

**Montana Department of Fish, Wildlife and Parks**

**ENVIRONMENTAL ASSESSMENT**

**Transfer of Spottail Shiners from  
Tiber 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 (upper)	Location:	T26N R03W Sec 19
Water Code:	14-00AI		
County:	Teton		

**Donating Water:**

Name:	Tiber Reservoir	Location:	T30N R01E – R05E
Water Code:	14-9240		
County:	Toole / Liberty		

Montana Fish, Wildlife & Parks proposes to introduce up to several thousand spottail shiners *Notropis hudsonius* into Split Rock and Arod lakes to supplement and diversify the forage base in these waters. This introduction may occur over a several-year period beginning in 2004. Spottail shiners will be live-captured in Tiber Reservoir using trap nets and transported in an aerated truck tank to the receiving waters. All sizes and ages of spottail shiners will be introduced to increase the likelihood of them becoming established in these waters. Subsequent monitoring will evaluate the success of these introductions. If necessary, additional stockings may occur in subsequent years.

**B. Need for Action**

Split Rock Lakes is a series of natural potholes in the Sun River drainage maintained by springs and seepage from the Pishkun Supply Canal. This series of connected lakes are approximately 100 surface acres and relatively shallow. Maximum depth in the largest lake is about 12 feet. Arod Lakes is a series of three lakes in the Teton River drainage that cover approximately 225 surface acres and have a maximum depth of about 20 feet. Water is diverted from Muddy Creek and stored in Arod for municipal and irrigation use. Northern pike were stocked into both Split Rock and Arod lakes in the late 1940s.

Both Split Rock and Arod lakes support relatively minor fisheries for yellow perch and northern pike. Yellow perch that survive pike predation can grow quite large, but generally are uncommon. Northern pike are typically small in size with an occasional larger individual caught by anglers. Lack of

adequate forage has limited the development of the northern pike fisheries in both Split Rock and Arod lakes.

The *Montana Warmwater Fisheries Management Plan 1997 – 2006* (1997) recommended introducing spottail shiners into Split Rock and Arod lakes to improve forage availability for northern pike. Spottail shiners are a non-native species that have been widely introduced across Montana as a forage fish. They were first introduced into Montana at Fort Peck Reservoir in 1981, and subsequent introductions have occurred in Nelson Reservoir, Fresno Reservoir, Tiber Reservoir, Lake Frances, Pishkun Reservoir, Bynum Reservoir, and Petrolia Reservoir. Spottail shiners have become established in all these waters and no negative interactions with existing fisheries have been identified. Northern pike readily utilize spottail shiners as forage in these waters.

## **II. Impacts of the proposed action**

Please review the attached checklist on page 4. The impacts of this action are included in the Environmental Assessment checklist. The following text addresses the impacts.

### **A. Impacts to the Physical Environment**

#### **1) Terrestrial and Aquatic Habitat**

There is potential introduced spottail shiners may pioneer waters downstream of Split Rock Lakes. Split Rock's overflow is transported down a small coulee approximately 3 miles before entering the Sun River. There is potential for spottail shiners to reach the Sun River. However, it is likely spottails have already drifted into the Sun River drainage via the Sunny Slope Canal from Pishkun Reservoir. Spottails have been established in Pishkun Reservoir since their introduction in 1986. Further downstream in the Missouri River below Morony Dam, spottail shiners have access from previous introductions in Fort Peck and Tiber reservoirs.

Introduced spottail shiners may potentially pioneer waters up- or downstream of Arod lakes. However, Bynum Reservoir's existing spottail population (introduced in 1985) has access to Muddy Creek upstream of Arod Lakes. Downstream of Arod Lakes, Tiber Reservoir's spottail population (introduced in 1984) has access to the Teton and Marias rivers. Thus, if adequate habitat is available, spottail shiners are likely already present in these waters.

There are disease concerns associated with all fish introductions. However, there are no known fish health concerns related to spottail shiners nor have any been identified in previous introductions (Jim Peterson, MT Fish, Wildlife & Parks, personal communication). A full health screening of Tiber's spottail shiner population is proposed prior to completing this transplant.

## **B. Impacts to the Human Environment**

### **7) Access to and Quality of Recreational Activities**

The proposed action will likely improve size and condition of northern pike in Split Rock and Arod lakes. Larger yellow perch may also prey on spottails. This should improve angler satisfaction and may lead to increased use of these fisheries.

### **10) Demands on Government Services**

This action will be undertaken by fisheries staff as part of normal field operations. Other fisheries projects may be postponed or cancelled to complete the fish transfer. Follow-up monitoring of these introductions will also increase workload.

## **III. Discussion of Reasonable Alternatives**

### **1) No Action**

Spottail shiners would not be introduced into Split Rock and Arod lakes to provide additional forage as recommended in the *Montana Warmwater Fisheries Management Plan 1997 – 2006* (1997). Thus, these fisheries would maintain their marginal status and no increase in public angling opportunities would be realized.

### **2) Introduction of an alternative forage species**

An alternative forage specie(s) other than spottail shiners could be considered for introduction into Split Rock and Arod lakes. However, no other forage species would present as minimal recognized risks to the existing fisheries; spottail shiners have been widely introduced across Montana with favorable results.

## **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.

Peterson, J. 2004. Personal Communication. Montana Department of Fish, Wildlife & Parks, Great Falls, Montana.

**Montana Department of Fish, Wildlife and Parks**

**Environmental Assessment Checklist**

**Project:** Spottail shiner transfer - Transfer of live spottail shiners from Tiber Reservoir to Split Rock and Arod Lakes.

**Division:** Fisheries Division

**Description of Project:** Up to several thousand spottail shiners will be trapped and transported to Spit Rock and Arod Lakes to supplement the existing forage base in these waters. Introductions will begin in 2004 and may continue into subsequent years if necessary. Follow-up monitoring will determine if spottail shiners become established in these waters.

**Potential Impact 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:** May 12, 2004

**Comments will be accepted until:** June 4, 2004

**Comments should be sent to:** Dave Yerk, MTFWP, P.O. Box 733, Choteau, MT 59422; [dyer@3rivers.net](mailto:dyer@3rivers.net)