

## Montana Fish, Wildlife and Parks

### ENVIRONMENTAL REVIEW OF FISH INTRODUCTION INTRODUCTION OF WESTSLOPE CUTTHROAT TROUT INTO CASTLE LAKE

#### Proposed Action:

To stock westslope cutthroat trout (WCT) *Oncorhynchus clarki lewisi* from hatchery brood stock into Castle Lake.

#### Need for Action:

Westslope cutthroat trout stocking is proposed for Castle Lake to reduce stocking costs. Stocking in nearby mountain lakes has been converted from Yellowstone cutthroat trout to WCT in the last few years. Yellowstone cutthroat trout (YCT) *Oncorhynchus clarki bouvieri* will no longer be stocked.

#### Description of water body:

Name:	Castle Lake	Location:	T8N R8E S22
Water Code:	18-7390	County:	Meagher

#### Drainage where pond is located:

Castle Lake is located in the Castle Mountains in the headwaters Alabaugh Creek, which flows into the South Fork Musselshell River drainage. It is about 12 miles southeast of White Sulphur Springs, MT.

#### Species proposed for introduction and stocking history:

WCT are proposed for introduction into Castle Lake. Historically, several different species were stocked into Castle Lake. From 1934 to 1961, Arctic grayling *Thymallus arcticus*, undesignated cutthroat trout *Oncorhynchus clarki* sp., and rainbow trout *Oncorhynchus mykiss*, were all stocked at least once. From 1966 – 2001, YCT were usually air planted into Castle Lake on alternate years. Approximately 500 age-0 YCT were planted each stocking session.

#### Species of Special Concern in the drainage

There are none in local waters. Trout are likely not native to this part of the Musselshell drainage. Redbelly x finescale dace hybrids *Phoxinus sp* are located in some Musselshell tributaries and sauger *Sander canadense* and blue suckers *Cycleptus elongatus* are located over 100 miles downstream. Cutthroat of both subspecies have been stocked in several waters in the upper Musselshell and wild cutthroat are found in a few upper Musselshell streams.

#### RISKS:

#### Potential for impacts on genetic structure of existing fish populations:

None  Minor  Major

Pure WCT from the State of Montana Hatchery System will be used. It is unlikely, even during an exceptional precipitation event that WCT will emigrate from Castle Lake and establish in associated tributaries. Juvenile cutthroat trout would also not compete well with the abundant brook populations in downstream tributaries. WCT are likely not native to this

part of the Musselshell and it is unlikely WCT would have detrimental impacts on the genetics of the non-native cutthroat trout in the upper Musselshell.

**Impacts to any life stage of existing fish populations due to competition and/or predation?**

None  Minor  Major

No impacts to existing fish populations are expected, as stocking densities will remain similar to historic management.

**Impacts to other forms of aquatic life that may be caused by this introduction?**

None  Minor  Major

It is expected that the effects on the aquatic invertebrate community and other aquatic life in the lake from WCT will be similar to the effects from the previous plants of YCT trout.

**Potential for the proposed new species to reproduce in this location:**

None  Minor  Major

There are no inflowing or outflowing streams associated with Castle Lake that would provide adequate spawning habitat for WCT. In the past, it appears that YCT did not successfully spawn in Castle Lake.

**If necessary, would it be feasible to remove this species after it has been stocked?**

Cessation of stocking would reduce the population over a period of several years as stocked fish age and die-off or are harvested. It may be possible to chemically treat Castle Lake to remove introduced WCT, but this would likely be cost prohibitive.

**Would this introduction result in impacts that are individually limited, but cumulatively considerable? No.**

**Describe reasonable and prudent alternatives to this action, if any (including no action).**

- 1) **No Action:** YCT trout would continue to be stocked. However, the high costs associated with stocking this lake with its limited fishing pressure and access may preclude further stocking.
- 2) **Do not stock any fish:** Anglers would realize reduced opportunities and loss of a high quality mountain lake angling experience.
- 3) **Preferred alternative is to stock westslope cutthroat trout.** Establishment of a WCT fishery would allow continued opportunity to fish this mountain lake.

**Describe and evaluate mitigation, stipulations, or other control measures enforceable by the agency, if any.**

None are necessary beyond this EA.

**List any other agencies or individuals that may be affected by the proposed introduction:**

Lewis and Clark National Forest; Montana anglers

**List all agencies and individuals who have been notified of this proposed introduction:**

Lewis and Clark National Forest

Steve Leathe, Fisheries Manager, Montana Fish, Wildlife and Parks, Great Falls

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

EA prepared by: Anne Tews, Fisheries Biologist      Date: June 12, 2006

Comments will be accepted until: August 1, 2006

Comments should be sent to: Anne Tews

Montana Fish, Wildlife and Parks

P.O. Box 938

Lewistown, MT 59457

antews@mt.gov