

IDAHO

High Mountain Lake Stocking



The Development and Current Practices of Idaho's High Mountain Lake Stocking Program



Topics

- Brief timeline on when fish stocking began in Idaho.
- Goals of Fish Management for the Mountain Lake Stocking Program in Upper Salmon River Drainage.
- How fish management determines the number of fish to stock in each lake.
- Different techniques the department has used to stock high mountain lakes over the years.
- The current techniques and status of the program.



Photo by: Neill McGrath

Development of High Mountain Lake Fish Stocking in Idaho - Timeline



Courtesy of Kate Bethke

- **1920 - Fish and Game and the Forest Service began hauling trout in ten gallon milk cans (one pound of one inch trout) on pack mules into the back country lakes in Sawtooth Mountains.**
- **1938 -The first recorded experiments on aerial drops and fish survival with a open cockpit Eagle rock biplane by Lionel Dean of Twin Falls, Idaho**
- **1941 – First aerial stocking in the Sawtooth Mountains.**
- **1949- First organized high mountain lake stocking program.**



- **1958 - First use of helicopters for stocking.**
- **1964 - Wilderness Act changed stocking practices.**

- 1976 - Memorandum of understanding between IDFG & USFS & USFW.

- 1987- to Present - IDFG continues to stock high mountain lakes throughout Idaho on an annual rotating schedule.



Courtesy of Kate Bethke

Fish Stocked in Upper Salmon River Drainage

- **Cutthroat trout**
- **Rainbow trout**
- **Grayling**
- **Bull Trout**
- **Kamloops**
- **Brook Trout**



High Mountain Lake Management Plan for Region 7

Goals:

Maintain a viable and diverse mountain lake fishery in the Salmon Region.

Assess the status of all fish and amphibian populations by surveying all stocked and unstocked mountain lakes within the Salmon Region. Surveys will document fish and amphibian populations, determine spawning potential of inlets and outlets, and record parameters of angler/camper use.



- Regional Fishery Staff backpacks and day hikes to survey lakes.

- They document fish presence and species by visual encounter and by angling.

- The information collected from these surveys is stored in a regional geodatabase.

- The geodatabase is used to provide mountain lake information for the angling public, regional planning, and government agencies



High Mountain Lake Stocking

- The Salmon region has approximately a thousand mountain lakes in the region. Sawtooth Fish Hatchery stocks two hundred fifty lakes.
- Lakes get stocked on a three year rotation.
- GPS coordinates are used to navigate to lakes.



Who Plays a Role in Decision Making

- **Primary authority for managing mountain lakes belongs to the Fish Managers in each Region. They determine which lakes get stocked with what species, as well as how often to stock a lake.**



Strategy of Stocking Densities



- **Determined by the mass of zooplankton per sampled area.**
- **The number of fish to plant is based on 200 fry/acre, zooplankton population (ZPR).**

For example:

150-300 fingerling/acre when $ZPR > 0.60$

75-150 fingerling/acre when $ZPR = 0.25$ to 0.60

Techniques



Courtesy of Stacy Gebhards

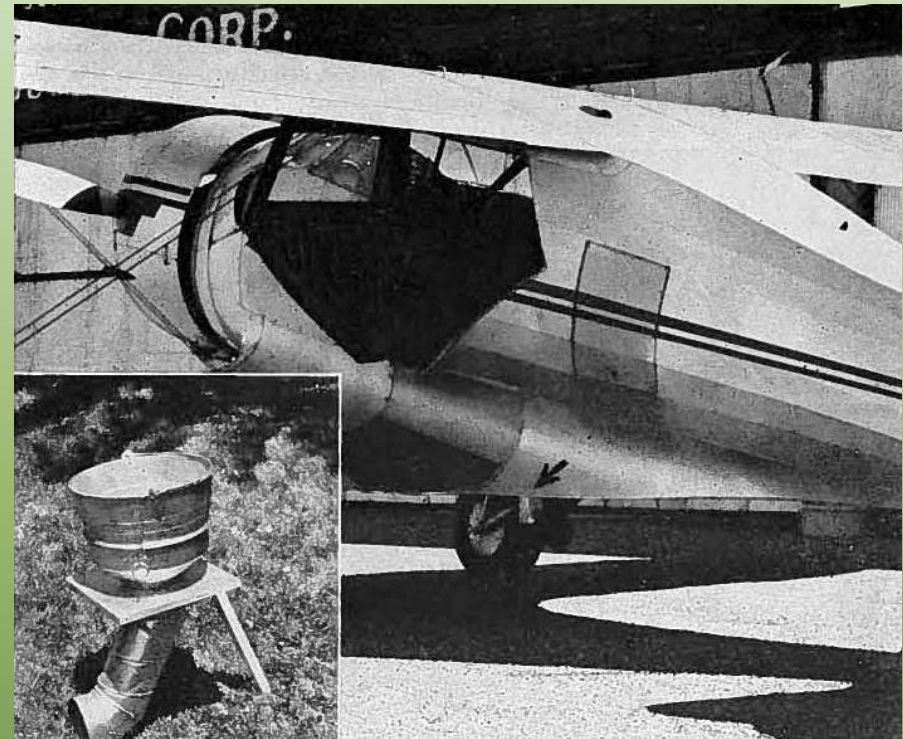
We are currently using oxygen filled disposable plastic milk-bags for transport of fingerlings to the lakes.

- The milk can method of transportation was replaced with canvas bags to carry the fry to the lakes.



Means of Stocking

Earliest efforts used milk cans packed on mules.



Other techniques ranged from backpacking to and horseback riding...

....to motorcycles, fixed-wing and helicopter.



More recently, everything from jet boats to cars have been used to transport fry to the trail head.

Preparing Fry for Transport



Weighing out grams of fish per bag.



To meet fish numbers per lake as determined by fishery management.



Bags are loaded to meet the plane for transport.

Fixed Wing Method



185 Cessna single engine aircraft

The fixed wing method uses a four seated plane with one seat removed to accommodate hopper which fry are released from .





The fish are placed in the hopper which is a metal canister with a plunger in the center.

When the pilot says pull, the plunger is lifted and fish are released through a chute attached to the bottom of the hopper, which is on the under side of the plane.



Using GPS coordinates, fish and game personnel assist the pilot in navigating to the lakes that are being stocked . To increase survival of fingerlings, the plane has to fly very close to the surface of the lake. When the plunger is pulled, the plane pulls up sharply forcing fish out the chute.



2009 Overhead



No tell'um Lake

- Eggs were purchased from Westslope Trout Company.
- Seventy two lakes were stocked in upper Salmon River (Region 7) and fifteen in upper Wood river Valley (Region 4).
- Five flights to complete rotation B and one flight in Region 4 approximately \$50 per lake.
- Total of 39,250 fry were stocked in 2009.

Video Clip of High Mountain Lake Stocking in The White Clouds Mountain.



Video Provided By: Steve Kammeyer

Acknowledgments



Pilot

Mike Doris



Acknowledgements

- **Jerry Mallet**
- **Kate Bethke**
- **Mick Hoover**
- **Bob Esselman**
- **Steve Kammeyer**
- **Sharon Clark**
- **Brent Snider**
- **Neill McGrath**
- **Stacy Gebhards**
- **Sylvia Hamilton**
- **Mel Hughes**
- **Bill Doris**
- **Tom Curet**



THE END

