

Montana Department of Fish, Wildlife and Parks
1420 East 6th Ave P.O. Box 200701, Helena, MT 59620 -0701

ENVIRONMENTAL ASSESSMENT

**Transfer of Northern Pike from
Pishkun Reservoir to Split Rock and Arod Lakes**

I. Description of proposed action

A. Description of water body and action.

Receiving Waters:

Name: Split Rock Lake Location: T22N R07W Sec 17
Water Code: 20-8200
County: Teton

Name: Arod Lake Location: T26N R03W Sec 19
Water Code: 14-146840
County: Teton

Donating Water:

Name: Pishkun Reservoir Location: T22N R07W Sec 01
Water Code: 20-7950
County: Teton

Northern pike *Esox lucius* will be trapped in Pishkun Reservoir and transplanted into Split Rock and Arod lakes. Pike removal efforts are directed at reducing predation pressure in Pishkun Reservoir and providing additional angling opportunities in Split Rock and Arod lakes. The quality and condition of the northern pike and yellow perch fisheries in Pishkun should improve as a result of these efforts, and reduced predation pressure might provide an opportunity to establish a salmonid fishery in the reservoir. Rainbow trout were stocked into Pishkun during 2003, and will be stocked annually into the reservoir the next several years in an attempt to provide additional fishing opportunities. These management actions are outlined in the *Montana Warmwater Fisheries Management Plan 1997 – 2006* (1997).

Trap nets will be used to live capture northern pike during their spring spawning period (mid to late April). Captured pike will be measured for total length, weighed, and tagged with individually numbered Floy T-tags prior to transplanting. Pike will be transported in a truck-mounted water tank equipped with aeration. Fisheries personnel will attempt to capture and transplant between 500 and 1,000 northern pike from Pishkun into Split Rock and Arod lakes annually for a five-year period (2004 – 2008). Both lakes currently sustain northern pike populations, although current fisheries data is not available for either lake. Low water levels resulted in a fish kill (northern pike and common carp) in Arod Lake during August 2003. Concurrent with transplanting northern pike, a separate EA will address introducing spottail shiners into both Split Rock and Arod lakes to enhance the forage base in these waters.

B. Need for Action

Pishkun Reservoir is a 1,500 acre off-stream irrigation storage reservoir that receives water diverted from the Sun River. Historically managed as a rainbow trout fishery, northern pike and yellow perch were illegally introduced into the reservoir in the 1950s and quickly became established. Several attempts at managing Pishkun as a mixed fishery including northern pike, yellow perch, and either rainbow trout or kokanee salmon, have failed. Northern pike predation pressure has limited the development of the reservoir's rainbow trout, kokanee salmon, and yellow perch fisheries. Spottail shiners were introduced into the reservoir in 1987 to provide additional forage, but size and condition of northern pike remains poor and relative abundances of other species low. The *Montana Warmwater Fisheries Management Plan 1997 – 2006* (1997) indicated trapping and removing a significant portion of Pishkun's northern pike population should be evaluated as a means to reduce predation pressure in the reservoir.

Trapping efforts completed during spring 2003 indicated large numbers of northern pike can be removed from Pishkun using trap nets—497 pike were removed in seven days. Captured pike averaged 18.4 inches total length and 1.73 lbs., indicating the relatively poor condition of this population. Pike captured during 2003 were killed and either given to anglers or returned to the reservoir. Transplanting captured pike into Split Rock and Arod lakes will better utilize these fish by providing additional opportunities for anglers at a nominal cost.

II. Impacts of the proposed action

Please review the attached checklist on page 5. The impacts of this action are included in the Environmental Assessment checklist. The following text addresses the impacts.

A. Potential Impacts on the Physical Environment

1) Terrestrial and aquatic life and habitats

Current data is not available for the northern pike populations in Split Rock and Arod lakes. A fish kill (extent unknown) including northern pike occurred on Arod Lakes during August 2003. Transplanting additional pike into these waters may result in too many predators for available forage. To provide additional forage in these lakes, a proposal to introduce spottail shiners during the 2004 summer will be evaluated. Additionally, follow-up monitoring on Split Rock Lake (and possibly Arod Lakes) will help assess the status of these fisheries. In the event northern pike numbers appear too high, harvest can be promoted on these waters or transplanting efforts can be reduced or stopped.

There are no known fish disease concerns associated with transplanting northern pike from Pishkun Reservoir, although limited fish health screening has occurred in this reservoir (Jim Peterson, MT Fish, Wildlife & Parks Fish Health Biologist, personal communication).

B. Potential Impacts on the Human Environment

7) Access to & quality of recreation and wilderness activities

The proposed action will improve fishing opportunities for northern pike in Split Rock and Arod lakes. Additionally, the removal of pike from Pishkun should reduce predation pressure in the reservoir, thus improving survival and growth of the reservoir's other fisheries. Growth and condition of northern pike should also improve. Positive changes in Pishkun's fisheries will likely result in increased angler use and satisfaction.

10) Demands for government services

This action will be accomplished by fisheries staff as part of normal field operations. Other fisheries projects may be postponed or canceled due to these trapping and transplanting efforts. It is anticipated a two-person crew will need approximately seven to ten days to complete this work.

III. Discussion of Reasonable Alternatives

1) No Action:

A portion of Pishkun Reservoir's northern pike population would not be removed (transplanted or killed) as detailed in the *Montana Warmwater Fisheries Management Plan 1997 – 2006* (1997). Predation pressure would not be reduced in the reservoir, thus limiting FWP's ability to implement alternative management strategies to enhance this fishery. This may result in less public fishing opportunities.

2) Capture and kill northern pike in Pishkun Reservoir:

Northern pike trapped in Pishkun Reservoir would not be transplanted but killed and given to anglers or returned to the reservoir. During trapping efforts in spring 2003, several anglers expressed dissatisfaction with what they considered "wasting" of these gamefish. Transplanting them into Split Rock and Arod lakes provides a reasonable and cost-effective alternative.

3) Transplant a portion of northern pike captured in Pishkun Reservoir:

Transplanting a portion of captured northern pike into Split Rock and Arod lakes would provide additional angling opportunities and might be acceptable to individuals concerned about the killing of these fish. If time permitted, additional survey work could be completed to determine the status of existing northern pike populations in both lakes prior to transplanting all pike removed from Pishkun. However, the additional stocking of one to two hundred additional pike into these lakes can likely be mitigated with the introduction of additional forage (spottail shiners).

4) Donation of fish to food banks and/or charities:

Northern pike removed from Milltown Dam in western Montana have been processed and utilized by local food banks (David Schmetterling, MT Fish, Wildlife & Parks Fisheries Biologist, personal communication). However, the small average size (18.4 inches) of Pishkun's pike population would provide little meat in return for processing and filleting efforts. It is unlikely a food bank would be interested in processing these small fish.

IV. Environmental Assessment Conclusion Section

- 1) Is an EIS required?** No, the action is expected to be minor and beneficial.

References

Montana Warmwater Fisheries Management Plan 1997- 2002. 1997. Montana Department of Fish, Wildlife & Parks. Helena, MT.

Montana Department of Fish, Wildlife and Parks
 1420 E. 6th Ave P.O. Box 200701, Helena, MT 59620 -0701

Environmental Assessment Checklist

Project: Northern pike transplant - transfer of live fish from Pishkun Reservoir into Split Rock and Arod Lakes.

Division: Fisheries Division

Description of Project: Northern Pike will be trapped from Piskun Reservoir and transplanted to Split Rock and Arod lakes. A total of 500 to 1,000 pike will be removed and transplanted annually for five years (2004 – 2008). Concurrent monitoring will evaluate the consequences of these efforts on both the donor and receiving waters.

Potential Impacts on the Physical Environment

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			P. 2
2. Water quality, quantity & distribution				X		
3. Geology & soil quality, stability and moisture				X		
4. Vegetative cover, quantity & quality				X		
5. Aesthetics				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		
9. Historical & archaeological sites				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 recreation and wilderness activities		X (benefit)				P. 3
8. Quantity & distribution of employment				X		
9. Distribution and density of population & housing				X		
10. Demands for government services				X		P. 3
11. Industrial and commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flow				X		

Other groups or agencies contacted or which may have overlapping jurisdiction: Not applicable.

List of Individuals or groups contributing to this EA: Not applicable.

List of all agencies and individuals who have been notified of this proposed transfer: Notification will be done via the Montana Fish, Wildlife and Parks Web Site.

Recommendation concerning preparation of EIS: No EIS Required. Action expected to be minor.

EA prepared by: Dave Yerk, Fisheries Biologist **Date:** March 2, 2004

Comments will be accepted until: March 31, 2004

Comments should be sent to: Dave Yerk, MTFWP, P.O. Box 733, Choteau, MT 59422; dyerk@3rivers.net