

# Lake Roosevelt Volunteer Net Pens

## Lake Roosevelt Rainbow Trout Net Pens

Annual Report  
2002 - 2003



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**Lake Roosevelt Volunteer Net Pens  
(LRDA)**

**Annual Report  
October 1, 2002- September 30, 2003  
FY03**

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**Project # 1995-009-00**

## **Acknowledgements**

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## **Project #199500900**

### **Introduction and History Leading to Origin of the Net Pen Project**

The completion of Grand Coulee Dam for power production, flood control, and irrigation resulted in the creation of a blocked area above the dam and in the loss of anadromous fish. Because of lake level fluctuations required to meet the demands for water release or storage, native or indigenous fish were often threatened.

For many years very little effort was given to stocking the waters above the dam. However, studies by fish biologists showed that there was a good food base capable of supporting rainbow and kokanee (Gangmark and Fulton 1949, Jagielo 1984, Scholz et al 1986, Peone et al 1990). Further studies indicated that artificial production might be a way of restoring or enhancing the fishery.

In the 1980's volunteers experimented with net pens. The method involved putting fingerlings in net pens in the fall and rearing them into early summer before release. The result was an excellent harvest of healthy fish. The use of net pens to hold the fingerlings for approximately nine months appears to reduce predation and the possibility of entrainment during draw down and to relieve the hatcheries to open up available raceways for future production.

The volunteer net pen program grew for a few years but raising funds to maintain the pens and purchase food became more and more difficult. In 1995 the volunteer net pen project (LRDA) was awarded a grant through the Northwest Power Planning Council's artificial production provisions.

## **Method of Operation:**

### A Multi-Agency Partnership

The net pen program is a partner in the artificial production program for Lake Roosevelt. Our primary goal is to rear and release 500,000 rainbow trout annually. Our direct partners are the Spokane Tribal Hatchery and the Sherman Creek Hatchery. The rainbow trout for the most part come to our pens from these two facilities. The performance of and evaluation of hatchery and net pen reared fish released into the project area are conducted by the Lake Roosevelt Fisheries Evaluation Program.

### Seasonal Order of Events

The volunteer net pens operate in an annual series of events in cooperation with other agencies. Events are pretty well outlined in content found under objectives and tasks. The method includes transfer of fish from the hatcheries to the pens which takes 6 to 9 weeks to complete. Secondly, fish are fed, weighed, and monitored while in pens for approximately nine months. Next follows the release of fish into the lake in mid-June. July and August are spent washing all nets, repairing docks, pens, and cables in preparation for restocking in mid-September.

### Seasonal Constraints and Conditions Which Affect Project

Unlike rearing fish in a controlled atmosphere such as a hatchery, doing so in a ninety-four mile stretch of riverine type of lake is somewhat unpredictable and challenging. Along with wind, ice, and other abiotic conditions, the draw down and dewatering of boat ramps make accessibility sometimes difficult. The severity of the draw down is hard to predict, but sometimes causes damage to docks and pens.

## Location and Number of Pens in Project

Rainbow Trout net pens are located at seven sites on the lake. There are 37 rainbow net pens. Six of these are located at the boat launch at Kettle Falls. Through a cooperative agreement Mitch Combs manages these pens. In return we manage eight kokanee pens down river. Other sites are Hall Creek near Inchelium, 4 pens; Hunters at the National Park Service Campground, 4 pens; Two Rivers Marina, 5 pens; Friday Bay at Seven Bays, 12 pens (4 kokanee, 8 rainbow); Lincoln, 10 pens (4 kokanee, 6 rainbow); Keller Marina, 4 pens.

## **2003 Volunteer Net Pen Objective/Task Accomplishments**

Objective I. Coordinate volunteer net pen work force.

Task 1.1 Hold quarterly meetings with LRDA Board; register and keep roster of volunteer hours.

Status: Completed

Task 1.2 Coordinate work projects at seven sites.

Status: Completed day planner of activities and participants. Records also kept for WSDFW volunteer services for payment of L & I costs.

Task 1.3 Coordinate feed schedules and volunteer hours

Status: Completed

Objective II. Complete the process of fish transfer, rearing and release.

Task 2.1 Arrange for delivery, distribution, and storage of fish food.

Status: Fish food was delivered to Seven Bays site twice—12 ton in October and 12 ton in January. Another 8 ton were transferred from Kettle Falls to Seven Bays between previously listed deliveries. Fish food was distributed from Seven Bays storage to each site on the river.

Task 2.2 Coordinate transfer of fish from hatchery to net pen sites.

Status: The process of transfer of rainbow from Spokane Tribal Hatchery and Sherman Creek Hatchery began in mid-September and was completed in mid-November.

Task 2.3 Record fish growth and report release data to proper associated.

Status: Reports to WSDRWL and the Coordination Team are supplied in fall meetings and in the annual report to BPA. (Table at end of Objectives/Tasks)

Objective III. Operate and maintain the program as a consistent ongoing project.

Task 3.1 Secure special use permits issued by the National Park Service.

Status: Updated and on file.

Task 3.2 Maintain and/or replace net pen frames

Status: Repaired 4 frames at Keller and 4 at Seven Bays; all other frames were rebanded.

Task 3.3 Repair or replace cables, anchors, floatation and winch apparatus.

Status: One new anchow added at Seven Bays, Lincoln and Hunters

Task 3.4 Clean, repair, or replace automatic feeders.

Status: Maintenance was completed on 37 automatic feeders. They were brought to the shop, vacuumed, tested, and stored until fall.

Task 3.5 Wash and repair top and bottom nets

Status: 45 top and bottom nets were washed, mended, rolled up, and stored. The process took 5-6 weeks.

Objective IV. Coordinate with local partners, hatchery managers, and others to implement programmatic reviews of Lake Roosevelt fishery.

Task 4.1 Participate in monthly review of programs hosted by the Lake Roosevelt Monitors

Status: Participation based on agenda items.

Task 4.2 Participation in planning fish transfer dates and sites during Quarterly Hatchery Coordination Team meetings.

Status: Completed.

Task 4.3 Provide report on fish rearing and release data including dates of release and fish sizes relative to each site.

Status: completed data distributed to partners involved in local sub-basin.

## **Conclusions**

The volunteer net pen project is one part of a cooperative effort to improve or substitute for the loss of a sustainable resident fishery. Information gained from creel surveys and data from the annual derby indicate angler success and a resulting satisfaction with the fishery in general. Although severe draw down occur periodically recuding carry over fish, the annual releases reach 13 to 15 inch size by mid-November with an average weight of a pound and a half. These fish carried over into the next summer would weigh between 2.5 and 3.5 pounds.

A great deal of effort is provided by volunteers. Most are retired and live near the net pen sites. Their interest is genuine and they are very dependable. Their participation in the project is certainly valued and appreciated.

Key to information on chart [following page]:

STH: Spokane Tribal Hatchery  
SCH: Sherman Creek Hatchery  
ColH: Colville Hatchery (WDFish)  
ID Code (Spc:Stk:BY:BO)  
RB:Spok:01:H

Transfer	Hatchery to Site	Species	Size	Total Wt.	#Fish	Release	Size	Total Wt.	#Released
9/24/02	STH > 2 Rivers	Rbt	20/lb	796	15,920	6/4/03	5.4	2,927	15,808
9/24/02	STH > 2 Rivers	Rbt	20/lb	790	15,800	6/4/03	4.2	3,754	15,767
9/24/02	STH > 2 Rivers	Rbt	20/lb	795	15,900	6/4/03	3.7	4,288	15,780
9/24/02	STH > 2 Rivers	Rbt	20/lb	798	15,960	6/4/03	4.9	3,225	15,803
9/24/02	STH > 2 Rivers	Rbt	20/lb	796	15,920	6/4/03	5	3,152	15,762
				3975	79,500			17,346	78,920
10/1/02	STH>7 Bays	Triploid	18/lb	880	15,840	5/28/03	4.1	3,811	15,627
10/1/02	STH>7 Bays	Triploid	18/lb	884	15,912	5/28/03	3.6	4,383	15,782
10/2/02	STH>7 Bays	Rbt	18/lb	840	15,120	5/28/03	5	2,996	14,980
10/2/02	STH>7 Bays	Rbt	18/lb	855	15,390	5/28/03	6.6	2,304	15,208
10/3/02	STH>7 Bays	Rbt	18/lb	860	15,480	5/28/03	5.3	2,870	15,212
10/3/02	STH>7 Bays	Rbt	18/lb	866	15,588	5/28/03	5.4	2,385	15,328
10/1/02	SCH>7 Bays	Rbt	14.8	1060	15,688	5/28/03	4.5	3,426	15,418
10/2/02	SCH>7 Bays	Rbt	14.8	1030	15,244	5/28/03	4.7	3,229	15,018
10/2/02	SCH>7 Bays	Rbt	14.8	985	14,578	5/28/03	3.8	3,775	14,347
10/2/02	SCH>7 Bays	Rbt	14.8	1005	14,874	5/28/03	3.3	4,444	14,668
10/2/02	SCH>7 Bays	Rbt	14.8	990	14,652	5/28/03	3.8	3,812	14,488
				10255	168,366			37,435	166,076
10/7/02	SCH>Hall Creek	Rbt	14.8	1035	15,318	6/8/03	3.9	3,825	15,188
10/7/02	SCH>Hall Creek	Rbt	15.1	1035	15,629	6/8/03	4.3	3,614	15,472
10/7/02	SCH>Hall Creek	Rbt	15.1	1045	15,880	6/8/03	5.7	2,738	15,689
10/7/02	SCH>Hall Creek	Rbt	15.1	1000	15,100	6/8/03	3.8	3,941	14,894
				4115	61,927			14,118	61,243
10/9/02	SCH>Hunters	Rbt	15.1	1000	15,100	6/3/03	5.4	2,757	14,891
10/9/02	SCH>Hunters	Rbt	15.1	1005	15,176	6/3/03	6	2,734	16,404
10/9/02	SCH>Hunters	Rbt	15.1	1100	16,610	6/3/03	5.5	2,711	14,912
10/9/02	SCH>Hunters	Rbt	15.1	1215	15,552	6/3/03	4.8	3,191	15,318
				4320	62,438			11,393	61,525
10/15/02	STH>KetFalls	Triploid	16	990	15,840	6/25/03	8.8	1,774	15,612
10/15/02	STH>KetFalls	Triploid	16	975	15,600	6/25/03	4.3	3,566	15,379
10/15/02	SCH>KetFalls	Rbt	12.8	1170	14,976	6/25/03	6	2,128	12,766
10/15/02	SCH>KetFalls	Rbt	12.8	1170	14,976	6/25/03	5.8	1,155	6,700
10/15/02	SCH>KetFalls	Rbt	12.8	1170	14,976	6/25/03	6.4	2,295	14,689
10/15/02	SCH>KetFalls	Rbt	12.8	1170	14,976	6/25/03	6.2	2,223	13,782
				6645	91,344			13,141	78,928
10/18/02	STH>KellerFerry	Rbt	15	1050	15,750	4/23/03	6.4	2,412	15,443
10/18/02	STH>KellerFerry	Rbt	15	1025	15,375	4/16/03	6.4	859	5,500
10/18/02	STH>KellerFerry	Triploid	14	1075	15,050	4/23/03	4.6	3,184	14,648
10/18/02	STH>KellerFerry	Triploid	14	1085	15,190	4/23/03	4.6	3,220	14,812
				4235	61,365			9,675	50,403
10/23/02	STH>Lincoln	Rbt	12	840	10,080	5/27/03	3.3	3,018	9,960
10/23/02	STH>Lincoln	Rbt	12	886	10,632	5/27/03	3.8	2,763	10,503
10/24/02	STH>Lincoln	Rbt	12	850	10,200	5/27/03	3.4	2,950	10,033
10/24/02	STH>Lincoln	Rbt	12	840	10,080	5/27/03	3.1	3,210	9,954
10/30/02	STH>Lincoln	Rbt	12	850	10,200	5/27/03	4	2,510	10,041
10/30/02	Pen #6	Rbt	12	490	5,880	5/27/03	5.2	2,425	12,612
10/30/02	Pen #6	Rbt	12.8	540	6,912	5/27/03	5.2		
				5296	63,984			16,876	63,103
xxx	Col H>Kettle					8/18/03	1.9	3,285	6,373
								123,269	567,080

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