Burns Paiute Tribe Fisheries Department

Evaluate The Life History Of Native Salmonids Within The Malheur Subbasin
Project # 199701900

Technical and/or scientific background

- Prior to 1990
- Malheur population, brink of extinction (Ratliff & Howell 1992, Buchanan et al. 1997).
  - Habitat degradation
  - Down stream losses
  - Exotic species
- June 1998 ESA listing of bull trout
- Introduction of brook trout *Salvalinus fontinalis* in the Upper Malheur River pose a serious threat (Ratliff and Howell, 1992; Leary, *et. al.,* 1991).

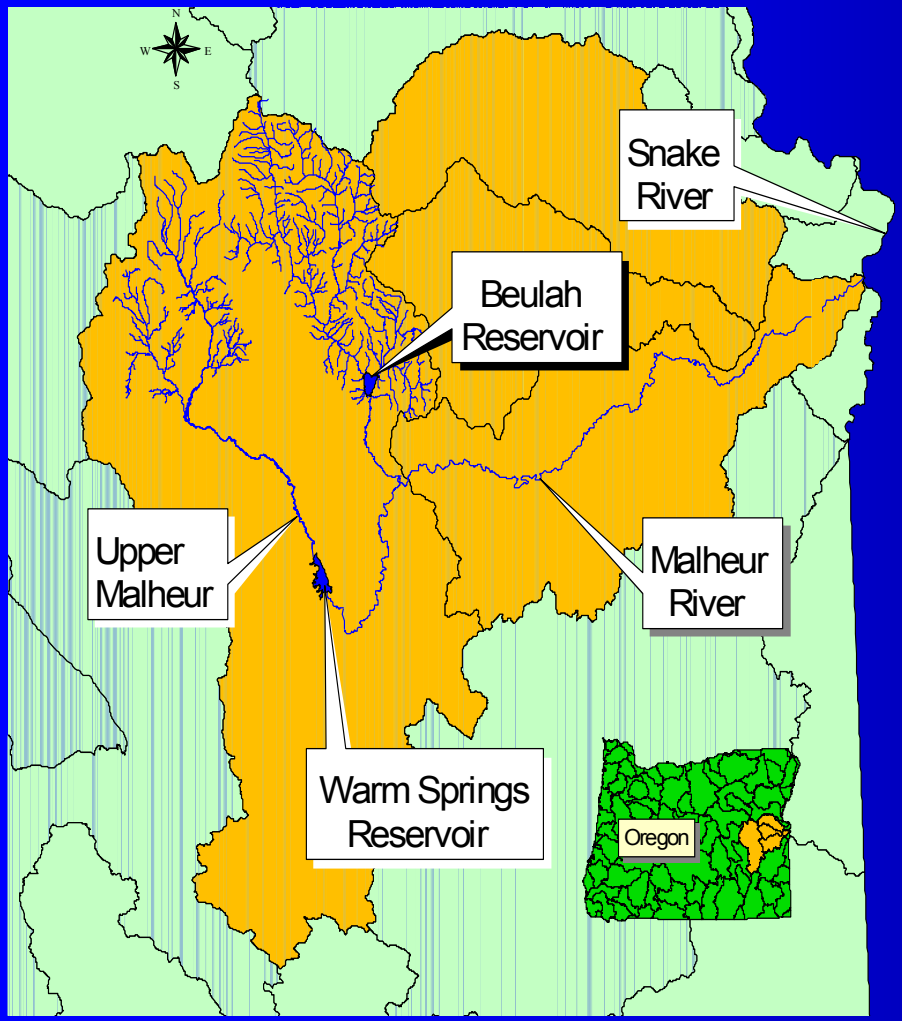
Technical and/or scientific background Cont.

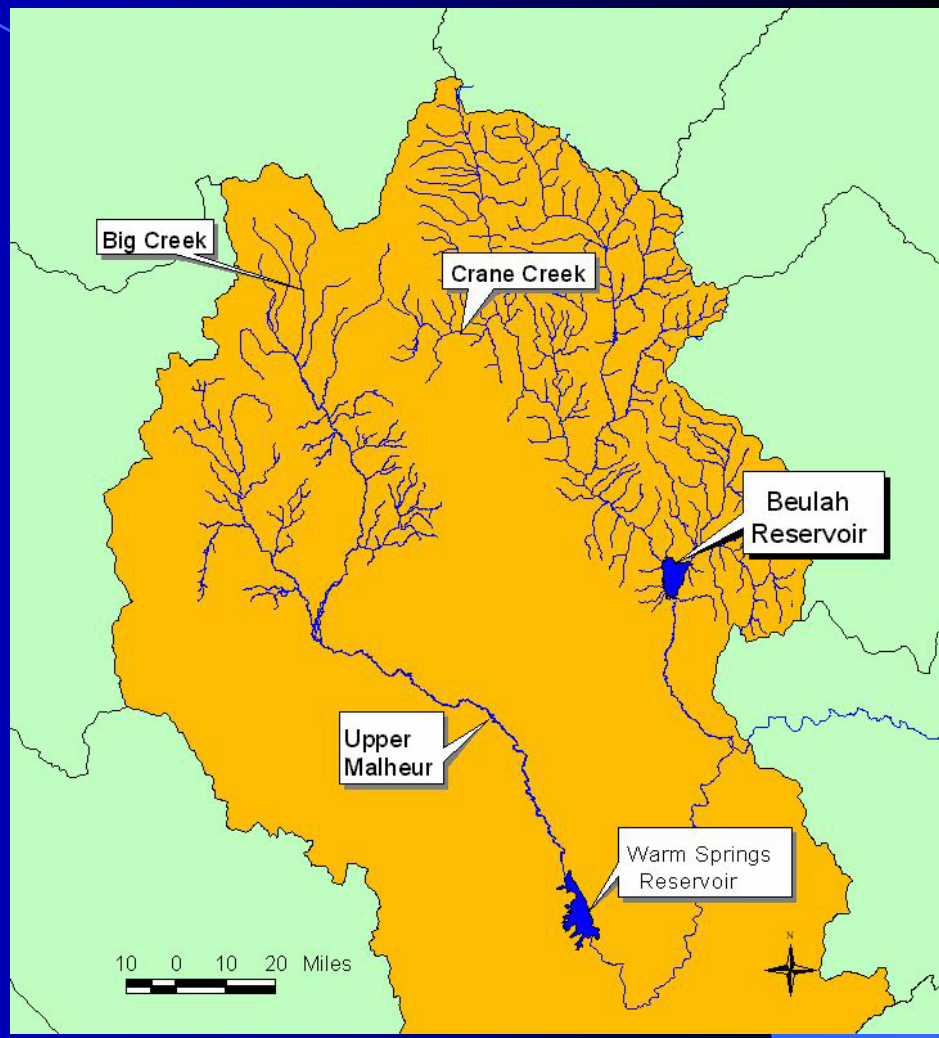
Brook Trout

Potential Hybrid

Technical and/or scientific background Cont.

- Geographical Area





Rationale and significance to Regional Programs

- Columbia River Basin Fish and Wildlife Program 1994.
- Malheur basins bull trout recovery workgroups action plan to initiate recovery.

Rationale and significance to Regional Programs

Malheur Subbasin limiting factors for fish.

- Dams;
- Irrigation projects;
- Livestock grazing and farming;
- Exotic species;
- Roads;
- Poisoning projects;
- Past harvest regulations and stocking of hatchery rainbow trout.
- Loss of beaver and beaver dam complexes;
- Extirpation of salmon has eliminated a critical food and nutrient source for native fish species in the Subbasin.

Rationale and significance to Regional Programs

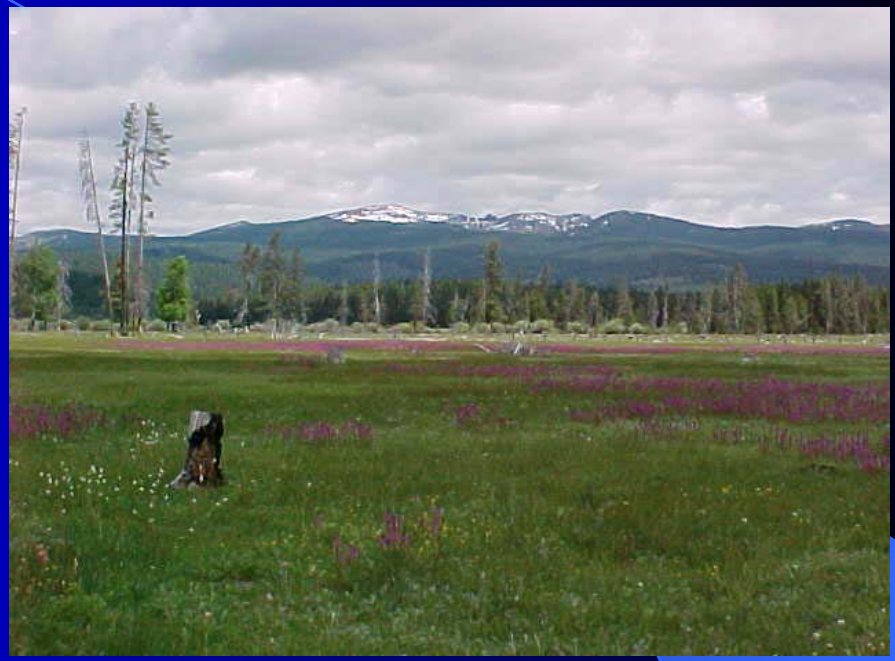
specific fish needs addressed within the sub-basin plan.

- Continued monitoring and investigations into the distribution and abundance of known populations;
- Establish minimum pools in irrigation dams;
- Protect current refugia for bull trout;
- Protect, restore, and enhance aquatic habitat;
- Improve water quality, with emphasis on reducing summer stream temperature;
- Protect and restore riparian zones;
- Educate anglers and the general public as to the importance of bull trout and the need to protect them.

Relationships to other projects

- The Burns Paiute Tribe Wildlife mitigation projects

Project # 200002700



Project # 200000900

- Current efforts by Cooperators:

USFS, ODFW, USGS, USBR, USFWS, BLM, OSU, and Private landowner projects

Project History

Results:

- Documented adult bull trout migratory patterns and seasonal use
- Identified critical habitat for adult bull trout
- Identification of refugia area with the use of FLIR data
- Changes in operation of Agency Valley Dam to favor bull trout
- Changes in state regulations concerning harvest in bull trout waters.
- Revised land use practices by federal agencies in bull trout waters.
- Redband genetics analysis.
- The project has aided in filling in critical data gaps identified by Federal and State agencies (Stream surveys, Fish Surveys, Ect.)

Proposal objectives, tasks and methods

Goal:

- The goal of this project is to gain an understanding of the life history and genetic composition of the native salmonids within the Malheur River Subbasin

Proposal objectives, tasks and methods

Project Objectives

1) Document the complete migratory patterns of bull trout.
2) Continue monitoring population trends (index) and age class structure.
3) Monitor water quality.
4) Determine the timing of bull trout spawning and critical locations.
5) Determine the pre-migration use by bull trout in Beulah and Warm Springs Reservoir and the entrainment over the dam.
6) Evaluate habitat profiles of critical bull trout spawning and rearing tributaries.
7) Continue quantifying genetic population structures.
8) Determine cool micro-refugia
9) Progress Reports.

Proposal objectives, tasks and methods

- Work will be completed with the cooperation of federal, state, and private agencies.

- This project will use various methods to achieve the project objectives, including:

Proposal objectives, tasks and methods

Use of PIT tags and micro-radio transmitters to track fish movement,

Proposal objectives, tasks and methods

The installation of screw and or weir traps,

Proposal objectives, tasks and methods

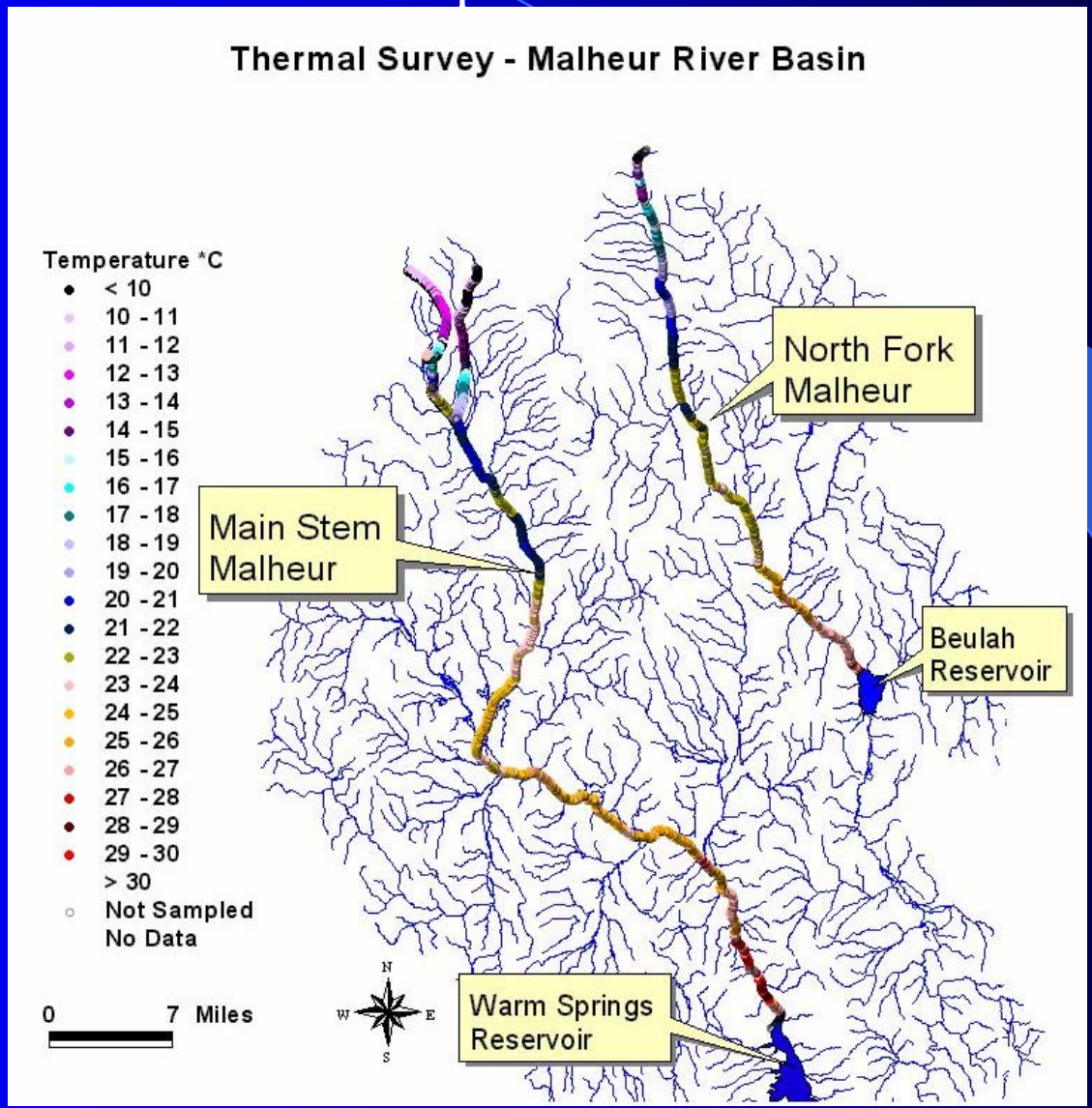
Fish capture and tagging in Beulah and Warm springs Reservoirs,

Proposal objectives, tasks and methods

Annual spawning surveys (redd counts),

Proposal objectives, tasks and methods

The compilation and evaluation of new and existing water temperature data.



Proposal objectives, tasks and methods

Analysis of genetic population structure in salmonid populations within the Malheur basin.

- Bull trout