**ENVIRONMENTAL ASSESSMENT CHECKLIST**

**Project Title:** Wadsworth Lake Habitat Improvement Project

**Division/Bureau:** Fisheries Division, Region 4 - Great Falls

**Description of Project:** This project is being proposed to deepen a portion of an existing man-made lake located near the town of Great Falls to improve urban fishing opportunities for area youth.

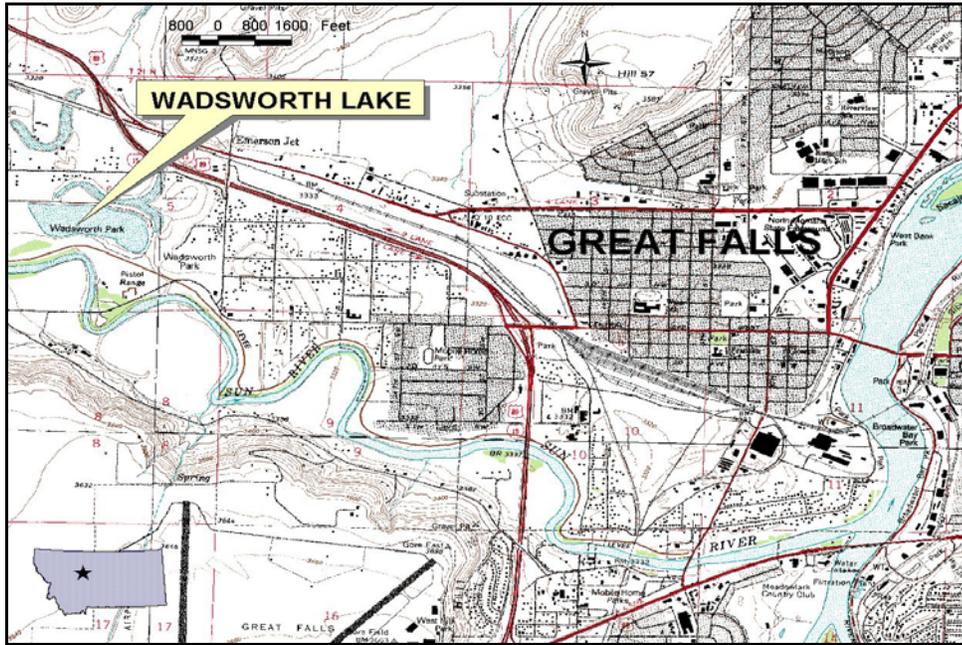
POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture				X		
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources				X		
8. Demands on environmental resources of land, water, air & energy			X			X
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		X
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

**Attachment 1. Site location map.**



**Attachment 2. Proposed dredged area shown as cross-hatched along western shoreline.**

