

ENVIRONMENTAL ASSESSMENT CHECKLIST

PART 1. PROPOSED ACTION DESCRIPTION

Project Title: Yellowstone Cutthroat Trout Introduction into Island Lake

Date: May 1, 2009

Name, Address and Phone Number:

Ken Frazer
Regional Fisheries Manager
Montana Fish, Wildlife and Parks
2300 Lake Elmo Drive
Billings, MT 59105
(406) 247-2961
kfrazer@mt.gov

Project Location: Island Lake is a 4.5 acre mid-elevation lake located on the West Fishtail Creek drainage near Fishtail, Montana. The lake, which was likely historically fishless and isolated from West Fishtail Creek, has been enhanced by a manmade irrigation diversion that routed water from the creek into the Island Lake sub-drainage. As a result, irrigation water flows through Island Lake from May through October each year, elevating lake levels by approximately 5-8 feet in this otherwise 15-20-foot deep lake. The fish population in Island Lake is primarily composed of a relatively small number of brown trout, which probably drop down from West Fishtail Creek through the ditch. Survey work in 2008 failed to identify any evidence of natural reproduction in the lake, further explaining the low brown trout numbers. Some spawning habitat was identified near the lake's outlet, but this habitat is inaccessible for fall spawning fish like brown trout because it is dry after the irrigation season. This spawning habitat is accessible during the summer months, however, when the lake level is elevated to facilitate irrigation, and the spawning gravels are covered with adequate water.

Description of Project:

We propose to enhance the fishery of Island Lake by stocking the lake with purestrain Yellowstone cutthroat trout (YCT) in an attempt to establish a self-sustaining population that will co-exist with the limited number of brown trout present. The Goose Lake strain of YCT would be stocked from the Yellowstone River Trout Hatchery in Big Timber, MT for at least

three consecutive years beginning in 2009. YCT have never before been stocked in Island Lake, prompting the need to complete an environmental assessment of the proposed action.

Because of its unique flow regime, Island Lake provides an opportunity to test the theory that differential life history strategies can determine trout species distribution patterns. Brown trout are fall spawners, while cutthroat trout spawn during the spring/summer period. The fluctuating water level (and habitat availability) in Island Lake presents a situation where spawning habitat is not accessible to brown trout during their fall spawning period, but would be accessible to spring/summer spawning YCT because of elevated lake levels during the irrigation season. YCT eggs would then incubate in the gravel and fry would hatch and swim out into the lake prior to the end of the irrigation season. As a result, we believe that YCT may be able to co-exist with brown trout because they should successfully reproduce a new age class each year. The brown trout population, on the other hand, should continue to be supported solely by drop-down fish from West Fishtail Creek. The expected end result would be a small and healthy population of brown trout combined with a more abundant population of self-sustaining YCT.

While the proposed action should provide enhanced recreational opportunity in Island Lake, it may also help achieve conservation goals for YCT and familiarize more anglers with the species and the need to conserve it. The distribution and abundance of Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*; YCT) have declined from historical levels throughout most of their range. In Montana, Idaho and Wyoming, YCT currently occupy less than 60% of their historically occupied 17,397 miles of habitat, and of these only 7-25% are genetically pure populations of fish (May et al. 2003). YCT are a species of special concern in the state of Montana and on the Sensitive Species List for R1 of the US Forest Service. Many populations have been in decline or have disappeared, mainly due to the introduction of non-native fish species, which compete with, prey upon, and hybridize with YCT. This project would help expand the current distribution of YCT, and may answer some scientific questions about the ability of YCT to survive in the presence of competing and predatory brown trout.

Other groups or agencies contacted or which may have overlapping jurisdiction:

Island Lake is located within the Custer National Forest. FWP has the authority to manage fish populations on National Forest lands, and the project is being coordinated with the local USFS Ranger District. In addition, the goals of this project are consistent with USFS sensitive species management goals, and specific goals and objectives outlined in the Cooperative Conservation Agreement for Yellowstone Cutthroat Trout within Montana (CCA 2000) entered into by several state and federal resource management agencies including FWP and the Custer National Forest.

PART 2. ENVIRONMENTAL REVIEW

1. POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

WILL THE PROJECT RESULT IN POTENTIAL IMPACTS TO:	UNKNOWN	POTENTIALLY SIGNIFICANT	MINOR	NONE	CAN BE MITIGATED	COMMENTS PROVIDED
1. Unique, endangered, fragile or limited environmental resources			X			1.1
2. Terrestrial or aquatic life and/or habitat			X			1.2
3. Introduction of a new species into an area			X			1.3
4. Vegetation cover, quantity and quality				X		
5. Water quality, quantity and distribution (surface or groundwater)				X		
6. Existing water right or reservation				X		
7. Geology and soil quality, stability and moisture				X		
8. Air quality or objectionable odors				X		
9. Historical and archaeological sites				X		
10. Demands on environmental resources of land, water, air & energy				X		
11. Aesthetics				X		

Comments

1.1. Unique, endangered, fragile, or limited environmental resources

The Yellowstone cutthroat trout is listed as a "Species of Special Concern" in Montana.. The intent of this project is to create a self-sustaining population of YCT, a highly valued native fish species and the only indigenous trout species in the Yellowstone drainage. If the habitat conditions in Island Lake allow for YCT persistence, the lake will likely harbor a healthy population long into the future, decreasing the possibility of their extinction within the drainage. If successful, this project will also provide insight for future YCT restoration projects in areas where nonnative species like brown trout are currently dominant.

1.2. Terrestrial or aquatic life and/or habitat

The introduction of YCT will have direct impacts on invertebrate and vertebrate organisms through predation. However, YCT and brown trout feeding habits are very similar, and therefore little difference in impacts to these organisms is expected with the addition of YCT.

1.3. Introduction of a new species into an area

See comment 1.2.

2. POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

WILL THE PROJECT RESULT IN POTENTIAL IMPACTS TO:	UNKNOWN	POTENTIALLY SIGNIFICANT	MINOR	NONE	CAN BE MITIGATED	COMMENTS PROVIDED
1. Social structures and cultural diversity				X		
2. Changes in existing public benefits provided by wildlife populations and/or habitat			X			2.2
3. Local and state tax base and tax revenue				X		
4. Agricultural production				X		
5. Human health				X		
6. Quantity and distribution of community income				X		
7. Access to and quality of recreational activities			X			2.7
8. Locally adopted environmental plans & goals				X		
9. Distribution and density of population and housing				X		
10. Demands for government services				X		
11. Industry and/or commercial activity				X		

Comments

2.2. Changes in the existing public benefits provided by wildlife populations and/or habitat

By establishing a population of YCT in Island Lake, recreational opportunities to catch wild cutthroat trout will increase, while brown trout fishing opportunity should stay the same, resulting in an overall net increase in fish density and fishing opportunity. This will translate to an enhancement of existing public benefit resulting from the project.

2.7. Access to and quality of recreational activities

See comment 2..2. Also, note that this project will provide a unique opportunity for the public to fish for and harvest YCT in a fairly accessible setting. Island Lake is much more easily accessible to the public than most YCT lakes in the mid-Yellowstone drainage, which require many miles of strenuous hiking over steep terrain to reach. A number of local families, sporting groups, horseback riders and backpackers enjoy recreating in this area due to its gentle terrain and proximity to vehicle access. A fishable YCT population in Island Lake would certainly increase the quality of recreation here and provide benefit to many outdoorspeople.

Does the proposed action involve potential risks of adverse effects that are uncertain but extremely harmful if they were to occur?

No

Does the proposed action have impacts that are individually minor, but cumulatively significant or potentially significant?

No

Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action when alternatives are reasonably available and prudent to consider. Include a discussion of how the alternatives would be implemented:

1. The "No Action" Alternative

If no action is taken the following consequences are likely to result:

The fishery in Island Lake would likely remain in its current state, being supported by fish that move downstream from West Fishtail Creek. The number of fish in the lake would remain limited, and the recreational opportunities would remain the same. The lake would not support a YCT fishery with recreational and conservation value under the "no action" alternative.

Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

None

Individuals or groups contributing to, or commenting on this EA:

EA prepared by: Jeremiah Wood, Regional Fisheries Biologist, Montana Fish, Wildlife and Parks

Date Completed: May 1, 2009

Mail comments to:

Ken Frazer
Regional Fisheries Manager
Montana Fish, Wildlife and Parks
2300 Lake Elmo Dr.
Billings, MT 59105

Comments due by: May 29, 2009

References

- Cooperative Conservation Agreement. 2000. Cooperative conservation agreement for Yellowstone cutthroat trout within Montana between Crow Tribe, Montana Department of Fish, Wildlife and Parks, Montana Department of Environmental Quality, Montana Department of Natural Resources and Conservation, USDA Forest Service Gallatin and Custer National Forests, USDI Bureau of Land Management, USDI Fish and Wildlife Service, USDI Bureau of Indian Affairs, and Yellowstone National Park. Montana Department of Fish, Wildlife and Parks, Helena, Montana.
- Marcuson, P. E. 1980. Fisheries Management Plan for Mountain Lakes of the Boulder River Drainage, Montana. Department of Fish and Game, Billings, MT.
- May, B. E., Urie, W., Shepard, B. B., and Montana Cooperative Fishery Research Unit. 2003. Range-Wide Status of Yellowstone Cutthroat Trout (*Oncorhynchus clarki bowvieri*): 2001. Bozeman, MT.

PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST

The 54th Legislature enacted the Private Property Assessment Act, Chapter 462, Laws of Montana (1995). The intent of the legislation is to establish an orderly and consistent process by which state agencies evaluate their proposed actions under the "Takings Clauses" of the United States and Montana Constitutions. The Takings Clause of the Fifth Amendment of the United States Constitution provides: "nor shall private property be taken for public use, without just compensation." Similarly, Article II, Section 29 of the Montana Constitution provides: "Private property shall not be taken or damaged for public use without just compensation..."

The Private Property Assessment Act applies to proposed agency actions pertaining to land or water management or to some other environmental matter that, if adopted and enforced without compensation, would constitute a deprivation of private property in violation of the United States or Montana Constitutions.

The Montana State Attorney General's Office has developed guidelines for use by state agency to assess the impact of a proposed agency action on private property. The assessment process includes a careful review of all issues identified in the Attorney General's guidance document (Montana Department of Justice 1997). If the use of the guidelines and checklist indicates that a proposed agency action has taking or damaging implications, the agency must prepare an impact assessment in accordance with Section 5 of the Private Property Assessment Act. For the purposes of this EA, the questions on the following checklist refer to the following required stipulation(s):

(LIST ANY MITIGATION OR STIPALTIONS REQUIRED, OR NOTE "NONE")

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PRIVATE PROPERTY ASSESSMENT ACT?

- | YES | NO | |
|------------|--------------|---|
| _____ | <u> X </u> | 1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights? |
| _____ | <u> X </u> | 2. Does the action result in either a permanent or indefinite physical occupation of private property? |
| _____ | <u> X </u> | 3. Does the action deprive the owner of all economically viable uses of the property? |
| _____ | <u> X </u> | 4. Does the action deny a fundamental attribute of ownership? |

- _____ X 5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If the answer is **NO**, skip questions 5a and 5b and continue with question 6.]
- _____ _____ 5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
- _____ _____ 5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
- _____ X 6. Does the action have a severe impact on the value of the property?
- _____ X 7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? [If the answer is **NO**, do not answer questions 7a-7c.]
- _____ _____ 7a. Is the impact of government action direct, peculiar, and significant?
- _____ _____ 7b. Has government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
- _____ _____ 7c. Has government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if **YES** is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if **NO** is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with Section 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.