



United States
Department of
Agriculture

Forest
Service

February 2009



Decision Memo

Mondeaux Flowage Maintenance of Dam Structure and Fishery Habitat

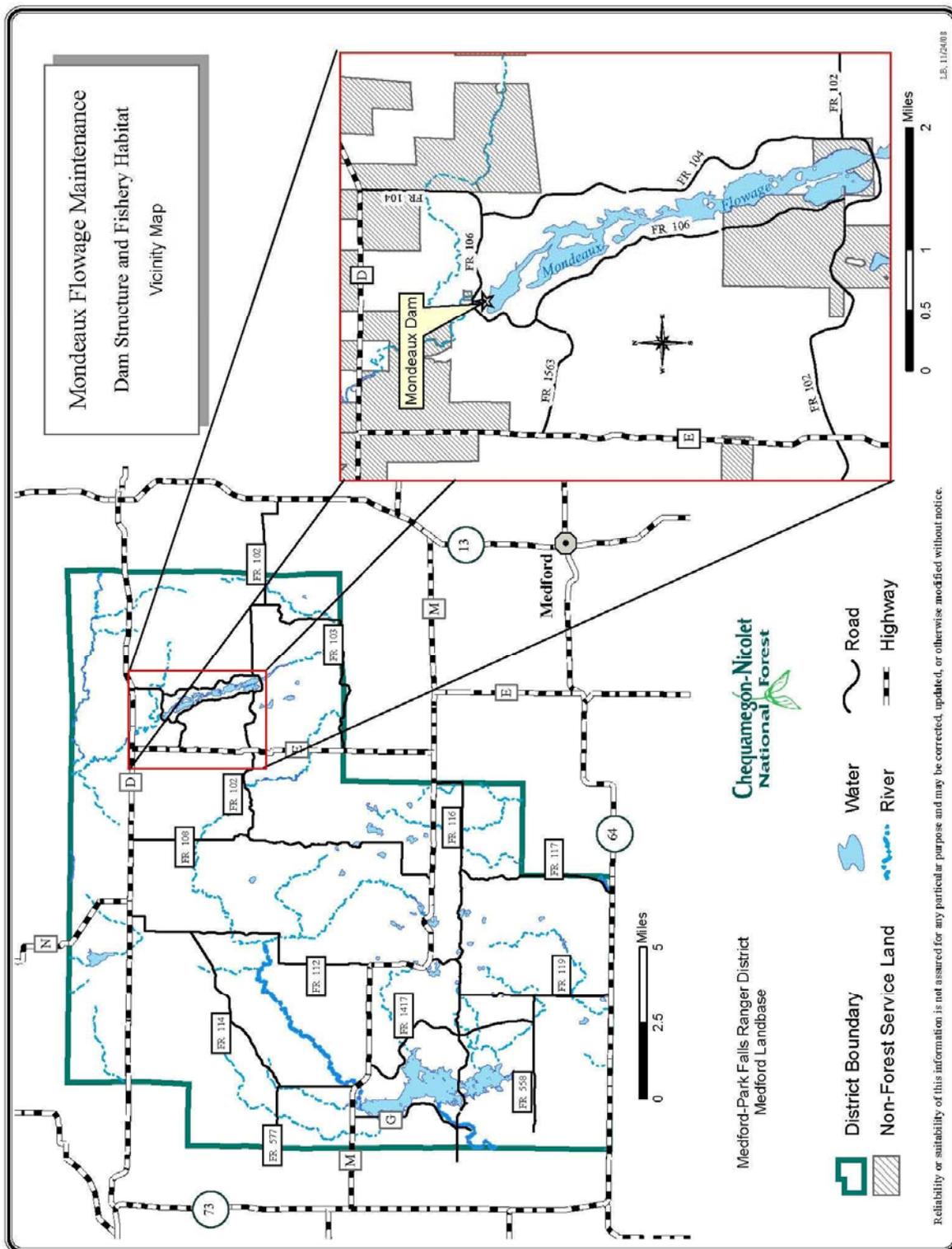
Medford-Park Falls Ranger District
Chequamegon-Nicolet National Forest
Taylor County, Wisconsin

Legal Description: T33N R1W and R1E, and T32N R1E

For Information Contact:

SUSANNE ADAMS
USDA Forest Service, Medford-Park Falls RD
850 N. 8th Street, Medford, WI 54451
(715)748-4875x36 smadams@fs.fed.us

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, DC 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.



Background

The 416 acre Mondeaux Flowage (referred to as Mondeaux) was built in the 1930's to provide recreation and camping to the area by the Civilian Conservation Corp and Works Progress Administration. It is located in T33N R1W and R1E, and T32N R1E in Taylor County, approximately 14 miles northwest of Medford, Wisconsin (See attached vicinity map). The Mondeaux has 4 campgrounds, a swimming beach, three boat ramps and a concessionaire restaurant/store located on its shores. Additionally, the dam, concessionaire and other outbuildings, along with surrounding landscaping are on the National Register of Historic Places.

Water levels and fisheries habitat on the Mondeaux have been actively managed for the past several decades, with numerous overwinter drawdowns conducted and also the first major repair to the dam in 1988. There has also been yearly vegetation monitoring conducted since 1984, which documented the amount of the flowage that is in open water versus the amount that was choked with weeds. The yearly monitoring also documented the types of vegetation and general locations. The drawdowns conducted since 1993 were covered by an analysis and decision in August 1993.

Overwinter drawdowns are conducted to reduce submergent weed populations which in turn help increase overwinter dissolved oxygen levels, help promote better panfish size structure, and have more open water accessible for fishing. These drawdowns are most successful when the water is lowered on the flowage early enough to allow for the weed beds to be exposed to freezing, snow-free conditions. Once a blanket of snow is in place over the weed beds, it acts as insulation and any weeds still alive would then be protected during the winter. Overwinter drawdowns have been conducted in recent years during the winters of: 1984/85, 1985/86, 1993/94, 1997/98, 1999/2000 and 2003/04. Plus there was a year long drawdown conducted from fall 1987 until spring 1989 for the dam repair conducted in 1988.

The charts attached (Appendix 1) show that typically there is a positive growth response both in reproduction of northern pike, as well as an increase in the size of bluegill. In 2003 there was an exceptional response by the northern pike and panfish not typical to most drawdowns, likely due to the lack of competition by largemouth bass and bluegills. This allowed for a phenomenal year class of northern pike to be produced and increased growth rates in the remaining bluegill population. A large percentage of bass and bluegills were lost during the 2003/2004 overwinter drawdown due to large fluctuations in water levels caused by heavy rains in late December. Approximately 200 adult largemouth bass were stocked in the flowage in summer 2004 as a result. In reality, the fishery response to the 1993-94 and 1999-2000 drawdowns are closer to "typical". The 1997-98 drawdown showed only minimal improvement in the fishery likely due to poor conditions during the early winter preventing a good reduction in weeds (i.e. early and heavy snows that covered and insulated the weeds and exposed flowage bed).

During dam inspections by a Forest Service engineering staff from 1996 to present, it was documented that the 1988 repair to the dam facing was failing. This is currently visible

in places where the water flows over the dam and pieces of the new concrete facing have come off or have bubbled (delaminated). The exact reason for the lamination failure is unknown, but it is suspected that the 1988 concrete overlay did not have a good chemical bond with the existing concrete. Additionally the repairs on the wing walls were documented as failing. Because this lamination failure did not materialize immediately, but years after the repair work, warranty follow-up with the original contractor was not possible. The original contract specifications were fully met.

The Decision

My decision is to:

- Repair the dam structure by removing the entire existing concrete overlay and any unsound concrete and replacing with new reinforced concrete
- Add fencing to the entire top of the wing walls for safety reasons
- Continue with the periodic overwinter drawdowns for fishery and recreation enhancement

Following are required design criteria for conducting the dam repair and overwinter drawdowns:

Dam Construction Design Measures & Foreseeable Conditions
Repair work on the dam will start sometime mid to late summer, as early as July 13, 2009, but no earlier than that date.
The contractor will likely have 120 work days to complete the project from the start date.
All necessary permits will be obtained by Forest Service Engineers (Wisconsin Department of Natural Resources, Army Corps of Engineers, etc).
Work will occur primarily on weekdays from 7am to 6 pm. No work is expected to occur on weekends, but it may become necessary if there are unforeseen delays such as weather, equipment down time, or more extensive work needed.
Equipment will be kept to the East side of the dam as much as possible (away from the concession stand). There will likely be a 50-100 ton crane (80-100' boom) on site.
The immediate area of the dam will be off-limits to the public once work starts. This will not impact the concession area, but no one will be able to walk across the dam walkway, and the pool below the dam will be inaccessible.
The construction will be quite noisy at times; this sound may impact some campers or day users at the concessionaire building and associated beach and picnic area. The noise however will not be constant, and is not planned to be on the weekends when use is highest.
When work starts the water will be released just until it is no longer flowing over the top of the dam. It is expected this will be no more than a 6 inch drop from the crest of the spillway and will likely be at similar levels to a dry mid-summer condition.
Work prior to Labor Day will focus on the north side of the dam, and then will shift to the south side as the water is drawn down after Labor Day.
Starting on the day after Labor Day, the water will be released at a rate of 4-6 inches per day, down a total of 6 feet. It is predicted that lowering water levels will affect access for fishing starting sometime around Sept 10-15 if the water was at near normal levels at the start.
Work is targeted to be completed by mid-November 2009, but the contractor will likely have

120 days from the start of the contract.
When work is completed, the water will be raised a foot or so, to the normal 4-5 foot drained level of a regular overwinter drawdown. The water will be maintained around this level for a normal overwinter drawdown until Spring 2010.
Water in the Flowage will be refilled to normal levels following overwinter drawdown refilling criteria listed below in Spring 2010.
At all times 25% of the baseflow of the Mondeaux River will be released through the gate at the bottom of the dam to ensure water supply downriver.
Utilize the "Wisconsin Construction Site Best Management Practices Handbook" as well as the "Best Management Practices for Erosion and Sedimentation Control.
Any damage to landscaping or turf will be repaired by the contractor.
Fencing will be added to the wing walls and will go from the top of the dam down to the end of the wing walls. This is for safety reasons to prevent falls from the wing walls. They are planned to be the same color and type as the current small section of fencing toward the top of the wing walls.

Overwinter Drawdowns Design Measures
Conduct vegetation survey, evaluate drawdown criteria, and make recommendation to District Ranger by August 15 yearly.
If a drawdown is recommended and approved by the District Ranger, inform public through Star News and posting at Mondeaux Flowage campgrounds, boat landings, and concession.
Individually notify Mondeaux Association President, Westboro Conservation Club President, and Mondeaux Concessionaire.
Begin drawdown in mid to late September and have it completed by November 1.
Rate of water release will be about 3 inches per day, but should not exceed 6 inches per day (to avoid stranding fish).
Water will be drawdown until approximately 25% of the flowage (about 100 acres) has water remaining. This translates to a drop in the water level of about 4 to 5 feet.
The Flowage will be checked regularly during the drawdown, water levels recorded, and the rate of water flow adjusted by gate height as needed.
Winter Dissolved Oxygen (DO) levels will be checked periodically during the drawdown.
Documented Heritage site #09-02-03-118 will be monitored for any damage or vandalism during the drawdown prior to established snow cover. Other documented heritage site adjacent to the flowage will be monitored periodically.
Refilling of the Flowage will begin around the first week in March, with full pool achieved close to April 1 st . Timing of the refilling may be adjusted to take advantage of spring run-off water flows.
During refilling of the dam, at least 25% of the normal inflow will be allowed to pass downstream. (the gate cannot be shut so that water is cut off from the downstream river)
Yearly monitoring of the fish populations by the Wisconsin Department of Natural Resources will continue.

Overwinter Drawdown Criteria
Densities of aquatic vegetation. Thick weed densities in shallow flowages hamper recreational activities and provide excessive hiding cover for panfish (resulting in high numbers and poor size structure). Thick densities can also result in low winter oxygen levels due to their

decomposition under ice cover. Weed densities covering more than 50% of the open water area are considered heavy in the Mondeaux.
Fish population considerations. Panfish, northern pike, and largemouth bass populations are all known to benefit from drawdowns. Abundant, slow-growing panfish are concentrated during winter drawdown and there is less hiding cover in the following season. This increases predation, reduces numbers, and helps to increase growth rates and size structure. Both northern pike and bass benefit by seeing increased feeding efficiency and improved spawning habitat. Problem indicators may include panfish PSD (proportional stock density) values less than 40%; gamefish in poor condition (long/skinny, big heads); and low reproduction/recruitment of pike or bass.
Winter dissolved oxygen (DO) levels from the previous winter. DO levels often get progressively worse with each succeeding season due to the build up of decaying organic matter and may indicate the need for future drawdowns. Levels below 2mg/L are low and warrant remedial action.
Current year weather/habitat conditions. Hot and dry summer weather can result in an increased need for a drawdown. Hot and dry weather results in abundant weed densities as well as a decrease in water/stream inflow into the flowage
The above factors are all equally important in determining the need for a drawdown. Conditions vary year to year and different factors will be important in different years. All factors will be considered each year before a decision on a drawdown is made.

The overall look of the dam will be essentially the same following completion of the repair. The only apparent difference will be the addition of fencing from the end of the current fencing on the wing walls down to the end of the concrete wing wall. The fencing will be the same height as the existing fencing, approximately 48". This is a safety addition to prevent children or adults from falling from the wing wall into the water either upstream (10 feet plus) or downstream (15 feet plus) from the dam. It is the responsibility of all public land managers to identify significant safety hazards and make appropriate improvements to reduce this potential risk. The shape of the dam will remain the same.

In general, the dam repair will take place sometime between July and December, 2009. The dam itself will be closed to the public during construction for safety reasons; however the concession and all other aspects of the Mondeaux (camping, boat launches, etc) will be unaffected prior to Labor Day. The water will be lowered just a few inches for any work prior to Labor Day, which should be no lower than the water level of the recent dry summers. Immediately after Labor Day the water will be begin being released until it is down approximately 6 feet. This is to allow work to be done on the south face of the dam that is normally covered by water. Recreational activities on the Mondeaux will start being impacted sometime around mid-September as the water levels get too low to easily launch boats. This will look and feel very much like previous overwinter drawdowns, but conducted a month or so earlier than normal.

The timing of the dam repair and associated drawdown is an attempt to strike a balance between engineering and construction needs, and impacts to Mondeaux recreationists and the concessionaire business. There would be fewer impacts to users of the Mondeaux and the concessionaire business if the date of activity was primarily after Labor Day. However there would be reduced cost to the taxpayers and higher chance of successful

repair if the construction and concrete work is done during the typically drier and warmer conditions during July, August, and September. Giving the contractor a larger window of operation would also allow for unforeseen equipment or weather delays, or if more structurally unsound concrete is found during the repair that would require more extensive work than currently planned. The work will start no sooner than July 13, 2009 due to several hundred to a thousand or more visitors to the Mondeaux and concession area in particular during the July 11, 2009 annual Bluegrass Festival.

The overwinter drawdowns and criteria for conducting them will be very similar to what was approved in the 1993 decision and how they have occurred since that decision. Changes include adding more criteria to determine when to conduct an overwinter drawdown. The project criteria include percentage of open water to weed choked areas along with previous winter dissolved oxygen levels, panfish size structure and gamefish condition, and consideration of weather conditions. One other change is to have the drawdowns start in mid-late September rather than October 1st. This will allow a better chance of suitable freezing conditions to kill the weed beds. The goals of an overwinter drawdown are not met if snow insulates the weed beds prior to good snow-free freezing conditions with the water levels down enough to expose the weed beds.

Reasons for Categorically Excluding this Action

The Forest Service has identified typical classes of actions that normally do not require documentation in an environmental impact statement (EIS) or environmental assessment (EA) per 40 CFR 1507.3 (b) (2). These types of actions are called categorical exclusions. An action may be categorically excluded from documentation in an EIS or an EA only if that action falls within one of the identified categories (36 CFR 220.6 (d) and (e) and when there are no extraordinary circumstances.

Upon review of the proposal I have determined that no extraordinary circumstances, as defined in 36 CFR 220.6 (b), exist. Based upon experience with similar types of projects, these projects are considered minor in context and intensity. This action is categorically excluded from documentation in an environment assessment or environmental impact statement because:

1) Based on my review, the dam repair falls within a category for repair and maintenance of recreation sites, and the drawdowns fall within categories for wildlife habitat improvement and aquatic habitat improvement.

More specifically, these actions fall into categories described in 36 CFR 220.6 as follows:

(d) Categories Established by the Chief (Decision Memo not required)

(5) Repair and maintenance of recreation sites and facilities.

(e) Categories of Actions for Which a Project or Case File and Decision Memo Are Required

- (6) Timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than 1 mile of low standard road construction.
- (7) Modification or maintenance of stream or lake aquatic habitat improvement structures using native materials or normal practices

2) Based on my review of the project file, I find this action to be routine and no extraordinary circumstances exist that might cause this action to have adverse effects to the environment. I base this on my assessment of the following resource conditions (36 CFR 220.6(b)):

- Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species will not be adversely affected by this action (12-18-08 CE checklist). There is one known eagle's nest located on the flowage. This nest is over a mile from the dam repair site and the timing of the repair and any outyear drawdowns will not limit access to food source (fish) and additionally will not occur during the more sensitive breeding period.
- Flood plains, wetlands, or municipal watersheds would not be adversely affected. There are no municipal watersheds on the Medford-Park Falls District. Necessary permits will be obtained from Wisconsin Department of Natural Resources or Army Corps of Engineers (See project design criteria).
- This action does not take place in congressionally designated areas such as Wilderness, Wilderness Study Areas, or National Recreation Areas (Forest Plan FEIS 3-199, 3-201).
- There are no Inventoried Roadless Areas adjacent to the Mondeaux (Forest Plan FEIS Appendix C).
- There are no Research Natural Areas or proposed areas adjacent to the Mondeaux (Forest Plan FEIS Appendix N).
- Archaeological sites or historic properties will not be affected by these actions, as concurred by the Wisconsin State Historic Preservation Office (1-21-09 correspondence, see project file). The repair work will take place on a structure in the National Register of Historic Places, however the shape and look of the dam will not change. Other buildings on the National Register will not be impacted in any way by the repair work or drawdowns. There are 7 other known potentially eligible locations of historic sites adjacent to the flowage. One site will be monitored during any drawdowns (see project design criteria) with the remaining sites monitored periodically as determined by the Mark Bruhy, CNNF Heritage Program Manager (5-23-08 document, see project file).

- American Indian and Alaska Native religious or cultural sites will not be affected by these actions. Tribes were contacted with a 12-4-08 letter, with no response received.

Compliance with Other Laws and Regulations

FOREST PLAN CONSISTENCY (NATIONAL FOREST MANAGEMENT ACT)

This project has been designed in conjunction with the guidelines in this act as well as with direction in the Chequamegon-Nicolet National Forest Land and Resource Management Plan, 2004 (Forest Plan) which was prepared under NFMA regulations.

These actions are consistent with the Forest Plan goals and objectives, and forest-wide standards and guidelines. Project design measures were incorporated, in part from the Forest Plan standards and guidelines (see The Decision section of this document).

CLEAN WATER ACT, AS AMENDED 1977

The Federal Water Pollution Control Act of 1972, as amended, is commonly referred to as the Clean Water Act. Under Section 404, the U.S. Army Corps of Engineers has been given responsibility to regulate the discharge of dredged and fill material into waters of the United States, including wetlands (33 CFR 323.3). Any necessary Wisconsin Department of Natural Resources or Army Corps of Engineers permits will be obtained.

ENDANGERED SPECIES ACT (ESA) OF 1973, AS AMENDED 1978, 1979, 1982, AND 1988 (16 U.S.C. 1531)

This Act provides direction to the Forest Service to establish objectives for habitat management and recovery through the Forest Plan for the conservation and protection of endangered and threatened species. This project is consistent with these guidelines. The project area has been reviewed to identify, manage, and protect essential and critical habitats to meet legal requirements and recovery objectives for Federally listed species. There is no critical habitat present in the project area. An analysis of effects on listed species has been conducted and documented in categorical exclusion checklist (12-8-08). This analysis found no endangered or threatened species present and no adverse effects from this project.

NATIONAL HISTORIC PRESERVATION ACT (16 U.S.C. 470)

This Act provides direction for Federal agencies to establish a program for preservation of historic properties. In compliance with this act, potential impacts to sites eligible for the National Register of Historic Places were considered in this analysis. The Mondeaux Concession, adjacent buildings and the dam itself are on the Register. Work on the dam will not change its overall shape or look, with the exception of safety related fencing added to the concrete wing walls. Drawdowns were concluded to have no impact on any known sites adjacent to the Mondeaux Flowage, and monitoring design criteria was

incorporated. The Wisconsin State Historic Preservation Office has concluded that there will be no adverse effect (1-21-09).

WILD AND SCENIC RIVERS ACT

There are no designated or eligible Wild and Scenic Rivers within the project area (Forest Plan 3-42).

WILDERNESS ACT

There is no designated or proposed Wilderness within the project area. There are no Roadless Areas or proposed Roadless Inventory Areas within the project area (Forest Plan FEIS 3-199).

Scoping and Public Involvement _____

Letters were sent directly to 94 individuals, tribes, organizations, municipalities, and agencies known to be interested in or affected by the proposed action on December 16, 2008. The project team leader, Susanne Adams, attended the 11-20-08 meeting of the Westboro Conservation Club to discuss the proposed project. Two other interested parties, Mike Ebel president of the Mondeaux Flowage Association, and Steve Kalmon concessionaire at the Mondeaux, were all spoken to directly on the proposed project. Three responses were received, and any concerns or questions were incorporated into the decision or background sections of this document.

Implementation _____

This decision is not subject to appeal in accordance with 36 CFR part 215 regulations and implementation may start immediately after the date of signature on this document.

/s/ Bob Hennes

BOB HENNES
District Ranger
Medford-Park Falls Ranger District

2/24/09

DATE

