

Endangered Species Act
Federal Columbia River Power System
2009 Annual ESA Progress Report: Section 4

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Attachment 1: Habitat, Hatchery, Predation Management, and RM&E Projects Completed or in Progress in 2009

Attachment 1 - Table 1. BPA Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1983-436-00	Umatilla Passage O&M	10/1/1983	http://www.cbfish.org/Project.mvc/Display/1983-436-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1984-021-00	Mainstem, Middle Fork, John Day Rivers Fish Habitat Enhancement Project	3/1/1984	http://www.cbfish.org/Project.mvc/Display/1984-021-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1984-025-00	ODFW Blue Mountain Oregon Fish Habitat Improvement	3/1/1984	http://www.cbfish.org/Project.mvc/Display/1984-025-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1987-100-01	Umatilla Anad Fish Hab – CTUIR	2/1/1987	http://www.cbfish.org/Project.mvc/Display/1987-100-01
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1987-100-02	Umatilla Subbasin Fish Habitat Improvement Project	10/1/1987	http://www.cbfish.org/Project.mvc/Display/1987-100-02
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1988-022-00	Umatilla Fish Passage Operations	1/1/1988	http://www.cbfish.org/Project.mvc/Display/1988-022-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1988-120-25	YKFP Management, Data, Habitat	10/1/1988	http://www.cbfish.org/Project.mvc/Display/1988-120-25
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1988-120-35	YKFP Klickitat Management, Data, and Habitat	5/1/1988	http://www.cbfish.org/Project.mvc/Display/1988-120-35
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1989-027-00	Power Repay Umatilla Basin Project	10/1/1989	http://www.cbfish.org/Project.mvc/Display/1989-027-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1992-009-00	Yakima Phase II/Huntsville Screen Operation & Maintenance	5/1/1992	http://www.cbfish.org/Project.mvc/Display/1992-009-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1992-026-01	Grand Ronde Model Watershed Program Habitat Restoration - Planning, Coordination and Implementation	5/1/1992	http://www.cbfish.org/Project.mvc/Display/1992-026-01

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Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1992-062-00	Yakama Nation - Riparian/Wetlands Restoration	4/1/1992	http://www.cbfish.org/Project.mvc/Display/1992-062-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1993-040-00	Fifteenmile Creek Habitat Restoration and Monitoring Project	10/1/1993	http://www.cbfish.org/Project.mvc/Display/1993-040-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1993-066-00	Oregon Fish Screens Project	1/1/1993	http://www.cbfish.org/Project.mvc/Display/1993-066-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1994-015-00	Idaho Fish Screening and Passage Improvements	7/1/1994	http://www.cbfish.org/Project.mvc/Display/1994-015-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1994-018-05	Continued Implementation of Prioritized Asotin Creek Watershed Habitat Projects	1/1/1994	http://www.cbfish.org/Project.mvc/Display/1994-018-05
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1994-018-06	Tucannon Stream and Riparian Protection, Enhancement, and Restoration	10/1/1994	http://www.cbfish.org/Project.mvc/Display/1994-018-06
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1994-018-07	Improve Habitat For Fall Chinook, Steelhead in the Lower Snake and Tucannon Subbasins	6/1/1994	http://www.cbfish.org/Project.mvc/Display/1994-018-07
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1994-042-00	Trout Creek Fish Habitat Restoration Project	2/1/1994	http://www.cbfish.org/Project.mvc/Display/1994-042-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1995-033-00	O&M Yakima Basin Fish Screens	5/1/1995	http://www.cbfish.org/Project.mvc/Display/1995-033-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1996-011-00	Walla Walla Juvenile and Adult Passage Improvements	9/1/2009	http://www.cbfish.org/Project.mvc/Display/1996-011-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1996-035-01	Yakama Reservation Watersheds Project	10/1/1996	http://www.cbfish.org/Project.mvc/Display/1996-035-01
abitat	Protect and Improve Tributary Habitat	34	All	BPA	1996-042-00	Restore and Enhance Anadromous Fish Populations and Habitat in Salmon Creek	8/1/1996	http://www.cbfish.org/Project.mvc/Display/1996-042-00

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Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1996-046-01	Walla Walla River Basin Fish Habitat Enhancement	4/1/1996	http://www.cbfish.org/Project.mvc/Display/1996-046-01
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1996-077-02	Protect and Restore Lolo Creek Watershed	3/1/1996	http://www.cbfish.org/Project.mvc/Display/1996-077-02
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1996-077-05	Restore McComas Meadows/ Meadow Creek Watershed	3/1/1996	http://www.cbfish.org/Project.mvc/Display/1996-077-05
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1996-083-00	CTUIR Grande Ronde Subbasin Restoration Project	4/1/1996	http://www.cbfish.org/Project.mvc/Display/1996-083-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1997-051-00	Yakima Basin Side Channels	4/1/2001	http://www.cbfish.org/Project.mvc/Display/1997-051-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1997-056-00	Klickitat Watershed Enhancement	10/1/1997	http://www.cbfish.org/Project.mvc/Display/1997-056-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1998-019-00	Wind River Watershed	10/1/1999	http://www.cbfish.org/Project.mvc/Display/1998-019-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1998-021-00	Hood River Fish Habitat	10/1/1998	http://www.cbfish.org/Project.mvc/Display/1998-021-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1998-028-00	Trout Creek Watershed Restoration Project	4/1/1998	http://www.cbfish.org/Project.mvc/Display/1998-028-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1999-010-00	Pine Hollow/Jackknife Habitat	11/1/1999	http://www.cbfish.org/Project.mvc/Display/1999-010-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1999-016-00	Protect & Restore the Big Canyon Creek Watershed	5/1/1999	http://www.cbfish.org/Project.mvc/Display/1999-016-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1999-017-00	Protect and Restore Lapwai Creek Watershed	5/1/1999	http://www.cbfish.org/Project.mvc/Display/1999-017-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	1999-019-00	Restore Salmon River (Challis, Idaho)	5/1/1999	http://www.cbfish.org/Project.mvc/Display/1999-019-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2000-001-00	Anadromous Fish Habitat & Pass	2/1/2000	http://www.cbfish.org/Project.mvc/Display/2000-001-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2000-015-00	Oxbow Conservation Area Management	4/28/2000	http://www.cbfish.org/Project.mvc/Display/2000-015-00

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Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2000-031-00	North Fork John Day Basin Anadromous Fish Habitat Enhancement Project	4/1/2000	http://www.cbfish.org/Project.mvc/Display/2000-031-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2000-033-00	Walla Walla River Fish Passage Operations	1/1/2000	http://www.cbfish.org/Project.mvc/Display/2000-033-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2000-035-00	Rehabilitate Newsome Creek - S	12/1/2000	http://www.cbfish.org/Project.mvc/Display/2000-035-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2000-036-00	Protect And Restore Mill Creek	3/1/2000	http://www.cbfish.org/Project.mvc/Display/2000-036-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2001-021-00	15 Mile Creek Riparian Buffers	4/1/2001	http://www.cbfish.org/Project.mvc/Display/2001-021-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2002-013-01	Water Entity (RPA 151) NWPCC - Anadromous	10/1/2002	http://www.cbfish.org/Project.mvc/Display/2002-013-01
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2002-015-00	Provide Coordination and Technical Assistance to Watershed Councils and Individuals in Sherman County, Oregon	7/1/2002	http://www.cbfish.org/Project.mvc/Display/2002-015-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2002-019-00	Wasco Riparian Buffers	5/1/2002	http://www.cbfish.org/Project.mvc/Display/2002-019-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2002-034-00	Wheeler Co Riparian Buffers	5/1/2002	http://www.cbfish.org/Project.mvc/Display/2002-034-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2002-035-00	Gilliam Co Riparian Buffers	7/1/2002	http://www.cbfish.org/Project.mvc/Display/2002-035-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2002-050-00	Continued Riparian Buffer Projects on Couse/Tenmile and other Salmonid Bearing Streams in Asotin County	1/1/2002	http://www.cbfish.org/Project.mvc/Display/2002-050-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2002-059-00	Yankee Fork Salmon River Dredge Tailings Restoration Project	6/15/2002	http://www.cbfish.org/Project.mvc/Display/2002-059-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2002-061-00	Restore Potlatch R Watershed	9/1/2002	http://www.cbfish.org/Project.mvc/Display/2002-061-00

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Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2002-070-00	Lapwai Cr Anadromous Habitat	5/1/2002	http://www.cbfish.org/Project.mvc/Display/2002-070-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2002-072-00	Protect & Restore Red River Watershed	12/1/2002	http://www.cbfish.org/Project.mvc/Display/2002-072-00
Reporting	Protect and Improve Tributary Habitat	34	All	BPA	2003-022-00	CCT OBMEP	3/1/2003	http://www.cbfish.org/Project.mvc/Display/2003-022-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-034-00	Columbia Cascade Pump Screen Correction	8/15/2007	http://www.cbfish.org/Project.mvc/Display/2007-034-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-035-00	UPA Project - Methow Basin Riparian Enhancement	8/20/2007	http://www.cbfish.org/Project.mvc/Display/2007-035-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-055-00	Entiat River - UPA - Lower Entiat River Off-Channel Restoration Project	10/1/2006	http://www.cbfish.org/Project.mvc/Display/2007-055-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-064-00	Protect and Restore Slate Creek	9/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-064-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-065-00	Coordinate and implement tributary habitat restoration in the Little Salmon River and lower Salmon River Idaho	5/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-065-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-077-00	Hemlock Dam Removal	6/15/2007	http://www.cbfish.org/Project.mvc/Display/2007-077-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-086-00	UPA Wenatchee Subbasin Riparian Enhancement Proposal	9/27/2007	http://www.cbfish.org/Project.mvc/Display/2007-086-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-112-00	Teaway Watershed - Protect critical habitat from development, reduce water temperatures and increase instream flows, restore habitat forming processes in the floodplain	1/7/2007	http://www.cbfish.org/Project.mvc/Display/2007-112-00

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Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-113-00	Cowiche Restoration and Protection Project (Easement/Fee Simple Acquisition)	9/30/2007	http://www.cbfish.org/Project.mvc/Display/2007-113-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-127-00	Reestablish Connectivity and Restore Fish Habitat in the East Fork of the South Fork Salmon River Watershed	7/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-127-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-145-00	Okanogan Livestock and Water	9/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-145-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-172-00	UPA Project - MVID West Canal Diversion and Headworks	10/1/2006	http://www.cbfish.org/Project.mvc/Display/2007-172-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-194-00	Oak Flats Acquisition and Habitat Enhancement	10/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-194-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-214-00	UPA Project - Fender Mill Floodplain Restoration – Phase 1	8/20/2007	http://www.cbfish.org/Project.mvc/Display/2007-214-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-217-00	Operation and Maintenance for Walla Walla Basin Passage Projects	1/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-217-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-224-00	Implementation of the Okanogan Subbasin Plan. Initiate a Programmatic and Sequenced set of Key Habitat Restoration and Protection Actions	2/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-224-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-231-00	UPA Entiat Subbasin Riparian Enhancement Program	9/17/2007	http://www.cbfish.org/Project.mvc/Display/2007-231-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-237-00	UPA Project - Elbow Coulee Floodplain Restoration	6/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-237-00

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Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-251-00	UPA Project - Methow Valley Irrigation District East Diversion Dam Replacement	10/1/2006	http://www.cbfish.org/Project.mvc/Display/2007-251-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-264-00	UPA Project - Programmatic Habitat Complexity Projects in the Methow River Subbasin	9/24/2007	http://www.cbfish.org/Project.mvc/Display/2007-264-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-268-00	Idaho Watershed Habitat Restoration Project via Custer Soil and Water Conservation District	6/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-268-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-318-00	Entiat River - UPA - Knapp-Wham Hanan Detwiler Irrigation System Consolidation Project	6/8/2007	http://www.cbfish.org/Project.mvc/Display/2007-318-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-325-00	UPA Wenatchee Subbasin Complexity Proposal	9/27/2007	http://www.cbfish.org/Project.mvc/Display/2007-325-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-393-00	NPT Protect and Restore NE OR	7/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-393-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-394-00	Idaho Watershed Habitat Restoration Lemhi County	8/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-394-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-395-00	Protect and Restore the Upper Lochsa Watershed	5/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-395-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-396-00	Walla Walla Basinwide Tributary Passage and Instream Flow	9/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-396-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-397-00	John Day Tributary/Passage & Flow	2/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-397-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-398-00	Yakima River Basinwide Tributary/Passage & Flow	6/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-398-00
Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-399-00	Upper Salmon Screen Tributary Passage	6/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-399-00

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Habitat	Protect and Improve Tributary Habitat	34	All	BPA	2007-400-00	Wenatchee Basinwide Passage	6/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-400-00
Habitat	Protect and Improve Tributary Habitat	36	All	BPA	1999-025-00	Sandy River Delta Habitat Restoration	7/1/1999	http://www.cbfish.org/Project.mvc/Display/1999-025-00
Habitat	Improve Fish Survival in Estuary Habitat	36	All	BPA	2003-011-00	Columbia R/Estuary Habitat	5/21/2003	http://www.cbfish.org/Project.mvc/Display/2003-011-00
Habitat	Improve Fish Survival in Estuary Habitat	36	All	BPA	2003-013-00	Grays River Watershed Restoration	5/15/2003	http://www.cbfish.org/Project.mvc/Display/2003-013-00
Hatchery	Ensure Funded Hatchery Programs are not Impeding Recovery	40	All	BPA	2008-712-00	Implement Hatchery Reform Action	10/1/2009	http://www.cbfish.org/Project.mvc/Display/2008-712-00
Hatchery	Execute on Safety Net and Conservation Objectives	41	All	BPA	1996-043-00	Johnson Creek Artificial Propagation Enhancement Project	1/1/1996	http://www.cbfish.org/Project.mvc/Display/1996-043-00
Hatchery	Execute on Safety Net and Conservation Objectives	41	All	BPA	2000-019-00	Tucannon River Spring Chinook Captive Broodstock Program	10/1/2000	http://www.cbfish.org/Project.mvc/Display/2000-019-00
Hatchery	Execute on Safety Net and Conservation Objectives	41	All	BPA	2007-402-00	Snake River Sockeye Salmon Captive Propagation	7/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-402-00
Hatchery	Execute on Safety Net and Conservation Objectives	41	All	BPA	2007-403-00	ID Snake River Spr/Summer Chinook Captive Propagation	12/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-403-00
Hatchery	Execute on Safety Net and Conservation Objectives	41	All	BPA	2007-404-00	OR Snake River Spring/Summer Chinook Salmon Captive Propagation	1/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-404-00

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Hatchery	Execute on Safety Net and Conservation Objectives	42	All	BPA	2001-053-00	Reintroduction of Chum Salmon into Duncan Creek	10/1/2001	http://www.cbfish.org/Project.mvc/Display/2001-053-00
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	BPA	2003-023-00	Chief Joseph Hatchery Program	7/1/2003	http://www.cbfish.org/Project.mvc/Display/2003-023-00
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	BPA	2007-212-00	Develop a locally-adapted summer steelhead program to supplement natural production throughout the Okanogan River basin	7/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-212-00
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	BPA	2007-401-00	Kelt Reconditioning/ Reproductive Success	4/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-401-00
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	BPA	2007-402-00	Snake River Sockeye Salmon Captive Propagation	7/1/2007	http://www.cbfish.org/Project.mvc/Display/2007-402-00
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	BPA	2008-458-00	Upper Columbia Steelhead Kelt Reconditioning	10/1/2007	http://www.cbfish.org/Project.mvc/Display/2008-458-00
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	BPA	2008-710-00	Assess habitat potential for reintroduction of CR chum in tributaries below Bonneville Dam	5/1/2009	http://www.cbfish.org/Project.mvc/Display/2008-710-00
Predation Management	Implement Piscivorous Predation Control Measures	43	All	BPA	1990-077-00	Development of Systemwide Predator Control	1990	http://www.cbfish.org/Project.mvc/Display/1990-077-00
Predation Management	Implement Avian Predation Control Measures	45	All	BPA	1997-024-00	Avian Predation on Juvenile Salmonids	1997	http://www.cbfish.org/Project.mvc/Display/1997-024-00

Attachment 1 - Table 1. BPA Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
Predation Management	Implement Avian Predation Control Measures	46	All	BPA	1997-024-00	Avian Predation on Juvenile Salmonids	1997	http://www.cbfish.org/Project.mvc/Display/1997-024-00
Predation Management	Implement Avian Predation Control Measures	47	All	BPA	1997-024-00	Avian Predation on Juvenile Salmonids	1997	http://www.cbfish.org/Project.mvc/Display/1997-024-00
Predation Management	Implement Marine Mammal Control Measures	49	All	BPA	2008-003-00	Removal of Sea Lions at Bonneville Dam	2008	http://www.cbfish.org/Project.mvc/Display/2008-003-00
Predation Management	Implement Marine Mammal Control Measures	49	All	BPA	2008-004-00	Sea Lion Non-Lethal Hazing	2008	http://www.cbfish.org/Project.mvc/Display/2008-004-00
RM&E	Monitor the Status of Selected Fish Populations	50	4,5,6,7	BPA	198201301	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	2008	http://www.cbfish.org/Project.mvc/Display/198201301
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	198201302	Coded Wire Tag-Oregon Department of Fish and Wildlife (ODFW)	2008	http://www.cbfish.org/Project.mvc/Display/198201302
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	198201303	Coded Wire Tag-US Fish and Wildlife Service (USFWS)	2008	http://www.cbfish.org/Project.mvc/Display/198201303
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	198201304	Coded Wire Tag-Washington Department of Fish and Wildlife (WDFW)	2008	http://www.cbfish.org/Project.mvc/Display/198201304
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	198335000	Nez Perce Tribal Hatchery Operations and Maintenance (O&M)	2008	http://www.cbfish.org/Project.mvc/Display/198335000
RM&E	Monitor the Status of Selected Fish Populations	50	5,6,7	BPA	198335003	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	2008	http://www.cbfish.org/Project.mvc/Display/198335003
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	198402500	Blue Mountain Fish Habitat Improvement	2008	http://www.cbfish.org/Project.mvc/Display/198402500

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Monitor the Status of Selected Fish Populations	50	3,4,6,7	BPA	198712700	Smolt Monitoring by Non-Federal Entities	2008	http://www.cbfish.org/Project.mvc/Display/198712700
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	198802200	Umatilla Fish Passage Operations	2008	http://www.cbfish.org/Project.mvc/Display/198802200
RM&E	Monitor the Status of Selected Fish Populations	50	4,6,7	BPA	198805303	Hood River Production Monitoring and Evaluation (M&E)-Warm Springs	2008	http://www.cbfish.org/Project.mvc/Display/198805303
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	198805304	Hood River Production Monitor and Evaluation (M&E)-Oregon Department of Fish and Wildlife (ODFW)	2008	http://www.cbfish.org/Project.mvc/Display/198805304
RM&E	Monitor the Status of Selected Fish Populations	50	7	BPA	198805307	Hood River Production Operations and Maintenance (O&M)-Warm Springs	2008	http://www.cbfish.org/Project.mvc/Display/198805307
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	198805308	Hood River Production Operations and Maintenance (O&M) and Powerdale	2008	http://www.cbfish.org/Project.mvc/Display/198805308
RM&E	Monitor the Status of Selected Fish Populations	50	1,3,6	BPA	198902401	Evaluate Umatilla Juvenile Salmonid Outmigration	2008	http://www.cbfish.org/Project.mvc/Display/198902401
RM&E	Monitor the Status of Selected Fish Populations	50	5,6,7	BPA	198909800	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	2008	http://www.cbfish.org/Project.mvc/Display/198909800
RM&E	Monitor the Status of Selected Fish Populations	50	4	BPA	198910700	Statistical Support For Salmon	2008	http://www.cbfish.org/Project.mvc/Display/198910700
RM&E	Monitor the Status of Selected Fish Populations	50	1,7	BPA	199000500	Umatilla Hatchery Monitoring and Evaluation (M&E)	2008	http://www.cbfish.org/Project.mvc/Display/199000500

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Monitor the Status of Selected Fish Populations	50	4	BPA	199004400	Coeur D'Alene Reservation Fisheries Habitat	2008	http://www.cbfish.org/Project.mvc/Display/199004400
RM&E	Monitor the Status of Selected Fish Populations	50	5,6,7	BPA	199005500	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	2008	http://www.cbfish.org/Project.mvc/Display/199005500
RM&E	Monitor the Status of Selected Fish Populations	50	1	BPA	199008000	Columbia Basin Pit-Tag Information	2008	http://www.cbfish.org/Project.mvc/Display/199008000
RM&E	Monitor the Status of Selected Fish Populations	50	1,3,5	BPA	199102800	Pit Tagging Wild Chinook	2008	http://www.cbfish.org/Project.mvc/Display/199102800
RM&E	Monitor the Status of Selected Fish Populations	50	4,5,6	BPA	199107300	Idaho Natural Production Monitoring. Clearwater, Lochsa, Selway, SF Clearwater, Chamberlain, EF Salmon, Lemhi, Little Salmon, Lower MF Salmon, NF Salmon, Pahsimeroi, Panther Cr, Secesh, SF Salmon, Upper MF Salmon, Upper Salmon	2008	http://www.cbfish.org/Project.mvc/Display/199107300
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	199202604	Grand Ronde Early Life History of Spring Chinook and Steelhead	2008	http://www.cbfish.org/Project.mvc/Display/199202604
RM&E	Monitor the Status of Selected Fish Populations	50	2	BPA	199302900	Survival Estimate for Passage through Snake and Columbia River Dams and Reservoirs	2008	http://www.cbfish.org/Project.mvc/Display/199302900
RM&E	Monitor the Status of Selected Fish Populations	50	5	BPA	199303701	ID Steelhead M&E Studies	2008	http://www.cbfish.org/Project.mvc/Display/199303701
RM&E	Monitor the Status of Selected Fish Populations	50	3	BPA	199403300	Fish Passage Center	2008	http://www.cbfish.org/Project.mvc/Display/199403300

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	199506325	Yakima River Monitoring and Evaluation- Yakima/Klickitat Fisheries Project (YKFP)	2008	http://www.cbfish.org/Project.mvc/Display/199506325
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	199506335	Klickitat River Monitoring and Evaluation- Yakima/Klickitat Fisheries Project (YKFP)	2008	http://www.cbfish.org/Project.mvc/Display/199506335
RM&E	Monitor the Status of Selected Fish Populations	50	1,3,5,6,7	BPA	199602000	Comparative Survival Study (CSS)	2008	http://www.cbfish.org/Project.mvc/Display/199602000
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	199603501	Yakama Reservation Watershed Project	2008	http://www.cbfish.org/Project.mvc/Display/199603501
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	199604300	Johnson Creek Artificial Propagation Enhancement	2008	http://www.cbfish.org/Project.mvc/Display/199604300
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	199701501	Imnaha River Smolt Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/199701501
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	199703000	Chinook Salmon Adult Abundance Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/199703000
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	199800702	Grande Ronde Supplementation Operations and Maintenance (O&M) and Monitoring and Evaluation (M&E) on Lostine River	2008	http://www.cbfish.org/Project.mvc/Display/199800702
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	199800703	Grande Ronde Supplementation O&M on Catherine Creek/Upper Grande Ronde River	2008	http://www.cbfish.org/Project.mvc/Display/199800703
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	199801003	Spawning Distribution of Snake River Fall Chinook Salmon	2008	http://www.cbfish.org/Project.mvc/Display/199801003

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Monitor the Status of Selected Fish Populations	50	4,6	BPA	199801600	Escapement and Productivity of Spring Chinook and Steelhead	2008	http://www.cbfish.org/Project.mvc/Display/199801600
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	199801900	Wind River Watershed	2008	http://www.cbfish.org/Project.mvc/Display/199801900
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	200003900	Walla Walla River Basin Monitoring and Evaluation (M&E)	2008	http://www.cbfish.org/Project.mvc/Display/200003900
RM&E	Monitor the Status of Selected Fish Populations	50	1,2	BPA	200100300	Adult Pit Detector Installation	2008	http://www.cbfish.org/Project.mvc/Display/200100300
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	200203200	Snake River Fall Chinook Salmon Life History Investigations	2008	http://www.cbfish.org/Project.mvc/Display/200203200
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	200205300	Asotin Creek Salmon Population Assessment	2008	http://www.cbfish.org/Project.mvc/Display/200205300
RM&E	Monitor the Status of Selected Fish Populations	50	4,5,6	BPA	200301700	Integrated Status and Effectiveness Monitoring Program (ISEMP)	2008	http://www.cbfish.org/Project.mvc/Display/200301700
RM&E	Monitor the Status of Selected Fish Populations	50	4,6	BPA	200302200	Okanogan Basin Monitoring & Evaluation Program (OBMEP)	2008	http://www.cbfish.org/Project.mvc/Display/200302200
RM&E	Monitor the Status of Selected Fish Populations	50	4,6	BPA	200303900	Monitor and Evaluate (M&E) Reproductive Success and Survival in Wenatchee River	2008	http://www.cbfish.org/Project.mvc/Display/200303900
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	200305400	Evaluate the Relative Reproductive Success of Hatchery-Origin and Wild-Origin Steelhead Spawning Naturally in the Hood River	2008	http://www.cbfish.org/Project.mvc/Display/200305400
RM&E	Monitor the Status of Selected Fish Populations	50	2,5	BPA	200500200	Lower Granite Dam Adult Trap Operations	2008	http://www.cbfish.org/Project.mvc/Display/200500200

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	200708300	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	2008	http://www.cbfish.org/Project.mvc/Display/200708300
RM&E	Monitor the Status of Selected Fish Populations	50	5,6	BPA	200723300	Distribution and Abundance Monitoring of Oncorhynchus mykiss within the Lower Clearwater Subbasin	2008	http://www.cbfish.org/Project.mvc/Display/200723300
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	200733700	Oregon Plan Monitoring of Steelhead Status, Trend, and Habitat in the Grande Ronde River Subbasin	2008	http://www.cbfish.org/Project.mvc/Display/200703700
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	200733700	Oregon Plan Monitoring of Steelhead Status, Trend, and Habitat in the Grande Ronde River Subbasin	2008	http://www.cbfish.org/Project.mvc/Display/200703700
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	200740300	Spring Chinook Captive Propagation-Idaho	2008	http://www.cbfish.org/Project.mvc/Display/200740300
RM&E	Monitor the Status of Selected Fish Populations	50	6,7	BPA	200740400	Spring Chinook Captive Propagation-Oregon	2008	http://www.cbfish.org/Project.mvc/Display/200740400
RM&E	Monitor the Status of Selected Fish Populations	50	6	BPA	200830600	Deschutes fall Chinook research	2008	http://www.cbfish.org/Project.mvc/Display/200830600
RM&E	Monitor the Status of Selected Fish Populations	50	3,6	BPA	200831100	Natural Production Management and Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200831100
RM&E	Monitor the Status of Selected Fish Populations	50	3	BPA	200872400	Pittag Sr Sockeye-Uc Sp.Chnook	2008	http://www.cbfish.org/Project.mvc/Display/200872400

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Monitor the Status of Selected Fish Populations	50	4	BPA	200900200	Status and Trend Annual Reporting	2009	http://www.cbfish.org/Project.mvc/Display/200900200
RM&E	Monitor the Status of Selected Fish Populations	51	1,3	BPA	198201301	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	2008	http://www.cbfish.org/Project.mvc/Display/198201301
RM&E	Monitor the Status of Selected Fish Populations	51	1	BPA	198201304	Coded Wire Tag-Washington Department of Fish and Wildlife (WDFW)	2008	http://www.cbfish.org/Project.mvc/Display/198201304
RM&E	Monitor the Status of Selected Fish Populations	51	1,3	BPA	198810804	StreamNet - Coordinated Information System (CIS)/Northwest Environmental Database (NED)	2008	http://www.cbfish.org/Project.mvc/Display/198810804
RM&E	Monitor the Status of Selected Fish Populations	51	1	BPA	198909800	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	2008	http://www.cbfish.org/Project.mvc/Display/198909800
RM&E	Monitor the Status of Selected Fish Populations	51	1,3	BPA	199403300	Fish Passage Center	2008	http://www.cbfish.org/Project.mvc/Display/199403300
RM&E	Monitor the Status of Selected Fish Populations	51	1,3	BPA	199604300	Johnson Creek Artificial Propagation Enhancement	2008	http://www.cbfish.org/Project.mvc/Display/199604300
RM&E	Monitor the Status of Selected Fish Populations	51	1	BPA	199703000	Chinook Salmon Adult Abundance Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/199703000
RM&E	Monitor the Status of Selected Fish Populations	51	1,2,3	BPA	200400200	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	2008	http://www.cbfish.org/Project.mvc/Display/200400200
RM&E	Monitor the Status of Selected Fish Populations	51	3	BPA	200721600	Pacific NW Aquatic Monitoring Program (PNAMP) Research, Monitoring and Evaluation (RM&E) Design and Protocols	2008	http://www.cbfish.org/Project.mvc/Display/200721600

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Monitor the Status of Selected Fish Populations	51	1	BPA	200740700	Upper Snake River Tribes Regional Coord	2008	http://www.cbfish.org/Project.mvc/Display/200740700
RM&E	Monitor the Status of Selected Fish Populations	51	1,3	BPA	200850500	Streamnet Library	2008	http://www.cbfish.org/Project.mvc/Display/200850500
RM&E	Monitor the Status of Selected Fish Populations	51	1	BPA	200860700	Nutrient Enhancement Project	2008	http://www.cbfish.org/Project.mvc/Display/200860700
RM&E	Monitor the Status of Selected Fish Populations	51	2	BPA	200873300	Regional Strategy-Status/Trend	2008	http://www.cbfish.org/Project.mvc/Display/200873300
RM&E	Hydrosystem RM&E	52	2	BPA	198331900	New Marking Monitoring Techniques	2008	http://www.cbfish.org/Project.mvc/Display/198331900
RM&E	Hydrosystem RM&E	52	1,2,3,4,5,7	BPA	198712700	Smolt Monitoring by Non-Federal Entities	2008	http://www.cbfish.org/Project.mvc/Display/198712700
RM&E	Hydrosystem RM&E	52	2	BPA	198909800	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	2008	http://www.cbfish.org/Project.mvc/Display/198909800
RM&E	Hydrosystem RM&E	52	2	BPA	199102800	Pit Tagging Wild Chinook	2008	http://www.cbfish.org/Project.mvc/Display/199102800
RM&E	Hydrosystem RM&E	52	1,3	BPA	199105100	Modeling and Evaluation Statistical Support for Life-Cycle Studies	2008	http://www.cbfish.org/Project.mvc/Display/199105100
RM&E	Hydrosystem RM&E	52	2	BPA	199302900	Survival Estimate for Passage through Snake and Columbia River Dams and Reservoirs	2008	http://www.cbfish.org/Project.mvc/Display/199302900
RM&E	Hydrosystem RM&E	52	6	BPA	199403300	Fish Passage Center	2008	http://www.cbfish.org/Project.mvc/Display/199403300
RM&E	Hydrosystem RM&E	52	2	BPA	199602000	Comparative Survival Study (CSS)	2008	http://www.cbfish.org/Project.mvc/Display/199602000

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RM&E	Hydrosystem RM&E	52	7	BPA	200302200	Okanogan Basin Monitoring & Evaluation Program (OBMEP)	2008	http://www.cbfish.org/Project.mvc/Display/200302200
RM&E	Hydrosystem RM&E	52	1,2	BPA	200304100	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	2008	http://www.cbfish.org/Project.mvc/Display/200304100
RM&E	Hydrosystem RM&E	52	2	BPA	200311400	Pacific Ocean Survey Tracking (POST)	2008	http://www.cbfish.org/Project.mvc/Display/200311400
RM&E	Hydrosystem RM&E	52	3,7	BPA	200500200	Lower Granite Dam Adult Trap Operations	2008	http://www.cbfish.org/Project.mvc/Display/200500200
RM&E	Hydrosystem RM&E	52	4,5	BPA	200872400	Pittag Sr Sockeye-Uc Sp.Chinook	2008	http://www.cbfish.org/Project.mvc/Display/200872400
RM&E	Hydrosystem RM&E	52	6	BPA	200902000	UW-CBR Internal Statistical / Technical Support to BPA (Skalski)	2009	http://www.cbfish.org/Project.mvc/Display/200902000
RM&E	Hydrosystem RM&E	53	5	BPA	198331900	New Marking Monitoring Techniques	2008	http://www.cbfish.org/Project.mvc/Display/198331900
RM&E	Hydrosystem RM&E	53	1,2,3,4	BPA	198712700	Smolt Monitoring by Non-Federal Entities	2008	http://www.cbfish.org/Project.mvc/Display/198712700
RM&E	Hydrosystem RM&E	53	2,3	BPA	198909800	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	2008	http://www.cbfish.org/Project.mvc/Display/198909800
RM&E	Hydrosystem RM&E	53	2,3	BPA	199005500	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	2008	http://www.cbfish.org/Project.mvc/Display/199005500
RM&E	Hydrosystem RM&E	53	2,3	BPA	199102800	Pit Tagging Wild Chinook	2008	http://www.cbfish.org/Project.mvc/Display/199102800
RM&E	Hydrosystem RM&E	53	1,2	BPA	199102900	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	2008	http://www.cbfish.org/Project.mvc/Display/199102900

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hydrosystem RM&E	53	1,2	BPA	199105100	Modeling and Evaluation Statistical Support for Life-Cycle Studies	2008	http://www.cbfish.org/Project.mvc/Display/199105100
RM&E	Hydrosystem RM&E	53	1,2,3	BPA	199403300	Fish Passage Center	2008	http://www.cbfish.org/Project.mvc/Display/199403300
RM&E	Hydrosystem RM&E	53	2,3	BPA	199602000	Comparative Survival Study (CSS)	2008	http://www.cbfish.org/Project.mvc/Display/199602000
RM&E	Hydrosystem RM&E	53	2	BPA	199602100	Gas Bubble Disease Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/199602100
RM&E	Hydrosystem RM&E	53	2,3	BPA	200304100	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	2008	http://www.cbfish.org/Project.mvc/Display/200304100
RM&E	Hydrosystem RM&E	53	1,2,3	BPA	200850600	Smolt Monitoring Video Feasibility Project	2008	http://www.cbfish.org/Project.mvc/Display/200850600
RM&E	Hydrosystem RM&E	54	1,9,13,14	BPA	198331900	New Marking Monitoring Techniques	2008	http://www.cbfish.org/Project.mvc/Display/198331900
RM&E	Hydrosystem RM&E	54	5,6,7	BPA	198712700	Smolt Monitoring by Non-Federal Entities	2008	http://www.cbfish.org/Project.mvc/Display/198712700
RM&E	Hydrosystem RM&E	54	1,5,6,7,8,9,10,12	BPA	198909800	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	2008	http://www.cbfish.org/Project.mvc/Display/198909800
RM&E	Hydrosystem RM&E	54	1,5,6,7,8,10,12	BPA	199005500	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	2008	http://www.cbfish.org/Project.mvc/Display/199005500
RM&E	Hydrosystem RM&E	54	8	BPA	199007700	Development of Systemwide Predator Control	2008	http://www.cbfish.org/Project.mvc/Display/199007700
RM&E	Hydrosystem RM&E	54	6,7,8,10,12,	BPA	199102800	Pit Tagging Wild Chinook	2008	http://www.cbfish.org/Project.mvc/Display/199102800

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hydrosystem RM&E	54	2,7	BPA	199302900	Survival Estimate for Passage through Snake and Columbia River Dams and Reservoirs	2008	http://www.cbfish.org/Project.mvc/Display/199302900
RM&E	Hydrosystem RM&E	54	2,13	BPA	199403300	Fish Passage Center	2008	http://www.cbfish.org/Project.mvc/Display/199403300
RM&E	Hydrosystem RM&E	54	1	BPA	199602000	Comparative Survival Study (CSS)	2008	http://www.cbfish.org/Project.mvc/Display/199602000
RM&E	Hydrosystem RM&E	54	5,6,7,8, 10,12	BPA	199602000	Comparative Survival Study (CSS)	2008	http://www.cbfish.org/Project.mvc/Display/199602000
RM&E	Hydrosystem RM&E	54	8	BPA	199702400	Avian Predation on Juvenile Salmonids	2008	http://www.cbfish.org/Project.mvc/Display/199702400
RM&E	Hydrosystem RM&E	54	11	BPA	200100300	Adult Pit Detector Installation	2008	http://www.cbfish.org/Project.mvc/Display/200100300
RM&E	Hydrosystem RM&E	54	1,5,6,7,8,12	BPA	200304100	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	2008	http://www.cbfish.org/Project.mvc/Display/200304100
RM&E	Hydrosystem RM&E	54	9	BPA	200753500	Physical and Biological Testing of a Flow Velocity Enhancement System (FVES)	2008	http://www.cbfish.org/Project.mvc/Display/200753500
RM&E	Hydrosystem RM&E	55	4,5,7,8,9	BPA	198331900	New Marking Monitoring Techniques	2008	http://www.cbfish.org/Project.mvc/Display/198331900
RM&E	Hydrosystem RM&E	55	1,2,4	BPA	198712700	Smolt Monitoring by Non-Federal Entities	2008	http://www.cbfish.org/Project.mvc/Display/198712700
RM&E	Hydrosystem RM&E	55	1,2	BPA	198909800	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	2008	http://www.cbfish.org/Project.mvc/Display/198909800
RM&E	Hydrosystem RM&E	55	1,2	BPA	199005500	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	2008	http://www.cbfish.org/Project.mvc/Display/199005500

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hydrosystem RM&E	55	1,2	BPA	199102800	Pit Tagging Wild Chinook	2008	http://www.cbfish.org/Project.mvc/Display/199102800
RM&E	Hydrosystem RM&E	55	4	BPA	199102900	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	2008	http://www.cbfish.org/Project.mvc/Display/199102900
RM&E	Hydrosystem RM&E	55	2	BPA	199403300	Fish Passage Center	2008	http://www.cbfish.org/Project.mvc/Display/199403300
RM&E	Hydrosystem RM&E	55	1,2	BPA	199602000	Comparative Survival Study (CSS)	2008	http://www.cbfish.org/Project.mvc/Display/199602000
RM&E	Hydrosystem RM&E	55	4	BPA	200203200	Snake River Fall Chinook Salmon Life History Investigations	2008	http://www.cbfish.org/Project.mvc/Display/200203200
RM&E	Hydrosystem RM&E	55	1,2	BPA	200304100	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	2008	http://www.cbfish.org/Project.mvc/Display/200304100
RM&E	Hydrosystem RM&E	55	1,2,8	BPA	200311400	Pacific Ocean Survey Tracking (POST)	2008	http://www.cbfish.org/Project.mvc/Display/200311400
RM&E	Hydrosystem RM&E	55	1,2	BPA	200500200	Lower Granite Dam Adult Trap Operations	2008	http://www.cbfish.org/Project.mvc/Display/200500200
RM&E	Hydrosystem RM&E	55	1,2,5	BPA	200872400	Pittag Sr Sockeye-Uc Sp.Chinook	2008	http://www.cbfish.org/Project.mvc/Display/200872400
RM&E	Tributary Habitat RM&E	56	1	BPA	198335003	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	2008	http://www.cbfish.org/Project.mvc/Display/198335003
RM&E	Tributary Habitat RM&E	56	1,2	BPA	198402100	John Day Habitat Enhancement	2008	http://www.cbfish.org/Project.mvc/Display/198402100
RM&E	Tributary Habitat RM&E	56	1,2	BPA	198402500	Blue Mountain Fish Habitat Improvement	2008	http://www.cbfish.org/Project.mvc/Display/198402500

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Tributary Habitat RM&E	56	1	BPA	198805303	Hood River Production Monitoring and Evaluation (M&E)-Warm Springs	2008	http://www.cbfish.org/Project.mvc/Display/198805303
RM&E	Tributary Habitat RM&E	56	1	BPA	198805304	Hood River Production Monitor and Evaluation (M&E)-Oregon Department of Fish and Wildlife (ODFW)	2008	http://www.cbfish.org/Project.mvc/Display/198805304
RM&E	Tributary Habitat RM&E	56	1	BPA	198902401	Evaluate Umatilla Juvenile Salmonid Outmigration	2008	http://www.cbfish.org/Project.mvc/Display/198902401
RM&E	Tributary Habitat RM&E	56	1	BPA	198909800	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	2008	http://www.cbfish.org/Project.mvc/Display/198909800
RM&E	Tributary Habitat RM&E	56	1	BPA	199005500	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	2008	http://www.cbfish.org/Project.mvc/Display/199005500
RM&E	Tributary Habitat RM&E	56	1	BPA	199202604	Grand Ronde Early Life History of Spring Chinook and Steelhead	2008	http://www.cbfish.org/Project.mvc/Display/199202604
RM&E	Tributary Habitat RM&E	56	1	BPA	199401805	Asotin Creek Enhancement and Restoration	2008	http://www.cbfish.org/Project.mvc/Display/199401805
RM&E	Tributary Habitat RM&E	56	1	BPA	199401806	Tucannon Stream and Riparian Restoration	2008	http://www.cbfish.org/Project.mvc/Display/199401806
RM&E	Tributary Habitat RM&E	56	1	BPA	199404200	Trout Creek Operations and Maintenance (O&M)	2008	http://www.cbfish.org/Project.mvc/Display/199404200
RM&E	Tributary Habitat RM&E	56	1	BPA	199506335	Klickitat River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	2008	http://www.cbfish.org/Project.mvc/Display/199506335
RM&E	Tributary Habitat RM&E	56	1	BPA	199602000	Comparative Survival Study (CSS)	2008	http://www.cbfish.org/Project.mvc/Display/199602000
RM&E	Tributary Habitat RM&E	56	1,3	BPA	199603501	Yakama Reservation Watershed Project	2008	http://www.cbfish.org/Project.mvc/Display/199603501

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Tributary Habitat RM&E	56	1	BPA	199701501	Imnaha River Smolt Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/199701501
RM&E	Tributary Habitat RM&E	56	1	BPA	199705600	Klickitat Watershed Enhancement	2008	http://www.cbfish.org/Project.mvc/Display/199705600
RM&E	Tributary Habitat RM&E	56	1	BPA	199801003	Spawning Distribution of Snake River Fall Chinook Salmon	2008	http://www.cbfish.org/Project.mvc/Display/199801003
RM&E	Tributary Habitat RM&E	56	1	BPA	199801900	Wind River Watershed	2008	http://www.cbfish.org/Project.mvc/Display/199801900
RM&E	Tributary Habitat RM&E	56	1	BPA	200003900	Walla Walla River Basin Monitoring and Evaluation (M&E)	2008	http://www.cbfish.org/Project.mvc/Display/200003900
RM&E	Tributary Habitat RM&E	56	1,3	BPA	200203200	Snake River Fall Chinook Salmon Life History Investigations	2008	http://www.cbfish.org/Project.mvc/Display/200203200
RM&E	Tributary Habitat RM&E	56	1,2	BPA	200205900	Yankee Fork Salmon River Restoration	2008	http://www.cbfish.org/Project.mvc/Display/200205900
RM&E	Tributary Habitat RM&E	56	1	BPA	200206100	Potlatch River Watershed Restoration	2008	http://www.cbfish.org/Project.mvc/Display/200206100
RM&E	Tributary Habitat RM&E	56	3	BPA	200206800	Evaluate Stream Habitat-Nez Perce Tribe Watershed Monitoring and Evaluation (M&E) Plan.	2008	http://www.cbfish.org/Project.mvc/Display/200206800
RM&E	Tributary Habitat RM&E	56	1,2	BPA	200301700	Integrated Status and Effectiveness Monitoring Program (ISEMP)	2008	http://www.cbfish.org/Project.mvc/Display/200301700
RM&E	Tributary Habitat RM&E	56	1	BPA	200303900	Monitor and Evaluate (M&E) Reproductive Success and Survival in Wenatchee River	2008	http://www.cbfish.org/Project.mvc/Display/200303900
RM&E	Tributary Habitat RM&E	56	3	BPA	200400200	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	2008	http://www.cbfish.org/Project.mvc/Display/200400200

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Tributary Habitat RM&E	56	1,2	BPA	200708300	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	2008	http://www.cbfish.org/Project.mvc/Display/200708300
RM&E	Tributary Habitat RM&E	56	1	BPA	200712700	East Fork of South Fork Salmon River Passage Restoration	2008	http://www.cbfish.org/Project.mvc/Display/200712700
RM&E	Tributary Habitat RM&E	56	1	BPA	200715600	Snake River Sockeye Captive Propagation	2008	http://www.cbfish.org/Project.mvc/Display/200715600
RM&E	Tributary Habitat RM&E	56	1	BPA	200723300	Distribution and Abundance Monitoring of Oncorhynchus mykiss within the Lower Clearwater Subbasin	2008	http://www.cbfish.org/Project.mvc/Display/200723300
RM&E	Tributary Habitat RM&E	56	1	BPA	200733200	Mitigation of Marine-Derived Nutrient Loss in Central Idaho	2008	http://www.cbfish.org/Project.mvc/Display/200733200
RM&E	Tributary Habitat RM&E	56	3	BPA	200740200	Snake River Sockeye Captive Propagation	2008	http://www.cbfish.org/Project.mvc/Display/200740200
RM&E	Tributary Habitat RM&E	56	1,2	BPA	200847100	Upper Columbia Nutrient Supplementation	2008	http://www.cbfish.org/Project.mvc/Display/200847100
RM&E	Tributary Habitat RM&E	56	1,2	BPA	200900300	Upper Columbia Habitat Restoration	2009	http://www.cbfish.org/Project.mvc/Display/200900300
RM&E	Tributary Habitat RM&E	57	4	BPA	198402100	John Day Habitat Enhancement	2008	http://www.cbfish.org/Project.mvc/Display/198402100
RM&E	Tributary Habitat RM&E	57	4	BPA	198402500	Blue Mountain Fish Habitat Improvement	2008	http://www.cbfish.org/Project.mvc/Display/198402500
RM&E	Tributary Habitat RM&E	57	4	BPA	199404200	Trout Creek Operations and Maintenance (O&M)	2008	http://www.cbfish.org/Project.mvc/Display/199404200
RM&E	Tributary Habitat RM&E	57	4	BPA	199604000	Mid-Columbia Reintroduction Feasibility Study	2008	http://www.cbfish.org/Project.mvc/Display/199604000

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Tributary Habitat RM&E	57	2,4	BPA	200201301	Water Entry - Water Transaction Program	2008	http://www.cbfish.org/Project.mvc/Display/200201301
RM&E	Tributary Habitat RM&E	57	1,2,3,4	BPA	200205900	Yankee Fork Salmon River Restoration	2008	http://www.cbfish.org/Project.mvc/Display/200205900
RM&E	Tributary Habitat RM&E	57	1,3,4	BPA	200301700	Integrated Status and Effectiveness Monitoring Program (ISEMP)	2008	http://www.cbfish.org/Project.mvc/Display/200205900
RM&E	Tributary Habitat RM&E	57	4	BPA	200708300	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	2008	http://www.cbfish.org/Project.mvc/Display/200708300
RM&E	Tributary Habitat RM&E	57	4	BPA	200873300	Regional Strategy-Status/Trend	2008	http://www.cbfish.org/Project.mvc/Display/200873300
RM&E	Tributary Habitat RM&E	57	4	BPA	200900300	Upper Columbia Habitat Restoration	2009	http://www.cbfish.org/Project.mvc/Display/200900300
RM&E	Tributary Habitat RM&E	57	5	BPA	200901400	Biomonitoring of Fish Habitat Enhancement	2009	http://www.cbfish.org/Project.mvc/Display/200901400
RM&E	Estuary Habitat RM&E	58	3,4	BPA	199801400	Ocean Survival of Salmonids	2008	http://www.cbfish.org/Project.mvc/Display/199801400
RM&E	Estuary Habitat RM&E	58	3,4	BPA	200300700	Lower Columbia River Estuary Ecosystem Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200300700
RM&E	Estuary Habitat RM&E	58	2,3	BPA	200301000	Historic Habitat Food Web Link	2008	http://www.cbfish.org/Project.mvc/Display/200301000
RM&E	Estuary Habitat RM&E	58	1	BPA	200311400	Pacific Ocean Survey Tracking (POST)	2008	http://www.cbfish.org/Project.mvc/Display/200311400
RM&E	Estuary Habitat RM&E	58	2,3	BPA	200500100	Tidal Freshwater Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200500100
RM&E	Estuary Habitat RM&E	59	1,2,4,5	BPA	200300700	Lower Columbia River Estuary Ecosystem Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200300700

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Estuary Habitat RM&E	59	4	BPA	200301000	Historic Habitat Food Web Link	2008	http://www.cbfish.org/Project.mvc/Display/200301000
RM&E	Estuary Habitat RM&E	59	1,5	BPA	200301100	Columbia River Estuary Habitat Restoration	2008	http://www.cbfish.org/Project.mvc/Display/200301100
RM&E	Estuary Habitat RM&E	59	1	BPA	200500100	Tidal Freshwater Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200500100
RM&E	Estuary Habitat RM&E	59	4,5	BPA	200500100	Tidal Freshwater Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200500100
RM&E	Estuary Habitat RM&E	60	1,2	BPA	200300700	Lower Columbia River Estuary Ecosystem Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200300700
RM&E	Estuary Habitat RM&E	60	1,2,3	BPA	200301100	Columbia River Estuary Habitat Restoration	2008	http://www.cbfish.org/Project.mvc/Display/200301100
RM&E	Estuary Habitat RM&E	60	2	BPA	200301300	Grays River Watershed Assessment	2008	http://www.cbfish.org/Project.mvc/Display/200301300
RM&E	Estuary Habitat RM&E	60	1,2	BPA	200500100	Tidal Freshwater Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200500100
RM&E	Estuary Habitat RM&E	60	2	BPA	200751300	Eelgrass Enhancement And Restoration	2008	http://www.cbfish.org/Project.mvc/Display/200751300
RM&E	Estuary Habitat RM&E	61	4	BPA	199801400	Ocean Survival of Salmonids	2008	http://www.cbfish.org/Project.mvc/Display/199801400
RM&E	Estuary Habitat RM&E	61	1,2	BPA	199801400	Ocean Survival of Salmonids	2008	http://www.cbfish.org/Project.mvc/Display/199801400
RM&E	Estuary Habitat RM&E	61	1,3	BPA	200300700	Lower Columbia River Estuary Ecosystem Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200300700
RM&E	Estuary Habitat RM&E	61	1,2	BPA	200300900	Canada-USA Shelf Salmon Survival Study	2008	http://www.cbfish.org/Project.mvc/Display/200300900
RM&E	Estuary Habitat RM&E	61	1,3,4	BPA	200301000	Historic Habitat Food Web Link	2008	http://www.cbfish.org/Project.mvc/Display/200301000
RM&E	Estuary Habitat RM&E	61	3	BPA	200301100	Columbia River Estuary Habitat Restoration	2008	http://www.cbfish.org/Project.mvc/Display/200301100

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Estuary Habitat RM&E	61	1,2	BPA	200311400	Pacific Ocean Survey Tracking (POST)	2008	http://www.cbfish.org/Project.mvc/Display/200311400
RM&E	Estuary Habitat RM&E	61	1,3	BPA	200500100	Tidal Freshwater Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200500100
RM&E	Estuary Habitat RM&E	61	1	BPA	200727500	Impact of American Shad in the Columbia River	2008	http://www.cbfish.org/Project.mvc/Display/200727500
RM&E	Estuary Habitat RM&E	61	3	BPA	200902000	UW-CBR Internal Statistical / Technical Support to BPA (Skalski)	2009	http://www.cbfish.org/Project.mvc/Display/200902000
RM&E	Harvest RM&E	62	4	BPA	198201301	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	2008	http://www.cbfish.org/Project.mvc/Display/198201301
RM&E	Harvest RM&E	62	4	BPA	198201302	Coded Wire Tag-Oregon Department of Fish and Wildlife (ODFW)	2008	http://www.cbfish.org/Project.mvc/Display/198201302
RM&E	Harvest RM&E	62	4	BPA	198201303	Coded Wire Tag-US Fish and Wildlife Service (USFWS)	2008	http://www.cbfish.org/Project.mvc/Display/198201303
RM&E	Harvest RM&E	62	4	BPA	198201304	Coded Wire Tag-Washington Department of Fish and Wildlife (WDFW)	2008	http://www.cbfish.org/Project.mvc/Display/198201304
RM&E	Harvest RM&E	62	4,5	BPA	198335000	Nez Perce Tribal Hatchery Operations and Maintenance (O&M)	2008	http://www.cbfish.org/Project.mvc/Display/198335000
RM&E	Harvest RM&E	62	1,4,5	BPA	198335003	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	2008	http://www.cbfish.org/Project.mvc/Display/198335003
RM&E	Harvest RM&E	62	1,4	BPA	198805303	Hood River Production Monitoring and Evaluation (M&E)-Warm Springs	2008	http://www.cbfish.org/Project.mvc/Display/198805303
RM&E	Harvest RM&E	62	5	BPA	198805304	Hood River Production Monitor and Evaluation (M&E)-Oregon Department of Fish and Wildlife (ODFW)	2008	http://www.cbfish.org/Project.mvc/Display/198805304

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Harvest RM&E	62	4,5	BPA	198805307	Hood River Production Operations and Maintenance (O&M)-Warm Springs	2008	http://www.cbfish.org/Project.mvc/Display/198805307
RM&E	Harvest RM&E	62	5	BPA	198909600	Genetic Monitoring and Evaluation (M&E) Program for Salmon and Steelhead	2008	http://www.cbfish.org/Project.mvc/Display/198909600
RM&E	Harvest RM&E	62	1,5	BPA	198909800	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	2008	http://www.cbfish.org/Project.mvc/Display/198909800
RM&E	Harvest RM&E	62	4	BPA	199000500	Umatilla Hatchery Monitoring and Evaluation (M&E)	2008	http://www.cbfish.org/Project.mvc/Display/199000500
RM&E	Harvest RM&E	62	5	BPA	199005500	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	2008	http://www.cbfish.org/Project.mvc/Display/199005500
RM&E	Harvest RM&E	62	2	BPA	199306000	Select Area Fisheries Enhancement	2008	http://www.cbfish.org/Project.mvc/Display/199306000
RM&E	Harvest RM&E	62	4,5	BPA	199506325	Yakima River Monitoring and Evaluation- Yakima/Klickitat Fisheries Project (YKFP)	2008	http://www.cbfish.org/Project.mvc/Display/199506325
RM&E	Harvest RM&E	62	5	BPA	199506335	Klickitat River Monitoring and Evaluation- Yakima/Klickitat Fisheries Project (YKFP)	2008	http://www.cbfish.org/Project.mvc/Display/199506335
RM&E	Harvest RM&E	62	1,5	BPA	199604300	Johnson Creek Artificial Propagation Enhancement	2008	http://www.cbfish.org/Project.mvc/Display/199604300
RM&E	Harvest RM&E	62	1,4,5	BPA	199701501	Imnaha River Smolt Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/199701501
RM&E	Harvest RM&E	62	5	BPA	199703000	Chinook Salmon Adult Abundance Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/199703000
RM&E	Harvest RM&E	62	5	BPA	199703800	Listed Stock Chinook Salmon Gamete Preservation	2008	http://www.cbfish.org/Project.mvc/Display/199703800

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Harvest RM&E	62	5	BPA	199800702	Grande Ronde Supplementation Operations and Maintenance (O&M) and Monitoring and Evaluation (M&E) on Lostine River	2008	http://www.cbfish.org/Project.mvc/Display/199800702
RM&E	Harvest RM&E	62	5	BPA	199801600	Escapement and Productivity of Spring Chinook and Steelhead	2008	http://www.cbfish.org/Project.mvc/Display/199801600
RM&E	Harvest RM&E	62	5	BPA	200203000	Salmonid Progeny Markers	2008	http://www.cbfish.org/Project.mvc/Display/200203000
RM&E	Harvest RM&E	62	5	BPA	200205300	Asotin Creek Salmon Population Assessment	2008	http://www.cbfish.org/Project.mvc/Display/200205300
RM&E	Harvest RM&E	62	4	BPA	200206000	Nez Perce Harvest Monitoring on Snake and Clearwater Rivers	2008	http://www.cbfish.org/Project.mvc/Display/200206000
RM&E	Harvest RM&E	62	5	BPA	200303900	Monitor and Evaluate (M&E) Reproductive Success and Survival in Wenatchee River	2008	http://www.cbfish.org/Project.mvc/Display/200303900
RM&E	Harvest RM&E	62	5	BPA	200305000	Evaluate the Reproductive Success of Wild and Hatchery Steelhead in Natural and Hatchery Environments	2008	http://www.cbfish.org/Project.mvc/Display/200305000
RM&E	Harvest RM&E	62	5	BPA	200305400	Evaluate the Relative Reproductive Success of Hatchery-Origin and Wild-Origin Steelhead Spawning Naturally in the Hood River	2008	http://www.cbfish.org/Project.mvc/Display/200305400
RM&E	Harvest RM&E	62	5	BPA	200306000	Evaluate the Relative Reproductive Success of Wild and Hatchery Origin Snake River Fall Chinook Spawners Upstream of Lower Granite Dam	2008	http://www.cbfish.org/Project.mvc/Display/200306000

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Harvest RM&E	62	2	BPA	200708300	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	2008	http://www.cbfish.org/Project.mvc/Display/200708300
RM&E	Harvest RM&E	62	2	BPA	200724900	Evaluation of Live Capture Gear	2008	http://www.cbfish.org/Project.mvc/Display/200724900
RM&E	Harvest RM&E	62	1	BPA	200740100	Kelt Reconditioning and Reproductive Success Evaluation Research	2008	http://www.cbfish.org/Project.mvc/Display/200740100
RM&E	Harvest RM&E	62	5	BPA	200740400	Spring Chinook Captive Propagation-Oregon	2008	http://www.cbfish.org/Project.mvc/Display/200740400
RM&E	Harvest RM&E	62	2,3,4	BPA	200810500	Selective Gear Deployment	2008	http://www.cbfish.org/Project.mvc/Display/200810500
RM&E	Harvest RM&E	62	5	BPA	200831000	White River supplementation	2008	http://www.cbfish.org/Project.mvc/Display/200831000
RM&E	Harvest RM&E	62	5	BPA	200831100	Natural Production Management and Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200831100
RM&E	Harvest RM&E	62	1	BPA	200850200	Expanded Tribal Catch Sampling	2008	http://www.cbfish.org/Project.mvc/Display/200850200
RM&E	Harvest RM&E	62	1	BPA	200850800	Power Analysis Catch Sampling Rates	2008	http://www.cbfish.org/Project.mvc/Display/200850800
RM&E	Harvest RM&E	62	5	BPA	200890700	Genetic Assessment of Columbia River Stocks	2008	http://www.cbfish.org/Project.mvc/Display/200890700
RM&E	Harvest RM&E	62	1,3,4	BPA	200890800	FCRPS Water Studies & Passage of Adult Salmon & Steelhead	2008	http://www.cbfish.org/Project.mvc/Display/200890800
RM&E	Hatchery RM&E	63	1	BPA	198335003	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	2008	http://www.cbfish.org/Project.mvc/Display/198335003

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hatchery RM&E	63	1	BPA	198909600	Genetic Monitoring and Evaluation (M&E) Program for Salmon and Steelhead	2008	http://www.cbfish.org/Project.mvc/Display/198909600
RM&E	Hatchery RM&E	63	1	BPA	198909800	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	2008	http://www.cbfish.org/Project.mvc/Display/198909800
RM&E	Hatchery RM&E	63	1,2	BPA	199202604	Grand Ronde Early Life History of Spring Chinook and Steelhead	2008	http://www.cbfish.org/Project.mvc/Display/199202604
RM&E	Hatchery RM&E	63	2	BPA	199305600	Advance Hatchery Reform Research	2008	http://www.cbfish.org/Project.mvc/Display/199305600
RM&E	Hatchery RM&E	63	1	BPA	199604300	Johnson Creek Artificial Propagation Enhancement	2008	http://www.cbfish.org/Project.mvc/Display/199604300
RM&E	Hatchery RM&E	63	1	BPA	199703000	Chinook Salmon Adult Abundance Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/199703000
RM&E	Hatchery RM&E	63	1	BPA	199800702	Grande Ronde Supplementation Operations and Maintenance (O&M) and Monitoring and Evaluation (M&E) on Lostine River	2008	http://www.cbfish.org/Project.mvc/Display/199800702
RM&E	Hatchery RM&E	63	1	BPA	199800703	Grande Ronde Supplementation O&M on Catherine Creek/Upper Grande Ronde River	2008	http://www.cbfish.org/Project.mvc/Display/199800703
RM&E	Hatchery RM&E	63	1	BPA	199800704	Grande Ronde Spring Chinook on Lostine/Catherine Creek/Upper Grande Ronde Rivers	2008	http://www.cbfish.org/Project.mvc/Display/199800704
RM&E	Hatchery RM&E	63	1	BPA	199801600	Escapement and Productivity of Spring Chinook and Steelhead	2008	http://www.cbfish.org/Project.mvc/Display/199801600
RM&E	Hatchery RM&E	63	1	BPA	200105300	Reintroduction of Chum in Duncan Creek	2008	http://www.cbfish.org/Project.mvc/Display/200105300

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RM&E	Hatchery RM&E	63	1	BPA	200708300	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	2008	http://www.cbfish.org/Project.mvc/Display/200708300
RM&E	Hatchery RM&E	63	1	BPA	200740200	Snake River Sockeye Captive Propagation	2008	http://www.cbfish.org/Project.mvc/Display/200740200
RM&E	Hatchery RM&E	63	1	BPA	200740300	Spring Chinook Captive Propagation-Idaho	2008	http://www.cbfish.org/Project.mvc/Display/200740300
RM&E	Hatchery RM&E	63	1	BPA	200740400	Spring Chinook Captive Propagation-Oregon	2008	http://www.cbfish.org/Project.mvc/Display/200740400
RM&E	Hatchery RM&E	63	1	BPA	200871000	Development of an Integrated strategy for Chum Salmon Restoration in the tributaries below Bonneville Dam	2008	http://www.cbfish.org/Project.mvc/Display/200871000
RM&E	Hatchery RM&E	64	2	BPA	198335000	Nez Perce Tribal Hatchery Operations and Maintenance (O&M)	2008	http://www.cbfish.org/Project.mvc/Display/198335000
RM&E	Hatchery RM&E	64	1,2,3	BPA	198335003	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	2008	http://www.cbfish.org/Project.mvc/Display/198335003
RM&E	Hatchery RM&E	64	2	BPA	198343500	Umatilla Hatchery Satellite Fac O&M	2008	http://www.cbfish.org/Project.mvc/Display/198343500
RM&E	Hatchery RM&E	64	2	BPA	198805301	Northeast Oregon Hatchery Master Plan	2008	http://www.cbfish.org/Project.mvc/Display/198805301
RM&E	Hatchery RM&E	64	1,2	BPA	198805303	Hood River Production Monitoring and Evaluation (M&E)-Warm Springs	2008	http://www.cbfish.org/Project.mvc/Display/198805303
RM&E	Hatchery RM&E	64	1,2	BPA	198805304	Hood River Production Monitor and Evaluation (M&E)-Oregon Department of Fish and Wildlife (ODFW)	2008	http://www.cbfish.org/Project.mvc/Display/198805304

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RM&E	Hatchery RM&E	64	1,2	BPA	198805307	Hood River Production Operations and Maintenance (O&M)-Warm Springs	2008	http://www.cbfish.org/Project.mvc/Display/198805307
RM&E	Hatchery RM&E	64	1,2	BPA	198805308	Hood River Production Operations and Maintenance (O&M) and Powerdale	2008	http://www.cbfish.org/Project.mvc/Display/198805308
RM&E	Hatchery RM&E	64	1,2	BPA	198909600	Genetic Monitoring and Evaluation (M&E) Program for Salmon and Steelhead	2008	http://www.cbfish.org/Project.mvc/Display/198909600
RM&E	Hatchery RM&E	64	2	BPA	198909800	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	2008	http://www.cbfish.org/Project.mvc/Display/198909800
RM&E	Hatchery RM&E	64	2	BPA	199000500	Umatilla Hatchery Monitoring and Evaluation (M&E)	2008	http://www.cbfish.org/Project.mvc/Display/199000500
RM&E	Hatchery RM&E	64	2	BPA	199000501	Umatilla Basin Natural Production Monitoring and Evaluation (M&E)	2008	http://www.cbfish.org/Project.mvc/Display/199000501
RM&E	Hatchery RM&E	64	1,2	BPA	199202604	Grand Ronde Early Life History of Spring Chinook and Steelhead	2008	http://www.cbfish.org/Project.mvc/Display/199202604
RM&E	Hatchery RM&E	64	2	BPA	199506325	Yakima River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	2008	http://www.cbfish.org/Project.mvc/Display/199506325
RM&E	Hatchery RM&E	64	2	BPA	199604300	Johnson Creek Artificial Propagation Enhancement	2008	http://www.cbfish.org/Project.mvc/Display/199604300
RM&E	Hatchery RM&E	64	2	BPA	199701501	Imnaha River Smolt Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/199701501
RM&E	Hatchery RM&E	64	2	BPA	199703000	Chinook Salmon Adult Abundance Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/199703000

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RM&E	Hatchery RM&E	64	2	BPA	199703800	Listed Stock Chinook Salmon Gamete Preservation	2008	http://www.cbfish.org/Project.mvc/Display/199703800
RM&E	Hatchery RM&E	64	1,2	BPA	199800702	Grande Ronde Supplementation Operations and Maintenance (O&M) and Monitoring and Evaluation (M&E) on Lostine River	2008	http://www.cbfish.org/Project.mvc/Display/199800702
RM&E	Hatchery RM&E	64	1,2	BPA	199800703	Grande Ronde Supplementation O&M on Catherine Creek/Upper Grande Ronde River	2008	http://www.cbfish.org/Project.mvc/Display/199800703
RM&E	Hatchery RM&E	64	1,2	BPA	199800704	Grande Ronde Spring Chinook on Lostine/Catherine Creek/Upper Grande Ronde Rivers	2008	http://www.cbfish.org/Project.mvc/Display/199800704
RM&E	Hatchery RM&E	64	2	BPA	199801003	Spawning Distribution of Snake River Fall Chinook Salmon	2008	http://www.cbfish.org/Project.mvc/Display/199801003
RM&E	Hatchery RM&E	64	2	BPA	199801004	Monitor and Evaluate (M&E) Performance of Juvenile Snake River Fall Chinook Salmon from Fall Chinook Acclimation Project	2008	http://www.cbfish.org/Project.mvc/Display/199801004
RM&E	Hatchery RM&E	64	2	BPA	200001900	Tucannon River Spring Chinook Captive Brood	2008	http://www.cbfish.org/Project.mvc/Display/200001900
RM&E	Hatchery RM&E	64	2	BPA	200203000	Salmonid Progeny Markers	2008	http://www.cbfish.org/Project.mvc/Display/200203000
RM&E	Hatchery RM&E	64	2	BPA	200203100	Growth Modulation in Salmon Supplementation	2008	http://www.cbfish.org/Project.mvc/Display/200203100

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RM&E	Hatchery RM&E	64	1,2	BPA	200303900	Monitor and Evaluate (M&E) Reproductive Success and Survival in Wenatchee River	2008	http://www.cbfish.org/Project.mvc/Display/200303900
RM&E	Hatchery RM&E	64	2	BPA	200305000	Evaluate the Reproductive Success of Wild and Hatchery Steelhead in Natural and Hatchery Environments	2008	http://www.cbfish.org/Project.mvc/Display/200305000
RM&E	Hatchery RM&E	64	1,2	BPA	200305400	Evaluate the Relative Reproductive Success of Hatchery-Origin and Wild-Origin Steelhead Spawning Naturally in the Hood River	2008	http://www.cbfish.org/Project.mvc/Display/200305400
RM&E	Hatchery RM&E	64	1,2,3	BPA	200306000	Evaluate the Relative Reproductive Success of Wild and Hatchery Origin Snake River Fall Chinook Spawners Upstream of Lower Granite Dam	2008	http://www.cbfish.org/Project.mvc/Display/200306000
RM&E	Hatchery RM&E	64	2	BPA	200306300	Natural Reproductive Success and Demographic Effects of Hatchery-Origin Steelhead in Abernathy Creek, Washington	2008	http://www.cbfish.org/Project.mvc/Display/200306300
RM&E	Hatchery RM&E	64	1,2	BPA	200708300	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	2008	http://www.cbfish.org/Project.mvc/Display/200708300
RM&E	Hatchery RM&E	64	2	BPA	200729900	Investigation of Relative Reproductive Success of Stray Hatchery & Wild Steelhead & Influence of Hatchery Strays on Natural Productivity in Deschutes	2008	http://www.cbfish.org/Project.mvc/Display/200729900

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hatchery RM&E	64	2,3	BPA	200740100	Kelt Reconditioning and Reproductive Success Evaluation Research	2008	http://www.cbfish.org/Project.mvc/Display/200740100
RM&E	Hatchery RM&E	64	2	BPA	200740200	Snake River Sockeye Captive Propagation	2008	http://www.cbfish.org/Project.mvc/Display/200740200
RM&E	Hatchery RM&E	64	2	BPA	200740300	Spring Chinook Captive Propagation-Idaho	2008	http://www.cbfish.org/Project.mvc/Display/200740300
RM&E	Hatchery RM&E	64	2	BPA	200740400	Spring Chinook Captive Propagation-Oregon	2008	http://www.cbfish.org/Project.mvc/Display/200740400
RM&E	Hatchery RM&E	64	2	BPA	200831000	White River supplementation	2008	http://www.cbfish.org/Project.mvc/Display/200831000
RM&E	Hatchery RM&E	64	2	BPA	200831100	Natural Production Management and Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200831100
RM&E	Hatchery RM&E	64	2	BPA	200845800	Steelhead Kelt Reconditioning	2008	http://www.cbfish.org/Project.mvc/Display/200845800
RM&E	Hatchery RM&E	64	2	BPA	200900100	Expand Multispecies Acclimation Wenatchee/Methow	2009	http://www.cbfish.org/Project.mvc/Display/200900100
RM&E	Hatchery RM&E	65	1,2,3	BPA	199102900	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	2008	http://www.cbfish.org/Project.mvc/Display/199102900
RM&E	Hatchery RM&E	65	1,2	BPA	199801003	Spawning Distribution of Snake River Fall Chinook Salmon	2008	http://www.cbfish.org/Project.mvc/Display/199801003
RM&E	Hatchery RM&E	65	1,2	BPA	199801004	Monitor and Evaluate (M&E) Performance of Juvenile Snake River Fall Chinook Salmon from Fall Chinook Acclimation Project	2008	http://www.cbfish.org/Project.mvc/Display/199801004

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RM&E	Hatchery RM&E	65	1,2,5	BPA	200306000	Evaluate the Relative Reproductive Success of Wild and Hatchery Origin Snake River Fall Chinook Spawners Upstream of Lower Granite Dam	2008	http://www.cbfish.org/Project.mvc/Display/200306000
RM&E	Predation Management RM&E	66		BPA	199702400	Avian Predation on Juvenile Salmonids	2008	http://www.cbfish.org/Project.mvc/Display/199702400
RM&E	Predation Management RM&E	67		BPA	199702400	Avian Predation on Juvenile Salmonids	2008	http://www.cbfish.org/Project.mvc/Display/199702400
RM&E	Predation Management RM&E	68		BPA	199702400	Avian Predation on Juvenile Salmonids	2008	http://www.cbfish.org/Project.mvc/Display/199702400
RM&E	Predation Management RM&E	69	1,2,3	BPA	200800400	Sea Lion Non-Lethal Hazing and Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200800400
RM&E	Predation Management RM&E	70	1,2,3	BPA	199007700	Development of Systemwide Predator Control	2008	http://www.cbfish.org/Project.mvc/Display/199007700
RM&E	Predation Management RM&E	70	4	BPA	200871900	Research Non-Indigenous Actions	2008	http://www.cbfish.org/Project.mvc/Display/200871900
RM&E	Coordination and Data Management	71	4	BPA	198201301	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	2008	http://www.cbfish.org/Project.mvc/Display/198201301
RM&E	Coordination and Data Management	71	4	BPA	198810804	StreamNet - Coordinated Information System (CIS)/ Northwest Environmental Database (NED)	2008	http://www.cbfish.org/Project.mvc/Display/198810804
RM&E	Coordination and Data Management	71	3,4	BPA	199403300	Fish Passage Center	2008	http://www.cbfish.org/Project.mvc/Display/199403300
RM&E	Coordination and Data Management	71	3	BPA	199604300	Johnson Creek Artificial Propagation Enhancement	2008	http://www.cbfish.org/Project.mvc/Display/199604300
RM&E	Coordination and Data Management	71	4	BPA	200300700	Lower Columbia River Estuary Ecosystem Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200300700

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Coordination and Data Management	71	4,5	BPA	200301700	Integrated Status and Effectiveness Monitoring Program (ISEMP)	2008	http://www.cbfish.org/Project.mvc/Display/200301700
RM&E	Coordination and Data Management	71	4	BPA	200302200	Okanogan Basin Monitoring & Evaluation Program (OBMEP)	2008	http://www.cbfish.org/Project.mvc/Display/200301700
RM&E	Coordination and Data Management	71	4,5,6	BPA	200307200	Habitat and Biodiversity Information System for Columbia River Basin	2008	http://www.cbfish.org/Project.mvc/Display/200307200
RM&E	Coordination and Data Management	71	3,4,5,6	BPA	200400200	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	2008	http://www.cbfish.org/Project.mvc/Display/200400200
RM&E	Coordination and Data Management	71	5	BPA	200500100	Tidal Freshwater Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200500100
RM&E	Coordination and Data Management	71	3	BPA	200721600	Pacific NW Aquatic Monitoring Program (PNAMP) Research, Monitoring and Evaluation (RM&E) Design and Protocols	2008	http://www.cbfish.org/Project.mvc/Display/200721600
RM&E	Coordination and Data Management	71	4	BPA	200740300	Spring Chinook Captive Propagation-Idaho	2008	http://www.cbfish.org/Project.mvc/Display/200740300
RM&E	Coordination and Data Management	71	4	BPA	200850500	Streamnet Library	2008	http://www.cbfish.org/Project.mvc/Display/200850500
RM&E	Coordination and Data Management	71	4	BPA	200873300	Regional Strategy-Status/Trend	2008	http://www.cbfish.org/Project.mvc/Display/200873300
RM&E	Coordination and Data Management	72	1,3	BPA	198201301	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	2008	http://www.cbfish.org/Project.mvc/Display/198201301
RM&E	Coordination and Data Management	72	1,2,3	BPA	198810804	StreamNet - Coordinated Information System (CIS)/Northwest Environmental Database (NED)	2008	http://www.cbfish.org/Project.mvc/Display/198810804
RM&E	Coordination and Data Management	72	2	BPA	199601900	Data Access in Real Time (DART)	2008	http://www.cbfish.org/Project.mvc/Display/199601900

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Coordination and Data Management	72	1,3	BPA	199803100	Implement Wy - Kan - Ush - Mi Wa - Kis	2008	http://www.cbfish.org/Project.mvc/Display/199803100
RM&E	Coordination and Data Management	72	1	BPA	200301700	Integrated Status and Effectiveness Monitoring Program (ISEMP)	2008	http://www.cbfish.org/Project.mvc/Display/200301700
RM&E	Coordination and Data Management	72	1,3	BPA	200400200	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	2008	http://www.cbfish.org/Project.mvc/Display/200400200
RM&E	Coordination and Data Management	72	1	BPA	200500100	Tidal Freshwater Monitoring	2008	http://www.cbfish.org/Project.mvc/Display/200500100
RM&E	Coordination and Data Management	72	1,3	BPA	200850500	Streamnet Library	2008	http://www.cbfish.org/Project.mvc/Display/200850500
RM&E	Coordination and Data Management	72	1	BPA	200872700	Regional Data Management Support and Coordination	2008	http://www.cbfish.org/Project.mvc/Display/200872700
RM&E	Coordination and Data Management	72	2	BPA	200872700	Regional Data Management Support and Coordination	2008	http://www.cbfish.org/Project.mvc/Display/200872700
RM&E	Implementation and Compliance Monitoring	73	1,2,3	None identified	None identified	BPA	None identified	

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4313	Entiat River Tributary Assessment	5/29/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4321	Roaring Creek Diversion	8/27/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4326	Keystone Canyon Project	1/29/2007
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4339	Below the Bridge (Moody Canyon) ELJ (Bridge to Bridge Restoration, Phase 4)	4/1/2007
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4341	Stormy Creek Culvert Replacement	6/15/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4357	Entiat National Fish Hatchery (ENFH) Habitat Channel (Bridge to Bridge Restoration, Phase 5)	1/14/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4391	Knapp Wham Diversion Replacement (Phase 2)	4/16/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4392	Bridge to Bridge Phase III	4/16/2009

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4399	Tyee Restoration Project (Stillwater complexity project)	8/13/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4327	Orodell Diversion Fish Passage Enhancement Project	9/24/2007
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4317	Middle Fork Rock Replacement Projects	1/19/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4318	CTWSRO (MCA) Middle Fork Forrest Reach Assessment	9/18/2007
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4319	CTWSRO Oxbow Reach Assessment (MCA)	9/5/2007
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4345	Boulder Creek Ranch Diversion	7/25/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4411	Austin Ranch Diversion	10/9/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4412	Lower Clear Creek Diversion	10/9/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4314	Grant SWCD-Stout Diversion (UPJD RM 214.3)	3/31/2008

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4323	Kennedy (UPJD RM 209) and Murray (UPJD RM 210.2) Ditch Diversions	1/24/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4347	Fry-Ingle Diversion	7/28/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4348	Cummings Creek Pump	6/28/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4349	Eddington Ditch Diversion (Page Pump Station- UPJD RM 231.7)	7/28/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4350	Oliver Ditch # 47 (UPJD RM 253.3) Diversion (combined with Oliver #48 in 2008)	7/28/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4351	Oliver Ditch # 48 (UPJD RM 253.2) Diversion (combined with Oliver # 47 in 2008)	7/28/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4353	Oliver Ditch # 49 Diversion (UPJD RM 252.3)	7/28/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4369	Grant SWCD- Cummings River Ditch Diversion (UPJD RM 222.5)	2/4/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4388	Blanchette Habitat Project	12/15/2009

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4398	Panama Pipeline Appraisal Study	12/18/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4405	Lower Deardorf Diversion	8/21/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4406	Upper Deardorf Diversion	8/21/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4407	East Fork Canyon Creek Diversion	8/21/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4408	Dovenberg Pump Station	8/31/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4409	Beech Creek Moore Diversion	8/31/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4413	Dad's Creek #1 Siphon	10/7/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4414	Dad's Creek #2 Winegar Diversion	10/7/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4415	Dad's Creek #3 CTWSRO Diversion	10/7/2009

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4416	UJD Forrest Property RM 264.7 Enhancement	5/18/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4328	L-1 Diversion	4/1/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4378	Upper Lemhi River Flow Enhancement / Eighteenmile Creek Reconnect	10/16/2006
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4386	Lemhi River, Little Springs Creek Restoration	2/12/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4387	Wimpey Creek- 2 Diversion Replacement	2/11/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4403	L-47 Diversion	8/4/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4404	L-45 Diversion Replacement	2/14/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4417	Big Timber Flow Enhancement	5/30/2003
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4034	MVID East Canal Diversion Dam	9/13/2002

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4035	MVID West Canal Diversion Dam	9/13/2002
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4262	Rockview-Fender Mills Phase I Side Channel Reconnection	5/12/2005
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4263	Upper Beaver Creek Side Channel Reconnection	5/3/2005
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4330	Poorman Cutoff Road Culvert	2/15/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4395	Operskalski Complexity	12/19/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4396	Heath Middle Pond Fish Passage	1/23/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4401	Barclay Fish Return Gates	11/2/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4402	Little Barkley Pipe	11/11/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4420	Little Chewuch Streamflow Improvement	10/15/2009

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4324	Big Springs Creek 7-8 Diversion Enhancement	8/1/2007
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4389	Hooper Lane Culverts	12/23/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4400	Big Springs Creek 3 Diversion Enhancement	7/2/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4410	Big Springs Creek 1 Diversion Enhancement	7/2/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4238	East Fork 15 Fish Diversion	3/9/2004
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4239	East Fork Salmon River-EF 13 Diversion	3/9/2004
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4240	East Fork Salmon River-EF 13 Headgate	3/9/2004
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4246	East Fork Salmon River-EF 14 Headgate	2/16/2006
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4247	East Fork Salmon River-EF 14 Diversion	2/16/2006

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4248	East Fork Salmon River-EF 16 Headgate	2/16/2006
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4249	East Fork Salmon River EF 16 Diversion	2/16/2006
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4342	Pole Creek Diversion Enhancement	9/10/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4287	Nason Creek MCA Project (Oxbow Reconnection)	7/21/2006
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4336	Nason 1- Ray Rock Springs	2/11/2008
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4338	Icicle ID Screen Replacement and Barrier Removal	8/18/2006
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4361	Peshastin Pipeline	4/2/2007
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4390	Upper Chumstick Barriers	12/15/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4393	Chumstick Culverts Replacement 2009 (17)	4/16/2009

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4394	Mission Creek Reconfiguration Projects (2)	4/16/2009
Habitat	Protect and Improve Tributary Habitat	34	All	Reclamation	4418	Cashmere Ponds Project	9/9/2008
RM&E	Tributary Habitat RM&E	56	All	Reclamation	4797	Fish Pop Genetics	2008
RM&E	Tributary Habitat RM&E	56	All	Reclamation	4887	Methow Fish Prod, Food Webs	2008
RM&E	Tributary Habitat RM&E	56	All	Reclamation	4806	Landscape Classification	2009
RM&E	Tributary Habitat RM&E	57	All	Reclamation	4887	Methow Channel Restoration Fish Productivity Response	2008
RM&E	Tributary Habitat RM&E	57	All	Reclamation	4806	Landscape Influences on Stream Condition	2009
RM&E	Tributary Habitat RM&E	65	All	Reclamation	4797	Fish Pop Genetics	2008
RM&E	Coordination and Data Management	71	All	Reclamation	4930	PNAMP	2008

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date
RM&E	Coordination and Data Management	72	All	Reclamation	4930	PNAMP	2008

Attachment 1 - Table 2. Corps Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hydrosystem RM&E	52	1	COE	SPE-06-2	Comparative Performance of Acoustic - Tagged and PIT - Tagged Juvenile Salmonids		
RM&E	Hydrosystem RM&E	52	1	COE	SPE-P-08-3	Studies of Surface Spill at John Day Dam		
RM&E	Hydrosystem RM&E	52	1	COE	SPE-W-04-2	Juvenile Survival and Passage at Little Goose Dam		
RM&E	Hydrosystem RM&E	52	1	COE	SPE-W-05-1	Passage, survival, and approach patterns of juvenile salmonids at McNary Dam		
RM&E	Hydrosystem RM&E	52	1	COE	SPE-W-08-4	Fish passage and survival at Lower Monumental Dam and Ice Harbor Dam		
RM&E	Hydrosystem RM&E	52	3, 7	COE	ADS-00-4	Investigation of Fate of Fish; Straying in Adult Salmon and Steelhead (RM&E)		

Attachment 1 - Table 2. Corps Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hydrosystem RM&E	53	5	COE	ADS-P-00-6	Evaluation of Steelhead Kelt and Overwintering Summer Steelhead Downstream Passage Through Columbia and Snake River dams		
RM&E	Hydrosystem RM&E	54	2	COE	SPE-P-08-2	Condition and Gatewell Retention Time Evaluation for Subyearling Chinook (Spring Creek Hatchery Origin & Run - of - the - River) through FGE modified units at the Second Powerhouse Bonneville Dam		
RM&E	Hydrosystem RM&E	54	4	COE	TSP-05-1	Pressure Investigations to Support Biological Index Testing		
RM&E	Hydrosystem RM&E	54	6	COE	TPE-W-00-06	Analyze the Benefits of Transporting Lower Snake River Juvenile Fall Chinook Salmon		

Attachment 1 - Table 2. Corps Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hydrosystem RM&E	54	6	COE	TPE-W-04-1	Determine the Seasonal Effects of Transporting fish from the Snake River to optimize a Transportation Strategy		
RM&E	Hydrosystem RM&E	54	8	COE	AVS-08-01	Evaluate Management Measures and Develop Baseline Information on Double - crested Cormorants Directed at Reducing the Impact of Their Predation on Salmonid Smolts in the Columbia River Estuary		
RM&E	Hydrosystem RM&E	54	8	COE	AVS-W-03-01	Evaluate the Impact of Avian Predation on Salmonid Smolts from the Columbia and Snake Rivers		
RM&E	Hydrosystem RM&E	54	8	COE	AVS-W-03-01	Electronic Recovery of PIT Tags from Piscivorous Bird Colonies in the Columbia River Basin		

Attachment 1 - Table 2. Corps Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hydrosystem RM&E	54	9	COE	ADS-00-4	Investigation of Fate of Fish; Straying in Adult Salmon and Steelhead (RM&E)		
RM&E	Hydrosystem RM&E	54	9	COE	SPE-06-2	Comparative Performance of Acoustic - Tagged and PIT - Tagged Juvenile Salmonids		
RM&E	Hydrosystem RM&E	54	12	COE	ADS-00-1	Evaluation of Adult Salmon and Steelhead Delay and Fallback at Snake and Columbia River Dams		
RM&E	Hydrosystem RM&E	54	13	COE	ADS-P-00-6	Evaluation of Steelhead Kelt and Overwintering Summer Steelhead Downstream Passage Through Columbia and Snake River dams		

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H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hydrosystem RM&E	54	14	COE	ADS-P-00-6	Evaluation of Steelhead Kelt and Overwintering Summer Steelhead Downstream Passage Through Columbia and Snake River dams		
RM&E	Hydrosystem RM&E	54	1, 2,3,4,5, 9	COE	SPE-P-08-3	Studies of Surface Spill at John Day Dam		
RM&E	Hydrosystem RM&E	54	1, 2,3,4,5, 9	COE	SPE-W-04-2	Juvenile Survival and Passage at Little Goose Dam.		
RM&E	Hydrosystem RM&E	54	1, 2,3,4,5, 9	COE	SPE-W-05-1	Passage, Survival, and Approach Patterns of Juvenile Salmonids at McNary Dam		
RM&E	Hydrosystem RM&E	54	1, 2,3,4,5, 9	COE	SPE-W-08-4	Fish passage and survival at Lower Monumental Dam and Ice Harbor Dam		
RM&E	Hydrosystem RM&E	54	3, 9	COE	SPE-P-08-1	Evaluation of a Behavioral Guidance Structure at Bonneville Dam Second Powerhouse		

Attachment 1 - Table 2. Corps Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hydrosystem RM&E	55	1	COE	TPE-W-00-06	Analyze the Benefits of Transporting Lower Snake River Juvenile Fall Chinook Salmon		
RM&E	Hydrosystem RM&E	55	1	COE	TPE-W-04-1	Determine the Seasonal Effects of Transporting fish from the Snake River to optimize a Transportation Strategy		
RM&E	Hydrosystem RM&E	55	2	COE	EST-02-01	A Study of Salmonid Survival and Behavior through the Columbia River Estuary Using Acoustic Tags		
RM&E	Hydrosystem RM&E	55	2	COE	TPE-W-00-06	Analyze the Benefits of Transporting Lower Snake River Juvenile Fall Chinook Salmon		
RM&E	Hydrosystem RM&E	55	2	COE	TPE-W-04-1	Determine the Seasonal Effects of Transporting fish from the Snake River to optimize a Transportation Strategy		

Attachment 1 - Table 2. Corps Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Hydrosystem RM&E	55	4	COE	EST-02-01	A Study of Salmonid Survival and Behavior through the Columbia River Estuary Using Acoustic Tags		
RM&E	Hydrosystem RM&E	55	4	COE	TPE-W-00-06	Analyze the Benefits of Transporting Lower Snake River Juvenile Fall Chinook Salmon		
RM&E	Hydrosystem RM&E	55	6	COE	TSP-05-1	Pressure Investigations to Support Biological Index Testing		
RM&E	Hydrosystem RM&E	55	8	COE	SPE-06-2	Comparative Performance of Acoustic - Tagged and PIT - Tagged Juvenile Salmonids		
RM&E	Hydrosystem RM&E	55	9	COE	ADS-00-4	Investigation of Fate of Fish; Straying in Adult Salmon and Steelhead (RM&E)		
RM&E	Estuary Habitat RM&E	58	1	COE	EST-02-01	A Study of Salmonid Survival and Behavior through the Columbia River Estuary Using Acoustic Tags		

Attachment 1 - Table 2. Corps Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Estuary Habitat RM&E	58	1	COE	EST-09-P-new	Evaluation of Life History Diversity, Habitat Connectivity, and Survival Benefits Associated with Habitat Restoration Actions in the Lower Columbia River and Estuary		
RM&E	Estuary Habitat RM&E	58	2	COE	EST-09-P-new	Evaluation of Life History Diversity, Habitat Connectivity, and Survival Benefits Associated with Habitat Restoration Actions in the Lower Columbia River and Estuary		
RM&E	Estuary Habitat RM&E	59	1	COE	AER7	JBH Tide Gate Replacement		
RM&E	Estuary Habitat RM&E	59	3	COE	AER7	JBH Tide Gate Replacement		
RM&E	Estuary Habitat RM&E	59	4	COE	EST-02-01	A Study of Salmonid Survival and Behavior through the Columbia River Estuary Using Acoustic Tags		
RM&E	Estuary Habitat RM&E	59	5	COE	STM3	Tides and Currents		

Attachment 1 - Table 2. Corps Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Estuary Habitat RM&E	59	5	COE	STM4	ODEQ Ambient Water Quality Monitoring		
RM&E	Estuary Habitat RM&E	59	5	COE	STM5	USGS Discharge and WQ Monitoring		
RM&E	Estuary Habitat RM&E	59	5	COE	STM6	WDOE Ambient WQ Monitoring		
RM&E	Estuary Habitat RM&E	59	1, 5	COE	EST-02-P-04	Evaluating Cumulative Ecosystem Response to Habitat Restoration Projects in the Lower Columbia River and Estuary		
RM&E	Estuary Habitat RM&E	59	2,3	COE	EST-09-P-new	Evaluation of Life History Diversity, Habitat Connectivity, and Survival Benefits Associated with Habitat Restoration Actions in the Lower Columbia River and Estuary		
RM&E	Estuary Habitat RM&E	60	2	COE	AER5	Pile Structure Evaluation Coal Creek		
RM&E	Estuary Habitat RM&E	60	2	COE	AER9	Tenasillahe Island Monitoring		

Attachment 1 - Table 2. Corps Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Estuary Habitat RM&E	60	1, 2, 3	COE	EST-02-P-04	Evaluating Cumulative Ecosystem Response to Habitat Restoration Projects in the Lower Columbia River and Estuary		
RM&E	Estuary Habitat RM&E	60	2, 3	COE	AER10	Monitoring at Smith and Bybee Lakes		
RM&E	Estuary Habitat RM&E	60	2, 3	COE	AER12	Ramsey Lake Project Monitoring		
RM&E	Estuary Habitat RM&E	60	2, 3	COE	AER7	JBH Tide Gate Replacement		
RM&E	Estuary Habitat RM&E	60	2, 3	COE	AER8	Crims Island Monitoring		
RM&E	Estuary Habitat RM&E	61	1	COE	EST-02-01	A Study of Salmonid Survival and Behavior through the Columbia River Estuary Using Acoustic Tags		
RM&E	Estuary Habitat RM&E	61	3	COE	EST-02-P-04	Evaluating Cumulative Ecosystem Response to Habitat Restoration Projects in the Lower Columbia River and Estuary		

Attachment 1 - Table 2. Corps Project List

H-Section	BiOp Strategy	RPA #	RPA Subaction	Agency	Project #	Project Title	Start Date	Action Information Link
RM&E	Estuary Habitat RM&E	61	4	COE	STM3	Tides and Currents		
RM&E	Estuary Habitat RM&E	61	4	COE	STM5	USGS Discharge and WQ Monitoring		
RM&E	Estuary Habitat RM&E	61	2, 3	COE	EST-02-01	A Study of Salmonid Survival and Behavior through the Columbia River Estuary Using Acoustic Tags		
RM&E	Predation Mgmt RM&E	68		COE	AVS-W-03-01	Electronic Recovery of PIT Tags from Piscivorous Bird Colonies in the Columbia River Basin		
RM&E	Predation Mgmt RM&E	68		COE	AVS-W-03-01	Evaluate the Impact of Avian Predation on Salmonid Smolts from the Columbia and Snake Rivers		

Attachment 2: Summary of 2007 to 2009 Tributary Habitat Accomplishments, by Population

Attachment 2 summarizes metrics at the population level for tributary habitat measures implemented with funding from BPA or with technical assistance from Reclamation in 2007 through 2009. BPA uses Pisces, a contract management system, to track and record planned and actual work accomplishments. Reclamation metrics included here were summarized from the detailed metrics reported in Attachment 3, Tables 5.2 and 5.3. Further detail of work accomplished can be found in BPA's Report Center Habitat Metrics Report, available at <http://www.efw.bpa.gov/IntegratedFWP/reportcenter.aspx>.

NOTE: Metrics in this attachment may be reported twice if they are located in areas used by Chinook and steelhead.

2007-2009 Completed Metrics (BPA and USBR)			Water Quantity	Entrainment	Passage		Channel Complexity	Water Quality Riparian Protection and Enhancement		
ESU/DPS	MPG	Population	CFS protected	# of screens addressed	# of barriers addressed	Stream miles with improved access	Stream miles improved	Stream miles protected	Riparian acres improved	Riparian acres protected
Snake River Spring/Summer-run Chinook Salmon ESU	Dry Clearwater	Lapwai/Big Canyon			4	27.6	0.0		440.7	
		Polatch River							36.8	
		Upper South Fork Clearwater			7	29.5	2.0		3.6	
	Grande Ronde / Imnaha	Catherine Creek			2	23.5				
		Grande Ronde River upper mainstem			1	52.8	3.1			58.5

2007-2009 Completed Metrics (BPA and USBR)			Water Quantity	Entrainment	Passage		Channel Complexity	Water Quality Riparian Protection and Enhancement			
ESU/DPS	MPG	Population	CFS protected	# of screens addressed	# of barriers addressed	Stream miles with improved access	Stream miles improved	Stream miles protected	Riparian acres improved	Riparian acres protected	
		Imnaha River mainstem							250		
		Lostine River	52.2		1	5.0	1.9		51		
	Lower Snake	Asotin Creek								23.5	
		Tucannon River		5					29.5		591.0
	Middle Fork Salmon River	Camas Creek					0.1				
		Marsh Creek			2						
	South Fork Salmon River	East Fork South Fork Salmon River				3	15.6				
		Little Salmon River				3	20.8				

2007-2009 Completed Metrics (BPA and USBR)			Water Quantity	Entrainment	Passage		Channel Complexity	Water Quality Riparian Protection and Enhancement			
ESU/DPS	MPG	Population	CFS protected	# of screens addressed	# of barriers addressed	Stream miles with improved access	Stream miles improved	Stream miles protected	Riparian acres improved	Riparian acres protected	
	Upper Salmon River	East Fork Salmon River		1			2.0				
		Lemhi River	103.5	8	5	147.0					
		Pahsimeroi River	29.6	4	1	1.0					
		Salmon River lower mainstem below Redfish Lake	29.6	3	2	3.0					
		Salmon River upper mainstem above Redfish Lake	54.1	3	1	3.0			7.0		
		Valley Creek		3	1	3.0					
	Wet Clearwater	Lochsa River				4	4.5			8.5	
		Lolo Creek				5	11.7	0.1			

2007-2009 Completed Metrics (BPA and USBR)			Water Quantity	Entrainment	Passage		Channel Complexity	Water Quality Riparian Protection and Enhancement		
ESU/DPS	MPG	Population	CFS protected	# of screens addressed	# of barriers addressed	Stream miles with improved access	Stream miles improved	Stream miles protected	Riparian acres improved	Riparian acres protected
Snake River Spring/Summer-run Chinook Salmon ESU Total			269.0	29.0	40.0	348.0	9.2	29.5	879.6	591.0
Upper Columbia River Spring-run Chinook Salmon ESU	Upper Columbia / East Slope Cascades	Entiat River	0.3	1	1				2.0	
		Methow River	97.1		2	33.1	4.3	1.0	32.3	135.0
		Wenatchee River			3	0.8	0.1		2.1	
Upper Columbia River Spring-run Chinook Salmon ESU Total			97.4	1.0	6.0	33.9	4.4	1.0	36.4	135.0
Middle Columbia River Steelhead DPS	Cascades Eastern Slope Tributaries	Deschutes River - eastside	3.5	1				60.5	156.0	864.8
		Deschutes River - westside	3.8					20.1	20.0	652.4

2007-2009 Completed Metrics (BPA and USBR)			Water Quantity	Entrainment	Passage		Channel Complexity	Water Quality Riparian Protection and Enhancement		
ESU/DPS	MPG	Population	CFS protected	# of screens addressed	# of barriers addressed	Stream miles with improved access	Stream miles improved	Stream miles protected	Riparian acres improved	Riparian acres protected
		Fifteenmile Creek (winter run)	11.0					25.9		513.7
		Klickitat River			4	6.0			7.3	
	John Day River	John Day River lower mainstem tributaries		24	17	61.5	0.4	64.9	184	954.9
		John Day River upper mainstem	9.8	38	20	66.4	8.2	10.5	441.8	203.1
		Middle Fork John Day River	14.5	3	14	83.0	9.0	11.0	221.6	250.0
		North Fork John Day River			1	2.5		13.4	134.1	762.0
		South Fork John Day River		2	3	7.0	0.2	16.0	21	237.0

2007-2009 Completed Metrics (BPA and USBR)			Water Quantity	Entrainment	Passage		Channel Complexity	Water Quality Riparian Protection and Enhancement			
ESU/DPS	MPG	Population	CFS protected	# of screens addressed	# of barriers addressed	Stream miles with improved access	Stream miles improved	Stream miles protected	Riparian acres improved	Riparian acres protected	
	Umatilla and Walla Walla River	Touchet River	1.9	1	1	100.0	2.5				
		Umatilla River	2.1		3	13.0	43.3	14.2	1053.9	7.0	
		Walla Walla River	3.1	1	2	30.0	0.2		9		
	Yakima River Group	Naches River	4.4	12	1	0.5	0.3			160	
		Satus Creek			1	93.0		168.0	0	8,062.0	
		Toppenish		1	1	50.0	1.5	3.2	360	98.0	
		Yakima River upper mainstem	16.3	3	5	16.0	0.1	15.0	6.8	55.0	

2007-2009 Completed Metrics (BPA and USBR)			Water Quantity	Entrainment	Passage		Channel Complexity	Water Quality Riparian Protection and Enhancement			
ESU/DPS	MPG	Population	CFS protected	# of screens addressed	# of barriers addressed	Stream miles with improved access	Stream miles improved	Stream miles protected	Riparian acres improved	Riparian acres protected	
Middle Columbia River Steelhead DPS Total			70.3	86	73.0	528.9	65.6	422.7	2,775.5	12,659.9	
Snake River Basin Steelhead DPS	Clearwater River	Clearwater River lower mainstem			4	27.6	0.0		477.5		
		Lochsa River			4	4.5			8.5		
		Lolo Creek			5	11.7	0.1		0		
		South Fork Clearwater River			7	29.5	2.0		3.6		
	Grande Ronde River	Grande Ronde River lower mainstem tributaries			2	11.5				10	
		Grande Ronde River upper mainstem			4	81.3	7.0			173.4	
		Joseph Creek			2	10.3	8.0			11	

2007-2009 Completed Metrics (BPA and USBR)			Water Quantity	Entrainment	Passage		Channel Complexity	Water Quality Riparian Protection and Enhancement			
ESU/DPS	MPG	Population	CFS protected	# of screens addressed	# of barriers addressed	Stream miles with improved access	Stream miles improved	Stream miles protected	Riparian acres improved	Riparian acres protected	
		Wallowa River	52.2		1	5.0	1.9		51		
	Imnaha River	Imnaha River							250		
	Lower Snake	Asotin Creek								269.8	
		Tucannon River			5				29.5		591.0
	Salmon River	Big, Camas, and Loon Creek						0.1			
		East Fork Salmon River	13.2	2	1	2.0	2.0				
		Lemhi River	103.5	8	5	147.0					
		Middle Fork Salmon River upper mainstem			2						
		Little Salmon and Rapid River				3	20.8				

2007-2009 Completed Metrics (BPA and USBR)			Water Quantity	Entrainment	Passage		Channel Complexity	Water Quality Riparian Protection and Enhancement		
ESU/DPS	MPG	Population	CFS protected	# of screens addressed	# of barriers addressed	Stream miles with improved access	Stream miles improved	Stream miles protected	Riparian acres improved	Riparian acres protected
		Pahsimeroi River	46.0	6	2	2.0				
		Salmon River upper mainstem	54.1	6	2	6.0			7.0	
		South Fork Salmon River			3	15.6				
Snake River Basin Steelhead DPS Total			269.0	29.0	45.0	374.8	21.1	29.5	1,261.8	591.0
Upper Columbia River Steelhead DPS	Upper Columbia / East Slope Cascades	Entiat River	0.3	1	1		1.4		2.0	
		Methow River	97.1		2	33.1	4.6	1.0	32.3	135.0
		Okanogan River	80.1		7	14.0	0.2	1.1	35.4	103.5
		Wenatchee River		5	15	20.4	1.6		2.7	

2007-2009 Completed Metrics (BPA and USBR)			Water Quantity	Entrainment	Passage		Channel Complexity	Water Quality Riparian Protection and Enhancement		
ESU/DPS	MPG	Population	CFS protected	# of screens addressed	# of barriers addressed	Stream miles with improved access	Stream miles improved	Stream miles protected	Riparian acres improved	Riparian acres protected
Upper Columbia River Steelhead DPS Total			177.5	6.0	25.0	67.5	7.7	2.1	72.4	238.5

Attachment 3: Progress of Projects and Actions Identified for 2007-2009 Implementation in the FCRPS Biological Assessment, Attachment B.2.2-2, Tables 1-6

The Action Agencies committed to provide funding and technical assistance for specific tributary habitat projects as listed in Attachment B.2.2-2, Tables 1-6, of the FCRPS Biological Assessment. These projects were used as the basis for estimating changes in habitat quality for specific populations and established an initial performance standard for annual progress reporting. The tables in Attachment 3 describe the 2007, 2008, and 2009 implementation progress of the projects identified for implementation in the FCRPS Biological Assessment. Accomplishments may be reported more than once if they benefit both Chinook and steelhead.

Attachment 3 - Table 1. Tributary Habitat Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Tables 1a & b: Upper Columbia Spring Chinook & Steelhead

Upper Columbia Spring Chinook & Steelhead (NOTE: Projects that benefit multiple ESUs/DPSs or populations are reported more than once)				
Population	Project #	Project Title & Short Description	2007–09 Action Description	FY07-09 Progress
Entiat River	200703400	Columbia Cascade Pump Screen Correction This project proposes to start a voluntary compliance pump screen correction program in the Methow, Entiat, and Wenatchee River basins in order to reduce juvenile fish losses due to entrapment in water diversions.	Install Fish Screen	Project work focused in Okanogan subbasin; future Entiat work pending inventory, assessment and prioritization.
	200705500	Entiat River - UPA - Lower Entiat River Off-Channel Restoration Project The Lower Entiat River Off-Channel enhancement project will provide 0.28 miles of off-channel habitat to benefit Upper Columbia ESA listed steelhead, spring Chinook, and bull trout. An irrigation channel will be enhanced for rearing and spawning habitat.	Develop Pond	Contract in FY10
			Increase Instream Habitat Complexity	
			Install Fish Passage Structure	
	200723100	UPA Entiat Subbasin Riparian Enhancement Program Riparian projects are being proposed in the Entiat	Plant Vegetation	1.0 riparian mile planted along Indian Creek
Install Fence				
			Maintain Vegetation	

Attachment 3 - Table 1. Tributary Habitat Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Tables 1a & b: Upper Columbia Spring Chinook & Steelhead

Upper Columbia Spring Chinook & Steelhead (NOTE: Projects that benefit multiple ESUs/DPSs or populations are reported more than once)				
Population	Project #	Project Title & Short Description	2007–09 Action Description	FY07-09 Progress
		subbasin to benefit Upper Columbia spring Chinook, steelhead and bull trout. Funding is requested for Tillicum Creek Fence and programmatic riparian projects.	Plant Vegetation	
	200731800	Entiat River - UPA - Knapp-Wham Hanan Detwiler Irrigation System Consolidation Project Consolidation of the Knapp-Wham and Hanan Detwiler irrigation systems will eliminate partial fish passage barriers associated with 2 surface water diversions, add instream habitat within the lower Entiat River, and enhance instream flows via water saved.	Develop Alternative Water Source Increase Instream Habitat Complexity Install Well Remove/Install Diversion	5 new wells drilled Replaced Knapp-Wham and Keystone fish screens, Hanan-Detwiler fish screen complex decommissioned. Conserved over 1600 acre-ft/yr and 5 cfs of flow. 5.8 miles primary stream reach improved.
Methow River	200501000	Macpherson Side Channel on the Chewuch River	Install Fish Passage Structure	Replaced undersized culvert to allow access to 0.5 miles instream habitat, enhanced 2000 feet meandering channel.
	200600700	Little Bridge Creek Fence	Install Fence	Installed 0.5 miles riparian fencing.
	200703400	Columbia Cascade Pump Screen Correction This project proposes to start a voluntary compliance pump screen correction program in the Methow, Entiat, and Wenatchee River basins in order to reduce juvenile fish losses due to entrapment in water diversions.	Install Fish Screen	Project work focused on Okanogan; Methow pending inventory, assessment, prioritization.

Attachment 3 - Table 1. Tributary Habitat Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Tables 1a & b: Upper Columbia Spring Chinook & Steelhead

Upper Columbia Spring Chinook & Steelhead (NOTE: Projects that benefit multiple ESUs/DPSs or populations are reported more than once)				
Population	Project #	Project Title & Short Description	2007–09 Action Description	FY07-09 Progress
	200703500	UPA Project - Methow Basin Riparian Enhancement MSRF proposes to partner with Bureau of Reclamation and Methow Conservancy to identify and prioritize riparian enhancement projects that will add value to passage, access and conservation projects. All projects will focus on TES species and habitat.	Install Fence Plant Vegetation	5.15 miles riparian fencing installed; 5.8 riparian miles planted.
	200717200	UPA Project - MVID West Canal Diversion and Headworks Move POD 175' upstream by installing new concrete diversion headworks, realign 150' of West Canal intake and build new access road to connect new headworks, construct permanent channel-spanning natural rock roughened channel permanent diversion.	Install Fish Passage Structure Operate and Maintain Habitat/Passage Plant Vegetation Remove/Install Diversion	Project under consideration to assess fish benefits.
	200721400	UPA Project - Fender Mill Floodplain Restoration - Phase 1. Restore natural channel process, reestablish side channel rearing habitat, restore-improve riparian forest habitat, add wood complexes in main stem, install rock structure to keep majority of flow in main stem, breach existing levee, connect side channels.	Create, Restore, and/or Enhance Wetland Increase Instream Habitat Complexity Operate and Maintain Habitat/Passage Plant Vegetation	Implementation deferred. Treated 0.45 riparian miles.

Attachment 3 - Table 1. Tributary Habitat Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Tables 1a & b: Upper Columbia Spring Chinook & Steelhead

Upper Columbia Spring Chinook & Steelhead (NOTE: Projects that benefit multiple ESUs/DPSs or populations are reported more than once)				
Population	Project #	Project Title & Short Description	2007–09 Action Description	FY07-09 Progress
	200723700	UPA Project - Elbow Coulee Floodplain Restoration This project would eliminate a dike; open an existing side channel and floodplain; reconnect a wetland; and use large woody debris and boulders to split flows. These would increase habitat complexity and create more dynamic habitats for listed salmonids.	Create, Restore, and/or Enhance Wetland	Dike notching, sill construction, and minimal channel improvements completed.
			Enhance Floodplain	
			Increase Instream Habitat Complexity	
			Operate and Maintain Habitat/Passage	
			Plant Vegetation	
			Realign, Connect, and/or Create Channel	
			Upland Erosion and Sedimentation Control	
	200725100	UPA Project - Methow Valley Irrigation District East Diversion Dam Replacement This project will remove the present channel-spanning irrigation diversion dam and replace it with a reinforced earth and rock wing dam parallel to the thalweg. This project will also re-open 1/4 mile of side channel habitat blocked by a pushup berm.	Operate and Maintain Habitat/Passage	Conducted value engineering on proposed action, developed permit and consultation materials, developed materials for construction bids, and negotiated landowner agreements. Implementation deferred until FY2010.
			Plant Vegetation	
			Realign, Connect, and/or Create Channel	
			Remove/Install Diversion	

Attachment 3 - Table 1. Tributary Habitat Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Tables 1a & b: Upper Columbia Spring Chinook & Steelhead

Upper Columbia Spring Chinook & Steelhead (NOTE: Projects that benefit multiple ESUs/DPSs or populations are reported more than once)				
Population	Project #	Project Title & Short Description	2007–09 Action Description	FY07-09 Progress
	200726400	UPA Project - Programmatic Habitat Complexity Projects in the Methow River Subbasin These projects would eliminate dikes, open side channels, and enhance floodplain connectivity at various sites in the Methow subbasin. Identification and ranking to be based on MIHRP study.	Realign, Connect, and/or Create Channel	Installed LWD structure and improved complexity on 0.07 miles of Big Valley Reach; completed permitting, design, and contracting for 2010 implementation to increase instream complexity and reconnect side channels.
	200201301	Water Entity Fund water right transactions that restore streamflows and focused riparian easements on critical fish-bearing Columbia Basin tributaries. Implemented as the Columbia Basin Water Transactions Program (CBWTP) in a partnership between BPA and NFWF.	Acquire Water Instream	63 cfs and 8047 acre-ft. of water flow protected; 132 total miles/69 primary miles of stream reach improved.
Develop and Negotiate Water Right Transaction				
Install Flow Measuring Device				
			Land Purchase	Conservation easements to protect 1 mile riparian habitat.
	200810400	Land & Water Acquisition	Land Purchase	Completed White property land purchase to protect 30 upland and 3.5 riparian acres, and 0.55 riparian miles.
Wenatchee River	200703400	Columbia Cascade Pump Screen Correction This project proposes to start a voluntary compliance pump screen correction program in the Methow, Entiat, and Wenatchee River basins in order to reduce juvenile fish losses due to entrapment in water diversions.	Install Fish Screen	Project work focused in Okanogan; Wenatchee pending inventory, assessment, prioritization.

Attachment 3 - Table 1. Tributary Habitat Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Tables 1a & b: Upper Columbia Spring Chinook & Steelhead

Upper Columbia Spring Chinook & Steelhead (NOTE: Projects that benefit multiple ESUs/DPSs or populations are reported more than once)				
Population	Project #	Project Title & Short Description	2007–09 Action Description	FY07-09 Progress
	200704200	UPA Wenatchee Passage Program To replace 9 barrier culverts in Alder Creek, Clear Creek and Beaver Creek with fish-friendly structures to provide 4.0 miles of spawning and rearing habitat for ESA listed Upper Columbia steelhead.	Install Fish Passage Structure	Combined into new project 200740000.
			Remove/Modify Dam	
	200708500	UPA Nason Creek Oxbow Reconnection Project Project proposes to install two bottomless arch culverts in SR 207 to successfully reconnect 0.64 miles of historic oxbow habitat to the main channel Nason Creek. This project will increase Spring Chinook salmonid abundance by 25-50% in the Nason A.U.	Install Fish Passage Structure	Combined into new project 200740000.
	200708600	UPA Wenatchee Subbasin Riparian Enhancement Proposal The Wenatchee Riparian proposal will involve planting native vegetation and fencing to establish a properly functioning riparian buffer in the Wenatchee Assessment Units. This project will benefit Upper Columbia steelhead, spring Chinook and bull trout.	Install Fence	Treated 0.66 riparian miles.
	Maintain Vegetation			
	Plant Vegetation			
	200723100	Entiat River Riparian Restoration Exclude livestock from portions of Tillicum and Indian Creeks to protect approximately 0.5 miles of streambanks and riparian vegetation along steelhead spawning areas.	Install Fence Plant Vegetation	Installed 1 mile riparian fencing and planted 0.7 miles riparian vegetation.

Attachment 3 - Table 1. Tributary Habitat Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Tables 1a & b: Upper Columbia Spring Chinook & Steelhead

Upper Columbia Spring Chinook & Steelhead (NOTE: Projects that benefit multiple ESUs/DPSs or populations are reported more than once)				
Population	Project #	Project Title & Short Description	2007–09 Action Description	FY07-09 Progress
	200728300	UPA Wenatchee Subbasin Access Proposal Forty three (43) potential fish passage barrier structures are being proposed for funding to benefit Upper Columbia spring Chinook, steelhead and bull trout. Emphasis is on replacing the Mill Creek Culvert near the mouth of Peshastin Creek.	Install Fish Passage Structure	Combined into new project 200740000.
	200732500	UPA Wenatchee Subbasin Complexity Proposal Five potential complexity projects are being proposed for funding to benefit Upper Columbia spring Chinook, steelhead and bull trout. Funds are also requested for unidentified potential complexity projects to assist in meeting UPA metric goals.	Realign, Connect, and/or Create Channel	0.1 mile stream complexity improved; Completed alternatives and feasibility analyses, survey and design, contract packages for 2010 implementation to improve fish passage and treatment of instream habitat.
	200740000	Wenatchee River Subbasin Fish Passage Enhancement (combination of 200704200, 2000708500, & 200728300)	Install Fish Passage Structure	Installed 2 fish passage culverts to provide access to 0.8 mile of oxbow habitat in Nason Creek; initiated replacement of 12 fish barrier culverts for 2010 completion.
Okanogan River	199604200	Restore and Enhance Anadromous Fish Populations and Habitat in Salmon Creek This project is directed at reconnecting a productive tributary of the Okanogan River, Salmon Creek. This project involves a water lease with the Okanogan Irrigation District and construction of a low flow channel within the lower reach.	Acquire Water Instream	
			Develop and Negotiate Water Right Transaction	
			Install Well	

Attachment 3 - Table 1. Tributary Habitat Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Tables 1a & b: Upper Columbia Spring Chinook & Steelhead

Upper Columbia Spring Chinook & Steelhead (NOTE: Projects that benefit multiple ESUs/DPSs or populations are reported more than once)				
Population	Project #	Project Title & Short Description	2007–09 Action Description	FY07-09 Progress
			Realign, Connect, and/or Create Channel	Constructed low flow channel in lower Salmon Creek to add 8 miles instream habitat with boulder weirs to provide resting pools for migrating adults and two rock toes to prevent streambank erosion.
	200000100	Anadromous Fish Habitat & Passage The Tribe proposes continuing habitat rehabilitation efforts to decrease sediment loads and improve passage for anadromous steelhead and salmon. In addition, monitoring and evaluation efforts will assess effectiveness of ongoing activities.	Develop Alternative Water Source	1.6 miles riparian planting, 2.4 miles riparian fencing installed, fish passage structures installed to improve access to 15 miles instream habitat; recontoured 0.5 mile abandoned road and relocated livestock corrals to reduce sedimentation, installed structure to maintain adequate flow to 0.15 miles pool habitat, 200 acres protected through Omak Creek land purchase.
			Install Fence	
	200714500	Okanogan Livestock and Water Provide a cost share program to assist producers in developing offsite water for livestock and provide assistanc fencing riparian areas. Allowing producers to respond to and prevent complaints.	Develop Alternative Water Source	Completed 2 spring developments, 6 off-site watering facilities, 4,380 feet of pipeline, 4 rock crossings, and 2 hardened watering points .
			Install Fence	Installed 1.1 miles riparian fencing.
			Plant Vegetation	Planted native species on Saltsman property.
	200722400	Implementation of the Okanogan Subbasin Plan. Initiate a Programmatic and Sequenced set of Key Habitat Restoration and Protection Actions The integration of science into management,	Acquire Water Instream	Installed 0.2 miles riparian fencing, planted 0.5 riparian miles, treated 0.3 riparian miles noxious weeds.

Attachment 3 - Table 1. Tributary Habitat Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Tables 1a & b: Upper Columbia Spring Chinook & Steelhead

Upper Columbia Spring Chinook & Steelhead (NOTE: Projects that benefit multiple ESUs/DPSs or populations are reported more than once)				
Population	Project #	Project Title & Short Description	2007–09 Action Description	FY07-09 Progress
		decision-making and recommended actions is an essential task for resource managers. This phased and programmatic plan is the centerpiece for mitigation, recovery and conservation in the Okanogan R & the Province.	Enhance Floodplain	
			Plant Vegetation	
			Realign, Connect, and/or Create Channel	
			Upland Erosion and Sedimentation Control	
	200201301	Water Entity Fund water right transactions that restore streamflows and focused riparian easements on critical fish-bearing Columbia Basin tributaries. Implemented as the Columbia Basin Water Transactions Program (CBWTP) in a partnership between BPA and NFWF.	Acquire Water Instream	Annual protection of 700 acre-ft and 25 cfs of water.
			Develop and Negotiate Water Right Transaction	
			Install Flow Measuring Device	
			Land Purchase	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
Multiple populations	200201301	Water Entity (Rpa 151) Nwppc Fund water right transactions that restore streamflows and focused riparian easements on critical fish-bearing Columbia Basin tributaries. Implemented as the Columbia Basin Water Transactions Program (CBWTP) in a partnership between BPA and NFWF.	Acquire Water Instream	10,982 acre-ft/yr and 52 cfs of water flow protected in 2007-09 for Middle Columbia River steelhead.
Klickitat River (above BON)	199705600	Klickitat Watershed Enhancement This project (KWEF) restores, enhances, and protects watershed health to aid recovery of native salmonid stocks in the Klickitat subbasin. Implemented by the Yakama Nation Fisheries Program and funded by BPA, KWEF addresses FWP goals and objectives.	Create, Restore, and/or Enhance Wetland	Installed fish passage structure (culverts) to provide access to 6 miles instream habitat.
			Develop Alternative Water Source	
			Enhance Floodplain	
			Increase Instream Habitat Complexity	
			Install Fence	
			Install Fish Passage Structure	
			Install Flow Measuring Device	
			Maintain Vegetation	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
			Operate and Maintain Habitat/Passage	
			Plant Vegetation	
			Realign, Connect, and/or Create Channel	
			Upland Erosion and Sedimentation Control	
			Decommission Road	
			Enhance Nutrients Instream	
			Improve/Relocate Road	
			Remove vegetation	
			Remove Debris	
	198812035	YKFP Klickitat Management, Data, and Habitat Proposal provides for all YN management functions associated with the Yakima/Klickitat Fisheries Project including project planning, O&M, research, data management, and habitat improvement and acquisition actions in the Klickitat Subbasin.	Habitat improvement	Klickitat Master Plan under development, primary work involves fish population research, fish habitat inventory, development of management alternatives and coordination of preliminary design, permitting, and cost projections associated with proposed Master Plan actions.
			Lease Land	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
Fifteen Mile Creek (above TDA)	200102100	15 Mile Creek Riparian Buffers This proposal develops riparian buffer systems on streams in the Fifteenmile Subbasin and other direct tributaries to the Columbia River in northern Wasco County. Implementation of buffer plans developed under this proposal are fully funded by USDA.	Riparian Enhancement	513 riparian acres and 25 riparian miles protected through CCRP/CREP agreements.
	199304000	Fifteenmile Creek Habitat Restoration and Monitoring Project Provide continued operation and maintenance on previously installed fencing and instream habitat, monitor the success of all restoration efforts, and begin implementation to improve instream habitat complexity within the Fifteenmile Creek Subbasin.	Develop Alternative Water Source Increase Instream Habitat Complexity Install Fence Maintain Vegetation Operate and Maintain Habitat/Passage	Installed 1 mile of riparian fencing to protect approximately 0.5 mile of stream and 20 riparian acres.
Eastside Deschutes (above TDA)	199404200	Trout Creek Fish Habitat Restoration Project Construction, O&M, and M&E of numerous new and existing instream and riparian habitat restoration projects; Monitoring and Evaluation of summer steelhead smolt production and adult return. M&E of instream and riparian habitat restoration activities.	Develop Alternative Water Source	1.0 miles of stream channel and floodplain restoration; conserved 35 acre-ft flow; maintained approximately 120 miles riparian fencing.
			Enhance Floodplain	
			Maintain Vegetation	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
			Realign, Connect, and/or Create Channel	
	199802800	Trout Creek Watershed Restoration Project Implementation of numerous riparian and upland habitat improvement projects on private lands in the Trout Creek watershed, Deschutes Basin. Monitoring and evaluation of current and past projects.	Enhance Floodplain Plant Vegetation Realign, Connect, and/or Create Channel Remove/Install Diversion Install Pipeline	Screened 82 acre-ft./yr and conserved 130 acre-ft/yr of water; protected 29 acres riparian habitat.
	200201900	Wasco Riparian Buffers This proposal develops riparian buffer systems in southern Wasco County in the lower Deschutes and lower John Day subbasins of the Columbia Plateau Province. Implementation of buffer plans developed under this proposal is fully funded.	Riparian Enhancement	1268 riparian acres protected through CCRP/CREP agreements.
At least 1 John Day MPG population (above John Day dam)	200201900	Wasco Riparian Buffers This proposal develops riparian buffer systems in southern Wasco County in the lower Deschutes and lower John Day subbasins of the Columbia Plateau Province. Implementation of buffer plans developed under this proposal is fully funded by USDA.	Riparian Enhancement	148 riparian acres protected through CCRP/CREP agreements.

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
	198402100	Mainstem, Middle Fork, John Day Rivers Fish Habitat Enhancement Project This project was initiated on July 1, 1984, (BPA) contract number DE A179-84 BP17460 and allows for initial landowner contacts, agreement development, project design, budgeting, and implementation for anadromous fish habitat on private lands.	Develop Alternative Water Source	58 structures installed, 0.77 mile stream complexity improved, 92 miles riparian fencing installed, protected 1140 riparian acres and 53 riparian miles, planted 5.5 miles of riparian vegetation.
			Increase Instream Habitat Complexity	
			Install Fence	
			Operate and Maintain Habitat/Passage	
			Plant Vegetation	
			Remove vegetation	
	199306600	Oregon Fish Screens Project The project provides immediate and long-term protection for anadromous and resident fish species in the John Day, Umatilla, and Walla Walla basins by the installation or replacement of out dated fish protection and passage devices on irrigation diversions.	Install Fish Passage Structure	Improved access to 158 miles instream habitat, replaced over 60 fish screens.
			Install Fish Screen	
			Operate and Maintain Habitat/Passage	
			Remove/Install Diversion	
	199801800	John Day Watershed RestorationContinue implementation of protection and restoration actions, planned under the John Day Subbasin Plan, to improve water quality, water quantity, and riparian	Develop Alternative Water Source	3.5 miles habitat accessed.
			Increase Instream Habitat Complexity	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
		habitat, and to eliminate passage barriers for anadromous and resident fish.	Install Fish Passage Structure	
			Maintain Vegetation	
			Plant Vegetation	
			Remove/Install Diversion	
			Remove vegetation	
			Install Pipeline	
	199901000	Pine Hollow/Jackknife Habitat Implement practices to reduce erosion, flooding, and protect critical areas in the stream corridor which will allow natural recovery of riparian vegetation and channel stability in the Pine Hollow and Jackknife watersheds.	Develop Alternative Water Source	
			Install Fence	
			Plant Vegetation	
			Upland Erosion and Sedimentation Control	
			Remove vegetation	
	200001500	Oxbow Conservation Area Management The 1,022-acre Oxbow Conservation Area project is a mitigation property acquired by the CTWSRO through BPA funding. This proposal aims to continue the O&M, M&E, and habitat improvement projects on this valuable anadromous fish property.	Develop and Negotiate Water Right Transaction	2.3 miles riparian fencing installed; 4 miles riparian vegetation planted; 0.2 miles riparian weed control and vegetation management; 0.5 miles improved stream complexity; 180 riparian acres protected.
			Increase Instream Habitat Complexity	
			Install Fence	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
			Install Fish Passage Structure	
			Install Fish Screen	
			Maintain Vegetation	
			Operate and Maintain Habitat/Passage	
			Plant Vegetation	
			Realign, Connect, and/or Create Channel	
			Remove vegetation	
			Conduct Controlled Burn	
	200003100	North Fork John Day Basin Anadromous Fish Habitat Enhancement Project Increase habitat for Chinook salmon and steelhead on private and public-owned lands via implementing fencing, off-stream water development, revegetation, culvert replacement, pool development, mine tailing removal and large wood placement projects.	Enhance Floodplain	2.6 miles riparian fencing installed; 380 riparian acres and 1.3 riparian miles protected through lease; 7.4 miles riparian vegetation planted.
			Increase Instream Habitat Complexity	
			Install Fence	
			Install Fish Passage Structure	
			Maintain Vegetation	
			Plant Vegetation	
			Lease Land	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
			Remove Mine Tailings	
	200104101	Forrest Conservation Area Management The Forrest Conservation Area consists of 4,232 acres and contains 8.5 miles of critical fish habitat in the Upper Mainstem and Middle Fork John Day River systems. Management prioritizes protection of fish, wildlife and their associated habitats.	Develop and Negotiate Water Right Transaction	35 instream structures installed to increase habitat complexity; 1.15 miles stream complexity improved; improved access to 5.3 miles habitat; 4.0 miles riparian vegetation planted.
			Increase Instream Habitat Complexity	
			Install Fish Passage Structure	
			Install Fish Screen	
			Maintain Vegetation	
			Operate and Maintain Habitat/Passage	
			Plant Vegetation	
			Remove vegetation	
			Conduct Controlled Burn	
			Investigate Trespass	
	200201500	Provide Coordination and Technical Assistance to Watershed Councils and Individuals in Sherman County, Oregon.	Riparian Enhancement	51 riparian acres, 12.6 riparian miles, and 301 upland acres protected through CCRP/CREP Agreements.

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
	200203400	Wheeler Co Riparian Buffers This proposal will provide technical support and planning needed to implement riparian buffer contracts (CREP) on streams within Wheeler County. Riparian buffers address many of the limiting factors identified in the John Day Sub-basin Plan.	Riparian Enhancement	125 riparian acres and 13.6 riparian miles protected through CCRP/CREP Agreements.
	200203500	Gilliam Co Riparian Buffers We seek BPA funding to continue our riparian buffer position. This job entails making 10-15 year contracts with private landowners to establish riparian areas. Non-BPA monies are then leveraged to develop, maintain and enhance fish and wildlife resources.	Riparian Enhancement	382 riparian acres and 25 riparian miles protected through CCRP/CREP Agreements.
Umatilla River (above John Day dam)	198343600	Umatilla Passage O&M Westland Irrigation District, as contractor to Bonneville Power Administration, and West Extension Irrigation District, as subcontractor to Westland, provide labor, equipment, and material necessary for the operation, care, and maintenance of fish facilities.	Operate and Maintain Habitat/Passage	Annual O&M at 17 sites to ensure that ladders, bypasses, screen sites. and trap facilities operate according to design criteria.
	198710001	Umatilla Anadromous Fish Habitat - CTUIR instream and riparian habitat restoration for fisheries and wildlife in the Umatilla River Basin.	Develop Alternative Water Source	170 instream structures installed to increase habitat complexity; 41.6 miles stream complexity improved; 13 miles instream habitat accessed; 7.5 riparian acres planted; 16 riparian miles treated with noxious weed control; 3.5 miles riparian fencing installed.
			Increase Instream Habitat Complexity	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
			Install Fence	
			Maintain Vegetation	
			Operate and Maintain Habitat/Passage	
			Plant Vegetation	
			Remove/Modify Dam	
			Remove vegetation	
			Lease Land	
	198710002	Umatilla Subbasin Fish Habitat Improvement Project The ongoing Umatilla Subbasin Fish Habitat Improvement Project (19871-100-02) is aimed at protecting (where possible) and enhancing/rehabilitating (where required), degraded fish habitat on private lands using passive and active restoration techniques.	Develop Alternative Water Source	3.25 miles riparian fencing installed; 7 riparian acres protected through cooperative agreements/leases/easements; 3.7 riparian miles planted, 0.1 riparian miles treated for exotic vegetation.
			Develop and Negotiate Water Right Transaction	
			Increase Instream Habitat Complexity	
			Install Fence	
			Maintain Vegetation	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
			Operate and Maintain Habitat/Passage	
			Plant Vegetation	
			Realign, Connect, and/or Create Channel	
			Remove/Modify Dam	
			Improve/Relocate Road	
			Remove vegetation	
			Lease Land	
	198802200	Umatilla Fish Passage Operations Increase survival of migrating juvenile and adult salmon and steelhead in the Umatilla Basin by operating passage facilities, flow enhancement measures, trapping facilities, and transport equipment to provide adequate passage conditions.	Operate and Maintain Habitat/Passage	Trap and haul of 7,100 migrants; passage facility operation and maintenance oversight.
			Trap and Haul	
	198902700	Power Repay Umatilla Basin Project Provide reimbursement of power costs to Umatilla Electric Cooperative and Pacific Power & Light Company for the Umatilla Basin Project pumping plants that provide Columbia River water to irrigators in exchange for Umatilla River water left instream.	Acquire Water Instream	Ongoing utility reimbursements.

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
Walla Walla River (above MCN)	199601100	Walla Walla Juvenile and Adult Passage Improvements Provide safe passage for migrating juvenile and adult salmonids in the Walla Walla Subbasin by constructing and maintaining passage facilities at irrigation diversion dams and canals and other passage barriers.	Install Fish Screen	Fish passage structures installed — 30 miles instream habitat accessed. Project work now combined with 2007-396-00 .
	199604601	Walla Walla River Basin Fish Habitat Enhancement The proposed project is a continued effort by the CTUIR to protect and restore habitat critical to the recovery of salmonid fish populations in the Walla Walla River Basin.	Increase Instream Habitat Complexity	14 instream structures installed to increase habitat complexity; 0.22 mile stream complexity improved; 0.75 mile riparian fencing installed; 0.5 riparian acres planted.
			Maintain Vegetation	
			Plant Vegetation	
	200003300	Walla Walla River Fish Passage Operations Increase survival of migrating salmonids in the Walla Walla Basin by coordinating the overall passage program including monitoring passage conditions and operation of passage facilities and transport equipment to provide adequate passage conditions.	Operate and Maintain Habitat/Passage	261 fish trapped and hauled.
			Trap and Haul	
	200203600	Restore Walla Walla River Flow Irrigation efficiency and shallow aquifer recharge will improve Walla Walla River flows on flow -impaired priority restoration reaches at times of the year that are critical for steelhead, spring Chinook, and bull trout passage and habitat use.	Develop and Negotiate Water Right Transaction	Project work merged into 2007-396-00 Walla Walla Basinwide Tributary Passage and Flow Project — new intake and fish screens and fish passage structure installed to access 100 miles of habitat .
			Install Pipeline	
			Install Sprinkler	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
	200721700	Operation and Maintenance for Walla Walla Basin Passage Projects Operation and maintenance of BPA-Constructed fish passage facilities in the Walla Walla Sub-basin.	Operate and Maintain Habitat/Passage	Annual O&M at Garden City/Lowden No. 2 Diversion Consolidation and Fish Passage Project, Gardena Fish Screens and related equipment, Gardena Ladder and related equipment, Little Walla Walla River fish screen facility, Nursery Bridge fish ladder.
At least 1 populations: - Satus Creek (above MCN) - Toppenish Creek (above MCN) - Naches River (above MCN) - Upper Mainstem Yakima (above MCN)	199206200	Yakama Nation - Riparian/Wetlands Restoration Continue implementation on YN Wetlands/Riparian Restoration Project by protecting and restoring native floodplain habitats along anadromous fish-bearing waterways in the agricultural area of the Yakama Reservation (~2,000 acres per year).	Maintain Vegetation	60 riparian acres and 35 upland acres improved through controlled burn; 98 riparian acres and 183 upland acres protected.
			Operate and Maintain Habitat/Passage	
			Plant Vegetation	
			Remove Debris	
			Lease Land	
	199603501	Yakama Reservation Watersheds Project The YRWP works to restore natural function to the Satus, Toppenish and Ahtanum Watersheds. Our restoration and monitoring efforts take a comprehensive approach to the restoration of habitat for fisheries resources including steelhead and bull trout.	Enhance Floodplain	1.5 miles stream complexity improved; 18 miles riparian fencing and 1.1 miles upland fencing installed; access improved to 143 miles of fish habitat; 1 fish screen installed; 8,062 riparian acres, 56 riparian miles, and 72,559 upland acres protected through lease.
			Increase Instream Habitat Complexity	
			Install Fence	
			Plant Vegetation	
			Realign, Connect, and/or Create Channel	
Lease Land				

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
	198812025	YKFP Management, Data, Habitat Proposal provides for all YN management functions associated with the Yakima/Klickitat Fisheries Project including project planning, O&M, research, data management, and habitat improvement and acquisition actions in the Yakima Subbasin.	Increase Instream Habitat Complexity	20 instream structures installed to increase habitat complexity.
			Plant Vegetation	
	199200900	Yakima Phase II/Huntsville Screen Operation & Maintenance Continue to provide operation and maintenance to BPA's Phase II Fish Screen Facilities to ensure they provide maximum protection to all species and life stages of fish. This O&M function will include the addition of the Manastash basin facilities.	Operate and Maintain Habitat/Passage	Annual maintenance to provide properly functioning Yakima and Walla Walla Phase II fish protection facilities.
	199503300	O&M Yakima Basin Fish Screens This proposal provides for continuation of funding for the existing comprehensive operation & maintenance program by Reclamation of BPA owned Yakima Phase II fish screening and trapping facilities.	Operate and Maintain Habitat/Passage	Routine O&M and annual maintenance to provide properly functioning fish screens.
	200202501	Yakima Tributary Access & Habitat Program The Yakima Tributary Access and Habitat Program intends to: a) screen diversion structures; b) provide for fish passage at man-made barriers; c) assist landowners improve stream habitat; and, d) coordinate the acquisition of riparian buffer easements.	Create, Restore, and/or Enhance Wetland	0.11 mile of stream complexity improved; 15 instream structures installed to increase habitat complexity; 1.5 miles of habitat accessed; installed Hanson fish screen; removed upper Lust diversion; installed Eslinger/Sorenson Parke Cr pipeline.
			Develop Alternative Water Source	
			Enhance Floodplain	
			Increase Instream Habitat Complexity	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
			Install Fence	
			Install Fish Passage Structure	
			Install Fish Screen	
			Install Well	
			Maintain Vegetation	
			Plant Vegetation	
			Realign, Connect, and/or Create Channel	
			Remove/Install Diversion	
			Install Pipeline	
	200300100	Manastash Crk Passage & Screening The Manastash Creek Project will provide fish passage, diversion screening and seek instream flow to support fish recovery in the Yakima Basin. This proposal is for Phase 1: screening/passage. Phase 2: instream flow will be a second proposal.	Install Fish Passage Structure	Design and permitting for Manastash & Keats Jensen diversions, BPA/Water User MOA signed for Barnes Road facilities. Project merged into 2007-398-00 Yakima Basinwide Tributary Passage and Flow on 7/02/07.
			Install Fish Screen	
			Maintain Vegetation	
			Operate and Maintain Habitat/Passage	
			Plant Vegetation	
			Remove/Modify Dam	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
			Install Pipeline	
	200702000	Manastash Instream Flow Enhancement This proposal seeks to enhance instream flow by working with water users to implement irrigation conveyance and on-farm water use efficiency projects, to trust water to the creek and investigate diversion timing to assist steelhead migration.	Acquire Water Instream	0.25 mile stream complexity improved, 5 instream structures installed, fish screens installed at six sites, 0.16 mile riparian vegetation planted, Pott Dam removal/modification with 1.5 miles habitat accessed Project merged into 2007-398-00 Yakima Basinwide Tributary Passage and Flow on 7/02/07.
			Develop and Negotiate Water Right Transaction	
			Install Well	
			Install Pipeline	
			Install Sprinkler	
	200711300	Cowiche Restoration and Protection Project (Easement/Fee Simple Acquisition) The goal of this project is to protect stream and riparian habitat, and floodplain functions along the Cowiche Creek. The project will acquire conservation easements protecting more than five miles of critical, high quality, steelhead and coho habitat.	Lease Land	Project closed — Funds transferred to Oak Flats on the Naches.
	199705100	Yakima Basin Side Channels We will replace problematic irrigation diversions and culverts in the lower North Fork and Mid-mainstem John Day Watersheds with fish-friendly structures that ensure fish passage and improve riparian habitat while efficiently meeting land managers' needs.	Land Purchase	Conducting real property reviews for habitat acquisitions.
			Develop and Negotiate Water Right Transaction	

Attachment 3 - Table 2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 2: Middle Columbia Steelhead

Middle Columbia Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
Naches River	200719400	Oak Flats Acquisition and Habitat Enhancement Acquire a 357 acre multi-parcel site on the Naches River to protect from rural development and enhance 3.0 miles of streamside riparian habitat. Site supports Chinook salmon and Federally threatened mid-Columbia summer steelhead and bull trout.	Acquire Water Instream	Environmental land audit completed; acquisition deferred as a result of MOA and hazardous materials work.
			Enhance Floodplain	
			Plant Vegetation	
			Remove/Modify Dam	
			Remove Debris	
Yakima River upper mainstem	200711200	Teaway Watershed - Protect critical habitat from development, reduce water temperatures and increase instream flows, restore habitat forming processes in the floodplain. Teaway watershed supports viable salmonid populations with complex spatial structure and diversity. Maximizing abundance and productivity of focal species requires protecting critical habitat, augmenting instream flows, & restoring floodplain functions.	Acquire Water Instream	58 structures installed on Indian and Jack Creeks; increased complexity of 0.08 miles of fish habitat; improved access to 8.8 miles of fish habitat; completed Conservation Plan for the Teaway Tract.
			Develop and Negotiate Water Right Transaction	
			Increase Instream Habitat Complexity	
			Install Fence	
			Maintain Vegetation	
			Operate and Maintain Habitat/Passage	
			Plant Vegetation	

Attachment 3 - Table 3.1. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3a: Snake River Steelhead

Snake River Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
Multiple	200201301	Water Entity Fund water right transactions that restore streamflows and focused riparian easements on critical fish-bearing Columbia Basin tributaries. Implemented as the Columbia Basin Water Transactions Program (CBWTP) in a partnership between BPA and NFWF.	Acquire Water Instream	25,250 acre-ft/yr and 237 cfs of water flow protected.
	199202601	Grand Ronde Model Watershed Program Habitat Restoration - Planning, Coordination and Implementation The project coordinates BPA funded restoration activities in the Grande Ronde and Imnaha Subbasins working with tribes, agencies and landowners. The project annually implements 10-20 habitat restoration projects. Project also to consider including habitat actions proposed in Wallowa, Lostine, & Joseph Cr. watersheds (200710500, 200711600, 200724500).	Increase Instream Habitat Complexity	Treated 5.6 miles of riparian road/trail and 1.7 miles of upland road/trail; installed 196 structures to increase complexity to 10.3 stream miles; fenced 0.02 riparian miles and 3.48 upland miles; improved access to 49 miles of fish habitat; planted 2.2 miles riparian vegetation; added 0.6 miles stream channel.
			Install Fence	
			Install Fish Passage Structure	
			Plant Vegetation	
	199608300	CTUIR Grande Ronde Subbasin Restoration Project The CTUIR Grande Ronde Subbasin Restoration Project plans, designs, implements, maintains, and monitors habitat enhancement and restoration	Create, Restore, and/or Enhance Wetland	Added 18 LWD structures to increase habitat complexity in 1 mile of Meadow Creek; 13.85 miles riparian vegetation planted.
Install Fence				
Plant Vegetation				

Attachment 3 - Table 3.1. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3a: Snake River Steelhead

Snake River Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
		projects in the Grande Ronde Subbasin. Planned FY 2007-09 projects include Meadow Cr, End Cr, Ladd Cr, and main GR.	Realign, Connect, and/or Create Channel	
Grande Ronde upper mainstem Catherine Creek	198402500	ODFW Blue Mountain Oregon Fish Habitat Improvement This project works with landowners, and other government and quasi-governmental agencies to protect and enhance habitat for federal ESA listed fish in the Blue Mountain Province of Oregon.	Create, Restore, and/or Enhance Wetland	490 instream structures installed in 4.4 miles of End Creek, Meadow Creek, and Ladd Creeks to increase habitat complexity; 0.4 riparian miles fenced; 14.2 miles of riparian vegetation planted; channel improvements to add 8.8 stream miles in End, Meadow, and Ladd Creeks.
			Increase Instream Habitat Complexity	
			Install Fence	
			Plant Vegetation	
			Realign, Connect, and/or Create Channel	
Lostine River Imnaha River Big Sheep Creek	200739300	NPT Protect and Restore NE OR Funding for Coordination, Planning, Design, Implementation. Initially the funds were placed under 200724500. Established a new project for the Willowa and Imnaha watersheds.	Decommission Road	Improved access to 9.1 miles fish habitat and planted 11 miles riparian vegetation in Joseph Creek watershed.
			Enhance Floodplain	
			Increase Instream Habitat Complexity	
			Install Fence	
			Install Fish Passage Structure	
			Maintain Vegetation	
			Plant Vegetation	

Attachment 3 - Table 3.1. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3a: Snake River Steelhead

Snake River Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
			Realign, Connect, and/or Create Channel	
			Remove vegetation	
Asotin Creek (extirpated)	199401805	Continued Implementation of Prioritized Asotin Creek Watershed Habitat Projects On-going project for prioritizing & implementing on-the-ground habitat projects for wild steelhead & Chinook salmon in Asotin watershed. Bull trout also benefit from this ridge-top-to-ridge-top approach with match from private landowners & other grants.	Install Fence	Installed 2.36 miles riparian and 1 mile upland fencing; 2.5 miles riparian vegetation planted.
			Plant Vegetation	
			Practice No-till and Conservation Tillage Systems	
	200205000	Continued Riparian Buffer Projects on Couse/Tenmile and other Salmonid Bearing Streams in Asotin County On-going project to continue implementation of prioritized habitat protection on private property for ESA listed steelhead, Chinook salmon and bull trout as identified in the Asotin Subbasin Plan. Cost share provided by private landowners & other sources.	Install Fence	Installed 4.9 miles riparian and 3.5 miles upland fencing; 1.75 miles riparian vegetation planted; 1,272.4 upland acres improved with no-till conservation systems; erosion and sedimentation control on 95.6 upland acres.
			Plant Vegetation	
			Practice No-till and Conservation Tillage Systems	
			Upland Erosion and Sedimentation Control	
Tucannon River	199401806	Tucannon Stream and Riparian Protection, Enhancement, and Restoration Implement habitat protection, enhancement, and recovery strategies to support Subbasin Plan identified ESA focal, cultural significant and species of interest recovery within the Tucannon Subbasin.	Increase Instream Habitat Complexity	29.5 riparian miles protected through CREP agreements.
			Lease Land	

Attachment 3 - Table 3.1. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3a: Snake River Steelhead

Snake River Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
	199401807	<p>Improve Habitat For Fall Chinook, Steelhead in the Lower Snake and Tucannon Subbasins</p> <p>To obtain funding to continue with the districts effort to reduce soil erosion on the uplands and along the streams of Garfield County to improve water quality and fish habitat.</p>	<p>Plant Vegetation</p> <p>Remove vegetation</p> <p>Upland Erosion and Sedimentation Control</p>	3,787 upland acres improved through erosion and sediment control and no-till conservation systems.
Multiple populations (Lemhi, Pahsimeroi, and Salmon River upper mainstem)	199401500	<p>Idaho Fish Screening and Passage Improvements</p> <p>Provide management and operational support for a capital construction program dedicated to the protection of anadromous fish from loss in water diversions, improve fish passage at diversions for juvenile and adult anadromous fish, and improve stream flow conditions where possible.</p>	<p>Install Fish Screen</p> <p>Remove/Install Diversion</p>	New headgates and fish screens installed at four sites on Wimpy and Big Spring creeks; two unscreened diversions consolidated into one screened ditch and accessed 3 miles of habitat.
Little Salmon River	200706500	<p>Coordinate and implement tributary habitat restoration in the Little Salmon River and lower Salmon River Idaho</p> <p>Implement fish habitat restoration on private lands dominated by agricultural practices using cost sharing by Bonneville, Idaho Pacific Coast Salmon Recovery Funds, Idaho Water Quality Program for Agriculture, and landowner participation.</p>	<p>Install Fence</p> <p>Plant Vegetation</p> <p>Remove vegetation</p> <p>Remove/Install Diversion</p>	Squaw Creek culvert replacement accessed 11 miles of habitat.
Little Salmon River	200706400	<p>Protect and Restore Slate Creek</p> <p>Restore and protect the Slate Creek Watershed for the benefit of both resident and anadromous fish using an overall watershed approach. Restoration and</p>	<p>Decommission Road</p> <p>Plant Vegetation</p> <p>Remove vegetation</p>	Little Slate Creek culvert replacement improved access to 5.3 miles fish habitat.

Attachment 3 - Table 3.1. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3a: Snake River Steelhead

Snake River Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
		protection efforts will be done cooperatively with the Nez Perce National Forest.	Upland Erosion and Sedimentation Control	
Secesh River South Fork Salmon River	200712700	Reestablish Connectivity and Restore Fish Habitat in the East Fork of the South Fork Salmon River Watershed This project will reestablish fish passage through a 30-foot tall cascade using natural channel design and rehabilitate one mile of fish habitat through an anthropogenically degraded reach of the upper mainstem East Fork of the South Fork Salmon River.	Enhance Floodplain	Addressed 3 passage barriers and improved access to 15.6 miles fish habitat.
			Increase Instream Habitat Complexity	
			Install Fish Passage Structure	
			Plant Vegetation	
East Fork Salmon River Pahsimeroi River Salmon River upper mainstem	200726800	Idaho Watershed Habitat Restoration Project via Custer Soil and Water Conservation District The project scope is to implement high priority action items to maintain, enhance and restore fish habitat and fish passage in the priority stream segments of the upper Salmon Basin area within the administrative boundaries of the Custer SWCD.	Install Fence	Improved habitat complexity in 2.1 stream miles; installed nine instream structures in Herd and Slate creeks; 6.4 miles riparian and 1.8 miles upland fencing installed; 2.3 miles riparian vegetation planted; addressed diversions at 3 locations; improved access to 3 miles fish habitat.
			Remove/Install Diversion	
			Remove/Modify Dam	
Lemhi River & Pahsimeroi	200739400	Idaho Watershed Habitat Restoration Lemhi County This project merged coordination, planning, design and implementation work from 1992-026-03 effective on 2/26/2007.	Acquire Water Instream	Addressed diversions at 3 locations; improved access to 2.5 miles fish habitat; installed 0.2 miles of riparian fencing.
			Install Fence	
			Install Fish Passage Structure	
			Install Fish Screen	

Attachment 3 - Table 3.1. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3a: Snake River Steelhead

Snake River Steelhead				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
Salmon River lower mainstem	199901900	Restore Salmon River (Challis, Idaho) Passive restoration by securing easements will assist restoration efforts via the Corps 206 Program. The development of side channels will help create a more naturally functioning floodplain, provide a wide array of environmental and ecological benefit.	Investigate Trespass	Visitation log to investigate Stark property conservation values.
Yankee Creek	200205900	Yankee Fork Salmon River Dredge Tailings Restoration Project Restore natural river channel characteristics, floodplain function, hydraulic and sediment regimes, and aquatic habitat within the dredged reach of the YFSR, initially by redistributing dredge tailings piles from the floodplain.	Plant Vegetation	Inventory, assessment, monitoring being conducted prior to on-the-ground work.
			Remove Mine Tailings	

Attachment 3 - Table 3.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3b: Snake River Spring/Summer Chinook

Snake River Spring/Summer Chinook				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-08 Progress
Multiple	200201301	Water Entity Fund water right transactions that restore streamflows and focused riparian easements on critical fish-bearing Columbia Basin tributaries. Implemented as the Columbia Basin Water Transactions Program (CBWTP) in a partnership between BPA and NFWF.	Acquire Water Instream	25,256 acre-ft/yr and 237 cfs of water flow protected in Lemhi, Lostine, Pahsimeroi, and Salmon River lower and upper mainstem watersheds.
	199202601	Grand Ronde Model Watershed Program Habitat Restoration - Planning, Coordination and Implementation The project coordinates BPA funded restoration activities in the Grande Ronde and Imnaha Subbasins working with tribes, agencies and landowners. The project annually implements 10-20 habitat restoration projects. Project also to consider including habitat actions proposed in Wallowa, Lostine, & Joseph Cr. watersheds (200710500, 200711600, 200724500).	Increase Instream Habitat Complexity	3.6 miles upland fencing installed in Lick Cr. Watershed; improved access to 23 miles of Catherine Creek, 2.8 miles of upper Grande Ronde River, and 5 miles of the Lostine River; relocated 1.6 miles of draw bottom road in upper Grande Ronde; increased habitat complexity in 1.6 miles of Bear Creek and 0.7 miles of Lostine/Wallowa River; installed 21 structures to create meanders and add 0.1 miles stream channel in upper Grande Ronde floodplain; installed 13 structures and created 0.1 miles stream channel in Lostine/Wallowa River; planted 1.6 miles riparian vegetation in upper Grande Ronde.
			Install Fence	
Install Fish Passage Structure				
Plant Vegetation				
199608300	CTUIR Grande Ronde Subbasin Restoration Project The CTUIR Grande Ronde Subbasin Restoration Project plans, designs, implements, maintains, and monitors habitat enhancement and restoration projects in the Grande Ronde Subbasin.	Create, Restore, and/or Enhance Wetland	Planted 1.8 miles riparian vegetation in Meadow Creek and Longley Meadows; added 18 LWD structures in Meadow Creek to increase complexity for 1 miles of fish habitat .	
		Install Fence		
		Plant Vegetation		

Attachment 3 - Table 3.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3b: Snake River Spring/Summer Chinook

Snake River Spring/Summer Chinook				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-08 Progress
		Planned FY 2007-09 projects include Meadow Cr, End Cr, Ladd Cr, and main GR.	Realign, Connect, and/or Create Channel	
Grande Ronde upper mainstem Catherine Creek	198402500	ODFW Blue Mountain Oregon Fish Habitat Improvement This project works with landowners, and other government and quasi-governmental agencies to protect and enhance habitat for federal ESA listed fish in the Blue Mountain Province of Oregon.	Create, Restore, and/or Enhance Wetland	Installed 150 structures to improve complexity in 0.5 miles of Meadow Creek; installed 91 structures to improve complexity in 1.2 miles of Wallowa River; installed 0.4 miles riparian fencing in Catherine Creek; planted 1.8 miles of riparian vegetation in Catherine Creek, upper Grande Ronde, and Lostine watersheds; added 1.0 miles channel habitat in upper Grande Ronde and Lostine rivers.
			Increase Instream Habitat Complexity	
			Install Fence	
			Plant Vegetation	
Lostine River Imnaha River Big Sheep Creek	200739300	NPT Protect and Restore NE OR Funding for Coordination, Planning, Design, Implementation. Initially the funds were placed under 200724500. Established a new project for the Wallowa and Imnaha watersheds.	Decommission Road	Funding secured to implement the Tamarack culvert replacement; prepared designs for the City of Lostine and Sheep Ridge diversions on the Lostine River; Camp Creek diversion project design underway; contract executed for Carrol Creek culvert replacement.
			Enhance Floodplain	
			Increase Instream Habitat Complexity	
			Install Fence	
			Install Fish Passage Structure	
			Maintain Vegetation	
Plant Vegetation				

Attachment 3 - Table 3.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3b: Snake River Spring/Summer Chinook

Snake River Spring/Summer Chinook				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-08 Progress
			Realign, Connect, and/or Create Channel	
			Remove vegetation	
Asotin Creek (extirpated)	199401805	Continued Implementation of Prioritized Asotin Creek Watershed Habitat Projects On-going project for prioritizing & implementing on-the-ground habitat projects for wild steelhead & Chinook salmon in Asotin watershed. Bull trout also benefit from this ridge-top-to-ridge-top approach with match from private landowners & other grants.	Install Fence	Fenced 2.36 riparian and 0.6 upland miles; 2.5 miles riparian vegetation planted; 2,778.2 upland acres improved through no-till conservation systems.
			Plant Vegetation	
			Practice No-till and Conservation Tillage Systems	
	200205000	Continued Riparian Buffer Projects on Couse/Tenmile and other Salmonid Bearing Streams in Asotin County On-going project to continue implementation of prioritized habitat protection on private property for ESA listed steelhead, Chinook salmon and bull trout as identified in the Asotin Subbasin Plan. Cost share provided by private landowners & other sources.	Install Fence	4.9 miles riparian and 3.5 miles upland fencing installed; 1.0 stream miles fenced; 1.8 miles riparian vegetation planted; 1,272.4 upland acres improved with no-till conservation systems; erosion and sedimentation control on 95.6 upland acres.
			Plant Vegetation	
			Practice No-till and Conservation Tillage Systems	
			Upland Erosion and Sedimentation Control	
Tucannon River	199401806	Tucannon Stream and Riparian Protection, Enhancement, and Restoration Implement habitat protection, enhancement, and recovery strategies to support Subbasin Plan identified ESA focal, cultural significant and species of interest recovery within the Tucannon Subbasin.	Increase Instream Habitat Complexity	Fish screens installed at five diversions; 590 riparian acres (29.47 riparian miles) protected through CREP extensions.
			Lease Land	

Attachment 3 - Table 3.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3b: Snake River Spring/Summer Chinook

Snake River Spring/Summer Chinook				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-08 Progress
	199401807	Improve Habitat For Fall Chinook, Steelhead in the Lower Snake and Tucannon Subbasins To obtain funding to continue with the districts effort to reduce soil erosion on the uplands and along the streams of Garfield County to improve water quality and fish habitat.	Plant Vegetation Remove vegetation Upland Erosion and Sedimentation Control	3,787 upland acres improved through erosion and sediment control and no-till conservation systems.
Multiple (Lemhi, Pahsimeroi, Upper Salmon mainstem, Valley Creek)	199401500	Idaho Fish Screening and Passage Improvements Provide management and operational support for a capital construction program dedicated to the protection of anadromous fish from loss in water diversions, improve fish passage at diversions for juvenile and adult anadromous fish, and improve stream flow conditions where possible.	Install Fish Screen Remove/Install Diversion	Addressed one irrigation diversion structure and installed fish screens at five locations.
Little Salmon River	200706500	Coordinate and implement tributary habitat restoration in the Little Salmon River and lower Salmon River Idaho Implement fish habitat restoration on private lands dominated by agricultural practices using cost sharing by Bonneville, Idaho Pacific Coast Salmon Recovery Funds, Idaho Water Quality Program for Agriculture, and landowner participation.	Install Fence Plant Vegetation Remove vegetation Remove/Install Diversion	Replace Squaw Creek culvert to improve access to 11 miles of habitat.
			Decommission Road Plant Vegetation Remove vegetation	
	200706400	Protect and Restore Slate Creek Restore and protect the Slate Creek Watershed for the benefit of both resident and anadromous fish using an overall watershed approach. Restoration and	Decommission Road Plant Vegetation Remove vegetation	Replaced Little Slate Creek culvert to improve access to 5.3 miles of habitat.

Attachment 3 - Table 3.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3b: Snake River Spring/Summer Chinook

Snake River Spring/Summer Chinook				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-08 Progress
		protection efforts will be done cooperatively with the Nez Perce National Forest.	Upland Erosion and Sedimentation Control	
Secesh River South Fork Salmon River	200712700	Reestablish Connectivity and Restore Fish Habitat in the East Fork of the South Fork Salmon River Watershed This project will reestablish fish passage through a 30-foot tall cascade using natural channel design and rehabilitate one mile of fish habitat through an anthropogenically degraded reach of the upper mainstem East Fork of the South Fork Salmon River.	Enhance Floodplain	Addressed five migration barriers to improve access to 15.6 miles of habitat.
			Increase Instream Habitat Complexity	
			Install Fish Passage Structure	
			Plant Vegetation	
East Fork Salmon River Pahsimeroi River Salmon River upper mainstem	200726800	Idaho Watershed Habitat Restoration Project via Custer Soil and Water Conservation District The project scope is to implement high priority action items to maintain, enhance and restore fish habitat and fish passage in the priority stream segments of the upper Salmon Basin area within the administrative boundaries of the Custer SWCD.	Install Fence	Installed 6.4 miles riparian and 1.8 miles upland fencing; installed nine instream structures and improved 2.1 miles of habitat; addressed irrigation diversions to improve access to 2 miles fish habitat; planted 2.3 miles riparian vegetation.
			Remove/Install Diversion	
			Remove/Modify Dam	
Lemhi River	200739400	Idaho Watershed Habitat Restoration Lemhi County Move funds for coordination, planning, design and implementation from 1992-026-03, Upper Salmon Basin Watershed Project.	Acquire Water Instream	Installed 0.2 miles of riparian fencing; addressed three irrigation diversion structures to improve access to 2.5 miles fish habitat.
			Install Fence	
			Install Fish Passage Structure	
			Install Fish Screen	

Attachment 3 - Table 3.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 3b: Snake River Spring/Summer Chinook

Snake River Spring/Summer Chinook				
Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-08 Progress
Salmon River lower mainstem	199901900	Restore Salmon River (Challis, Idaho) Passive restoration by securing easements will assist restoration efforts via the Corps 206 Program. The development of side channels will help create a more naturally functioning floodplain, provide a wide array of environmental and ecological benefit.	Investigate Trespass	Visitation log to investigate Stark property conservation values.
Yankee Creek	200205900	Yankee Fork Salmon River Dredge Tailings Restoration Project Restore natural river channel characteristics, floodplain function, hydraulic and sediment regimes, and aquatic habitat within the dredged reach of the YFSR, initially by redistributing dredge tailings piles from the floodplain.	Plant Vegetation	Inventory, assessment, and monitoring being conducted prior to on-the-ground work.
			Remove Mine Tailings	

Tables 4.1, 4.2, and 4.3 — Actions Identified for 2008-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Tables 4a-c

Tables 4a-c in the FCRPS BA indicated tributary habitat actions the Action Agencies could implement in the 2008 and 2009 timeframe if funding was expanded beyond the initial 2007–2009 Fish and Wildlife Program funding levels. The expanded funding was targeted to address specific limiting factors for populations with the greatest biological needs for improvement. Tables 4.1, 4.2, and 4.3 list the projects that received expanded funding levels to implement these or similar suites of actions and any actual metrics that were completed.

Attachment 3 - Table 4.1. Actions Identified for 2008-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4a: Snake River Spring/Summer Chinook

Snake River Spring/Summer Chinook				
MPG	Population	Primary Limiting Factor(s) by AU	Action Description	FY08-09 Progress
Grande Ronde	Catherine Creek	In-channel characteristics	In-stream enhancement, LWD, modify/enhance channel	GRMW/Umatilla Tribe contract, Ladd Creek/Land Marsh Channel Reconstruction and Wetland Restoration Project. Completed NEPA, permitting and design for FY10/11 implementation to excavate new channels, rehabilitate old channels, place LWD.
			Opportunistic channel enhancement	
		Riparian / Floodplain	livestock exclusion/reveg/weed control/expand streamside buffers/levee or road mod/restore meadows	GRMW/USFS contract, Riparian Fencing and Water Development project. Developed alternate livestock watering systems in Little Catherine Creek, Prong Creek, Scout Creek, and Indian Creek; executed contracts to develop alternative livestock watering systems in Fly Creek and Warm Springs Creek in FY10.
			wetland project development	
	riparian fencing (FS)	GRMW/USFS contract, Riparian Fencing and Water Development project. Installed 4 miles livestock enclosure fencing in Little Catherine Creek, Lick Creek and tributary, and Corral Creek; executed contracts to install enclosure fencing in SF Catherine Creek and Camp Creek in 2010.		
	road obliteration/sediment reduction (FS)			

Attachment 3 - Table 4.1. Actions Identified for 2008-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4a: Snake River Spring/Summer Chinook

Snake River Spring/Summer Chinook				
MPG	Population	Primary Limiting Factor(s) by AU	Action Description	FY08-09 Progress
		Fish Passage	culverts/irrigation diversion improvements	GRMW contract, Catherine Creek State Diversion Fish Passage project: fish ladder construction and diversion modification to access 22 miles habitat. Smutz Draw culvert replacement to access 1.5 miles habitat.
			Catherine Creek State Diversion Fish Passage	
			Catherine Creek Diversion Townley-Dobin	GRMW contract, Townley-Dobbin and Mill Creek Fish Passage Project: permitting and design in FY09, contract in place for FY10 construction of Townley-Dobbin fishway, diversion structure modification, and headgate/j-hook installation. Completed environmental review, permitting, design and installation of Mill Creek rock vortex weir to improve access to 2 miles habitat.
			Catherine Creek Davis Dams Fish Passage (design)	GRMW contract, permitting and design initiated.
			Scout Creek Culvert Replacement (design)	GRMW contract, design pending completion of USFS review.
	Upper Grande Ronde	In-channel characteristics	End Creek Restoration - Phase IV	GRMW/Umatilla Tribe contract, End Creek Restoration. McDonald Creek restoration channel segments and spring channels added 0.4 mile stream habitat.
			Willow Ck channel improvement /wetland restoration (new)	
			Indian Ck channel enhancement and wetland restoration	
		Riparian / Floodplain	Indian/Little Indian riparian fencing/water development-start in 09, continue through 15 (FS)	GRMW/USFS contract, Riparian Fencing and Water Development project. Alternative livestock watering system developed in Indian Creek.

Attachment 3 - Table 4.1. Actions Identified for 2008-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4a: Snake River Spring/Summer Chinook

Snake River Spring/Summer Chinook				
MPG	Population	Primary Limiting Factor(s) by AU	Action Description	FY08-09 Progress
		Passage	culverts/irrigation diversion improvements	GRMW/Umatilla Tribe contract, End Creek Restoration Project — McDonald Creek Headgate removal accessed 5 miles habitat.
		In-channel characteristics	Upper GR River mine tailings (FS)	GRMW/USFS Upper Grande Ronde Mine Tailings contract: planning, permitting, design, and implementation to remove/recontour mile tailings. Treated 38 riparian acres and 7.5 wetland acres over 2.5 mile stream reach.
			Fly Ck (FS)	GRMW/USFS contract, Fly Creek Stream Restoration: planning, permitting, design in FY09, implementation in FY10.
			UGR/Fly/Sheep Ck riparian fencing + water development- 2009 (FS)	GRMW/USFS contract, Riparian Fencing and Water Development project: permitting and design in FY08, implementation in FY09.
			Camp Carson erosion control 2008 (FS)	Cancelled — lack of fish benefits.
	Wallowa	Lack of passage - Lack of access to diversity of habitats,	Fish Passage Improvements	GRMW contract, Deer Creek Culvert Replacement to improve access to 2.5 miles steelhead habitat.
Middle Fork Salmon	Big Creek	Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Road Improvement, Culvert Removal / Replacement, Riparian Restoration near Mining Sites, Weed Management, Silvicultural BMPs	Expanded the geographic scope and budget of project 2007-127-000 East Fork of South Fork Salmon River Passage Restoration to include Big Creek watershed habitat improvements. Implementation to begin in FY10 and expanded implementation in FY11/12.

Attachment 3 - Table 4.1. Actions Identified for 2008-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4a: Snake River Spring/Summer Chinook

Snake River Spring/Summer Chinook				
MPG	Population	Primary Limiting Factor(s) by AU	Action Description	FY08-09 Progress
		Migration Barriers associated with roads and mining activities	Assess stream crossings and anthropogenic migration barriers to determine actions necessary for salmonid passage. Provide for salmonid passage at identified passage barriers (e.g., culvert replacement)	
South Fork Salmon River	South Fork Salmon River mainstem	Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Road Improvement, Culvert Removal / Replacement, Riparian Restoration, Mine rehabilitation	BPA expanded funding to project 200712700, Reestablish Connectivity and Restore Fish Habitat in the East Fork of the South Fork Salmon River Watershed. Conducted assessment, inventory, and prioritization of habitat opportunities for subsequent implementation. Completed planning, design, environmental review, and permitting and recontoured over 20 miles of road.
		Migration Barriers	Assess stream crossings and anthropogenic migration barriers to determine actions necessary for salmonid passage. Provide for salmonid passage at identified passage barriers. The Stibnite-Glory Hole passage project is a priority.	Funding through 200712700 (see above). Stibnite-Glory Hole passage project cancelled, replaced with watershed-scale assessment of passage barriers (culverts), channel complexity, and floodplain reconnection opportunities, and prioritized road decommissioning. Implementation in FY09 and beyond based on inventory and assessment and pending environmental review and permitting. Addressed migration barriers on Parks Creek, Salt Creek, and Profile Creek to improve access to 15.6 miles fish habitat.
	Secesh River	Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Road Improvement, Culvert Removal / Replacement, Weed Management, Silvicultural BMPs	Funding included in expanded funding to 200712700. See above.

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
Upper Grande Ronde	Mid Grande Ronde River and Tributaries	In-channel characteristics	End Creek Restoration - Phase IV	GRMW contract, End Creek Restoration. McDonald Creek restoration channel segments and spring channels added 0.4 mile stream habitat.
			Willow Ck channel improvement /wetland restoration (new)	
			Indian Ck channel enhancement and wetland restoration	
		Riparian / Floodplain	Indian/Little Indian Riparian fencing/water development 2009 start (FS)	GRMW/USFS contract, Riparian Fencing and Water Development project. Alternative livestock watering system developed in Indian Creek.
	Upper Grande Ronde and Tributaries	In-channel characteristics	Upper GR River mine tailings (FS)	GRMW/USFS Upper Grande Ronde Mine Tailings contract: planning, permitting, design, and implementation to remove/recontour mile tailings. Treated 38 riparian acres and 7.5 wetland acres over 2.5 mile stream reach.
			Fly Ck (FS)	GRMW/USFS contract, Fly Creek Stream Restoration: planning, permitting, design in FY09, implementation in FY10.
		Sediment	Camp Carson erosion control (FS)	Cancelled — lack of fish benefits.
	Catherine Creek	In-channel characteristics	In-stream enhancement, LWD, modify/enhance channel	GRMW/Umatilla Tribe contract, Ladd Creek/Land Marsh Channel Reconstruction and Wetland Restoration Project. Completed NEPA, permitting and design for FY10/11 implementation to excavate new channels, rehabilitate old channels, place LWD.

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
		Riparian / Floodplain	livestock exclusion/reveg/weed control/expand streamside buffers/levee or road mod/restore meadows	GRMW/USFS contract, Riparian Fencing and Water Development project. Developed alternate livestock watering systems in Little Catherine Creek, Prong Creek, Scout Creek, and Indian Creek; executed contracts to develop alternative livestock watering systems in Fly Creek and Warm Springs Creek in FY10.
			wetland project development	
			Catherine Ck road obliteration/sediment reduction 2009 start (FS)	
		Fish Passage	culverts/irrigation diversion improvements	GRMW contract, Catherine Creek State Diversion Fish Passage project: fish ladder construction and diversion modification to access 22 miles habitat. Smutz Draw culvert replacement to access 1.5 miles habitat.
			Catherine Creek State Diversion Fish Passage	
			Catherine Creek Diversion Townley-Dobin	GRMW contract, Townley-Dobbin and Mill Creek Fish Passage Project: permitting and design in FY09, contract in place for FY10 construction of Townley-Dobbin fishway, diversion structure modification, and headgate/j-hook installation. Completed environmental review, permitting, design and installation of Mill Creek rock vortex weir to improve access to 2 miles habitat.
			Catherine Creek Davis Dams Fish Passage (design)	GRMW contract, permitting and design initiated.
			Scout Creek Culvert Replacement (design)	Design pending completion of USFS review.

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
Lochsa	Crooked Fork	Connectivity - Lack of access to diversity of habitats	Culvert Replacement or Removal	BPA funding for project 200739500, Protect and Restore the Lochsa River beginning in 2007; budget expanded by \$756k/year beginning in FY09. Completed road and culvert risk assessment in the upper Lochsa. Addressed migration barriers in Haskell and NF Spruce creeks to improve access to 3.8 miles fish habitat.
		Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Removal and Improvement/ Land Acquisition	Project 200739500. Decommissioned 8 miles of road in Rock Creek. Prepared designs for 373 road decommissioning in 2010.
		Temperature and Instream Habitat-poor quality pools and structure	Revegetation to allow for woody debris recruitment and riparian area cover. Land Acquisition	Project 200739500. Revegetated 38.8 acres; treated 50 acres of exotic/noxious weeds.
	Middle Lochsa North Face Tributaries (from Post Office to Bald Mountain)	Loss of riparian vegetation and complexity, lack of shade, loss of nutrients	Riparian Rehabilitation	Project 200739500: 67 acres of riparian planting.
		Lack of passage - Lack of access to diversity of habitats,	Culvert Replacement or Removal	Project 200739500: Replaced Indian Graves culvert (2.5 miles) and East Fork Indian Graves culvert to improve access to 5.0 miles fish habitat.
		Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume,	Road Decommissioning, Culvert Removal / Replacement, Noxious Weed Control	Project 200739500: Decommissioned 12 miles road; treated 7 acres of exotic/invasive plants.

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
		reduced spawning success		
		Temperature	Road Removal, Riparian Rehabilitation	Project 200739500: see above.
	Lower Lochsa (Fish Creek to Pete King Creek)	Loss of riparian vegetation and complexity, lack of shade, loss of nutrients	Riparian Rehabilitation	Project 200739500: No on the ground implementation in this AU. Implementation planning for 2010 and beyond.
		Lack of passage - Lack of access to diversity of habitats	Culvert Replacement or Removal, Remove engineered instream structures	
		Temperature	Road Removal, Riparian Rehabilitation	
		Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Culvert Removal / Replacement, Noxious Weed Control	
Lolo Creek	Musselshell Creek	Sediment from roads, timber harvest, cattle grazing, and historic mining - effects on rearing and spawning success, interstitial space	Road Decommissioning and road drainage improvements, Weed Control	BPA funding for project 199607702, Protect and Restore the Lolo Creek Watershed — budget expanded by \$100K/year beginning in FY09: Weed treatment on 3 riparian miles/30 riparian acres.

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
		and pool volume		
		Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian Rehabilitation & Large Woody Debris	Protect 200 acres of meadow; installed 1 mile fencing along stream.
		Lack of passage - Lack of access to diversity of habitats	Musselshell Tunnel/ Stream Relocation, Culvert Replacement	Removed culvert upstream of mining Musselshell Tunnel to improve access to 21 miles of habitat once Tunnel barrier is addressed.
	Yoosa Creek	Sediment from roads, timber harvest, cattle grazing, and historic mining - effects on rearing and spawning success, interstitial space and pool volume	Road Decommissioning and road drainage improvements, Weed Control	Project 199607702: Replaced Mox Creek culverts to improve access to 2.5 miles fish habitat.
	Lolo Creek	Sediment from roads, timber harvest, cattle grazing,- effects on rearing and spawning success, interstitial space and pool volume	Road obliteration and road drainage improvements	Project 199607702: Decommissioned 48 miles of road in Yakus and Lolo Creeks (White-White Road).
		Reduced channel complexity from streamside roads, reduced LWD & historic	Riparian Rehabilitation & Large Woody Debris	

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
		dredge mining		
		Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian planting	
		Lack of passage - Lack of access to diversity of habitats	Culvert Replacement, Eldorado Falls Adjustment	Project 199607702: Rat Creek culvert replacement improved access to 4.3 miles habitat.
Selway River	O'Hara Creek	Sediment from roads, timber harvest, cattle grazing - effects on rearing and spawning success, interstitial space and pool volume	Road Decommissioning and road drainage improvements, Weed Control	No tributary habitat improvement projects funded by BPA in the Selway River. Implementation planned for 2010-13.
		Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian Rehabilitation & Large Woody Debris	
	Lower Selway River	Sediment from roads - effects on rearing and spawning success, interstitial space and pool volume	Riparian Rehabilitation & Sediment Filters	
		Lack of passage - Lack of access to diversity of habitats	Culvert Replacement	

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
South Fork Clearwater River	Newsome Creek	Channel Morphology - Channel straightened, lack of pools, lack of pool depth, lack of complexity, lack of cover	Channel / Riparian Rehabilitation	BPA funding for Project 200003500, Rehabilitate Newsome Creek — budget expanded by \$321k/year beginning in FY08: design and contract preparation completed for implementation of 2.4 miles of stream restoration in 2010-13.
		Loss of riparian vegetation and complexity – dredge mine effects, lack of shade, loss of nutrients	Channel / Riparian Rehabilitation	Project 200003500: Design and contraction preparation completed for 5-10 acres riparian planting.
		Lack of passage - Lack of access to diversity of habitats	Culvert Replacement	Project 200003500: Mare Creek and Mule Creek culvert replacements to improve access to 6 miles habitat.
		Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Road Improvement, Culvert Removal / Replacement	Project 200003500: Improved 19.5 road miles; decommissioned 18 road miles.
	Meadow Creek	Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Soil Restoration, Culvert Removal / Replacement, Weed Control	BPA funding for Project 199607705, Restore McComas Meadows/Meadow Creek Watershed — budget expanded by \$200k/year beginning in FY08: 2.5 riparian miles and 43.9 upland miles of road treated/removed.
		Lack of passage - Lack of access to diversity of habitats	Culvert Replacement	Project 199607705: Covert & Rock Creek culvert replacements to improve access to 3.5 miles habitat.

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
		Loss of riparian vegetation and complexity - lack of large woody debris recruitment resulting in lack of habitat complexity	Riparian Rehabilitation	Project 199607705: 4 miles riparian vegetation planted.
		Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian Rehabilitation	See above.
	Mill Creek	Lack of passage - Lack of access to diversity of habitats	Culvert Replacement	BPA funding for Project 200003600, Protect and Restore Mill Creek — budget expanded by \$150k/year beginning in FY08: Hepner Creek and Merton Creek culvert replacements to improve access to 8 miles habitat.
		Loss of riparian vegetation and complexity - lack of large woody debris recruitment resulting in lack of habitat complexity	Riparian Rehabilitation	Project 200003600: 2.0 miles riparian vegetation planted.
		Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian Rehabilitation	See above.

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
	American River	Channel Morphology - Channel straightened, lack of pools, lack of pool depth, lack of complexity, lack of cover	Channel / Riparian Rehabilitation on Telephone, Whitaker, & Queen Creeks. BLM proposed restoration of American River.	No tributary habitat improvement projects funded by BPA for 2007-09 implementation in the American River AU. Implementation planned for 2010 and beyond.
		Loss of riparian vegetation and complexity - dredge mine effects, lack of shade, loss of nutrients	Channel / Riparian Rehabilitation on Telephone, Whitaker, & Queen Creeks	
		Lack of passage - Lack of access to diversity of habitats	Culvert Replacement	
		Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Road Improvement, Culvert Removal / Replacement, Weed Control	
		Riparian and channel alteration from floodplain/riparian development	Maines Estate Land Acquisition / Conservation Easements	
	Crooked River	Channel Morphology - Channel straightened, lack of pools, lack of pool depth, lack of complexity, lack of cover	Channel / Riparian Rehabilitation, includes both BPA proposals and FS Stewardship actions	No tributary habitat improvement projects funded by BPA for 2007-09 implementation in the Crooked River AU. Implementation planned in 2010 and beyond.

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
		Loss of riparian vegetation and complexity - dredge mine effects, lack of shade, loss of nutrients	Channel / Riparian Rehabilitation, includes both BPA proposals and FS Stewardship actions	
		Lack of passage - Lack of access to diversity of habitats	Culvert Replacement	
		Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Road Improvement, Culvert Removal / Replacement, Weed Control	
	Red River	Channel Morphology - Channel straightened, lack of pools, lack of pool depth, lack of complexity, lack of cover	Channel / Riparian Rehabilitation	BPA funding for Project 200207200, Protect and Restore Red River Watershed — budget expanded by \$198k/year beginning in FY08. Initiated Red River stream restoration on 2 miles (planned completion in 2010); installed 41 instream structures; added 0.1 miles stream channel at Red River narrows.
		Loss of riparian vegetation and complexity - dredge mine effects, lack of shade, loss of nutrients	Channel / Riparian Rehabilitation	See above.
		Lack of passage - Lack of access to diversity of habitats	Culvert Replacement	Project 200207200: Replace #1709 culvert to improve access to 5.0 miles habitat.

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
		Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Road Improvement, Culvert Removal / Replacement, Weed Control	Project 200207200: 1.0 riparian mile and 20 upland miles of road decommissioned.
		Riparian and channel alteration from floodplain/riparian development	Red River Meadows Land Acquisition / Conservation Easements	Project 200207200: Began implementation of Red River restoration on 2 stream miles (planned completion in 2010); installed 41 instream structures; added 0.1 miles stream channel at Red River narrows.
Big Creek	Entire Big Creek Watershed	Chemical Pollution From Mining Activities	Mine Rehabilitation and Riparian Restoration	No action implemented in Big Creek. Implementation planned for 2010 and beyond.
		Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Road Improvement, Culvert Removal / Replacement, Riparian Restoration near Mining Sites, Weed Management, Silvicultural BMPs	

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
		Migration Barriers associated with roads and mining activities	Assess stream crossings and anthropogenic migration barriers to determine actions necessary for salmonid passage. Provide for salmonid passage at identified passage barriers (e.g., culvert replacement)	See above.
Secesh River	Entire Secesh Basin	Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Road Improvement, Culvert Removal / Replacement, Weed Management, Silvicultural BMPs	BPA expanded funding to Project 200712700, Reestablish Connectivity and Restore Fish Habitat in the East Fork of the South Fork Salmon River Watershed. Conducted assessment, inventory, and prioritization of habitat opportunities. Projects initiated to decommission 15-30 road miles beginning in FY 09.
South Fork Salmon	EFSF Salmon and tribs	Sediment effects on rearing and spawning success - lack of interstitial space, reduced pool volume, reduced spawning success	Road Decommissioning, Road Improvement, Culvert Removal / Replacement, Riparian Restoration, Mine rehabilitation	BPA expanded funding to Project 200712700, Reestablish Connectivity and Restore Fish Habitat in the East Fork of the South Fork Salmon River Watershed. Conducted assessment, inventory, and prioritization of habitat opportunities.
		Migration Barriers	Assess stream crossings and anthropogenic migration barriers to determine actions necessary for salmonid passage. Provide for salmonid passage at identified passage barriers. The Stibnite-Glory Hole passage project is a priority.	Funding through 200712700 (see above). Stibnite-Glory Hole passage project cancelled, replaced with watershed-scale assessment of passage barriers (culverts), channel complexity and floodplain reconnection opportunities, and prioritized road decommissioning. Replaced Salt, Parks, and Profile creeks culverts to improve access to 15 miles of habitat.

Attachment 3 - Table 4.2. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4b: Snake River Summer/Winter Steelhead

Snake River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Action Description	FY08-09 Progress
		Heavy Metal Contamination	Mine oversight and management to protect and restore water quality and fish habitat. Riparian, floodplain, and wetland restoration.	See above.

Attachment 3 - Table 4.3. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 4c: Upper Columbia River Summer/Winter Steelhead

Upper Columbia River Summer/Winter Steelhead				
Population	Assessment Unit (AU)	Primary Limiting Factor(s) by AU	Action Description	FY08 Progress
Okanogan River	Omak Creek MSA	Passage-culverts	provide passage at barriers	Colville Tribe Accord Agreement: approximately \$850k budget increase in FY08 (Projects 2000-00-100 Omak Creek Anadromous Fish Habitat and Passage, 1996-042-00 Restore Salmon Creek Anadromous Fish, 2007-224-00 Okanogan Subbasin Habitat Implementation Program). 200 acres purchased along Omak Creek to protect 0.5 riparian miles, added 8 miles of stream channel in lower Salmon Creek; installed 2.7 riparian miles and 0.7 upland miles fencing; planted 2.1 miles riparian vegetation, increased complexity in 1.2 miles of fish habitat; replaced or removed culverts to improve access to 14 miles habitat.
	Small Trib Creeks Combined mSA	Riparian and floodplain function	land acquisition	
	Salmon Creek	Low stream flow	water acquisition	
		In-channel habitat quantity*	Salmon Creek Project funded under 2007-09 F&W Pgm Funding Decision. Potential to fund water acquisition through the Water Entity/CBWTP.	
		Passage-flow barrier in lower reach	improve water management/channel reconstruction	
	Loup Loup Creek	Low stream flow	improve water management	
		Riparian and floodplain function	water conservation	
		Passage- flow barrier in lower reach	provide passage at barriers	

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

Table 5.1 contains metric and metric values for actions completed in 2007-2009 and ongoing actions that will continue into 2010 and later with technical assistance provided by Reclamation. Ongoing actions are those with no date in the "Action End Date" column. Some of the actions in table 5.1 complement some of the BPA-funded projects listed in Attachment 3, Tables 1 to 4. The following abbreviations apply. Streamflow: streamflow protected under state law. Stream length: stream length affected. Type (channel access): D, diversion; C, culvert. Type (channel complexity): R, restore main channel function; S, side channel reconnection. Extent of barrier: P, partial (upstream access seasonably inaccessible prior to action); F, full (absolutely no passage prior to action). Access: miles made accessible to next upstream full or partial barrier. Stream miles affected by screen: miles between action location and next diversion. Complexity miles: length of instream habitat treated after action completed.

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
Upper Columbia River Steelhead and Spring Chinook Salmon																		
4391	Entiat	Channel Access	Knapp Wham Diversion Replacement (Phase 2)	This project is part of the larger Knapp-Wham/Hanan Detwiler Ditch consolidation. It is the replacement of a push-up dam with a permanent diversion for the KW ditch. Benefits associated with the completed action and evaluated by the expert panel address a different limiting factor (access) than identified in the 2007 FCRPS BA (streamflow) owing to action changes based on landowner input.	47 41 42	120 19 13	4/16/2009	10/15/2009			D	P	22					
4034	Methow	Channel Access	MVID East Canal Diversion Dam	Will replace the structure with a new one located at the original point of diversion. The upstream location will allow a much less obtrusive structure that will not require a constructed fishway for passage. Barrier removed and access metric obtained in 2008; completion of headworks scheduled for 2010.	48 25 08	120 08 25	9/13/2002				D	P	246.3					
4035	Methow	Channel Access	MVID West Canal Diversion Dam	Design and construct a new diversion structure and headgate that would prevent entry and minimize the effects of MVD's operations on listed salmonids. Designs completed in 2007; completion pending landowner decisions; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional	48 22 13	120 11 38	9/13/2002				D	P	120.3					

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
				actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.														
4261	Methow	Channel Complexity	Elbow Coulee Side Channel Restoration	The objective of this geomorphology project is to restore off-channel rearing habitat in a side channel off the mainstem Twisp River.	48 22 47	120 14 20	5/4/2005	9/29/2008			S							0.5
4260	Methow	Channel Complexity	Jennings Habitat Complexity Project	The purpose of the project is to reconnect the floodplain to the river and establish off-channel habitat.	48 22 03	120 18 39	1/23/2006	10/11/2006			S							1
4263	Methow	Channel Complexity	Upper Beaver Creek Side Channel Reconnection	This geomorphology project involves re-connecting a former beaver pond area and channel to the existing Beaver Creek channel in the Methow subbasin, with the objective of providing off-channel rearing habitat and floodplain connectivity. Deferred pending landowner decision and response; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.	48 23 45	120 02 45	5/3/2005				S							0.5
	Methow	Channel Complexity	Buckley Floodplain Restoration	This project will provide off-channel rearing habitat and improve floodplain connectivity by providing flow and fish access to a series of existing ponds. Deferred pending landowner decision and response; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009														

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
				that will be considered by expert panels upon completion are listed in table 5.4.														
	Methow	Channel Complexity	Lower Eight Mile	Floodplain restoration in middle Chewuch River deferred pending landowner decision and response; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.														
	Methow	Channel Complexity	Windhaven Reach	Side Channel Reconnection in lower Chewuch River deferred pending landowner decision and response; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.														
	Methow	Channel Complexity	Lehman Reach Projects	Side channel reconnection and ground water /irrigation water utilization in middle Methow River deferred pending landowner decision and response; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion														

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
				are listed in table 5.4.														
	Methow	Channel Complexity	McNae Island Channel Restoration	Channel restoration below MVID East Diversion deferred pending landowner decision and response; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.														

Snake River Steelhead and Spring/Summer Chinook Salmon

4328	Lemhi	Channel Access	L-1 Diversion	Evaluation of alternatives and development of conceptual design for a pump system and/or diversion weir is requested. Conceptual designs prepared in 2008; completion pending landowner decisions; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.	45 10 69	113 53 15	4/1/2008				D	P	1					
4021	Lemhi	Channel Access	L-3A0 Diversion Replacement	The existing gravel push-up dam spanning the Lemhi River has no provisions for fish passage and can be an impediment during low streamflow conditions.	45 09 37	113 50 23	4/16/2002	7/27/2005			D	P	1					
4209	Lemhi	Channel Access	Lemhi River-L-44 Diversion Consolidation	The L-44 and 45 irrigation diversions on the upper Lemhi River are typical rock, push-up diversion structures. Elimination of one diversion berm (L-44) and replacement of the other	44 49 46	113 36 37	5/13/2004	8/13/2005			D	P	0.5					

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
				(L-45) with a single, consolidated structure will ensure fish passage during variable flows.														
	Lemhi	Channel Access	L-7 Wasteway Ditch Fish Screen	The L-7 ditch is located on the Lemhi River, Lemhi County, Idaho. Presently adult salmon and steelhead that are migrating up the Lemhi River are being attracted into the return flow from the L-7 irrigation ditch system. A barrier or screen located near the ditch outlet is needed to prevent fish from entering the ditch system. Deferred pending landowner decision and response; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.														
4342	Upper Salmon	Channel Access	Pole Creek Diversion Enhancement	Pole Creek Diversion is a wooden structure check board to raise the level of the creek for diversion into an irrigation ditch. There is a fish ladder associated with the diversion that local biologists feel is a barrier to fish movement. Deferred pending landowner decision and response; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.	43 54 35	114 45 26	9/10/2008											

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
4239	Upper Salmon	Channel Access	East Fork Salmon River-EF 13 Diversion	This project would construct a permanent diversion structure. Fish passage around the site will be provided. Deferred pending landowner decision and response; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.	44 08 45	114 23 26	3/9/2004				D	P	1					
4247	Upper Salmon	Channel Access	East Fork Salmon River-EF 14 Diversion	EF 14 is an irrigation diversion with a gravel push-up dam. The diversion is unstable and must be re-built several times each year. This project would construct a more permanent rock diversion structure, along with a fish screen that meets NOAA Fisheries criteria. Deferred pending landowner decision and response; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.	44 08 33	114 24 07	2/16/2006				D	P	1.2					

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
4249	Upper Salmon	Channel Access	East Fork Salmon River EF 16 Diversion	EF 16 is an irrigation diversion with a gravel push-up dam. The diversion is unstable and must be rebuilt several times each year. This project would consolidate three diversions by building a more permanent rock diversion structure, building a new fish screen and new headgate structure. Deferred pending landowner decision and response; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.	44 07 31	114 25 39	2/16/2006				D	P	1.9					
4410	Pahsimero i	Channel Access	Big Springs Creek 1 Diversion Enhancement	This project proposes to remove the existing wooden check structure and replace it with a structure that would allow fish passage at all times, while allowing the irrigators to continue diverting water. Scheduled for completion in 2010; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.	44 36 55	113 57 54	7/2/2008				D	P	2.5					
	Pahsimero i	Channel Access	Big Springs #2	Replace gravel push-up structure with a structure passable to migrating fish. Combined with Big Springs #1; completed replacement and additional actions considered by the expert panel for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing														

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
				replacement and additional actions initiated in 2007-2009 that will be considered by expert panels upon completion are listed in table 5.4.														

Mid-Columbia River Steelhead

4296	John Day Middle Fork	Channel Access	Smith Ditch Diversion	Historically a pushup dam was required for the irrigator to divert at the full water right rate. A concrete headgate structure with two slide headgates controls the flow into the ditch. The Grant SWCD anticipates installing a typical lay-flat stanchion dam at this site with fish passage. Construction is targeted for 2008.	44 40 57	118 45 47	10/18/2006	8/1/2008			D	P	1					
4292	John Day Middle Fork	Channel Access	North Ditch Diversion	The diversion has an 18-inch, open-ended CMP pipe for a headgate which is regulated by placing boards and plastic across the opening. The instream part of the structure is composed of large rocks and gravels. The diversion will be replaced by a lay-flat stanchion dam by the GSWCD.	44 35 18	118 26 27	10/11/2006	8/15/2007			D	P	24					
4295	John Day Middle Fork	Channel Access	South Ditch Diversion (MFJDR)	The diversion has an 18-inch, open-ended CMP pipe for a headgate which is regulated by placing boards and plastic across the opening. The instream part of the structure is composed of large rocks. The diversion will be replaced by a lay-flat stanchion dam by the GSWCD.	44 35 53	118 28 10	10/13/2006	8/15/2007			D	F	2					
4293	John Day Middle Fork	Channel Access	Upper Clear Creek Diversion	The diversion has an 18-inch, open-ended CMP pipe for a headgate which is regulated by placing boards and plastic across the opening. The instream part of the structure is composed of large rocks, boards, and plastic supported	44 34 37	118 29 35	10/13/2006	8/15/2007			D	P	14					

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
				by steel fence posts. The diversion will be replaced by a lay-flat stanchion dam by the GSWCD.														
4294	John Day Middle Fork	Channel Access	Vinegar Creek Diversion	The instream part of the structure is composed of 2-4 foot boulders on the permanent part of the structure with smaller rocks, debris, boards, and plastic on the part that is hand built each year. The diversion will be replaced by a modified version of a lay-flat stanchion dam by the GSWCD.	44 37 49	118 29 59	10/13/2006	8/15/2007			D	P	7					
4345	John Day Middle Fork	Channel Access	Boulder Creek Ranch Diversion	The Boulder Creek Ranch Diversion is about 15 miles Northwest of Austin Junction, Oregon, on Big Boulder Creek. Big Boulder Creek is a major tributary to the Middle Fork John Day River. The instream part of the structure is composed of large cobble and traps. Scheduled for completion in 2010.	44 40 26	118 43 01	7/25/2008				D	P	13					
4272	John Day Middle Fork	Channel Complexity	TNC MF John Day Habitat Improvement Project-Phase I	The Nature Conservancy has asked Reclamation for technical assistance in design and planning for a variety of habitat improvements on their Dunstan Homestead Preserve property on the Middle Fork John Day. Phase I of the project will be to determine the feasibility and then the ultimate design and planning for three side channel projects.	44 40 00	118 42 34	5/23/2005	8/15/2007			R							0.64
4368	John Day Middle Fork	Channel Complexity	TNC MF John Day Habitat Improvement Project -Phase II	TNC has asked Reclamation for technical assistance for design of a subset of projects proposed in the Aquatic and Flood Restoration Plan for Dustan Homestead Preserve (Claire Fields, 2004) in order to build partnerships and refine designs, permitting process, construction techniques, construction costs, and monitoring protocols for these restoration elements.	44 40 00	118 42 34	5/20/2005	10/30/2007			R							1.25

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BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
				Each element has future application elsewhere on the Dustan Preserve, as well as elsewhere in the upper Middle Fork John Day watershed.														
4283	John Day Middle Fork	Channel Complexity	Big Boulder Habitat Improvement Project	The Nature Conservancy and the Oregon Department of Fish and Wildlife, acting as advisor to landowner Les Zaitz, have asked Reclamation for technical assistance in design and planning for channel reconfiguration and large wood placements on Big Boulder Creek.	44 40 22	118 42 59	9/6/2005	7/15/2008			R							0.83
4273	John Day Middle Fork	Channel Complexity	Dead Cow Gulch Access and Habitat Improvement Project	Dead Cow Gulch is currently blocked to fish passage near its mouth by two culverts. The channel has also been moved to a different path which further limits access and available habitat. This project would reroute the stream into a more natural alignment and eliminate the culverts as a barrier.	44 36 27	118 32 50	2/14/2005	10/30/2007			R	F	1.5					0.2
4299	John Day Upper Main	Channel Access	Blue Mountain Diversion	The structure consists of concrete wing walls and a concrete sill about 15 feet wide and 80-100 feet long, with a total vertical drop of 6-7 feet at low flow. The GSWCD is proposing to rebuild the channel grade using a series of weirs to raise the water level to the sill of the dam and then create a passageway over or through the flash board part of the dam.	44 24 39	119 07 42	10/11/2006	8/15/2007			D	F	0.5					
4303	John Day Upper Main	Channel Access	Morgan Ditch Diversion (Reynold's Creek)	There is a functioning slide headgate, and the instream part of the structure is composed of large rocks and logs. The diversion will be replaced by a lay-flat stanchion dam by the GSWCD.	44 24 42	118 33 34	10/11/2006	8/15/2007			D	P	0.85					

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BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
4297	John Day Upper Main	Channel Access	Axe Ditch Diversion-Reynolds Creek	There is not a functioning headgate and the instream part of the structure is composed of large rocks, tarps, steel posts, and logs. The diversion will be replaced by a lay-flat stanchion dam by the GSWCD.	44 25 01	118 32 40	1/19/2007	8/15/2007			D	F	11					
4304	John Day Upper Main	Channel Access	Panama Ditch Diversion	The diversion structure is a typical gravel pushup dam which has to be constructed and maintained with heavy equipment. The Grant SWCD anticipates installing a typical lay-flat stanchion dam at this site with fish passage. Construction is targeted for 2008.	44 25 00	119 03 18	10/18/2006	8/15/2008			D	F	7					
4300	John Day Upper Main	Channel Access	Bower's/Lemon's Ditch Diversion	The diversion structure is a typical gravel pushup dam which has to be constructed and maintained with heavy equipment. The Grant SWCD anticipates installing a typical lay-flat stanchion dam at this site with fish passage. Construction is targeted for 2008.	44 24 40	119 07 02	10/18/2006	8/15/2008			D	F	10.5					
4302	John Day Upper Main	Channel Access	Long Box Diversion	The diversion structure is a gravel and large rock pushup dam. The Grant SWCD anticipates installing a typical lay-flat stanchion dam at this site with fish passage. Construction is targeted for 2008.	44 27 18	119 25 33	10/18/2006	8/15/2008			D	P	1					
4298	John Day Upper Main	Channel Access	Beech Creek Crossing	A dam in Beech Creek allows the water in Panama Ditch to flow into and back out of Beech Creek. The Grant SWCD anticipates installing an inverted siphon to carry the Panama Ditch water under Beech Creek and modifications to the dam in Beech Creek to divert Beech Creek water and allow passage. Construction is targeted for 2008.	44 25 32	119 06 35	10/18/2006	8/15/2008			D	F	6					

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BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
4301	John Day Upper Main	Channel Access	Hufstader Pump Station	The pump station will serve lands at the far end of the Eddington Ditch. Eddington Ditch diverts water from the John Day River 4.3 river miles upstream from the site of the proposed pump station. The Grant SWCD anticipates installing a pump station and associated delivery piping. Construction is targeted for 2008.	44 43 24	119 27 37	10/18/2006	4/15/2008			D	P						
4323	John Day Upper Main	Channel Access	Kennedy (UPJD RM 209) and Murray (UPJD RM 210.2) Ditch Diversions	The diversion structures are typical gravel pushup dams which have to be constructed and maintained with heavy equipment. The Grant SWCD anticipates installing two pump stations and associated pipelines to eliminate the instream structures. Scheduled for completion in 2010	44 29 13	119 33 21	1/24/2008		3.8	1.3	D	F	1					
4369	John Day Upper Main	Channel Access	Grant SWCD-Cummings River Ditch Diversion (UPJD RM 222.5)	The Cummings River Diversion project is located 12 miles west of Mt. Vernon on the John Day River at river mile 226. The diversion structure is a typical gravel and large rock pushup dam which has to be constructed and maintain with heavy equipment.	44 26 07	119 18 56	2/4/2008	8/15/2009			D	F	1					
	John Day Upper Main	Channel Access	Diversion, Bridge Creek Diversion	Replace the current dam with a lay-flat stanchion type dam. The new structure would incorporate fish passage meeting current criteria. This project was identified incorrectly in the 2007 FCRPS BA; completed replacement and additional actions for this subbasin for the 2007-2009 implementation cycle are listed in table 5.3; ongoing replacement and additional actions initiated in 2007-2009 and pending completion are listed in table 5.4.														
4314	John Day Upper Main	Channel Access	Grant SWCD-Stout Diversion (UPJD RM 214.3)	The Grant SWCD anticipates installing a typical lay-flat stanchion dam in the side channel and a grade control	44 27 54	119 29 32	3/31/2008	8/15/2009			D	F	1					

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
				structure in the main channel.														
4350	John Day Upper Main	Channel Access	Oliver Ditch # 47 (UPJD RM 253.3) Diversion (combined with Oliver #48 in 2008)	The Oliver Ditch # 47 Diversion project is located 4.5 miles east of John Day on the John Day River at river mile 253.3. Scheduled for completion in 2010.	44 25 25	118 51 50	7/28/2008				D	F	1					
4351	John Day Upper Main	Channel Access	Oliver Ditch # 48 (UPJD RM 253.2) Diversion (combined with Oliver # 47 in 2008)	The Oliver Ditch # 48 Diversion project is located 4.5 miles east of John Day on the John Day River at river mile 253.2. Scheduled for completion in 2010.	44 25 19	118 51 50	7/28/2008				D	P	0.1					
4353	John Day Upper Main	Channel Access	Oliver Ditch # 49 Diversion (UPJD RM 252.3)	The Oliver Ditch # 49 Diversion project is located four miles east of John Day on the John Day River at river mile 252.3. Preliminary review of the water rights indicates this diversion has a water right for diversion of 2.3 cfs. This structure is a full barrier at low flow to all life stages but at higher flows, when the dam is partially washed out, it is partially a barrier. Scheduled for completion in 2010.	44 25 14	118 52 36	7/28/2008				D	F	1					
4349	John Day Upper Main	Channel Access	Eddington Ditch Diversion (Page Pump Station-UPJD RM 231.7)	The Eddington Ditch Diversion project is located 6 miles west of Mt. Vernon on the John Day River at river mile 233. The diversion structure is a typical gravel pushup dam which has to be constructed and maintain with heavy equipment. One partially functioning slide headgate controls flow into the ditch.	44 25 44	119 12 44	7/28/2008	8/15/2009			D	F	1					
4305	John Day Upper Main	Channel Complexity	CTWSRO Reach 8 Habitat Design	The work will involve design of features to improve habitat. The river is partially constrained by levees resulting in a fairly straight, wide, and shallow cross section. The proposed project is to remove the levees and strategically place large wood to increase channel complexity, narrow the channel,	44 27 33	118 41 52	10/13/2006	8/1/2007			R							0.15

Attachment 3 - Table 5.1. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5a Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
				and stimulate natural increases in sinuosity.														

Attachment 3 - Table 5.2. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5b Tributary Habitat Actions Performed with Reclamation Technical Assistance

Table 5.2 contains metric and metric values for actions completed in 2007-2009 and ongoing actions that will continue into 2010 and later with technical assistance provided by Reclamation. Ongoing actions are those with no date in the "Action End Date" column. Some of the actions in table 5.2 supplement some of the BPA-funded projects listed in Attachment 3, Tables 1 to 4. Actions in Table 5.2 were not considered in NOAA Fisheries' 2008 FCRPS BiOp jeopardy analysis and provide benefits above and beyond those denoted in the 2007 FCRPS BA. Benefits for actions completed by 2009 were considered by expert panels. The following abbreviations apply. Streamflow: streamflow protected under state law. Stream length: stream length affected. Type (channel access): D, diversion; C, culvert. Type (channel complexity): R, restore main channel function; S, side channel reconnection. Extent of barrier: P, partial (upstream access seasonably inaccessible prior to action); F, full (absolutely no passage prior to action). Access: miles made accessible to next upstream full or partial barrier. Stream miles affected by screen: miles between action location and next diversion. Complexity miles: length of instream habitat treated after action completed.

Attachment 3 - Table 5.2. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5b Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected		
Upper Columbia River Steelhead and Spring Chinook Salmon																			
4341	Entiat	Channel Access	Stormy Creek Culvert Replacement	This project will address two barrier culverts on Stormy Creek. Scheduled for completion in the 2010-2012 Implementation cycle.			6/15/2008												
4194	Entiat	Channel Access	Knapp-Wham/Hannon Detweiler Ditch Consolidation (Phases 1&3)	Consolidation of two ditches with diversions that constitute barriers with one diversion reconfigured to better pass ESA-listed anadromous species.	47 41 11	120 18 55	10/31/2003	10/15/2007			D	P							
4339	Entiat	Channel Complexity	Below the Bridge (Moody Canyon) ELJ (Bridge to Bridge Restoration, Phase 4)	Complexity Project in the lower Entiat River.	47 39 51	120 15 48	4/1/2007	1/15/2009			R								0.4
4357	Entiat	Channel Complexity	Entiat National Fish Hatchery (ENFH) Habitat Channel (Bridge to Bridge Restoration, Phase 5)	The USFWS and Reclamation are collaborating on a multi-faceted project at the ENFH that incorporates existing infrastructure into a new project to provide off-channel spawning and rearing habitat for ESA-listed species. Conceptual designs initiated in 2008; continued progress pending landowner decision and response.	47 41 51	120 19 18	1/14/2008				S								0.3
4399	Entiat	Channel Complexity	Tyee Restoration Project (Stillwater complexity project)	Alterations at the Tyee Restoration Project include the construction of levees with rip-rap. Scheduled for completion in the 2010-2012 Implementation cycle.			8/13/2009				R								0.47

Attachment 3 - Table 5.2. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5b Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
4326	Entiat	Channel Complexity	Keystone Canyon Project	This project consists of an existing push-up diversion structure replacement and habitat improvement/floodplain connectivity features. The goal of this project is to meet the BiOp Metric requirement for adding habitat complexity to the Entiat River to improve spawning and rearing habitat quantity and quality for native endangered fish species. The habitat need identified in the subbasin plan and by local biologists for the lower Entiat River is deep, slow-water habitat (pools), localized pockets of depth, velocity and substrate diversity leading to increased habitat diversity, and retention of spawning size gravels on the channel edges for steelhead (Water Resource Inventory Area (WRIA) 46 Management Plan). The objective of the work under this scope of work is to provide an evaluation of a selected alternative through an Alternative Evaluation Report (AER) for floodplain reconnection and/or in-channel restoration structures, which will provide sufficient analysis results to complete a construction funding proposal. This project was completed by the Yakama Nation as part of their Fish Accord. Reclamation provided survey data.	47 39 54	120 16 05	1/29/2007	2009			S							0.2
4329	Entiat	Channel Complexity	Harrison Side Channel (Bridge to Bridge Restoration, Phases 2 and 3)	The purpose of this project is to connect secondary channels at about three locations at varying elevations along the main channel.	47 40 12	120 17 29	6/26/2007	11/15/2008			S							0.5

Attachment 3 - Table 5.2. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5b Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
4340	Entiat	Channel Complexity	Milne Diversion Project (Bridge to Bridge and Beyond Project # 1)	This is the first project in the lower Entiat River resulting from TSC's Reach Study. It will be multiple instream habitat structures including one that also replaces an irrigation push-up dam.	47 39 57	120 16 36	8/25/2006	10/15/2007			R							0.3
4284	Wenatchee	Channel Access	Three Mission Creek Projects: Miller, Turnbull and Jurgins	Miller and Turnbull: Repair and installation of low-stage log weirs to re-establish plunge pool habitat and thalweg and increase complexity. Jurgins: Install a low-stage rock weir with large woody debris to provide plunge pool habitat, control bank erosion, increase complexity, and re-establish thalweg.	47 27 26	120 29 27	6/26/2006	10/15/2006			D	P	10	2				
4217	Wenatchee	Channel Access	Gagnon Diversion Project	This project will address a partial barrier to listed salmonids in the Wenatchee River near Cashmere, Washington, by eliminating the need for annual maintenance and periodic re-excavation of a side channel used as a source for irrigation withdrawal.	47 32 01	120 31 47	9/9/2004	9/15/2006			D	P	10					
4255	Wenatchee	Channel Access	Alder Creek Culvert Passage Project # 1 (formerly Alder Creek #2 Culvert Passage Project)	This culvert is a barrier to fish passage because of the outfall velocities associated with it. This project will consist of a detailed analysis of the culvert using WDFW protocol and replacing it as necessary.	47 51 09	120 39 36	2/17/2006	8/23/2007			C	P	4.3					
4308	Wenatchee	Channel Access	WPP Alder Creek 2 & 3	This project proposes to replace a culvert on Alder Creek that doesn't meet current WDFW and NOAA Fisheries passage criteria. It carries a paved county road over Alder Creek and will be analyzed as both a retrofit and replacement.	47 50 56	120 39 27	1/18/2007	7/23/2007			C	P	1					

Attachment 3 - Table 5.2. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5b Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
4306	Wenatchee	Channel Access	WPP Beaver Creek 3 Culvert Replacements	This project will address three barrier culverts on Beaver Creek by replacing the existing culverts with modular bridges with a span of less than 30 feet.	47 49 24	120 37 22	1/19/2007	10/15/2008			C	P	2					
4258	Wenatchee	Channel Complexity	Wenatchee Watershed Fluvial Habitat Restoration Plan (WWFHRP)- Nason Ck TA&Ras	The deliverable of this RFP will be a Wenatchee Watershed Fluvial Habitat Restoration Plan Scope of Work. A draft of the plan will be required by May 31, 2007.			9/26/2005	7/15/2008										
4265	Wenatchee	Channel Complexity	Gagnon CMZ Project	This project proposes to create (excavate) a backchannel feature (along the floodplain of the Gagnon CMZ Site) to link the existing pond to the main stream, thus providing high flow salmonid refuge habitat.	47 32 00	120 30 19	11/14/2005	11/15/2007			S							0.2
4193	Wenatchee	Channel Access, Channel Complexity, Entrainment	Jones Shotwell Ditch	This project would bring the Jones Shotwell Ditch Company's fish screen into compliance with NOAA Fisheries criteria.	47 29 37	120 25 25	2/2/2004	2/15/2008			D	P	100	1				0.2
4331	Methow	Channel Access	Redshirt Project	This project will address an irrigation-related barrier on Beaver Creek by constructing a rock weir structure. The expert panel evaluated this project only for Upper Columbia steelhead	48 23 01	120 02 58	7/20/2006	10/26/2007			D	P	4					
4330	Methow	Channel Access	Poorman Cutoff Road Culvert	Replacement of culvert. The expert panel evaluated this project only for Upper Columbia steelhead	48 21 50	120 20 19	2/15/2008	10/15/2009			C	F	3					
4325	Methow	Channel Complexity	Big Valley Reach Assessment	This study will address cumulative project impacts, river stability, and habitat assessment for a six- to 10-mile reach of the mainstem Methow River.			10/2/2006	3/31/2008										
4333	Methow	Channel Complexity	Big Valley Light Heath	This project will provide better connection and access from the Methow River to a spring creek and pond on the Heath property.	48 30 28	120 15 33	1/19/2007	8/29/2008			S							1

Attachment 3 - Table 5.2. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5b Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
	Methow	Channel Complexity	Lower Eightmile Floodplain Restoration	Project deferred pending landowner decision and response.														
	Methow	Channel Complexity	Patterson Pond Reconnect	Project deferred pending landowner decision and response.														
4262	Methow	Channel Complexity	Rockview-Fender Mills Phase I Side Channel Reconnection	The objective of this side channel restoration project is to provide approximately 1/4 mile of off-channel rearing habitat and restore floodplain connectivity.	48 32 34	120 19 20	5/12/2005	5/15/2009			S							0.25

Mid-Columbia River Steelhead

4319	John Day Middle Fork	Channel Complexity	CTWSRO Oxbow Reach Assessment (MCA)	Channel Reconfiguration. The ultimate goal of this reach assessment is a diagnostic investigation of the main processes that transport and store water, wood, and sediment at the habitat reach scale of the river system; and an integration of hydrologic, hydraulic, geomorphic, and biologic conditions of the system to establish an environmental baseline through a matrix of pathways of effects and indicators of those effects. The proximate goal is to formulate a multiple working hypothesis for guiding restoration and protection activities at the reach scale based on an established baseline environmental conditions quantified through channel conditions and dynamics indicators and the reach sequencing of restoration and preservation project areas. Scheduled for completion in the 2010			9/5/2007											
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Attachment 3 - Table 5.2. Status of Completed and Ongoing 2007 FCRPS Biological Assessment Table 5b Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	Stream Miles Affected	
4318	John Day Middle Fork	Channel Complexity	CTWSRO (MCA) Middle Fork Forrest Reach Assessment	Channel Reconfiguration. The ultimate goal of this reach assessment is a diagnostic investigation of the main processes that transport and store water, wood, and sediment at the habitat reach scale of the river system; and an integration of hydrologic, hydraulic, geomorphic, and biologic conditions of the system to establish an environmental baseline through a matrix of pathways of effects and indicators of those effects. The proximate goal is to formulate a multiple working hypothesis for guiding restoration and protection activities at the reach scale based on an established baseline of environmental conditions quantified through channel conditions and dynamics indicators and the reach sequencing of restoration and preservation project areas. This assessment effort will serve as a foundation for subsequent project design packages. Scheduled for completion in the 2010.			9/18/2007											
4419	John Day	Channel Complexity	CTWRSO (MCA Study) Middle Fork and Upper John Day River Tributary Assessments	Tributary assessments provide baseline physical and biological conditions for approximately 23 river miles (RM) of the Middle Fork John Day River and three miles of the Upper John Day River, located in Grant County, Oregon. The purpose of this report is to develop restoration and protection strategies based on a sound assessment of channel processes.			5/12/2006	5/16/2008										

Attachment 3 - Table 5.3. Status of Completed 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

Table 5.3 contains metric and metric values for actions completed in 2007-2009 with technical assistance provided by Reclamation in addition to those identified in Tables 5a or 5b of the 2007 FCRPS BA. Some of the actions in table 5.3 may supplement or complement some of the BPA-funded projects listed in Attachment 3, Tables 1 to 4. The following abbreviations apply. Streamflow: streamflow protected under state law. Stream length: stream length affected. Type (channel access): D, diversion; C, culvert. Type (channel complexity): R, restore main channel function; S, side channel reconnection. Extent of barrier: P, partial (upstream access seasonably inaccessible prior to action); F, full (absolutely no passage prior to action). Access: miles made accessible to next upstream full or partial barrier. Stream miles affected by screen: miles between action location and next diversion. Complexity miles: length of instream habitat treated after action completed.

Attachment 3 - Table 5.3. Status of Completed 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
Upper Columbia River Steelhead and Spring Chinook Salmon																		
4285	Entiat	Channel Complexity	Bridge to Bridge Phase 1	Entails installation of instream structures, adjustments to canal intake to change water velocities to improve off-channel fish habitat and maintain existing irrigation canal, installation of a water-tight slide gate on irrigation intake pipe, fish improvements to the irrigation canal outfall, and riparian planting.	47 40 09	120 17 05	6/27/2006	11/15/2007			R							0.2
4313	Entiat	Channel Complexity	Entiat River Tributary Assessment	Channel Geomorphology	47 44 09	120 21 46	5/29/2008	1/15/2009										
4009	Methow	Channel Access	Fulton Diversion	The diversion structure is adequate, but the fishway will be redesigned and replaced with a more effective version.	48 29 13	120 10 54	11/1/2002	2/23/2007			D	P	30.1					
4270	Methow	Channel Complexity	Methow Subbasin Geomorphic Assessment	This investigation will provide data on the fluvial geomorphologic characteristics of the Methow Subbasin.			5/12/2005	9/30/2007										

Attachment 3 - Table 5.3. Status of Completed 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
4395	Methow	Channel Complexity	Operskalski Complexity	The Operskalski property includes roughly 1000 feet of Beaver Creek that is being severely impacted by livestock. The channel segment is low in large wood and has a severely eroded right bank due to loss of riparian vegetation from cattle trampling and over-grazing. The left bank is in good condition but is beginning to deteriorate. A stream habitat assessment concludes that there is good spawning habitat potential for steelhead. The objective of the project is to improve habitat complexity in this segment by adding large wood complexes, replanting the cattle-damaged stream bank and protecting the project by constructing about 1000 feet of fencing. An off-channel water source for the cattle may also be needed.	48 22 56	120 02 58	12/19/2008	10/15/2009			S							0.25
4162	Methow	Streamflow	Chewuch Basin Water Acquisition	Compensation for curtailed irrigation water uses from the Chewuch River allows limited irrigation to continue while meeting NOAA Fisheries "ESA flows" in the Chewuch River in dry years from RM 7.9 to 0.7.	48 34 13	120 10 28	10/1/2006	9/30/2008	16.1	7.2	A							
4257	Wenatchee	Channel Access	Mill Creek Culvert Passage Project	This project will consist of either adding passage to the existing culvert or replacing it.	47 30 39	120 37 56	2/23/2006	5/1/2007			C	F	2.3					
4379	Wenatchee	Channel Access	Two Mission Creek Projects-2007	Two projects to improve passage in Mission Creek	47 29 18	120 29 05	6/26/2007	10/15/2007			C	P		2				
4256	Wenatchee	Channel Access	Chumstick(Watkins) Driveway Culvert Replacement.	This project is a continuation of work that has been done cooperatively by NRCS and the Chelan County Conservation District. It involves the replacement of up to 15 culverts in order to improve fish passage on Chumstick Creek near	47 42 39	120 38 24	2/23/2006	9/30/2008			C	P	22.5					

Attachment 3 - Table 5.3. Status of Completed 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	
				Leavenworth, Washington.													
4380	Wenatchee	Channel Access	Two Mission Creek Projects-2008	Two projects to improve passage in Mission Creek	47 29 07	120 28 55	6/26/2008	10/15/2008			C	P					
4393	Wenatchee	Channel Access	Chumstick Culverts Replacement 2009 (17)	These projects will address up to 17 passage barrier culverts in the Chumstick Drainage. Reclamation will be providing construction oversight as per the Jeff McLaughlin negotiated construction schedule.	47 41 00	120 38 22	4/16/2009	9/30/2009			C	P	7				
4315	Wenatchee	Channel Complexity	CMZ 12/13	Channel Reconfiguration	47 32 01	120 32 55	2/26/2008	10/15/2008			S						0.4
4316	Wenatchee	Channel Complexity	CMZ 11	Channel Reconfiguration	47 32 04	120 31 25	2/26/2008	10/15/2008			S						0.3
4418	Wenatchee	Channel Complexity	Cashmere Ponds Project	The objectives of the Cashmere Pond Off-Channel Habitat Project are: 1) prevent fish stranding in the pond, and 2) address the primary habitat limiting factor for juvenile steelhead and spring Chinook salmon on the lower Wenatchee River due to the lack of off-channel habitat.	47 31 27	120 28 26	9/9/2008	10/15/2009			S						0.4

Snake River Steelhead and Spring/Summer Chinook Salmon

4327	Grande Ronde	Channel Access	Orodell Diversion Fish Passage Enhancement Project	This project proposes to replace an existing irrigation diversion structure that is currently being used by two ditch companies.	45 20 31	118 06 59	9/24/2007	9/24/2009			D	P	50				
4343	Lemhi	Channel Access	Lemhi River- L-44 Diversion Repair	This project was constructed on the upper Lemhi River in fall 2005. Shortly after completion of the new diversion structure, IDFG raised concerns about the ability of juvenile salmonids to negotiate upstream over the structure.	44 49 46	113 36 37	2/28/2005	9/28/2007			D	P					

Attachment 3 - Table 5.3. Status of Completed 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
4417	Lemhi	Channel Access	Big Timber Flow Enhancement	Water rights from BT-2 diversion were transferred to a new POD in the Lemhi River. Instead, BT-2 water remains in the creek channel to the Lemhi River to a location where the water is diverted out of the river and pumped back up to the historic place of use.	44 42 05	113 22 56	5/30/2003	8/15/2009	2	4.5	D	P	0.75					
4378	Lemhi	Channel Access	Upper Lemhi River Flow Enhancement / Eighteenmile Creek Reconnect	In September 2008, a formerly disconnected Lemhi River tributary was seasonally re-connected to the mainstem Lemhi River by placement of an earthen berm that now blocks diversion of Eighteenmile Creek flow into an irrigation conveyance canal referred to locally as the "Whitefish Ditch." The barrier to fish passage in Canyon Creek also was removed. Eighteenmile Creek stream flow and spring flow water rights that were formerly conveyed to irrigated lands via the Whitefish Ditch were re-directed to now flow into the Lemhi River. Spring flow water rights out of Eighteenmile Creek were transferred by IDWR to a withdrawal location out of the Lemhi River at the L-62 point of diversion. Whitefish Ditch irrigation water is now conveyed via the Lemhi River down to L-62 where the transferred Whitefish Ditch water rights are now diverted/pumped onto agricultural land. This project was funded by the Pacific Coast Salmon Recovery Fund which is provided by the NOAA Fisheries and is administered in Idaho by the Office of Species Conservation. Additional cost share funding was provided by the Natural Resources	44 41 26	113 21 43	10/16/2006	9/15/2009	12	3	D	P	166	1	3.5		3	

Attachment 3 - Table 5.3. Status of Completed 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
				Conservation Service.														
4386	Lemhi	Channel Access	Lemhi River, Little Springs Creek Restoration	Purposed habitat improvements include utilizing a combination of various bioengineering treatments intended to return the stream to a more natural and stable condition. Treatments will include channel/bank reshaping and alignment, placement of engineered log jams, diversion replacement, and planting of riparian vegetation.	44 45 45	113 30 34	2/12/2008	11/16/2009			D	P	2					1.25
4233	Lemhi	Streamflow	Lemhi Basin 06 PHABSIM Studies (TSC)	Objectives of this study are to identify a range of stream flow needed to sustain various life-history stages of salmon, steelhead, and bull trout in Hawley and Eighteenmile Creeks in the upper Lemhi River basin. Results can be used by state and federal regulatory agencies to identify stream flow targets which Reclamation can help meet by implementing other Habitat Program measures.			10/1/2005	7/17/2007										
4237	Little Salmon	Channel Access	Squaw Creek Culvert	A culvert passage barrier is located on the Squaw Creek Road (no. 517). This road is maintained by the Idaho County Road Department. Pre-design should investigate the feasibility of replacing the culvert or modifying it to allow for fish passage. Modification could include backwatering the culvert and installing baffles to reduce velocities in the culvert.	45 25 06	116 21 34	6/1/2005	9/21/2007			C	P	4.5					

Attachment 3 - Table 5.3. Status of Completed 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
Mid-Columbia River Steelhead																		
4317	John Day Middle Fork	Channel Complexity	Middle Fork Rock Replacement Projects	Channel Reconfiguration	44 35 43	118 31 28	9/17/2007	7/25/2008			R							1.55
4278	John Day Upper Main	Channel Access	GSWCD-North Diversion, Reynolds Creek	Grant SWCD is proposing to build a lay-flat stanchion type dam to replace the current dam. The new structure would incorporate fish passage meeting current criteria.	44 24 40	118 34 04	10/7/2005	8/15/2007			D	F	0.2					
4347	John Day Upper Main	Channel Access	Fry-Ingle Diversion	The Fry-Ingle Diversion is about six miles west of John Day, Oregon, on the John Day River near river mile 241.5. Large boulders appear to stay in place year around with additional gravels pushed up to complete the dam at lower flows. This structure is a full barrier at low flows to all life stages but, at higher flows when the dam is partially washed out, it is a partial barrier.	44 24 54	119 04 05	7/28/2008	8/15/2009			D	F	1					
4271	John Day Upper Main	Channel Complexity	CTWSRO John Day Habitat Improvement Project-Phase 1	The John Day Basin office of the Confederated Tribes of Warm Spring Reservation of Oregon has asked Reclamation for technical assistance to restore instream habitat for anadromous and resident fisheries on the Oxbow and Forest conservation areas on the Middle Fork and Forrest Conservation Area on the upper John Day River.	44 27 31	118 41 31	6/15/2005	7/15/2007			R							5.75
4320	John Day Upper Main	Channel Complexity	Forrest-Emmel Habitat Improvement Program	Channel Reconfiguration	44 27 12	118 40 18	8/27/2007	8/15/2008			R							1.15

Attachment 3 - Table 5.3. Status of Completed 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	
4198	John Day Upper Main	Streamflow	Pauls Upper John Day Water Lease	Landowner located East of Dayville, Oregon, has water rights to divert water from the upper John Day River to irrigate a total of 86.9 acres under two separate certificates. He has expressed an interest in no longer farming the majority of his irrigable land and is interested in leasing the water rights to the land currently under sprinkler irrigation, for a period of five to 10 years. This sprinkler-irrigated land amounts to about 54 acres. The result would be a lease of diversions rights of 1.36 cfs with priority dates of 1902, 1906, and 1973.	44 27 18	119 25 28	10/1/2006	9/30/2008	1.36	195							

Attachment 3 - Table 5.4. Status of Ongoing 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

Table 5.3 contains metric and metric values for ongoing actions initiated in 2007-2009 that will continue into 2010 and later with technical assistance provided by Reclamation in addition to those identified in Tables 5a or 5b of the 2007 FCRPS BA. Some of the actions in table 5.3 may supplement or complement some of the BPA-funded projects listed in Attachment 3, Tables 1 to 4. The following abbreviations apply. Streamflow: streamflow protected under state law. Stream length: stream length affected. Type (channel access): D, diversion; C, culvert. Type (channel complexity): R, restore main channel function; S, side channel reconnection. Extent of barrier: P, partial (upstream access seasonably inaccessible prior to action); F, full (absolutely no passage prior to action). Access: miles made accessible to next upstream full or partial barrier. Stream miles affected by screen: miles between action location and next diversion. Complexity miles: length of instream habitat treated after action completed.

Attachment 3 - Table 5.4. Status of Ongoing 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)	
Upper Columbia River Steelhead and Spring Chinook Salmon																	
4392	Entiat	Channel Complexity	Bridge to Bridge Phase III	The goal of this project is to meet the needs identified in the subbasin plan and by local biologists for the lower Entiat River: deep, slow-water habitat (pools), localized pockets of depth, velocity, and substrate diversity leading to increased habitat diversity.			4/16/2009				R						0.35
4321	Entiat	Streamflow	Roaring Creek Diversion	Barriers	47 40 53	120 25 17	8/27/2008				C						
4396	Methow	Channel Access	Heath Middle Pond Fish Passage	Replace two impassable culverts with bridges to restore fish access in and out of the middle pond on the Heath property in the Big Valley Reach.	48 30 23	120 15 32	1/23/2009				C	F	0.5				
4401	Methow	Entrainment	Barclay Fish Return Gates	The Barclay fish return is controlled by two headgates that are inoperable. This project would replace the gates, allowing improved diversion intake canal operations. The ability to manage flows throughout the year through the intake canal, upstream of the fish screens, will save hundreds of juvenile spring Chinook, steelhead, and lamprey from stranding. This project is an urgent priority because of the high level of mortality of listed fish in the Barclay intake when the ditch is turned off in the fall. This project is the first phase of future Barclay diversion projects that will benefit habitat and protect fish.			11/2/2009							1			0.5

Attachment 3 - Table 5.4. Status of Ongoing 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
4420	Methow	Streamflow	Little Chewuch Streamflow Improvement	The objective of the Little Chewuch Streamflow Improvement Project is to increase flows by 0.5 cfs to enhance critical habitat for T&E Species in the Chewuch River. Scheduled for completion in 2010.	42 25 22	120 07 55	10/15/2009											
4402	Methow	Streamflow	Little Barkley Pipe	Provide design, design support, and construction observation for the conversion of the Little Barkley open canal to an enclosed pipe. Will result in a 0.5 cfs permanent reduction in diversion from the Barkley point of diversion on the Methow River. Scheduled for completion in 2010	48 25 50	120 09 02	11/11/2009											
4394	Wenatchee	Channel Access	Mission Creek Reconfiguration Projects (2)	These projects will address various in-stream habitat elements in Mission Creek.			4/16/2009				D	P	10		1			0.1
4390	Wenatchee	Channel Access	Upper Chumstick Barriers	This project will remove the remaining five-six barriers on Chumstick Creek, allowing passage primarily for ESA-listed steelhead.	47 42 46	120 38 36	12/15/2009				C	F	2					0
4287	Wenatchee	Channel Complexity	Nason Creek MCA Project (Oxbow Reconnection)	This project will reconnect partial flows and full fish access to 4600 linear feet of oxbow habitat to the mainstem Nason Creek.	47 46 20	120 43 17	7/21/2006				S							0.9
4336	Wenatchee	Channel Complexity	Nason 1- Ray Rock Springs	Complexity Projects in Nason Creek.	47 47 13	120 51 03	2/11/2008											
4338	Wenatchee	Entrainment	Icicle ID Screen Replacement and Barrier Removal	This project will replace the currently undersized rotary screen (Schille , WDFW Screen Shop, 2006) with one that meets current criteria.			8/18/2006											
4361	Wenatchee	Streamflow	Peshastin Pipeline	The purpose of this project is to replace two miles of leaking irrigation ditch with 36-inch and 10-inch pipe resulting in 1.2 cfs of water to be returned at the point of diversion. This water will greatly increase the water in the fish bypass at Peshatin Diversion. The water saved will be documented and put in trust for fish passage.	47 31 45	120 37 13	4/2/2007											

Attachment 3 - Table 5.4. Status of Ongoing 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
Snake River Steelhead and Spring/Summer Chinook Salmon																		
4404	Lemhi	Channel Access	L-45 Diversion Replacement	The L-45 Diversion is a typical push-up diversion weir that spans the Lemhi River and requires annual maintenance with heavy equipment in the river. Local IDFG and NMFS biologists have expressed concern that the weir is a fish barrier for migrating anadromous and resident fish. This project would replace the existing rock diversion with another diversion designed to deliver irrigation water and provide improved fish passage in this reach of the river.	44 49 55	113 36 62	2/14/2008				D	P	2					
4403	Lemhi	Channel Access	L-47 Diversion	The Lemhi River, L-47 Diversion consists of a rock irrigation weir that once spanned the Lemhi River. Over time, high river flows have washed portions of the weir away. To divert a sufficient quantity of river water into the irrigation ditch, annual maintenance is required to temporarily repair and lengthen the existing weir.	44 78 11	113 54 88	8/4/2008				D	P	1					
4387	Lemhi	Channel Access	Wimpey Creek-2 Diversion Replacement	The Wimpey Creek No. 2, LWC-02 Diversion check structure has been determined to be a complete barrier to fish passage. IDFG recently installed a fish screen on the ditch and requested design assistance for a replacement irrigation diversion structure.	45 05 56	113 42 55	2/11/2009				D	F	0.5					
4324	Pahsimeroi	Channel Access	Big springs Creek 7-8 Diversion Enhancement	This project proposes to remove the existing wooden check structure and replace it with a structure that would allow fish passage at all times	44 56 28	113 88 87	8/1/2007				D							

Attachment 3 - Table 5.4. Status of Ongoing 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
4400	Pahsimeroi	Channel Access	Big Springs Creek 3 Diversion Enhancement	Salmon and steelhead utilize Big Springs Creek for spawning and rearing habitat, as do bull trout. Big Springs 3 Diversion is a wooden structure that utilizes horizontal boards to check up the water in the creek for diversion into the ditch, which restricts fish passage. This project proposes to remove the existing wooden check structure and replace it with a structure that would allow fish passage at all times, while still allowing the irrigators to continue diverting water.	44 36 69	113 56 24	7/2/2008				D	P	2.5					
4389	Pahsimeroi	Channel Access	Hooper Lane Culverts	Hooper Lane cuts across the Pahsimeroi Valley approximately XX miles upstream from the mouth. There are three culvert crossings on the road that are currently undersized and can restrict fish passage at certain flows. These culverts carry Big Springs Creek, Little Pahsimeroi River, and Pahsimeroi River flows. There is an additional culvert crossing nearby, where Sulfur Creek crosses the Pahsimeroi Back Road, that is also undersized. Replacing these culverts will improve passage to the upstream ends of these drainages. The project will be coordinated through the Custer Soil and Water Conservation District (CSWCD) and the Custer County Road Department. BPA funding will be pursued to construct the new crossings. Construction is planned for July/August of 2011. Completion of the Big Springs culvert will improve access to approximately 0.8 miles of Big Springs Creek, up to the Big Springs XX Diversion. Replacing the Little Pahsimeroi	44 32 55	113 54 57	12/23/2009				D	P	6.6					

Attachment 3 - Table 5.4. Status of Ongoing 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
				culvert will improve access to the upper 2.5 miles of the creek. Replacing the Pahsimeroi River culvert will improve access to 1.7 miles of the river, up to the P-13 Diversion. And replacing the Sulfur Creek culvert will improve access to 2.3 miles of Sulfur Creek. Steelhead, Chinook salmon, and Bull Trout all utilize these streams to spawn and/or for rearing habitat.														
4238	Upper Salmon	Channel Access	East Fork 15 Fish Diversion	Reclamation will design a NOAA Fisheries criteria fish screen for the head of the EF-15 ditch. This design will be constructed by the Idaho Fish & Game screen shop.	44 07 50	114 25 05	3/9/2004											
4240	Upper Salmon	Streamflow	East Fork Salmon River- EF 13 Headgate	A new headgate structure will be installed to allow the irrigator to control the diversion.	44 08 45	114 23 26	3/9/2004				C							
4246	Upper Salmon	Streamflow	East Fork Salmon River- EF 14 Headgate	EF 14 is an irrigation diversion with a gravel push-up dam, located approximately 18 miles from the mouth of the East Fork of the Salmon River. This project would construct a more permanent rock diversion structure. A new headgate may be part of the project, depending on the final design.	44 08 33	114 24 07	2/16/2006				C							
4248	Upper Salmon	Streamflow	East Fork Salmon River- EF 16 Headgate	EF 16 is an irrigation diversion with a gravel push-up dam, located approximately 20 miles from the mouth of the East Fork of the Salmon River. The diversion is unstable and must be re-built several times each year. This project would consolidate three diversions and build a new headgate structure that will allow the irrigator to control the flows into the irrigation ditch.	44 07 31	114 25 39	2/16/2006				C							

Attachment 3 - Table 5.4. Status of Ongoing 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
Mid-Columbia River Steelhead																		
4411	John Day Middle Fork	Channel Access	Austin Ranch Diversion	The Austin Ranch Diversion is about 17 miles northeast of Prairie City, Oregon, and diverts from the Middle Fork John Day. This high quality water is home to spawning and rearing steelhead and Chinook. The diversion is located on the Malheur National Forest, and a letter has been received from the District Ranger specifying that the diversion is a private diversion and the Forest Service has no operation or maintenance responsibilities for the diversion.	44 36 14	118 28 50	10/9/2009				D	F	15					
4412	John Day Middle Fork	Channel Access	Lower Clear Creek Diversion	The Lower Clear Creek Diversion is about 15 miles northeast of Prairie City, Oregon. Clear Creek is a major tributary to the upper part of the Middle Fork John Day. This high quality water is home to spawning and rearing steelhead and Chinook as well as bull trout. Preliminary review of the water rights indicates this diversion has a water right for diversion of 1.59 cfs. This diversion is a partial barrier at lower flows and depends on year-to-year construction of the dam.	44 35 04	118 30 01	10/9/2009				D	P	7					
4348	John Day Upper Main	Channel Access	Cummings Creek Pump	Cummings Creek is a small tributary entering the upper John Day River near river mile 224. This project facilitates the transfer of a point of diversion from Cummings Creek to the John Day River.	44 66 47	119 22 19	6/28/2008				D	P	3.5					
4398	John Day Upper Main	Channel Access	Panama Pipeline Appraisal Study	The Panama Ditch is about 5.7 miles long and diverts from the John Day River mid-way between the towns of John Day and Mt. Vernon, Oregon. Ditch users are interested in piping the ditch, which could	44 25 00	119 03 18	12/18/2008				D	P	0					

Attachment 3 - Table 5.4. Status of Ongoing 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
				improve efficiency and have large fisheries benefits in Beech Creek. This study is considered Phase I and will provide analysis of alternatives and information available for the Ditch Company to seek construction funding sources. If funding is identified and there is strong support for the selected alternative, Phase II would be to further refine and finalize designs and construct the project.														
4405	John Day Upper Main	Channel Access	Lower Deardorf Diversion	The Lower Deardorf Creek Diversion is about 10 miles southeast of Prairie City, Oregon. Deardorf Creek is a large tributary to the upper John Day River near the headwaters. This high-quality water is home to spawning and rearing steelhead, bull trout, and rearing Chinook salmon. In recent years, Chinook spawning has also been documented. The instream part of the structure is composed of large cobble, gravel, and tarps. This diversion is a full-barrier at lower flows and depends on year-to-year construction of the dam.	44 23 47	118 33 44	8/21/2009				D	F	0.1					
4406	John Day Upper Main	Channel Access	Upper Deardorf Diversion	The Upper Deardorf Creek Diversion is about 10 miles southeast of Prairie City, Oregon. Deardorf Creek is a large tributary to the upper John Day River near the headwaters. This high-quality water is home to spawning and rearing steelhead, bull trout, and rearing Chinook salmon. In recent years, Chinook spawning has also been documented. The instream part of the structure is composed of large cobble, gravel, and tarps. This	44 23 48	118 33 43	8/21/2009				D	F	6.5					

Attachment 3 - Table 5.4. Status of Ongoing 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
				diversion is a full barrier at lower flows and depends on year-to-year construction of the dam.														
4407	John Day Upper Main	Channel Access	East Fork Canyon Creek Diversion	The East Fork Canyon Creek Diversion is about 15 miles south of John Day, Oregon. East Fork Canyon Creek is a small tributary to Canyon Creek which is a major tributary to the upper John Day River. This diversion is one of two diversions on the East Fork. The instream part of the structure is composed of large cobble and tarps. Preliminary review of the water rights indicates this diversion has a water right for diversion of .74 cfs. This diversion is a full barrier at lower flows and depends on year-to-year construction of the dam.	44 14 47	118 54 39	8/21/2009				D	P	1.3					
4408	John Day Upper Main	Channel Access	Dovenberg Pump Station	The Dovenberg Pump Station is 10 miles west of Mt. Vernon, Oregon, on the upper John Day River. The existing pump station requires a gravel push-up dam across the river to maintain a pool deep enough for the pump intake fish screens to function correctly. Preliminary review of the water rights indicates this diversion has a water right for diversion of 6.4 cfs. The push-up dam is a partial barrier depending on year-to-year timing and construction of the dam. The Grant SWCD anticipates stabilizing the pool for the pump intakes by installing a permanent weir or modified lay-flat stanchion dam.	44 26 15	119 20 01	8/31/2009				D	P	1					

Attachment 3 - Table 5.4. Status of Ongoing 2007 FCRPS Biological Assessment Table 5a and 5b Replacement and Additional Tributary Habitat Actions Performed with Reclamation Technical Assistance

BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
4409	John Day Upper Main	Channel Access	Beech Creek Moore Diversion	The Beech Creek Diversion is at the southwest edge of the city of Mt. Vernon, Oregon, and is the lowermost diversion on Beech Creek. The instream part of the structure is composed of large rock and tarps. The Grant SWCD anticipates moving the point of diversion downstream to the John Day River and installing a pump station for this landowner. Along with the pump station, a measurement structure would be constructed in Beech Creek to measure the flow available to the water right.	44 24 49	119 06 52	8/31/2009				D	P	2					
4413	John Day Upper Main	Channel Access	Dad's Creek #1 Siphon	The Dads Creek #1 Siphon project is located about two miles east of Prairie City, Oregon. This small tributary is known to have a remnant population of spawning and rearing steelhead. About a quarter mile from the mouth, the stream is intercepted by two irrigation ditches with no passage or screening provided. The ditch crossings are made by blocking Dads Creek with push-up dams or tarps.	44 27 22	118 40 11	10/7/2009				D	F	0.5				6.5	
4414	John Day Upper Main	Channel Access	Dad's Creek #2 Winegar Diversion	The Dads Creek #2 Diversion project is located about 2.5 miles east of Prairie City, Oregon. This small tributary is known to have a remnant population of spawning and rearing steelhead. This diversion is one of four planned for replacement as part of a full watershed restoration approach.	44 27 44	118 39 57	10/7/2009				D	F	0.1					
4415	John Day Upper Main	Channel Access	Dad's Creek #3 CTWSRO Diversion	The Dads Creek #3 Diversion project is located about 2.5 miles east of Prairie City, Oregon. This small tributary is known to have a remnant population of spawning and rearing steelhead. This	44 27 50	118 39 55	10/7/2009				D	F	1					

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									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
				diversion is the second of four planned for replacement as part of a full watershed restoration approach.														
4416	John Day Upper Main	Channel Complexity	UJD Forrest Property RM 264.7 Enhancement	The Confederated Tribes of Warm Spring Reservation of Oregon owns the Forrest Conservation Area on the upper John Day River. Past management activities have simplified the river system by blocking off side channels, straightening sections, and hardening bends with rip rap. This project would add complexity back into the system with addition of a few large wood structures, opening access to historic flood plains and side channels, and removing riprap on a .3 mile reach of the river.	44 27 09	118 40 32	5/18/2009				R							0.3
4388	John Day Upper Main	Channel Complexity	Blanchette Habitat Project	The Blanchette property is seven miles west of Mt. Vernon, Oregon, and is bisected by the Upper John Day River. ODFW biologists have indicated that salmonids move to this section of river for overwintering, but there is currently a lack of pool and cover habitat in any season. Also, two sections of river bank on the property are actively eroding causing losses in bank vegetation and fine sediment issues downstream. The Grant SWCD will assist the landowner in using constructed log jam or rootwad structure placements to add pool and cover needed to improve fish habitat conditions and reduce sediment loads associated with bank erosion on the mainstem John Day River. Vegetative plantings and	44 25 39	119 15 10	12/15/2009				R							0.28

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BiOp ID	Subbasin	Limiting Factor	Project Title	Short Description	Latitude	Longitude	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment			Complexity (Miles)	
									Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Access (Miles)	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (A-F/yr)		Stream Miles Affected
				fencing will be used along with the woody materials to rehabilitate the banks and improve fish habitat.														

Attachment 3 - Table 6. Actions Identified for 2007-2009 Implementation in FCRPS BA, Attachment B.2.2-2, Table 6: Lower Columbia ESUs/DPSs

ESU/Population	Project #	Project Title & Short Description	2007-09 Action Description	FY07-09 Progress
Lower Columbia River coho/Lower Gorge tributaries Lower Columbia River steelhead (summer & winter)/Hood Lower Columbia River Spring Chinook/Hood	199802100	<u>Hood River Fish Habitat</u> Implement habitat improvement actions in the Hood River subbasin that will support wild fish and supplementation efforts of the Hood River Production Program (HRPP).	Increase Instream Habitat Complexity	Installed pipeline to conserve instream water and improve 7 stream miles, placed large woody debris and improved 1.9 stream miles of complexity; removed existing water intake structure & installed diversion channel to improve access to 3 miles fish habitat; decommissioned 0.27 miles of riparian road; installed flat plate fish screen; replaced culvert in Evans Creek.
			Install Fence	
			Plant Vegetation	
			Install Fish Passage Structure	
			Install Fish Screen	
			Remove/Modify Dam	
			Install Pipeline	
			Plant Vegetation	
			Realign, Connect, and/or Create Channel	
Lower Columbia River steelhead (summer & winter)/Wind	200707700	<u>Hemlock Dam Removal</u> This project will remove a 26-ft high dam on Trout Creek, a tributary to the Wind River. Trout Creek provides spawning and rearing habitat for LCR steelhead. The project will restore unimpeded fish passage and improve water quality and habitat.	Plant Vegetation	Hemlock Dam removed and restored access to 15 miles fish habitat, recontoured 0.5 miles of Trout Creek through reservoir reach; began site rehabilitation.
			Realign, Connect, and/or Create Channel	
			Remove/Modify Dam	

Attachment 4: Tributary Habitat Reports by the Bureau of Reclamation

Report Name	Internet address	Date
<u>Washington</u>		
<u>Entiat</u>		
Entiat Tributary Assessment	http://www.usbr.gov/pn/programs/fcrps/thp/ucao/entiat/tribassmt/index.html	Jan-09
Preston Reach Assessment	http://www.usbr.gov/pn/programs/fcrps/thp/ucao/entiat/prestonreach/index.html	Jul-09
Stormy Reach Assessment	http://www.usbr.gov/pn/programs/fcrps/thp/ucao/entiat/stormyreach/stormy-assmt.pdf	Nov-09
<u>Methow</u>		
Completion Report: Wolf Creek Diversion Dam	http://www.usbr.gov/pn/programs/fcrps/thp/ucao/methow/completion/wolfcreekdiversion.pdf	Mar-09
Methow Subbasin Geomorphic Assessment	http://www.usbr.gov/pn/programs/fcrps/thp/ucao/methow/geomorphicassessment/index.html	May-08
Memorandum: Fulton Diversion Dam Investigations	http://www.usbr.gov/pn/programs/fcrps/thp/ucao/methow/fulton/geo-investigation-091807.pdf	Jul-06
<u>Wenatchee</u>		
Kahler Reach Assessment	http://www.usbr.gov/pn/programs/fcrps/thp/ucao/wenatchee/kahler/index.html	Mar-09
Upper White Pine Reach Assessment	http://www.usbr.gov/pn/programs/fcrps/thp/ucao/wenatchee/upperwhitepine/index.html	Mar-09
Lower White Pine Reach Assessment	http://www.usbr.gov/pn/programs/fcrps/thp/ucao/wenatchee/lowerwhitepine/index.html	Feb-09
Nason Creek Tributary Assessment . Technical Appendices	http://www.usbr.gov/pn/programs/fcrps/thp/ucao/wenatchee/nasoncreek/tributary-assmt.pdf http://www.usbr.gov/pn/programs/fcrps/thp/ucao/wenatchee/nasoncreek/app.pdf	Jul-08
<u>Oregon</u>		
<u>General Documents</u>		
Middle Fork and Upper Fork John Day River Tributary Assessments	http://www.usbr.gov/pn/programs/fcrps/thp/lcao/tributary-assmt/index.html	May-08
<u>Middle Fork John Day</u>		

ATTORNEY-CLIENT PRIVILEGED DOCUMENT * ATTORNEY WORK PRODUCT
 DELIBERATIVE PROCESS PRIVILEGE APPLIES

Report Name	Internet address	Date
Rock Removal and Large Woody Debris Installation –Beaver to Ragged Specifications and Drawings	http://www.usbr.gov/pn/programs/fcrps/thp/lcao/middlefork/drawings/index.html	Jun-08
Geomorphology and Hydraulic Model Analysis of the Oxbow Conservation Area	http://www.usbr.gov/pn/programs/fcrps/thp/lcao/oxbow/index.html	Jun-09
<u>Idaho</u>		
<u>Lemhi</u>		
Completion Report: Lemhi River L-3 Wasteway Diversion Fish Barrier	http://www.usbr.gov/pn/programs/fcrps/thp/srao/lemhi/completion/L-3.pdf	Feb-08
Completion Report: Lemhi River L-9 Diversion Replacement	http://www.usbr.gov/pn/programs/fcrps/thp/srao/lemhi/completion/L9.pdf	Dec-07
Completion Report: Lemhi River L-13 Irrigation Fish Screen Replacement	http://www.usbr.gov/pn/programs/fcrps/thp/srao/lemhi/completion/L-13.pdf	Oct-07
Completion Report: Lemhi River L-44 Irrigation Diversion Replacement	http://www.usbr.gov/pn/programs/fcrps/thp/srao/lemhi/completion/L44.pdf	Oct-07
Completion Report: Lemhi River L-35A Fish Screen and Headgate Replacement	http://www.usbr.gov/pn/programs/fcrps/thp/srao/lemhi/completion/L35A.pdf	Oct-07
Flow Characterization Study: Instream Flow Assessment, Hawley Creek and Eighteenmile Creek, Idaho	http://www.usbr.gov/pn/programs/fcrps/thp/srao/lemhi/phabsim/2006/hawley-flowassessment.pdf	Jun-07
Completion Report: L-3 and L-3A Irrigation Diversion Replacement	http://www.usbr.gov/pn/programs/fcrps/thp/srao/lemhi/completion/L3-L3A.pdf	May-07
Memorandum: L3AO River Control Structure Survey, April 13, 2007, Columbia/Upper Salmon Recovery Project, Lemhi River Subbasin, Idaho	http://www.usbr.gov/pn/programs/fcrps/thp/srao/lemhi/L3AO/L3AO-inspection.pdf	Apr-07
<u>Little Salmon</u>		
Completion Report: Squaw Creek Culvert Fish Passage Improvement	http://www.usbr.gov/pn/programs/fcrps/thp/srao/littlesalmon/completion/sqawcrk-	Feb-08

Report Name	Internet address	Date
Project	culvert.pdf	
<u>Upper Salmon</u>		
Completion Report: East Fork Salmon River EF/10 and EF/11 Irrigation Diversion Consolidation Project	http://www.usbr.gov/pn/programs/fcrps/thp/srao/uppersalmon/completion/ef1011/ef10-11.pdf	Jul-07
Completion Report: Garden Creek and Gini Canal Crossing Project	http://www.usbr.gov/pn/programs/fcrps/thp/srao/uppersalmon/completion/ginicanal/gini-garden.pdf	Jul-07
Memorandum: S11-12 Canal Consolidation, Diversion Berm Underwater Inspection, 04/13/2007, Upper Salmon River Water Optimization Project, Idaho	http://www.usbr.gov/pn/programs/fcrps/thp/srao/uppersalmon/completion/s1314/inspection/S11-12-inspection.pdf	Jun-07

Attachment 5: Action Agency 2009 Estuary Habitat Projects

Project	Description	Stream-Type* or Ocean-Type**	River Reach	Status
Perkins Creek (BPA)	This project 1) restored and enhanced passage at the mouth of Perkins Creek; 2) improved passage .27 mile upstream of the outlet by properly siting, sizing and replacing an under-sized culvert; and 3) enhanced off-channel rearing areas for juvenile salmonids at the project site.	Stream-Type and Ocean-Type	Reach A	Completed
Columbia Slough (BPA)	This project improved in-stream, riparian and floodplain wetland habitat with an emphasis on rearing and refuge habitat for juvenile salmonids by installing large woody debris, planting native vegetation and erosion control.	Ocean-Type	Reach F	Completed
Gray's River Restoration (BPA)	Five instream structures, engineered log jams, were placed to help restore hydraulic complexity, restore balance of sediment transport and storage, improve width-to-depth ratio and pool/riffle sequences, increase localized hydraulic connectivity between main and side channels, and increase opportunities for large woody debris recruitment to improve channel roughness and cover for migrating adult and juvenile salmonids.	Stream-Type and Ocean-Type	Reach B	Completed
Sandy River (BPA)	The Sandy River Project is part of a larger 1,500-acre long-term restoration project. The focus of this phase of the overall project is to plant native vegetation on 5 acres of riparian areas and on 1.2 riparian stream miles; plant 35 acres of riparian shrubs; and maintain native vegetation on 45 acres. Sandy River Delta historically was a wooded, riparian wetland with components of ponds, sloughs, bottomland woodland, oak woodland, prairie, and low- and high-elevation floodplain. Restoration of historical landscape components is a primary goal for this land, with current focus on restoration of riparian forest and wetlands.	Stream-Type and Ocean-Type	Reach G	2009 phase completed (multi-phase project).

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Project	Description	Stream-Type* or Ocean-Type**	River Reach	Status
Elochoman Acquisition (BPA)	Permanently protect 200 acres of important intertidal wetland habitat located in the floodplain of the Columbia and Elochoman Rivers. The property is off of Highway 4 on the mouth of Elochoman River and the Elochoman Slough, ¾ mile north of Cathlamet in Wahkiakum County, Washington. It is adjacent to the 5,600-acre Julia Butler Hansen Refuge for Columbia White-tail Deer on the Columbia River.	Stream-Type and Ocean-Type	Reach B	Acquisition completed. Under the Corps 536 program a Feasibility Study will be undertaken.
Sandy River Riparian Plantings (Corps)	Final riparian planting of 205 acres on the Sandy River Delta, Sundial Island.	Stream-Type and Ocean-Type	Reach G	Completed
Julia Butler Hanson (COE, USF&WS)	First year of construction, this project replaced 1 old top hinged tide gate with more hydraulically efficient side hinged tide gates (providing improved juvenile fish passage) and installed 2 new side hinged tide gates on blind sloughs restoring a muted tidal signal and juvenile salmon passage for shallow water habitat. Project restores 87 acres of slough/wetland habitat and 210 acres of riparian forest habitat.	Stream-Type and Ocean-Type	Reach D	Phase 1 completed in 2009 (Phase 2 will be completed in 2010)
Pile Structure Program (BPA and Corps)	In 2009, the Action Agencies continued to collaborate with LCREP and others toward planning a pilot pile removal project. Several piles were identified and planning efforts underway for possible removal under the pilot pile removal project. NOAA Fisheries' Northwest Region reviewed and provided comments on the final draft Pile Program Plan.	Stream-Type and Ocean-Type	NA	Ongoing (multi-year process)

Project	Description	Stream-Type* or Ocean-Type**	River Reach	Status
Project Assessment: Deer Island (BPA)	<p>Habitat restoration assessment on Deer Island for future restoration actions for up to 4,500 acres. This project will be implemented in multiple phases. Topographic data collection, juvenile salmonid use and passage through this area, project inventory, and site prep for planting.</p> <p>The overall long-term restoration project on Deer Island seeks to partially restore historical estuarine habitat on the 4,500-acre Deer Island complex. The slough historically was a natural backwater of the Columbia River that provided salmonid rearing and foraging opportunities. Loss of connectivity has reduced access opportunities by salmonids and led to degraded water quality conditions in the form of high temperatures, low dissolved oxygen, and excessive channel aggradation.</p>	NA	Reach E	Assessment in progress (multi-year process)
Project Design: Tryon Creek (BPA)	This project provided final designs for a restoration project on Tryon Creek. The project will enhance critical fish habitat at Tryon Creek confluence, with channel improvements, invasive plant removal and native plantings. The project area is 4.5 acres of publicly-owned land.	Stream-Type and Ocean-Type	Reach F	Design Completed
Project Design: Fort Columbia Design (BPA)	<p>Quality Assurance/Quality Control (QA/QC) and final modeling and design for a culvert replacement project. The QA/QC will reviewed the assumptions, data collection methods, and modeling to determine if any crucial information was missed or any further investigation were warranted. Final design and modeling are necessary to proceed with construction and to finalize a construction timeline.</p> <p>This tidal connection project will be implemented in 2010 and will replace a small culvert in very poor condition with a large box culvert under Hwy 101 which will initially open up 12 acres of wetlands to salt water intrusion. Over time the fresh water wetland will revert back to a salt water wetland which will benefit salmon.</p>	Stream-Type and Ocean-Type	Reach A	Design Completed

Project	Description	Stream-Type* or Ocean-Type**	River Reach	Status
Design: Oaks Bottom (BPA)	Design included development of final project design drawings and design report, design review by civil, structural and geotechnical engineers, and collection of additional data (if needed).	Stream-Type and Ocean-Type	Reach F	Design Completed
Sandy River Dam Removal (COE, USFS)	Began Feasibility Study for Section 536 ecosystem restoration of the east distributary and dam removal.	Stream-Type and Ocean-Type	Reach G	Continue work on Feasibility Study
Abernathy Creek (COE, BPA, WDF&W)	Initiated Feasibility Study for Section 536 ecosystem restoration to add complexity to the lower creek and reconnect with local wet lands.	Stream-Type and Ocean-Type	Reach C	Feasibility Study initiated
WREC (COE)	Completed Design Documents to construct a channel to provide tidal reconnection of approximately 50 acres of wetland to the Columbia River. Implementation in 2010.	Stream-Type and Ocean-Type	Reach G	Design completed

* Stream-type life histories include Snake River sockeye salmon, Lower Columbia River coho salmon, Upper Columbia River steelhead, Snake River steelhead, Lower Columbia River steelhead, Middle Columbia River steelhead, Upper Willamette River steelhead, Upper Columbia River spring Chinook salmon and Snake River spring/summer Chinook salmon.

** Ocean-type life histories include Columbia River chum, Snake River Fall Chinook, Upper Willamette Chinook, and Lower Columbia fall Chinook.