

# Columbia Plateau Province

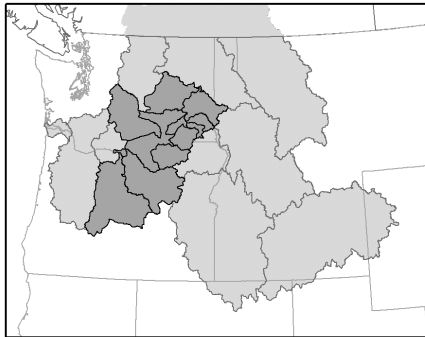


## Columbia Plateau Province

### BPA Spending, FY 2001-2003

FY 2001	\$25,408,751
FY 2002	\$40,621,776
FY 2003	\$28,805,179

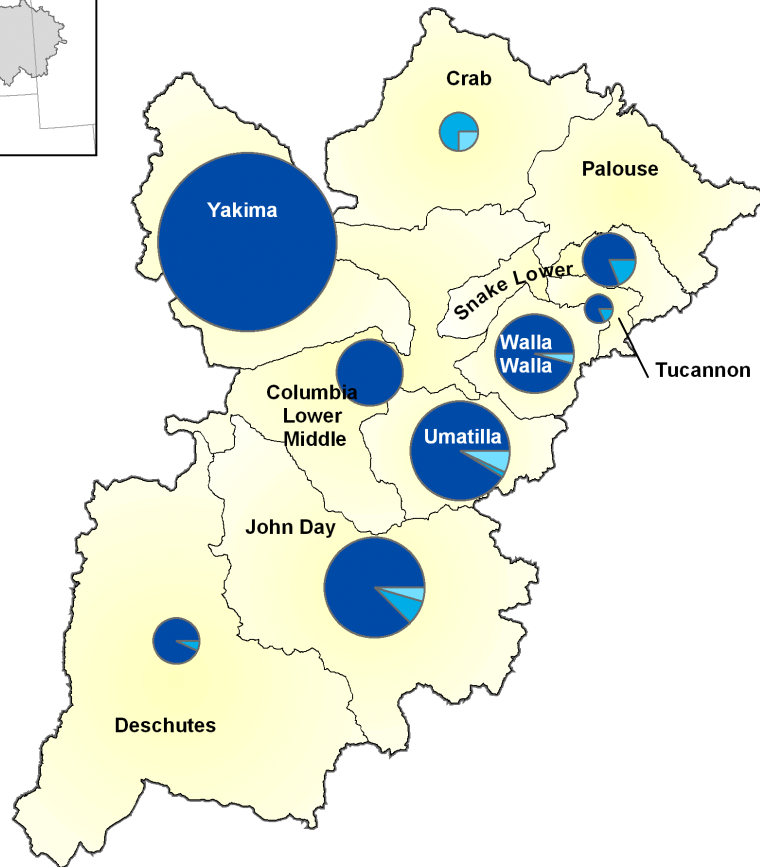
**Total Spending**      **\$94,835,705**



### Legend

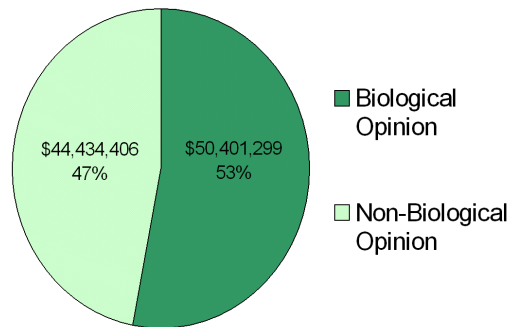
- Anadromous (93%)
- Resident (4%)
- Wildlife (3%)

Note: Diameter of pie represents relative funding levels in each subbasin.



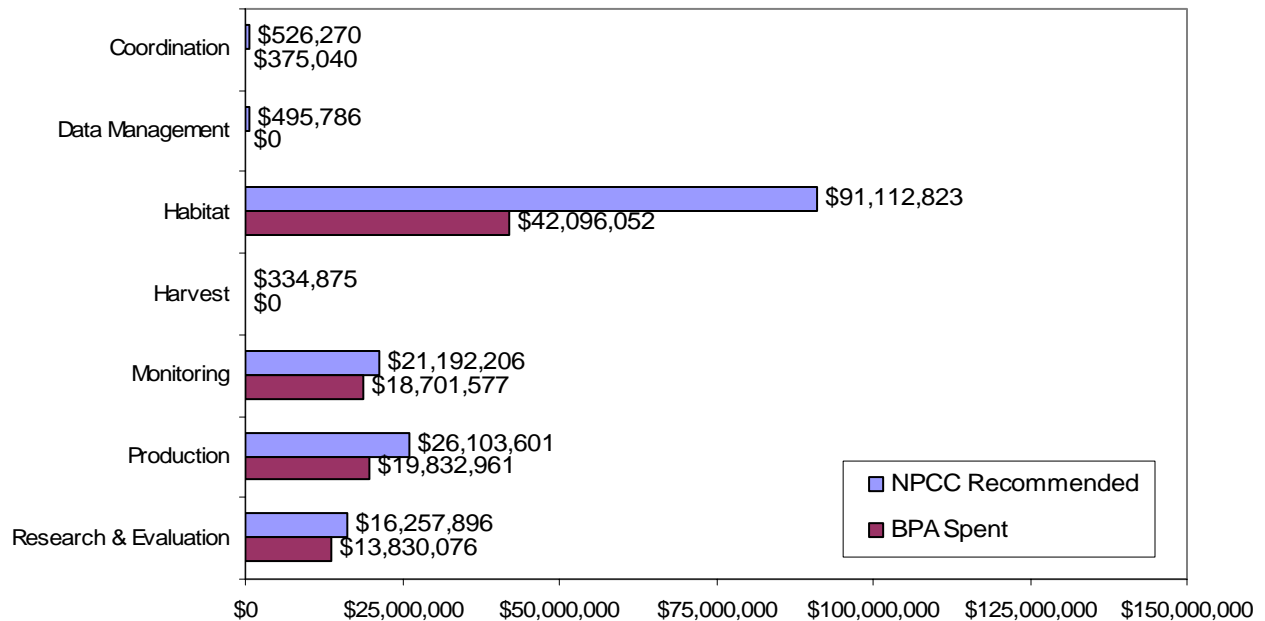
### Biological Opinion Spending, FY 2001-2003 NMFS & USFWS Designated Projects

	BiOp	Non BiOp
Columbia Lower	\$1,812,140	\$4,171,767
Crab	\$0	\$2,007,427
Deschutes	\$1,828,227	\$1,042,028
John Day	\$12,947,629	\$738,046
Snake Lower	\$3,152,508	\$733,057
Tucannon	\$1,051,969	\$45,360
Umatilla	\$3,072,431	\$10,334,265
Walla Walla	\$4,815,096	\$3,674,583
Yakima	\$21,721,299	\$21,687,873

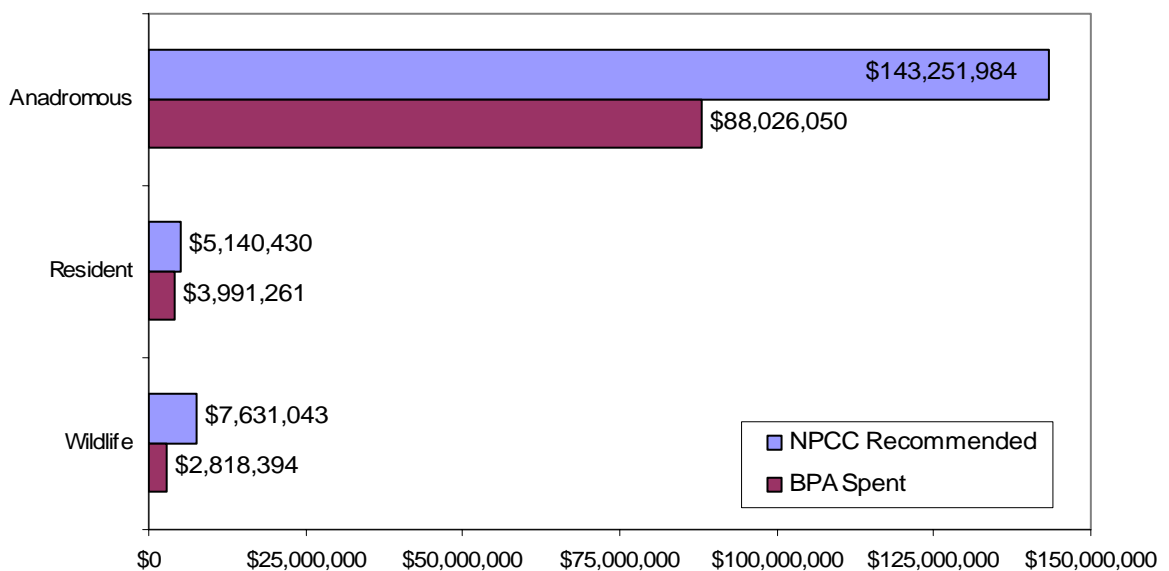


## Columbia Plateau Province FY 2001-2003 Spending Summaries

### NPCC Recommendations and BPA Spending by Project Category, FY01-03



### NPCC Recommendations and BPA Spending by Project Type, FY01-03



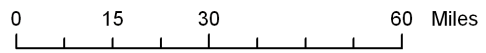
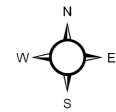
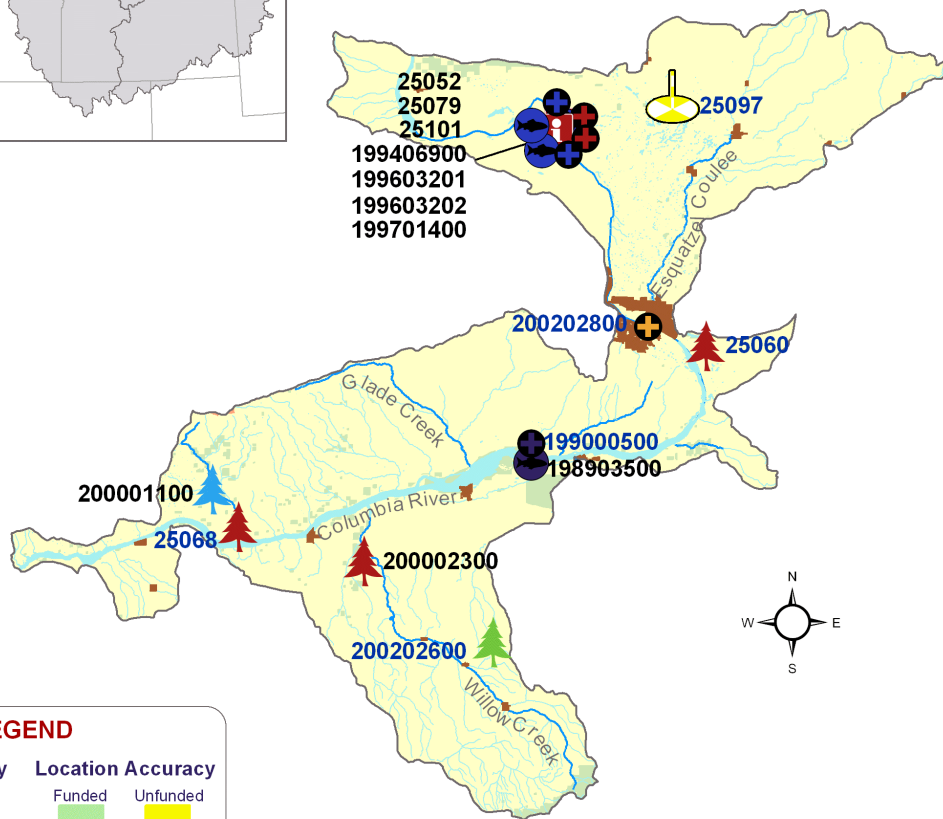
# Columbia Lower Middle Subbasin



FY 2001-2003 NPCC Recommended and/or BPA Funded Fish & Wildlife Projects



## Columbia Plateau Province Columbia Lower Middle Subbasin



**LEGEND**

<b>Project Category</b>	<b>Location Accuracy</b>																						
<ul style="list-style-type: none"> <li> Coordination</li> <li> Data Management</li> <li> Habitat</li> <li> Harvest</li> <li> Mainstem Survival</li> <li> Monitoring</li> <li> Production</li> <li> Research &amp; Evaluation</li> </ul>	<table border="0"> <tr> <td>Funded</td> <td>Unfunded</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Province</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Subbasin</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Stream</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Area</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Point</td> <td></td> </tr> </table>	Funded	Unfunded			Province				Subbasin				Stream				Area				Point	
Funded	Unfunded																						
Province																							
Subbasin																							
Stream																							
Area																							
Point																							

**Project Labels**

Biological Opinion    Non Biological Opinion

**Land Use/Ownership**

Federal	Tribal	State	Local	Private	Urban

Data Layers: Land Ownership (ICBEMP), 100k Hydrography (Streamnet), Urban Areas (State Data), Projects (CBFWA)  
 Projection: UTM 1983, Zone 11  
 Produced by: Columbia Basin Fish & Wildlife Authority  
 Map Date: 5/20/04

## Projects in the Columbia Lower Middle Subbasin

<i>Project ID</i>	<i>Project Title</i>					<i>Review Cycle</i>		<i>BiOp?</i>
25052	Sex Reversal in Hanford Reach Fall Chinook Salmon					Columbia Plateau		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$262,321	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Research & Evaluation area	
25060	Burbank Sloughs and Mainstem Columbia River Shoreline/Side Channel/Wetland Habitat Restoration					Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$116,000	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Habitat area	
25068	Rock Creek Watershed Road and Riparian Corridor Improvement Project					Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$96,500	\$96,500	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Habitat area	
25079	Integration and Construction of a GIS Based 2-Dimensional Hydraulic/Habitat Model for 51 miles of Hanford Reach and Site of the Columbia River					Columbia Plateau		no
	<i>Rec 00-03</i>	\$ 0	\$295,786	\$200,000	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Data Management area	
25097	Salmon and Steelhead Habitat Inventory and Assessment Project (SSHAP)					Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$522,710	\$372,550	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Monitoring province	
25101	Use of Mainstem Habitats by Juvenile Pacific Lamprey ( <i>Lampetra tridentata</i> )*					Columbia Plateau		no
	<i>Rec 00-03</i>	\$ 0	\$89,238	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Research & Evaluation area	
198903500	Umatilla Hatchery Operation and Maintenance					Columbia Plateau		no
	<i>Rec 00-03</i>	\$860,000	\$889,240	\$919,474	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$915,201	\$1,028,443	\$815,317	Anadromous	Production point	
199000500	Umatilla Fish Hatchery Monitoring and Evaluation					Columbia Plateau		yes
	<i>Rec 00-03</i>	\$693,311	\$626,178	\$631,381	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$554,340	\$623,211	\$544,418	Anadromous	Research & Evaluation point	



**Projects in the Columbia Lower Middle Subbasin, continued...**

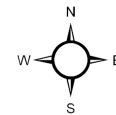
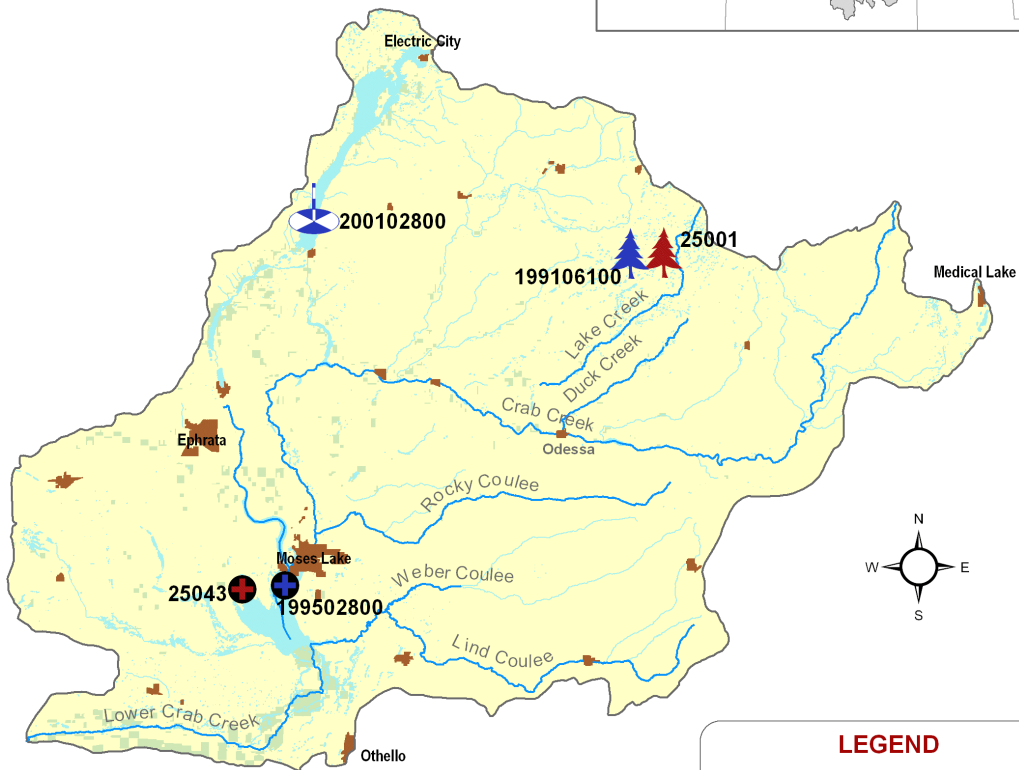
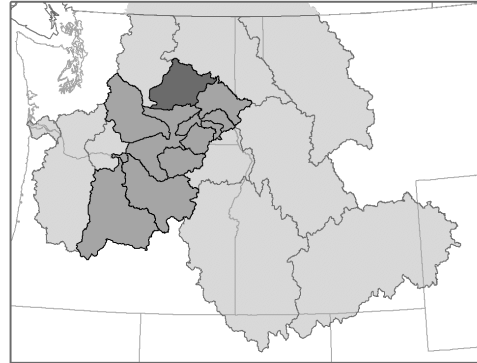
<i>Project ID</i>	<i>Project Title</i>					<i>Review Cycle</i>		<i>BiOp?</i>
199406900	Estimate production potential of fall chinook salmon in the Hanford Reach of the Columbia River					Columbia Plateau		no
	<i>Rec 00-03</i>	\$225,000	\$232,650	\$240,560		Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$162,261	\$419,986	\$266,003	Anadromous	Research & Evaluation	area
199603201	Begin Implementation of Year 1 of the K Pool Master Plan Program					FY 2000		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0		Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 2,235	\$ 0	Anadromous	Production	area
199603202	Hanford K Basin Master Plan					FY 2000		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0		Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$130,902	\$ 0	Anadromous	Production	area
199701400	Evaluation of Juvenile Fall Chinook Stranding on the Hanford Reach					Columbia Plateau		no
	<i>Rec 00-03</i>	\$341,784	\$353,404	\$18,000		Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$213,856	\$160,790	\$ 0	Anadromous	Research & Evaluation	area
200001100	Rock Creek Watershed Assessment/Restoration					FY 2000		no
	<i>Rec 00-03</i>	\$156,000	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$44,224	\$12,549	Anadromous	Habitat	stream
200002300	Securing Wildlife Mitigation Sites - Oregon, Horn Butte (Philippi Property)					Columbia Plateau		no
	<i>Rec 00-03</i>	\$42,302	\$200,000	\$2,000,000		Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Wildlife	Habitat	area
200202600	Morrow County Buffer Initiative					Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$75,086	\$77,337		Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$21,895	\$68,276	Anadromous	Habitat	county
200202800	Conduct Watershed Assessments for Priority Watersheds on Private Lands in the Columbia Plateau					Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$1,259,725	\$89,725		Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Research & Evaluation	subbasin

# Crab Subbasin



FY 2001-2003 NPCC Recommended and/or BPA Funded Fish & Wildlife Projects

## Columbia Plateau Province Crab Subbasin



0 10 20 40 Miles

Data Layers: Land Ownership (ICBEMP), 100k Hydrography (Streamnet), Urban Areas (State Data), Projects (CBFWA)  
 Projection: UTM 1983, Zone 11  
 Produced by: Columbia Basin Fish & Wildlife Authority  
 Map Date: 5/20/04

**LEGEND**

<b>Project Category</b>		<b>Location Accuracy</b>	
Coordination	Funded	Unfunded	
Data Management	Province	Subbasin	
Habitat	Subbasin	Stream	
Harvest	Stream	Area	
Mainstem Survival	Area	Point	
Monitoring	Point		
Production			
Research & Evaluation			

**Project Labels**

Biological Opinion    Non Biological Opinion

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**Land Use/Ownership**

Federal	Tribal	State	Local	Private	Urban
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## Projects in the Crab Subbasin

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
25001	Acquire Sharp-tailed Grouse Habitat at the Swanson Lakes Wildlife Area				Columbia Plateau		no
	<i>Rec 00-03</i>	\$ 0	\$300,000	\$32,900	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Wildlife	Habitat	area
25043	Northern Leopard Frog Distribution and Habitat Association				Columbia Plateau		no
	<i>Rec 00-03</i>	\$ 0	\$41,754	\$91,680	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Wildlife	Research & Evaluation	area
<b>199106100</b>	<b>Swanson Lakes Wildlife Area (SLWA)</b>				<b>Columbia Plateau</b>		<b>no</b>
	<i>Rec 00-03</i>	\$255,921	\$264,622	\$273,619	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$256,733	\$200,475	Wildlife	Habitat	area
<b>199502800</b>	<b>Restore Moses Lake Recreational Fishery</b>				<b>Intermountain</b>		<b>no</b>
	<i>Rec 00-03</i>	\$213,072	\$217,902	\$222,702	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$372,800	\$170,174	Resident	Research & Evaluation	area
<b>200102800</b>	<b>Evaluation of the Banks Lake Fishery</b>				<b>Intermountain</b>		<b>no</b>
	<i>Rec 00-03</i>	\$170,408	\$347,500	\$340,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$147,350	Resident	Monitoring	area

Projects in **bold** have preliminary results data included in this report.

**199106100—Swanson Lake Wildlife Area**

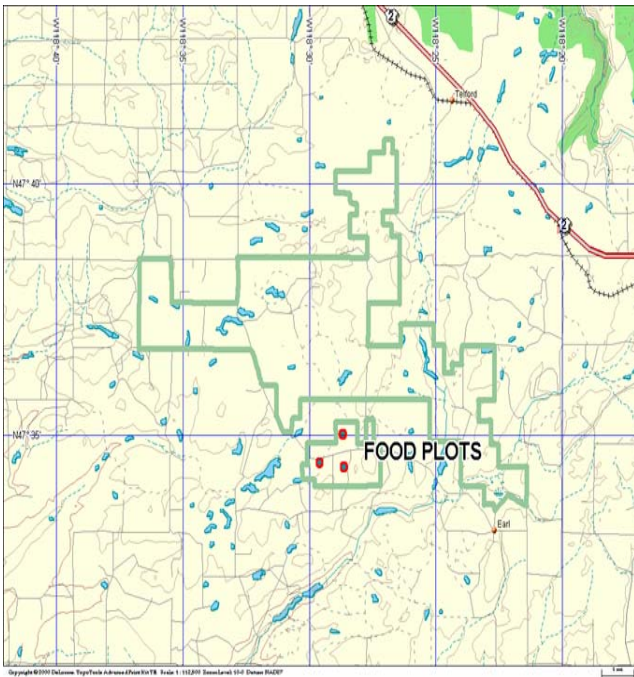
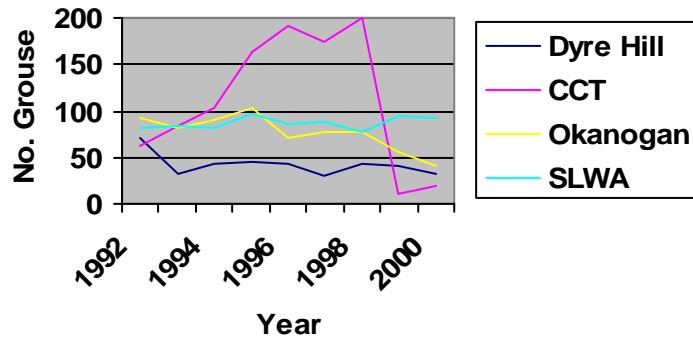
**2002 Project Objectives**

- Monitor wildlife and habitat response to protection, maintenance, and enhancement measures

**Habitat Enhancement and Sharp-tailed Grouse Counts - Preliminary Results**

- Habitat**
- 18,000 shrubs/trees planted
  - 600 acres of agriculture land converted to native grasslands
  - 40 acres of food plots
  - 59 miles of fence installed
- Sharp-tailed Grouse Counts**
- Lek counts for the Swanson Lakes Wildlife Area (SLWMA) have remained relatively stable (approximately 100) since the late 1990's
  - Lek counts for Swanson Lake Wildlife are greater than other areas in eastern Washington

**Sharp-tailed Grouse Lek Counts**



Location of food plots created by the Washington Department of Fish and Wildlife on the Swanson Lake Wildlife Area.



Photo: Courtesy Washington Department of Fish and Wildlife  
 With the assistance of volunteers (above) the Washington Department Fish and Wildlife planted 18,000 shrubs and trees throughout the Swanson Lakes Wildlife Area.



Photo: Courtesy Washington Department of Fish and Wildlife  
 Male sharp-tailed grouse protecting a preferred location on the Swanson Lakes Wildlife Area.

199502800 — Factors Affecting the Recreational Fishery in Moses Lake, Washington

2002 Project Objectives

- Quantify the influence of predation on target fishes in Moses Lake
- Quantify mortality of selected fishes in Moses Lake
- Assess the effects of habitat changes from shoreline development and carp on the fish community in Moses Lake

Predator Diets - Preliminary Results

Relative Abundance of Most Frequent Prey

- Walleye
  - Fall 2000*
    - 48% bluegill and black crappie
    - 29% sculpins
  - Summer 2001*
    - 74% yellow perch
  - Fall 2001*
    - 44% bluegill
    - 13% bullhead
  - Winter 2002*
    - 84% yellow perch
  - Summer 2003*
    - 93% yellow perch
- Smallmouth bass
  - Spring 2001*
    - 89% yellow perch
  - Fall 2001*
    - 35% non-salmonids
    - 25% Daphnia
  - Summer 2003*
    - 51% yellow perch
- Largemouth bass
  - Fall 2000*
    - 82% yellow perch
  - Spring 2001*
    - 97% yellow perch
  - Fall 2001*
    - 27% bluegill
    - 25% yellow perch



Photos: Courtesy Washington Department of Fish and Wildlife  
Washington Department of Fish and Wildlife biologists collecting predators (upper) and analyzing stomach contents removed from the fish collected from Moses Lake, Washington.



## Exploitation of Moses Lake Fisheries - Preliminary Results



2003 Moses Lake Creel Survey

	Catch	Harvest
Rainbow trout	63	41
Smallmouth bass	187	62
Walleye	557	102
Yellow perch	3,514	343
Largemouth bass	5	2
Bluegill	47	2
Black crappie	327	43

Walleye, such as this 19.36 lb specimen collected by Washington Department of Fish and Wildlife biologists, were the second most common species caught by anglers at Moses Lake in 2003.

## Abundance of Age-0 Fish - Preliminary Results

Beach Seine Results for Moses Lake  
Age-0 Fish (2000-2002)

Spring	2000	2001	2002
Black crappie	Na	66	0
Bluegill	Na	11	1
Largemouth bass	Na	6	0
Smallmouth bass	Na	9	0
Walleye	Na	22	0
Yellow perch	Na	1468	1
Fall	2000	2001	2002
Black crappie	158	102	3
Bluegill	742	69	8
Largemouth bass	538	200	15
Smallmouth bass	256	40	2
Walleye	30	1	0
Yellow perch	1854	306	4

- Lack of Age-0 survival observed between Fall of 2001 and Spring 2002 for all species
- Significant reduction in representation of Age-0 specimens in Fall 2002 for all species



Washington Department of Fish and Wildlife biologist with samples collected from Moses Lake, Washington.

## Entrainment Losses - Preliminary Results

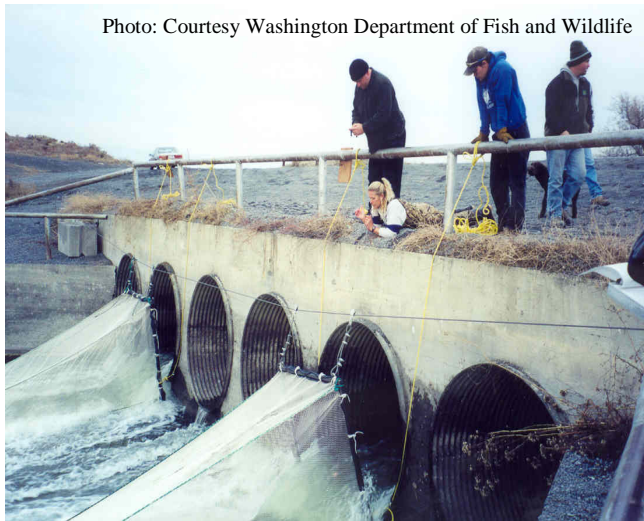
- Greater number of fish were entrained during the winter despite lower releases
- Entrainment was highest during night
- Gamefish entrained included black crappie, largemouth bass, yellow perch, smallmouth bass, bluegill, and rainbow trout

Photo: Courtesy Washington Department of Fish and Wildlife



Washington Department of Fish and Wildlife biologists collecting fish entrained through Moses Lake Dam.

Photo: Courtesy Washington Department of Fish and Wildlife



Washington Department of Fish and Wildlife biologists preparing nets for the purpose of collecting fish entrained through Moses Lake Dam.

### Entrainment of Fish through Moses Lake Dam

November 5, 2002		February 20, 2003	
Day	Night	Day	Night
119.2 cfs	42.6 cfs	33.1 cfs	33.1 cfs
0.3 fish/hr	8.0 fish/hr	4.8 fish/hr	12.8 fish/hr



Photo: Courtesy Washington Department of Fish and Wildlife

Examples of gamefish collected by the Washington Department of Fish and Wildlife that were entrained through Moses Lake Dam.

**200102800 — Banks Lake Fishery Evaluation**

**2002 Project Objectives**

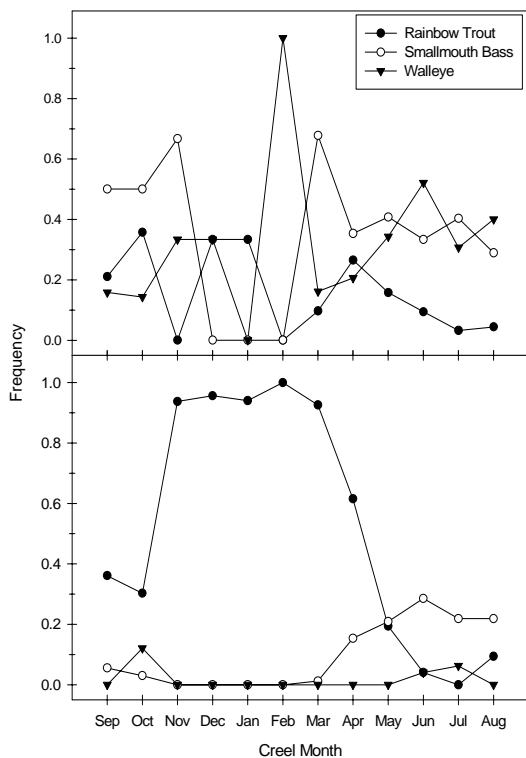
- Determine what factors limit the recruitment of rainbow trout, walleye, yellow perch, crappie, bluegill, and hatchery-reared kokanee to the Banks Lake fishery

**Exploitation of Banks Lake Fisheries - Preliminary Results**

- Annual Harvest**
- Rainbow trout, walleye, and smallmouth bass were species most sought after by anglers
  - Only four kokanee reported in the creel (incidental capture)
  - Only two parties targeted kokanee (no kokanee were caught)
  - Estimated annual economic value of the Banks Lake fishery = \$6 million

**2002-2003 Banks Lake Catch and Harvest Results**

	Catch	Harvest
<b>Rainbow trout</b>	<b>5,800</b>	<b>5,470</b>
<b>Smallmouth bass</b>	<b>120,278</b>	<b>11,915</b>
<b>Walleye</b>	<b>9,259</b>	<b>6,412</b>
<b>Yellow perch</b>	<b>6,870</b>	<b>1,949</b>



Relative proportion of anglers indicating they were targeting rainbow trout, smallmouth bass, and walleye.



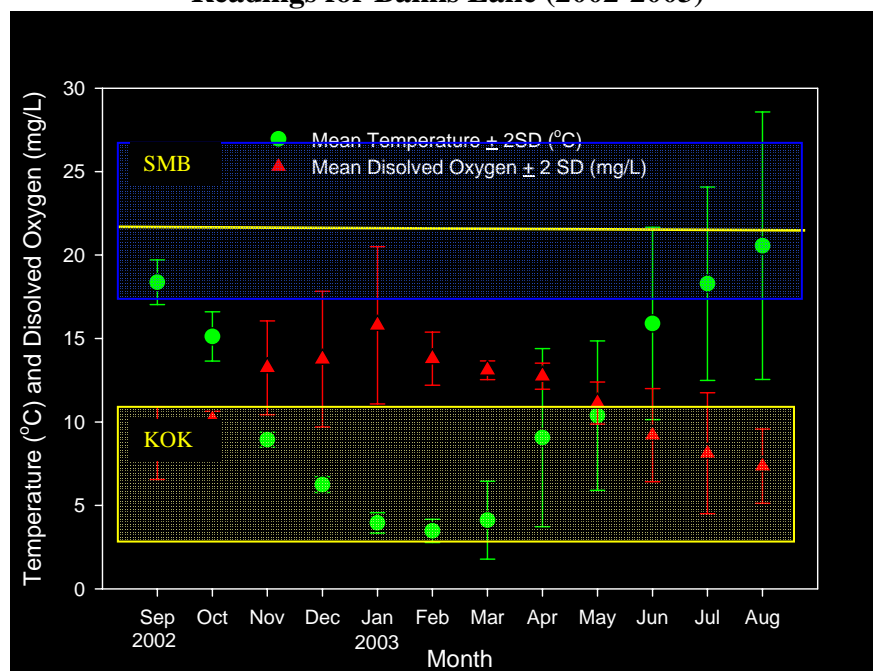
Photo: Courtesy Washington Department of Fish and Wildlife

Walleye ranked second in harvest at Banks Lake, Washington, during 2002-2003.



## Abiotic Factors Affecting Banks Lake Fisheries - Preliminary Results

### Mean Monthly Water Temperature and Dissolved Oxygen Readings for Banks Lake (2002-2003)



## Adult Piscivore Diets - Preliminary Results

### Relative Abundance of Most Frequent Prey

- Walleye
  - 39% yellow perch
  - 29% sculpins
- Smallmouth bass
  - 39% sculpins
  - 19% diptera
- Largemouth bass
  - 35% yellow perch
  - 9% sculpins
- Yellow perch
  - 25% *Daphnia spp.*
  - 21% yellow perch
- Salmonids were found in only 5 samples



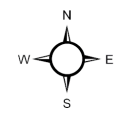
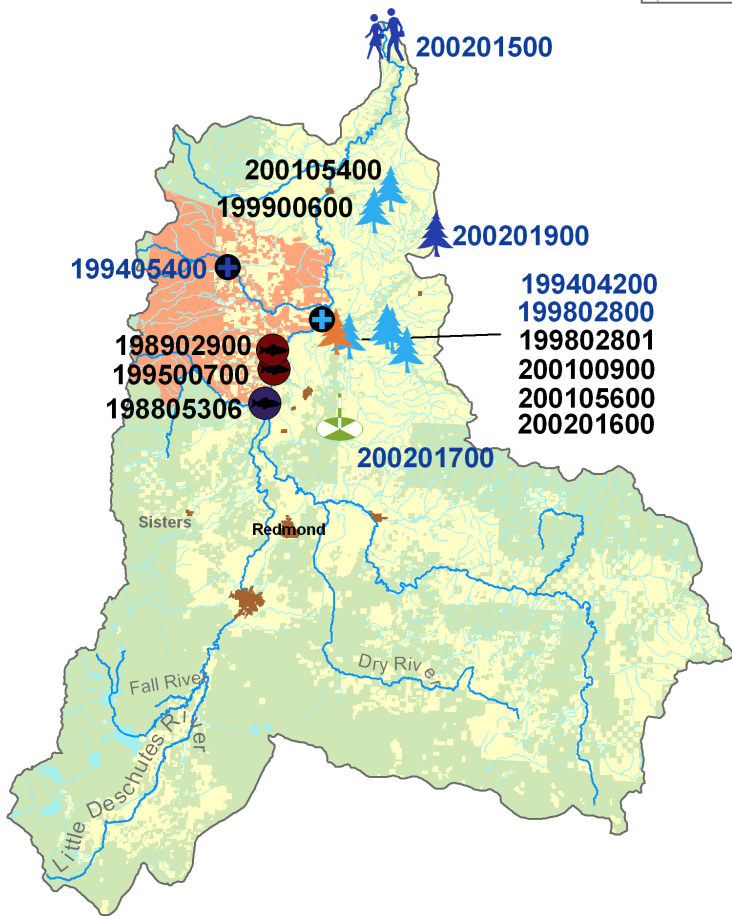
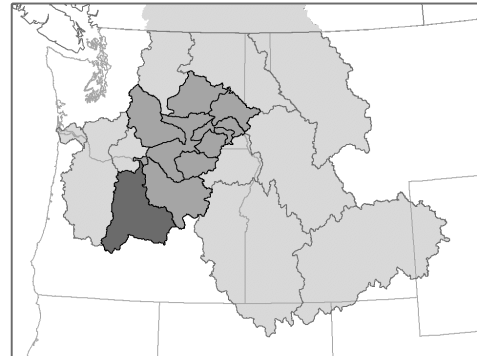
Diet samples were collected from over 1,148 fish from Banks Lake, Washington, from Spring 2002– Spring 2003 .

# Deschutes Subbasin



FY 2001-2003 NPCC Recommended and/or  
BPA Funded Fish & Wildlife Projects

Columbia Plateau Province  
Deschutes Subbasin



Data Layers: Land Ownership (ICBEMP), 100k Hydrography (Streamnet), Urban Areas (State Data), Projects (CBFWA)  
Projection: UTM 1983, Zone 11  
Produced by: Columbia Basin Fish & Wildlife Authority  
Map Date: 5/20/04

**LEGEND**

<b>Project Category</b>	<b>Location Accuracy</b>														
<ul style="list-style-type: none"> <li> Coordination</li> <li> Data Management</li> <li> Habitat</li> <li> Harvest</li> <li> Mainstem Survival</li> <li> Monitoring</li> <li> Production</li> <li> Research &amp; Evaluation</li> </ul>	<table border="0"> <tr> <td>Funded</td> <td>Unfunded</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>	Funded	Unfunded												
Funded	Unfunded														

**Project Labels**

Biological Opinion    Non Biological Opinion

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**Land Use/Ownership**

Federal	Tribal	State	Local	Private	Urban

## Projects in the Deschutes Subbasin

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
198805306	Hood River Production Program (HRPP): Hatchery O&M - Portland General Electric - Enron				Columbia Plateau		no
	<i>Rec 00-03</i>	\$ 0	\$150,871	\$156,001	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$93,853	\$166,280	\$216,742	Anadromous	Production point
198902900	Hood River Production Program - Pelton Ladder - Hatchery				Columbia Gorge		no
	<i>Rec 00-03</i>	\$139,534	\$115,011	\$137,520	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Production point
199404200	Trout Creek Habitat Restoration Project				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$358,846	\$358,845	\$371,046	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$336,121	\$419,797	\$271,767	Anadromous	Habitat stream
<b>199405400</b>	<b>Tools for Managing Bull Trout Populations Influenced by Nonnative Brook Trout Invasions</b>				<b>Columbia Plateau</b>		<b>yes</b>
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$16,333	\$99,922	\$86,045	Resident	Research & Evaluation area
199500700	Hood River Production - PGE: O&M				Columbia Gorge		no
	<i>Rec 00-03</i>	\$46,300	\$50,000	\$54,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Production point
199802800	Trout Creek Watershed Improvement Project				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$118,100	\$122,115	\$126,267	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$81,625	\$128,650	\$123,065	Anadromous	Habitat stream
199802801	Trout Creek Watershed Assessment				FY 2001		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$25,606	\$68,982	\$ 0	Anadromous	Habitat stream
199900600	Bakeoven Riparian Assessment				FY 2001		no
	<i>Rec 00-03</i>	\$80,000	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$48,321	\$13,232	\$126,856	Anadromous	Habitat stream
200100900	Trout Creek Culvert Replacement				FY01 Action Plan		no
	<i>Rec 00-03</i>	\$128,000	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Habitat stream
200105400	Supplement Flows in Buck Hollow Creek				FY01 Action Plan		no
	<i>Rec 00-03</i>	\$22,826	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$15,624	\$ 6,758	\$ 0	Anadromous	Habitat stream

Projects in **bold** have preliminary results data included in this report.

**Projects in the Deschutes Subbasin, continued...**

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
200105600	Trout Creek 2001 Streamflow Enhancement				FY01 Action Plan		no
	<i>Rec 00-03</i>	\$133,500	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$117,481	\$ 0	Anadromous	Habitat stream
200201500	Provide Coordination and Technical Assistance to Watershed Councils and Individuals in Sherman County, Oregon				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$71,000	\$65,770	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 2,424	\$73,343	Anadromous	Coordination area
200201600	Determine Lamprey Species Composition, Larval Distribution and Adult Abundance in the Deschutes Subbasin				Columbia Plateau		no
	<i>Rec 00-03</i>	\$ 0	\$125,440	\$107,971	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$142,293	Anadromous	Research & Evaluation stream
200201700	Regional Stream Conditions and Stressor Evaluation				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$80,000	\$80,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$117,467	Anadromous	Monitoring subbasin
200201900	Establish Riparian Buffer Systems				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$67,119	\$67,218	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$15,270	\$56,398	Anadromous	Habitat area

**199405400— Bull Trout Distribution and Abundance On and Boardering the Warm Springs Reservation**

**2002 Project Objectives**

- Monitor trends in relative abundance of juvenile bull trout in the Deschutes River
- Determine the sampling efficiency of night snorkeling
- Monitor trends in adult bull trout abundance using redd surveys in Warm Springs River and Shitike Creek
- Determine escapement of adult fluvial bull trout in the Warm Springs River and Shitike Creek

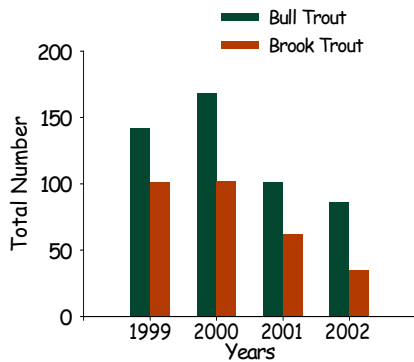
**Relative Abundance and Habitat Use by Bull Trout - Preliminary Results**

- Juvenile bull trout found in highest densities in glides and pools
- Number of juvenile bull trout has decreased since 2002



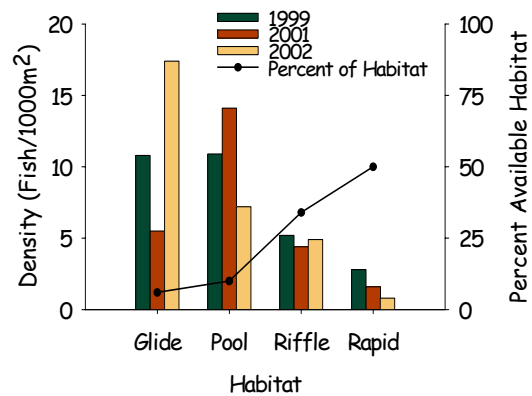
Adult bull trout observed in Shitike Creek.

**Total Number of Fish Observed – Night Snorkeling**



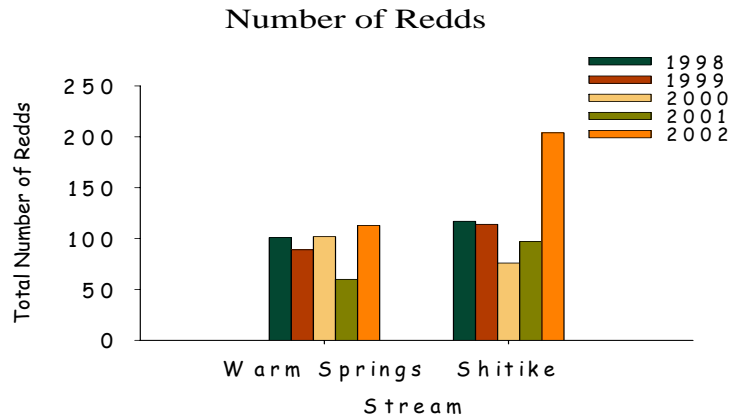
1999-2002	Mean	Range
Bull Trout	124	86-168
Brook Trout	75	35-102

**Bull Trout Density by Habitat Type**



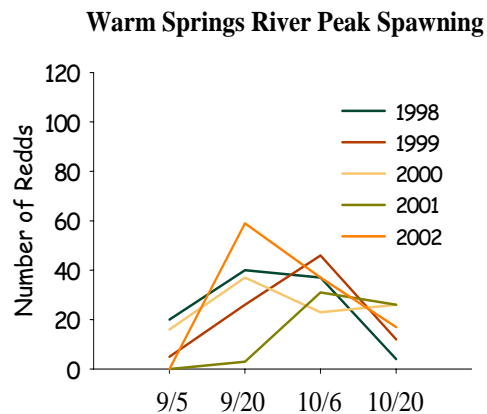
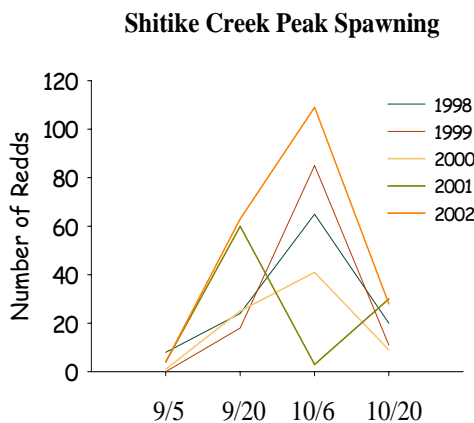
### Warm Springs River and Shitike Creek Bull Trout Spawning - Preliminary Results

- Bull trout spawned two to three weeks earlier in Shitike Creek and Warm Springs River, than in past years
- 113 and 204 bull trout redds were identified in Warm Springs River and Shitike Creek, respectively



1998-2002	Total	Mean	Range
Shitike	602	120.4	76-204
Warm Springs	465	93.0	60-113

The number of bull trout redds identified in Shitike Creek and Warm Springs River in 2002 was the greatest number during a four year period.

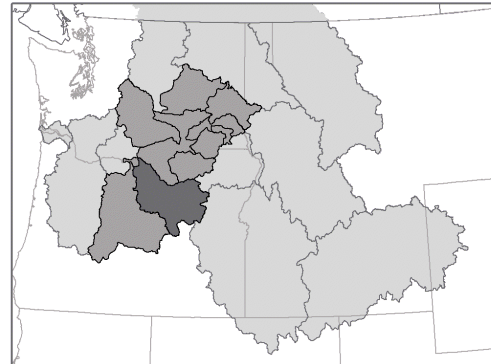


Bull trout spawning activity during 2002 occurred approximately 2-3 weeks earlier than past years.

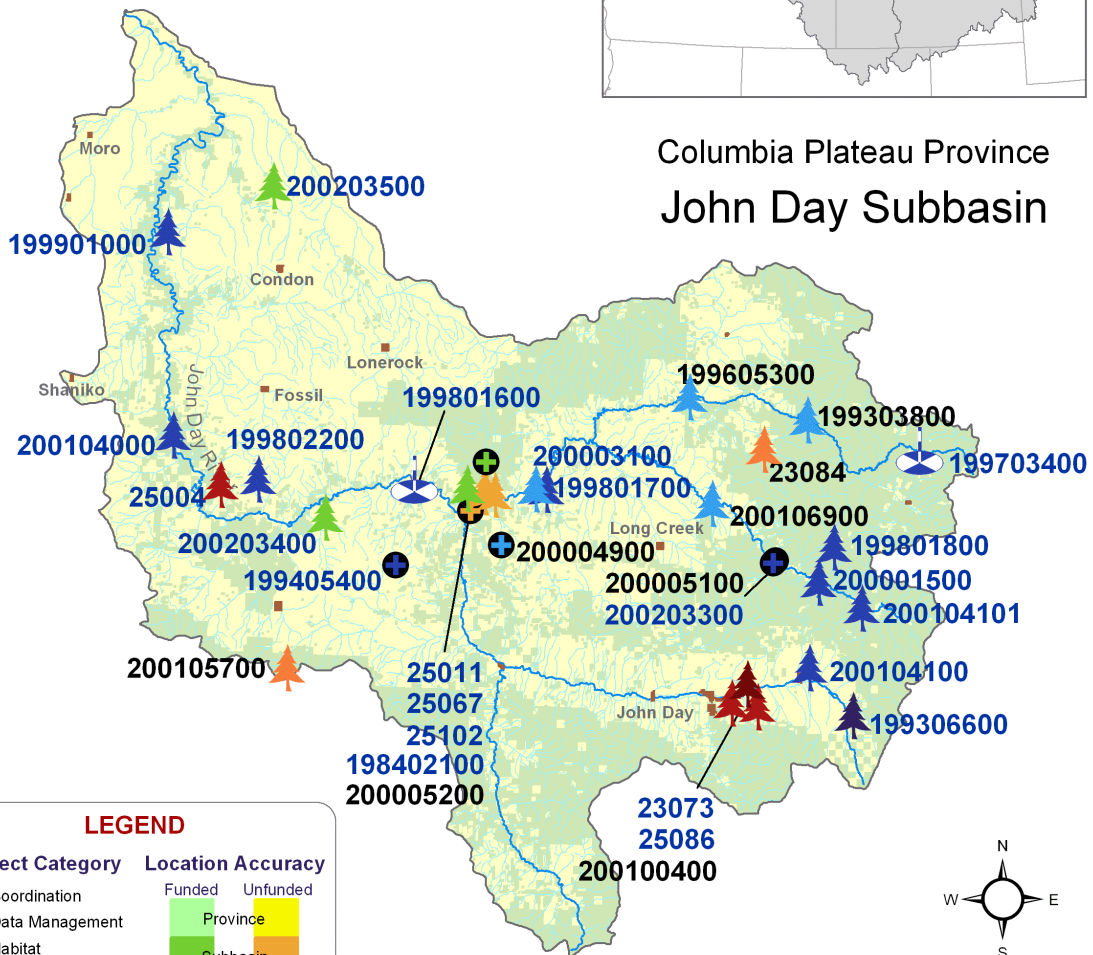
# John Day Subbasin



FY 2001-2003 NPCC Recommended and/or BPA Funded Fish & Wildlife Projects



Columbia Plateau Province  
John Day Subbasin



**LEGEND**

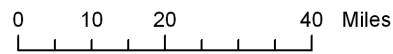
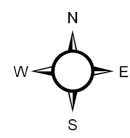
Project Category	Location Accuracy
Coordination	Funded Unfunded
Data Management	Province
Habitat	Subbasin
Harvest	Stream
Mainstem Survival	Area
Monitoring	Point
Production	
Research & Evaluation	

**Project Labels**

Biological Opinion    Non Biological Opinion

**Land Use/Ownership**

Federal	Tribal	State	Local	Private	Urban
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Data Layers: Land Ownership (ICBEMP), 100k Hydrography (Streamnet), Urban Areas (State Data), Projects (CBFWA)  
 Projection: UTM 1983, Zone 11  
 Produced by: Columbia Basin Fish & Wildlife Authority  
 Map Date: 5/20/04

## Projects in the John Day Subbasin

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
23073	Purchase Perpetual Conservation Easement on Holliday Ranch and Crown Ranch Riparian Corridors and Uplands				FY01 High Priority		yes
	<i>Rec 00-03</i>	\$481,800	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	area
23084	Acquisition of Lower Desolation Creek, John Day Basin				FY01 Action Plan		no
	<i>Rec 00-03</i>	\$4,987,754	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	stream
25004	Acquisition of Wagner Ranch				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$108,217	\$35,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	area
25011	Assess Riparian Condition Through Spectrometric Imaging Of Riparian Vegetation				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$175,000	\$100,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Research & Evaluation	subbasin
25067	Manage Water Distribution in the John Day Basin				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$251,261	\$177,785	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	subbasin
25086	Purchase Perpetual Conservation Easement on Holliday Ranch and Crown Ranch Riparian Corridors and Uplands				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$22,950	\$12,900	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	area
25102	Columbia Plateau Water Right Acquisition Program				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$149,368	\$154,446	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	subbasin
198402100	Protect and Enhance Anadromous Fish Habitat in The John Day Subbasin				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$439,936	\$448,500	\$463,749	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$182,933	\$295,866	Anadromous	Habitat	subbasin
199303800	North Fork John Day Area Riparian Fencing				FY 2000		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$48,223	\$10,896	Anadromous	Habitat	stream
199306600	Oregon Fish Screening Project				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$641,621	\$660,870	\$680,696	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$360,247	\$517,064	Anadromous	Habitat	point



## Projects in the John Day Subbasin, continued...

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
<b>199405400</b>	<b>Tools for Managing Bull Trout Populations Influenced by Nonnative Brook Trout Invasions</b>				<b>Columbia Plateau</b>		<b>yes</b>
<i>Rec 00-03</i>		\$488,027	\$489,174	\$500,558	Type	Category	Accuracy
<i>Spent 01-03</i>	--	\$360,675	\$369,736	\$337,763	Resident	Research & Evaluation	area
199605300	North Fork John Day Dredge Tailings Restoration Project				FY 2001		no
<i>Rec 00-03</i>		\$85,000	\$ 0	\$ 0	Type	Category	Accuracy
<i>Spent 01-03</i>	--	\$145,432	\$48,827	\$ 0	Anadromous	Habitat	stream
199703400	Monitoring Fine Sediment Grande Ronde and John Day Rivers				Columbia Plateau		yes
<i>Rec 00-03</i>		\$39,486	\$40,829	\$42,217	Type	Category	Accuracy
<i>Spent 01-03</i>	--	\$48,207	\$18,012	\$22,456	Anadromous	Monitoring	area
199801600	Monitor Natural Escapement & Productivity of John Day Basin Spring Chinook				Columbia Plateau		yes
<i>Rec 00-03</i>		\$157,057	\$1,067,328	\$1,059,648	Type	Category	Accuracy
<i>Spent 01-03</i>	--	\$176,821	\$154,490	\$291,052	Anadromous	Monitoring	area
199801700	Eliminate Gravel Push-up Dams in Lower North Fork John Day				Columbia Plateau		yes
<i>Rec 00-03</i>		\$95,100	\$98,333	\$101,677	Type	Category	Accuracy
<i>Spent 01-03</i>	--	\$47,426	\$ 3,367	\$ 4,764	Anadromous	Habitat	area
199801800	John Day Watershed Restoration				Columbia Plateau		yes
<i>Rec 00-03</i>		\$432,350	\$447,050	\$462,250	Type	Category	Accuracy
<i>Spent 01-03</i>	--	\$291,677	\$ 0	\$534,437	Anadromous	Habitat	area
<b>199802200</b>	<b>Pine Creek Ranch</b>				<b>Columbia Plateau</b>		<b>yes</b>
<i>Rec 00-03</i>		\$175,870	\$172,000	\$117,720	Type	Category	Accuracy
<i>Spent 01-03</i>	--	\$255,463	\$91,077	\$279,279	Wildlife	Habitat	area
199901000	Mitigate Effects of Runoff and Erosion on Salmonid Habitat in Pine Hollow and Jackknife				Columbia Plateau		yes
<i>Rec 00-03</i>		\$32,865	\$21,980	\$22,727	Type	Category	Accuracy
<i>Spent 01-03</i>	--	\$32,832	\$ 0	\$13,083	Anadromous	Habitat	area
200001500	Oxbow Ranch Management and Implementation				Columbia Plateau		yes
<i>Rec 00-03</i>		\$1,782,546	\$291,898	\$110,715	Type	Category	Accuracy
<i>Spent 01-03</i>	--	\$ 0	\$116,235	\$127,275	Anadromous	Habitat	area

Projects in **bold** have preliminary results data included in this report.

## Projects in the John Day Subbasin, continued...

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>	
200003100	North Fork John Day River Subbasin Anadromous Fish Habitat Enhancement Project				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$221,205	\$228,726	\$236,503	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$103,938	\$359,073	Anadromous	Habitat	stream	
200004900	Diet, Distribution & Life History of Neomysis Mercedis in John Day Pool				FY 2000		no	
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$64,799	\$41,562	Anadromous	Research & Evaluation	stream	
200005100	Research/Evaluation of NE Oregon Streams				FY 1999		no	
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$109,325	\$28,382	\$ 5,216	Anadromous	Research & Evaluation	area
200005200	Upstream Migration of Pacific Lampreys in the John Day River: Behavior, Timing, and Habitat Use				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$98,420	\$271,956	\$271,000	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$136,157	\$24,643	\$ 1,244	Anadromous	Research & Evaluation	subbasin
200100400	Holliday Ranch Easement				FY01 Action Plan		no	
	<i>Rec 00-03</i>	\$5,026,800	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Habitat	point
200104000	Wagner Ranch Acquisition				FY01 High Priority		yes	
	<i>Rec 00-03</i>	\$2,658,774	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$2,589,449	\$ 7,616	\$ 0	Anadromous	Habitat	area
200104100	Forrest Ranch Acquisition				FY01 High Priority		yes	
	<i>Rec 00-03</i>	\$4,184,185	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$3,936,444	\$ 0	Anadromous	Habitat	area
200104101	Forrest Ranch Acquisition				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$ 0	\$169,851	\$155,715	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$37,316	Anadromous	Habitat	area
200105700	Badger Creek Culvert Replacement and Road Closure Projects (23020)				FY01 Action Plan		no	
	<i>Rec 00-03</i>	\$87,000	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Habitat	stream

**Projects in the John Day Subbasin, continued...**

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
200106900	John Day Basin Streamflow Enhancement Project, Summer 2001				FY01 Action Plan		no
	<i>Rec 00-03</i>	\$73,340	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$73,340	Anadromous	Habitat	stream
200203300	John Day Salmonid Recovery Monitoring Program				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$164,133	\$59,150	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Research & Evaluation	area
200203400	Wheeler SWCD Riparian Buffer Planning and Implementation				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$75,086	\$77,337	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	county
200203500	Gilliam SWCD Riparian Buffers				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$75,086	\$77,337	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 7,806	Anadromous	Habitat	county

**199405400—Bull Trout Life History, Genetics, Habitat Needs, and Limiting Factors in Central and Northeast Oregon**

**2002 Project Objectives**

- Characterize fine-scale bull trout population structure in central and northeast Oregon
- Determine movements of fluvial bull trout of the Umatilla River
- Compare methods to estimate adult bull trout abundance in Mill Creek
- Employ EMAP to monitor the status, trends, and distribution of adult bull trout in the Columbia Plateau

**Genetic Monitoring - Preliminary Results**

- Genetic samples were collected from 32 streams throughout central and northeastern Oregon
- Genetic analyses using microsatellites will be completed in 2004



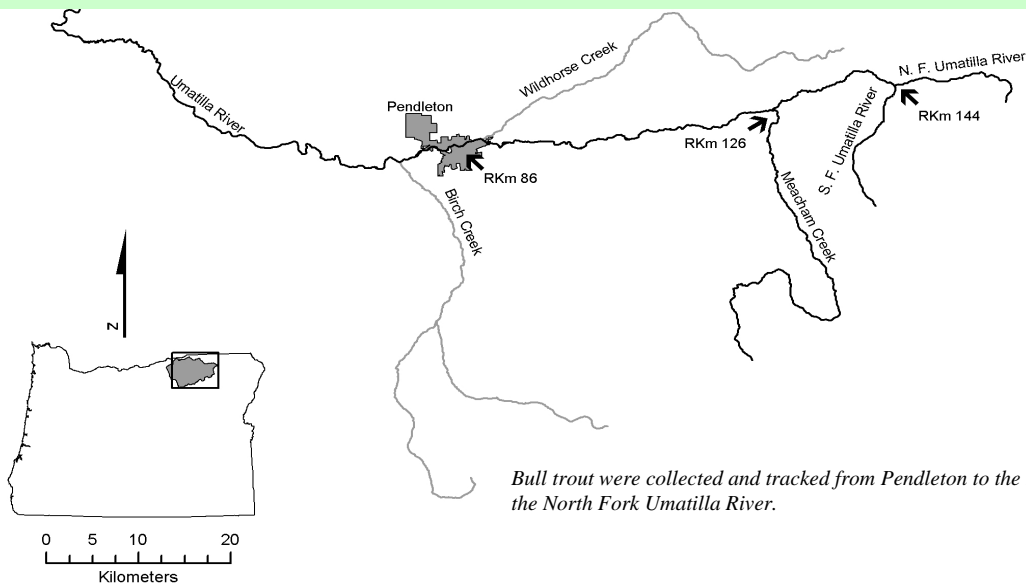
Photo: Courtesy Oregon Department of Fish and Wildlife

M. Esteve 2002

*Bull trout spawning in the North Fork Umatilla River.*

**Umatilla River Bull Trout Movements - Preliminary Results**

- Radio-tagged 15 fluvial fish ( $\geq 12$  in)
  - 11 from the Umatilla River between river mile 85-89
  - 4 from the North Fork Umatilla River between river mile 0-2
- All fish moved into the North Fork Umatilla River by the end of July with movement as far as river mile 6 during September and October
- Seven fish over-wintered in the Umatilla River between river mile 73-89



*Bull trout were collected and tracked from Pendleton to the headwaters of the North Fork Umatilla River.*

### Comparison of Methods to Estimate Abundance - Preliminary Results

- Results suggest modifications are required prior to implementing similar tasks in 2004
- Modifications include:
  1. Eliminating the potential for fish to jump the dam (likely result in an underestimate of the fluvial form)
  2. Snorkel all pools
  3. Increase sampling effort in select locations

	Fluvial form	Resident form
<b>Adults</b>	212	Unknown
<b>Mature females</b>	106	0
<b>Female redds</b>	168	45

### EMAP (randomized sampling) in the Columbia Plateau - Preliminary Results

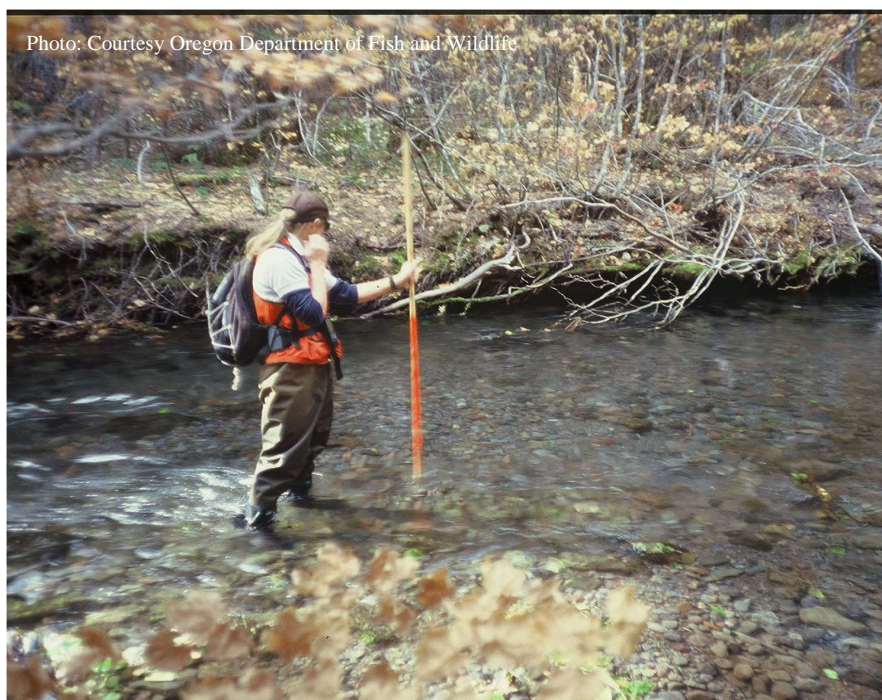


Photo: Courtesy Oregon Department of Fish and Wildlife

An ODFW biologist surveying bull trout redds in the Umatilla River Basin.

#### Redd Estimates in the Columbia Plateau Province

	N	Redds	95% CI
<b>Province</b>	116	2930	± 15%
<b>John Day</b>	42	541	± 33%
<b>Walla Walla</b>	40	716	± 16%
<b>Deschutes</b>	34	1704	± 22%

	Census	EMAP
<b>Redds (N)</b>	730	716
<b>Km surveyed</b>	115	59



**199802200— Pine Creek Ranch**

**2002 Project Objectives**

- Restore and monitor changes in riparian, floodplain, and upland habitat
- Implement public access plan

**Upland and Riparian Restoration- Preliminary Results**

- Pine Creek Ranch acquired in 1999
- 34,000 deeded acres
- 10,000 acres of BLM allotments
- 10 miles of Pine Creek (37% of the watershed)
- 6 miles of John Day waterfront

**Upland Restoration/Protection**

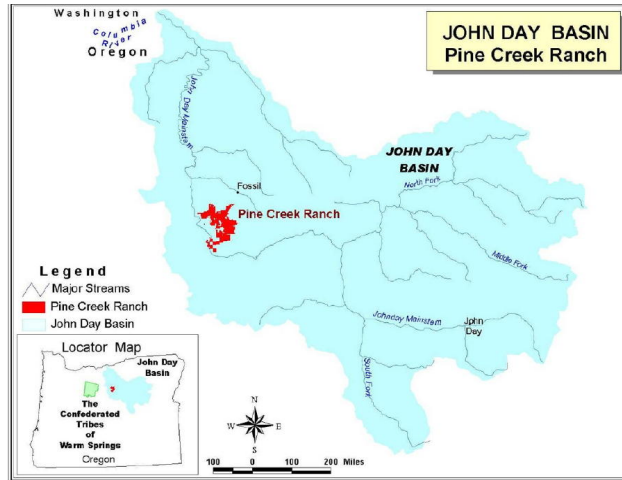
- Livestock removed from 44,000 acres of private and BLM lands

**Riparian Restoration/Protection**

- Removed/controlled junipers from two miles of Pine Creek
- Removed one passage barrier (i.e., culvert) from Pine Creek in 2002

**Education and Access Program**

- Over 1,500 student-days
- 878 tribal and public hunter-days
- 262 hiking/bird watching-days



Through riparian buffer, water rights instream leases, and juniper control programs, the portion of Pine Creek shown above experienced a natural recovery of riparian vegetation. Photos: Courtesy Confederated Tribes of the Warm Springs Reservation of Oregon



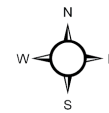
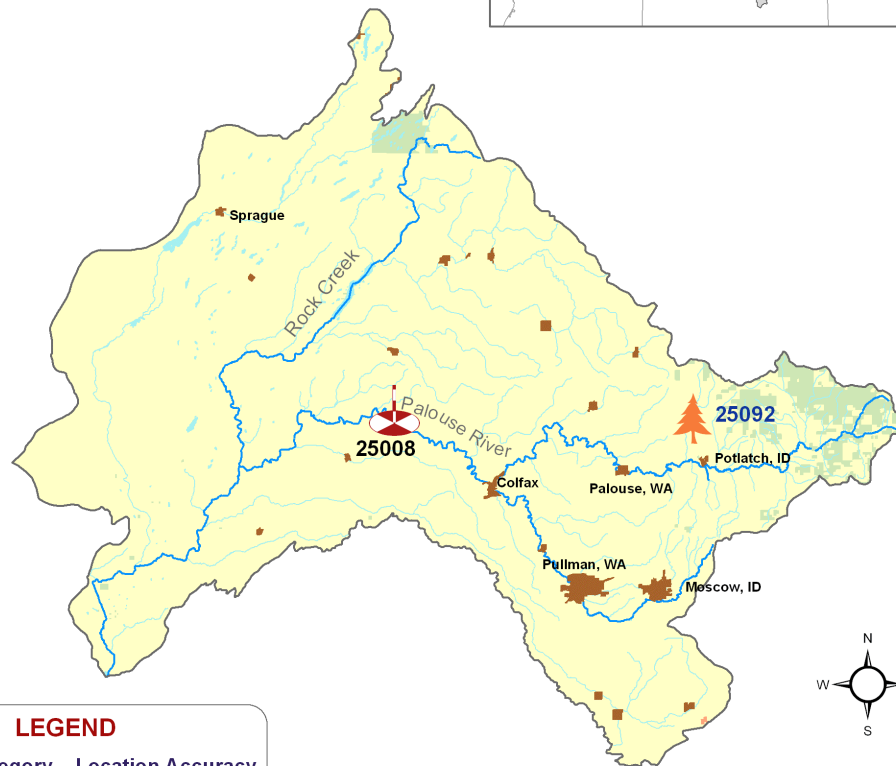
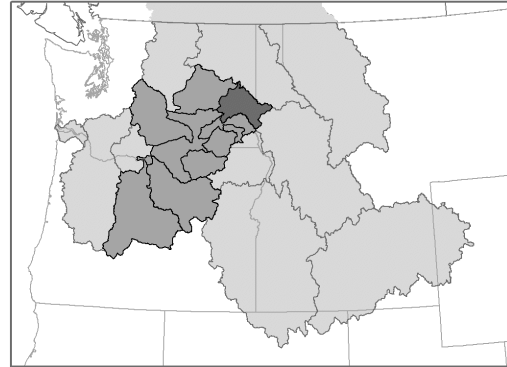
Working with the Wheeler County Soil and Water Conservation District, the Confederated Tribes of the Warm Springs Reservation of Oregon removed the culvert in the above photo (left) that was functioning as a barrier to fish passage.

# Palouse Subbasin



FY 2001-2003 NPCC Recommended and/or BPA Funded Fish & Wildlife Projects

Columbia Plateau Province  
Palouse Subbasin



**LEGEND**

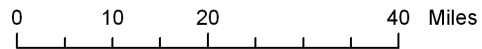
<b>Project Category</b>	<b>Location Accuracy</b>
Coordination	Funded  Unfunded
Data Management	Province
Habitat	Subbasin
Harvest	Stream
Mainstem Survival	Area
Monitoring	Point
Production	
Research & Evaluation	

**Project Labels**

Biological Opinion Non Biological Opinion

**Land Use/Ownership**

Federal	Tribal	State	Local	Private	Urban
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Data Layers: Land Ownership (ICBEMP), 100k Hydrography (Streamnet), Urban Areas (State Data), Projects (CBFWA)  
 Projection: UTM 1983, Zone 11  
 Produced by: Columbia Basin Fish & Wildlife Authority  
 Map Date: 5/20/04

## Projects in the Palouse Subbasin

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
25008	Resident Fish Stock Status in the Palouse River and Upper Crab Creek Watersheds, Washington				Columbia Plateau		no
<i>Rec 00-03</i>	\$ 0	\$546,670	\$472,203	Type	Category	Accuracy	
<i>Spent 01-03</i>	--	\$ 0	\$ 0	Resident	Monitoring	area	
25092	Restoration of Healthy Watershed to Palouse River Drainage in Idaho				Columbia Plateau		yes
<i>Rec 00-03</i>	\$ 0	\$100,200	\$ 0	Type	Category	Accuracy	
<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	stream	

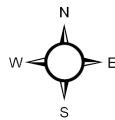
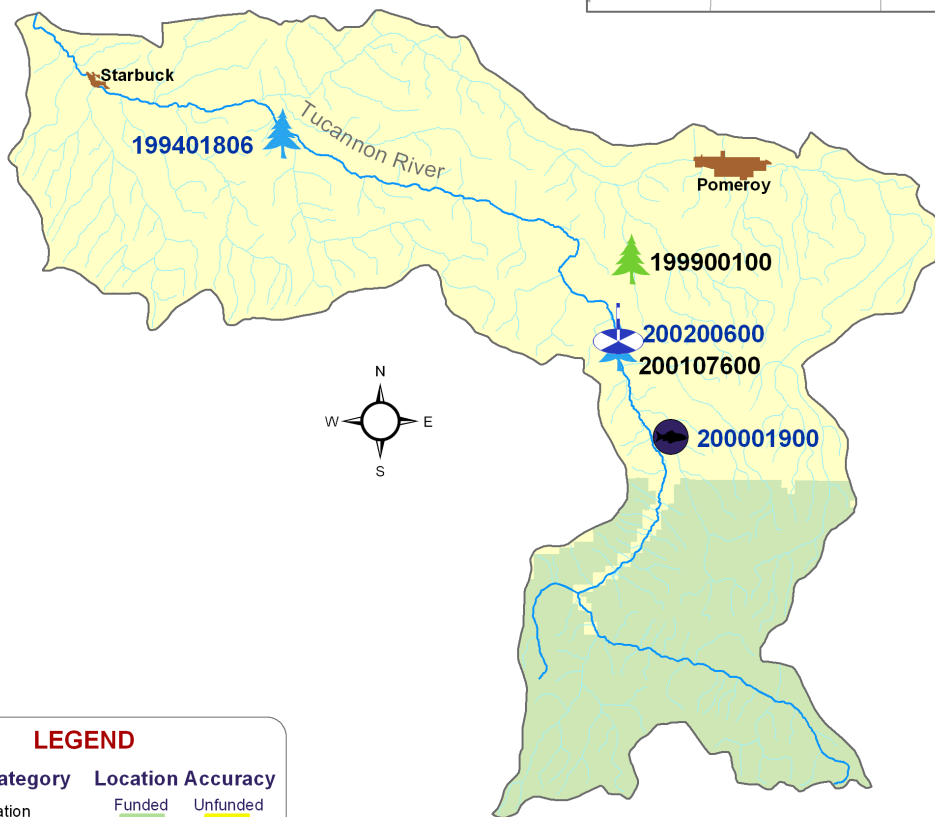
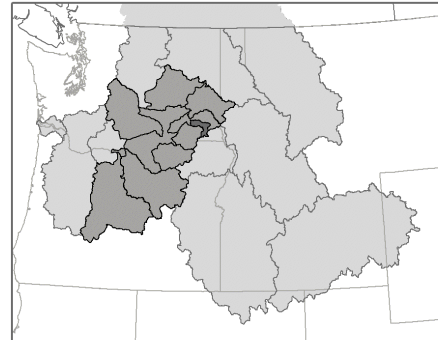


# Tucannon Subbasin



FY 2001-2003 NPCC Recommended and/or BPA Funded Fish & Wildlife Projects

## Columbia Plateau Province Tucannon Subbasin



**LEGEND**

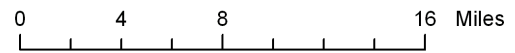
Project Category		Location Accuracy	
		Funded	Unfunded
	Coordination		
	Data Management		
	Habitat		
	Harvest		
	Mainstem Survival		
	Monitoring		
	Production		
	Research & Evaluation		

**Project Labels**

Biological Opinion    Non Biological Opinion

**Land Use/Ownership**

Federal	Tribal	State	Local	Private	Urban



Data Layers: Land Ownership (ICBEMP), 100k Hydrography (Streamnet), Urban Areas (State Data), Projects (CBFWA)  
 Projection: UTM 1983, Zone 11  
 Produced by: Columbia Basin Fish & Wildlife Authority  
 Map Date: 5/20/04

## Projects in the Tucannon Subbasin

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
199401806	Implement Tucannon River Model Watershed Plan to Restore Salmonid Habitat				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$257,375	\$252,625	\$304,249	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$102,535	\$172,530	\$294,006	Anadromous	Habitat stream
199900100	Tucannon WS Implementation				FY 2000		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$35,256	\$ 0	\$ 0	Anadromous	Habitat subbasin
200001900	Tucannon River Spring Chinook Captive Broodstock Program				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$98,420	\$94,509	\$97,722	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$65,850	\$68,470	\$147,785	Anadromous	Production point
200107600	Acquire Tucannon River Water Rights				FY01 High Priority		no
	<i>Rec 00-03</i>	\$120,000	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$10,104	Anadromous	Habitat stream
<b>200200600</b>	<b>Evaluate Bull Trout Movements in the Tucannon and Lower Snake rivers</b>				<b>Columbia Plateau</b>		<b>yes</b>
	<i>Rec 00-03</i>	\$ 0	\$81,626	\$193,641	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$200,793	Resident	Monitoring area

Projects in **bold** have preliminary results data included in this report.

200200600—Bull Trout Movements; Tucannon and Snake Rivers

2002 Project Objectives

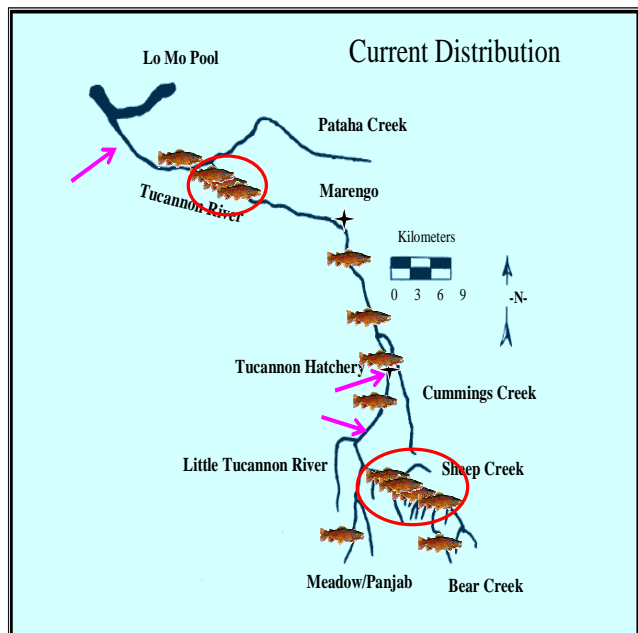
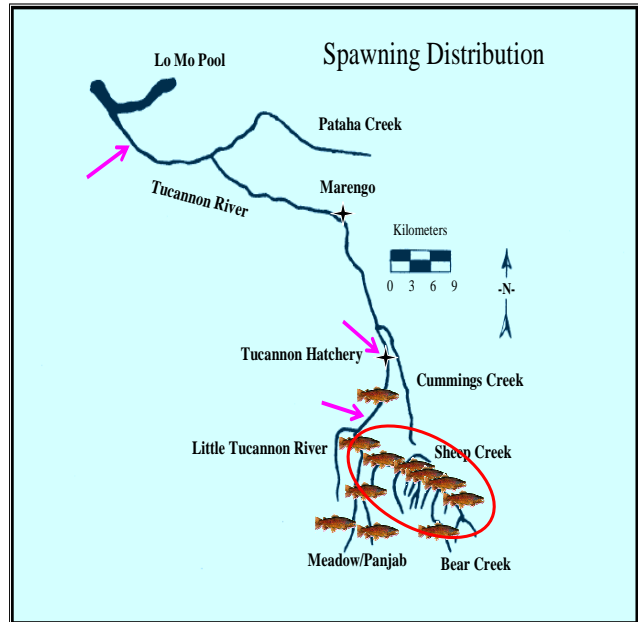
- Determine spatial and temporal distribution of adult bull trout in the Tucannon and Lower Snake rivers.

Tucannon River / Lower Snake River Bull Trout Movements - Preliminary Results

- Bull trout use the headwaters of Meadow, Panjab, Bear, and Sheep creeks for spawning
- Preliminary data indicated adult bull trout disperse throughout the Tucannon Basin following spawning and migrate towards the Lower Snake River



U.S. Fish and Wildlife fisheries biologist radio tracking bull trout in the Tucannon River.



Distribution of spawning bull trout in the Tucannon River.



## Projects in the Snake Lower Subbasin

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
198605001	Evaluation of Rebuilding the Sturgeon Population in the Snake River				FY 1998		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$44,862	\$473,339	\$214,856	Resident	Research & Evaluation point
199102900	Understanding the Effects of Summer Flow Augmentation on the Migratory Behavior and Survival of Fall Chinook Salmon Migrating through Lower Granite Reservoir				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$699,000	\$630,375	\$610,375	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$802,258	\$1,171,291	\$600,501	Anadromous	Research & Evaluation area
199401807	Garfield County Sediment Reduction and Riparian Improvement Program				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$123,700	\$80,000	\$80,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$128,639	\$75,787	\$63,018	Anadromous	Habitat county
200202700	Numerically Simulating the Hydrodynamic and Water Quality Environment for Migrating Salmon in the Lower Snake River				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$207,360	\$183,322	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$97,994	\$213,020	Anadromous	Research & Evaluation point

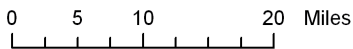
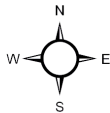
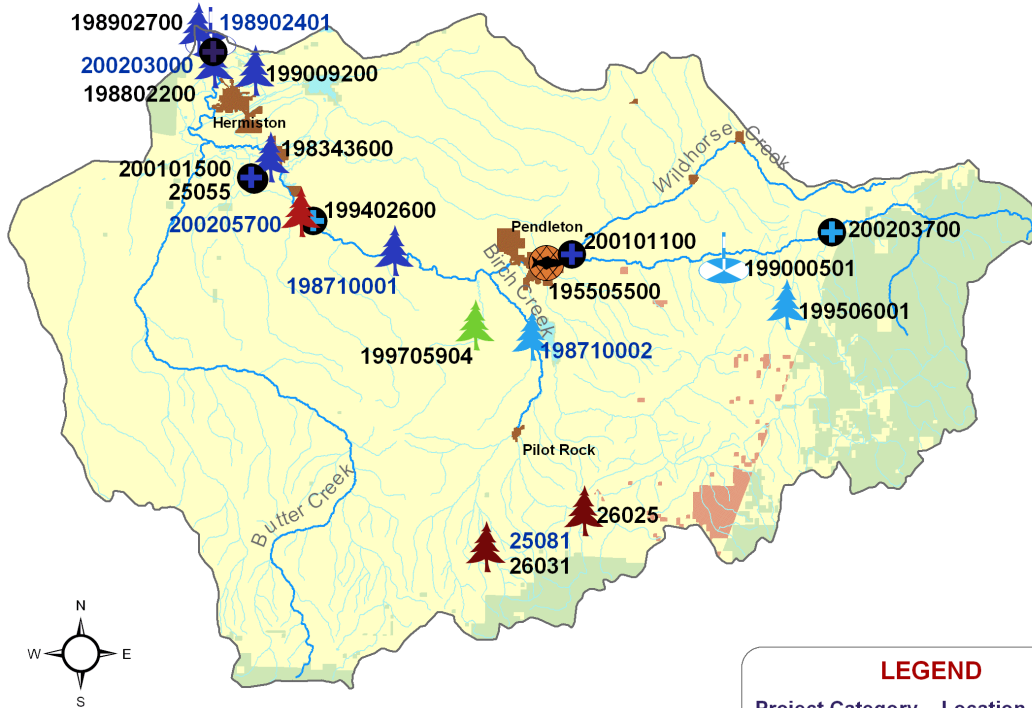
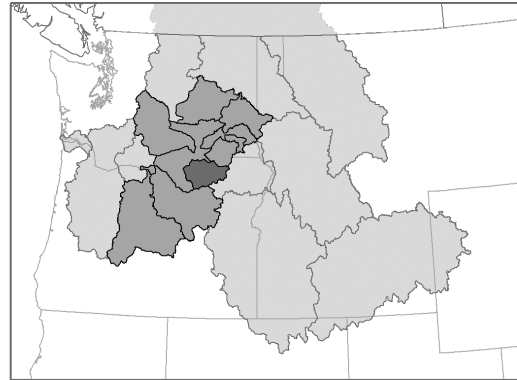
# Umatilla Subbasin



**Columbia Basin  
Fish and Wildlife Authority**

FY 2001-2003 NPCC Recommended and/or  
BPA Funded Fish & Wildlife Projects

## Columbia Plateau Province Umatilla Subbasin



Data Layers: Land Ownership (ICBEMP), 100k Hydrography (Streamnet), Urban Areas (State Data), Projects (CBFWA)  
 Projection: UTM 1983, Zone 11  
 Produced by: Columbia Basin Fish & Wildlife Authority  
 Map Date: 5/20/04

**LEGEND**

Project Category		Location Accuracy	
	Coordination		Funded Province
	Data Management		Unfunded Province
	Habitat		Subbasin
	Harvest		Stream
	Mainstem Survival		Area
	Monitoring		Point
	Production		
	Research & Evaluation		

**Project Labels**

Biological Opinion    Non Biological Opinion

**Land Use/Ownership**

Federal	Tribal	State	Local	Private	Urban

## Projects in the Umatilla Subbasin

Project ID	Project Title					Review Cycle		BiOp?
25055	Echo Meadows Artificial Recharge Extended Groundwater and Surface Water Modeling					Columbia Plateau		no
	Rec 00-03	\$ 0	\$390,283	\$390,283	Type	Category	Accuracy	
	Spent 01-03	--	\$ 0	\$ 0	\$ 0	Anadromous	Research & Evaluation point	
25081	Improve Upstream Fish Passage in the Birch Creek Watershed					Columbia Plateau		yes
	Rec 00-03	\$ 0	\$374,572	\$210,410	Type	Category	Accuracy	
	Spent 01-03	--	\$ 0	\$ 0	\$ 0	Anadromous	Habitat area	
26025	LP Ranch Acquisition					FY01 Action Plan		no
	Rec 00-03	\$1,468,042	\$ 0	\$ 0	Type	Category	Accuracy	
	Spent 01-03	--	\$ 0	\$ 0	\$ 0	Anadromous	Habitat point	
26031	Improve Upstream Fish Passage in the Birch Creek Watershed					FY01 Action Plan		no
	Rec 00-03	\$300,410	\$ 0	\$ 0	Type	Category	Accuracy	
	Spent 01-03	--	\$ 0	\$ 0	\$ 0	Anadromous	Habitat point	
195505500	Umatilla Tribal Fish & Wildlife Enforcement					Columbia Plateau		no
	Rec 00-03	\$ 0	\$163,369	\$171,506	Type	Category	Accuracy	
	Spent 01-03	--	\$ 0	\$ 0	\$ 0	Anadromous	Harvest stream	
198343600	Umatilla Basin Fish Facilities Operation and Maintenance					Columbia Plateau		no
	Rec 00-03	\$445,411	\$460,555	\$476,214	Type	Category	Accuracy	
	Spent 01-03	--	\$422,497	\$417,609	\$ 0	Anadromous	Habitat area	
198710001	Enhance Umatilla River Basin Anadromous Fish Habitat					Columbia Plateau		yes
	Rec 00-03	\$270,987	\$350,000	\$350,000	Type	Category	Accuracy	
	Spent 01-03	--	\$ 7,085	\$638,659	\$269,437	Anadromous	Habitat area	
198710002	Umatilla Subbasin Fish Habitat Improvement					Columbia Plateau		yes
	Rec 00-03	\$425,263	\$300,264	\$300,264	Type	Category	Accuracy	
	Spent 01-03	--	\$371,927	\$549,910	\$359,556	Anadromous	Habitat stream	
198802200	Umatilla River Fish Passage Operations					Columbia Plateau		no
	Rec 00-03	\$327,600	\$338,738	\$350,256	Type	Category	Accuracy	
	Spent 01-03	--	\$415,592	\$319,320	\$425,710	Anadromous	Habitat area	
198902401	Evaluate Juvenile Salmonid Outmigration and Survival in the Lower Umatilla River Basin					Columbia Plateau		yes
	Rec 00-03	\$347,489	\$286,427	\$296,166	Type	Category	Accuracy	
	Spent 01-03	--	\$232,732	\$201,549	\$301,961	Anadromous	Monitoring area	



## Projects in the Umatilla Subbasin, continued...

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>	
198902700	Power Repay Umatilla Basin Project				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$800,000	\$1,000,000	\$1,000,000	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$437,548	\$468,977	\$1,596,097	Anadromous	Habitat	area
199000501	Umatilla Basin Natural Production Monitoring and Evaluation Project				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$318,333	\$375,716	\$385,260	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$685,305	\$1,334,397	\$427,785	Anadromous	Monitoring	stream
199009200	Protect and Enhance the Wanaket Wildlife Mitigation Area				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$204,438	\$211,389	\$218,576	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$203,471	\$259,939	\$166,670	Wildlife	Habitat	area
199402600	Pacific Lamprey Research and Restoration				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$453,267	\$468,678	\$484,613	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$379,062	\$418,963	\$546,859	Anadromous	Research & Evaluation	stream
<b>199506001</b>	<b>Protect and Enhance Wildlife Habitat in Squaw Creek Watershed</b>				<b>Columbia Plateau</b>		<b>no</b>	
	<i>Rec 00-03</i>	\$205,188	\$212,164	\$219,378	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$82,719	\$97,609	\$145,246	Wildlife	Habitat	stream
199705904	Oregon Wildlife Planning & Coordination CTUIR				FY 1999		no	
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 4,335	\$ 0	\$ 0	Wildlife	Habitat	subbasin
200101100	Habitat Diversity in Alluvial Rivers				FY01 Innovative		no	
	<i>Rec 00-03</i>	\$319,860	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$57,285	\$74,415	\$151,761	Anadromous	Research & Evaluation	area
200101500	Echo Meadow Project - Winter Artificial Recharge to Cool Rivers				FY01 Innovative		no	
	<i>Rec 00-03</i>	\$232,000	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$309,473	\$268,269	Anadromous	Research & Evaluation	area
200203000	Develop Progeny Marker for Salmonids to Evaluate Supplementation				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$ 0	\$149,655	\$152,151	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$139,615	Anadromous	Research & Evaluation	point

Projects in **bold** have preliminary results data included in this report.

**Projects in the Umatilla Subbasin, continued...**

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
200203700	Characterize Genetic Differences and Distribution of Freshwater Mussels				Columbia Plateau		no
	<i>Rec 00-03</i>	\$ 0	\$220,000	\$228,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Resident	Research & Evaluation	stream
200205700	Westland-Ramos Fish Passage and Habitat Restoration Pilot Project				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$203,020	\$1,044,080	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	area

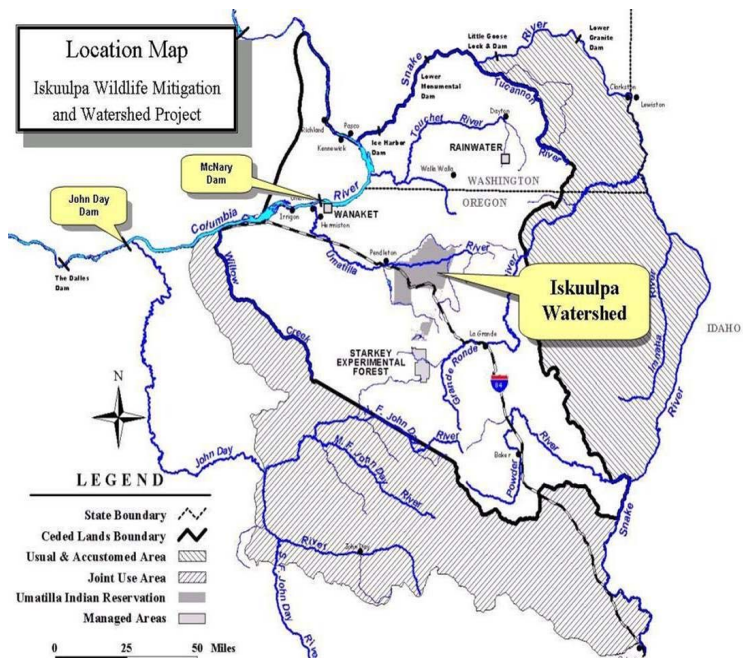
**199506001—Protect and Enhance Wildlife Habitat in Squaw Creek Watershed**

**2002 Project Objectives**

- Implement instream/riparian enhancement activities
- Monitor effectiveness of protection and enhancement activities

**Iskulpa Watershed Project - Preliminary Results**

- Iskulpka watershed = 24,200 acres
- Acquired grazing leases for 20,117 acres annually
- Added 130 whole trees to Reaches 3-5 in the floodplain to provide 27 pieces/mile (<4 pieces/mile prior to implementation)
- Planted floodplain to provide future large wood
- Controlled noxious weeds in Meacham and Umatilla watersheds



**HEP Results**

Species	Habitat Units
Downy woodpecker	1,222.7
Black-capped chickadee	1,203.8
Blue grouse	407.6
Great blue heron	30.5
Mink	280.6
Western meadowlark	1,318.9
Total	4,567.8

**Summer Steelhead Production**

- 1985-2002; Mean 61.2 redds/index reach/year (9.7/mile)
- 2002: 134 redds/index reach/year (20/mile)



Photo: Courtesy Confederated Tribes of the Umatilla Indian Reservation

Of the observed anadromous fish spawning production observed in the Umatilla Subbasin, 24% occurred in Iskulpka Creek.

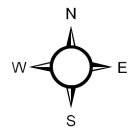
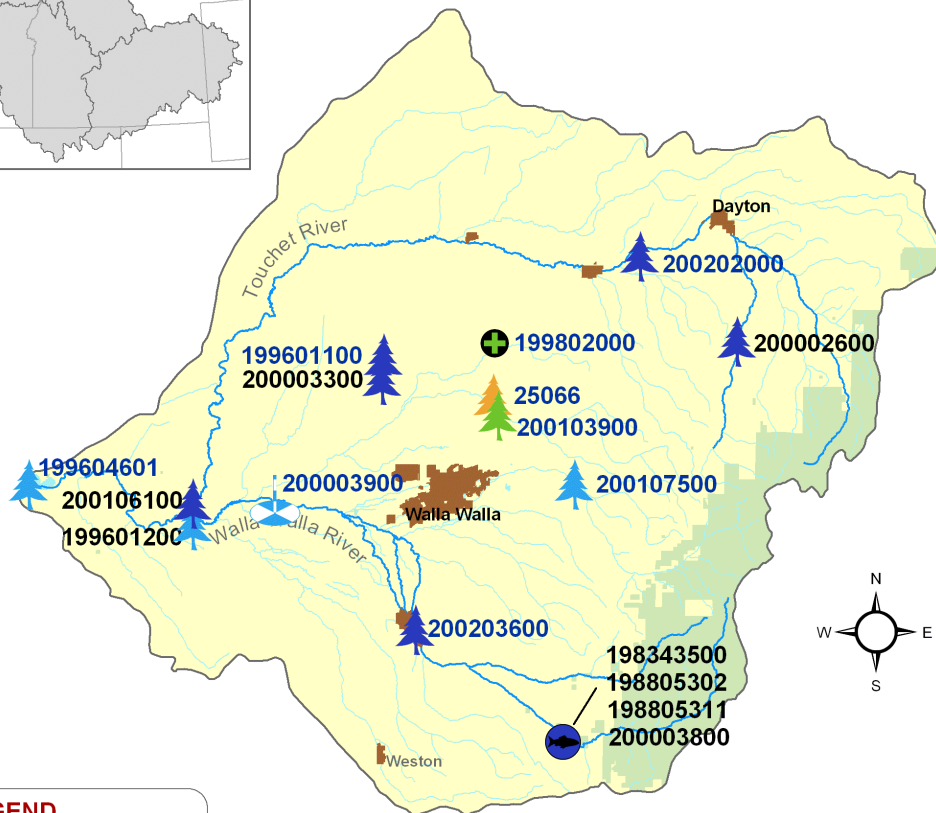
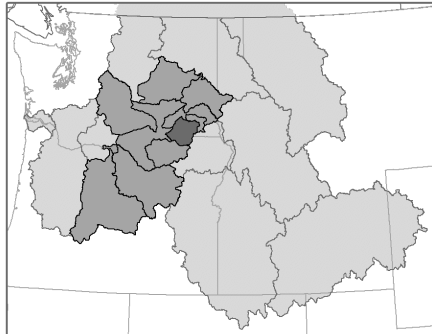
# Walla Walla Subbasin



**Columbia Basin  
Fish and Wildlife Authority**

FY 2001-2003 NPCC Recommended and/or  
BPA Funded Fish & Wildlife Projects

## Columbia Plateau Province Walla Walla Subbasin



### LEGEND

Project Category	Location Accuracy	
	Funded	Unfunded
Coordination	Province	Subbasin
Data Management	Stream	Area
Habitat	Area	Point
Harvest	Area	Point
Mainstem Survival	Area	Point
Monitoring	Area	Point
Production	Area	Point
Research & Evaluation	Area	Point

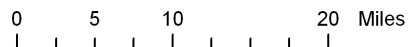
**Project Labels**

Biological Opinion    Non Biological Opinion

**Land Use/Ownership**

Federal	Tribal	State	Local	Private	Urban
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Data Layers: Land Ownership (ICBEMP), 100k Hydrography (Streamnet), Urban Areas (State Data), Projects (CBFWA)  
 Projection: UTM 1983, Zone 11  
 Produced by: Columbia Basin Fish & Wildlife Authority  
 Map Date: 5/20/04

## Projects in the Walla Walla Subbasin

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
25066	Manage Water Distribution in the Walla Walla River Basin				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$552,525	\$498,799	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	subbasin
198343500	Operate and Maintain Umatilla Hatchery Satellite Facilities				Columbia Plateau		no
	<i>Rec 00-03</i>	\$920,977	\$952,290	\$984,668	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$776,240	\$968,224	Anadromous	Production	area
198805302	Design and Construct Umatilla Hatchery Supplement				Columbia Plateau		no
	<i>Rec 00-03</i>	\$35,000	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$14,776	\$ 0	Anadromous	Production	area
198805311	NEOH Umatilla CTUIR Parametrix				FY 2000		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 932	\$ 0	Anadromous	Production	point
199601100	Walla Walla River Juvenile and Adult Passage Improvements				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$450,000	\$465,300	\$481,120	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$581,973	\$1,480,201	Anadromous	Habitat	area
199601200	Anad Fish Passage Walla Walla				FY 1999		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$400,000	\$ 0	Anadromous	Habitat	stream
199604601	Walla Walla Basin Fish Habitat Enhancement				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$251,122	\$259,660	\$268,489	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$12,063	\$528,757	Anadromous	Habitat	stream
199802000	Assess Fish Habitat and Salmonids in the Walla Walla Watershed in Washington				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$158,490	\$163,879	\$169,451	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$88,449	\$158,800	Anadromous	Research & Evaluation	subbasin
200002600	Rainwater Wildlife Area				Columbia Plateau		no
	<i>Rec 00-03</i>	\$279,744	\$289,255	\$299,090	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$23,054	\$177,559	Wildlife	Habitat	area

**Projects in bold have preliminary results data included in this report.**

## Projects in the Walla Walla Subbasin, continued...

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>	
200003300	Walla Walla River Fish Passage Operations				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$80,000	\$109,551	\$113,276	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$90,947	Anadromous	Habitat	area
200003800	Design and Construct NEOH Walla Walla Hatchery				FY 2000		no	
	<i>Rec 00-03</i>	\$100,000	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$44,131	\$ 0	\$-16,641	Anadromous	Production	area
200003900	Walla Walla Basin Natural Production Monitoring and Evaluation Project				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$330,880	\$498,886	\$510,518	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$288,940	Anadromous	Monitoring	stream
200103900	Install Fish Screens to Protect ESA-listed Steelhead and Bull Trout in the Walla Walla Basin				FY01 High Priority		yes	
	<i>Rec 00-03</i>	\$461,700	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$153,986	Anadromous	Habitat	subbasin
200106100	Touchet River Flow Acquisition				FY01 Action Plan		no	
	<i>Rec 00-03</i>	\$115,524	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$102,024	\$13,500	Anadromous	Habitat	area
200107500	Increase In Stream Flows to De-watered Stream Reaches in the Walla Walla Basin				FY01 High Priority		yes	
	<i>Rec 00-03</i>	\$590,000	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$69,804	\$92,550	Anadromous	Habitat	stream
200202000	Fabricate and Install New Hunstville Mill Fish Screen				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$ 0	\$120,000	\$120,000	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$78,097	Anadromous	Habitat	area
200203600	Walla Walla River Flow Restoration				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$ 0	\$478,000	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$161,448	\$180,087	Anadromous	Habitat	area

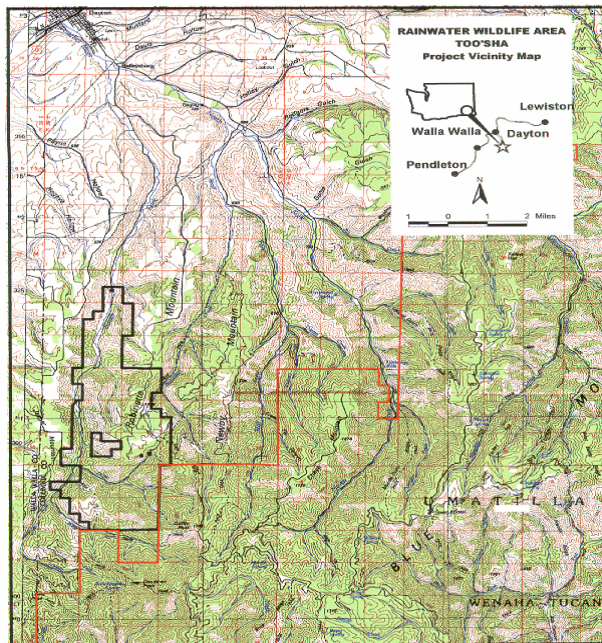


**200002600—Rainwater Wildlife Area**

**2002 Project Objectives**

- Maintain and enhance forest, grassland, and riparian habitat
- Monitor and evaluate habitat restoration/maintenance activities

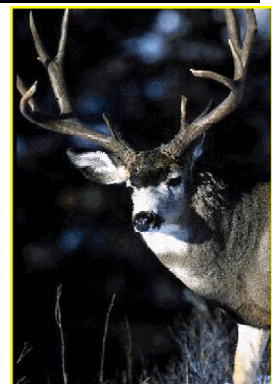
**Habitat Enhancement - Preliminary Results**



- 9 miles of road obliterated and drainage repaired
- Removed failed bridge that was preventing fish passage
- Added large wood to Griffin Fork
- Planted 14,000 trees
- Seeded 30 acres

**HEP Results**

Species	Habitat Units
Downy woodpecker	1,100
Black-capped chickadee	3,178
Blue grouse	137
Great blue heron	117
Mink	447
Western meadowlark	154
Yellow warbler	28
<b>Total</b>	<b>5,161</b>

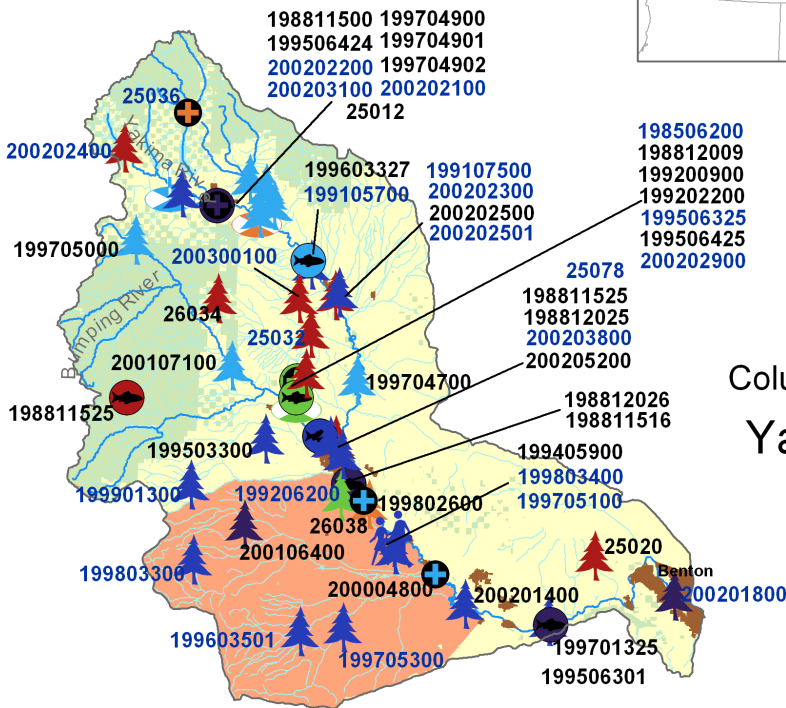
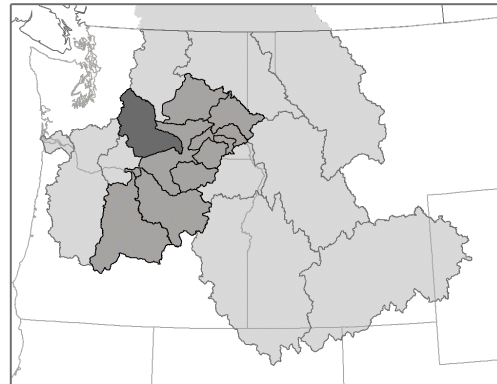


Photos: Courtesy Confederated Tribes of the Umatilla Indian Reservation

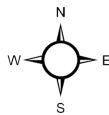
# Yakima Subbasin



FY 2001-2003 NPCC Recommended and/or BPA Funded Fish & Wildlife Projects



Columbia Plateau Province  
Yakima Subbasin



0 20 40 80 Miles

Data Layers: Land Ownership (ICBEMP), 100k Hydrography (Streamnet), Urban Areas (State Data), Projects (CBFWA)  
Projection: UTM 1983, Zone 11  
Produced by: Columbia Basin Fish & Wildlife Authority  
Map Date: 5/20/04

**LEGEND**

<b>Project Category</b>		<b>Location Accuracy</b>	
Coordination	Funded	Unfunded	
Data Management	Province	Subbasin	
Habitat	Stream	Area	
Harvest	Point		
Mainstem Survival			
Monitoring			
Production			
Research & Evaluation			
<b>Project Labels</b>			
Biological Opinion	Non Biological Opinion		
<b>Land Use/Ownership</b>			
Federal	Tribal	State	Local
Private	Urban		

## Projects in the Yakima Subbasin

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
25012	Assessment of Bull Trout Populations in the Yakima River Watershed				Columbia Plateau		no
	<i>Rec 00-03</i>	\$ 0	\$243,947	\$165,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Resident	Monitoring	stream
25020	Acquire Rattlesnake Slope Addition				Columbia Plateau		no
	<i>Rec 00-03</i>	\$ 0	\$3,542,500	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	area
25032	Wenas Wildlife Area Inholding Acquisitions				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$706,143	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Wildlife	Habitat	area
25036	The Impact of Flow Regulation on Riparian Cottonwood Ecosystems in the Yakima River Basin				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$225,495	\$134,421	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Research & Evaluation	stream
25078	Acquire Anadromous Fish Habitat in the Selah Gap to Union Gap Flood Plain, Yakima River Basin, Washington				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$875,000	\$875,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	area
26034	Kittitas Valley Reach Acquisitions				FY01 Action Plan		no
	<i>Rec 00-03</i>	\$2,000,000	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	area
26038	Acquire Anadromous Fish Habitat in the Union Gap Reach and Wenas Basin, Yakima River Basin, Washington				FY01 Action Plan		no
	<i>Rec 00-03</i>	\$3,000,000	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	stream
198506200	Passage Improvement Evaluation				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$100,000	\$103,400	\$106,916	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$111,279	\$110,566	Anadromous	Monitoring	subbasin
198811500	Cle Elum Mon/Eval Bldg				FY 1999		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$128,561	\$710,706	Anadromous	Production	point
198811516	Yakima Hatchery Acclimation Site				FY 2000		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$37,558	\$ 0	Anadromous	Production	point

## Projects in the Yakima Subbasin, continued...

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
198811525	Yakima/Klickitat Fisheries Project (YKFP) Design and Construction				Columbia Gorge		no
	<i>Rec 00-03</i>	\$233,000	\$234,000	\$5,629,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Production area
198811525	Yakima/Klickitat Fisheries Project (YKFP) Design and Construction				Columbia Plateau		no
	<i>Rec 00-03</i>	\$978,000	\$1,011,252	\$1,045,635	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$228,935	Anadromous	Production area
198812009	Steelhead Fall Chinook Production Objectives				FY 2000		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$62,986	\$ 0	\$ 0	Anadromous	Production subbasin
198812025	Yakima/Klickitat Fisheries Project (YKFP) Management				Columbia Plateau		no
	<i>Rec 00-03</i>	\$800,000	\$827,200	\$855,325	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$263,805	\$1,158,673	\$564,082	Anadromous	Production area
198812026	YIN Hatchery Educate/Training				FY 1999		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 303	\$201,156	\$164,162	Anadromous	Production point
199105700	Fabricate and Install Yakima Basin Phase II Fish Screens				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$71,875	\$159,889	\$20,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$309,749	\$198,084	\$ 6,006	Anadromous	Habitat area
199107500	Yakima Phase II Screens - Construction				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$1,000,000	\$600,000	\$500,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$1,229,762	\$519,999	\$147,172	Anadromous	Habitat area
199200900	Operate and Maintain (O&M) Yakima Basin Phase II Fish Screens				Columbia Plateau		no
	<i>Rec 00-03</i>	\$135,000	\$148,557	\$155,584	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$47,220	\$ 0	\$188,730	Anadromous	Habitat subbasin
199202200	Wild Smolt Behavior/Physiology				FY 2001		no
	<i>Rec 00-03</i>	\$350,024	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$431,384	\$420,361	\$99,956	Anadromous	Research & Evaluation subbasin

## Projects in the Yakima Subbasin, continued...

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>	
<b>199206200</b>	<b>Yakama Nation - Riparian/Wetlands Restoration</b>				<b>Columbia Plateau</b>		<b>yes</b>	
	<i>Rec 00-03</i>	\$1,370,000	\$1,416,580	\$1,464,744	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$3,261,204	\$672,669	Anadromous	Habitat	subbasin
199405900	Yakima Basin Environmental Education				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$127,500	\$130,000	\$132,000	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$73,991	\$120,569	\$104,713	Anadromous	Coordination	area
199503300	O&M Of Yakima Phase II Fish Facilities				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$100,000	\$103,400	\$106,916	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$133,137	\$56,827	\$92,755	Anadromous	Habitat	area
199506301	YKFP/YIN Chandler Juvenile Facility				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$21,248	Anadromous	Habitat	area
199506325	Yakima/Klickitat Fisheries Project Monitoring and Evaluation				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$3,708,932	\$3,835,036	\$3,965,427	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$2,851,805	\$4,379,405	\$2,997,600	Anadromous	Monitoring	subbasin
199506424	WDFW/YKFP Supp Monitor Activit				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$969,991	\$1,336,155	\$707,036	Anadromous	Monitoring	stream
199506425	Policy/Technical Involvement and Planning in the Yakima/ Klickitat Fisheries Project				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$15,000	\$187,800	\$193,435	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$98,548	\$92,175	\$175,864	Anadromous	Production	subbasin
199603327	Coho Supplementation Yakima River Construction				FY 1999		no	
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$169,844	\$250,027	\$ 0	Anadromous	Production	stream
199603501	Satus Watershed Restoration Project				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$160,000	\$352,966	\$370,125	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$472,353	\$111,177	\$341,034	Anadromous	Habitat	area
199701325	Yakima/Klickitat Fisheries Project Operations and Maintenance				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$2,350,000	\$2,429,900	\$2,512,517	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$2,030,204	\$4,433,547	\$2,530,981	Anadromous	Production	point

Projects in **bold** have preliminary results data included in this report.

## Projects in the Yakima Subbasin, continued...

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>
199704700	Yakima River Basin Side Channels				FY 1998		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$45,677	\$106,685	\$ 0	Anadromous	Habitat stream
199704900	Teanaway River Instream Flow Restoration BOR				FY 1999		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$232,946	\$58,341	\$ 4,348	Anadromous	Habitat stream
199704901	Teanaway River Instream Flow Restoration NRCS				FY 1999		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$ 2,310	\$ 0	\$ 0	Anadromous	Habitat stream
199704902	Teanaway River Instream Flow Restoration KCCD				FY 1999		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$31,226	\$ 0	\$ 0	Anadromous	Habitat stream
199705000	Little Naches Riparian Channel				FY 2001		no
	<i>Rec 00-03</i>	\$120,417	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$299,417	\$ 6,601	\$ 0	Anadromous	Habitat stream
199705100	Yakama Nation Yakima/Klickitat Fisheries Project (YKFP) Yakima Side Channels				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$ 0	\$565,136	\$584,350	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$230,030	\$569,080	\$54,101	Anadromous	Habitat point
199705300	Toppenish-Simcoe Instream Flow Restoration and Assessment				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$237,503	\$245,577	\$225,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$70,510	\$270,270	\$117,267	Anadromous	Habitat area
199802600	Native Trout Populations				FY 2000		no
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$ 0	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$39,408	\$33,001	\$ 0	Resident	Research & Evaluation stream
199803300	Restore Upper Toppenish Watershed				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$190,000	\$196,460	\$203,140	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$66,034	\$276,962	\$42,031	Anadromous	Habitat area
199803400	Yakama Nation Yakima/Klickitat Fisheries Project (YKFP) Reestablish Safe Access into Tributaries of the Yakima Subbasin				Columbia Plateau		yes
	<i>Rec 00-03</i>	\$784,794	\$ 0	\$230,000	Type	Category	Accuracy
	<i>Spent 01-03</i>	--	\$359,924	\$155,170	\$124,296	Anadromous	Habitat area



## Projects in the Yakima Subbasin, continued...

<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>		<i>BiOp?</i>	
199901300	Ahtanum Creek Watershed Assessment				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$200,192	\$206,999	\$214,036	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$107,273	\$176,113	Anadromous	Habitat	area	
200004800	Benthic Index Biotic Integrity				FY 2000		no	
	<i>Rec 00-03</i>	\$189,822	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$34,661	\$45,837	Anadromous	Research & Evaluation	stream	
200106400	Improve Stream Flow and Passage for Simcoe Creek Steelhead				FY01 Action Plan		no	
	<i>Rec 00-03</i>	\$767,143	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$200,000	\$401,840	Anadromous	Habitat	point
200107100	Increase Naches River In-stream Flows Through Wapatox Power Buyout				FY01 Action Plan		no	
	<i>Rec 00-03</i>	\$4,000,000	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 8,121	\$ 0	Anadromous	Habitat	stream
200201400	Protect, Enhance, and Maintain Habitat on the Sunnyside Wildlife Area to Benefit Wildlife and Fish Assemblages				Columbia Plateau		no	
	<i>Rec 00-03</i>	\$ 0	\$418,874	\$398,416	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$322,176	\$64,426	Wildlife	Habitat	area
200201800	Restore Riparian Corridor at Tapteal Bend, Lower Yakima River				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$ 0	\$160,500	\$11,000	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 2,236	Anadromous	Habitat	point
200202100	Implement Actions to Reduce Water Temperatures in the Teanaway Basin				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$ 0	\$172,950	\$100,825	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$80,340	Anadromous	Habitat	stream
200202200	YKFP Big Creek Passage & Screening				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$ 0	\$175,280	\$30,000	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$60,426	Anadromous	Habitat	area
200202300	Yakima-Klickitat Fisheries Project - Wilson Creek Snowden Parcel Acquisition				Columbia Plateau		yes	
	<i>Rec 00-03</i>	\$ 0	\$206,580	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Habitat	area

## Projects in the Yakima Subbasin, continued...

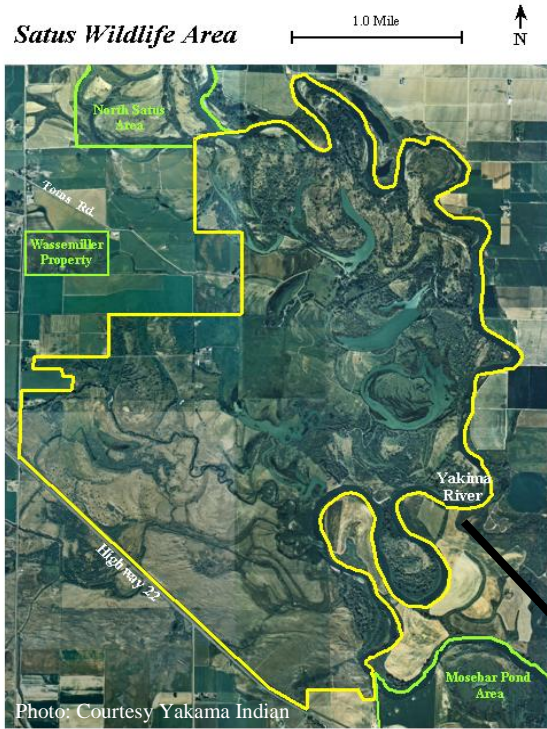
<i>Project ID</i>	<i>Project Title</i>				<i>Review Cycle</i>	<i>BiOp?</i>		
200202400	YKFP -- Secure Salmonid Spawning and Rearing Habitat on the Upper Yakima River				Columbia Plateau	yes		
	<i>Rec 00-03</i>	\$ 0	\$2,300,000	\$69,000	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	Anadromous	Habitat	area	
200202500	Yakima Tributary Access and Habitat Program (Objective 1: Early Actions)				FY01 Action Plan	no		
	<i>Rec 00-03</i>	\$1,588,000	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$385,522	\$282,744	Anadromous	Habitat	point
200202501	Yakima Tributary Access and Habitat Program (YTAHP)				Columbia Plateau	yes		
	<i>Rec 00-03</i>	\$ 0	\$17,500	\$750,000	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$204,115	Anadromous	Habitat	area
200202900	Fish Passage Inventory and Corrective Actions on WDFW Lands in The Yakima Subbasin				Columbia Plateau	yes		
	<i>Rec 00-03</i>	\$ 0	\$205,300	\$180,300	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Habitat	area
200203100	Growth Rate Modulation in Spring Chinook Salmon Supplementation				Columbia Plateau	yes		
	<i>Rec 00-03</i>	\$ 0	\$313,294	\$32,582	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$400,902	Anadromous	Research & Evaluation	point
200203800	Protect Normative Structure and Function of Critical Aquatic and Terrestrial Habitat				Columbia Plateau	yes		
	<i>Rec 00-03</i>	\$ 0	\$349,000	\$360,866	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$21,285	\$284,546	Anadromous	Habitat	area
200205200	Naches River Water Treatment Plant Intake Screening Project				FY01 Action Plan	no		
	<i>Rec 00-03</i>	\$1,657,500	\$ 0	\$ 0	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$175,431	\$624,569	Anadromous	Habitat	area
200300100	Yakima-Klickitat Fisheries Project - Manastash Creek Fish Passage and Screening				Columbia Plateau	yes		
	<i>Rec 00-03</i>	\$ 0	\$ 0	\$632,835	Type	Category	Accuracy	
	<i>Spent 01-03</i>	--	\$ 0	\$ 0	\$ 0	Anadromous	Habitat	area

199206200— Yakama Nation— Riparian/Wetland Restoration

2002 Project Objectives

- Protect, restore, and enhance secured lands to increase wildlife habitat values
- Monitor wildlife habitat conditions following enhancement

Habitat Enhancement - Preliminary Results



- Over 16,000 acres secured through FY 2003
- Over 34,000 Habitat Units protected and restored through 2003
- All irrigation diversions on Satus Creek have been removed
- Approximately 50% of the steelhead redds observed in Satus Creek were in project locations
- Almost 50% of the steelhead redds in Toppenish Creek were in project locations

