

John Day River Subbasin Fish Habitat Enhancement Project

**Annual Report
2001**



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John Day River Subbasin Fish Habitat Enhancement Project

2001 ANNUAL REPORT

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Mr. John Baugher, C.O.T.R.

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ABSTRACT

Work undertaken in 2001 included: 1) 3335 structure posts were pounded on six new projects thereby protecting 10 miles of stream 2) Completion of 1000 ft. of barbed wire fence and one watergap on the Middle Fork of the John Day River/ Forrest property. 3) Fence removal of 5010 ft. of barbed wire fence on the Meredith project. 4) Maintenance of all active project fences (66 miles), watergaps (76), spring developments (32) and plantings were checked and repairs performed. 5) Since the initiation of the Fish Habitat Project in 1984 we have 63.74 miles of stream protected using 106.78 miles of fence. With the addition of the Restoration and Enhancement Projects we have 180.64 miles of fence protecting 120.6 miles of stream.

INTRODUCTION

Background:

This project was initiated on July 1, 1984, under the Bonneville Power Administration (BPA) contract number DE A179-84 BP17460 and allows for initial landowner contacts, agreement development, project design, budgeting, and implementation for anadromous fish habitat improvement on privately owned lands within the John Day Basin. . The primary goal of "*The John Day Basin Fish Habitat Enhancement Project*" is to access, create, improve, protect, and restore riparian and instream habitat for anadromous salmonids, thereby maximizing opportunities for natural fish production within the basin. This project provided for implementation of Program Measure 703 (C)(1), Action Item 4.2 of the Northwest Power Planning Council's Columbia River Basin Fish and Wildlife Program (NPPC, 1987), and continues to be implemented as offsite mitigation for mainstem fishery losses caused by the Columbia River hydro-electric system.

The purpose of the John Day Fish Habitat Enhancement Program is to enhance production of indigenous wild stocks of spring Chinook and summer steelhead within the sub basin through habitat protection, enhancement and fish passage improvement. The John Day River system supports the largest remaining wild runs of spring Chinook salmon and summer steelhead in Northeast Oregon.

DESCRIPTION OF PROJECT AREA

The John Day River drains 8,010 square miles of land in east central Oregon and is the third largest drainage in the state (Figure 3). The sub basin includes a major part of Gilliam, Grant, and Wheeler counties and portions of Crook, Harney, Jefferson, Morrow, Sherman, Umatilla, Union, and Wasco counties.

The mainstem John Day River flows 284 miles from its source in the Strawberry Mountains to its confluence with the Columbia River one mile upstream of the John Day Dam. The largest tributary, the North Fork, enters the mainstem of the John Day River at Kimberly (RM 184) and extends 112 miles to its headwaters in the Elkhorn Mountains near the town of Granite. The Middle Fork of the John Day River originates just south of the headwaters of the North Fork and flows roughly parallel to it for 75 miles until they merge at RM 31 of the North Fork. The South Fork of the John Day River originates from Cougar Mountain Southwest of the town of Burns and drains the South side of Aldrich Mountain. Then it flows into the mainstem of the John Day River near the town of Dayville at RM 212.

The Bonneville Power Administration under contract number DEA 179-84 BP17460 provides funding for this endeavor. This funding is for private land leasing, stream habitat inventory, planning and design work, contract development, budgeting, fish passage improvement, fence construction, instream habitat placement, vegetation enhancement, construction review and maintenance. These activities are for anadromous fish habitat improvement on private lands within the John Day Basin. This program is coordinated with other fish habitat improvement programs on BLM and Forest Service and Tribal lands within the basin, and for these restoration activities, to be successful, they must be coordinated across many jurisdictional and ownership boundaries Section 7, Action Item 7.6C of the Northwest Power Planning Council's Columbia River Basin Fish and Wildlife Program (NPPC, 1994).

TABLE 1. New project implementation completed in 2001.							
Stream Landowner	John Day River/John Forrest	Little Beech and Beech Cr./Meredith	Granite Cr./Walton	Poison Cr./St. Clair	Middle Fork John Day River/John Forrest	Beech Cr./Patterson	Totals
Hours Worked	150	420	200	60	350	50	1230
Stream Length Protected	2.0 Miles	3.1 Miles	0.75 Miles	0.33 Miles	3.3 Miles	0.5 Miles	9.98 Miles Protected
Fence constructed by ODFW					1000ft.		1000 Ft.
Fence removal		5010 ft.					5010 Ft.
Structure Posts Pounded	600	1200	185	50	1200	100	3335
Planting		1.8 miles Seeding 7-way mix					1.8 Miles Seeded
Cost for Labor/Materials	\$4,602	\$20,582	\$3,184	\$929	\$9,778	\$1,054	\$40,129

Specific areas that were added to the project during FY 2001 were:

- The pounding of structure posts (1200) on the Beech/Little Beech Creek /Meredith project was completed by project personnel; fence to be constructed in 2002 by contractor.
- Structure posts (185) were driven on the Walton/Granite Creek-Middle Fork John Day River project; fence contract was awarded by ODOT to private contractor.
- Time was spent pounding structure posts (50) on Poison Creek/St. Clair property.
- Structure posts (approximately 1200) were pounded on the Middle Fork of the John Day River/Forrest property, construction of the fence contract written by CTWS.

- Structure posts (100) were also set on the Beech Creek/Patterson property a 10-year Restoration and Enhancement project.
- The Technician and Seasonal Technician pounded 600 structure posts on the John Day River/Forrest property for approximately 5.5 miles of fence. ODFW project personnel constructed approximately 1000 feet of barbwire fence and one watergap. CTWS personnel wrote the construction contract for the remaining 5.5 miles of fence to be built on the Mainstem John Day River/Forrest property.
- The Indian Cr./Olson property was staked in 2001 and will be constructed in 2002.
- Staking of the Grub Cr./McDaniel property was completed.

The pounding of structure posts by project personnel was to keep the cost of the fence/mile down in order to complete more projects.

METHODS AND MATERIALS

The overall project goal is to rehabilitate and improve anadromous fish spawning and rearing habitat thereby contributing to the Northwest Power Planning Council's interim goal of doubling anadromous fish runs in the Columbia River Basin. The quality and quantity of instream and riparian cover is severely reduced in many John Day basin streams. This condition will be directly improved utilizing three complementary approaches: 1) fencing riparian areas, 2) constructing instream structures, and 3) planting streamside vegetation. These methods have proven effective in restoring stream habitat condition when properly applied.

Streams requiring rehabilitation in the John Day basin were first prioritized in 1983, again in 1987 by ODFW biologists in cooperation with the United States Forest Service (USFS), the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the Grant County Soil and Water Conservation District (GSWCD). Problem identification was based on previous habitat evaluations in the basin and field biologist's knowledge of present conditions and problems. Streams were prioritized based on 1) severity of habitat degradation, 2) location within the basin, 3) fish species present, 4) landowner acceptance and cooperation, 5) ongoing habitat improvement projects in the area, 6) anticipated fish benefits, and 7) logistical constraints.

In 1996 a modification of program direction was decided upon. More emphasis will be placed on encouraging landowners to build and maintain their own riparian fences, through the ten-year Restoration and Enhancement program. Providing fence materials and assisting with fence layout, along with help in initial construction and giving of technical advice will accomplish this. Project personnel will continue to lease and build fences on high priority streams if landowners will not build them. Personnel will also continue to maintain project fences under previous leases.

Beginning in 1993 the ODFW Fish Habitat Enhancement Program was broken down into four main activities:

- 1. IMPLEMENTATION - Prework**
- 2. IMPLEMENTATION - Onsite**
- 3. OPERATIONS and MAINTENANCE**
- 4. MONITORING and EVALUATION**

IMPLEMENTATION - Prework:

This is one of the most time-consuming and important phases of the program, in which landowner relations and goals of the project are established, and work activities scheduled. Prior to project construction the following activities are conducted:

Project Planning

Project planning includes design, layout and mapping of all work to be done onsite, landowner coordination, development of contracts and contract specifications, and obtaining necessary work permits.

Project Preparation

Prior to signing leases or construction contracts, all lease boundaries and work sites must be identified, staked, and agreed upon by the landowner and/or contractor. Work sites may include easements or right-of-ways, fences, livestock watering gaps, instream structures, offsite water developments, planting, and miscellaneous lease or construction related areas.

Riparian Lease Development and Procurement

Riparian lease development and procurement includes meeting with landowners and/or their legal representatives specifically for the purpose of developing an acceptable lease or cooperative agreement text. Lease documents must be signed, notarized, and filed in the county courthouse.

Field Inventories

These may include prework stream surveys, and photographic documentation to provide baseline information on habitat condition and potential for improvement prior to any onsite implementation.

IMPLEMENTATION - Onsite:

Onsite implementation activities are the primary responsibility of ODFW personnel with technical oversight being provided by the Grant County Soil and Water Conservation District. The actual on-the-ground work phase of the program may include any or all of the following:

Instream Work

During late summer and early fall (instream work window) when stream flows are lowest, instream structures may be installed in streams at locations pre-selected by fishery biologists and/or hydrologists. Instream structures will be installed to specifically address the factors limiting fish production in each stream reach. Structures of various types may be used to provide optimum pool/riffle ratios, raise stream water tables, collect spawning gravels, and increase the amount of large woody debris, thereby increasing quantity and quality of spawning and rearing habitats. Hard rock structures may be necessary under some circumstances, but bioengineered or other "soft" structures will be the primary methods used to stabilize stream banks. Boulders may be used to create small rearing pools and hiding cover, and may be used as anchor points for cabling large woody debris.

In some cases, such as in artificially channelized reaches, more intensive work may be needed to restore a channel back to functioning at its full potential. Work in these reaches will be conducted based on Rosgen (1996) natural channel design to restore streams back into their natural dimension, pattern and profile.

Planting

During the early spring, shrub and/or tree species may be planted at pre-selected locations along streams within project areas. Since high summer water temperatures are a major limiting factor, plantings will be made to provide stream shade, thereby reducing summer water temperatures and increasing salmonid utilization of streams. The maximum shade attainable for most streams in project areas is estimated at about 80 percent.

Plantings may also be done in areas of poor bank stability as a preferred alternative to the more costly rock structures. Plantings will be done only after riparian fences have been installed to ensure their protection. During the fall, areas disturbed during implementation activities will be seeded to stabilize soils and discourage weed growth.

Fencing

Degradation of streamside vegetation by domestic livestock has been a major problem within project areas. To provide protection from livestock, and thereby promote rapid recovery of existing and planted vegetation, fences will be constructed along riparian zones within project areas. When negotiating fence locations with landowners, preference will be given to projects where fences are located well outside the normal flood-prone area.

Offsite Water Developments

In an attempt to reduce the number of water gaps in riparian fences (thereby reducing fence construction and maintenance costs), and to encourage livestock utilization of vegetation away from riparian areas, offsite water sources will be developed.

Miscellaneous Implementation Activities

Cooperator signboards denoting riparian enhancement projects as cooperative efforts between BPA, ODFW and private landowners will be installed at high visibility sites along completed riparian enhancement project areas.

OPERATIONS AND MAINTENANCE:

Operations and maintenance activities will begin the year following implementation and include:

Landowner Coordination

Ongoing coordination and cooperation between landowners and ODFW is a vital element to ensure long-term project success after the initial implementation is completed.

Fence Maintenance

Biannual inspections of all project areas will be made. Following these inspections all fence maintenance will be done. Stream cross fences and/or water gap cross fences may be installed or removed during these inspections, or at any time during the year to meet landowner needs and to ensure maximum recovery within the projects.

Instream Maintenance

Annual inspections of all instream structures will be done, usually in combination with fence maintenance inspections. Instream structures are generally expected to provide long lasting benefits with low maintenance. Instream structure maintenance will be done on a case-by-case basis, depending on impact of the structure failure on riparian recovery, streambank stability and/or landowner needs.

Revegetation

Replanting and/or seeding of project areas may be necessary to produce adequate stream shading, bank stability, or cover within the 15-year lease period. Events such as severe flooding and bank erosion, or when recovery is unacceptably slow due to lack of parent stock may result in a decision to replant an area.

Miscellaneous Operations & Maintenance Activities

These activities include vehicle, ATV, and equipment maintenance and repair. Plus, installing or replacing project signs, and efforts to control wildlife damage.

MONITORING AND EVALUATION:

Whenever possible, some level of monitoring will be established prior to project implementation, and will continue beyond the term of the lease agreement if the landowner is willing. Individual projects will be monitored using one or more of the following methods:

Photopoint Establishment

Photopoint establishment will include locating and placing permanent markers at sites from which photographs can be taken at regular intervals. These photographs are a primary and inexpensive means of documenting physical and biological changes along streams. Also associated with photopoint establishment is development of a photopoint notebook for each project area. These notebooks contain maps of all photopoint locations, instructions on taking the photographs, and labeled slides and prints.

Photopoint Picture Taking

Standardized pictures will be taken from pre-selected photopoints prior to implementation on any project area and then for the next two years immediately following completion of a project. Once these initial photos are obtained the frequency of photopoint picture taking may diminish to once every two to three years.

Habitat Monitoring Transect Establishment

Within selected project areas permanent habitat monitoring transects will be established. Specific measurements will then be taken along each transect to record channel morphology, and vegetative characteristics. These measurements will be repeated at regular intervals and compared with original measurements as a means of quantitatively measuring environmental changes through time.

Habitat Monitoring Transect Data

Immediately after establishing habitat monitoring transects, baseline data will be collected. Data collection will be done on the first year following completion of implementation activities and thereafter at approximately 3 to 5 year intervals.

Thermograph Data Collection and Summarization

Thermographs will be installed at various locations throughout the project area. Thermograph data will be recorded, collected, summarized, and graphed on a regular basis. The purpose of this type of monitoring is to detect changes in stream water temperatures that may occur over the years within fenced-off, recovering riparian areas.

Miscellaneous Monitoring and Evaluation

Miscellaneous monitoring and evaluation activities may include Chinook salmon and steelhead redds counts, juvenile fish population surveys, streambank stability surveys, and evaluating riparian vegetative recovery and/or planting success. See Appendix 1 (Table 2 & 4 and Figure 1 & 2).

RESULTS AND DISCUSSIONS: FIELD ACTIVITIES

All implementation activities were accomplished in two phases: Prework and Onsite Implementation.

Implementation – Prework:

Project Planning

Design and Layout

Designs for the fencing project on the Walton Ranch were made. This is a co-operative agreement between ODFW, and Oregon Department of Transportation, for mitigation dealing with the bridge reconstruction on

Hwy 395. In the agreement ODFW, supplied all materials and set all structure posts, while the landowner will install and maintain the barbed wire fence.

Staking of the McDaniel fence on Grub Creek was accomplished, and preliminary design work was completed.

A meeting was held with Leif Olson of the Oxbow Ranch to discuss future riparian projects.

A detailed map of the Indian Creek/Olsen property was drafted showing fence and Watergap locations.

Landowner Coordination

Personnel from the Confederated Tribes of the Warm Springs contacted ODFW about the Oxbow project fence (Middle Fork John Day River) being vandalized (cut) on Granite-Boulder Creek. The fence was cut by individual/individuals unknown on both sides of the creek; project personnel repaired the problem area.

Donna Carter contacted ODFW about a tree through the fence on the John Day River. Allen Jacobs reported that trees had fallen down on the John Day River riparian fence. Both situations were taken care of by Fish Habitat personnel.

George and Priscilla Meredith checked on how the project was going on the land they own on Beech and Little Beech Creek in Mt Vernon, Oregon. They were consulted about the right-of-way easement through their land to the adjacent property. Our fence location is on the edge of the road in two areas and if the original road becomes eroded, we told Mr. Meredith that we would move the section of road back to a suitable location.

Paul Walton checked on our construction methods, and was pleased with what he observed, at that time we had set about 1/3 of the 185 structure posts.

Three ranch owners (McNeil-Allen Mullin, Jacobs, and Johns) expressed an interest in renewing their lease agreements with ODFW. They were told that as of now, the lease agreements were not being renewed. Johns and McNeil Ranches have already had their leases expire, the Jacobs Ranch will expire next year.

Project personnel met with Leif Olsen of the Oxbow Ranch to discuss the fencing site on Indian Creek, and went over the design and layout. He had concerns about the fence alignment, which was worked out to both parties satisfaction.

Developing Contracts and Contract Specifications

The Technician developed a Riparian Lease and map for the Indian Creek/Oxbow property.

Obtaining Work Permits

An application was submitted to DSL to protect 120 feet of eroding bank on Indian Creek/Kuhl property by using juniper riprap, the permit was granted.

Project Preparation

The Biologist and Technician met with Shaun Robertson of CTWS to stake the fenceline on the John Day River/Forrest property.

A map was made of the Grub Creek/McDaniel fence layout, to be constructed in 2002.

The mapping and staking of the proposed fence location on Granite Cr./Walton was completed and acceptable to the landowner.

Project personnel finished the staking of Little and Main Beech Creek/Meredith property.

Staking was also completed on Mountain Creek/Herb Jones property; it was staked for juniper riprap installation along approximately 400 feet of bank.

The Biologist and Technician worked on map designs of the Holliday perpetual easement with aerial photographs of the John Day River, Grub, Castle, Indian, and Pine Creeks. Which were then sent to the BPA Contracting Officer.

Riparian Lease Development & Procurement

Lease maps and text were prepared and sent to Sam McDaniel for the Grub Creek Project.

Project personnel attended a meeting with Gordon Larson about a possible project on Canyon and Berry Creeks. A copy of the Riparian Lease Agreement was given to him for review.

The Technician staked out fence alignment on the Oxbow/Indian Creek property.

The Fish Habitat Biologist continued to work on the perpetual easement purchase on the Holliday Ranch streams.

A 15-year Riparian lease was signed on Indian Creek/Olsen property.

The technician spoke with Paul Robertson about starting a fifteen-year cooperative agreement on Mountain Creek, Mr. Robertson said he would need more time to think about the proposition.

Field Inventories

Contracts for fence and watergap materials delivery were written, announced and awarded by ODFW.

Fence and instream construction contracts, specifications and project site maps were written and awarded by GSWCD.

All 2001 construction sites were staked and flagged for the contractors by ODFW personnel.

Implementation - On site:

Planting

Project personnel planted 80 Ponderosa pine seedlings, 100 cottonwood and 240 willow cuttings on Mountain Creek/Jones' property.

Fencing

The installation and placement of structure posts (1200) on the Beech Creek /Meredith project was completed by project personnel.

Structure posts (185) were set on the Walton/Granite Creek-Middle Fork John Day River project.

A considerable amount of time was spent installing structure posts (50) on Poison Creek/St. Clair property.

Structure posts (approximately 1200) were placed on the Middle Fork of the John Day River/Forrest property.

Structure posts (100) were also set on the Beech Creek/Patterson property a 10-year Restoration and Enhancement project.

The Technician and Seasonal Technician pounded 600 structure posts on John Day River/Forrest property for approximately 5.5 miles of fence. Project personnel constructed approximately 1000 feet of barbwire fence and one watergap. CTWS personnel wrote the construction contract for the remaining 5.5 miles of fence to be built on the Mainstem John Day River/Forrest property.

Upon most pastures being retired for the winter we removed our watergaps, solar pumps and stream cross fences. Where livestock were still present we lifted the cross fences above spring floodwater levels.

Miscellaneous Implementation Activities

Two cattle guards (12H20) and 10 yards of $\frac{3}{4}$ " minus were set into place by Haberly Construction on the Little Beech/Beech Creek/Meredith project.

OPERATIONS AND MAINTENANCE:

Landowner Coordination

Many of the landowners were contacted throughout the year in regards to timing of their cattle movements, watergap installation and removal, and weed control.

Project personnel went over the design and layout with Mr. Olsen. He had concerns about the fence alignment, which was worked out to both parties satisfaction.

Several landowners were contacted to coordinate fence maintenance and reinstall watergaps for the 2001 grazing period.

The landowner on the Long Creek/Carter project called to notify us of fence damage due to fallen trees.

Instream Maintenance

Fifteen junipers were cut and hauled from Steve Mullin's property, which were then used to stabilize 120 feet of streambank on Indian Creek/Hank Kuhl's property. The landowner also allowed the riparian fence to be moved back 15 feet to give a riparian buffer.

Fence Maintenance

A damaged water gap was repaired on Indian Creek/Hiatt property; mainline fence repair was undertaken on Cottonwood Creek/Hettinga and Phipps Meadow/Moeller projects.

The mainline fence on the Mainstem John Day River/Mullin and Carter property's were inspected and maintained with a few minor repairs. The habitat project on Cottonwood Creek/Hettinga and Berenburg property's were also maintained. The Phipps Meadow/Moeller property mainline fence was maintained along with water gaps being installed. The Mountain Creek/Brown riparian project was inspected and water gaps installed. The remaining water gaps were put in on Camp Creek/O'Rorke property. The mainline fence on Canyon Creek/Still project was also inspected, with a few downed trees cut off of the fenceline.

Two fallen cottonwood trees and a large willow tree were removed from the fenceline on the John Day River/Lawrence Property. ODFW personnel removed a beaver felled tree and rebuilt 60 feet of the damaged fenceline on Canyon Cr./Still property.

Miscellaneous Operations & maintenance activities

Routine maintenance on project vehicles was accomplished. The HD10 Shaver Post Pounder had a new guide rail installed.

Two aerial flights with Bill Krayer were taken, cattle were found in the enclosure on Hiatt project and also on the expired lease on the Fox Creek/Johns property. The landowner was contacted concerning the forty head of cattle on Fox Creek, at the end of the lease he said maintenance would still be completed. He explained that his hired hand had opened the gate for no apparent reason and that he would resolve the problem.

New fenders were made and installed on the equipment trailer.

The Technician completed cleaning the storage shed and chainsaw maintenance.

Routine maintenance was completed on project vehicles and equipment.

MONITORING AND EVALUATION:

Photopoint Picture Taking

The photopoints on the Canyon Cr./Still, Phipps Meadow/Moeller, Long Cr./Courchesne, and Long Cr./Carter properties were retaken and filed by the Technician.

Thermograph Data Collection and Summarization

The two thermographs on Cottonwood Creek had quit working in 2000 and were not replaced in the year 2001.

Miscellaneous Monitoring Activities

The Technician conducted a preliminary walk through on East Beech, McClellan and Tinker Creek's looking for steelhead redds. No redds were observed but numerous beaver dams were noted throughout.

Spring Chinook redd counts were completed by project personnel on the Middle Fork of the John Day River.

Project and District personnel removed fish within a section of the Enterprise ditch, which was then treated to kill vegetation.

PROGRAM ADMINISTRATION

RESULTS AND DISCUSSION II.

Reports and Data Summaries

The July-September 2000 quarterly report was written and submitted to BPA.

Monthly expenditure summaries were completed.

A map of the Phipps Meadow/Moeller project was sent to Oregon Watershed Enhancement Board.

Monthly financial statements were written and submitted to the Regional Fish Habitat Coordinator.

Budgets/Purchases

Request for bids were sent out to various vendors for barbed wire, t-posts, and wood posts.

The monthly budget summaries were completed. The Biologist worked on carry over dollars for the 2002 budget, which would extend the Grub Cr./Thoming fence and the Granite Creek dredge tail leveling contracts.

Bids for fencing supplies were sent out, all items were received at the John Day screens material yard.

A pionjar rock drill with bits was purchased to help in aiding fence construction.

The 2001/02-project proposal was submitted to CBFWA.

Various supplies for project maintenance and implementation were purchased.

Program Development

The project Technician received training on Arc View, which is to be used in developing maps for program projects.

Personnel

Lonnie Goin Jr.'s seasonal appointment ended on November 30. Jim Jerome the Habitat Technician reverted to regular salary on November 15, after working out of class since July 15, because the Fish Habitat Biologist (Jeff Neal) was appointed the new Assistant John Day District Fish Biologist.

The Technician attended a budget meeting with Kevin Blakely (ODFW Watershed Manager), and the Soil and Water Conservation District manager Ken Delano.

Project personnel attended the monthly Regional Safety meeting.

Project personnel attended the monthly safety meeting at the John Day Screen Shop.

The seasonal Technician was rehired on March 1, 2001.

Contract Administration

The GSWCD wrote, published, announced, awarded, administered and made payments for the Indian Creek, Little and Main Beech Creeks, and Grub Creek fence construction contracts. ODFW personnel designed, staked, procured materials and inspected the contracts from December to February.

INTERAGENCY COORDINATION & EDUCATION

Interagency Coordination

- The Technician meet with the Grant Soil and Water Conservation District manager on budget concerns for the upcoming season.
- The Technician met with the Ken Delano (SWCD Manager) to coordinate upcoming Fish Habitat projects.
- The Technician spent time with Tim Unterwegner (John Day District Fisheries Biologist) reviewing materials to provide information for the Independent Scientific Review Panel (ISRP).
- The Biologist continued to work with CTWS CTUIR, SWCD, and the Watershed Council on gathering material for a John Day Basin Summary Report for CBFWA.

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Fisheries Status:

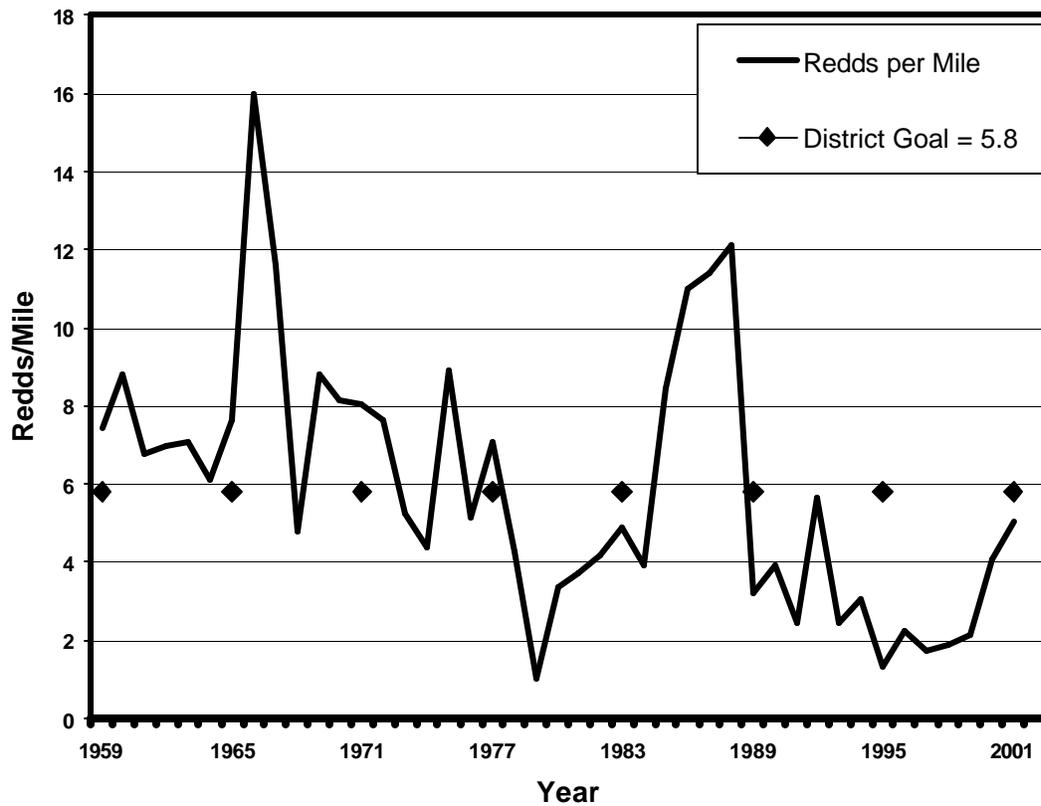
Steelhead Spawning Annual index steelhead spawning surveys were completed on June 5 totaling 85.7 miles of stream. A total of 433 redds were observed for a density of 5.1 redds/mile. The ten-year average is 2.7 redds/mile. (Figure 1 and Table 2)

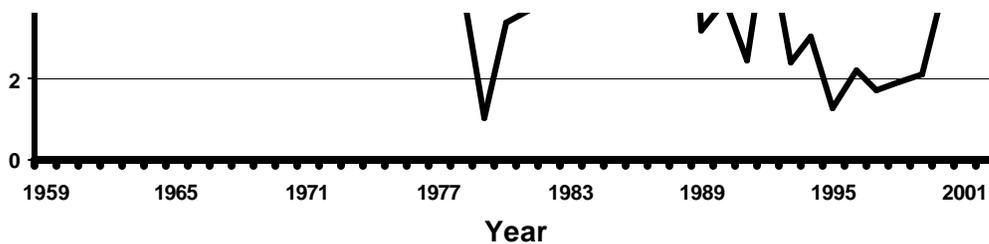
Table 2

Year	Number of streams surveyed	Miles surveyed	Live Steelhead	Redds	Redds/Mile
1959	6	14.5	30	108	7.4
1960	10	22.0	60	194	8.8
1961	8	24.5	56	166	6.8
1962	10	26.5	56	184	6.9
1963	11	30.5	47	216	7.1
1964	13	43.5	51	266	6.1
1965	19	45.0	88	344	7.6
1966	23	69.0	141	1103	16.0
1967	25	78.0	61	905	11.6
1968	23	74.5	19	358	4.8
1969	27	91.5	76	806	8.8
1970	21	65.0	58	530	8.2
1971	8	22.5	18	181	8.0
1972	16	53.5	41	409	7.6
1973	25	76.4	22	402	5.3
1974	14	38.0	4	167	4.4
1975	14	34.0	21	302	8.9
1976	21	59.8	8	308	5.2
1977	30	75.5	69	535	7.1
1978	35	102.7	21	438	4.3
1979	29	78.7	4	81	1.0
1980	34	90.1	11	305	3.4
1981	33	86.1	12	319	3.7
1982	32	71.8	34	301	4.2
1983	31	89.3	39	438	4.9
1984	29	76.7	33	299	3.9
1985	39	120.3	88	1016	8.4
1986	43	120.6	129	1323	11.0
1987	61	154.3	82	1757	11.4
1988	46	128.0	111	1551	12.1
1989	35	106.5	42	340	3.2
1990	39	114.3	37	451	3.9
1991	29	91.9	8	225	2.4
1992	35	107.3	70	608	5.7

1993	24	68.0	14	166	2.4
1994	38	114.6	6	352	3.1
1995	34	104.1	8	135	1.3
1996	35	100.8	9	225	2.2
1997	33	96.5	15	165	1.7
1998	27	70.6	4	134	1.9
1999	28	79.6	20	169	2.1
2000	30	89.7	8	366	4.1
2001	29	85.7	75	433	5.1

Figure 1 John Day Steelhead Spawning 1959-2001





Spring Chinook Spawning Surveys were performed on 55 miles of index streams, with a count of 1411 redds, for a basin average of 25.7 redds/mile. This ties the record set last year for the highest returns to the John Day Basin since counts began in 1959. A summary of results is presented in Table 4. Using the estimated ratio of index to index plus extensive counts with the conversions to adults of 3 fish per redd, the estimated spawning escapement was 6,048 adult spring chinook in the John Day River. The Mainstem increased from last year's 20.5 % to 23% redd counts (See Figures 2). The highest spawning density in the basin occurred on the North Fork with 43% of the redds. The Middle Fork and the Granite Creek System held steady at 19 % and 13.5 % respectively. A preliminary estimate of nine hatchery strays (thought to be fin clipped) was found this year, which comprised 1.4 % of the Spring Chinook sampled.

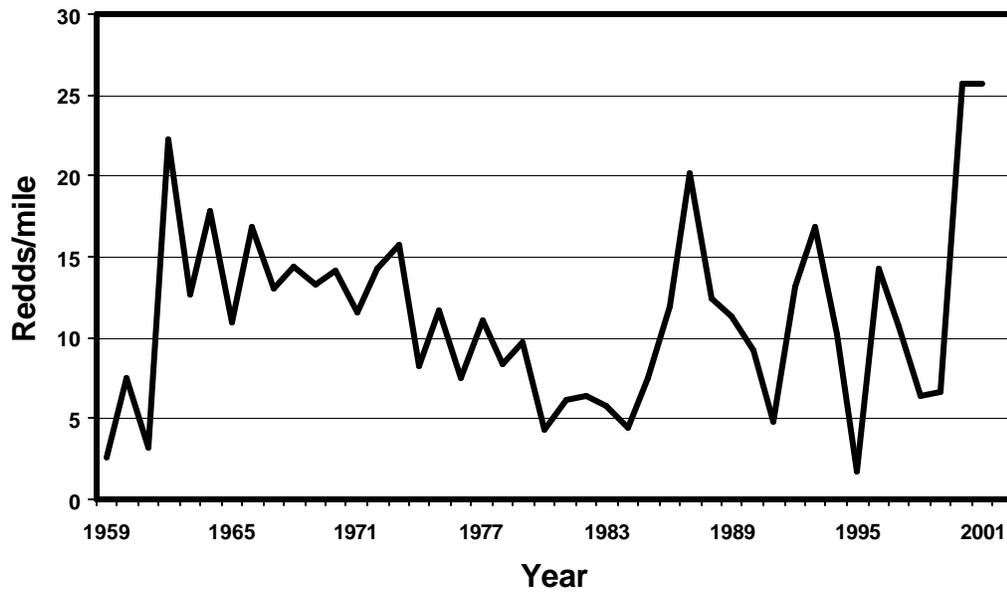
Fifty-two pre-spawn mortalities were found this year, which comprised 8.6 % of the Spring Chinook sampled. This number is higher than in years past, especially in Granite Creek. Although low water flows and high water temperatures may have been contributing factors, further analysis of the data to determine the higher mortality rate is ongoing.

Table 4. Summary of Chinook salmon spawning density, John Day District, 1959-2001.

Year	Redds/mile							Total
	Bull Run	Clear Cr.	Granite Cr.	Granite System	Upper JDR	MF John Day	NF John Day	
1959	*	4.3	6.0	5.3	0.3	0.0	*	2.6
1960	*	16.3	10.0	12.5	0.7	3.2	*	7.5
1961	*	3.3	5.3	4.5	3.0	1.1	*	3.2
1962	2.0	49.7	44.2	44.3	12.2	2.8	*	22.2
1963	7.0	29.2	26.4	28.4	0.8	0.4	*	12.7
1964	10	49.7	34.8	38.3	1.3	3.6	7.8	17.8
1965	7.5	16.7	24.4	18.5	5.8	3.7	8.1	11
1966	0.3	43.5	31.0	28.4	9.3	6.5	10.3	16.8
1967	6.0	38.5	19.4	23.1	7.4	1.7	5.5	13
1968	6.4	60.5	50.2	44.3	0.7	0.4	8.8	14.4
1969	15.6	13.7	16.8	15.9	9.3	4.8	20.5	13.3
1970	26.4	18.7	33.6	26.9	8.3	7.6	16.8	14.1
1971	11.6	18.8	31.2	22.6	7.0	4.1	11.8	11.5
1972	24.4	39.5	43.5	38.2	3.9**	5.1	10.5	14.2
1973	7.2	27	36	27	8.9	4.3	19.4	15.7
1974	7.6	8.0	25.5	15.9	2.5	8.1	7.2	8.2
1975	18.8	11.5	24.7	19.1	7.1	8.9	11.7	11.7
1976	9.2	7	20.2	13.5	4.6	6.6	6.2	7.5
1977	11.6	12.8	23.1	17.3	4.9	5.8	16.4	11.1
1978	12.4	6.3	19.8	13.8	4.5	10.7	5.9	8.3
1979	6.4	7.0	15.6	10.8	5.2	11.8	11.1	9.7
1980	1.2	7.0	8.5	6.5	1.2	5.8	4.3	4.3
1981	2.8	11.3	10.6	9.2	3.9	2.6	7.7	6.1
1982	5.2	10.8	12.0	10.2	3.8	6.2	5.5	6.4
1983	0.8	1.0	7.3	3.8	10.2	5.1	4.2	5.8

1984	3.2	2.0	5.8	4	5.6	6.7	3.5	4.4
1985	6.4	8.2	15.1	11	8.9	4.0	6.1	7.5
1986	2.4	11.5	20.2	13.6	12.2	6.3	14.3	11.9
1987	5.6	14	12.9	11.8	19	28.3	20.8	20.2
1988	1.2	11.0	12.5	9.7	6.3	20.1	13.6	12.4
1989	6.0	16.7	12.2	12.4	12.7	9.4	10.9	11.3
1990	2.4	2.7	11.1	6.5	9.5	3.9	14.3	9.2
1991	1.6	5.2	5.5	4.6	4.7	2.9	6.4	4.8
1992	0.0	11.7	16.5	11.5	10.9	9.0	18.8	13.2
1993	17.6	25.6	19.8	21.3	10.4	12.9	21.1	16.9
1994	0.0	4.0	14.5	8	13.0	7.8	11.2	10.2
1995	0.0	2.8	2.2	1.9	2.2	1.3	1.5	1.7
1996	3.6	9.5	14.7	10.7	17.5	11.3	16.2	14.2
1997	7.2	7.2	10	8.5	9.6	13.6	10.9	10.7
1998	0.4	2.8	8.4	4.8	8.3	6.6	5.6	6.4
1999	3.2	3.8	11.6	7.3	4.5	8.8	6.7	6.7
2000	4.8	20.0	28.0	20.5	28.1	30.6	26.9	25.7
2001	15.2	20.0	18.9	18.5	29.5	16.6	33.7	25.7

Figure 2 **John Day Basin Spring Chinook Redd Counts**



Appendix 2



Photo Pt #5, Richard Courchesne Property
June 1992 above, and below **August 2000**,
depicting recovery after two flood events in
1997.

