



**Endangered Species Act  
Federal Columbia River Power System**



**2013  
Comprehensive Evaluation  
Section 3**

**Project Tables for  
Reasonable and Prudent Alternative  
(RPA) Action Implementation**

*Endangered Species Act  
Federal Columbia River Power System  
2013 Comprehensive Evaluation: Section 3*

**PROJECT TABLES FOR REASONABLE AND PRUDENT ALTERNATIVE  
(RPA) ACTION IMPLEMENTATION**

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## Attachment 1: AMIP, Hatchery Safety Net & Conservation Programs and RME Projects Completed or in Progress 2008-2012

### RPA Association Status:

Removed: After further evaluation of the scope of the project and the final deliverables produced, it was determined that a project was not necessary to meet the needs of the RPA; and subsequently the RPA association for the project was removed.

Continued: Work is ongoing in a project to support the needs of the RPA.

Completed: Work was completed fulfilling the need of the RPA.

Integrated: A BPA project contract number was closed and the work was integrated into another existing project number.

Planned: Work for a specific RPA identified in the Implementation Plan was delayed in a project, and has been planned for the specified future date.

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
Hydro	Develop and Implement a Kelt Management Plan	33	3	2007-401-00	Kelt Reconditioning and Reproductive Success Evaluation Research	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-401-00">http://www.cbfish.org/Project.mvc/Display/2007-401-00</a>
Hydro	Develop and Implement a Kelt Management Plan	33	4	2007-401-00	Kelt Reconditioning and Reproductive Success Evaluation Research	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-401-00">http://www.cbfish.org/Project.mvc/Display/2007-401-00</a>
Hatchery	Ensure Funded Hatchery Programs are not Impeding Recovery	40	All	2008-712-00	Implement Hatchery Reform Action	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-712-00">http://www.cbfish.org/Project.mvc/Display/2008-712-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	41	1	2010-076-00	Characterizing migration and survival for juvenile Snake River sock-eye salmon between the upper Salmon River basin and Lower Granite Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-076-00">http://www.cbfish.org/Project.mvc/Display/2010-076-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
Hatchery	Execute on Safety Net and Conservation Objectives	41	All	1996-043-00	Johnson Creek Artificial Propagation Enhancement	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-043-00">http://www.cbfish.org/Project.mvc/Display/1996-043-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	41	All	1997-038-00	Listed Stock Chinook Salmon Gamete Preservation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-038-00">http://www.cbfish.org/Project.mvc/Display/1997-038-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	41	All	2000-019-00	Tucannon River Spring Chinook Captive Brood	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2000-019-00">http://www.cbfish.org/Project.mvc/Display/2000-019-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	41	All	2007-402-00	Snake River Sockeye Captive Propagation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-402-00">http://www.cbfish.org/Project.mvc/Display/2007-402-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	41	All	2007-403-00	Spring Chinook Captive Propagation-Idaho	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-403-00">http://www.cbfish.org/Project.mvc/Display/2007-403-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	41	All	2007-404-00	Spring Chinook Captive Propagation-Oregon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-404-00">http://www.cbfish.org/Project.mvc/Display/2007-404-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	42	6	1988-053-01	Northeast Oregon Hatchery Master Plan	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-01">http://www.cbfish.org/Project.mvc/Display/1988-053-01</a>
Hatchery	Execute on Safety Net and Conservation Objectives	42	9	2001-053-00	Reintroduction of Chum in Duncan Creek	Integrated	<a href="http://www.cbfish.org/Project.mvc/Display/2001-053-00">http://www.cbfish.org/Project.mvc/Display/2001-053-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	42	9	2008-710-00	Development of an Integrated strategy for Chum Salmon Restoration in the tributaries below Bonneville Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-710-00">http://www.cbfish.org/Project.mvc/Display/2008-710-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
Hatchery	Execute on Safety Net and Conservation Objectives	42	10	2001-053-00	Reintroduction of Chum in Duncan Creek	Integrated	<a href="http://www.cbfish.org/Project.mvc/Display/2001-053-00">http://www.cbfish.org/Project.mvc/Display/2001-053-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	42	10	2008-710-00	Development of an Integrated strategy for Chum Salmon Restoration in the tributaries below Bonneville Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-710-00">http://www.cbfish.org/Project.mvc/Display/2008-710-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	2003-023-00	Chief Joseph Hatchery Program	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-023-00">http://www.cbfish.org/Project.mvc/Display/2003-023-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	2007-212-00	Okanogan Basin Locally Adapted Steelhead Broodstock Step 1 and 2 (Casimer Bar)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-212-00">http://www.cbfish.org/Project.mvc/Display/2007-212-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	2007-401-00	Kelt Reconditioning and Reproductive Success Evaluation Research	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-401-00">http://www.cbfish.org/Project.mvc/Display/2007-401-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	2007-402-00	Snake River Sockeye Captive Propagation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-402-00">http://www.cbfish.org/Project.mvc/Display/2007-402-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	2008-458-00	Steelhead Kelt Reconditioning	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-458-00">http://www.cbfish.org/Project.mvc/Display/2008-458-00</a>
Hatchery	Execute on Safety Net and Conservation Objectives	42	All	2009-001-00	Expanded Multi-Species Acclimation in the Wenatchee/Methow Basins	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2009-001-00">http://www.cbfish.org/Project.mvc/Display/2009-001-00</a>
Predation Management	Implement Piscivorous Predation Control Measures	43	All	1990-077-00	Development of Systemwide Predator Control	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-077-00">http://www.cbfish.org/Project.mvc/Display/1990-077-00</a>



**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
Predation Management	Implement Piscivorous Predation Control Measures	44	All	2008-718-00	Non-Native Fish Hot Spots	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-718-00">http://www.cbfish.org/Project.mvc/Display/2008-718-00</a>
Predation Management	Implement Piscivorous Predation Control Measures	44	All	2008-719-00	Research Non-Indigenous Actions	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-719-00">http://www.cbfish.org/Project.mvc/Display/2008-719-00</a>
Predation Management	Implement Avian Predation Control Measures	45	All	1997-024-00	Avian Predation on Juvenile Salm- onids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-024-00">http://www.cbfish.org/Project.mvc/Display/1997-024-00</a>
Predation Management	Implement Avian Predation Control Measures	46	All	1997-024-00	Avian Predation on Juvenile Salm- onids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-024-00">http://www.cbfish.org/Project.mvc/Display/1997-024-00</a>
Predation Management	Implement Avian Predation Control Measures	47	All	1997-024-00	Avian Predation on Juvenile Salm- onids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-024-00">http://www.cbfish.org/Project.mvc/Display/1997-024-00</a>
Predation Management	Implement Marine Mammal Control Measures	49	All	2008-004-00	Sea Lion Non-Lethal Hazing	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-004-00">http://www.cbfish.org/Project.mvc/Display/2008-004-00</a>
RME	Monitor Fish Populations	50	1	1990-080-00	Columbia Basin Pit-Tag Information	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-080-00">http://www.cbfish.org/Project.mvc/Display/1990-080-00</a>
RME	Monitor Fish Populations	50	1	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-080-00">http://www.cbfish.org/Project.mvc/Display/1990-080-00</a>
RME	Monitor Fish Populations	50	2	2001-003-00	Adult PIT Detector Installation	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Monitor Fish Populations	50	2	2005-002-00	Lower Granite Dam Adult Trap Operations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2005-002-00">http://www.cbfish.org/Project.mvc/Display/2005-002-00</a>
RME	Monitor Fish Populations	50	3	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Monitor Fish Populations	50	3	1989-107-00	Statistical Support For Salmon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Monitor Fish Populations	50	3	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
RME	Monitor Fish Populations	50	3	1991-029-00	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-029-00">http://www.cbfish.org/Project.mvc/Display/1991-029-00</a>
RME	Monitor Fish Populations	50	3	1994-033-00	Fish Passage Center	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1994-033-00">http://www.cbfish.org/Project.mvc/Display/1994-033-00</a>
RME	Monitor Fish Populations	50	3	1996-020-00	Comparative Survival Study (CSS)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-020-00">http://www.cbfish.org/Project.mvc/Display/1996-020-00</a>
RME	Monitor Fish Populations	50	3	2007-083-00	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-083-00">http://www.cbfish.org/Project.mvc/Display/2007-083-00</a>
RME	Monitor Fish Populations	50	3	2007-132-00	NEOH Monitoring & Evaluation Implementation (Formerly a component of 198805301)	Planned	<a href="http://www.cbfish.org/Project.mvc/Display/2007-132-00">http://www.cbfish.org/Project.mvc/Display/2007-132-00</a>
RME	Monitor Fish Populations	50	3	2008-311-00	Natural Production Management and Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-311-00">http://www.cbfish.org/Project.mvc/Display/2008-311-00</a>
RME	Monitor Fish Populations	50	4	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Monitor Fish Populations	50	4	1991-073-00	Idaho Natural Production Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-073-00">http://www.cbfish.org/Project.mvc/Display/1991-073-00</a>
RME	Monitor Fish Populations	50	4	1998-016-00	Escapement and Productivity of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-016-00">http://www.cbfish.org/Project.mvc/Display/1998-016-00</a>
RME	Monitor Fish Populations	50	4	2002-060-00	Nez Perce Harvest Monitoring on Snake and Clearwater Rivers	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-060-00">http://www.cbfish.org/Project.mvc/Display/2002-060-00</a>
RME	Monitor Fish Populations	50	4	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>



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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Monitor Fish Populations	50	4	2009-002-00	Status and Trend Annual Reporting	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2009-002-00">http://www.cbfish.org/Project.mvc/Display/2009-002-00</a>
RME	Monitor Fish Populations	50	4	2010-034-00	Upper Columbia Spring Chinook and Steelhead Juvenile and Adult Abundance, Productivity and Spatial Structure Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-034-00">http://www.cbfish.org/Project.mvc/Display/2010-034-00</a>
RME	Monitor Fish Populations	50	4	2010-036-00	Lower Columbia Coded Wire Tag (CWT) Recovery Project	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-036-00">http://www.cbfish.org/Project.mvc/Display/2010-036-00</a>
RME	Monitor Fish Populations	50	5	1982-013-01	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-01">http://www.cbfish.org/Project.mvc/Display/1982-013-01</a>
RME	Monitor Fish Populations	50	5	1983-350-03	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Monitor Fish Populations	50	5	1989-098-00	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Monitor Fish Populations	50	5	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
RME	Monitor Fish Populations	50	5	1991-073-00	Idaho Natural Production Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-073-00">http://www.cbfish.org/Project.mvc/Display/1991-073-00</a>
RME	Monitor Fish Populations	50	5	1993-037-01	Technical Assistance of Life Cycle Model	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1993-037-01">http://www.cbfish.org/Project.mvc/Display/1993-037-01</a>
RME	Monitor Fish Populations	50	5	1996-020-00	Comparative Survival Study (CSS)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1996-020-00">http://www.cbfish.org/Project.mvc/Display/1996-020-00</a>
RME	Monitor Fish Populations	50	5	2002-060-00	Nez Perce Harvest Monitoring on Snake and Clearwater Rivers	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2002-060-00">http://www.cbfish.org/Project.mvc/Display/2002-060-00</a>
RME	Monitor Fish Populations	50	5	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Monitor Fish Populations	50	5	2005-002-00	Lower Granite Dam Adult Trap Operations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2005-002-00">http://www.cbfish.org/Project.mvc/Display/2005-002-00</a>
RME	Monitor Fish Populations	50	5	2009-005-00	Influence of Environment and Landscape on Salmonid Genetics	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2009-005-00">http://www.cbfish.org/Project.mvc/Display/2009-005-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Monitor Fish Populations	50	5	2010-026-00	Chinook and Steelhead Genotyping for Genetic Stock Identification (GSI) at Lower Granite Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-026-00">http://www.cbfish.org/Project.mvc/Display/2010-026-00</a>
RME	Monitor Fish Populations	50	5	2010-031-00	Snake River Chinook and Steelhead Parental Based Tagging	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-031-00">http://www.cbfish.org/Project.mvc/Display/2010-031-00</a>
RME	Monitor Fish Populations	50	5	2010-038-00	Lolo Creek Permanent Weir Construction	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-038-00">http://www.cbfish.org/Project.mvc/Display/2010-038-00</a>
RME	Monitor Fish Populations	50	5	2010-057-00	B-run steelhead supplementation effectiveness research	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-038-00">http://www.cbfish.org/Project.mvc/Display/2010-038-00</a>
RME	Monitor Fish Populations	50	6	1982-013-01	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-01">http://www.cbfish.org/Project.mvc/Display/1982-013-01</a>
RME	Monitor Fish Populations	50	6	1982-013-02	Coded Wire Tag-Oregon Department of Fish and Wildlife (ODFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-02">http://www.cbfish.org/Project.mvc/Display/1982-013-02</a>
RME	Monitor Fish Populations	50	6	1982-013-03	Coded Wire Tag-US Fish and Wildlife Service (USFWS)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-03">http://www.cbfish.org/Project.mvc/Display/1982-013-03</a>
RME	Monitor Fish Populations	50	6	1982-013-04	Coded Wire Tag-Washington Department of Fish and Wildlife (WDFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-04">http://www.cbfish.org/Project.mvc/Display/1982-013-04</a>
RME	Monitor Fish Populations	50	6	1983-350-03	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1983-350-03">http://www.cbfish.org/Project.mvc/Display/1983-350-03</a>
RME	Monitor Fish Populations	50	6	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Monitor Fish Populations	50	6	1988-022-00	Umatilla Fish Passage Operations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-022-00">http://www.cbfish.org/Project.mvc/Display/1988-022-00</a>
RME	Monitor Fish Populations	50	6	1988-053-03	Hood River Production Monitoring and Evaluation (M&E)-Warm Springs	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-03">http://www.cbfish.org/Project.mvc/Display/1988-053-03</a>
RME	Monitor Fish Populations	50	6	1988-053-04	Hood River Production Monitor and Evaluation (M&E)-Oregon Department of Fish and Wildlife (ODFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-04">http://www.cbfish.org/Project.mvc/Display/1988-053-04</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Monitor Fish Populations	50	6	1988-053-08	Hood River Production Operations and Maintenance (O&M) and Powderdale	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-08">http://www.cbfish.org/Project.mvc/Display/1988-053-08</a>
RME	Monitor Fish Populations	50	6	1989-024-01	Evaluate Umatilla Juvenile Salmonid Outmigration	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-024-01">http://www.cbfish.org/Project.mvc/Display/1989-024-01</a>
RME	Monitor Fish Populations	50	6	1989-098-00	Salmon Studies in Idaho Rivers- Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Monitor Fish Populations	50	6	1990-005-00	Umatilla Hatchery Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-005-00">http://www.cbfish.org/Project.mvc/Display/1990-005-00</a>
RME	Monitor Fish Populations	50	6	1990-005-01	Umatilla Basin Natural Production Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-005-01">http://www.cbfish.org/Project.mvc/Display/1990-005-01</a>
RME	Monitor Fish Populations	50	6	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
RME	Monitor Fish Populations	50	6	1991-028-00	Pit Tagging Wild Chinook	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-028-00">http://www.cbfish.org/Project.mvc/Display/1991-028-00</a>
RME	Monitor Fish Populations	50	6	1991-073-00	Idaho Natural Production Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-073-00">http://www.cbfish.org/Project.mvc/Display/1991-073-00</a>
RME	Monitor Fish Populations	50	6	1992-026-04	Grande Ronde Early Life History of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1992-026-04">http://www.cbfish.org/Project.mvc/Display/1992-026-04</a>
RME	Monitor Fish Populations	50	6	1992-026-04	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1992-026-04">http://www.cbfish.org/Project.mvc/Display/1992-026-04</a>
RME	Monitor Fish Populations	50	6	1995-063-25	Yakima River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-25">http://www.cbfish.org/Project.mvc/Display/1995-063-25</a>
RME	Monitor Fish Populations	50	6	1995-063-35	Klickitat River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-35">http://www.cbfish.org/Project.mvc/Display/1995-063-35</a>
RME	Monitor Fish Populations	50	6	1996-019-00	Data Access in Real Time (DART)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-019-00">http://www.cbfish.org/Project.mvc/Display/1996-019-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Monitor Fish Populations	50	6	1996-020-00	Comparative Survival Study (CSS)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1996-020-00">http://www.cbfish.org/Project.mvc/Display/1996-020-00</a>
RME	Monitor Fish Populations	50	6	1996-035-01	Yakama Reservation Watershed Project	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-035-01">http://www.cbfish.org/Project.mvc/Display/1996-035-01</a>
RME	Monitor Fish Populations	50	6	1996-043-00	Johnson Creek Artificial Propagation Enhancement	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-043-00">http://www.cbfish.org/Project.mvc/Display/1996-043-00</a>
RME	Monitor Fish Populations	50	6	1997-015-01	Imnaha River Smolt Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-015-01">http://www.cbfish.org/Project.mvc/Display/1997-015-01</a>
RME	Monitor Fish Populations	50	6	1997-030-00	Chinook Salmon Adult Abundance Monitoring	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1997-030-00">http://www.cbfish.org/Project.mvc/Display/1997-030-00</a>
RME	Monitor Fish Populations	50	6	1998-007-02	Grande Ronde Supplementation Operations and Maintenance (O&M) and Monitoring and Evaluation (M&E) on Lostine River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-02">http://www.cbfish.org/Project.mvc/Display/1998-007-02</a>
RME	Monitor Fish Populations	50	6	1998-007-03	Grande Ronde Supplementation O&M on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-03">http://www.cbfish.org/Project.mvc/Display/1998-007-03</a>
RME	Monitor Fish Populations	50	6	1998-010-04	Monitor and Evaluate (M&E) Performance of Juvenile Snake River Fall Chinook Salmon from Fall Chinook Acclimation Project	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-03">http://www.cbfish.org/Project.mvc/Display/1998-007-03</a>
RME	Monitor Fish Populations	50	6	1998-016-00	Escapement and Productivity of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-016-00">http://www.cbfish.org/Project.mvc/Display/1998-016-00</a>
RME	Monitor Fish Populations	50	6	1998-019-00	Wind River Watershed	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-019-00">http://www.cbfish.org/Project.mvc/Display/1998-019-00</a>
RME	Monitor Fish Populations	50	6	1999-003-01	Evaluate Spawning of Fall Chinook and Chum Salmon Just Below the Four Lowermost Mainstem Dams	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1999-003-01">http://www.cbfish.org/Project.mvc/Display/1999-003-01</a>
RME	Monitor Fish Populations	50	6	1999-020-00	Analyze Persistence and Dynamics in Chinook Redds	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1999-020-00">http://www.cbfish.org/Project.mvc/Display/1999-020-00</a>
RME	Monitor Fish Populations	50	6	2002-032-00	SNAKE RIVER FALL CHINOOK SALMON LIFE HISTORY INVESTIGATIONS	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-032-00">http://www.cbfish.org/Project.mvc/Display/2002-032-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Monitor Fish Populations	50	6	2002-053-00	Asotin Creek Salmon Population Assessment	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-053-00">http://www.cbfish.org/Project.mvc/Display/2002-053-00</a>
RME	Monitor Fish Populations	50	6	2002-060-00	Nez Perce Harvest Monitoring on Snake and Clearwater Rivers	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-060-00">http://www.cbfish.org/Project.mvc/Display/2002-060-00</a>
RME	Monitor Fish Populations	50	6	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Monitor Fish Populations	50	6	2003-022-00	Okanogan Basin Monitoring & Evaluation Program (OBMEP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-022-00">http://www.cbfish.org/Project.mvc/Display/2003-022-00</a>
RME	Monitor Fish Populations	50	6	2007-083-00	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-083-00">http://www.cbfish.org/Project.mvc/Display/2007-083-00</a>
RME	Monitor Fish Populations	50	6	2007-233-00	Distribution and Abundance Monitoring of Oncorhynchus mykiss within the Lower Clearwater Sub-basin	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2007-233-00">http://www.cbfish.org/Project.mvc/Display/2007-233-00</a>
RME	Monitor Fish Populations	50	6	2007-402-00	SNAKE RIVER SOCKEYE CAPTIVE PROPAGATION	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-402-00">http://www.cbfish.org/Project.mvc/Display/2007-402-00</a>
RME	Monitor Fish Populations	50	6	2007-403-00	Spring Chinook Captive Propagation-Idaho	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2007-403-00">http://www.cbfish.org/Project.mvc/Display/2007-403-00</a>
RME	Monitor Fish Populations	50	6	2009-004-00	Monitoring Recovery Trends in Key Spring Chinook Habitat Variables and Validation of Population Viability Indicators	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2009-004-00">http://www.cbfish.org/Project.mvc/Display/2009-004-00</a>
RME	Monitor Fish Populations	50	6	2010-026-00	Chinook and Steelhead Genotyping for Genetic Stock Identification (GSI) at Lower Granite Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-026-00">http://www.cbfish.org/Project.mvc/Display/2010-026-00</a>
RME	Monitor Fish Populations	50	6	2010-028-00	Estimate Adult Steelhead Abundance in Small Streams Associated with Tucannon & Asotin Populations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-028-00">http://www.cbfish.org/Project.mvc/Display/2010-028-00</a>
RME	Monitor Fish Populations	50	6	2010-030-00	Project to provide VSP Estimates for Yakima Steelhead MPG	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-030-00">http://www.cbfish.org/Project.mvc/Display/2010-030-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Monitor Fish Populations	50	6	2010-032-00	Imnaha River Steelhead Status Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-032-00">http://www.cbfish.org/Project.mvc/Display/2010-032-00</a>
RME	Monitor Fish Populations	50	6	2010-034-00	Upper Columbia Spring Chinook and Steelhead Juvenile and Adult Abundance, Productivity and Spatial Structure Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-034-00">http://www.cbfish.org/Project.mvc/Display/2010-034-00</a>
RME	Monitor Fish Populations	50	6	2010-035-00	Abundance, Productivity and Life History of Fifteenmile Creek Winter Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-035-00">http://www.cbfish.org/Project.mvc/Display/2010-035-00</a>
RME	Monitor Fish Populations	50	6	2010-036-00	Lower Columbia Coded Wire Tag (CWT) Recovery Project	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-036-00">http://www.cbfish.org/Project.mvc/Display/2010-036-00</a>
RME	Monitor Fish Populations	50	6	2010-038-00	Lolo Creek Permanent Weir Construction	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-038-00">http://www.cbfish.org/Project.mvc/Display/2010-038-00</a>
RME	Monitor Fish Populations	50	6	2010-042-00	Tucannon Expanded Pit Tagging	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-042-00">http://www.cbfish.org/Project.mvc/Display/2010-042-00</a>
RME	Monitor Fish Populations	50	6	2012-013-00	Snake River Fall Chinook Monitoring and Evaluation	Planned	<a href="http://www.cbfish.org/Project.mvc/Display/2010-042-00">http://www.cbfish.org/Project.mvc/Display/2010-042-00</a>
RME	Monitor Fish Populations	50	7	1982-013-02	Coded Wire Tag-Oregon Department of Fish and Wildlife (ODFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-02">http://www.cbfish.org/Project.mvc/Display/1982-013-02</a>
RME	Monitor Fish Populations	50	7	1982-013-03	Coded Wire Tag-US Fish and Wildlife Service (USFWS)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-03">http://www.cbfish.org/Project.mvc/Display/1982-013-03</a>
RME	Monitor Fish Populations	50	7	1982-013-04	Coded Wire Tag-Washington Department of Fish and Wildlife (WDFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-04">http://www.cbfish.org/Project.mvc/Display/1982-013-04</a>
RME	Monitor Fish Populations	50	7	1983-350-03	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1983-350-03">http://www.cbfish.org/Project.mvc/Display/1983-350-03</a>
RME	Monitor Fish Populations	50	7	1988-053-07	Hood River Production Operations and Maintenance (O&M)-Warm Springs	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-07">http://www.cbfish.org/Project.mvc/Display/1988-053-07</a>
RME	Monitor Fish Populations	50	7	1988-053-08	Hood River Production Operations and Maintenance (O&M) and Powderdale	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-08">http://www.cbfish.org/Project.mvc/Display/1988-053-08</a>



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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Monitor Fish Populations	50	7	1989-098-00	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Monitor Fish Populations	50	7	1990-005-00	Umatilla Hatchery Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-005-00">http://www.cbfish.org/Project.mvc/Display/1990-005-00</a>
RME	Monitor Fish Populations	50	7	1995-063-25	Yakima River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-25">http://www.cbfish.org/Project.mvc/Display/1995-063-25</a>
RME	Monitor Fish Populations	50	7	1995-063-35	Klickitat River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-35">http://www.cbfish.org/Project.mvc/Display/1995-063-35</a>
RME	Monitor Fish Populations	50	7	1996-020-00	Comparative Survival Study (CSS)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-020-00">http://www.cbfish.org/Project.mvc/Display/1996-020-00</a>
RME	Monitor Fish Populations	50	7	1996-043-00	Johnson Creek Artificial Propagation Enhancement	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-043-00">http://www.cbfish.org/Project.mvc/Display/1996-043-00</a>
RME	Monitor Fish Populations	50	7	1998-007-03	Grande Ronde Supplementation O&M on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-03">http://www.cbfish.org/Project.mvc/Display/1998-007-03</a>
RME	Monitor Fish Populations	50	7	2007-083-00	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-083-00">http://www.cbfish.org/Project.mvc/Display/2007-083-00</a>
RME	Monitor Fish Populations	50	7	2007-404-00	Spring Chinook Captive Propagation-Oregon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-404-00">http://www.cbfish.org/Project.mvc/Display/2007-404-00</a>
RME	Monitor Fish Populations	50	7	2008-710-00	Development of an Integrated strategy for Chum Salmon Restoration in the tributaries below Bonneville Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-710-00">http://www.cbfish.org/Project.mvc/Display/2008-710-00</a>
RME	Monitor Fish Populations	50	7	2010-028-00	Estimate Adult Steelhead Abundance in Small Streams Associated with Tucannon & Asotin Populations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-028-00">http://www.cbfish.org/Project.mvc/Display/2010-028-00</a>
RME	Monitor Fish Populations	50	7	2010-032-00	Imnaha River Steelhead Status Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-032-00">http://www.cbfish.org/Project.mvc/Display/2010-032-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Monitor Fish Populations	51	1	1982-013-01	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-01">http://www.cbfish.org/Project.mvc/Display/1982-013-01</a>
RME	Monitor Fish Populations	51	1	1982-013-02	Coded Wire Tag-Oregon Department of Fish and Wildlife (ODFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-02">http://www.cbfish.org/Project.mvc/Display/1982-013-02</a>
RME	Monitor Fish Populations	51	1	1982-013-04	Coded Wire Tag-Washington Department of Fish and Wildlife (WDFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-04">http://www.cbfish.org/Project.mvc/Display/1982-013-04</a>
RME	Monitor Fish Populations	51	1	1988-108-04	StreamNet - Coordinated Information System (CIS)/ Northwest Environmental Database (NED)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-108-04">http://www.cbfish.org/Project.mvc/Display/1988-108-04</a>
RME	Monitor Fish Populations	51	1	1989-098-00	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Monitor Fish Populations	51	1	1994-033-00	Fish Passage Center	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1994-033-00">http://www.cbfish.org/Project.mvc/Display/1994-033-00</a>
RME	Monitor Fish Populations	51	1	1996-019-00	Data Access in Real Time (DART)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-019-00">http://www.cbfish.org/Project.mvc/Display/1996-019-00</a>
RME	Monitor Fish Populations	51	1	1996-043-00	Johnson Creek Artificial Propagation Enhancement	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-043-00">http://www.cbfish.org/Project.mvc/Display/1996-043-00</a>
RME	Monitor Fish Populations	51	1	1997-030-00	Chinook Salmon Adult Abundance Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-030-00">http://www.cbfish.org/Project.mvc/Display/1997-030-00</a>
RME	Monitor Fish Populations	51	1	1999-020-00	Analyze Persistence and Dynamics in Chinook Redds	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1999-020-00">http://www.cbfish.org/Project.mvc/Display/1999-020-00</a>
RME	Monitor Fish Populations	51	1	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Monitor Fish Populations	51	1	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>
RME	Monitor Fish Populations	51	1	2007-407-00	Upper Snake River Tribe (USRT) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-407-00">http://www.cbfish.org/Project.mvc/Display/2007-407-00</a>
RME	Monitor Fish Populations	51	1	2008-507-00	Tribal Data Network	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-507-00">http://www.cbfish.org/Project.mvc/Display/2008-507-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Monitor Fish Populations	51	1	2010-036-00	Lower Columbia Coded Wire Tag (CWT) Recovery Project	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-036-00">http://www.cbfish.org/Project.mvc/Display/2010-036-00</a>
RME	Monitor Fish Populations	51	2	1989-062-01	Annual Work Plan for Columbia Basin Fish and Wildlife Authority (CBFWA)	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-062-01">http://www.cbfish.org/Project.mvc/Display/1989-062-01</a>
RME	Monitor Fish Populations	51	2	1989-107-00	Statistical Support For Salmon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Monitor Fish Populations	51	2	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>
RME	Monitor Fish Populations	51	2	2008-733-00	Regional Strategy-Status/Trend	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-733-00">http://www.cbfish.org/Project.mvc/Display/2008-733-00</a>
RME	Monitor Fish Populations	51	2	2010-026-00	Chinook and Steelhead Genotyping for Genetic Stock Identification (GSI) at Lower Granite Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-026-00">http://www.cbfish.org/Project.mvc/Display/2010-026-00</a>
RME	Monitor Fish Populations	51	3	1982-013-01	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-01">http://www.cbfish.org/Project.mvc/Display/1982-013-01</a>
RME	Monitor Fish Populations	51	3	1982-013-02	Coded Wire Tag-Oregon Department of Fish and Wildlife (ODFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-02">http://www.cbfish.org/Project.mvc/Display/1982-013-02</a>
RME	Monitor Fish Populations	51	3	1988-108-04	StreamNet - Coordinated Information System (CIS)/ Northwest Environmental Database (NED)	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1988-108-04">http://www.cbfish.org/Project.mvc/Display/1988-108-04</a>
RME	Monitor Fish Populations	51	3	1989-062-01	Annual Work Plan for Columbia Basin Fish and Wildlife Authority (CBFWA)	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-062-01">http://www.cbfish.org/Project.mvc/Display/1989-062-01</a>
RME	Monitor Fish Populations	51	3	1989-107-00	Statistical Support For Salmon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Monitor Fish Populations	51	3	1994-033-00	Fish Passage Center	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1994-033-00">http://www.cbfish.org/Project.mvc/Display/1994-033-00</a>
RME	Monitor Fish Populations	51	3	1996-043-00	Johnson Creek Artificial Propagation Enhancement	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-043-00">http://www.cbfish.org/Project.mvc/Display/1996-043-00</a>
RME	Monitor Fish Populations	51	3	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Monitor Fish Populations	51	3	2007-216-00	Pacific NW Aquatic Monitoring Program (PNAMP) Research, Monitoring and Evaluation (RM&E) Design and Protocols	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2007-216-00">http://www.cbfish.org/Project.mvc/Display/2007-216-00</a>
RME	Hydrosystem RM&E	52	1	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	52	1	1989-107-00	Statistical Support For Salmon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Hydrosystem RM&E	52	1	1991-051-00	Modeling and Evaluation Statistical Support for Life-Cycle Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-051-00">http://www.cbfish.org/Project.mvc/Display/1991-051-00</a>
RME	Hydrosystem RM&E	52	1	1997-015-01	Imnaha River Smolt Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-015-01">http://www.cbfish.org/Project.mvc/Display/1997-015-01</a>
RME	Hydrosystem RM&E	52	1	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	52	2	1983-319-00	New Marking and Monitoring Technologies	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1983-319-00">http://www.cbfish.org/Project.mvc/Display/1983-319-00</a>
RME	Hydrosystem RM&E	52	2	1987-127-00	Smolt Monitoring by Non-Federal Entities	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	52	2	1989-098-00	Salmon Studies in Idaho Rivers- Idaho Department of Fish and Game (IDFG)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Hydrosystem RM&E	52	2	1989-107-00	Statistical Support For Salmon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Hydrosystem RM&E	52	2	1990-005-01	Umatilla Basin Natural Production Monitoring and Evaluation (M&E)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1990-005-01">http://www.cbfish.org/Project.mvc/Display/1990-005-01</a>
RME	Hydrosystem RM&E	52	2	1993-029-00	Survival Estimate for Passage through Snake and Columbia River Dams and Reservoirs	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1993-029-00">http://www.cbfish.org/Project.mvc/Display/1993-029-00</a>
RME	Hydrosystem RM&E	52	2	1996-020-00	Comparative Survival Study (CSS)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-020-00">http://www.cbfish.org/Project.mvc/Display/1996-020-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hydrosystem RM&E	52	2	1997-015-01	Imnaha River Smolt Monitoring	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1997-015-01">http://www.cbfish.org/Project.mvc/Display/1997-015-01</a>
RME	Hydrosystem RM&E	52	2	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	52	2	2003-114-00	Coastal Ocean Acoustic Salmon Tracking (COAST)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-114-00">http://www.cbfish.org/Project.mvc/Display/2003-114-00</a>
RME	Hydrosystem RM&E	52	2	2008-908-00	FCRPS Water Studies & Passage of Adult Salmon & Steelhead	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-908-00">http://www.cbfish.org/Project.mvc/Display/2008-908-00</a>
RME	Hydrosystem RM&E	52	3	1987-127-00	Smolt Monitoring by Non-Federal Entities	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	52	3	1989-107-00	Statistical Support For Salmon	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Hydrosystem RM&E	52	3	1991-051-00	Modeling and Evaluation Statistical Support for Life-Cycle Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-051-00">http://www.cbfish.org/Project.mvc/Display/1991-051-00</a>
RME	Hydrosystem RM&E	52	3	2005-002-00	Lower Granite Dam Adult Trap Operations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2005-002-00">http://www.cbfish.org/Project.mvc/Display/2005-002-00</a>
RME	Hydrosystem RM&E	52	3	2008-508-00	Power Analysis Catch Sampling Rates	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-508-00">http://www.cbfish.org/Project.mvc/Display/2008-508-00</a>
RME	Hydrosystem RM&E	52	3	2008-908-00	FCRPS Water Studies & Passage of Adult Salmon & Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-908-00">http://www.cbfish.org/Project.mvc/Display/2008-908-00</a>
RME	Hydrosystem RM&E	52	4	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	52	4	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	52	4	2008-724-00	PIT-tag SR Sockeye-UC Sp. Chinook	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-724-00">http://www.cbfish.org/Project.mvc/Display/2008-724-00</a>
RME	Hydrosystem RM&E	52	5	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hydrosystem RM&E	52	5	2008-724-00	PIT-tag SR Sockeye-UC Sp. Chinook	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-724-00">http://www.cbfish.org/Project.mvc/Display/2008-724-00</a>
RME	Hydrosystem RM&E	52	5	2010-076-00	Characterizing migration and survival for juvenile Snake River sockeye salmon between the upper Salmon River basin and Lower Granite Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-076-00">http://www.cbfish.org/Project.mvc/Display/2010-076-00</a>
RME	Hydrosystem RM&E	52	6	1989-107-00	Statistical Support For Salmon	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Hydrosystem RM&E	52	6	1994-033-00	Fish Passage Center	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1994-033-00">http://www.cbfish.org/Project.mvc/Display/1994-033-00</a>
RME	Hydrosystem RM&E	52	7	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	52	7	2008-105-00	Selective Gear Deployment	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-105-00">http://www.cbfish.org/Project.mvc/Display/2008-105-00</a>
RME	Hydrosystem RM&E	52	7	2008-908-00	FCRPS Water Studies & Passage of Adult Salmon & Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-908-00">http://www.cbfish.org/Project.mvc/Display/2008-908-00</a>
RME	Hydrosystem RM&E	53	1	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	53	1	1991-029-00	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-029-00">http://www.cbfish.org/Project.mvc/Display/1991-029-00</a>
RME	Hydrosystem RM&E	53	1	1991-051-00	Modeling and Evaluation Statistical Support for Life-Cycle Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-051-00">http://www.cbfish.org/Project.mvc/Display/1991-051-00</a>
RME	Hydrosystem RM&E	53	1	1994-033-00	Fish Passage Center	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1994-033-00">http://www.cbfish.org/Project.mvc/Display/1994-033-00</a>
RME	Hydrosystem RM&E	53	2	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	53	2	1989-098-00	Salmon Studies in Idaho Rivers- Idaho Department of Fish and Game (IDFG)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>



**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hydrosystem RM&E	53	2	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
RME	Hydrosystem RM&E	53	2	1991-028-00	Pit Tagging Wild Chinook	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-028-00">http://www.cbfish.org/Project.mvc/Display/1991-028-00</a>
RME	Hydrosystem RM&E	53	2	1991-029-00	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-029-00">http://www.cbfish.org/Project.mvc/Display/1991-029-00</a>
RME	Hydrosystem RM&E	53	2	1991-051-00	Modeling and Evaluation Statistical Support for Life-Cycle Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-051-00">http://www.cbfish.org/Project.mvc/Display/1991-051-00</a>
RME	Hydrosystem RM&E	53	2	1994-033-00	Fish Passage Center	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1994-033-00">http://www.cbfish.org/Project.mvc/Display/1994-033-00</a>
RME	Hydrosystem RM&E	53	2	1996-020-00	Comparative Survival Study (CSS)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-020-00">http://www.cbfish.org/Project.mvc/Display/1996-020-00</a>
RME	Hydrosystem RM&E	53	2	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	53	2	2010-026-00	Chinook and Steelhead Genotyping for Genetic Stock Identification (GSI) at Lower Granite Dam	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2010-026-00">http://www.cbfish.org/Project.mvc/Display/2010-026-00</a>
RME	Hydrosystem RM&E	53	3	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	53	3	1994-033-00	Fish Passage Center	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1994-033-00">http://www.cbfish.org/Project.mvc/Display/1994-033-00</a>
RME	Hydrosystem RM&E	53	3	1996-020-00	Comparative Survival Study (CSS)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1996-020-00">http://www.cbfish.org/Project.mvc/Display/1996-020-00</a>
RME	Hydrosystem RM&E	53	3	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	53	4	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hydrosystem RM&E	54	1	1989-107-00	Statistical Support For Salmon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Hydrosystem RM&E	54	1	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	54	2	1989-107-00	Statistical Support For Salmon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Hydrosystem RM&E	54	2	1993-029-00	Survival Estimate for Passage through Snake and Columbia River Dams and Reservoirs	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1993-029-00">http://www.cbfish.org/Project.mvc/Display/1993-029-00</a>
RME	Hydrosystem RM&E	54	3	2001-003-00	Adult PIT Detector Installation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2001-003-00">http://www.cbfish.org/Project.mvc/Display/2001-003-00</a>
RME	Hydrosystem RM&E	54	4	1989-107-00	Statistical Support For Salmon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Hydrosystem RM&E	54	5	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	54	5	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
RME	Hydrosystem RM&E	54	5	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	54	6	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	54	6	1989-098-00	Salmon Studies in Idaho Rivers- Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Hydrosystem RM&E	54	6	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
RME	Hydrosystem RM&E	54	6	1996-020-00	Comparative Survival Study (CSS)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-020-00">http://www.cbfish.org/Project.mvc/Display/1996-020-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hydrosystem RM&E	54	6	2001-003-00	Adult PIT Detector Installation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2001-003-00">http://www.cbfish.org/Project.mvc/Display/2001-003-00</a>
RME	Hydrosystem RM&E	54	6	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	54	7	1987-127-00	Smolt Monitoring by Non-Federal Entities	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	54	7	1989-107-00	Statistical Support For Salmon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Hydrosystem RM&E	54	7	1989-108-00	Modeling and Evaluation Support/Columbia River Integrated Statistical Program (CRISP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-051-00">http://www.cbfish.org/Project.mvc/Display/1991-051-00</a>
RME	Hydrosystem RM&E	54	7	1993-029-00	Survival Estimate for Passage through Snake and Columbia River Dams and Reservoirs	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1993-029-00">http://www.cbfish.org/Project.mvc/Display/1993-029-00</a>
RME	Hydrosystem RM&E	54	7	1996-020-00	Comparative Survival Study (CSS)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-020-00">http://www.cbfish.org/Project.mvc/Display/1996-020-00</a>
RME	Hydrosystem RM&E	54	7	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	54	8	1989-098-00	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Hydrosystem RM&E	54	8	1990-077-00	Development of Systemwide Predator Control	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-077-00">http://www.cbfish.org/Project.mvc/Display/1990-077-00</a>
RME	Hydrosystem RM&E	54	8	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	54	9	1983-319-00	New Marking and Monitoring Technologies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1983-319-00">http://www.cbfish.org/Project.mvc/Display/1983-319-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hydrosystem RM&E	54	9	2007-535-00	Physical and Biological Testing of a Flow Velocity Enhancement System (FVES)	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2007-535-00">http://www.cbfish.org/Project.mvc/Display/2007-535-00</a>
RME	Hydrosystem RM&E	54	11	2001-003-00	Adult PIT Detector Installation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2001-003-00">http://www.cbfish.org/Project.mvc/Display/2001-003-00</a>
RME	Hydrosystem RM&E	54	12	1996-020-00	Comparative Survival Study (CSS)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-020-00">http://www.cbfish.org/Project.mvc/Display/1996-020-00</a>
RME	Hydrosystem RM&E	54	12	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	54	13	1994-033-00	Fish Passage Center	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1994-033-00">http://www.cbfish.org/Project.mvc/Display/1994-033-00</a>
RME	Hydrosystem RM&E	55	1	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	55	1	1989-098-00	Salmon Studies in Idaho Rivers- Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Hydrosystem RM&E	55	1	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
RME	Hydrosystem RM&E	55	1	1991-028-00	Pit Tagging Wild Chinook	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-028-00">http://www.cbfish.org/Project.mvc/Display/1991-028-00</a>
RME	Hydrosystem RM&E	55	1	1996-020-00	Comparative Survival Study (CSS)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-020-00">http://www.cbfish.org/Project.mvc/Display/1996-020-00</a>
RME	Hydrosystem RM&E	55	1	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	55	1	2003-114-00	Coastal Ocean Acoustic Salmon Tracking (COAST)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-114-00">http://www.cbfish.org/Project.mvc/Display/2003-114-00</a>
RME	Hydrosystem RM&E	55	1	2005-002-00	Lower Granite Dam Adult Trap Operations	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2005-002-00">http://www.cbfish.org/Project.mvc/Display/2005-002-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hydrosystem RM&E	55	1	2008-724-00	PIT-tag SR Sockeye-UC Sp. Chinook	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-724-00">http://www.cbfish.org/Project.mvc/Display/2008-724-00</a>
RME	Hydrosystem RM&E	55	2	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	55	2	1989-098-00	Salmon Studies in Idaho Rivers- Idaho Department of Fish and Game (IDFG)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Hydrosystem RM&E	55	2	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
RME	Hydrosystem RM&E	55	2	1991-028-00	Pit Tagging Wild Chinook	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	55	2	1991-051-00	Modeling and Evaluation Statistical Support for Life-Cycle Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	55	2	1993-029-00	Survival Estimate for Passage through Snake and Columbia River Dams and Reservoirs	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
RME	Hydrosystem RM&E	55	2	2003-041-00	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-041-00">http://www.cbfish.org/Project.mvc/Display/2003-041-00</a>
RME	Hydrosystem RM&E	55	2	2003-114-00	Coastal Ocean Acoustic Salmon Tracking (COAST)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-114-00">http://www.cbfish.org/Project.mvc/Display/2003-114-00</a>
RME	Hydrosystem RM&E	55	2	2008-724-00	PIT-tag SR Sockeye-UC Sp. Chinook	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-724-00">http://www.cbfish.org/Project.mvc/Display/2008-724-00</a>
RME	Hydrosystem RM&E	55	3	1989-107-00	Statistical Support For Salmon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Hydrosystem RM&E	55	4	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	55	4	1989-107-00	Statistical Support For Salmon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hydrosystem RM&E	55	4	1989-108-00	Modeling and Evaluation Support/Columbia River Integrated Statistical Program (CRISP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
RME	Hydrosystem RM&E	55	4	1991-029-00	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-029-00">http://www.cbfish.org/Project.mvc/Display/1991-029-00</a>
RME	Hydrosystem RM&E	55	4	2002-032-00	Snake River Fall Chinook Salmon Life History Investigations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-032-00">http://www.cbfish.org/Project.mvc/Display/2002-032-00</a>
RME	Hydrosystem RM&E	55	5	2008-724-00	PIT-tag SR Sockeye-UC Sp. Chinook	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-724-00">http://www.cbfish.org/Project.mvc/Display/2008-724-00</a>
RME	Hydrosystem RM&E	55	7	1983-319-00	New Marking and Monitoring Technologies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1983-319-00">http://www.cbfish.org/Project.mvc/Display/1983-319-00</a>
RME	Hydrosystem RM&E	55	8	1983-319-00	New Marking and Monitoring Technologies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1983-319-00">http://www.cbfish.org/Project.mvc/Display/1983-319-00</a>
RME	Hydrosystem RM&E	55	8	1989-107-00	Statistical Support For Salmon	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Hydrosystem RM&E	55	8	2003-114-00	Coastal Ocean Acoustic Salmon Tracking (COAST)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-114-00">http://www.cbfish.org/Project.mvc/Display/2003-114-00</a>
RME	Hydrosystem RM&E	55	9	1983-319-00	New Marking and Monitoring Technologies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1983-319-00">http://www.cbfish.org/Project.mvc/Display/1983-319-00</a>
RME	Tributary Habitat RM&E	56	1	1984-021-00	John Day Habitat Enhancement	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1984-021-00">http://www.cbfish.org/Project.mvc/Display/1984-021-00</a>
RME	Tributary Habitat RM&E	56	1	1989-098-00	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Tributary Habitat RM&E	56	1	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
RME	Tributary Habitat RM&E	56	1	1998-016-00	Escapement and Productivity of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-016-00">http://www.cbfish.org/Project.mvc/Display/1998-016-00</a>
RME	Tributary Habitat RM&E	56	1	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>



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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Tributary Habitat RM&E	56	1	2008-471-00	Upper Columbia Nutrient Supplementation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-471-00">http://www.cbfish.org/Project.mvc/Display/2008-471-00</a>
RME	Tributary Habitat RM&E	56	1	2010-034-00	Upper Columbia Spring Chinook and Steelhead Juvenile and Adult Abundance, Productivity and Spatial Structure Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-034-00">http://www.cbfish.org/Project.mvc/Display/2010-034-00</a>
RME	Tributary Habitat RM&E	56	1	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
RME	Tributary Habitat RM&E	56	2	1998-016-00	Escapement and Productivity of Spring Chinook and Steelhead	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-016-00">http://www.cbfish.org/Project.mvc/Display/1998-016-00</a>
RME	Tributary Habitat RM&E	56	2	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Tributary Habitat RM&E	56	2	2005-002-00	Lower Granite Dam Adult Trap Operations	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2005-002-00">http://www.cbfish.org/Project.mvc/Display/2005-002-00</a>
RME	Tributary Habitat RM&E	56	2	2008-471-00	Upper Columbia Nutrient Supplementation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-471-00">http://www.cbfish.org/Project.mvc/Display/2008-471-00</a>
RME	Tributary Habitat RM&E	56	2	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
RME	Tributary Habitat RM&E	56	3	1984-021-00	John Day Habitat Enhancement	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1984-021-00">http://www.cbfish.org/Project.mvc/Display/1984-021-00</a>
RME	Tributary Habitat RM&E	56	3	1998-016-00	Escapement and Productivity of Spring Chinook and Steelhead	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-016-00">http://www.cbfish.org/Project.mvc/Display/1998-016-00</a>
RME	Tributary Habitat RM&E	56	3	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Tributary Habitat RM&E	56	3	2003-022-00	Okanogan Basin Monitoring & Evaluation Program (OBMEP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-022-00">http://www.cbfish.org/Project.mvc/Display/2003-022-00</a>
RME	Tributary Habitat RM&E	56	3	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>
RME	Tributary Habitat RM&E	56	3	2009-004-00	Monitoring Recovery Trends in Key Spring Chinook Habitat Variables and Validation of Population Viability Indicators	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2009-004-00">http://www.cbfish.org/Project.mvc/Display/2009-004-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Tributary Habitat RM&E	56	3	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
RME	Tributary Habitat RM&E	57	1	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Tributary Habitat RM&E	57	1	2010-034-00	Upper Columbia Spring Chinook and Steelhead Juvenile and Adult Abundance, Productivity and Spatial Structure Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-034-00">http://www.cbfish.org/Project.mvc/Display/2010-034-00</a>
RME	Tributary Habitat RM&E	57	1	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
RME	Tributary Habitat RM&E	57	2	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Tributary Habitat RM&E	57	2	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
RME	Tributary Habitat RM&E	57	3	1998-016-00	Escapement and Productivity of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-016-00">http://www.cbfish.org/Project.mvc/Display/1998-016-00</a>
RME	Tributary Habitat RM&E	57	3	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Tributary Habitat RM&E	57	3	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
RME	Tributary Habitat RM&E	57	4	1998-016-00	Escapement and Productivity of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-016-00">http://www.cbfish.org/Project.mvc/Display/1998-016-00</a>
RME	Tributary Habitat RM&E	57	4	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Tributary Habitat RM&E	57	4	2010-034-00	Upper Columbia Spring Chinook and Steelhead Juvenile and Adult Abundance, Productivity and Spatial Structure Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-034-00">http://www.cbfish.org/Project.mvc/Display/2010-034-00</a>
RME	Tributary Habitat RM&E	57	4	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
RME	Tributary Habitat RM&E	57	5	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Tributary Habitat RM&E	57	5	2009-004-00	Monitoring Recovery Trends in Key Spring Chinook Habitat Variables and Validation of Population Viability Indicators	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2009-004-00">http://www.cbfish.org/Project.mvc/Display/2009-004-00</a>
RME		57	5	2012-001-00	AMIP Salmonid Life Cycle Model Support	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2012-001-00">http://www.cbfish.org/Project.mvc/Display/2012-001-00</a>
RME	Estuary Habitat RM&E	58	1	2003-007-00	Lower Columbia River Estuary Ecosystem Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>
RME	Estuary Habitat RM&E	58	1	2003-114-00	Coastal Ocean Acoustic Salmon Tracking (COAST)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-114-00">http://www.cbfish.org/Project.mvc/Display/2003-114-00</a>
RME	Estuary Habitat RM&E	58	2	2003-010-00	Historic Habitat Food Web Link	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-010-00">http://www.cbfish.org/Project.mvc/Display/2003-010-00</a>
RME	Estuary Habitat RM&E	58	2	2005-001-00	Tidal Freshwater Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2005-001-00">http://www.cbfish.org/Project.mvc/Display/2005-001-00</a>
RME	Estuary Habitat RM&E	58	3	1989-107-00	Statistical Support For Salmon	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Estuary Habitat RM&E	58	3	1998-014-00	Ocean Survival Of Salmonids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-014-00">http://www.cbfish.org/Project.mvc/Display/1998-014-00</a>
RME	Estuary Habitat RM&E	58	3	2003-007-00	Lower Columbia River Estuary Ecosystem Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>
RME	Estuary Habitat RM&E	58	3	2003-009-00	Canada-USA Shelf Salmon Survival Study	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-010-00">http://www.cbfish.org/Project.mvc/Display/2003-010-00</a>
RME	Estuary Habitat RM&E	58	3	2003-010-00	Historic Habitat Food Web Link	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-010-00">http://www.cbfish.org/Project.mvc/Display/2003-010-00</a>
RME	Estuary Habitat RM&E	58	3	2005-001-00	Tidal Freshwater Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2005-001-00">http://www.cbfish.org/Project.mvc/Display/2005-001-00</a>
RME	Estuary Habitat RM&E	58	4	1998-014-00	Ocean Survival Of Salmonids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-014-00">http://www.cbfish.org/Project.mvc/Display/1998-014-00</a>
RME	Estuary Habitat RM&E	58	4	2003-007-00	Lower Columbia River Estuary Ecosystem Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Estuary Habitat RM&E	59	1	2003-007-00	Lower Columbia River Estuary Eco-system Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>
RME	Estuary Habitat RM&E	59	1	2003-011-00	Columbia River Estuary Habitat Restoration	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-011-00">http://www.cbfish.org/Project.mvc/Display/2003-011-00</a>
RME	Estuary Habitat RM&E	59	2	2003-007-00	Lower Columbia River Estuary Eco-system Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>
RME	Estuary Habitat RM&E	59	2	2003-011-00	Columbia River Estuary Habitat Restoration	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-011-00">http://www.cbfish.org/Project.mvc/Display/2003-011-00</a>
RME	Estuary Habitat RM&E	59	4	2003-007-00	Lower Columbia River Estuary Eco-system Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>
RME	Estuary Habitat RM&E	59	4	2003-010-00	Historic Habitat Food Web Link	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-010-00">http://www.cbfish.org/Project.mvc/Display/2003-010-00</a>
RME	Estuary Habitat RM&E	59	4	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>
RME	Estuary Habitat RM&E	59	4	2005-001-00	Tidal Freshwater Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2005-001-00">http://www.cbfish.org/Project.mvc/Display/2005-001-00</a>
RME	Estuary Habitat RM&E	59	5	1998-014-00	Ocean Survival Of Salmonids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-014-00">http://www.cbfish.org/Project.mvc/Display/1998-014-00</a>
RME	Estuary Habitat RM&E	59	5	2003-007-00	Lower Columbia River Estuary Eco-system Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>
RME	Estuary Habitat RM&E	59	5	2003-011-00	Columbia River Estuary Habitat Restoration	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-011-00">http://www.cbfish.org/Project.mvc/Display/2003-011-00</a>
RME	Estuary Habitat RM&E	59	5	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>
RME	Estuary Habitat RM&E	59	5	2005-001-00	Tidal Freshwater Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2005-001-00">http://www.cbfish.org/Project.mvc/Display/2005-001-00</a>
RME	Estuary Habitat RM&E	60	1	2003-007-00	Lower Columbia River Estuary Eco-system Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>
RME	Estuary Habitat RM&E	60	1	2003-011-00	Columbia River Estuary Habitat Restoration	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-011-00">http://www.cbfish.org/Project.mvc/Display/2003-011-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Estuary Habitat RM&E	60	1	2005-001-00	Tidal Freshwater Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2005-001-00">http://www.cbfish.org/Project.mvc/Display/2005-001-00</a>
RME	Estuary Habitat RM&E	60	2	2003-007-00	Lower Columbia River Estuary Eco-system Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-011-00">http://www.cbfish.org/Project.mvc/Display/2003-011-00</a>
RME	Estuary Habitat RM&E	60	2	2003-011-00	Columbia River Estuary Habitat Restoration	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-011-00">http://www.cbfish.org/Project.mvc/Display/2003-011-00</a>
RME	Estuary Habitat RM&E	60	2	2005-001-00	Tidal Freshwater Monitoring	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2005-001-00">http://www.cbfish.org/Project.mvc/Display/2005-001-00</a>
RME	Estuary Habitat RM&E	60	3	2003-011-00	Columbia River Estuary Habitat Restoration	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-011-00">http://www.cbfish.org/Project.mvc/Display/2003-011-00</a>
RME	Estuary Habitat RM&E	61	1	1989-107-00	Statistical Support For Salmon	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-014-00">http://www.cbfish.org/Project.mvc/Display/1998-014-00</a>
RME	Estuary Habitat RM&E	61	1	1998-014-00	Ocean Survival Of Salmonids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-014-00">http://www.cbfish.org/Project.mvc/Display/1998-014-00</a>
RME	Estuary Habitat RM&E	61	1	2003-007-00	Lower Columbia River Estuary Eco-system Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>
RME	Estuary Habitat RM&E	61	1	2003-009-00	Canada-USA Shelf Salmon Survival Study	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-009-00">http://www.cbfish.org/Project.mvc/Display/2003-009-00</a>
RME	Estuary Habitat RM&E	61	1	2003-010-00	Historic Habitat Food Web Link	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-010-00">http://www.cbfish.org/Project.mvc/Display/2003-010-00</a>
RME	Estuary Habitat RM&E	61	1	2003-114-00	Coastal Ocean Acoustic Salmon Tracking (COAST)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-114-00">http://www.cbfish.org/Project.mvc/Display/2003-114-00</a>
RME	Estuary Habitat RM&E	61	1	2005-001-00	Tidal Freshwater Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2005-001-00">http://www.cbfish.org/Project.mvc/Display/2005-001-00</a>
RME	Estuary Habitat RM&E	61	2	1998-014-00	Ocean Survival Of Salmonids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-014-00">http://www.cbfish.org/Project.mvc/Display/1998-014-00</a>
RME	Estuary Habitat RM&E	61	2	2003-009-00	Canada-USA Shelf Salmon Survival Study	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-009-00">http://www.cbfish.org/Project.mvc/Display/2003-009-00</a>
RME	Estuary Habitat RM&E	61	2	2003-114-00	Coastal Ocean Acoustic Salmon Tracking (COAST)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-114-00">http://www.cbfish.org/Project.mvc/Display/2003-114-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Estuary Habitat RM&E	61	3	1989-107-00	Statistical Support For Salmon	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-107-00">http://www.cbfish.org/Project.mvc/Display/1989-107-00</a>
RME	Estuary Habitat RM&E	61	3	2003-007-00	Lower Columbia River Estuary Eco-system Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>
RME	Estuary Habitat RM&E	61	3	2003-010-00	Historic Habitat Food Web Link	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-010-00">http://www.cbfish.org/Project.mvc/Display/2003-010-00</a>
RME	Estuary Habitat RM&E	61	3	2003-011-00	Columbia River Estuary Habitat Restoration	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-011-00">http://www.cbfish.org/Project.mvc/Display/2003-011-00</a>
RME	Estuary Habitat RM&E	61	3	2005-001-00	Tidal Freshwater Monitoring	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2005-001-00">http://www.cbfish.org/Project.mvc/Display/2005-001-00</a>
RME	Estuary Habitat RM&E	61	3	2009-020-00	UW	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2005-001-00">http://www.cbfish.org/Project.mvc/Display/2005-001-00</a>
RME	Estuary Habitat RM&E	61	4	1998-014-00	Ocean Survival Of Salmonids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-014-00">http://www.cbfish.org/Project.mvc/Display/1998-014-00</a>
RME	Estuary Habitat RM&E	61	4	2003-010-00	Historic Habitat Food Web Link	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-010-00">http://www.cbfish.org/Project.mvc/Display/2003-010-00</a>
RME	Harvest RM&E	62	1	2008-502-00	Expanded Tribal Catch Sampling	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-502-00">http://www.cbfish.org/Project.mvc/Display/2008-502-00</a>
RME	Harvest RM&E	62	1	2008-508-00	Power Analysis Catch Sampling Rates	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-508-00">http://www.cbfish.org/Project.mvc/Display/2008-508-00</a>
RME	Harvest RM&E	62	1	2008-908-00	FCRPS Water Studies & Passage of Adult Salmon & Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-908-00">http://www.cbfish.org/Project.mvc/Display/2008-908-00</a>
RME	Harvest RM&E	62	2	1993-060-00	Select Area Fisheries Enhancement	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1993-060-00">http://www.cbfish.org/Project.mvc/Display/1993-060-00</a>
RME	Harvest RM&E	62	2	2007-249-00	Evaluation of Live Capture Gear	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-249-00">http://www.cbfish.org/Project.mvc/Display/2007-249-00</a>
RME	Harvest RM&E	62	2	2008-105-00	Selective Gear Deployment	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-105-00">http://www.cbfish.org/Project.mvc/Display/2008-105-00</a>
RME	Harvest RM&E	62	3	2008-105-00	Selective Gear Deployment	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-105-00">http://www.cbfish.org/Project.mvc/Display/2008-105-00</a>



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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Harvest RM&E	62	4	1982-013-01	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-01">http://www.cbfish.org/Project.mvc/Display/1982-013-01</a>
RME	Harvest RM&E	62	4	1982-013-02	Coded Wire Tag-Oregon Department of Fish and Wildlife (ODFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-02">http://www.cbfish.org/Project.mvc/Display/1982-013-02</a>
RME	Harvest RM&E	62	4	1982-013-03	Coded Wire Tag-US Fish and Wildlife Service (USFWS)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-03">http://www.cbfish.org/Project.mvc/Display/1982-013-03</a>
RME	Harvest RM&E	62	4	1982-013-04	Coded Wire Tag-Washington Department of Fish and Wildlife (WDFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-04">http://www.cbfish.org/Project.mvc/Display/1982-013-04</a>
RME	Harvest RM&E	62	4	1983-350-00	Nez Perce Tribal Hatchery Operations and Maintenance (O&M)	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1983-350-00">http://www.cbfish.org/Project.mvc/Display/1983-350-00</a>
RME	Harvest RM&E	62	4	1983-350-03	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1983-350-03">http://www.cbfish.org/Project.mvc/Display/1983-350-03</a>
RME	Harvest RM&E	62	4	1988-053-03	Hood River Production Monitoring and Evaluation (M&E)-Warm Springs	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-03">http://www.cbfish.org/Project.mvc/Display/1988-053-03</a>
RME	Harvest RM&E	62	4	1995-063-25	Yakima River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-25">http://www.cbfish.org/Project.mvc/Display/1995-063-25</a>
RME	Harvest RM&E	62	4	1997-015-01	Imnaha River Smolt Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-015-01">http://www.cbfish.org/Project.mvc/Display/1997-015-01</a>
RME	Harvest RM&E	62	4	2002-060-00	Nez Perce Harvest Monitoring on Snake and Clearwater Rivers	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-060-00">http://www.cbfish.org/Project.mvc/Display/2002-060-00</a>
RME	Harvest RM&E	62	4	2010-028-00	Estimate Adult Steelhead Abundance in Small Streams Associated with Tucannon & Asotin Populations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-028-00">http://www.cbfish.org/Project.mvc/Display/2010-028-00</a>
RME	Harvest RM&E	62	4	2010-036-00	Lower Columbia Coded Wire Tag (CWT) Recovery Project	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-036-00">http://www.cbfish.org/Project.mvc/Display/2010-036-00</a>
RME	Harvest RM&E	62	5	1983-350-03	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1983-350-03">http://www.cbfish.org/Project.mvc/Display/1983-350-03</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Harvest RM&E	62	5	1988-053-04	Hood River Production Monitor and Evaluation (M&E)-Oregon Department of Fish and Wildlife (ODFW)	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-04">http://www.cbfish.org/Project.mvc/Display/1988-053-04</a>
RME	Harvest RM&E	62	5	1989-096-00	Genetic Monitoring and Evaluation (M&E) Program for Salmon and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-096-00">http://www.cbfish.org/Project.mvc/Display/1989-096-00</a>
RME	Harvest RM&E	62	5	1989-098-00	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Harvest RM&E	62	5	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
RME	Harvest RM&E	62	5	1991-073-00	Idaho Natural Production Monitoring and Evaluation (M&E)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1991-073-00">http://www.cbfish.org/Project.mvc/Display/1991-073-00</a>
RME	Harvest RM&E	62	5	1995-063-25	Yakima River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-25">http://www.cbfish.org/Project.mvc/Display/1995-063-25</a>
RME	Harvest RM&E	62	5	1995-063-35	Klickitat River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-35">http://www.cbfish.org/Project.mvc/Display/1995-063-35</a>
RME	Harvest RM&E	62	5	1996-043-00	Johnson Creek Artificial Propagation Enhancement	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1996-043-00">http://www.cbfish.org/Project.mvc/Display/1996-043-00</a>
RME	Harvest RM&E	62	5	1997-015-01	Imnaha River Smolt Monitoring	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1997-015-01">http://www.cbfish.org/Project.mvc/Display/1997-015-01</a>
RME	Harvest RM&E	62	5	1997-030-00	Chinook Salmon Adult Abundance Monitoring	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1997-030-00">http://www.cbfish.org/Project.mvc/Display/1997-030-00</a>
RME	Harvest RM&E	62	5	1997-038-00	Listed Stock Chinook Salmon Gamete Preservation	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1997-038-00">http://www.cbfish.org/Project.mvc/Display/1997-038-00</a>
RME	Harvest RM&E	62	5	1998-007-02	Grande Ronde Supplementation Operations and Maintenance (O&M) and Monitoring and Evaluation (M&E) on Lostine River	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-02">http://www.cbfish.org/Project.mvc/Display/1998-007-02</a>
RME	Harvest RM&E	62	5	1998-016-00	Escapement and Productivity of Spring Chinook and Steelhead	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-016-00">http://www.cbfish.org/Project.mvc/Display/1998-016-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Harvest RM&E	62	5	2002-030-00	Salmonid Progeny Markers	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2002-030-00">http://www.cbfish.org/Project.mvc/Display/2002-030-00</a>
RME	Harvest RM&E	62	5	2002-053-00	Asotin Creek Salmon Population Assessment	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2002-053-00">http://www.cbfish.org/Project.mvc/Display/2002-053-00</a>
RME	Harvest RM&E	62	5	2003-039-00	Monitor and Evaluate (M&E) Reproductive Success and Survival in Wenatchee River	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-039-00">http://www.cbfish.org/Project.mvc/Display/2003-039-00</a>
RME	Harvest RM&E	62	5	2003-050-00	Evaluate the Reproductive Success of Wild and Hatchery Steelhead in Natural and Hatchery Environments	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-050-00">http://www.cbfish.org/Project.mvc/Display/2003-050-00</a>
RME	Harvest RM&E	62	5	2003-054-00	Evaluate the Relative Reproductive Success of Hatchery-Origin and Wild-Origin Steelhead Spawning Naturally in the Hood River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-054-00">http://www.cbfish.org/Project.mvc/Display/2003-054-00</a>
RME	Harvest RM&E	62	5	2003-060-00	Evaluate the Relative Reproductive Success of Wild and Hatchery Origin Snake River Fall Chinook Spawners Upstream of Lower Granite Dam	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-060-00">http://www.cbfish.org/Project.mvc/Display/2003-060-00</a>
RME	Harvest RM&E	62	5	2003-063-00	Natural Reproductive Success and Demographic Effects of Hatchery-Origin Steelhead in Abernathy Creek, Washington	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-063-00">http://www.cbfish.org/Project.mvc/Display/2003-063-00</a>
RME	Harvest RM&E	62	5	2007-404-00	Spring Chinook Captive Propagation-Oregon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-404-00">http://www.cbfish.org/Project.mvc/Display/2007-404-00</a>
RME	Harvest RM&E	62	5	2008-310-00	White River Supplementation	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-310-00">http://www.cbfish.org/Project.mvc/Display/2008-310-00</a>
RME	Harvest RM&E	62	5	2008-907-00	Genetic Assessment of Columbia River Stocks	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-907-00">http://www.cbfish.org/Project.mvc/Display/2008-907-00</a>
RME	Harvest RM&E	62	5	2009-005-00	Influence of Environment and Landscape on Salmonid Genetics	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2009-005-00">http://www.cbfish.org/Project.mvc/Display/2009-005-00</a>
RME	Harvest RM&E	62	5	2010-026-00	Chinook and Steelhead Genotyping for Genetic Stock Identification (GSI) at Lower Granite Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-026-00">http://www.cbfish.org/Project.mvc/Display/2010-026-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Harvest RM&E	62	5	2010-028-00	Estimate Adult Steelhead Abundance in Small Streams Associated with Tucannon & Asotin Populations	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2010-028-00">http://www.cbfish.org/Project.mvc/Display/2010-028-00</a>
RME	Harvest RM&E	62	5	2010-030-00	Project to provided VSP Estimates for Yakima Steelhead MPG	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-030-00">http://www.cbfish.org/Project.mvc/Display/2010-030-00</a>
RME	Harvest RM&E	62	5	2010-031-00	Snake River Chinook and Steelhead Parental Based Tagging	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-031-00">http://www.cbfish.org/Project.mvc/Display/2010-031-00</a>
RME	Harvest RM&E	62	5	2010-032-00	Imnaha River Steelhead Status Monitoring	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2010-032-00">http://www.cbfish.org/Project.mvc/Display/2010-032-00</a>
RME	Hatchery RM&E	63	1	1983-350-03	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1983-350-03">http://www.cbfish.org/Project.mvc/Display/1983-350-03</a>
RME	Hatchery RM&E	63	1	1989-096-00	Genetic Monitoring and Evaluation (M&E) Program for Salmon and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-096-00">http://www.cbfish.org/Project.mvc/Display/1989-096-00</a>
RME	Hatchery RM&E	63	1	1989-098-00	Salmon Studies in Idaho Rivers- Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Hatchery RM&E	63	1	1992-026-04	Grande Ronde Early Life History of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1992-026-04">http://www.cbfish.org/Project.mvc/Display/1992-026-04</a>
RME	Hatchery RM&E	63	1	1996-043-00	Johnson Creek Artificial Propagation Enhancement	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-043-00">http://www.cbfish.org/Project.mvc/Display/1996-043-00</a>
RME	Hatchery RM&E	63	1	1998-007-02	Grande Ronde Supplementation Operations and Maintenance (O&M) and Monitoring and Evaluation (M&E) on Lostine River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-02">http://www.cbfish.org/Project.mvc/Display/1998-007-02</a>
RME	Hatchery RM&E	63	1	1998-007-03	Grande Ronde Supplementation O&M on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-03">http://www.cbfish.org/Project.mvc/Display/1998-007-03</a>
RME	Hatchery RM&E	63	1	1998-007-04	Grande Ronde Spring Chinook on Lostine/Catherine Creek/ Upper Grande Ronde Rivers	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-04">http://www.cbfish.org/Project.mvc/Display/1998-007-04</a>
RME	Hatchery RM&E	63	1	1998-016-00	Escapement and Productivity of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-016-00">http://www.cbfish.org/Project.mvc/Display/1998-016-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hatchery RM&E	63	1	2007-083-00	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-083-00">http://www.cbfish.org/Project.mvc/Display/2007-083-00</a>
RME	Hatchery RM&E	63	1	2007-132-00	NEOH Monitoring & Evaluation Implementation (Formerly a component of 198805301)	Planned	<a href="http://www.cbfish.org/Project.mvc/Display/2007-132-00">http://www.cbfish.org/Project.mvc/Display/2007-132-00</a>
RME	Hatchery RM&E	63	1	2007-402-00	Snake River Sockeye Captive Propagation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-402-00">http://www.cbfish.org/Project.mvc/Display/2007-402-00</a>
RME	Hatchery RM&E	63	1	2007-403-00	Spring Chinook Captive Propagation-Idaho	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2007-403-00">http://www.cbfish.org/Project.mvc/Display/2007-403-00</a>
RME	Hatchery RM&E	63	1	2007-404-00	Spring Chinook Captive Propagation-Oregon	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2007-404-00">http://www.cbfish.org/Project.mvc/Display/2007-404-00</a>
RME	Hatchery RM&E	63	1	2008-710-00	Development of an Integrated strategy for Chum Salmon Restoration in the tributaries below Bonneville Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-710-00">http://www.cbfish.org/Project.mvc/Display/2008-710-00</a>
RME	Hatchery RM&E	63	1	2010-042-00	Tucannon Expanded Pit Tagging	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-042-00">http://www.cbfish.org/Project.mvc/Display/2010-042-00</a>
RME	Hatchery RM&E	63	1	2010-057-00	B-run steelhead supplementation effectiveness research	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-042-00">http://www.cbfish.org/Project.mvc/Display/2010-042-00</a>
RME	Hatchery RM&E	63	1	2010-076-00	Characterizing migration and survival for juvenile Snake River sockeye salmon between the upper Salmon River basin and Lower Granite Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-076-00">http://www.cbfish.org/Project.mvc/Display/2010-076-00</a>
RME	Hatchery RM&E	63	2	1993-056-00	Advance Hatchery Reform Research	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1993-056-00">http://www.cbfish.org/Project.mvc/Display/1993-056-00</a>
RME	Hatchery RM&E	63	2	2010-042-00	Tucannon Expanded Pit Tagging	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-042-00">http://www.cbfish.org/Project.mvc/Display/2010-042-00</a>
RME	Hatchery RM&E	63	2	2010-050-00	Evaluation of the Tucannon endemic program	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-050-00">http://www.cbfish.org/Project.mvc/Display/2010-050-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hatchery RM&E	63	2	2010-076-00	Characterizing migration and survival for juvenile Snake River sock-eye salmon between the upper Salmon River basin and Lower Granite Dam	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2010-076-00">http://www.cbfish.org/Project.mvc/Display/2010-076-00</a>
RME	Hatchery RM&E	64	1	1988-053-04	Hood River Production Monitor and Evaluation (M&E)-Oregon Department of Fish and Wildlife (ODFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-04">http://www.cbfish.org/Project.mvc/Display/1988-053-04</a>
RME	Hatchery RM&E	64	1	1989-096-00	Genetic Monitoring and Evaluation (M&E) Program for Salmon and Steelhead	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1989-096-00">http://www.cbfish.org/Project.mvc/Display/1989-096-00</a>
RME	Hatchery RM&E	64	1	1992-026-04	Grande Ronde Early Life History of Spring Chinook and Steelhead	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1992-026-04">http://www.cbfish.org/Project.mvc/Display/1992-026-04</a>
RME	Hatchery RM&E	64	1	1998-007-02	Grande Ronde Supplementation Operations and Maintenance (O&M) and Monitoring and Evaluation (M&E) on Lostine River	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-02">http://www.cbfish.org/Project.mvc/Display/1998-007-02</a>
RME	Hatchery RM&E	64	1	1998-007-03	Grande Ronde Supplementation O&M on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-03">http://www.cbfish.org/Project.mvc/Display/1998-007-03</a>
RME	Hatchery RM&E	64	1	1998-007-04	Grande Ronde Spring Chinook on Lostine/Catherine Creek/ Upper Grande Ronde Rivers	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-04">http://www.cbfish.org/Project.mvc/Display/1998-007-04</a>
RME	Hatchery RM&E	64	1	2003-039-00	Monitor and Evaluate (M&E) Reproductive Success and Survival in Wenatchee River	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-039-00">http://www.cbfish.org/Project.mvc/Display/2003-039-00</a>
RME	Hatchery RM&E	64	1	2003-050-00	Evaluate the Reproductive Success of Wild and Hatchery Steelhead in Natural and Hatchery Environments	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-039-00">http://www.cbfish.org/Project.mvc/Display/2003-039-00</a>
RME	Hatchery RM&E	64	1	2003-054-00	Evaluate the Relative Reproductive Success of Hatchery-Origin and Wild-Origin Steelhead Spawning Naturally in the Hood River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-054-00">http://www.cbfish.org/Project.mvc/Display/2003-054-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hatchery RM&E	64	1	2003-060-00	Evaluate the Relative Reproductive Success of Wild and Hatchery Origin Snake River Fall Chinook Spawners Upstream of Lower Granite Dam	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-060-00">http://www.cbfish.org/Project.mvc/Display/2003-060-00</a>
RME	Hatchery RM&E	64	1	2003-063-00	Natural Reproductive Success and Demographic Effects of Hatchery-Origin Steelhead in Abernathy Creek, Washington	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-060-00">http://www.cbfish.org/Project.mvc/Display/2003-060-00</a>
RME	Hatchery RM&E	64	1	2007-083-00	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-083-00">http://www.cbfish.org/Project.mvc/Display/2007-083-00</a>
RME	Hatchery RM&E	64	2	1983-350-03	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1983-350-03">http://www.cbfish.org/Project.mvc/Display/1983-350-03</a>
RME	Hatchery RM&E	64	2	1988-053-01	Northeast Oregon Hatchery Master Plan	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-01">http://www.cbfish.org/Project.mvc/Display/1988-053-01</a>
RME	Hatchery RM&E	64	2	1988-053-03	Hood River Production Monitoring and Evaluation (M&E)-Warm Springs	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-03">http://www.cbfish.org/Project.mvc/Display/1988-053-03</a>
RME	Hatchery RM&E	64	2	1988-053-04	Hood River Production Monitor and Evaluation (M&E)-Oregon Department of Fish and Wildlife (ODFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-04">http://www.cbfish.org/Project.mvc/Display/1988-053-04</a>
RME	Hatchery RM&E	64	2	1988-053-15	Hood River Artificial Production-Parkdale	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-04">http://www.cbfish.org/Project.mvc/Display/1988-053-04</a>
RME	Hatchery RM&E	64	2	1989-096-00	Genetic Monitoring and Evaluation (M&E) Program for Salmon and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-096-00">http://www.cbfish.org/Project.mvc/Display/1989-096-00</a>
RME	Hatchery RM&E	64	2	1989-098-00	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
RME	Hatchery RM&E	64	2	1990-005-00	Umatilla Hatchery Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>



**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hatchery RM&E	64	2	1991-029-00	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-029-00">http://www.cbfish.org/Project.mvc/Display/1991-029-00</a>
RME	Hatchery RM&E	64	2	1992-026-04	Grande Ronde Early Life History of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1992-026-04">http://www.cbfish.org/Project.mvc/Display/1992-026-04</a>
RME	Hatchery RM&E	64	2	1993-056-00	Advance Hatchery Reform Research	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1993-056-00">http://www.cbfish.org/Project.mvc/Display/1993-056-00</a>
RME	Hatchery RM&E	64	2	1995-063-25	Yakima River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-25">http://www.cbfish.org/Project.mvc/Display/1995-063-25</a>
RME	Hatchery RM&E	64	2	1996-043-00	Johnson Creek Artificial Propagation Enhancement	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-043-00">http://www.cbfish.org/Project.mvc/Display/1996-043-00</a>
RME	Hatchery RM&E	64	2	1997-015-01	Imnaha River Smolt Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-015-01">http://www.cbfish.org/Project.mvc/Display/1997-015-01</a>
RME	Hatchery RM&E	64	2	1997-030-00	Chinook Salmon Adult Abundance Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-030-00">http://www.cbfish.org/Project.mvc/Display/1997-030-00</a>
RME	Hatchery RM&E	64	2	1997-038-00	Listed Stock Chinook Salmon Gamete Preservation	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1997-038-00">http://www.cbfish.org/Project.mvc/Display/1997-038-00</a>
RME	Hatchery RM&E	64	2	1998-007-02	Grande Ronde Supplementation Operations and Maintenance (O&M) and Monitoring and Evaluation (M&E) on Lostine River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-02">http://www.cbfish.org/Project.mvc/Display/1998-007-02</a>
RME	Hatchery RM&E	64	2	1998-007-03	Grande Ronde Supplementation O&M on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-03">http://www.cbfish.org/Project.mvc/Display/1998-007-03</a>
RME	Hatchery RM&E	64	2	1998-007-04	Grande Ronde Spring Chinook on Lostine/Catherine Creek/ Upper Grande Ronde Rivers	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-04">http://www.cbfish.org/Project.mvc/Display/1998-007-04</a>
RME	Hatchery RM&E	64	2	1998-010-03	Spawning Distribution of Snake River Fall Chinook Salmon	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-010-03">http://www.cbfish.org/Project.mvc/Display/1998-010-03</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hatchery RM&E	64	2	1998-010-04	Monitor and Evaluate (M&E) Performance of Juvenile Snake River Fall Chinook Salmon from Fall Chinook Acclimation Project	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-010-04">http://www.cbfish.org/Project.mvc/Display/1998-010-04</a>
RME	Hatchery RM&E	64	2	2000-039-00	Walla Walla River Basin Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2000-039-00">http://www.cbfish.org/Project.mvc/Display/2000-039-00</a>
RME	Hatchery RM&E	64	2	2002-031-00	Growth Modulation in Salmon Supplementation	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2002-031-00">http://www.cbfish.org/Project.mvc/Display/2002-031-00</a>
RME	Hatchery RM&E	64	2	2003-039-00	Monitor and Evaluate (M&E) Reproductive Success and Survival in Wenatchee River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-039-00">http://www.cbfish.org/Project.mvc/Display/2003-039-00</a>
RME	Hatchery RM&E	64	2	2003-050-00	Evaluate the Reproductive Success of Wild and Hatchery Steelhead in Natural and Hatchery Environments	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-050-00">http://www.cbfish.org/Project.mvc/Display/2003-050-00</a>
RME	Hatchery RM&E	64	2	2003-054-00	Evaluate the Relative Reproductive Success of Hatchery-Origin and Wild-Origin Steelhead Spawning Naturally in the Hood River	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-054-00">http://www.cbfish.org/Project.mvc/Display/2003-054-00</a>
RME	Hatchery RM&E	64	2	2003-063-00	Natural Reproductive Success and Demographic Effects of Hatchery-Origin Steelhead in Abernathy Creek, Washington	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-063-00">http://www.cbfish.org/Project.mvc/Display/2003-063-00</a>
RME	Hatchery RM&E	64	2	2007-083-00	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-083-00">http://www.cbfish.org/Project.mvc/Display/2007-083-00</a>
RME	Hatchery RM&E	64	2	2007-132-00	NEOH Monitoring & Evaluation Implementation (Formerly a component of 198805301)	Planned	<a href="http://www.cbfish.org/Project.mvc/Display/2007-132-00">http://www.cbfish.org/Project.mvc/Display/2007-132-00</a>
RME	Hatchery RM&E	64	2	2007-299-00	Investigation of Relative Reproductive Success of Stray Hatchery & Wild Steelhead & Influence of Hatchery Strays on Natural Productivity in Deschutes	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-299-00">http://www.cbfish.org/Project.mvc/Display/2007-299-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hatchery RM&E	64	2	2007-401-00	Kelt Reconditioning and Reproductive Success Evaluation Research	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-401-00">http://www.cbfish.org/Project.mvc/Display/2007-401-00</a>
RME	Hatchery RM&E	64	2	2007-402-00	Snake River Sockeye Captive Propagation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-402-00">http://www.cbfish.org/Project.mvc/Display/2007-402-00</a>
RME	Hatchery RM&E	64	2	2007-403-00	Spring Chinook Captive Propagation-Idaho	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-403-00">http://www.cbfish.org/Project.mvc/Display/2007-403-00</a>
RME	Hatchery RM&E	64	2	2007-404-00	Spring Chinook Captive Propagation-Oregon	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-404-00">http://www.cbfish.org/Project.mvc/Display/2007-404-00</a>
RME	Hatchery RM&E	64	2	2008-458-00	Steelhead Kelt Reconditioning	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-458-00">http://www.cbfish.org/Project.mvc/Display/2008-458-00</a>
RME	Hatchery RM&E	64	2	2010-031-00	Snake River Chinook and Steelhead Parental Based Tagging	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-031-00">http://www.cbfish.org/Project.mvc/Display/2010-031-00</a>
RME	Hatchery RM&E	64	2	2010-032-00	Imnaha River Steelhead Status Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-032-00">http://www.cbfish.org/Project.mvc/Display/2010-032-00</a>
RME	Hatchery RM&E	64	2	2010-033-00	Study Reproductive Success of Hatchery and Natural Origin Steelhead in the Methow	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-033-00">http://www.cbfish.org/Project.mvc/Display/2010-033-00</a>
RME	Hatchery RM&E	64	2	2010-042-00	Tucannon Expanded Pit Tagging	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-042-00">http://www.cbfish.org/Project.mvc/Display/2010-042-00</a>
RME	Hatchery RM&E	64	2	2010-085-00	Columbia River Hatchery Effects Evaluation Team (CRHEET)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-085-00">http://www.cbfish.org/Project.mvc/Display/2010-085-00</a>
RME	Hatchery RM&E	64	3	2003-060-00	Evaluate the Relative Reproductive Success of Wild and Hatchery Origin Snake River Fall Chinook Spawners Upstream of Lower Granite Dam	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-060-00">http://www.cbfish.org/Project.mvc/Display/2003-060-00</a>
RME	Hatchery RM&E	64	3	2010-033-00	Study Reproductive Success of Hatchery and Natural Origin Steelhead in the Methow	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-033-00">http://www.cbfish.org/Project.mvc/Display/2010-033-00</a>
RME	Monitor Fish Populations	64	3	2012-013-00	Snake River Fall Chinook Monitoring and Evaluation	Planned	<a href="http://www.cbfish.org/Project.mvc/Display/2010-042-00">http://www.cbfish.org/Project.mvc/Display/2010-042-00</a>
RME	Hatchery RM&E	65	1	1983-350-03	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1983-350-03">http://www.cbfish.org/Project.mvc/Display/1983-350-03</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hatchery RM&E	65	1	1991-029-00	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-029-00">http://www.cbfish.org/Project.mvc/Display/1991-029-00</a>
RME	Hatchery RM&E	65	1	1998-010-03	Spawning Distribution of Snake River Fall Chinook Salmon	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-010-03">http://www.cbfish.org/Project.mvc/Display/1998-010-03</a>
RME	Hatchery RM&E	65	1	1998-010-04	Monitor and Evaluate (M&E) Performance of Juvenile Snake River Fall Chinook Salmon from Fall Chinook Acclimation Project	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-010-04">http://www.cbfish.org/Project.mvc/Display/1998-010-04</a>
RME	Hatchery RM&E	65	1	2003-060-00	Evaluate the Relative Reproductive Success of Wild and Hatchery Origin Snake River Fall Chinook Spawners Upstream of Lower Granite Dam	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-060-00">http://www.cbfish.org/Project.mvc/Display/2003-060-00</a>
RME	Monitor Fish Populations	65	1	2012-013-00	SNAKE RIVER FALL CHINOOK MONITORING AND EVALUATION	Planned	<a href="http://www.cbfish.org/Project.mvc/Display/2010-042-00">http://www.cbfish.org/Project.mvc/Display/2010-042-00</a>
RME	Hatchery RM&E	65	2	1983-350-03	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1983-350-03">http://www.cbfish.org/Project.mvc/Display/1983-350-03</a>
RME	Hatchery RM&E	65	2	1991-029-00	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-029-00">http://www.cbfish.org/Project.mvc/Display/1991-029-00</a>
RME	Hatchery RM&E	65	2	1998-010-03	Spawning Distribution of Snake River Fall Chinook Salmon	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-010-03">http://www.cbfish.org/Project.mvc/Display/1998-010-03</a>
RME	Hatchery RM&E	65	2	1998-010-04	Monitor and Evaluate (M&E) Performance of Juvenile Snake River Fall Chinook Salmon from Fall Chinook Acclimation Project	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-010-04">http://www.cbfish.org/Project.mvc/Display/1998-010-04</a>
RME	Hatchery RM&E	65	2	2003-060-00	Evaluate the Relative Reproductive Success of Wild and Hatchery Origin Snake River Fall Chinook Spawners Upstream of Lower Granite Dam	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-060-00">http://www.cbfish.org/Project.mvc/Display/2003-060-00</a>
RME	Monitor Fish Populations	65	2	2012-013-00	SNAKE RIVER FALL CHINOOK MONITORING AND EVALUATION	Planned	<a href="http://www.cbfish.org/Project.mvc/Display/2010-042-00">http://www.cbfish.org/Project.mvc/Display/2010-042-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Hatchery RM&E	65	3	1991-029-00	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/1991-029-00">http://www.cbfish.org/Project.mvc/Display/1991-029-00</a>
RME	Predation Management RM&E	66	All	1997-024-00	Avian Predation on Juvenile Salm- onids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-024-00">http://www.cbfish.org/Project.mvc/Display/1997-024-00</a>
RME	Predation Management RM&E	67	All	1997-024-00	Avian Predation on Juvenile Salm- onids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-024-00">http://www.cbfish.org/Project.mvc/Display/1997-024-00</a>
RME	Predation Management RM&E	68	All	1997-024-00	Avian Predation on Juvenile Salm- onids	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-024-00">http://www.cbfish.org/Project.mvc/Display/1997-024-00</a>
RME	Predation Management RM&E	69	All	2008-004-00	Sea Lion Non-Lethal Hazing	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-004-00">http://www.cbfish.org/Project.mvc/Display/2008-004-00</a>
RME	Predation Management RM&E	70	1	1990-077-00	Development of Systemwide Preda- tor Control	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-077-00">http://www.cbfish.org/Project.mvc/Display/1990-077-00</a>
RME	Predation Management RM&E	70	2	1990-077-00	Development of Systemwide Preda- tor Control	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-077-00">http://www.cbfish.org/Project.mvc/Display/1990-077-00</a>
RME	Predation Management RM&E	70	3	1990-077-00	Development of Systemwide Preda- tor Control	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-077-00">http://www.cbfish.org/Project.mvc/Display/1990-077-00</a>
RME	Predation Management RM&E	70	4	2008-719-00	Research Non-Indigenous Actions	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-719-00">http://www.cbfish.org/Project.mvc/Display/2008-719-00</a>
RME	Predation Management RM&E	70	4	2008-720-00	Workshop Non-Indigenous Fishes	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-720-00">http://www.cbfish.org/Project.mvc/Display/2008-720-00</a>
RME	Predation Management RM&E	70	4	2010-076-00	Characterizing migration and sur- vival for juvenile Snake River sock- eye salmon between the upper Salmon River basin and Lower Granite Dam	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-076-00">http://www.cbfish.org/Project.mvc/Display/2010-076-00</a>
RME	Coordination and Data Man- agement	71	3	1994-033-00	Fish Passage Center	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1994-033-00">http://www.cbfish.org/Project.mvc/Display/1994-033-00</a>
RME	Coordination and Data Man- agement	71	3	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Coordination and Data Management	71	3	2007-216-00	Pacific NW Aquatic Monitoring Program (PNAMP) Research, Monitoring and Evaluation (RM&E) Design and Protocols	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2007-216-00">http://www.cbfish.org/Project.mvc/Display/2007-216-00</a>
RME	Coordination and Data Management	71	4	1982-013-01	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-01">http://www.cbfish.org/Project.mvc/Display/1982-013-01</a>
RME	Coordination and Data Management	71	4	1988-108-04	StreamNet - Coordinated Information System (CIS)/ Northwest Environmental Database (NED)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-108-04">http://www.cbfish.org/Project.mvc/Display/1988-108-04</a>
RME	Coordination and Data Management	71	4	2003-007-00	Lower Columbia River Estuary Ecosystem Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>
RME	Coordination and Data Management	71	4	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Coordination and Data Management	71	4	2003-022-00	Okanogan Basin Monitoring & Evaluation Program (OBMEP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-022-00">http://www.cbfish.org/Project.mvc/Display/2003-022-00</a>
RME	Coordination and Data Management	71	4	2003-072-00	Habitat and Biodiversity Information System for Columbia River Basin	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-072-00">http://www.cbfish.org/Project.mvc/Display/2003-072-00</a>
RME	Coordination and Data Management	71	4	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>
RME	Coordination and Data Management	71	4	2007-083-00	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-083-00">http://www.cbfish.org/Project.mvc/Display/2007-083-00</a>
RME	Coordination and Data Management	71	4	2008-505-00	StreamNet Library	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-505-00">http://www.cbfish.org/Project.mvc/Display/2008-505-00</a>
RME	Coordination and Data Management	71	4	2008-507-00	Tribal Data Network	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-507-00">http://www.cbfish.org/Project.mvc/Display/2008-507-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Coordination and Data Management	71	4	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
RME	Coordination and Data Management	71	5	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Coordination and Data Management	71	5	2003-072-00	Habitat and Biodiversity Information System for Columbia River Basin	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-072-00">http://www.cbfish.org/Project.mvc/Display/2003-072-00</a>
RME	Coordination and Data Management	71	5	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>
RME	Coordination and Data Management	71	6	2003-072-00	Habitat and Biodiversity Information System for Columbia River Basin	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2003-072-00">http://www.cbfish.org/Project.mvc/Display/2003-072-00</a>
RME	Coordination and Data Management	71	6	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>
RME	Coordination and Data Management	71	6	2007-216-00	Pacific NW Aquatic Monitoring Program (PNAMP) Research, Monitoring and Evaluation (RM&E) Design and Protocols	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/2007-216-00">http://www.cbfish.org/Project.mvc/Display/2007-216-00</a>
RME	Coordination and Data Management	72	1	1988-108-04	StreamNet - Coordinated Information System (CIS)/ Northwest Environmental Database (NED)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-108-04">http://www.cbfish.org/Project.mvc/Display/1988-108-04</a>
RME	Coordination and Data Management	72	1	1989-062-01	Annual Work Plan for Columbia Basin Fish and Wildlife Authority (CBFWA)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-062-01">http://www.cbfish.org/Project.mvc/Display/1989-062-01</a>
RME	Coordination and Data Management	72	1	1990-080-00	Columbia Basin Pit-Tag Information	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-080-00">http://www.cbfish.org/Project.mvc/Display/1990-080-00</a>
RME	Coordination and Data Management	72	1	1996-019-00	Data Access in Real Time (DART)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-019-00">http://www.cbfish.org/Project.mvc/Display/1996-019-00</a>



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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Coordination and Data Management	72	1	1998-031-00	Implement Wy-Kan-Ush-Mi Wa-Kish-Wit	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-031-00">http://www.cbfish.org/Project.mvc/Display/1998-031-00</a>
RME	Coordination and Data Management	72	1	2003-007-00	Lower Columbia River Estuary Ecosystem Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Coordination and Data Management	72	1	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Coordination and Data Management	72	1	2003-022-00	Okanogan Basin Monitoring & Evaluation Program (OBMEP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-022-00">http://www.cbfish.org/Project.mvc/Display/2003-022-00</a>
RME	Coordination and Data Management	72	1	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>
RME	Coordination and Data Management	72	1	2007-083-00	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-083-00">http://www.cbfish.org/Project.mvc/Display/2007-083-00</a>
RME	Coordination and Data Management	72	1	2008-505-00	StreamNet Library	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-505-00">http://www.cbfish.org/Project.mvc/Display/2008-505-00</a>
RME	Coordination and Data Management	72	1	2008-507-00	Tribal Data Network	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-507-00">http://www.cbfish.org/Project.mvc/Display/2008-507-00</a>
RME	Coordination and Data Management	72	1	2008-727-00	Regional Data Management Support and Coordination	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-727-00">http://www.cbfish.org/Project.mvc/Display/2008-727-00</a>
RME	Coordination and Data Management	72	1	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
RME	Coordination and Data Management	72	2	1988-108-04	StreamNet - Coordinated Information System (CIS)/ Northwest Environmental Database (NED)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-108-04">http://www.cbfish.org/Project.mvc/Display/1988-108-04</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Coordination and Data Management	72	2	1989-062-01	Annual Work Plan for Columbia Basin Fish and Wildlife Authority (CBFWA)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-062-01">http://www.cbfish.org/Project.mvc/Display/1989-062-01</a>
RME	Coordination and Data Management	72	2	1990-080-00	Columbia Basin Pit-Tag Information	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-080-00">http://www.cbfish.org/Project.mvc/Display/1990-080-00</a>
RME	Coordination and Data Management	72	2	1996-019-00	Data Access in Real Time (DART)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-019-00">http://www.cbfish.org/Project.mvc/Display/1996-019-00</a>
RME	Coordination and Data Management	72	2	1997-015-01	Imnaha River Smolt Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-015-01">http://www.cbfish.org/Project.mvc/Display/1997-015-01</a>
RME	Coordination and Data Management	72	2	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
RME	Coordination and Data Management	72	2	2008-507-00	Tribal Data Network	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-507-00">http://www.cbfish.org/Project.mvc/Display/2008-507-00</a>
RME	Coordination and Data Management	72	2	2008-727-00	Regional Data Management Support and Coordination	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-727-00">http://www.cbfish.org/Project.mvc/Display/2008-727-00</a>
RME	Coordination and Data Management	72	2	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
RME	Coordination and Data Management	72	3	1982-013-01	Coded Wire Tag-Pacific States Marine Fisheries Commission (PSMFC)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-01">http://www.cbfish.org/Project.mvc/Display/1982-013-01</a>
RME	Coordination and Data Management	72	3	1988-108-04	StreamNet - Coordinated Information System (CIS)/ Northwest Environmental Database (NED)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-108-04">http://www.cbfish.org/Project.mvc/Display/1988-108-04</a>
RME	Coordination and Data Management	72	3	1989-062-01	Annual Work Plan for Columbia Basin Fish and Wildlife Authority (CBFWA)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-062-01">http://www.cbfish.org/Project.mvc/Display/1989-062-01</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
RME	Coordination and Data Management	72	3	1998-031-00	Implement Wy-Kan-Ush-Mi Wa-Kish-Wit	Removed	<a href="http://www.cbfish.org/Project.mvc/Display/1998-031-00">http://www.cbfish.org/Project.mvc/Display/1998-031-00</a>
RME	Coordination and Data Management	72	3	2003-007-00	Lower Columbia River Estuary Ecosystem Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-007-00">http://www.cbfish.org/Project.mvc/Display/2003-007-00</a>
RME	Coordination and Data Management	72	3	2004-002-00	Pacific Northwest Aquatic Monitoring Program (PNAMP) Coordination	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2004-002-00">http://www.cbfish.org/Project.mvc/Display/2004-002-00</a>
RME	Coordination and Data Management	72	3	2007-216-00	Pacific NW Aquatic Monitoring Program (PNAMP) Research, Monitoring and Evaluation (RM&E) Design and Protocols	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2007-216-00">http://www.cbfish.org/Project.mvc/Display/2007-216-00</a>
RME	Coordination and Data Management	72	3	2008-505-00	StreamNet Library	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-505-00">http://www.cbfish.org/Project.mvc/Display/2008-505-00</a>
RME	Coordination and Data Management	72	3	2008-507-00	Tribal Data Network	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2008-507-00">http://www.cbfish.org/Project.mvc/Display/2008-507-00</a>
RME	Coordination and Data Management	72	3	2008-727-00	Regional Data Management Support and Coordination	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2008-727-00">http://www.cbfish.org/Project.mvc/Display/2008-727-00</a>
RME	Coordination and Data Management	72	3	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
RME	Implementation and Compliance Monitoring	73	1	2010-075-00	Upper Columbia Implementation and Action Effectiveness Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-075-00">http://www.cbfish.org/Project.mvc/Display/2010-075-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	A	2012-001-00	AMIP Salmonid Life Cycle Model Support	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2012-001-00">http://www.cbfish.org/Project.mvc/Display/2012-001-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1982-013-04	Coded Wire Tag-Washington Department of Fish and Wildlife (WDFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1982-013-04">http://www.cbfish.org/Project.mvc/Display/1982-013-04</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1983-350-03	Nez Perce Tribal Hatchery Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1983-350-03">http://www.cbfish.org/Project.mvc/Display/1983-350-03</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1988-053-03	Hood River Production Monitoring and Evaluation (M&E)-Warm Springs	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-03">http://www.cbfish.org/Project.mvc/Display/1988-053-03</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1988-053-04	Hood River Production Monitor and Evaluation (M&E)-Oregon Department of Fish and Wildlife (ODFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-04">http://www.cbfish.org/Project.mvc/Display/1988-053-04</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1988-053-08	Hood River Production Operations and Maintenance (O&M) and Powderdale	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-08">http://www.cbfish.org/Project.mvc/Display/1988-053-08</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1989-098-00	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1990-005-00	Umatilla Hatchery Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-005-00">http://www.cbfish.org/Project.mvc/Display/1990-005-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1990-005-01	Umatilla Basin Natural Production Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-005-01">http://www.cbfish.org/Project.mvc/Display/1990-005-01</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>

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H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1991-028-00	Pit Tagging Wild Chinook	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-028-00">http://www.cbfish.org/Project.mvc/Display/1991-028-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1991-073-00	Idaho Natural Production Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-073-00">http://www.cbfish.org/Project.mvc/Display/1991-073-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1992-026-04	Grande Ronde Early Life History of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1992-026-04">http://www.cbfish.org/Project.mvc/Display/1992-026-04</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1995-063-25	Yakima River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-25">http://www.cbfish.org/Project.mvc/Display/1995-063-25</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1995-063-35	Klickitat River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-35">http://www.cbfish.org/Project.mvc/Display/1995-063-35</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1996-019-00	Data Access in Real Time (DART)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-019-00">http://www.cbfish.org/Project.mvc/Display/1996-019-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1996-043-00	Johnson Creek Artificial Propagation Enhancement	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-043-00">http://www.cbfish.org/Project.mvc/Display/1996-043-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1997-030-00	Chinook Salmon Adult Abundance Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-030-00">http://www.cbfish.org/Project.mvc/Display/1997-030-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1998-007-02	Grande Ronde Supplementation Operations and Maintenance (O&M) and Monitoring and Evaluation (M&E) on Lostine River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-02">http://www.cbfish.org/Project.mvc/Display/1998-007-02</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1998-007-03	Grande Ronde Supplementation O&M on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-03">http://www.cbfish.org/Project.mvc/Display/1998-007-03</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1998-016-00	Escapement and Productivity of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-016-00">http://www.cbfish.org/Project.mvc/Display/1998-016-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1998-019-00	Wind River Watershed	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-019-00">http://www.cbfish.org/Project.mvc/Display/1998-019-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	1999-020-00	Analyze Persistence and Dynamics in Chinook Redds	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1999-020-00">http://www.cbfish.org/Project.mvc/Display/1999-020-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2002-032-00	Snake River Fall Chinook Salmon Life History Investigations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-032-00">http://www.cbfish.org/Project.mvc/Display/2002-032-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2002-053-00	Asotin Creek Salmon Population Assessment	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-053-00">http://www.cbfish.org/Project.mvc/Display/2002-053-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2002-060-00	Nez Perce Harvest Monitoring on Snake and Clearwater Rivers	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-060-00">http://www.cbfish.org/Project.mvc/Display/2002-060-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2003-022-00	Okanogan Basin Monitoring & Evaluation Program (OBMEP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-022-00">http://www.cbfish.org/Project.mvc/Display/2003-022-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2007-083-00	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-083-00">http://www.cbfish.org/Project.mvc/Display/2007-083-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2007-233-00	Distribution and Abundance Monitoring of Oncorhynchus mykiss within the Lower Clearwater Sub-basin	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-233-00">http://www.cbfish.org/Project.mvc/Display/2007-233-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2007-402-00	Snake River Sockeye Captive Propagation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-402-00">http://www.cbfish.org/Project.mvc/Display/2007-402-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2007-403-00	Spring Chinook Captive Propagation-Idaho	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-403-00">http://www.cbfish.org/Project.mvc/Display/2007-403-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2009-004-00	Monitoring Recovery Trends in Key Spring Chinook Habitat Variables and Validation of Population Viability Indicators	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2009-004-00">http://www.cbfish.org/Project.mvc/Display/2009-004-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2010-028-00	Estimate Adult Steelhead Abundance in Small Streams Associated with Tucannon & Asotin Populations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-028-00">http://www.cbfish.org/Project.mvc/Display/2010-028-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2010-030-00	Project to provide VSP Estimates for Yakima Steelhead MPG	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-030-00">http://www.cbfish.org/Project.mvc/Display/2010-030-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2010-032-00	Imnaha River Steelhead Status Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-032-00">http://www.cbfish.org/Project.mvc/Display/2010-032-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2010-034-00	Upper Columbia Spring Chinook and Steelhead Juvenile and Adult Abundance, Productivity and Spatial Structure Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-034-00">http://www.cbfish.org/Project.mvc/Display/2010-034-00</a>



**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2010-035-00	Abundance, Productivity and Life History of Fifteenmile Creek Winter Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-035-00">http://www.cbfish.org/Project.mvc/Display/2010-035-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2010-037-00	Toppenish Creek Steelhead Status & Trend Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-037-00">http://www.cbfish.org/Project.mvc/Display/2010-037-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2010-038-00	Lolo Creek Permanent Weir Construction	Completed	<a href="http://www.cbfish.org/Project.mvc/Display/2010-038-00">http://www.cbfish.org/Project.mvc/Display/2010-038-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	B	2010-042-00	Tucannon Expanded Pit Tagging	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-042-00">http://www.cbfish.org/Project.mvc/Display/2010-042-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1987-127-00	Smolt Monitoring by Non-Federal Entities	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1987-127-00">http://www.cbfish.org/Project.mvc/Display/1987-127-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1988-022-00	Umatilla Fish Passage Operations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-022-00">http://www.cbfish.org/Project.mvc/Display/1988-022-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1988-053-03	Hood River Production Monitoring and Evaluation (M&E)-Warm Springs	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-03">http://www.cbfish.org/Project.mvc/Display/1988-053-03</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1988-053-04	Hood River Production Monitor and Evaluation (M&E)-Oregon Department of Fish and Wildlife (ODFW)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-04">http://www.cbfish.org/Project.mvc/Display/1988-053-04</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1988-053-08	Hood River Production Operations and Maintenance (O&M) and Powderdale	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1988-053-08">http://www.cbfish.org/Project.mvc/Display/1988-053-08</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1989-024-01	Evaluate Umatilla Juvenile Salmonid Outmigration	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-024-01">http://www.cbfish.org/Project.mvc/Display/1989-024-01</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1989-098-00	Salmon Studies in Idaho Rivers-Idaho Department of Fish and Game (IDFG)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1989-098-00">http://www.cbfish.org/Project.mvc/Display/1989-098-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1990-055-00	Idaho Steelhead Monitoring and Evaluation (M&E) Studies	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1990-055-00">http://www.cbfish.org/Project.mvc/Display/1990-055-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1991-028-00	Pit Tagging Wild Chinook	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-028-00">http://www.cbfish.org/Project.mvc/Display/1991-028-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1991-073-00	Idaho Natural Production Monitoring and Evaluation (M&E)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1991-073-00">http://www.cbfish.org/Project.mvc/Display/1991-073-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1992-026-04	Grande Ronde Early Life History of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1992-026-04">http://www.cbfish.org/Project.mvc/Display/1992-026-04</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1995-063-25	Yakima River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-25">http://www.cbfish.org/Project.mvc/Display/1995-063-25</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1995-063-35	Klickitat River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1995-063-35">http://www.cbfish.org/Project.mvc/Display/1995-063-35</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1996-035-01	Yakama Reservation Watershed Project	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-035-01">http://www.cbfish.org/Project.mvc/Display/1996-035-01</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1996-043-00	Johnson Creek Artificial Propagation Enhancement	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1996-043-00">http://www.cbfish.org/Project.mvc/Display/1996-043-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1997-015-01	Imnaha River Smolt Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-015-01">http://www.cbfish.org/Project.mvc/Display/1997-015-01</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1997-030-00	Chinook Salmon Adult Abundance Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1997-030-00">http://www.cbfish.org/Project.mvc/Display/1997-030-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1998-007-02	Grande Ronde Supplementation Operations and Maintenance (O&M) and Monitoring and Evaluation (M&E) on Lostine River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-02">http://www.cbfish.org/Project.mvc/Display/1998-007-02</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1998-007-03	Grande Ronde Supplementation O&M on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-007-03">http://www.cbfish.org/Project.mvc/Display/1998-007-03</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1998-016-00	Escapement and Productivity of Spring Chinook and Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-016-00">http://www.cbfish.org/Project.mvc/Display/1998-016-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	1998-019-00	Wind River Watershed	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/1998-019-00">http://www.cbfish.org/Project.mvc/Display/1998-019-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2002-032-00	Snake River Fall Chinook Salmon Life History Investigations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-032-00">http://www.cbfish.org/Project.mvc/Display/2002-032-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2002-053-00	Asotin Creek Salmon Population Assessment	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-053-00">http://www.cbfish.org/Project.mvc/Display/2002-053-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2002-060-00	Nez Perce Harvest Monitoring on Snake and Clearwater Rivers	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2002-060-00">http://www.cbfish.org/Project.mvc/Display/2002-060-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2003-022-00	Okanogan Basin Monitoring & Evaluation Program (OBMEP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-022-00">http://www.cbfish.org/Project.mvc/Display/2003-022-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2007-083-00	Grande Ronde Supplementation Monitoring and Evaluation (M&E) on Catherine Creek/Upper Grande Ronde River	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-083-00">http://www.cbfish.org/Project.mvc/Display/2007-083-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2007-233-00	Distribution and Abundance Monitoring of Oncorhynchus mykiss within the Lower Clearwater Sub-basin	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-233-00">http://www.cbfish.org/Project.mvc/Display/2007-233-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2007-402-00	Snake River Sockeye Captive Propagation	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-402-00">http://www.cbfish.org/Project.mvc/Display/2007-402-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2007-403-00	Spring Chinook Captive Propagation-Idaho	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2007-403-00">http://www.cbfish.org/Project.mvc/Display/2007-403-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2009-004-00	Monitoring Recovery Trends in Key Spring Chinook Habitat Variables and Validation of Population Viability Indicators	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2009-004-00">http://www.cbfish.org/Project.mvc/Display/2009-004-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2010-028-00	Estimate Adult Steelhead Abundance in Small Streams Associated with Tucannon & Asotin Populations	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-028-00">http://www.cbfish.org/Project.mvc/Display/2010-028-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2010-032-00	Imnaha River Steelhead Status Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-032-00">http://www.cbfish.org/Project.mvc/Display/2010-032-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2010-034-00	Upper Columbia Spring Chinook and Steelhead Juvenile and Adult Abundance, Productivity and Spatial Structure Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-034-00">http://www.cbfish.org/Project.mvc/Display/2010-034-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2010-035-00	Abundance, Productivity and Life History of Fifteenmile Creek Winter Steelhead	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-035-00">http://www.cbfish.org/Project.mvc/Display/2010-035-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	C	2010-037-00	Toppenish Creek Steelhead Status & Trend Monitoring	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2010-037-00">http://www.cbfish.org/Project.mvc/Display/2010-037-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	D	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	D	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	E	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	E	2009-004-00	Monitoring Recovery Trends in Key Spring Chinook Habitat Variables and Validation of Population Viability Indicators	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2009-004-00">http://www.cbfish.org/Project.mvc/Display/2009-004-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	E	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>

**Attachment 1 - Table 1. BPA Project List**

H-Section	BiOp Strategy	Action #	Sub Action #	Project #	Project Title	RPA Association Status	Project URL
AMIP	Enhanced Research Monitoring & Evaluation	III.	F	2003-017-00	Integrated Status and Effectiveness Monitoring Program (ISEMP)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2003-017-00">http://www.cbfish.org/Project.mvc/Display/2003-017-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	F	2009-004-00	Monitoring Recovery Trends in Key Spring Chinook Habitat Variables and Validation of Population Viability Indicators	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2009-004-00">http://www.cbfish.org/Project.mvc/Display/2009-004-00</a>
AMIP	Enhanced Research Monitoring & Evaluation	III.	F	2011-006-00	Columbia Habitat and Monitoring Program - Pilot (CHaMP-P)	Continued	<a href="http://www.cbfish.org/Project.mvc/Display/2011-006-00">http://www.cbfish.org/Project.mvc/Display/2011-006-00</a>

**Attachment 1 - Table 2. Reclamation Project List**

H-Section	BiOp Strategy	Action No.	Sub-action No.	Project No.	Project Title	RPA Association Status
Hatchery	Ensure Funded Hatchery Programs are not Impeding Recovery	40	4	N/A	Winthrop Adult Holding and Spawning Facility	Under Construction
Hatchery	Ensure Funded Hatchery Programs are not Impeding Recovery	40	4	N/A	Project Alternative Solutions Study (PASS): Winthrop National Fish Hatchery Steelhead Management – RPA Action 40 Implementation Proposals	Study Completed
Hydro	<i>Carryover from the 2000 BiOp</i>	N/A	N/A	N/A	2007 FCRPS BA Columbia Basin Project Water Quality Study	Completed
RME	Predation Mgmt	47	All	0419	Avian Predation on Salmonid Smolts at Potholes Reservoir	Continuing
RME	Tributary Habitat RME	56	1	4887	Methow Fish Prod, Food Webs	Completed
RME	Tributary Habitat RME	56	1	7445	Develop Effectiveness Monitoring Population Models	Continuing
RME	Tributary Habitat RME	56	1	4806	Landscape Classification	Completed
RME	Tributary Habitat RME	56	1	4797	Fish Pop Genetics	Completed
RME	Tributary Habitat RME	57	4	4887	Methow Channel Restoration Fish Productivity Response	Continuing
RME	Tributary Habitat RME	57	5	4806	Landscape Influences on Stream Condition	Continuing
RME	Tributary Habitat RME	57	4	4445	Methow River Basin Demonstration	Continuing
RME	Tributary	65	1	4797	Fish Pop Genetics	Completed



**Attachment 1 - Table 2. Reclamation Project List**

H-Section	BiOp Strategy	Action No.	Sub-action No.	Project No.	Project Title	RPA Association Status
	Habitat RME					
RME	Coordination & Data Mgmt RME	71	3-6	4930	PNAMP	Continuing
RME	Coordination & Data Mgmt RME	72	All	4930	PNAMP	Continuing
RME	Coordination & Data Mgmt RME	72	All	4445	Integrated Data Modeling, Analyst and Management Activities	Continuing
RME	Coordination & Data Mgmt RME	72	2	17061	Methow Data Management Support	Continuing

**Attachment 1 - Table 3. Corps Project List**

H-Section	BiOp Strategy	Action No.	Sub-action No.	Agency	Project No.	Project Title	RPA Association Status
RME	Fish Population Status Monit. RME	51	1	NMFS, COE, BPA	2012-001-00	Adaptive Management Implementation Plan (AMIP) Life Cycle Modeling	Continuing
RME	Hydrosystem RME	52	1	COE	SPE-P-10-2	Passage and Survival of Juvenile Salmonids at The Dalles Dam	Completed
RME	Hydrosystem RME	52	1, 2, 3, 4, 5, 9	COE	SPE-W-05-1	Supplemental Behavior Analysis of Sockeye Salmon and Multi-Year Spillway Survival Analysis for all Species as a Function of Spillbay Operations at McNary Dam.	Continuing
RME	Hydrosystem RME	52	2	COE	SPE-P-10-1	Passage Behavior and Survival of Juvenile Salmonids at Bonneville Dam	Continuing
RME	Hydrosystem RME	52	2	COE	TPE-W-00-04	Evaluating the Responses of Snake River Basin Fall Chinook Salmon to Dam Passage Strategies and Experiences	Continuing
RME	Hydrosystem RME	52	2	COE	TPE-W-04-1	Determine the seasonal effects of transporting fish from the Snake River to optimize a transportation strategy.	Continuing
RME	Hydrosystem RME	52	2	COE	TPE-W-10-1	Determine the feasibility of conducting a sockeye transportation evaluation	New
RME	Hydrosystem RME	54	1,2,3,4	COE	SPE-P-08-3	Passage Behavior and Survival of Juvenile Salmonids at Bonneville Dam	Continuing
RME	Hydrosystem RME	54	1, 2, 3, 4, 5, 9	COE	SPE-W-05-1	Supplemental Behavior Analysis of Sockeye Salmon and Multi-Year Spillway Survival Analysis for all Species as a Function of Spillbay Operations at McNary Dam	Continuing
RME	Hydrosystem RME	54	1, 3, 5, 8	COE	SPE-P-08-3	Passage Behavior and Survival of Juvenile Salmonids at John Day Dam	Continuing
RME	Hydrosystem RME	21	1	COE	ADS-W-11-5	McNary dam steelhead fallback study	Continuing
RME	Hydrosystem RME	53	3	COE	SPE-W-11-3	Investigate juvenile fish impingement on the Oregon shore fish ladder screens at McNary dam.	Continuing
RME	Hydrosystem RME	54	2	COE	BPS-00-10	Determine survival to adult rates for juvenile salmon in the juvenile bypass systems relative to those passing undetected	Continuing
RME	Hydrosystem RME	54	2	COE	TPE-W-10-1	Determine the feasibility of conducting a sockeye transportation evaluation	New
RME	Hydrosystem RME	54	5	COE	SPE-P-10-1	Passage Behavior and Survival of Juvenile Salmonids at Bonneville Dam	Continuing

**Attachment 1 - Table 3. Corps Project List**

H-Section	BiOp Strategy	Action No.	Sub-action No.	Agency	Project No.	Project Title	RPA Association Status
RME	Hydrosystem RME	54	6	COE	TPE-W-00-04	Evaluating the Responses of Snake River Basin Fall Chinook Salmon to Dam Passage Strategies and Experiences	Continuing
RME	Hydrosystem RME	54	6	COE	TPE-W-04-1	Determine the seasonal effects of transporting fish from the Snake River to optimize a transportation strategy.	Continuing
RME	Hydrosystem RME	54	6, 10	COE	TPE-W-11-4	Evaluation of methods to reduce straying rates of barged juvenile steelhead.	New
RME	Hydrosystem RME	54	8	COE	AVS-W-03-01	Avian Predation at John Day and The Dalles Dams 2011: Estimated Fish Consumption Using Direct Observation	Completed
RME	Hydrosystem RME	54	8	COE	AVS-W-03-01	Electronic recovery of ISO-PIT tags from avian predators in the Columbia River Basin.	Continuing
RME	Hydrosystem RME	54	8	COE	AVS-W-03-01	Research, Monitoring, and Evaluation of Avian Predation on Salmonid Smolts in the Lower and Mid-Columbia River: 2011	Continuing
RME	Predation Mgmt RME	68	n/a	COE	AVS-W-03-01	Benefits to Columbia River Anadromous Salmonids from Potential Reductions in Avian Predation on the Columbia Plateau	New
RME	Predation Mgmt RME	68	n/a	COE	AVS-W-03-01	Impacts of Avian Predation on Salmonid Smolts from the Columbia and Snake Rivers <i>2004-2009 Synthesis Report</i>	New
RME	Hydrosystem RME	54	9	COE	SPE-P-06-2	Evaluation of Tag Effects on Acoustic-Tagged Juvenile Salmonids	Completed
RME	Hydrosystem RME	54	14	COE	ADS-W-11-3	Steelhead kelt and fallback passage through lower Columbia and lower Snake River dams	Continuing
RME	Hydrosystem RME	55	1	COE	BPS-00-10	SNAKE RIVER BASIN DIFFERENTIAL DELAYED MORTALITY SYNTHESIS REPORT: Evaluate comparative delayed mortality of transported and in-river migrating juvenile salmon and steelhead	Continuing
RME	Hydrosystem RME	55	1	COE	TPE-W-04-1	Determine the seasonal effects of transporting fish from the Snake River to optimize a transportation strategy.	Continuing
RME	Hydrosystem RME	55	1, 2	COE	TPE-W-00-04	Evaluating the Responses of Snake River Basin Fall Chinook Salmon to Dam Passage Strategies and Experiences	Continuing
RME	Hydrosystem RME	55	2	COE	TPE-W-04-1	Survival of yearling Chinook salmon during barge transport.	Completed
RME	Hydrosystem RME	55	2	COE	TPE-W-04-1	Determine the seasonal effects of transporting fish from the Snake River to optimize a transportation strategy.	Continuing
RME	Hydrosystem RME	55	4	COE	TPE-W-11-2	Overwintering locations for juvenile Snake River fall Chinook salmon	New

**Attachment 1 - Table 3. Corps Project List**

H-Section	BiOp Strategy	Action No.	Sub-action No.	Agency	Project No.	Project Title	RPA Association Status
RME	Hydrosystem RME	55	6	COE	TSP-05-1	Biological Index Testing of Snake and Columbia River Dam Turbines-Determining Best Powerhouse Operation for Fish Passage	Continuing
RME	Hydrosystem RME	55	6	COE	TSP-06-1	Biological Index Testing of Snake and Columbia River Dam Turbines-Determining Best Operating Point for Turbines	Continuing
RME	Estuary Habitat RME	58	1,2	COE	EST-P-09-1	Evaluation of Life History Diversity, Habitat Connectivity, and Survival Benefits Associated with Habitat Restoration Actions in the Lower Columbia River and Estuary	Continuing
RME	Estuary Habitat RME	58	2, 3, 4	COE	EST-P-05-1	Action Effectiveness Research and Monitoring of Ecosystem Restoration Actions within the Lower Columbia River and Estuary	Continuing
RME	Estuary Habitat RME	58	all	COE	EST-P-10-1	The Contribution of Tidal Fluvial Habitats in the Columbia River Estuary to the Recovery of Diverse Salmon ESUs	Continuing
RME	Estuary Habitat RME	59	1,3,4,5	COE	EST-P-09-1	Evaluation of Life History Diversity, Habitat Connectivity, and Survival Benefits Associated with Habitat Restoration Actions in the Lower Columbia River and Estuary	Continuing
RME	Estuary Habitat RME	59	1,4	COE	EST-P-05-1	Action Effectiveness Research and Monitoring of Ecosystem Restoration Actions within the Lower Columbia River and Estuary	Continuing
RME	Estuary Habitat RME	59	all	COE	EST-P-10-1	The Contribution of Tidal Fluvial Habitats in the Columbia River Estuary to the Recovery of Diverse Salmon ESUs	Continuing
RME	Estuary Habitat RME	60	1, 2, 3	COE	EST-P-02-4	Evaluating Cumulative Ecosystem Response to Habitat Restoration Projects in the Lower Columbia River Estuary	Continuing
RME	Estuary Habitat RME	60	2,3	COE	EST-P-05-1	Action Effectiveness Research and Monitoring of Ecosystem Restoration Actions within the Lower Columbia River and Estuary	Continuing
RME	Estuary Habitat RME	60	3	COE	EST-P-09-1	Evaluation of Life History Diversity, Habitat Connectivity, and Survival Benefits Associated with Habitat Restoration Actions in the Lower Columbia River and Estuary	Continuing
RME	Estuary Habitat RME	61	3	COE	EST-P-10-1	The Contribution of Tidal Fluvial Habitats in the Columbia River Estuary to the Recovery of Diverse Salmon ESUs	Continuing
RME	Predation Mgmt RME	68	n/a	COE	AVS-W-03-01	Avian Predation at John Day and The Dalles Dams 2011: Estimated Fish Consumption Using Direct Observation	Completed
RME	Predation Mgmt RME	68	n/a	COE	AVS-W-03-01	Benefits to Columbia River Anadromous Salmonids From Potential Reductions in Avian Predation on the Columbia Plateau.	Continuing
RME	Predation Mgmt RME	68	n/a	COE	AVS-W-03-01	Impacts of Avian Predation on Salmonid Smolts from the Columbia and Snake Rivers 2004-2009 Synthesis Report	Continuing

**Attachment 1 - Table 3. Corps Project List**

H-Section	BiOp Strategy	Action No.	Sub-action No.	Agency	Project No.	Project Title	RPA Association Status
RME	Predation Mgmt RME	68	n/a	COE	AVS-W-03-01	Electronic Recovery of PIT Tags from Piscivorous Bird Colonies in the Columbia River Basin	Continuing
RME	Predation Mgmt RME	68	n/a	COE	AVS-W-03-01	Research, Monitoring, and Evaluation of Avian Predation on Salmonid Smolts in the Lower and Mid-Columbia River: 2011	Continuing
RME	Predation Mgmt RME	69	1, 2	COE	ADS-P-02-16	Assessment of Sea Lion Predation and Abundance in the Bonneville Dam Tailrace	Continuing

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Attachment 2: Table 1. Summary of Tributary Habitat Metrics

This table summarizes metrics at the population level for tributary habitat measures implemented with funding from BPA or with technical assistance from the Bureau of Reclamation (Reclamation) in 2007-2012. BPA uses Pisces, a contract management system, to track and record planned and actual work accomplishments. Details for BPA projects can be found in Pisces via the links provided. Details of Reclamation projects are in Attachment 2, Tables 2 and 3, immediately following this table. 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>. Completed metrics are reported separately for 2012 for Annual Reporting requirement; total metrics are provided for Comprehensive Analysis requirement.

NOTE: Projects and metrics may be reported twice in this attachment (once under each ESU/DPS) if they improve habitat for both Chinook salmon ESU and steelhead DPS.  
Metric definitions: Metrics planned are from the 2010 Implementation Plan. Metrics completed were reported from projects and standardized into categories and units as much as possible. Definitions and units are listed below.

<b>Flow:</b> Water protected by efficiency improvements and water purchase/lease projects, reported as either volume in acre-feet per year (Af) or as river flow in cubic feet per second (Cfs).
<b>Entrainment:</b> Number of screens addressed can include new screens installed, existing screens improved for compliance with criteria, or entrainment issues addressed by elimination/consolidation of diversions.
<b>Passage:</b> Number of barriers addressed by providing passage or removing the barrier, reported to include number of miles of access improved to the next upstream barrier.
<b>Complexity:</b> Miles of Instream channel improved by adding habitat features via wood or boulder structures, or reconnecting existing habitat such as side channels.
<b>WQ/Riparian:</b> Projects undertaken to improve water quality by enhancing or protecting instream habitat or riparian function are reported in four different ways as described below.
Stream miles protected: Miles of stream habitat protected, typically by land purchases or conservation easements that improve land use practices such as excluding cattle from the stream.
Stream miles improved: Miles of stream habitat improved, typically by projects that enhance the function of the streambank such as planting native vegetation on the streambanks.
Riparian acres protected: Acres of riparian habitat protected by purchases or conservation easements that improve land use practices, allowing natural processes to reestablish riparian habitat.
Riparian acres improved: Acres of riparian habitat improved by projects to improve riparian habitat such as planting native vegetation or control of noxious weeds.

Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Snake River Spring/Summer Chinook Salmon ESU								
Grand Ronde/Imnaha MPG								
*Catherine Creek	Low summer flows	Flow:			381.2 Af, 1.7 Cfs protected	191 Af, 0.9 Cfs protected	381.2 Af, 1.7 Cfs protected	<a href="#">1984-025-00: Blue Mountain Fish Habitat Improvement</a> <a href="#">1992-026-01: Grand Ronde Model Watershed</a> <a href="#">2008-206-00: Instream Flow Restoration</a> <a href="#">1996-083-00: Grand Ronde Watershed Restoration</a>  USBR Project 4428, 4455, 4425
	Barriers	Passage:	2 Barriers improved 23.5 miles	Improve access to 45 miles	10 Barriers improved 133.3 miles	7 Barriers improved 76.8 miles	12 Barriers improved 126.8 miles	
	Lack of diverse habitats	Complexity:		Add 0.1 miles off-channel habitat	20.8 Instream miles improved	0.75 Instream miles improved	20.8 Instream miles improved	
	Degraded riparian High summer temps Excess fine sedi- ment	WQ/Riparian:		Protect 1 stream mile Treat 90 wetland acres	10.6 Stream miles protected 22.3 Stream miles improved 53 Riparian acres protected 77.2 Riparian acres improved	8.6 Stream miles protected 8.8 Stream miles improved 53 Riparian acres protected 77.2 Riparian acres improved	10.6 Stream miles protected 22.3 Stream miles improved 53 Riparian acres protected 77.2 Riparian acres improved	
Big Sheep Creek	Barriers	Passage:			2 Barriers improved 20 miles	2 Barriers improved 20 miles	2 Barriers improved 20 miles	<a href="#">1992-026-01: Grand Ronde Model Watershed</a>
	Instream complex- ity Degraded riparian conditions Excess fine sedi- ment High summer temps	Complexity:			0.06 Instream miles improved	0.06 Instream miles improved	0.06 Instream miles improved	

Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Snake River Spring/Summer Chinook Salmon ESU								
Grand Ronde/Imnaha MPG								
*Grand Ronde River Upper Mainstem	Low summer flows	Flow:						<a href="#">1992-026-01: Grand Ronde Model Watershed</a> <a href="#">1996-083-00: Grand Ronde Watershed Restoration</a> USBR Project 4327
	Passage barriers	Passage:	1 Barrier improved 53.8 miles		13 Barriers improved 53.8 miles	11 Barriers improved	13 Barriers improved 107.6 miles	
	Lack of diverse habitats	Complexity:	3.1 Instream miles improved	Treat 14.7 stream miles	58.8 Instream miles improved	6.5 Instream miles improved	61.9 Instream miles improved	
	Degraded riparian	WQ/Riparian:	58.5 Riparian acres improved	Treat 1.5 miles stream channel Remove 0.4 miles road	0.85 Stream miles protected	0.85 Stream miles protected	0.85 Stream miles protected	
	Excess fine sedi- ment Water temperature				30.1 Stream miles improved	9.1 Stream miles improved	30.1 Stream miles improved	
				27 Riparian acres protected	11.5 Riparian acres protected	27 Riparian acres protected	183 Riparian acres improved	
Imnaha River Mainstem	Barriers	Passage:		Improve access to 0.5 miles				<a href="#">1992-026-01: Grand Ronde Model Watershed</a> <a href="#">2007-393-00: Protect and Restore Northeast Oregon</a>
	Lack of diverse habitats	Complexity:			0.06 Instream miles improved	0.06 Instream miles improved	0.06 Instream miles improved	
	Excess fine sedi- ment	WQ/Riparian:	250 Riparian acres improved	Treat 5 road miles  Treat ≈ 5 riparian/stream miles	0.06 Stream miles improved	0.06 Stream miles improved	0.06 Stream miles improved	
	High summer temps				1 Riparian acre protected	1 Riparian acre protected	1 Riparian acre protected	
	Degraded riparian conditions						250 Riparian acres improved	
Lostine River	Low summer flow	Flow:	52.5 Cfs protected		1,712.5 Af, 15 Cfs protected	524.5 Af, 15 Cfs protected	1,712.5 Af, 67.5 Cfs protected	<a href="#">1992-026-01: Grand Ronde Model Watershed</a> <a href="#">2002-013-01: Water Entity - Water Transaction Program</a> <a href="#">2007-393-00: Protect and Restore Northeast Oregon</a>
	Barriers	Passage:	1 Barrier improved 5.0 miles	Improve access to 37 miles	2 Barriers improved 20 miles	2 Barriers improved 20 miles	3 Barriers improved 25 miles	
	Lack of diverse habitats	Complexity:	1.9 Instream miles improved	Reconnect 0.75 miles	0.25 Instream miles improved		2.15 Instream miles improved	
	Degraded riparian Floodplain connec- tivity Excess fine sedi- ment	WQ/Riparian:	51 Riparian acres improved	Treat <10 wetland acres Treat 1.0 miles floodplain or riparian	0.7 Stream miles improved		0.7 Stream miles improved 51 Riparian acres improved	



Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Snake River Spring/Summer Chinook Salmon ESU								
Lower Snake MPG								
Asotin Creek	Riparian degrada- tion	WQ/Riparian:	23.5 Riparian acres improved		1.28 Stream miles protected	1.28 Stream miles protected	1.28 Stream miles protected	<a href="#">1994-018-05 Asotin Creek Enhancement and Restoration</a> <a href="#">2002-050-00 Riparian Buffers on Couse and Tenmile Creeks in Asotin County</a>
	High water temp				8 Stream miles improved	8 Stream miles improved	8 Stream miles improved	
	Turbidity				10 Riparian acres protected	10 Riparian acres protected	10 Riparian acres protected	
					9 Riparian acres improved	9 Riparian acres improved	32.5 Riparian acres improved	
*Tucannon River	Screens	Entrainment:	5 Screens addressed				5 Screens addressed	<a href="#">1994-018-06: Tucannon Stream and Riparian Restoration</a> <a href="#">1994-018-07: Garfield County Fall Chinook and Steelhead Habitat Improvement</a> <a href="#">2008-202-00: Protect and Restore Tucannon Watershed</a>
	Barriers	Passage:			3 Barriers improved 0.9 miles	2 Barriers addressed	3 barriers improved 0.9 miles	
	Complexity and connectivity	Complexity:		Install structures in ≈ 0.6 miles	8.16 Instream miles improved	4.13 Instream miles improved	8.16 Instream miles improved	
	High water tem- peratures	WQ/Riparian:	29.5 Stream miles protected	Protect ≈ 5.5 miles of stream	0.8 Stream miles protected	0.8 Stream miles protected	30.3 Stream miles protected	
	Degraded riparian conditions		591 Riparian acres protected	Protect ≈ 200 riparian acres	4.3 Stream miles improved	2.4 Stream miles improved	4.3 Stream miles improved	
					395.4 Riparian acres protected	19.8 Riparian acres protected	986.4 acres protected	
			76.1 acres improved	60.1 Riparian acres improved	76.1 acres improved			

Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Snake River Spring/Summer Chinook Salmon ESU								
Middle Fork Salmon River MPG								
Big Creek	Barriers	Passage:		Improve access to ≈ 22 miles	1 Barrier improved 2.5 miles		1 Barrier improved 2.5 miles	<a href="#">2007-127-00: East Fork of South Fork Salmon River Pas-sage Restoration</a>
	Excess fine sedi-ment	WQ/Riparian:		Decommission ≈ 15 miles road				
Camas Creek	Limiting factors not identified by expert panels	Complexity:	0.1 Instream miles improved				0.1 Instream miles improved	<a href="#">1995-057-00 Southern Idaho Wildlife Mitigation</a>
Snake River Spring/Summer Chinook Salmon ESU								
South Fork Salmon River MPG								
Little Salmon River	Limiting factors not identified by expert panels	Passage:	3 Barriers improved 20.8 miles		2 Barriers improved 5.5 miles	1 Barrier improved 2.5 miles	5 Barriers improved 26.3 miles	<a href="#">2007-064-00: Slate Creek Watershed Restoration</a> USBR Project 4237
		WQ/Riparian:			0.4 Stream miles improved 0.4 Riparian acres improved	0.1 Stream miles improved 0.2 Riparian acres improved	0.4 Stream miles improved 0.4 Riparian acres improved	
Secesh River	Passage barriers	Passage:		Improve access to ≈ 12 miles	1 Barrier improved 0.8 miles	1 Barrier improved 0.8 miles	1 Barrier improved 0.8 miles	<a href="#">2007-127-00: East Fork of South Fork Salmon River Pas-sage Restoration</a>
	Excess sediments	WQ/Riparian:			14.4 Stream miles improved Decommission ≈ 45 miles road	1 Stream mile improved 1 Riparian acre improved	14.4 Stream miles improved 1 Riparian acre improved	
South Fork Salmon River	Barriers	Passage:	3 Barriers improved 15.6 miles	Improve access to ≈ 18.6 miles	3 Barriers improved 10.7 miles		6 Barriers improved 26.3 miles	<a href="#">2007-127-00: East Fork of South Fork Salmon River Pas-sage Restoration</a>
	Excess sediments	WQ/Riparian:		Enhance/Restore ≈ 3 riparian miles	1 Riparian acres improved	0.8 Riparian acres improved	1 Riparian acres improved	

Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)		
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)	
Snake River Spring/Summer Chinook Salmon ESU									
Upper Salmon River MPG									
East Fork Salmon River	Low stream flow	Flow:		Protect/acquire 3 Cfs				<a href="#">2007-399-00: Upper Salmon Screen Tributary Passage</a> <a href="#">1994-015-00: Idaho Fish Screening Project</a> <a href="#">2007-268-00: Idaho Watershed Habitat Restoration-Custer District</a> Reclamation Project 4240	
	Fish entrainment	Entrainment:	1 Screen addressed	Install 3 fish screens	3 Screens addressed		4 screens addressed		
	Barriers	Passage:		Improve access to 1.9 miles	1 barrier improved 1 mile		1 barrier improved 1 mile		
	Excess fine sedi- ment Altered riparian	Complexity:	2 Instream miles improved	Protect ≈ 0.5 riparian miles			2 Instream miles improved		
Lemhi River	Low stream flow	Flow:	103.5 Cfs protected	Protect/acquire 17 Cfs	7,658.4 Af, 34.1 Cfs protected		7,658.4 Af, 137.6 Cfs protect- ed	<a href="#">1994-015-00: Idaho Fish Screening Project</a> <a href="#">1994-050-00: Salmon River Habitat Enhancement</a> <a href="#">2007-394-00: Idaho Watershed Habitat Restoration-Lemhi</a> <a href="#">2007-399-00: Upper Salmon Screen Tributary Passage</a> <a href="#">2008-608-00: Idaho MOA/Fish Accord Water Transactions</a>  <a href="#">2008-903-00: ESA Habitat Restoration</a> <a href="#">2010-072-00: Lemhi River Restoration</a> <a href="#">2008-601-00: Upper Lemhi River Acquisition</a> <a href="#">2008-602-00: Upper Lemhi River Restoration</a> <a href="#">2008-605-00: Lower Lemhi Habitat Easements</a> <a href="#">2008-608-00: Idaho MOA/Fish Accord Water Transactions</a>  USBR Projects: 4496, 4495, 4493, 4482, 4486, 4387,4481, 4487, 4472, 4483, 4494, 4485, 4484, 4461, 4386, 4343, 4462, 4463, 4386, 4378, 4417, 4233, 4529, 4530, 4454, 4528, 4532, 4531	
	Fish entrainment	Entrainment:	8 Screens addressed	Install 12 fish screens	14 Screens addressed	4 Screens addressed	22 screens addressed		
	Barriers	Passage:	5 Barriers improved 147 miles	Improve access to ≈ 23 miles	15 Barriers improved 41.3 miles	6 Barriers improved 9.5 miles	20 Barriers improved 188.3 miles		
	Degraded condi- tions	Complexity:		Reconnect 2.0 miles stream channel	3 Instream miles improved	1.6 Instream miles improved	3 Instream miles improved		
	Degraded riparian conditions Excess sediments High water tem- peratures	WQ/Riparian:		Treat 8 stream miles	8.5 stream miles protected 29.2 Riparian acres improved 136.5 Riparian acres protected 24.2 Riparian acres improved	5.5 Stream miles protected 1.3 Stream miles improved 87.9 Riparian acres protected	8.5 stream miles protected 29.2 Riparian acres improved 136.5 Riparian acres protected 24.2 Riparian acres improved		
Pahsimeroi River	Low stream flow		29.6 Cfs protected	Protect ≈ 5 Cfs instream flow	1,553.1 Af, 7.1 Cfs protected	1,553.1 Af, 7.1 Cfs protected	1,553.1 Af, 36.7 Cfs flow pro- tected	<a href="#">1994-015-00: Idaho Fish Screening Project Restoration-Lemhi</a> <a href="#">1994-050-00: Salmon River Habitat Enhancement</a> <a href="#">2008-603-00: Pahsimeroi River Habitat</a> <a href="#">2007-394-00: Idaho Watershed Habitat Restoration - Lemhi</a> <a href="#">2002-013-01: Water Transaction Program</a> <a href="#">2007-268-00: Idaho Watershed Habitat Restoration-Custer</a> USBR Projects 4389, 4410, 4400, 4426, 4427, 4324, 4431, 4488	
	Fish entrainment	Entrainment:	4 Screens addressed	Install 3 fish screens			4 screens addressed		
	Barriers	Passage:	1 Barrier improved 1 mile	Improve access to ≈ 15 miles	12 Barriers improved 19 miles	1 Barrier improved 0.6 miles	13 Barriers improved 20 miles		
	Degraded riparian habitat Sediment	WQ/Riparian:		Protect ≈ 3.5 riparian miles Restore ≈ .5 riparian miles	8.1 Stream miles protected 4.2 Stream miles improved 14.6 Riparian acres protected 7.9 Riparian acres improved	2.5 Stream miles improved	8.1 Stream miles protected 4.2 Stream miles improved 14.6 Riparian acres protected 7.9 Riparian acres improved		

Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Snake River Spring/Summer Chinook Salmon ESU								
Upper Salmon River MPG								
Lower Mainstem Salmon River Below Redfish Lake	Low stream flow	Flow:	29.6 Cfs protected	Protect/acquire ≈ 5.5 Cfs flow	2,863.2 Af, 6.2 Cfs protected	1528.2 Af, 4.2 Cfs protected	2,863.2 Af, 35.8 Cfs protected	<a href="#">2002-013-01: Water Entity - Water Transaction Program</a> <a href="#">2007-268-00: Idaho Watershed Habitat Restoration- Custer District</a> <a href="#">2007-399-00: Upper Salmon Screen Tributary Passage</a> <a href="#">1994-015-00: Idaho Fish Screening Project</a> <a href="#">1999-019-00: Restore 12-mi Reach Upper Salmon River</a> <a href="#">2007-394-00: Idaho Watershed Habitat Restoration - Lemhi</a>  <a href="#">2008-602-00: Upper Lemhi River Restoration</a>
	Fish Entrainment	Entrainment:	3 Screens addressed	Install 4 fish screens	3 Screens addressed	1 Screen addressed	6 screens addressed	
	Barriers	Passage:	2 Barriers improved 3 miles	Improve access to ≈ 17 miles			2 Barriers improved 3 miles	
	Lack of complex habitat	Complexity:		Add 500-1000 ft. side channel				
	Altered riparian Temperature Sediment Bank stability	WQ/Riparian:			2 Stream miles protected 100 Stream miles improved 23 Riparian acres protected 12.5 riparian acres improved	100 Stream miles improved 3.4 Riparian acres improved	2 Stream miles protected 100 Stream miles improved 23 Riparian acres protected 12.5 riparian acres improved	
Upper Mainstem Salmon River above Redfish Lake	Low stream flow	Flow:	54.1 Cfs protected	Protect ≈ 11 Cfs instream flow			54.1 Cfs Protected	<a href="#">2007-268-00: Idaho Watershed Habitat Restoration- Custer District</a>  USBR Project 4180, 4423, 4240, 4424, 4424, 447, 4492
	Entrainment	Entrainment:	3 Screens addressed				3 Screens addressed	
	Barriers	Passage:	1 Barrier improved 3 miles				1 Barrier improved 3 miles	
	Excess fine sedi- ment Temperature	WQ/Riparian:	7 Riparian acres improved	Treat ≈ 1 stream mile	0.9 Stream miles protected 1.5 Riparian acres protected		0.9 Stream miles protected 1.5 Riparian acres protected  7 Riparian acres improved	
Valley Creek	Low stream flow	Flow:		Protect ≈ 4 Cfs instream flow				<a href="#">1994-015-00: Idaho Fish Screening Project</a> <a href="#">2007-394-00: Idaho Watershed Habitat Restoration</a> <a href="#">2007-399-00: Upper Salmon Screen Tributary Passage</a> <a href="#">2008-608-00: Idaho MOA/Fish Accord Water Transactions</a>
	Fish entrainment	Entrainment:	3 Screens addressed	Install 4 fish screens			3 Screens addressed	
	Barriers	Passage:	1 Barrier improved 3 miles	Improve access to 4 miles			1 Barrier improved 3 miles	
*Yankee Fork	Streambank deg- radation	Complexity:			0.5 Instream miles improved	0.5 Instream miles improved	0.5 Instream miles improved	USBR Project 4507

Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 25 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2013 Completed Metrics (RPAs 34 & 35)
Snake River Spring/Summer Chinook Salmon ESU								
Clearwater River MPG								
Projects completed to address limiting factors for Snake River Steelhead also benefit introduced Chinook salmon.								
Lochsa River	Projects completed to address limiting factors for Snake River Steelhead also benefit introduced Chinook salmon.	Passage:	4 Barriers improved 4.5 miles	Planning was targeted for listed Snake River Steelhead, completed projects also benefit introduced Chinook salmon.	3 Barriers improved 9.8 miles		7 Barriers improved 14.3 miles	<a href="#">2007-395-00 Protect and Restore Lochsa Watershed</a>
		WQ/Riparian:	8.5 Riparian acres improved		56.1 Stream miles improved	6.1 Stream miles improved	56.1 Stream miles improved 8.5 Riparian acres improved	
Meadow Creek		Passage			2 Barriers improved 3.5 miles	2 Barriers improved 3.5 miles	2 Barriers improved 3.5 miles	<a href="#">1996-077-05: Meadow Creek Watershed Restoration</a>
Lolo Creek		Passage:	5 Barriers improved 11.7 miles				5 Barriers improved 11.7 miles	<a href="#">1996-077-02: Lolo Creek Watershed Restoration</a>
		Complexity:	0.1 Instream miles improved				0.1 Instream miles improved	
		WQ/Riparian:			2 Stream miles improved		2 Stream miles improved	

**Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population**

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Upper Columbia River Spring Chinook Salmon ESU								
Upper Columbia-Below Chief Joseph MPG								
*Entiat	Low stream flow	Flow:	0.3 Cfs protected	Protect 6.5 Cfs water			0.3 Cfs Protected	2007-231-00: <a href="#">Entiat River Riparian Restoration</a> 2007-034-00: <a href="#">Columbia Cascade Pump Screen Correction</a> 2007-055-00: <a href="#">Lower Entiat Off-Channel Restoration</a> 2007-318-00: <a href="#">Irrigation System Consolidation Project</a> 2002-013-01: <a href="#">Water Entity - Water Transaction Program</a> 2010-001-00: <a href="#">Upper Columbia Programmatic Habitat</a> USBR Projects 4326, 4391, 4501, 4502, 4503, 4357, 4439, 4430, 4339, 4329, 4285, 4194, 4340, 4399, 4466
	Entrainment	Entrainment:	1 Screen addressed		8 Screens addressed		9 Screens addressed	
	Barriers	Passage:	1 Barrier addressed 1mile		1 Barrier improved 60 miles		2 Barriers improved 61 miles	
	Complexity and connectivity	Complexity:		Reconnect ≈ 0.5 miles side channel	3.7 Instream miles improved	2.9 Instream miles improved	3.7 Instream miles improved	
	Riparian condition	WQ/Riparian:		Treat ≈ 1.9 stream miles	1.9 Stream miles improved	1.08 Stream miles improved	1.9 Stream miles improved	
	Sediment		2 Riparian acres improved		0.9 Riparian acres protected 4.11 Riparian acres improved	0.9 Riparian acres protected 4.11 Riparian acres improved	2.9 Riparian acres protected 4.11 Riparian acres improved	
*Methow	Low stream flow	Flow:	97.1 Cfs protected	Protect ≈ 15 Cfs of in-stream flow	973.4 Af, 3.9 Cfs protected		973.4 Af, 101 Cfs protected	2002-013-01: <a href="#">Water Entity - Water Transaction Program</a> 2007-035-00: <a href="#">Methow Basin Riparian Enhancement Program</a> 2007-251-00: <a href="#">Methow Valley Irrigation District (MVID) East Irrigation Diversion</a> 2009-003-00: <a href="#">Upper Columbia Habitat Restoration</a> 2005-010-00: <a href="#">Chewuch River Side Channel</a> 2006-007-00: <a href="#">Little Bridge Creek Fence</a> 2007-034-00: <a href="#">Columbia Cascade Pump Screen Correction</a> 2007-172-00: <a href="#">MVID West Headworks</a> 2007-214-00: <a href="#">Fender Mill Floodplain Restoration</a> 2007-237-00: <a href="#">Elbow Coulee Floodplain Restoration</a> 2007-264-00: <a href="#">Habitat Complexity Projects in Methow Basin</a> 2008-104-00: <a href="#">Land and Water Acquisition</a> 2010-001-00: <a href="#">Upper Columbia Programmatic Habitat</a> USBR Projects 4361, 4390, 4489, 4491, 4490, 4034, 4432, 4402, 4420, 4395, 4261, 4396, 4330, 4262, 4162, 4333, 4325, 4331, 4162, 4270, 4009, 4534, 4459, 4458
	Entrainment	Entrainment:			4 screens addressed		4 screens addressed	
	Barriers	Passage:	2 Barriers improved 33.1 miles	Improve access to ≈ 0.8 miles	3 Barriers improved 60.5 miles		5 barriers improved 93.6 miles	
	Complexity and connectivity	Complexity:	4.3 Instream miles improved	Reconnect ≈ 2.3 miles side channel	2.6 Instream miles improved	1.8 Instream miles improved	6.9 Instream miles improved	
	Riparian & flood-plain function	WQ/Riparian:	1 Stream mile protected	Protect 1 stream mile	9.2 Stream miles protected	6.6 Stream miles protected	10.2 Stream miles protected	
	Sediment		135 Riparian acres protected	Treat ≈ 3.2 stream miles	5.7 Stream miles improved	1.3 Stream miles improved	5.7 Stream miles improved	
	Temperature		32.3 Riparian acres improved	Restore ≈ 18.6 riparian miles	227.9 Riparian acres protected	227.9 Riparian acres protected	362.9 Riparian acres improved	
				Restore ≈ 70 riparian acres	9.7 Riparian acres improved	9 Riparian acres improved	42. Riparian acres protected	
*Wenatchee	Low stream flow	Flow:		Protect ≈ 7.5 Cfs in-stream water	1.2 Cfs protected		1.2 Cfs protected	2007-325-00: <a href="#">Wenatchee River Complexity Fisheries Enhancement</a> 2007-034-00: <a href="#">Columbia Cascade Pump Screen Correction</a> 2007-086-00: <a href="#">Wenatchee Riparian Enhancement</a> 2007-400-00: <a href="#">Wenatchee Basin Fish Passage Enhancement</a> 2010-001-00: <a href="#">Upper Columbia Programmatic Habitat</a> USBR Projects: 4361, 4390, 4393, 4287, 4361, 4390, 4316, 4315, 4214, 4193, 4214, 4284, 4216, 4217, 4253, 4219, 4121, 4123, 4390
	Barriers	Passage:	3 Barriers improved 0.8 miles	Improve access to ≈ 7.2 miles	14 Barriers improved 4.1 miles	Improved 0.5 mi	17 barriers improved 4.9 miles	
	Complexity and connectivity	Complexity:	0.1 Instream miles improved	Reconnect ≈ 1.2 miles side channel	0.1 Instream miles improved		0.2 Instream miles improved	
	Riparian & flood-plain function	WQ/Riparian:		Protect/enhance ≈ 8.4 riparian miles	1 Stream miles improved	0.5 Stream miles improved	1 Stream miles improved	
	High stream temperatures		2.1 Riparian acres improved	Treat ≈ .2 stream miles	6 Riparian acres improved	3.5 Riparian acres improved	8.1 Riparian acres improved	



**Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population**

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Middle Columbia River Steelhead DPS								
Cascades Eastern Slope Tributaries MPG								
Deschutes River Eastside	Low stream flow	Flow:	3.5 Cfs protected	The planned metrics for the Middle Columbia River are not corroborated by the Expert Panels. Administratively, the Action Agencies account for the planned metrics as for other projects included in Attachment 2 for other populations.	2,713 Af, 4.5 Cfs protected	886.8 Af, 2.2 Cfs protected	2,713 Af, 8 Cfs protected	<a href="#">1994-042-00 : Trout Creek Operations and Maintenance (O&amp;M)</a> <a href="#">1998-028-00: Trout Creek Watershed Restoration</a> <a href="#">2002-013-01: Water Entity - Water Transaction Program</a> <a href="#">2002-019-00: Develop Riparian Buffer Systems in Lower Wasco County</a>
	Fish Entrainment	Entrainment:	1 Screen addressed		3 Screen addressed	2 Screens addressed	4 Screens addressed	
	Barriers	Passage:			5 Barriers improved 114 mi	3 Barriers improved 44.5 miles	5 Barriers improved 114 mi	
	Complexity and connectivity	Complexity:			0.1 Instream miles improved	0.04 Instream miles improved	0.1 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	60.5 Stream miles protected  864.8 Riparian acres protected 156 Riparian acres improved		4.5 Stream miles protected  7.1 Riparian miles improved 194.2 Riparian acres protected 201.5 Riparian acres improved	4.5 Stream miles protected  4.5 Stream miles improved 132.7 Riparian acres protected 185.2 Riparian acres improved	65 Stream miles protected  7.1 Riparian miles improved 1059 Riparian acres protected 357 Riparian acres improved	
Deschutes River Westside	Low stream flow	Flow:	3.8 Cfs protected		1,978.4 Af, 5.6 Cfs protected	1,073 Af, 2.96 Cfs protected	1978.4 Af, 9.4 Cfs protected	<a href="#">2002-013-01: Water Entity - Water Transaction Program</a> <a href="#">2002-019-00: Riparian Buffer Systems in Lower Wasco Co.</a> <a href="#">2008-301-00: Habitat Restoration</a>
	Degraded Riparian Habitat	WQ/Riparian:	20.1 Stream miles protected  652.4 Riparian acres protected 20 Riparian acres improved		0.9 Stream miles protected  0.5 Riparian miles improved 34.4 Riparian acres protected 0.5 Riparian acres improved	4.1 Stream miles protected  141.4 Riparian acres protected	21 Stream miles protected  0.5 Riparian miles improved 686.8 Riparian acres protected 20.5 Riparian acres improved	
Fifteenmile Creek (Winter Run)	Low stream flow	Flow:	11 Cfs protected		1,736.1 Af, 29.8 Cfs protected	495.4 Af, 2.2 Cfs protected	1,736.1 Af, 40.8 Cfs protected	<a href="#">1993-040-00: Fifteenmile Creek Habitat Improvement</a> <a href="#">2001-021-00: 15 Mile Creek Riparian Buffers</a> <a href="#">2002-013-01: Water Entity - Water Transaction Program</a>
	Barriers	Passage:			1 Barrier addressed	1 Barrier addressed	1 Barrier addressed	
	Degraded Riparian Habitat	WQ/Riparian:	25.9 Stream miles protected  513.7 Riparian acres protected		7.3 Stream miles protected  10 Stream miles improved 213 Riparian acres protected 50 Riparian acres improved	3.5 Stream miles protected  10 Stream miles improved 32.9 Riparian acres protected 50 Riparian acres improved	33.2 Stream miles protected  10 Stream miles improved 213 Riparian acres protected 50 Riparian acres protected	
Klickitat River	Barriers	Passage:	4 Barriers improved 6 miles		5 barriers improved 120 miles	3 Barriers improved 60 miles	9 barriers improved 126 miles	<a href="#">1988-115-35: Klickitat River Design and Construction-Yakima/Klickitat Fisheries Project (YKFP)</a> <a href="#">1997-056-00: Klickitat Watershed Enhancement</a>
	Complexity	Complexity:			2.4 Instream miles improved		2.4 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	7.3 Riparian acres improved		0.3 Stream miles protected  3.4 Stream miles improved 8.4 Riparian acres protected		0.3 Stream miles protected  3.4 Stream miles improved 8.4 Riparian acres protected 7.3 riparian acres improved	
Rock Creek	Degraded Riparian Habitat	WQ/Riparian:			2.6 Stream miles improved  2 Riparian acres improved	2 Stream miles improved  2 Riparian acres improved	2.6 Stream miles improved  2 Riparian acres improved	<a href="#">2007-156-00: Rock Creek Fish and Habitat Assessment</a>
White Salmon River	Low stream flow	Flow:			166 Af protected		166 Af protected	<a href="#">1998-019-00 Wind River Watershed</a>

Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Middle Columbia River Steelhead DPS								
John Day River MPG								
John Day River Lower Mainstem Tributaries	Low stream flow	Flow:			1254.1 Af, 0.1 Cfs protected		1254.1 Af, 0.1 Cfs protected	<a href="#">1984-021-00: John Day Habitat Enhancement</a> <a href="#">1998-022-00: Pine Creek Conservation Area</a> <a href="#">2002-015-00: Coordination and Technical Assistance to Watershed Councils and Individuals in Sherman County, Oregon</a> <a href="#">2002-019-00: Develop Riparian Buffer Systems in Lower Wasco County</a> <a href="#">2002-034-00: Riparian Buffers in Wheeler County</a> <a href="#">2002-035-00: Riparian Buffers in Gilliam County</a> <a href="#">2003-017-00: Integrated Status and Effectiveness Monitoring Program (ISEMP)</a> <a href="#">2007-397-00: John Day Watershed Restoration</a>
	Fish Entrainment	Entrainment:	24 Screens addressed		26 Screens addressed	13 Screens addressed	50 Screens addressed	
	Barriers	Passage:	17 Barriers improved 61.5 miles		16 barriers improved 155.1 miles	12 Barriers improved 36.1 miles	33 Barriers improved 216.6 miles	
	Complexity	Complexity:	0.4 Instream miles improved		15.6 Instream miles improved	7.1 Instream miles improved	16 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	64.9 Stream miles protected  954.9 Riparian acres protected  184 Riparian acres improved		142.1 Stream miles protected  54.2 Stream miles improved 1,991.4 Riparian acres protected 68.2 Riparian acres improved	49.9 Stream miles protected  20 Stream miles improved 636.9 Riparian acres protected 21.7 Riparian acres improved	207 Stream miles protected  54.2 Stream miles improved 2,946.3 Riparian acres protected 252.2 Riparian acres improved	
John Day River Upper Mainstem	Low stream flow	Flow:	9.8 Cfs protected		4,582.5 Af, 45.6 Cfs protected	1,653.9 Af, 22.2 Cfs protected	4,582.5 Af, 55.4 Cfs protected	<a href="#">1984-021-00: John Day Habitat Enhancement</a> <a href="#">2001-041-01: Forrest Ranch Conservation Area</a> <a href="#">2007-397-00: John Day Passage, Flow and Habitat Enhancement</a> <a href="#">1993-066-00: Oregon Fish Screens Project</a> <a href="#">1998-018-00: John Day Watershed Restoration</a> USBR Projects 4405, 4406, 4407, 4414, 4415, 4447, 4452, 4434, 4435, 4319, 4350, 4351, 4353, 4388, 4348, 4416, 4349, 4349, 4347, 4369, 4314, 4298, 4300, 4320, 4302, 4304, 4301, 4297, 4299, 4278, 4303, 4305, 4271, 4409, 4467
	Fish Entrainment	Entrainment:	38 Screens addressed		34 Screens addressed	9 Screens addressed	72 Screens addressed	
	Barriers	Passage:	20 Barriers improved 66.4 miles		16 Barriers improved 51.6 miles	3 Barriers improved 1.6 miles	36 barriers improved 118 miles	
	Complexity	Complexity:	8.2 Instream miles improved		2 Instream miles improved	1.5 Instream miles improved	10.2 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	10.5 Stream miles protected  203.1 Riparian acres protected 441.8 Riparian acres improved		32.1 Stream miles protected  11.8 Riparian miles improved 480 Riparian acres protected 174.8 Riparian acres improved	9.6 Stream miles protected  6.8 Stream miles improved 423 Riparian acres protected 170.3 Riparian acres improved	42.6 Stream miles protected  11.8 Riparian miles improved 683.1 Riparian acres protected 616.6 Riparian acres improved	
Middle Fork John Day River	Low stream flow	Flow:	14.5 Cfs protected		171 Af, 14.5 Cfs protected		171 Af, 14.5 Cfs protected	<a href="#">2000-015-00: Oxbow Conservation Area</a> <a href="#">2001-041-01: Forrest Ranch Conservation Area</a> <a href="#">2007-397-00: John Day Passage, Flow and Habitat Enhancement</a> USBR Project 4345, 4317, 4296, 4283, 4367, 4273, 4368, 4292, 4272, 4293, 4294, 4295, 4318, 4319, 4465
	Fish Entrainment	Entrainment:	3 Screens addressed		5 Screens addressed		8 Screens addressed	
	Barriers	Passage:	14 Barriers improved 83 miles		3 Barriers improved 17 miles	1 Barrier improved 1 miles	17 Barriers improved 100 miles	
	Complexity	Complexity:	9 Instream miles improved		4.7 Instream miles improved	0.7 Instream miles improved	13.7 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	11 Stream miles protected  250 Riparian acres protected 221.6 Riparian acres improved		12 Stream miles protected  10.5 Stream miles improved 180 Riparian acres protected 55.6 Riparian acres improved	5 Stream miles protected  7.3 Stream miles improved 180 Riparian acres protected 45.3 Riparian acres improved	23 Stream miles protected  10.5 Stream miles improved 430 Riparian acres protected 277.2 Riparian acres improved	



Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Middle Columbia River Steelhead DPS								
John Day River MPG								
North Fork John Day River	Low stream flow	Flow:			356 Af protected		356 Af protected	<a href="#">1984-021-00: John Day Habitat Enhancement</a> <a href="#">2000-031-00: Enhance Habitat in the North Fork John Day River</a>
	Fish Entrainment	Entrainment:			7 Screens addressed	3 Screens addressed	7 Screens addressed	
	Barriers	Passage:	1 Barrier improved 2.5 miles		11 Barriers improved 136.1 miles	4 Barriers improved 15.6 miles	12 Barriers improved 138.6 miles	
	Complexity	Complexity:			2.7 Instream miles improved	1.4 Instream miles improved	2.7 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	13.4 Stream miles protected  762 Riparian acres protected 134.1 Riparian acres improved		18.3 Stream miles protected  3 Stream miles improved 399 Riparian acres protected 50 Riparian acres improved	3 Stream miles protected  14 Riparian acres protected	31.7 Stream miles protected  3 Stream miles improved 1,161 Riparian acres protected 184.1 Riparian acres improved	
South Fork John Day River	Fish Entrainment	Entrainment:	2 Screens addressed		4 Screens addressed	1 Screen addressed	6 Screens addressed	<a href="#">1984-021-00: John Day Habitat Enhancement</a>
	Barriers	Passage:	3 Barriers improved 7 miles		1 Barrier improved 1.5 miles		4 Barriers improved 8.5 miles	
	Complexity	Complexity:	0.2 Instream miles improved				0.2 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	16 Stream miles protected  237 Riparian acres protected 21 Riparian acres improved		5.9 Stream miles protected  5.8 Stream miles improved 65 Riparian acres protected 3.1 Riparian acres improved	4 Stream miles protected  0.8 Stream miles improved 40 Riparian acres protected 1.1 Riparian acres improved	21.9 Stream miles protected  5.8 Stream miles improved 302 Riparian acres protected 24.1 Riparian acres improved	

Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Middle Columbia River Steelhead DPS								
Umatilla and Walla River MPG								
Touchet River	Low stream flow	Flow:	1.9 Cfs protected		1,080.5 Af, 2.5 Cfs protected	312.5 Af, 2.5 Cfs protected	1,080.5 Af, 4.4 Cfs protected	<a href="#">1996-046-01: Walla Walla River Basin Fish Habitat Enhancement</a>
	Fish Entrainment	Entrainment:	1 Screen addressed				1 Screen addressed	
	Barriers	Passage:	1 Barrier improved 100 miles				1 Barrier improved 100 miles	
	Complexity	Complexity:	2.5 Instream miles improved				2.5 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:			8.5 Stream miles protected 536.2 Riparian acres protected	7.3 Stream miles protected 450.2 Riparian acres protected	8.5 Stream miles protected 536.2 Riparian acres protected	
Umatilla River	Low stream flow	Flow:	2.1 Cfs protected		1,246.7 Af, 16.1 Cfs flow protected	660.7 Af, 8.53 Cfs protected	1,246.7 Af, 18.2 Cfs flow protected	<a href="#">1987-100-01: Umatilla Anadromous Fish Habitat-Umatilla Tribe</a> <a href="#">1987-100-02: Umatilla Anadromous Fish Habitat-Oregon Department of Fish and Wildlife (ODFW)</a> <a href="#">2008-206-00: Instream Flow Restoration</a>
	Fish Entrainment	Entrainment:			2 Screens addressed	2 Screens addressed	2 Screens addressed	
	Barriers	Passage:	3 Barriers improved 13 miles		5 Barriers improved 89.5 miles	4 Barriers improved 82.5 miles	8 Barriers improved 102.5 miles	
	Complexity	Complexity:	43.3 Instream miles improved		1.4 Instream miles improved	1.14 Instream miles improved	44.7 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	14.2 Stream miles protected  7 Riparian acres protected 1054 Riparian acres improved		9.9 Stream miles protected  29.7 Stream miles improved 586.6 Riparian acres protected 470.5 Riparian acres improved	1.3 Stream miles protected  22 Stream miles improved 68 Riparian acres protected 388.1 Riparian acres improved	24.1 Stream miles protected  29.7 Stream miles improved 593.6 Riparian acres protected 1,524.5 Riparian acres improved	
Walla Walla River	Low stream flow	Flow:	3.1 Cfs protected		7,977.3 Af, 8.3 protected	1,707.3 Af, 4.7 Cfs protected	7,977.3 Af, 11.4 Cfs protected	<a href="#">2007-396-00: Walla Walla Basinwide Tributary Passage and Flow</a> <a href="#">2008-206-00: Instream Flow Restoration</a>
	Fish Entrainment	Entrainment:	1 Screen addressed		1 Screens addressed		2 Screens addressed	
	Barriers	Passage:	2 Barriers improved 30 miles		8 Barriers improved 35.2 miles	7 Barriers improved 2 miles	10 Barriers improved 65.2 miles	
	Complexity	Complexity:	0.2 Instream miles improved		0.8 Instream miles improved	0.8 Instream miles improved	1 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	9 Riparian acres improved				9 Riparian acres improved	
Willow Creek	Fish Entrainment	Entrainment:			1 Screen addressed		1 Screen addressed	<a href="#">1984-025-00 Blue Mountain Fish Habitat Improvement</a> <a href="#">1996-083-00 Grande Ronde Watershed Restoration</a>

Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Middle Columbia River Steelhead DPS								
Yakima River Group MPG								
Naches River	Low stream flow	Flow:	4.4 Cfs protected				4.4 Cfs protected	<a href="#">1988-120-25: Yakima River Management, Data and Habitat-Yakima/Klickitat Fisheries Project (YKFP)</a> <a href="#">1996-035-01: Yakama Reservation Watershed Project</a>
	Fish Entrainment	Entrainment:	12 Screens addressed		2 Screens addressed	1 Screen addressed	14 Screens addressed	
	Barriers	Passage:	1 Barrier improved 0.5 miles		1 Barriers improved 17 miles		2 Barriers improved 17.5 miles	
	Complexity	Complexity:	0.3 Instream miles improved		4 Instream miles improved		4.3 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	160 Riparian acres improved		3 Stream miles protected 2.1 Stream miles improved 130 Riparian acres protected 10 Riparian acres improved	0.6 Stream miles improved 5 Riparian acres improved	3 Stream miles protected 2.1 Stream miles improved 130 Riparian acres protected 170 Riparian acres improved	
Satus Creek	Low stream flow	Flow:			8,062 Af protected		8,062 Af protected	<a href="#">1996-035-01: Yakama Reservation Watershed Project</a>
	Barriers	Passage:	1 Barrier improved 93 miles				1 Barrier improved 93 miles	
	Complexity	Complexity:			0.8 Instream miles improved		0.8 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	168 Stream miles protected 8062 Riparian acres protected		3.64 Stream miles protected 31.5 Riparian acres protected 200 Riparian acres improved	2.64 Stream miles protected 30.5 Riparian acres protected 200 Riparian acres improved	171.6 Stream miles protected 8,093.5 Riparian acres protected 200 Riparian acres protected	
Toppenish	Fish Entrainment	Entrainment:	1 Screen addressed		1 Screen addressed		2 Screens addressed	<a href="#">1992-062-00: Lower Yakima Valley Riparian Wetlands Restoration</a> <a href="#">1996-035-01: Yakama Reservation Watershed Project</a>
	Barriers	Passage:	1 Barrier improved 50 miles		4 Barriers improved 126.5 miles	3 Barriers improved 125.5 miles	5 Barriers improved 176.5 miles	
	Complexity	Complexity:	1.5 Instream miles improved		0.4 Instream miles improved		1.9 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	3.2 Stream miles protected 98 Riparian acres protected 360 Riparian acres improved		139 Riparian acres protected 40 Riparian acres improved		3.2 Stream miles protected 237 Riparian acres protected 400 Riparian acres improved	
Yakima River Upper Mainstem	Low stream flow	Flow:	16.3 Cfs protected		6,402.8 Af, 15.4 Cfs protected	1,043.3 Af, 4.4 Cfs protected	6,402.8 Af, 31.7 Cfs protected	<a href="#">1988-120-25: Yakima River Management, Data and Habitat-Yakima/Klickitat Fisheries Project (YKFP)</a> <a href="#">2002-013-01: Water Entity - Water Transaction Program</a> <a href="#">2007-112-00: Teanaway River Watershed Protection</a> <a href="#">2007-398-00: Yakima Basinwide Tributary Passage and Flow</a>
	Fish Entrainment	Entrainment:	3 Screens addressed		10 screens addressed	4 Screens addressed	13 screens addressed	
	Barriers	Passage:	5 Barriers improved 16 miles		15 barriers improved 186.5 miles	4 Barriers improved 41.5 miles	20 barriers improved 202.5 miles	
	Complexity	Complexity:	0.1 Instream miles improved		4.9 Instream miles improved		5 Instream miles improved	
	Degraded Riparian Habitat	WQ/Riparian:	15 Stream miles protected 55 Riparian acres protected 6.8 Riparian acres improved		1.31 Stream miles improved 65 Riparian acres protected 24.2 Riparian acres improved	0.01 Riparian acres improved	15 Stream miles protected 1.31 Stream miles improved 120 Riparian acres protected 31 Riparian acres improved	

Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Snake River Steelhead DPS								
Dry Clearwater MPG								
MPG Metrics cited for Clearwater River steelhead also benefit reintroduced Clearwater River spring/summer Chinook and coho salmon populations. Neither of these natural salmon species in the Clearwater drainage are listed under the federal ESA, but they are protected by state law.								
Clearwater River Lower Mainstem	Barriers	Entrainment:			1 Screen addressed	1 Screen addressed	1 Screen addressed	<a href="#">1999-017-00: Protect and Restore Lapwai Creek Watershed</a> <a href="#">2002-061-00: Potlatch River Watershed Restoration</a> <a href="#">2002-070-00: Lapwai Creek Anadromous Habitat</a> <a href="#">2008-604-00: Lower Clearwater and Potlatch Watersheds Habitat Improvements</a>
		Passage:	4 Barriers improved 27.6 miles		6 Barriers improved 28.2 miles	4 Barriers improved 21.2 miles	10 Barriers improved 55.8 miles	
	Reduced channel complexity	Complexity:		Add structures to ≈ 1.5 stream miles	1.4 Instream miles improved	0.3 Instream miles improved	1.4 Instream miles improved	
	Riparian and channel alteration, channel incision High summer temperature; Sediment, nutrients	WQ/Riparian:		Protect ≈ 2.7 riparian miles  Treat ≈ 20 riparian miles  Treat 14 riparian acres  477.5 Riparian acres improved  Treat 14 riparian acres Treat ≈ 0.2 road miles	3 Stream miles protected  21.4 Stream miles improved  38 Riparian acres protected  263.2 Riparian acres improved	1.3 Stream miles protected  15.1 Stream miles improved  30.8 Riparian acres protected  250.3 Riparian acres improved	3 Stream miles protected  21.4 Stream miles improved  38 Riparian acres protected  740.7 Riparian acres improved	
*Lochsa River	Barriers	Passage:	4 Barriers improved 4.5 miles	Improve access to 15 miles	3 Barriers improved 9.8 miles		7 Barriers improved 14.3 miles	<a href="#">2007-395-00: Protect and Restore Lochsa Watershed</a>
		Loss of complexity	Complexity:		None identified			
	Degraded riparian conditions Poor water quality  Elevated stream temperatures Excess fine sediments	WQ/Riparian:	8.5 Riparian acres improved	Treat 170 riparian acres	56.1 Stream miles improved	6.1 Stream miles improved	56.1 Stream miles improved	
				Treat 1575 riparian/upland acres Treat 7.9 road miles  Remove 75.2 road miles	Treated 14.5 road miles		8.5 Riparian acres improved  Treated 14.5 road miles	
*Lolo Creek	Barriers	Passage:	5 Barriers improved 11.7 miles	Improve access to 23.2 miles	4 barriers improved 5.5 miles		9 barriers improved 17.2 miles	<a href="#">1996-077-02: Lolo Creek Watershed Restoration</a>
	Loss of complexity	Complexity:	0.1 Instream miles improved	Treat 3 riparian miles			0.1 Instream miles improved	
	Poor water quality/  Elevated stream temperatures Excess fine sediments	WQ/Riparian:		Treat 30 riparian/upland miles Treat 15.1 road miles	2 Stream miles improved		2 Stream miles improved	
*Selway River	Barriers	Passage:			1 Barrier improved 3.5 miles	1 Barrier improved 3.5 miles	1 Barrier improved 3.5 miles	<a href="#">2007-092-00 Restore Selway River Watershed</a>
*South Fork Clearwater River	Barriers	Passage:	7 Barriers improved 29.5 miles	Improve access to 23.6 miles	4 Barriers improved 1 miles	2 Barriers improved	11 barriers improved 30.5 miles	<a href="#">1996-077-05: Meadow Creek Watershed Restoration</a> <a href="#">2000-036-00: Mill Creek Watershed Restoration</a> <a href="#">2002-072-00: Red River Watershed Restoration</a> <a href="#">2010-003-00: Lower South Fork Clearwater River Watershed Restoration</a>
	Loss of complexity	Complexity:	2 Instream miles improved	Add structures to 5.5 stream miles	1.8 Instream miles improved	1.8 Instream miles improved	3.8 Instream miles improved	

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Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Snake River Steelhead DPS								
Dry Clearwater MPG								
MPG Metrics cited for Clearwater River steelhead also benefit reintroduced Clearwater River spring/summer Chinook and coho salmon populations. Neither of these natural salmon species in the Clearwater drainage are listed under the federal ESA, but they are protected by state law.								
	Degraded riparian conditions Excess fine sediments	WQ/Riparian:	3.6 Riparian acres improved	Treat 8.5 stream miles  Treat 34.1 riparian miles  Treat 31 riparian acres Treat 55 riparian/upland acres Treat 100 upland acres Remove 76.5 road miles	2.5 Stream miles protected  19 Stream miles improved  333 Riparian acres protected 143.1 Riparian acres improved	28.1 Riparian acres improved	2.5 Stream miles protected  19 Stream miles improved  333 Riparian acres protected 146.7 Riparian acres improved	

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Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Snake River Steelhead DPS								
Grande Ronde River MPG								
Grande Ronde River Lower Mainstem Tributaries	Barriers	Passage:	2 Barriers improved 11.5 miles		2 Barriers improved		4 Barriers improved 11.5 miles	<a href="#">1996-080-00: Northeast Oregon Wildlife Project</a>
	Excess sediments	WQ/Riparian:	10 Riparian acres improved	Road decommissioning			10 Riparian acres improved	
Grande Ronde River Upper Mainstem	Low summer flows	Flow:			190.2 Af, 1.7 Cfs protected	Af, 0.9 Cfs protected	190.2 Af, 1.7 Cfs protected	<a href="#">1992-026-01: Grand Ronde Model Watershed</a> <a href="#">1984-025-00: Blue Mountain Fish Habitat Improvement</a> <a href="#">1996-083-00: Grand Ronde Watershed Restoration</a> <a href="#">2008-206-00: Instream Flow Restoration</a> USBR Project 4428, 4455, 4425
	Barriers	Passage:	4 Barriers improved 81.3 miles	Improve access to ≈ 50 miles	25 Barriers improved 142.3 miles	20 Barriers improved 110.7 miles	29 Barriers improved 223.6 miles	
	Complexity and connectivity	Complexity:	7 Instream miles improved	Add structures to 20.2 stream miles	59.6 Instream miles improved	7.3 Instream miles improved	66.6 Instream miles improved	
	Degraded riparian conditions			Reconnect/add 0.4 miles channel habitat				
	Excess fine sedi- ments	WQ/Riparian:	173.4 Riparian acres improved	Protect 1.5 stream miles	11.8 Stream miles protected	9.84 Stream miles protected	11.8 Stream miles protected	
	Poor water quality			Treat 7 riparian miles	43.3 Stream miles improved	17.9 Stream miles improved	43.3 Stream miles improved	
	Low dissolved oxy- gen			Protect 12-80 riparian acres	88 Riparian acres protected	72.5 Riparian acres protected	88 Riparian acres protected	
			Treat 220 riparian acres	289.7 Riparian acres improved	145.7 Riparian acres improved	463.1 Riparian acres improved		
			Remove 0.4 road miles	0.1 Road miles treated		0.1 Road miles treated		
Joseph Creek	Complexity and connectivity	Passage:	2 Barriers improved 10.3 miles		2 Barriers improved 21.1 miles		4 Barriers improved 31.4 miles	<a href="#">1996-080-00: Northeast Oregon Wildlife Project</a>
	Excess fine sedi- ments	Complexity:	8 Instream miles improved				8 Instream miles improved	
	Poor water quality/ Elevated stream temperature	WQ/Riparian:	11 Riparian acres improved	Treat/protect 1 riparian mile	32 Stream miles protected	32 Stream miles protected	32 Stream miles protected	
	Excess nutrients			Road decommissioning	8.5 Stream miles improved		8.5 Stream miles improved	
Wallowa River	Low summer flow	Flow:	52.2 Cfs protected	Protect 1 Cfs of instream water	1,188 Af, 15 Cfs protected		1,188 Af, 67.2 Cfs protected	<a href="#">1992-026-01: Grand Ronde Model Watershed</a>
	Barriers	Passage:	1 Barrier improved 5 miles	Improve access to in-stream habitat	2 Barriers improved 20 miles	2 Barriers improved 20 miles	3 Barrier improved 25 miles	<a href="#">2002-013-01: Water Entity - Water Transaction Program</a>
	Complexity and connectivity	Complexity:	1.9 Instream miles improved	Reconnect 0.75 miles	0.3 Instream miles improved		2.2 Instream miles improved	
	Degraded riparian conditions	WQ/Riparian:	51 Riparian acres improved	Treat 1.4 miles floodplain or riparian habitat	0.7 Stream miles improved		0.7 Stream miles improved	
	Excess fine sedi- ments			Treat <10 wetland acres			51 Riparian acres improved	

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			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Snake River Steelhead DPS								
Imnaha River MPG								
Imnaha River	Barriers	Passage:		Improve access to ≈ 23 miles	2 Barriers improved 20 miles	2 Barriers improved 20 miles	2 Barriers improved 20 miles	<a href="#">1992-026-01 Grande Ronde Model Watershed</a>
	Complexity and connectivity	Complexity:			0.12 Instream miles improved	0.12 Instream miles improved	0.12 Instream miles improved	
	Degraded riparian conditions	WQ/Riparian:		Treat ≈ 10 riparian/stream miles	0.06 Stream miles improved	0.06 Stream miles improved	0.06 Stream miles improved.	
	Excess fine sediment		250 Riparian acres protected	Decommission ≈ 5 road miles	1 Riparian acre protected	1 Riparian acre protected	251 Riparian acre protected	
Snake River Steelhead DPS								
Lower Snake MPG								
Asotin Creek	Complexity and connectivity	Complexity:		None identified				<a href="#">1994-018-05: Asotin Creek Enhancement and Restoration</a> <a href="#">2002-050-00: Riparian Buffers on Couse and Tenmile Creeks in Asotin County</a>
	Degraded riparian conditions	WQ/Riparian:		Protect ≈ 15 riparian miles	3.2 stream miles protected	2.3 Stream miles protected	3.2 stream miles protected	
	High water temperatures				13.5 Stream miles improved	11.5 Stream miles improved	13.5 Stream miles improved	
		269.8 Riparian acres improved	Enhance ≈ 30 riparian acres	25 Riparian acres protected 76.8 Riparian acres improved	25 Riparian acres protected 64.8 Riparian acres improved	25 Riparian acres protected 346.6 Riparian acres improved		
Tucannon	Entrainment	Entrainment:	5 Screens addressed				5 screens addressed	<a href="#">1994-018-06: Tucannon Stream and Riparian Restoration</a> <a href="#">1994-018-07: Garfield County Fall Chinook and Steelhead Habitat Improvement</a> <a href="#">2008-202-00: Protect and Restore Tucannon Watershed</a>
	Connectivity	Passage:			3 Barriers improved 0.9 miles	2 Barriers addressed	3 Barriers improved 0.9 miles	
	Complexity	Complexity:		Install structures in ≈ 0.6 miles	8.2 Instream miles improved	4.1 Instream miles improved	8.2 Instream miles improved	
	Degraded riparian conditions	WQ/Riparian:	29.5 Stream miles protected	Protect ≈ 5.5 miles of stream bank	0.8 Stream miles protected	0.8 Stream miles protected	30.3 Stream miles protected	
	High water temperatures				4.3 Stream miles improved	2.4 Stream miles improved	4.3 Stream miles improved	
		591 Riparian acres protected	Protect ≈ 200 riparian acres	395.8 Riparian acres protected 76.1 Riparian acres improved	19.8 Riparian acres protected 60.1 Riparian acres improved	986.8 Riparian acres protected 76.1 Riparian acres improved		



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			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Snake River Steelhead DPS								
Salmon River MPG								
*Lower Middle Fork Salmon River (Big, Camas, and Loon Creeks)	Barriers	Passage:		Improve access to ≈ 2 miles	1 Barrier improved 2.5 miles		1 barrier, improved 2.5 miles	2007-127-00: <a href="#">East Fork of South Fork Salmon River Pas- sage Restoration</a>
	Excess fine sedi- ment	Complexity:	0.1 Instream miles improved	Decommission ≈ 15 miles road			0.1 Instream miles improved	
East Fork Salmon River	Low stream flow	Flow:	13.2 Cfs protected	Protect/acquire 7.5 Cfs instream water	2,119.2 Af, 6.2 Cfs protected	1528.2 Af, 4.23 Cfs protected	2,119.2 Af, 19.4 Cfs protected	2007-268-00: <a href="#">Idaho Watershed Habitat Restoration- Custer District</a> 2007-399-00: <a href="#">Upper Salmon Screen Tributary Passage</a> 2002-013-01: <a href="#">Water Entity - Water Transaction Program</a> USBR Project 4240
	Fish entrainment	Entrainment:	2 Screens addressed	Install 3 fish screens	5 Screens addressed		7 Screens addressed	
	Barriers	Passage:	1 Barrier improved 2 miles	Improve access to 3.9 miles	1 Barriers improved 1 mile		2 Barriers improved 3 miles	
	Habitat Complexity	Complexity:	2 Instream miles improved				2 Instream miles improved	
	Lack of complex habitat Excess fine sedi- ment	WQ/Riparian:		Connect ≈ 500-1000' side channels Protect ≈ 0.5 riparian miles	2 stream miles protected 100 Stream miles improved 23 Riparian acres protected 12.5 Riparian acres improved	100 Stream miles improved 3.4 Riparian acres improved	2 Stream miles protected 100 Stream miles improved 23 Riparian acres protected 12.5 Riparian acres improved	
Lemhi River	Low stream flow	Flow:	103.5 Cfs protected	Protect/acquire 26 Cfs instream water	7,658.4 Af, 34.1 Cfs protected		7,658.4 Af, 137.6 Cfs protect- ed	1994-015-00: <a href="#">Idaho Fish Screening Project</a> 1994-050-00: <a href="#">Salmon River Habitat Enhancement</a> 2007-394-00: <a href="#">Idaho Watershed Habitat Restoration- Lemhi</a> 2007-399-00: <a href="#">Upper Salmon Screen Tributary Passage</a> 2008-608-00: <a href="#">Idaho MOA/Fish Accord Water Transactions</a> 2008-903-00: <a href="#">ESA Habitat Restoration</a> 2010-072-00: <a href="#">Lemhi River Restoration</a> USBR Projects: 4496, 4495, 4493, 4482, 4486, 4387,4481, 4487, 4472, 4483, 4494, 4485, 4484, 4461, 4386, 4343, 4462, 4463, 4386, 4378, 4417, 4233, 4529, 4530, 4454, 4528, 4532, 4531
	Fish entrainment	Entrainment:	8 Screens addressed	Install 10 fish screens	14 screens addressed	4 Screens addressed	22 screens addressed	
	Barriers	Passage:	5 Barriers improved 147 miles	Improve access to ≈ 25 miles	11 barriers improved 41.3 miles	6 Barriers improved 9.5 miles	16 barriers improved 188.3 miles	
	Habitat Complexity	Complexity:		Reconnect ≈ 2.0 miles stream channel	3 Instream miles improved	1.6 Instream miles improved	3 Instream miles improved	
	Degraded riparian conditions Excess sediments High water tem- peratures	WQ/Riparian:		Protect ≈ 50 riparian miles Treat ≈ 1 stream miles Protect 68 riparian acres	8.5 stream miles protected 2.5 Stream miles improved 136.5 Riparian acres protected 52.2 Riparian acres improved	5.5 Stream miles protected 1.25 Stream miles improved 87.9 Riparian acres protected 24.2 Riparian acres improved	8.5 stream miles protected 2.5 Stream miles improved 136.5 Riparian acres protected 52.2 Riparian acres improved	
Middle Fork Salmon River Upper Mainstem	Population not included in 2010-12 IP	Entrainment:	2 Screens addressed				2 Screens addressed	1994-015-00 <a href="#">Idaho Fish Screening Improvement</a>
*Little Salmon and Rapid River	Barriers	Passage:	3 Barriers improved 20.8 miles	Improve access to 3.0 miles	2 Barriers improved 5.5 miles	1 Barrier improved 2.5 miles	5 Barriers improved 26.3 miles	2007-064-00: <a href="#">Slate Creek Watershed Restoration</a> USBR Project 4237
	Riparian Condition Water Tempera- ture	WQ/Riparian:			0.4 Stream miles improved	0.1 Stream miles improved	0.4 Stream miles improved	
					0.4 Riparian acres improved	0.2 Riparian acres improved	0.4 Riparian acres improved	



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			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Snake River Steelhead DPS								
Salmon River MPG								
Pahsimeroi River	Low stream flow	Flow:	46 Cfs protected	Protect ≈ 6 Cfs instream flow	1,706.1 Af, 7.1 Cfs protected	1,553.1 Af, 7.1 Cfs protected	1,706.1 Af, 53.1 Cfs protected	<a href="#">1994-015-00: Idaho Fish Screening Project Restoration-Lemhi</a> <a href="#">1994-050-00: Salmon River Habitat Enhancement</a> <a href="#">2008-603-00: Pahsimeroi River Habitat</a> USBR Projects 4389, 4410, 4400, 4426, 4427, 4324, 4431, 4488
	Fish entrainment	Entrainment:	6 Screens addressed	Install 4 fish screens	1 Screen addressed	1 Screen addressed	7 Screens addressed	
	Barriers	Passage:	2 Barriers improved 2 miles	Improve access to ≈ 30 miles	12 Barriers improved 19.5 miles	1 Barrier improved 0.8 miles	14 Barriers improved 21.5 miles	
	Degraded riparian habitat Excess sediments	WQ/Riparian:		Protect ≈ 3.5 riparian miles Treat ≈ .5 riparian miles	8.1 Stream miles protected 4.2 Stream miles improved 14.6 Riparian acres protected 7.9 Riparian acres improved	2.5 Stream miles improved 3.1 Riparian acres improved	8.1 Stream miles protected 4.2 Stream miles improved 14.6 Riparian acres protected 7.9 Riparian acres improved	
*Secesh River	Passage barriers	Passage:		Improve access to ≈ 12 miles	1 Barrier improved 0.83 miles	1 Barrier improved 0.83 miles	1 Barrier improved 0.83 miles	<a href="#">2007-127-00: East Fork of South Fork Salmon River Pas- sage Restoration</a>
	Excess sediment	WQ/Riparian:		Decommission ≈ 45 miles road	14.4 Stream miles improved 1 Riparian acre improved	1 Stream mile improved 1 Riparian acre improved	14.4 Stream miles improved 1 Riparian acre improved	
*South Fork Salmon River	Barriers	Passage:	3 Barriers improved 15.6 miles	Improve access to ≈ 18.6 miles	3 Barriers improved 10.7 miles		6 Barriers improved 26.3 miles	<a href="#">2007-127-00: East Fork of South Fork Salmon River Pas- sage Restoration</a>
	Excess sediment	WQ/Riparian:		Enhance/Restore ≈ 3 riparian miles	0.5 stream miles protected		0.5 stream miles protected	
	High water tem- peratures				0.1 Stream miles improved		0.1 Stream miles improved	
					10 Riparian acres protected 1 Riparian acres improved	0.8 Riparian acres improved	10 Riparian acres protected 1 Riparian acres improved	

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			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Upper Columbia River Steelhead DPS								
Upper Columbia – below Chief Joseph MPG								
*Entiat	Low Stream flow	Flow:	0.3 Cfs protected	Protect 6.5 Cfs water			0.3 Cfs protected	2007-231-00: <a href="#">Entiat River Riparian Restoration</a> 2007-034-00: <a href="#">Columbia Cascade Pump Screen Correction</a> 2007-055-00: <a href="#">Lower Entiat Off-Channel Restoration</a> 2007-318-00: <a href="#">Irrigation System Consolidation Project</a> USBR Projects 4326, 4391, 4501, 4502, 4503, 4357, 4439, 4430, 4339, 4329, 4285, 4194, 4340, 4399, 4466
	Entrainment	Entrainment:	1 Screen addressed		7 Screens addressed		8 Screens addressed	
	Passage barriers	Passage:	1 Barrier improved access		2 Barrier improved 60 miles		3 Barriers improved 61 miles	
	Complexity and connectivity	Complexity:	1.4 Instream miles improved	Reconnect ≈ 0.5 miles side channel	5.1 Instream miles improved	2.9 Instream miles improved	6.5 Instream miles improved	
	Riparian condition Excess sediment Habitat diversity	WQ/Riparian:	2 Riparian acres improved	Treat ≈ 1.9 stream miles	1.9 Stream miles improved 0.9 Riparian acres protected 4.1 Riparian acres improved	1.1 Stream miles improved 0.9 Riparian acres protected 4.1 Riparian acres improved	1.9 Stream miles improved 0.9 Riparian acres protected 6.1 Riparian acres improved	
*Methow	Low Stream flow	Flow:	97.1 Cfs protected	Protect ≈ 15 Cfs of in-stream water	973.4 Af, 3.9 Cfs protected		973.4 Af, 101 Cfs protected	2002-013-01: <a href="#">Water Entity - Water Transaction Program</a> 2007-035-00: <a href="#">Methow Basin Riparian Enhancement Program</a> 2007-251-00: <a href="#">Methow Valley Irrigation District (MVID) East Irrigation Diversion</a> 2009-003-00: <a href="#">Upper Columbia Habitat Restoration</a> 2005-010-00: <a href="#">Chewuch River Side Channel</a> 2006-007-00: <a href="#">Little Bridge Creek Fence</a> 2007-034-00: <a href="#">Columbia Cascade Pump Screen Correction</a> 2007-172-00: <a href="#">MVID West Headworks</a> 2007-214-00: <a href="#">Fender Mill Floodplain Restoration</a> 2007-237-00: <a href="#">Elbow Coulee Floodplain Restoration</a> 2007-264-00: <a href="#">Habitat Complexity Projects in Methow Basin</a> 2008-104-00: <a href="#">Land and Water Acquisition</a> USBR Projects 4361, 4390, 4489, 4491, 4490, 4034, 4432, 4402, 4420, 4395, 4261, 4396, 4330, 4262, 4162, 4333, 4325, 4331, 4162, 4270, 4009, 4534, 4459, 4458
	Fish entrainment	Entrainment:			4 screens addressed		4 screens addressed	
	Barriers	Passage:	2 Barriers improved 33.1 miles	Improve access to ≈ 0.8 miles	3 Barriers improved 62.5 miles		5 Barriers improved 95.6 miles	
	Complexity and connectivity	Complexity:	4.6 Instream miles improved	Reconnect ≈ 2.3 miles side channel	2.6 Instream miles improved	1.8 Instream miles improved	7.2 Instream miles improved	
	Riparian & flood-plain function; In-channel habitat quantity	WQ/Riparian:	1 Stream mile protected  135 Riparian acres protected 32.3 Riparian acres improved	Protect 1 stream mile Treat ≈ 3.2 stream miles  Restore ≈ 18.6 riparian miles Restore ≈ 70 riparian acres	8.9 Stream miles protected 5.7 Stream miles improved  227.9 Riparian acres protected 9.8 Riparian acres improved	6.3 Stream miles protected 1.3 Stream miles improved  227.9 Riparian acres protected 9.1 Riparian acres improved	9.9 Stream miles protected 5.7 Stream miles improved  362.9 Riparian acres protected 42.1 Riparian acres improved	
*Okanogan	Low Stream flow	Flow:	80.1 Cfs protected	Protect ≈ 5 Cfs of in-stream water	2,584.9 Af, 128.7 Cfs protected	685.7 Af, 8.2 Cfs protected	2,584.9 Af, 208.8 Cfs protected	1996-042-00: <a href="#">Restore Salmon Creek Anadromous Fish</a> 2000-001-00: <a href="#">Omak Creek Anadromous Fish Habitat and Passage</a> 2007-145-00: <a href="#">Okanogan Livestock and Water for Habitat Improvement</a> 2007-224-00: <a href="#">Okanogan Subbasin Habitat Implementation Program</a> 2008-104-00: <a href="#">Land &amp; Water Acquisition</a> 2002-013-01: <a href="#">Columbia Basin Water Transactions Program</a> 1997-056-00: <a href="#">Klickitat Watershed Enhancement Project</a>
	Mechanical Injury	Entrainment:		Install 30 fish screens	1 Screen addressed	1 Screen addressed	1 Screen addressed	
	Barriers	Passage:	7 Barriers improved 14 miles	Improve access to ≈ 26 miles	13 Barriers improved 29.1 miles	4 Barriers improved 13.4 miles	20 barriers improved 43.1 miles	
	Complexity and connectivity	Complexity:	0.2 Instream miles improved	Reconnect ≈ 2 miles side channel	4.4 Instream miles improved	0.1 Instream miles improved	4.6 Instream miles improved	
	Riparian & flood-plain function  High stream temperatures	WQ/Riparian:	1.1 Stream miles protected  103.5 Riparian acres protected 35.4 Riparian acres improved	Protect/enhance ≈ 17 riparian miles  Protect/enhance ≈ 246 riparian acres  Protect ≈ 3540 acres land Treat 15 miles road	2.9 Stream miles protected 9 Stream miles improved  66.1 Riparian acres protected 77.7 Riparian acres improved	1 Stream mile protected 1.8 Stream mile improved  53 Riparian acres protected 13 Riparian acres improved	4 Stream miles protected 9 Stream miles improved  169.6 Riparian acres protected 113.1 Riparian acres improved	

Attachment 2 – Table 1. Summary of Tributary Habitat Metrics Completed by Population

Population (* Indicates Priority Population)	Limiting Factors	Metric Category	RPA 34	RPA 35			Total 2007-2012 (RPAs 34 and 35 Combined)	
			2007 - 2009 Completed Metrics	2010 - 2012 Planned Metrics	2010 – 2012 Completed Metrics	2012 Completed Metrics (Annual Report Requirement)	Total 2007-2012 Completed Metrics	Projects Associated with 2007-2012 Completed Metrics (RPAs 34 & 35)
Upper Columbia River Steelhead DPS								
Upper Columbia – below Chief Joseph MPG								
*Wenatchee	Low stream flow	Flow:		Protect ≈ 7.5 Cfs of in-stream water	1.2 Cfs protected		1.2 Cfs protected	<a href="#">2007-325-00: Wenatchee River Complexity Fisheries Enhancement</a> USBR Projects: 4361, 4390, 4393, 4287, 4361, 4390, 4316, 4315, 4214, 4193, 4214, 4284, 4216, 4217, 4253, 4219, 4121, 4123, 4390
	Mechanical Injury	Entrainment:	5 Screens addressed				5 screens addressed	
	Barriers	Passage:	15 Barriers improved 20.4 miles	Improve access to ≈ 7.2 miles	14 Barriers improved 4.5 miles	Improved 0.5 mile	29 Barriers improved 24.9 miles	
	Complexity and connectivity	Complexity:	1.6 Instream miles improved	Reconnect ≈ 1.2 miles side channel	0.08 Instream miles improved		1.68 Instream miles improved	
	Riparian & flood-plain function	WQ/Riparian:		Protect/enhance ≈ 8.4 riparian miles	1.0 Stream miles improved	0.48 Stream miles improved	1.0 Stream miles improved	
	High stream temperatures		2.7 Riparian acres improved	Treat ≈ .2 stream miles	3.51 Riparian acres improved	3.51 Riparian acres improved	6.2 Riparian acres improved	

Attachment 2 – Table 2. Status of Tributary Habitat Actions Completed 2007-2012 with Reclamation Technical Assistance

Table 2 contains metric and metric values for actions completed 2007-2012 with technical assistance provided by Reclamation. Actions in table 2 complement some of the BPA-funded projects listed in Attachment 2, Table 1. 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.

BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude D M S	West Longitude D M S	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
Upper Columbia (UC) River Steelhead and Spring Chinook Salmon																			
4399	Entiat	Complexity	Tyee Restoration Project (3B Site)	The project utilizes selective levee breaching and large woody material (LWM) structures to address limiting factors. Three levee breaches and nine LWM structures/structure groups were installed.	UC River Steelhead, UC River Spring Chinook Salmon	47 52 09	120 25 28	8/13/2009	11/15/2012										0.7
4534	Methow	Complexity	Pete Creek Complexity Project	Restoration actions were initiated in 2010. Piezometers were installed by Reclamation to collect baseline data on groundwater flow and depth at the site. Based on initial results, MSRF initiated re-vegetation work in 2011. In addition, MSRF added approximately 30 pieces of large wood in the main channel along the eroding face of the property's riverfront, and along an overflow channel where high water flows are beginning to re-establish connectivity with the remnant channels.	UC River Steelhead, UC River Spring Chinook Salmon	48 30 36	120 11 19	1/1/2010	5/31/2012										0.3
4459	Methow	Complexity	M2 O'Banion Project Area (Phase I - RM 46)	RM-46 is part of the first phase of the larger Middle Methow (M2) Project. The project created three scour pools containing ground cover, and complex hiding cover at a total of three locations along the left bank of a half-mile stretch of the mainstem Methow River.	UC River Steelhead, UC River Spring Chinook Salmon	48 24 54	120 08 27	5/7/2010	10/1/2012										0.4

**Attachment 2 – Table 2. Status of Tributary Habitat Actions Completed 2007-2012 with Reclamation Technical Assistance**

BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4458	Methow	Complexity	M2 Whitefish Island Habitat Improvement Project (WFI)	The M2-WFI project installed the following habitat complexity structures: two bar apex engineered log jams, five engineered log jams along the side channel left bank, two large wood assemblies along the side channel left bank, one live crib along the side channel right bank, various large wood on gravel bars adjacent to the main channel and side channel, and restoring riparian plant diversity and abundance.	UC River Steelhead, UC River Spring Chinook Salmon	48 26 00	120 09 40	5/7/2010	11/7/2012										0.3
4326	Entiat	Complexity	Keystone Canyon Project	This project replaced a push-up diversion structure and installed habitat improvement/floodplain connectivity features. The goal is to improve fish passage and to add habitat complexity to the Entiat to improve spawning and rearing habitat quantity and quality for native endangered fish species. This project was completed by the Yakama Nation as part of their Fish Accord. Reclamation provided survey data.	UC River Steelhead, UC River Spring Chinook Salmon	47 39 54	120 16 05	1/29/2007	9/30/2010	0	0	S		0	0	0	0	0	0.2
4391	Entiat	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.	UC River Steelhead, UC River Spring Chinook Salmon	47 41 42	120 19 13	4/16/2009	10/15/2009	0	0	D	P	22	0	0	0	0	0
4489	Methow	Stream-flow	Beaver Creek Water Purchase - Marrachi	The Marrachi Project was a permanent acquisition resulting in up to a 0.7 cfs increase in the instream flow of Beaver Creek from August 1 to September 15 each year.	UC River Steelhead, UC River Spring Chinook Salmon	48 24 07	120 02 30	8/15/2011	12/31/2099	0.7	8	A		0	0	0	0	0	0
4491	Methow	Stream-flow	Campbell - Beaver Creek Water Purchase	The Campbell Purchase, finalized in 2011, was a permanent acquisition resulting in up to a 1.57 cfs increase in Beaver Creek instream flow from August 1 to September 15.	UC River Steelhead, UC River Spring Chinook Salmon	48 23 54	120 02 40	4/15/2011	12/31/2099	1.57	7.5	A		0	0	0	0	0	0

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BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4490	Methow	Stream-flow	Prewitt - Methow Water Lease	This 10-year lease is for 1.3 cfs and 521.18 acre-feet annually through the irrigation season of April 1 to October 31 annually in the Methow River.	UC River Steelhead, UC River Spring Chinook Salmon	48 27 12	120 09 45	4/1/2011	10/31/2021	1.3	49.5	A		0	0	0	0	0	0
4034	Methow	Access	MVID East Canal Diversion Dam	Replaced diversion 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.	UC River Steelhead, UC River Spring Chinook Salmon	48 25 08	120 08 25	9/13/2002	10/30/2010	0	0	D	P	60	0	0	0	0	0.5
4432	Methow	Stream-flow	Little Chewuch Water Efficiency Improvement Project	This project permanently increased stream flows in the lower 8 miles of the Chewuch River by 0.5 cfs by piping a previous open ditch. This permanently reduced the streamflow diversion previously needed to meet the water right. The Diversion Reduction agreement was coordinated by Methow Salmon Recovery Foundation (MSRF) and assures that this water will be protected for instream purposes through the Washington State Water Trust Program.	UC River Steelhead, UC River Spring Chinook Salmon	48 56	120 18	10/30/2009	9/30/2010	0.5	8	A		0	0	0	0	0	0
4402	Methow	Stream-flow	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.	UC River Steelhead, UC River Spring Chinook Salmon	48 25 50	120 09 02	11/11/2009	6/1/2010	0.5	45			0	0	0	0	0	0
4420	Methow	Stream-flow	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.	UC River Steelhead, UC River Spring Chinook Salmon	48 25 22	120 07 55	10/15/2009	6/1/2010	0.5	54			0	0	0	0	0	0

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BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4395	Methow	Complexity	Operskalski Complexity	This project improved habitat complexity in Beaver Creek by adding large wood complexes, replanting the cattle-damages stream bank and protecting the project by constructing about 1000' of fencing. The property was low in large wood, had severely eroded banks due to loss of riparian vegetation from cattle trampling and over-grazing.	UC River Steelhead, UC River Spring Chinook Salmon	48 22 56	120 02 58	12/19/2008	10/15/2009	0	0	S		0	0	0	0	0	0.25
4261	Methow	Complexity	Elbow Coulee Side Channel Restoration	This geomorphology project restored a segment of off-channel rearing habitat in a side channel off the mainstem Twisp River.	UC River Steelhead, UC River Spring Chinook Salmon	48 22 47	120 14 20	5/4/2005	9/29/2008	0	0	S		0	0	0	0	0	0.5
4393	Wenatchee	Access	Chumstick Culverts Replacement 2009 (17)	These projects replaced 17 passage barrier culverts in the Chumstick Drainage.	UC River Steelhead, UC River Spring Chinook Salmon	47 41 00	120 38 22	4/16/2009	9/30/2009	0	0	C	P	7	0	0	0	0	0
4287	Wenatchee	Complexity	Nason Creek MCA Project (Oxbow Re-connection )	This project reconnected partial flows and full fish access to 4600 linear feet of oxbow habitat to the mainstem Nason Creek.	UC River Steelhead, UC River Spring Chinook Salmon	47 46 20	120 43 17	7/21/2006	10/31/2007	0	0	S		0	0	0	0	0	0.9
<b>Snake River Steelhead and Spring/Summer Chinook Salmon</b>																			
4428	Grande Ronde	Access	Little Creek 1 Fish Passage Enhancement Project	The diversion dam was replaced with a lay flat stanchion dam. Vertical fish screens were added to each diversion point, and a fish ladder was added to provide fish passage around the dam when stop logs are in place.	Snake River Steelhead, Snake River Sp/Su Chinook	45 13 34	117 54 06	5/1/2010	10/26/2012			D	F	0.7					
4455	Grande Ronde	Complexity	Catherine Creek Tributary and Reach Assessments	The purpose of the assessment was to provide a comprehensive geomorphic analysis of the subbasin.	Snake River Steelhead, Snake River Sp/Su Chinook			10/15/2009	3/16/2012										



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BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4425	Grande Ronde	Complexity	CC-37 Meander Reconstruction Project	This project improved water quality, reduced excessive sediment and high temperatures, increased riparian vegetation, and created complex fish habitat via large complex pools and large wood structures. These improvements are a result of the stabilization of both bank sides with large woody structures and riparian plantings, as well as reconnection of back water habitat/oxbows, the creation of new stream channel, and enhancement of the existing stream channel. The project was placed under a conservation easement.	Snake River Steelhead, Snake River Sp/Su Chinook	45 12 55	117 54 14	5/1/2010	8/31/2012										0.8
4529	Lemhi	Access	Fourth of July Creek Culvert Replacement (County Road)	The project entailed removal of the culvert and associated earthen fill, reconstruction of the stream-banks/channel, installation of a pre-fabricated steel bridge, and replacement of riprap along streambanks.	Snake River Steelhead, Snake River Sp/Su Chinook	45 22 45	113 54 26	1/2/2012	10/26/2012			C	F	0.1					
4530	Lemhi	Access	Fourth of July Creek Culvert Replacement (Private Driveway)	The project entailed removal of the culvert and associated earthen fill, reconstruction of the stream-banks/channel, installation of a pre-fabricated modular steel bridge, diversion headgate/pipe, and placement of riprap along streambanks.	Snake River Steelhead, Snake River Sp/Su Chinook	45 22 37	113 54 17	1/2/2012	11/16/2012			C	F	8.4					
4454	Lemhi	Access	Canyon Creek Culvert Replacement (County Road)	The project entailed construction of a temporary bypass for traffic, removal of the culvert and associated earthen fill, reconstruction of the stream-banks/channel, installation of a 24' x 30' pre-fabricated modular steel bridge, placement of riprap along streambanks, and placement of an asphalt road surface.	Snake River Steelhead, Snake River Sp/Su Chinook	44 41 31	113 21 14	12/10/2010	12/7/2012			C	F	1					
4528	Lemhi	Complexity	Lemhi Lower Little Springs Channel Restoration	The objective of the project was to improve fish passage, floodplain connectivity, riparian condition, fish habitat complexity, and increase available adult spawning/juvenile rearing habitat. The project entailed construction of 2,250 feet of new stream channel to replace 1,850 feet of river channel adjacent to SH-28 that had been straightened.	Snake River Steelhead, Snake River Sp/Su Chinook	44 46 45	113 32 38	1/2/2012	9/28/2012										0.4



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BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4532	Lemhi	Entrainment	L-50 Diversion Closure	The objective of the project was to close the L-50 irrigation diversion from the Lemhi River and close the un-screened LSC-3 irrigation diversion on Little Springs Creek. A new pump station/pipeline was constructed behind the existing fish screen in L-46A to convey 0.9 cfs water via a pipeline to a new sprinkler irrigation pivot. The end result being abandonment of the L-50 diversion/ditch and LSC-3 diversion/ditch.	Snake River Steelhead, Snake River Sp/Su Chinook	44 47 54	113 32 26	1/2/2012	11/30/2012						1	0.9		3.5	
4488	Pahsimeroi	Access	Pahsimeroi Valley Lower Sulphur Creek Habitat Improvement Project - Bridge Installation	This project removed two irrigation ditch diversions, replaced an undersized culvert with a bridge, and re-graded 550 feet of the creek that had previously been altered by the diversions and the roadway. Additional project benefits will be accounted for when associated projects are completed in the following years.	Snake River Steelhead, Snake River Sp/Su Chinook	44 32 55	113 54 57	7/1/2011	9/2/2012			D	P	0.8					
4424	Upper Salmon	Complexity	Yankee Fork Tributary Assessment	The Yankee Fork Tributary of the Salmon River was identified as a priority subbasin in the 2008 FCRPS BiOp. The purpose of the assessment was to provide a comprehensive geomorphic analysis of the subbasin.	Snake River Steelhead, Snake River Sp/Su Chinook			10/1/2009	2/3/2012										
4507	Upper Salmon	Complexity	Yankee Fork Pond Series 3 Side Channel	The objective of this project was to create high-flow refuge and year-round rearing habitat for juvenile Chinook salmon. This was accomplished by making major modifications to existing inter-connected ponds, situated amongst remnant dredge tailings. The project entailed excavation of an alcove in the river, and construction of a new inlet to increase inflow from the river. An undersized culvert and water level control structures, situated between ponds, were removed. Adjacent tailing piles were re-graded to partially fill in the ponds and create a narrow meandering size channel, containing a mixture of riparian, floodplain and wetland habitats for migrating salmon to utilize.	Snake River Steelhead, Snake River Sp/Su Chinook	44 20 41	114 43 25	8/30/2011	11/17/2012										0.5

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										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4483	Lemhi	Complexity	Lower Lemhi River Bank Stabilization (Sager)	Two hundred feet of eroding stream bank was armored with root wads, rock and planted vegetation to stop bank erosion and enhance fish habitat.	Snake River Steelhead, Snake River Sp/Su Chinook	45 05 18	113 43 12	4/4/2011	12/16/2011	0	0	R		0	0	0	0	0	0.5
4387	Lemhi	Access	Wimpey Creek - 2 Diversion Replacement	The Wimpey Creek No. 2, LWC-02 diversion check structure, formerly a complete barrier to fish passage, was replaced with a series of rock A weirs, and about 100 yards of degraded stream channel was rehabilitated. Additional project features included new headworks installation, ditch enlargement, riparian vegetation planting, a water measurement device, and a cattle water gap.	Snake River Steelhead, Snake River Sp/Su Chinook	45 05 56	113 42 55	2/11/2009	11/17/2011	0	0	D	F	0.5	0	0	0	0	0
4472	Lemhi	Complexity	Lower Lemhi River - Bridge to Bridge Rehabilitation Project	A rapid site assessment of a 3.6 mile section, located within the lower reach of the river, evaluated and summarized current channel/hydraulic/geologic conditions and identified potential projects that would protect/increase fish habitat/channel complexity and stabilize the streambank to reduce sediment loading to the river.	Snake River Steelhead, Snake River Sp/Su Chinook	45 05 23	113 43 15	5/9/2011	11/15/2011	0	0	R		0	0	0	0	0	
4486	Lemhi	Access	Archie Lane Culvert Replacement	Two undersized CMP culverts conveying Carmen Creek under Archie Lane were identified by IDFG as being undersized and potential fish migration barriers due to excessive water velocities. To improve fish passage, this project removed these culverts and replaced them with a 24-foot by 50-foot prefabricated steel bridge.	Snake River Steelhead, Snake River Sp/Su Chinook	45 16 88	113 49 36	6/7/2010	9/16/2011	0	0	C	P	0.65	0	0	0	0	0
4482	Lemhi	Access	Parmenter Lane Culvert Replacement	Two undersized CMP culverts conveying Carmen Creek under Parmenter Lane were identified by IDFG as being undersized and potential fish migration barriers due to excessive water velocities. To improve fish passage, this project removed these culverts and replaced them with a 24-foot by 50-foot prefabricated steel bridge.	Snake River Steelhead, Snake River Sp/Su Chinook	45 15 55	113 50 02	6/7/2010	9/16/2011	0	0	C	P	0.6	0	0	0	0	0

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BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4487	Lemhi	Complexity	Lemhi River Channel Re-location - Amonson Ranch	To improve floodplain connectivity, riparian condition, and fish habitat complexity, and ultimately increase available spawning/rearing habitat. 3,112 ft. of new river channel was constructed to replace 2,051 ft. of river channel that had historically been straightened, diked, perched, and overgrazed by livestock. About 700 feet of backwater rearing habitat was created within the old channel alignment, a bridge was constructed for access, vegetation was planted along stream banks, disturbed areas were hydroseeded, and riparian fencing was constructed to exclude livestock.	Snake River Steelhead, Snake River Sp/Su Chinook	44 46 01	113 30 29	6/1/2009	6/17/2011	0	0			0	0	0	0	0	0.5
4493	Lemhi	Access and Stream-flow	L-52 Removal (POD Transfer)	In the L-46A ditch, a pump station and three phase power were installed and a pipeline buried to convey Lemhi water to pivots that were installed to irrigate land formerly irrigated from the L-52 POD. Through a 20-year lease agreement, 4.06 cfs of unused L-52 water was placed in the Lemhi Water Bank for instream flow.	Snake River Steelhead, Snake River Sp/Su Chinook	44 47 47	113 33 47	3/1/2010	5/16/2011	4.06	6	D	P	1	0	0	0	0	0
4481	Lemhi	Access, Entrainment, and Stream-flow	Little Springs Creek Diversion Closure and Sprinkler Pivot Installation	The water rights for three gravity diversions in Little Springs Creek were transferred to a diversion from the Lemhi River (L-48). A pump station was installed in the L-48 ditch and a pipeline was buried to convey irrigation water to pivots that were erected on ground, formerly flood irrigated from Little Springs Creek.	Snake River Steelhead, Snake River Sp/Su Chinook	44 46 47	113 32 37	4/5/2010	5/16/2011	15.9	0.7	D	F	0.7	2	15.9	0	0.7	0
4495	Lemhi	Entrainment and Stream-flow	Canyon Creek Reconnect/Flow	Transfer water rights from a diversion on Lower Canyon Creek to the Lemhi River and constructed a new diversion weir, fish screen and pump station on the Lemhi River bank to convey transferred water rights from the Lemhi River to the original point of use. The result was improved efficiency, elimination of entrainment, and great assurance of flow remaining in Canyon Creek.	Snake River Steelhead, Snake River Sp/Su Chinook	44 41 38	113 22 03	8/2/2010	4/15/2011	4	1.25			0	1	0	0	0	0

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BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4496	Lemhi	Entrainment and Stream-flow	Lower Big Timber Creek Reconnect/Flow	Transferred water rights from a diversion on Lower Big Timber Creek to the Lemhi River, and constructed a new diversion weir, fish screen, and pump station on the Lemhi River bank to convey transferred water rights from the Lemhi River to the original point of use. Result was elimination of the lower point of diversion and improved efficiency, elimination of entrainment, increased access to habitat and great assurance of flow remaining in the lower Big Timber Creek.	Snake River Steelhead, Snake River Sp/Su Chinook	44 41 38	113 22 03	8/2/2010	4/15/2011	1.4	1			0	1	0	0	0	0
4461	Lemhi	Access	Lemhi Little Springs SH-28 Culvert Replacements	Lemhi Little Springs Creek is a spring fed tributary to the Lemhi River. It enters the Lemhi at RM 39.5. The tributary is considered by Idaho Dept. of Fish and Game (IDFG) to be high value habitat for juvenile Chinook salmon and steelhead. Two culverts that conveyed Little Springs under State Highway 28 were identified by IDFG as potential fish migration barriers and were replaced with larger squash CMP culverts. Reclamation assisted by providing a cultural resource survey and SHPO clearance. LiDAR flown in 2008 was also made available to the USBWP for use in design and permitting for this project.	Snake River Steelhead, Snake River Sp/Su Chinook	44 46 12	113 31 21	7/31/2007	10/29/2010				F	4					
4386	Lemhi	Access	Lemhi River, Little Springs Creek Restoration	Habitat improvements included utilizing a combination of various bioengineering treatments intended to return the stream to a more natural and more stable condition, including channel/bank reshaping and alignment, placement of engineered log jams, diversion replacement and planting of riparian vegetation.	Snake River Steelhead, Snake River Sp/Su Chinook	44 45 45	113 30 34	2/12/2008	11/16/2009	0	0	D	P	2	0	0	0	0	0
4343	Lemhi	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. Phase 2 modified the structure for better upstream fish passage.	Snake River Steelhead, Snake River Sp/Su Chinook	44 49 46	113 36 37	2/28/2005	9/28/2007	0	0	D	P	0	0	0	0	0	0

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BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4237	Little Salmon	Habitat - Channel Access	Squaw Creek Culvert	A culvert passage barrier was replaced on the Squaw Creek Road to allow for fish passage.	Snake River Steelhead, Snake River Sp/Su Chinook	45 25 06	116 21 34	6/1/2005	9/21/2007	0	0	C	P	4.5	0	0	0	0	0
4389	Pahsimeroi	Access	Hooper Lane Culverts	Four stream crossings on Hooper Lane (Big Springs Creek, Pahsimeroi River, Pahsimeroi Little Springs, and Big Springs/Little Springs Connection Channel) that were undersized and restricted fish passage were replaced with steel beam bridges to improve fish access to spawning and/or rearing habitat.	Snake River Steelhead, Snake River Sp/Su Chinook	44 32 55	113 54 57	12/23/2009	8/12/2011	0	0	D	P	6.6	0	0	0	0	0
4431	Pahsimeroi	Access	Muddy Springs Culverts	Two culverts on Muddy Springs Creek, a tributary to the Pahsimeroi River that previously restricted passage, were replaced with 12-foot wide bottomless arch pipe to provide access to rearing habitat.	Snake River Steelhead, Snake River Sp/Su Chinook	44 35 41	113 57 22	7/1/2009	8/2/2011	0	0	D	P	3.8	0	0	0	0	0
4410	Pahsimeroi	Access	Big Springs Creek 1 Diversion Enhancement	Big Springs 1 diversion is a wooden structure that utilizes horizontal boards to check up the water in the creek for diversion into the ditch, restricting fish passage. This project removed the existing wooden check structure and replaced it with a structure that allows fish passage at all times, while allowing the irrigators to continue diverting water.	Snake River Steelhead, Snake River Sp/Su Chinook	44 36 55	113 57 54	7/2/2008	8/30/2010	0	0	D	P	2.5	0	0	0	0	0
4400	Pahsimeroi	Access	Big Springs Creek 3 Diversion Enhancement	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, restricting fish passage. This project removed the existing wooden check structure and replaced it with a structure that allows fish passage at all times, while allowing the irrigators to continue diverting water.	Snake River Steelhead, Snake River Sp/Su Chinook	44 36 69	113 56 24	7/2/2008	8/30/2010	0	0	D	P	2.5	0	0	0	0	0

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										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4426	Pahsime-roi	Access	Big Springs Creek 4 Diversion Enhancement	Big Springs 4 diversion is a wooden structure that utilizes horizontal boards to check up the water in the creek for diversion into the ditch, restricting fish passage. This project removed the existing wooden check structure and replaced it with a structure that allows fish passage at all times, while allowing the irrigators to continue diverting water.	Snake River Steelhead, Snake River Sp/Su Chinook	44 34 15	113 54 38	8/1/2009	8/30/2010	0	0	D	P	1.7	0	0	0	0	0
4427	Pahsime-roi	Access	Big Springs Creek 6 Diversion Enhancement	This project removed the existing fish barrier check structure and replaced it with a structure that allows fish passage at all times.	Snake River Steelhead, Snake River Sp/Su Chinook	44 35 51	113 53 55	8/1/2009	8/30/2010	0	0	D	P	0.25	0	0	0	0	0
4324	Pahsime-roi	Access	Big springs Creek 7-8 Diversion Enhancement	This project removed the existing fish barrier check structure and replaced it with a structure that allows fish passage at all times.	Snake River Steelhead, Snake River Sp/Su Chinook	44 56 28	113 88 87	8/1/2007	8/30/2010	0	0	D		2.9	0	0	0	0	0
4423	Upper Salmon	Stream-flow and Access	Bayhorse Creek Wells	The purpose of this project is to improve fish passage in Bayhorse Creek by increasing the instream flows and eliminating a diversion. The second diversion in Bayhorse Creek (SBaC-02) was eliminated by changing the irrigation practices from the historical flood irrigation, approximately 2 cfs, to a well and pivot sprinkler system using 0.3 cfs.	Snake River Steelhead, Snake River Sp/Su Chinook	44 23 12	114 15 51	4/1/2011	10/15/2011	2	2	D	F	2					
4240	Upper Salmon	Stream-flow	East Fork Salmon River-EF 13 Headgate	A new headgate structure was installed to allow the irrigator to control the diversion and provide improved fish passage through the diversion and screen. Previously, the open canal would allow fish to pass over the screen and down the ditch at higher flows. The new structure reduces entrainment in the ditch and increases stream flow at the diversion site.	Snake River Steelhead, Snake River Sp/Su Chinook	44 08 45	114 23 26	3/9/2004	8/15/2011			C		0	0	0	0	0	0

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Mid-Columbia River Steelhead																			
4465	Middle Fork John Day	Complexity	Middle Fork Oxbow Tailings Project Phase II	Phase II of the project restored land forms altered by the gold dredging back to a condition similar to pre-mining disturbance. These actions included: (1) Construction of approximately 1,000 feet of new channel for Granite Boulder Creek - reconnecting it to the natural Middle Fork JD Channel; and (2) Removal of about 3,400 feet of the north channel ditch.	Middle Columbia River Steelhead	44 38 31	117 39 06	12/30/2011	9/28/2012										1.4
4409	Upper Main John Day	Access	Beech Creek Moore Diversion	The Grant SWCD assisted the land-owner in moving the point of the diversion downstream to the John Day River and installed a pump station and center pivot. In order to move the point of diversion to the John Day River, a measurement device was installed in Beech Creek to measure low flows to verify that water is available in Beech Creek to satisfy the water right.	Middle Columbia River Steelhead	44 24 49	119 06 52	8/31/2009	8/31/2012			D	P	2					
4467	Upper Main John Day	Complexity	Meredith Beech Creek Habitat Improvement Project	The project increased instream habitat complexity, raise the water table throughout the project reach by promoting aggradation of the streambed through increased reach-scale roughness, increased frequency of loading of agricultural fields, increased active floodplain width and reducing stream energy in entrenched areas, increased habitat characteristics that would support the stabilization and expansion of the beaver population, and stabilized the existing area for landowner access.	Middle Columbia River Steelhead	44 26 46	119 03 02	4/12/2011	8/17/2012										1.6
4465	John Day Middle Fork	Complexity	MF Oxbow Tailings Project Phase I	Phase I of the project, completed in 2011, added complexity to the South Channel with the placement of log structures and flood plain/riparian tree plantings. A small area of dredge tailings was also removed from the floodplain. This phase prepared the South Channel for additional flow that will be added when the North Channel is blocked off in Phase II.	Middle Columbia River Steelhead	44 38 31	118 39 06	10/1/2009	8/15/2011	0	0	R		0	0	0	0	0	1.07



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4345	John Day Middle Fork	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.	Middle Columbia River Steelhead	44 40 26	118 43 01	7/25/2008	8/20/2010	0	0	D	P	13	0	0	0	0	0
4317	John Day Middle Fork	Complexity	Middle Fork Rock Replacement Projects Beaver To Ragged	Channel Reconfiguration	Middle Columbia River Steelhead	44 39 07	118 40 35	1/19/2009	8/30/2009	0	0	R		0	0	0	0	0	0.6
4296	John Day Middle Fork	Access	Smith Ditch Diversion	Historically a pushup dam was required for the irrigator to divert the full water right rate. A concrete headgate structure with two slide headgates, control the flow into the ditch. The Grant SWCD installed a typical lay-flat stanchion dam at this site with fish passage.	Middle Columbia River Steelhead	44 40 57	118 45 47	10/18/2006	8/1/2008	0	0	D	P	1	0	0	0	0	0
4317	John Day Middle Fork	Complexity	Middle Fork Rock Replacement Projects Placer to Davis	Channel Reconfiguration	Middle Columbia River Steelhead	44 35 43	118 31 28	9/17/2007	7/25/2008	0	0	R		0	0	0	0	0	0.95
4283	John Day Middle Fork	Complexity	Big Boulder Habitat Improvement Project	The Nature Conservancy and the Oregon Department of Fish and Wildlife acting as advisor to landowner Les Zaitz, has asked Reclamation for technical assistance in design and planning for channel reconfiguration and large wood placements on Big Boulder Creek.	Middle Columbia River Steelhead	44 40 22	118 42 59	9/6/2005	7/15/2008	0	0	R		0	0	0	0	0	0.83



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4367	John Day Middle Fork	Stream-flow	Austin Ranch Permanent Diminishment of Water Rights	The Oregon Water Trust ( OWT) has acquired a split season water use agreement for selected Austin Ranch water rights, which are served by the Middle Fork of the John Day River and tributaries. Transfer of the water rights from irrigation use to instream flow would support important salmon and steelhead spawning areas in the Middle Fork, Vinegar Creek, and Clear Creek. This project resulted in the permanent diminishment of the season of use of approximately 11.29 cubic feet per second (cfs) of natural flow water rights.	Middle Columbia River Steelhead	44 35 31	118 30 41	6/30/2006	12/31/2007	11.3	30	A		0	0	0	0	0	0
4273	John Day Middle Fork	Access	Dead Cow Gulch Access and Habitat Improvement Project	This project rerouted the stream into a more natural alignment and eliminated the culverts as a barrier.	Middle Columbia River Steelhead	44 36 27	118 32 50	2/11/2005	10/30/2007	0	0	C	F	1.5	0	0	0	0	0
4273	John Day Middle Fork	Complexity	Dead Cow Gulch Access and Habitat Improvement Project	This project rerouted the stream into a more natural alignment and added complexity.	Middle Columbia River Steelhead	44 36 27	118 32 50	2/14/2005	10/30/2007	0	0	R		0	0	0	0	0	0.2
4368	John Day Middle Fork	Complexity	TNC MF John Day Habitat Improvement Project - Phase II	TNC coordinated with Reclamation for technical assistance for design of the Aquatic and Flood Restoration Plan for Dustan Homestead Preserve for refine designs, permitting process, construction techniques, construction costs, and monitoring protocols for these restoration elements.	Middle Columbia River Steelhead	44 40 00	118 42 34	5/20/2005	10/30/2007	0	0	R		0	0	0	0	0	1.25
4292	John Day Middle Fork	Access	North Ditch Diversion	The diversion replaced an 18 inch, open ended CMP pipe headgate regulated by wooden boards and plastic across the opening with a lay-flat stanchion dam. The instream part of the structure is composed of large rocks and gravels.	Middle Columbia River Steelhead	44 35 18	118 26 27	10/11/2006	8/15/2007	0	0	D	P	24	0	0	0	0	0

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4272	John Day Middle Fork	Complexity	TNC MF John Day Habitat Improvement Project-Phase I	The Nature Conservancy coordinated with 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.	Middle Columbia River Steelhead	44 40 00	118 42 34	5/23/2005	8/15/2007	0	0	R		0	0	0	0	0	0.64
4293	John Day Middle Fork	Access	Upper Clear Creek Diversion	The diversion replaced an 18 inch, open ended CMP pipe headgate regulated by wooden boards, fence posts and plastic across the opening with a lay-flat stanchion dam.  The instream part of the structure is composed of large rocks and gravels.	Middle Columbia River Steelhead	44 34 37	118 29 35	10/13/2006	8/15/2007	0	0	D	P	14	0	0	0	0	0
4294	John Day Middle Fork	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 was replaced by a modified version of a lay-flat stanchion dam by the GSWCD	Middle Columbia River Steelhead	44 37 49	118 29 59	10/13/2006	8/15/2007	0	0	D	P	7	0	0	0	0	0
4295	John Day Middle Fork	Access	South Ditch Diversion (MFJDR)	The diversion replaced an 18 inch, open ended CMP pipe headgate regulated by wooden boards and plastic across the opening with a lay-flat stanchion dam. The instream part of the structure is composed of large rocks and gravels.	Middle Columbia River Steelhead	44 35 53	118 28 10	10/13/2006	8/15/2007	0	0	D	F	2	0	0	0	0	0
4434	John Day Upper Main	Access	Lawrence Reynolds Creek Diversion	The Mark Lawrence Reynolds Creek Diversion consisted of a failing concrete sill and wing walls with slots to support boards. With boards and tarps in place, there was no provision for fish passage and no headgate. The diversion was replaced with a lay-flat stanchion dam, with a prefabricated steel weir and pool fish passage structure, and a headgate to control diversion flow.	Middle Columbia River Steelhead	44 24 51	118 35 15	11/1/2009	8/31/2011	0	0	D	F	0.5	0	0	0	0	0

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4435	John Day Upper Main	Access	Reynolds Slough Ditch Diversion	The Reynolds Slough Ditch Diversion consisted of river cobble and gravel, and had a partially functioning head-gate. The diversion was replaced with a lay-flat stanchion dam, with a pre-fabricated steel weir and pool fish pas-sage structure on one side, and slide headgate to control flow.	Middle Columbia River Steelhead	44 24 40	118 34 40	11/1/2009	8/31/2011	0	0	D	P	13.8	0	0	0	0	0
4414	John Day Upper Main	Access	Dad's Creek #2 Winegar Diversion	The Dads Creek #2 Diversion project is one of four on Dads Creek. The diver-sion consisted of boulders, boards, and tarps, and was a complete barrier when installed. It was replaced with a modified lay-flat stanchion dam prefab-ricated out of steel and set in place, with a weir and pool fishway on one side of the structure.	Middle Columbia River Steelhead	44 27 44	118 39 57	10/7/2009	8/15/2011	0	0	D	F	0.1	0	0	0	0	0
4415	John Day Upper Main	Access	Dad's Creek #3 CTWSRO Diversion	The Dads Creek #3 Diversion project is one of four on Dads Creek. The exist-ing diversion consisted of boulders, boards, and tarps, and was a complete barrier when installed. It was replaced with a modified lay-flat stanchion dam prefabricated out of steel and set in place, with a weir and pool fishway on one side of the structure.	Middle Columbia River Steelhead	44 27 50	118 39 55	10/7/2009	8/15/2011	0	0	D	F	1	0	0	0	0	0
4452	John Day Upper Main	Access	Dads Creek Diversions #4 and #5	The Dads Creek #4 and #5 Diversion projects are two of four projects on Dads Creek. The diversions consisted of boulders, boards, and tarps and were complete barriers when installed. Each was replaced with a modified lay-flat stanchion dam prefabricated out of steel and set in place, with a weir and pool fishway on one side of the struc-ture.	Middle Columbia River Steelhead	44 28 35	118 39 33	12/9/2010	8/15/2011	0	0	D	P	3.4	0	0	0	0	0

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4407	John Day Upper Main	Access	East Fork Canyon Creek Diversion	The East Fork Canyon Creek Diversion, one of two diversions on the East Fork of Canyon Creek, was made of large cobble, gravel, and tarps, with no headgate, and was an impediment to fish passage. The diversion was replaced with a lay-flat stanchion dam, with a prefabricated steel weir and pool fish passage structure on one side and slide headgate to control diversion flow.	Middle Columbia River Steelhead	44 14 47	118 54 39	8/21/2009	8/15/2011	0	0	D	P	1.3	0	0	0	0	0
4447	John Day Upper Main	Complexity	Edigar Habitat Project	The Edigar property on the Upper John Day River had one section of river bank about 300 feet long that was actively eroding, causing losses in bank vegetation and water quality issues downstream. Log-jam and rootwad structures were installed to reduce erosion in that area and enhance complexity of the habitat.	Middle Columbia River Steelhead	44 10 10	119 11 02	11/9/2010	8/15/2011	0	0	R		0	0	0	0	0	0.057
4405	John Day Upper Main	Access	Lower Deardorf Diversion	The Lower Deardorf Creek Diversion was made of large cobble, gravel, and tarps, with no headgate, and was an impediment to fish passage. The diversion was replaced with a lay-flat stanchion dam, with a prefabricated steel weir and pool fish passage structure on one side, and slide headgate to control diversion flow.	Middle Columbia River Steelhead	44 23 47	118 33 44	8/21/2009	8/15/2011	0	0	D	F	0.1	0	0	0	0	0
4406	John Day Upper Main	Access	Upper Deardorf Diversion	The Upper Deardorf Creek Diversion, like Lower Deardorf, was made of large cobble, gravel, and tarps, with no headgate, and was an impediment to fish passage. The diversion was replaced with a lay-flat stanchion dam, with a prefabricated steel weir and pool fish passage structure on one side, and slide headgate to control diversion flow.	Middle Columbia River Steelhead	44 23 48	118 33 43	8/21/2009	8/15/2011	0	0	D	F	6.5	0	0	0	0	0
4350	John Day Upper Main	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	Middle Columbia River Steelhead	44 25 25	118 51 50	7/28/2008	8/30/2010	0	0	D	F	1	0	0	0	0	0

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4351	John Day Upper Main	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	Middle Columbia River Steelhead	44 25 19	118 51 50	7/28/2008	8/30/2010	0	0	D	P	0.1	0	0	0	0	0
4353	John Day Upper Main	Access	Oliver Ditch # 49 Diversion (UPJD RM 252.3)	The Oliver Ditch # 49 Diversion project is located 4 miles east of John Day 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 it is a partially barrier.	Middle Columbia River Steelhead	44 25 14	118 52 36	7/28/2008	8/30/2010	0	0	D	F	1	0	0	0	0	0
4388	John Day Upper Main	Complexity	Blanchette Habitat Project	The Grant SWCD assisted the land-owner in constructed log jam and rootwad structures 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 fencing were used along with the woody materials to rehabilitate the banks and improve fish habitat.	Middle Columbia River Steelhead	44 25 39	119 15 10	12/15/2009	8/20/2010	0	0	R		0	0	0	0	0	0.28
4348	John Day Upper Main	Access	Cummings Creek Pump	Cummings Creek is a small tributary entering the Upper John Day River near river mile 224. This project transferred of a point of diversion from Cummings Creek to the John Day River.	Middle Columbia River Steelhead	44 26 47	119 22 19	6/28/2008	8/20/2010	0.54	1.5	D	P	3.5	1	0.54	0	3.5	0
4416	John Day Upper Main	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 added 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 0.3 mile reach of the river.	Middle Columbia River Steelhead	44 27 09	118 40 32	5/18/2009	7/27/2010	0	0	R		0	0	0	0	0	0.3

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4349	John Day Upper Main	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 was a typical gravel pushup dam constructed and maintain with heavy equipment annually. It was replaced with a fish-passable structure.	Middle Columbia River Steelhead	44 25 44	119 12 44	7/28/2008	8/15/2009	0	0	D	F	1	0	0	0	0	0
4347	John Day Upper Main	Access	Fry-Ingle Diversion	This structure was a full barrier at low flows to all life stages but at higher flows when the dam is partially washed out , it is partial barrier. It was re-placed with a fish-passable structure.	Middle Columbia River Steelhead	44 24 54	119 04 05	7/28/2008	8/15/2009	0	0	D	F	1	0	0	0	0	0
4369	John Day Upper Main	Access	Grant SWCD-Cummings River Ditch Diversion (UPJD RM 222.5)	The diversion structure was a typical gravel and large rock pushup dam which has to be constructed and maintain with heavy equipment. It was re-placed with a fish-passable structure.	Middle Columbia River Steelhead	44 26 07	119 18 56	2/4/2008	8/15/2009	0	0	D	F	1	0	0	0	0	0
4314	John Day Upper Main	Access	Grant SWCD-Stout Diversion (UPJD RM 214.3)	The Grant SWCD installed a typical lay-flat stanchion dam in the side channel and a grade control structure in the main channel.	Middle Columbia River Steelhead	44 27 54	119 29 32	3/31/2008	8/15/2009	0	0	D	F	1	0	0	0	0	0
4298	John Day Upper Main	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 installed 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.	Middle Columbia River Steelhead	44 25 32	119 06 35	10/18/2006	8/15/2008	0	0	D	F	6	0	0	0	0	0
4300	John Day Upper Main	Access	Bower's/ Lemon's Ditch Diversion	The Grant SWCD installed a typical lay-flat stanchion dam in the side channel and a grade control structure in the main channel.	Middle Columbia River Steelhead	44 24 40	119 07 02	10/18/2006	8/15/2008	0	0	D	F	10.5	0	0	0	0	0
4320	John Day Upper Main	Complexity	Forrest-Emmel Habitat Improvement Program	Channel Reconfiguration	Middle Columbia River Steelhead	44 27 12	118 40 18	8/27/2007	8/15/2008	0	0	R		0	0	0	0	0	1.15

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										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4302	John Day Upper Main	Access	Long Box Diversion	The Grant SWCD installed a typical lay-flat stanchion dam in the side channel and a grade control structure in the main channel.	Middle Columbia River Steelhead	44 27 18	119 25 33	10/18/2006	8/15/2008	0	0	D	P	1	0	0	0	0	0
4304	John Day Upper Main	Access	Panama Ditch Diversion	The Grant SWCD installed a typical lay-flat stanchion dam in the side channel and a grade control structure in the main channel.	Middle Columbia River Steelhead	44 25 00	119 03 18	10/18/2006	8/15/2008	0	0	D	F	7	0	0	0	0	0
4301	John Day Upper Main	Access	Hufstader Pump Station	The Grant SWCD installed a pump station and associated delivery piping to replace the instream diversion 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.	Middle Columbia River Steelhead	44 43 24	119 27 37	10/18/2006	4/15/2008	0	0	D	P	0	0	0	0	0	0
4297	John Day Upper Main	Access	Axe Ditch Diversion-Reynolds Creek	The poorly functioning headgate composed of large rocks, tarps, steel posts, and logs was be replaced by a lay-flat stanchion dam by the GSWCD.	Middle Columbia River Steelhead	44 25 01	118 32 40	1/19/2007	8/15/2007	0	0	D	F	11	0	0	0	0	0
4299	John Day Upper Main	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 6-7 at low flow. The GSWCD rebuilt the channel grade using a series of weirs to raise the water level to the sill of the dam and then creating a passageway over or through the flash board part of the dam.	Middle Columbia River Steelhead	44 24 39	119 07 42	10/11/2006	8/15/2007	0	0	D	F	0.5	0	0	0	0	0
4278	John Day Upper Main	Access	GSWCD-North Diversion, Reynolds Creek	Grant SWCD built a lay-flat stanchion type dam to replace the current dam. The new structure incorporates fish passage criteria.	Middle Columbia River Steelhead	44 24 40	118 34 04	10/7/2005	8/15/2007	0	0	D	F	0.2	0	0	0	0	0
4303	John Day Upper Main	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 was be replaced by a lay-flat stanchion dam by the GSWCD.	Middle Columbia River Steelhead	44 24 42	118 33 34	10/11/2006	8/15/2007	0	0	D	P	0.85	0	0	0	0	0



Attachment 2 – Table 2. Status of Tributary Habitat Actions Completed 2007-2012 with Reclamation Technical Assistance

BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4305	John Day Upper Main	Complexity	CTWSRO Reach 8 Habitat Design	The work involved design of features to improve habitat. The river is partially constrained by levees resulting in a fairly straight, wide, and shallow cross section. The project removed the levees and strategically place large wood to increase channel complexity, narrow the channel, and stimulate natural increases in sinuosity.	Middle Columbia River Steelhead	44 27 33	118 41 52	10/13/2006	8/1/2007	0	0	R		0	0	0	0	0	0.15
4271	John Day Upper Main	Complexity	CTWSRO John Day Habitat Improvement Project-Phase 1	The John Day Basin Office of the Confederated Tribes Warm Spring Reservation of Oregon coordinated with 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.	Middle Columbia River Steelhead	44 27 31	118 41 31	6/15/2005	7/15/2007	0	0	R		0	0	0	0	0	5.75



Attachment 2 – Table 3. Status of Tributary Habitat Actions Completed in 2007-2012 with Reclamation Technical Assistance

Table 3 contains metric and metric values for actions completed in 2007-2012 with technical assistance provided by Reclamation. Actions in table3 supplement the BPA-funded projects listed in Attachment2, Table1. 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.

BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
Upper Columbia River Steelhead and Spring Chinook Salmon																			
4466	Entiat	Complexity	Lower Entiat Reach Assessment and Existing Project Review	This piece summarized the existing conditions (baseline conditions for research, monitoring, and evaluation efforts) of reaches 1B, 1C, and 1E in the Lower Entiat River. This information will be used to identify and prioritize potential treatments and locations. The document also assessed the effectiveness of existing projects and identified potential improvements for implementation during the 2014 IMW effort.	UC River Steelhead, UC River Spring Chinook Salmon	47 39 46	120 14 27	3/16/2011	4/27/2012										
4390	Wenatchee	Access	Upper Chumstick Barriers Project (Cann, Baumann)	This barrier removal is part of a larger project, the Chumstick Creek Restoration Project. This project removed two barrier culvert that were a partial passage barriers, and replaced them with two bridges.	UC River Steelhead, UC River Spring Chinook Salmon	47 42 52	120 38 08	12/15/2009	11/1/2012			C	P	0.45					
4503	Entiat	Entrainment and Access	Ecology Wells	Three existing surface water irrigation diversions were converted to wells, reducing pump entrainment risk to juvenile ESA fish species in the lower Entiat River.	UC River Steelhead, UC River Spring Chinook Salmon	47 41 13	120 18 56	5/6/2010	11/21/2011	0	0	D	P	60	3	0.64	38	38	0

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BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4502	Entiat	Entrainment	ARRA Wells	Two existing surface water irrigation diversions were converted to wells, reducing pump entrainment risk to juvenile ESA fish species in the lower Entiat River.	UC River Steelhead, UC River Spring Chinook Salmon	47 41 16	120 18 55	4/6/2009	9/26/2011	0	0			0	2	2.4	0	38	0
4501	Entiat	Complexity	ARRA Preston Reach Project	Approximately 700 feet of bank was reshaped, fourteen bank large wood complexity structures were installed, and a 100 foot riparian buffer was planted to reduce recruitment of fine sediment and provide in-stream habitat.	UC River Steelhead, UC River Spring Chinook Salmon	47 51 39	120 25 14	4/5/2009	4/29/2011	0	0	R		0	0	0	0	0	0.16
4357	Entiat	Complexity	Entiat National Fish Hatchery (ENFH) Habitat Channel (Bridge to Bridge Restoration, Phase 5)	The USFWS and Bureau of 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	UC River Steelhead, UC River Spring Chinook Salmon	47 41 51	120 19 18	1/14/2008	9/30/2010	0	0	S		0	0	0	0	0	0.3
4439	Entiat	Complexity	Stormy Reach Assessment	The Stormy Reach Assessment (RM 18.0- RM 20.8) builds an understanding of geomorphic potential at the scale of implementation and documents environmental baseline conditions to establish a matrix of reach-based ecosystem indicators. Both geomorphic potential and the matrix serve as a basis to identify and prioritize potential habitat actions based on ecosystem conditions. The matrix serves a vital function as a platform for establishing among other things, an interdisciplinary and holistic approach to ecosystem rehabilitation and restoration. The matrix also provides baseline information needed for linking effectiveness monitoring to habitat implementation actions.	UC River Steelhead, UC River Spring Chinook Salmon			10/1/2008	11/15/2009	0	0			0	0	0	0	0	0

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BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4430	Entiat	Complexity	Preston Reach Assessment	The Preston Reach Assessment (RM 21.1- RM 23.1) builds an understanding of geomorphic potential at the scale of implementation and documents environmental baseline conditions to establish a matrix of reach-based ecosystem indicators. Both geomorphic potential and the matrix serve as a basis to identify and prioritize potential habitat actions based on ecosystem conditions. The matrix serves a vital function as a platform for establishing among other things, an interdisciplinary and holistic approach to ecosystem rehabilitation and restoration. The matrix also provides baseline information needed for linking effectiveness monitoring to habitat implementation actions.	UC River Steelhead, UC River Spring Chinook Salmon			10/1/2008	7/15/2009	0	0			0	0	0	0	0	0
4339	Entiat	Complexity	Below the Bridge (Moody Canyon) ELJ (Bridge to Bridge Restoration, Phase 4)	Complexity Project in the lower Entiat	UC River Steelhead, UC River Spring Chinook Salmon	47 39 51	120 15 48	4/1/2007	1/15/2009	0	0	R		0	0	0	0	0	0.4
4329	Entiat	Complexity	Harrison Side Channel (Bridge to Bridge Restoration, Phases 2 and 3)	The project connected secondary channels at about 3 locations at varying elevations along the main channel.	UC River Steelhead, UC River Spring Chinook Salmon	47 40 12	120 17 29	6/26/2007	11/15/2008	0	0	S		0	0	0	0	0	0.5
4285	Entiat	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 im-	UC River Steelhead, UC River Spring Chinook Salmon	47 40 09	120 17 05	6/27/2006	11/15/2007	0	0	R		0	0	0	0	0	0.2

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BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
				provements to the irrigation canal outfall and riparian planting.															
4194	Entiat	Access	Knapp-Wham/Hannon Detweiler Ditch Consolidation (Phases 1&3)	Consolidation of two ditches with diversions that constitute barriers with one diversion re-configured to better pass ESA listed anadromous species.	UC River Steelhead, UC River Spring Chinook Salmon	47 41 11	120 18 55	10/31/2003	10/15/2007	0	0	D	P	0	0	0	0	0	0
4340	Entiat	Complexity	Milne Diversion Project (Bridge to Bridge and Beyond Project # 1)	This is the first project in the Lower Entiat resulting from TSC's Reach Study. Multiple instream habitat structures including one that also replaces an irrigation push-up dam were installed.	UC River Steelhead, UC River Spring Chinook Salmon	47 39 57	120 16 36	8/25/2006	10/15/2007	0	0	R		0	0	0	0	0	0.3
4396	Methow	Access	Heath Middle Pond Fish Passage	This replaced three impassable culverts with bridges to restore fish access in and out of the middle pond on the Heath property in the Big Valley Reach.	UC River Steelhead, UC River Spring Chinook Salmon	48 30 23	120 15 32	1/23/2009	9/30/2010	0	0	C	F	0.5	0	0	0	0	0
4330	Methow	Access	Poorman Cutoff Road Culvert	Replacement of culvert with fish-passable structure.	UC River Steelhead, UC River Spring Chinook Salmon	48 21 50	120 20 19	2/15/2008	10/15/2009	0	0	C	F	3	0	0	0	0	0
4262	Methow	Complexity	Rockview-Fender Mills Phase I Side Channel Reconnection	The side-channel restoration project restored floodplain connectivity on approximately 1/4 mile of off-channel rearing habitat.	UC River Steelhead, UC River Spring Chinook Salmon	48 32 34	120 19 20	5/12/2005	5/15/2009	0	0	S		0	0	0	0	0	0.25
4162	Methow	Stream-flow	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 in dry years from RM 7.9 to 0.7.	UC River Steelhead, UC River Spring Chinook Salmon	48 34 13	120 10 28	10/1/2007	9/30/2008	18	7.2	A		0	0	0	0	0	0

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BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4333	Methow	Complexity	Big Valley Light Heath	This project provided better connection and access from the Methow River to a spring creek and pond on the Heath Property - also see Heath Middle Pond	UC River Steelhead, UC River Spring Chinook Salmon	48 30 28	120 15 33	1/19/2007	8/29/2008	0	0	S		0	0	0	0	0	1
4325	Methow	Complexity	Big Valley Reach Assessment	This study addressed cumulative project impacts,, river stability and habitat assessment for a 6 to 10 mile reach of the mainstem Methow River.	UC River Steelhead, UC River Spring Chinook Salmon			10/2/2006	3/31/2008	0	0			0	0	0	0	0	0
4331	Methow	Access	Redshirt Project	This project addressed an irrigation related barrier on Beaver Creek by constructing a rock weir structure.	UC River Steelhead, UC River Spring Chinook Salmon	48 23 01	120 02 58	7/20/2006	10/26/2007	0	0	D	P	4	0	0	0	0	0
4162	Methow	Stream-flow	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 in dry years from RM 7.9 to 0.7.	UC River Steelhead, UC River Spring Chinook Salmon	48 34 13	120 10 28	10/1/2006	9/30/2007	16.1	7.2	A		0	0	0	0	0	0
4270	Methow	Complexity	Methow Subbasin Geomorphic Assessment	This investigation provided data on the fluvial geomorphologic characteristics of the Methow Subbasin.	UC River Steelhead, UC River Spring Chinook Salmon			5/12/2005	9/30/2007	0	0			0	0	0	0	0	0
4009	Methow	Access	Fulton Diversion	The diversion structure is adequate but the fishway was re-designed and replaced with a more effective version.	UC River Steelhead, UC River Spring Chinook Salmon	48 29 13	120 10 54	11/1/2002	2/23/2007	0	0	D	P	30.1	0	0	0	0	0
4361	Wenatchee	Stream-flow	Peshastin Pipeline	Two miles of leaking irrigation ditch were replaced with 36" and 10" pipe, resulting in 1.2 cfs of water to be returned to Peshastin Creek. This water increases the water in the fish bypass at Peshastin Diversion.	UC River Steelhead, UC River Spring Chinook Salmon	47 31 45	120 37 13	4/2/2007	11/15/2011	1.2	2.4	A		0	0	0	0	0	0

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										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4390	Wenatchee	Access	Upper Chumstick Barriers	This project removed three diversions on Chumstick Creek that were total fish barriers. Two were replaced with a series of rock weirs, and the third was replaced with a roughened channel. The existing irrigation system was also updated with a fish friendly passive pump screen.	UC River Steelhead, UC River Spring Chinook Salmon	47 42 17	120 38 20	12/15/2009	11/11/2011	0	0	D	P	0.3	0	0	0	0	0
4316	Wenatchee	Complexity	CMZ 11	Channel Reconfiguration	UC River Steelhead, UC River Spring Chinook Salmon	47 32 04	120 31 25	2/26/2008	10/15/2008	0	0	S		0	0	0	0	0	0.3
4315	Wenatchee	Complexity	CMZ 12/13	Channel Reconfiguration	UC River Steelhead, UC River Spring Chinook Salmon	47 32 01	120 32 55	2/26/2008	10/15/2008	0	0	S		0	0	0	0	0	0.4
4214	Wenatchee	Access	Pioneer Ditch	This project eliminated seasonal instream disturbances associated with rebuilding a diversion dam, improving fish passage, and included habitat improvements.	UC River Steelhead, UC River Spring Chinook Salmon	47 29 42	120 25 17	7/26/2004	6/15/2008	0	0			0	0	0	0	0	0
4193	Wenatchee	Access	Jones Shotwell Ditch	This project brought the Jones Shotwell Ditch Company's fish screen into compliance with NOAA Fisheries criteria.	UC River Steelhead, UC River Spring Chinook Salmon	47 29 37	120 25 25	2/2/2004	2/15/2008	0	0	D	P	100	0	0	0	0	0

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										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4193	Wenatchee	Complexity	Jones Shotwell Ditch	This project added complexity to the Jones Shotwell Ditch Company's fish screen.	UC River Steelhead, UC River Spring Chinook Salmon	47 29 36	120 25 27	2/2/2004	2/15/2008	0	0	R		0	0	0	0	0	0.2
4193	Wenatchee	Entrainment	Jones Shotwell Ditch	This project brought the Jones Shotwell Ditch Company's fish screen into compliance with NOAA Fisheries criteria.	UC River Steelhead, UC River Spring Chinook Salmon	47 29 36	120 25 27	2/2/2004	2/15/2008	0	0			0	1	0	0	0	0
4214	Wenatchee	Stream-flow	Pioneer Ditch	This project eliminated seasonal instream disturbances associated with rebuilding a diversion dam, improving fish passage, and habitat improvements.	UC River Steelhead, UC River Spring Chinook Salmon	47 29 42	120 25 17	7/26/2004	11/15/2007			C		0	0	0	0	0	0
Snake River Steelhead and Spring/Summer Chinook Salmon																			
4531	Lemhi	Complexity	Upper Little Springs Channel Restoration	The project entailed removal of an irrigation diversion and re-establishment of streamflow from a connection with a smaller headwater tributary called Walters Creek. An undersized culvert in Little Springs Creek at the downstream end of the project area was replaced with a larger culvert to improve fish passage. At various locations throughout the 0.9 mile reach of Little Springs and 0.3 mile reach of Walters Creek, bioengineering and other treatments were implemented to rehabilitate degraded fish habitat, stabilize eroded streambanks, and re-establish riparian vegetation.	Snake River Steelhead, Snake River Sp/Su Chinook	44 45 35	113 30 11	1/2/2012	10/31/2012										1.2

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										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4424	Upper Salmon	Complexity	Yankee Fork Tributary Assessment	The Yankee Fork Tributary of the Salmon River was identified as a priority subbasin in the 2008 FCRPS BiOp. The purpose of the assessment was to provide a comprehensive geomorphic analysis of the sub-basin.	Snake River Steelhead, Snake River Sp/Su Chinook			10/1/2009	2/3/2012										
4476	Upper Salmon	Complexity	Yankee Fork Reach Assessment YF-3 (Bonanza Area Reach)	An investigation of physical and ecologic processes within the YF-3 Reach. The assessment summarizes existing conditions, and identifies, as well as prioritizes, action that could be implemented to improve aquatic habitat in the Yankee Fork Subbasin.	Snake River Steelhead, Snake River Sp/Su Chinook			10/20/2011	9/30/2012										
4492	Upper Salmon	Complexity	Yankee Fork Reach Assessment YF-2 (Pole Flat)	An investigation of physical and ecologic processes within the YF-2 Reach. The assessment summarizes existing conditions, and identifies, as well as prioritizes, action that could be implemented to improve aquatic habitat in the Yankee Fork Subbasin.	Snake River Steelhead, Snake River Sp/Su Chinook			12/1/2011	10/26/2012										
4327	Grande Ronde	Access	Orodell Diversion Fish Passage Enhancement Project	This project replaced a partial fish barrier irrigation diversion structure with a fish-passable structure.	Snake River Steelhead, Snake River Sp/Su Chinook	45 20 31	118 06 59	9/24/2007	9/24/2009	0	0	D	P	50	0	0	0	0	0
4484	Lemhi	Complexity	Lower Lemhi River Multi Landowner Bank Stabilization	351 feet of eroding stream bank was armored with root wads, rock and planted vegetation. An old levee was removed for increased floodplain connectivity, an irrigation ditch was relocated, and a fence line set back to exclude cattle from access to the stream bank and protect additional riparian habitat.	Snake River Steelhead, Snake River Sp/Su Chinook	45 09 42	113 50 43	4/4/2011	11/18/2011	0	0	R		0	0	0	0	0	0.1



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										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4485	Lemhi	Access	Wallace Creek Culvert Replacement	The existing 42-inch culvert under L Diamond Creek Road on Wallace Creek was under-sized and the outlet perched, thus preventing upstream fish migration. The culvert was replaced with a 22-foot by 35-foot prefabricated modular steel bridge.	Snake River Steelhead, Snake River Sp/Su Chinook	45 15 52	113 54 16	6/1/2010	9/16/2011	0	0	C	F	5	0	0	0	0	0
4494	Lemhi	Access, Entrainment, and Stream-flow	L-52 Ditch Closure	Along the length of the L-52 Ditch, head gates were removed and points of diversion were permanently closed to prevent water withdrawal, improving flow and fish passage. At locations where perennial and ephemeral streams were bisected (captured) by the ditch, embankments were removed to allow un-impeded flow of streams to the Lemhi River.	Snake River Steelhead, Snake River Sp/Su Chinook	44 45 24	113 29 23	5/3/2010	8/15/2011	1.5	3	C	F	3	3		0	0	0
4462	Lemhi	Access	Little Springs Creek Rehabilitation	IDFG obtained PCSRF funding to re-direct an off channel spring source and establish a new channel and physical connection with a tributary of the Lemhi River (Little Springs Creek) to enhance flows, reduce water temperatures and create additional habitat for Chinook and Steelhead. The project entailed developing the spring source, re-directing flow around a pond, and rehabilitating and constructing additional stream channel to connect the spring source with Little Springs Creek.	Snake River Steelhead, Snake River Sp/Su Chinook	44 45 41	113 30 50	1/3/2007	10/29/2010					0.3					
4462	Lemhi	Complexity	Little Springs Creek Rehabilitation	IDFG obtained PCSRF funding to re-direct an off channel spring source and establish a new channel and physical connection with a tributary of the Lemhi River (Little Springs Creek) to enhance flows, reduce water temperatures and create additional habitat for Chinook and Steelhead. The project entailed developing the	Snake River Steelhead, Snake River Sp/Su Chinook	44 45 41	113 30 50	1/3/2007	10/29/2010										0.3

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										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
				spring source, re-directing flow around a pond, and rehabilitating and constructing additional stream channel to connect the spring source with Little Springs Creek.															
4463	Lemhi	Access	Lower Iron Creek Culvert Replacement	Iron Creek is a tributary to the Salmon River. A culvert that conveyed Iron Creek under a county road was identified by IDFG as a fish passage barrier was replaced with a pre-fabricated steel bridge to provide improved fish passage under the county road. Reclamation assisted by providing an archeologist to conduct a cultural resource survey/report used to obtain SHPO clearance.	Snake River Steelhead, Snake River Sp/Su Chinook	44 53 24	113 58 26	8/15/2007	8/16/2010			C	F	4					
4386	Lemhi	Complexity	Lemhi River, Little Springs Creek Restoration	Habitat improvements utilizing a combination of various bio-engineering treatments intended to return the stream to a more natural and more stable condition included channel/bank reshaping and alignment, placement of engineered log jams, diversion replacement and planting of riparian vegetation.	Snake River Steelhead, Snake River Sp/Su Chinook	44 45 45	113 30 34	2/12/2008	11/16/2009	0	0	R		0	0	0	0	0	1.25
4378	Lemhi	Access	Upper Lemhi River Flow Enhancement/Eighteenmile Creek Reconnect	A formerly disconnected Lemhi River Tributary was re-connected to the mainstem Lemhi River by removing a permanent diversion structure and eliminating the "Whitefish Ditch". A related barrier to fish passage in an adjacent tributary Canyon Creek also was removed. Eighteenmile Creek stream flow water rights that were formerly conveyed to irrigated lands via the Whitefish Ditch were re-directed to flow down the Lemhi River. Water rights out of Eighteenmile Creek were transferred to a	Snake River Steelhead, Snake River Sp/Su Chinook	44 41 26	113 21 43	10/16/2006	9/15/2009	0	0	D	P	144	0	0	0	0	0

**Attachment 2 – Table 3. Status of Tributary Habitat Actions Completed in 2007-2012 with Reclamation Technical Assistance**

BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
				withdrawal location about 3 miles downstream from the Lemhi River at the L-62 point of diversion and now diverted / pumped onto agricultural land.															
4378	Lemhi	Entrainment	Upper Lemhi River Flow Enhancement/ Eighteenmile Creek Reconnect	See the "Whitefish Ditch" project above.	Snake River Steelhead, Snake River Sp/Su Chinook	44 41 26	113 21 43	10/16/2006	9/15/2009	0	0			0	1	3.5	0	3	0
4378	Lemhi	Stream-flow	Upper Lemhi River Flow Enhancement/ Eighteenmile Creek Reconnect	See the "Whitefish Ditch" project above. Previous irrigation withdrawal which included the entire stream at lower flows is now allowed to reach the Lemhi River and enhances flow for about 3 miles down to the new diversion location.	Snake River Steelhead, Snake River Sp/Su Chinook	44 41 26	113 21 43	10/16/2006	9/15/2009	12	3	A		0	0	0	0	0	0
4417	Lemhi	Access	Big Timber Flow Enhancement	Water rights from BT-2 diversion were transferred to a new POD downstream in the Lemhi River. Now, the 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.	Snake River Steelhead, Snake River Sp/Su Chinook	44 42 05	113 22 56	5/30/2003	8/15/2009	0	0	D	P	0.75	0	0	0	0	0
4417	Lemhi	Stream-flow	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.	Snake River Steelhead, Snake River Sp/Su Chinook	44 42 05	113 22 56	5/30/2003	8/15/2009	2	4.5	A		0	0	0	0	0	0
4233	Lemhi	Stream-flow	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	Snake River Steelhead, Snake River Sp/Su Chinook			10/1/2005	7/17/2007					0	0	0	0	0	0

Attachment 2 – Table 3. Status of Tributary Habitat Actions Completed in 2007-2012 with Reclamation Technical Assistance

BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
				Federal regulatory agencies to identify stream flow targets which Reclamation can help meet by implementing other Habitat Program measures.															
4180	Upper Salmon	Stream-flow	IDWR Upper Salmon Water Budget Model	Contract with IDWR for development of subbasin water models in the Upper Salmon will allow Reclamation to help market irrigation improvement related projects and monitor cumulative effects of those projects.	SNAKE RIVER STEELHEAD, SNAKE RIVER SP/SU CHINOOK			7/21/2003	6/15/2007					0	0	0	0	0	0
Mid-Columbia River Steelhead																			
4419	John Day	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 (Middle Fork) and 3 miles of the Upper John Day River (Upper Mainstem), 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.	Middle Columbia River Steelhead			5/12/2006	5/16/2008	0	0			0	0	0	0	0	0

Attachment 2 – Table 3. Status of Tributary Habitat Actions Completed in 2007-2012 with Reclamation Technical Assistance

BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
4318	John Day Middle Fork	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.	Middle Columbia River Steelhead			9/18/2007	8/19/2010	0	0			0	0	0	0	0	0
4319	John Day Middle Fork	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 resto-	Middle Columbia River Steelhead			9/5/2007	3/19/2010	0	0			0	0	0	0	0	0

Attachment 2 – Table 3. Status of Tributary Habitat Actions Completed in 2007-2012 with Reclamation Technical Assistance

BiOp ID	Sub-basin	Limiting Factor	Project Title	Short Description	ESU/DPS	North Latitude DMS	West Longitude DMS	Action Start Date	Action End Date	Streamflow		Type	Access		Entrainment				Complexity (miles)
										Stream Flow (cfs)	Stream Length (miles)		Extent of Barrier	Miles	Number of Screens Replaced	Screened Discharge (cfs)	Screened Discharge (Af/yr)	Stream Miles Affected	
				ration and preservation project areas.															

## Attachment 3 – Table 1. Tributary Habitat Reports by the Bureau of Reclamation

Report Name	Internet address	Date
Reclamation's 2011 Annual Report of Tributary Habitat Projects Completed for the 2010 FCRPS Biological Opinion	<a href="http://www.usbr.gov/pn/fcrps/ce/annualreports/2011annrept.pdf">http://www.usbr.gov/pn/fcrps/ce/annualreports/2011annrept.pdf</a>	May-12
Reclamation's 2010 Annual Report of Tributary Habitat Projects Completed for the 2010 Federal Columbia River Power System Biological Opinion	<a href="http://www.usbr.gov/pn/fcrps/ce/annualreports/2010annrept.pdf">http://www.usbr.gov/pn/fcrps/ce/annualreports/2010annrept.pdf</a>	Jul-11
Reclamation's 2009 Annual Report of Tributary Habitat Projects Completed for the 2008 Federal Columbia River Power System Biological Opinion	<a href="http://www.usbr.gov/pn/fcrps/ce/annualreports/2009annrept.pdf">http://www.usbr.gov/pn/fcrps/ce/annualreports/2009annrept.pdf</a>	Dec-10
<b>Washington</b>		
<b>Entiat</b>		
Existing Projects Review: Lower Entiat River	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/entiat/existing.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/entiat/existing.pdf</a>	April-12
Lower Entiat Reach Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/lowerentiat/finalRA.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/lowerentiat/finalRA.pdf</a>	Jan-12
Stormy Reach Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/entiat/stormyreach/stormy-assmt2.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/entiat/stormyreach/stormy-assmt2.pdf</a>	Nov-09
Preston Reach Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/entiat/prestonreach/completereport.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/entiat/prestonreach/completereport.pdf</a>	Jul-09
Entiat Tributary Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/entiat/tribassmt/index.html">http://www.usbr.gov/pn/fcrps/ce/wash/entiat/tribassmt/index.html</a>	Jan-09
<b>Methow</b>		
Winthrop Area (W2) Assessment of Geomorphic and Ecologic Indicators, Methow River, Methow Subbasin	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/methow/winthrop.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/methow/winthrop.pdf</a>	Dec-11
Middle Methow Reach Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/methow/m2reachassmt/m2report.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/methow/m2reachassmt/m2report.pdf</a>	Aug-10
Middle Methow Reach Assessments – Technical Appendices	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/methow/m2reachassmt/m2apps.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/methow/m2reachassmt/m2apps.pdf</a>	Aug-10
Geomorphology and Hydraulic Modeling for the Middle Methow River from Winthrop to Twisp	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/methow/m2geomorphology/m2finalreport.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/methow/m2geomorphology/m2finalreport.pdf</a>	Jan-10
Completion Report: Wolf Creek Diversion Dam	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/methow/completion/wolfcreekdiversion.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/methow/completion/wolfcreekdiversion.pdf</a>	Mar-09
Big Valley Reach Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/methow/bigvalley/bv-reachassmt.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/methow/bigvalley/bv-reachassmt.pdf</a>	Aug-08
Methow Subbasin Geomorphic Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/methow/geomorphicassessment/index.html">http://www.usbr.gov/pn/fcrps/ce/wash/methow/geomorphicassessment/index.html</a>	May-08

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<b>Wenatchee</b>		
Lower Nason Assessment of Geomorphic and Ecologic Indicators	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/wenatchee/nasoncreek/2011-geomorphicassmt-lowernason.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/wenatchee/nasoncreek/2011-geomorphicassmt-lowernason.pdf</a>	Apr-11
Kahler Reach Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/wenatchee/kahler/kahlerreachassmt.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/wenatchee/kahler/kahlerreachassmt.pdf</a>	Mar-09
Upper White Pine Reach Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/wenatchee/upperwhitepine/uwp-reachassmt.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/wenatchee/upperwhitepine/uwp-reachassmt.pdf</a>	Mar-09
Lower White Pine Reach Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/wenatchee/lowerwhitepine/reachassmt.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/wenatchee/lowerwhitepine/reachassmt.pdf</a>	Feb-09
Nason Creek Tributary Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/wash/wenatchee/nasoncreek/tributary-assmt.pdf">http://www.usbr.gov/pn/fcrps/ce/wash/wenatchee/nasoncreek/tributary-assmt.pdf</a>	Jul-08
<b>Oregon</b>		
<b>General Documents</b>		
Middle Fork and Upper Fork John Day River Tributary Assessments	<a href="http://www.usbr.gov/pn/fcrps/ce/oregon/tributary-assmt/midfortk-jdas2008.pdf">http://www.usbr.gov/pn/fcrps/ce/oregon/tributary-assmt/midfortk-jdas2008.pdf</a>	May-08
Middle Fork John Day Atlas	<a href="http://www.usbr.gov/pn/fcrps/ce/oregon/tributary-assmt/atlas/mfjd-atlas.pdf">http://www.usbr.gov/pn/fcrps/ce/oregon/tributary-assmt/atlas/mfjd-atlas.pdf</a>	May-08
Upper John Day Atlas	<a href="http://www.usbr.gov/pn/fcrps/ce/oregon/tributary-assmt/atlas/upjdatlas2008.pdf">http://www.usbr.gov/pn/fcrps/ce/oregon/tributary-assmt/atlas/upjdatlas2008.pdf</a>	May-08
<b>Middle Fork John Day</b>		
Forrest Conservation Area Reach Assessment Middle Fork John Day River	<a href="http://www.usbr.gov/pn/fcrps/ce/oregon/middlefork/forestreachassmt.pdf">http://www.usbr.gov/pn/fcrps/ce/oregon/middlefork/forestreachassmt.pdf</a>	Aug-10
Oxbow Conservation Area Reach Assessment Middle Fork John Day River	<a href="http://www.usbr.gov/pn/fcrps/ce/oregon/oxbowreach.pdf">http://www.usbr.gov/pn/fcrps/ce/oregon/oxbowreach.pdf</a>	Mar-10
Geomorphology and Hydraulic Model Analysis of the Oxbow Conservation Area	<a href="http://www.usbr.gov/pn/fcrps/ce/oregon/oxbow/geomorph051509.pdf">http://www.usbr.gov/pn/fcrps/ce/oregon/oxbow/geomorph051509.pdf</a>	Jun-09
2006 PHABSIM Report Flow Characterization Study: Instream Flow Assessment Selected Stream Segments-John Day and Middle Fork John Day River Subbasins, Oregon	<a href="http://www.usbr.gov/pn/fcrps/ce/oregon/middlefork/flowstudy.pdf">http://www.usbr.gov/pn/fcrps/ce/oregon/middlefork/flowstudy.pdf</a>	Mar-08
<b>Grande Ronde River Basin</b>		
Biological Assessment, Catherine Creek RM 37 Stream and Fish Habitat Restoration Project	<a href="http://www.usbr.gov/pn/fcrps/ce/oregon/ba/cc37-ba.pdf">http://www.usbr.gov/pn/fcrps/ce/oregon/ba/cc37-ba.pdf</a>	Feb-12
Catherine Creek Tributary Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/oregon/catherinecreek/index.html">http://www.usbr.gov/pn/fcrps/ce/oregon/catherinecreek/index.html</a>	Feb-12
Biological Assessment, Little Creek Diversion No. 1 Fish Passage Project	<a href="http://www.usbr.gov/pn/fcrps/ce/oregon/ba/littlecreek-ba.pdf">http://www.usbr.gov/pn/fcrps/ce/oregon/ba/littlecreek-ba.pdf</a>	Apr-11

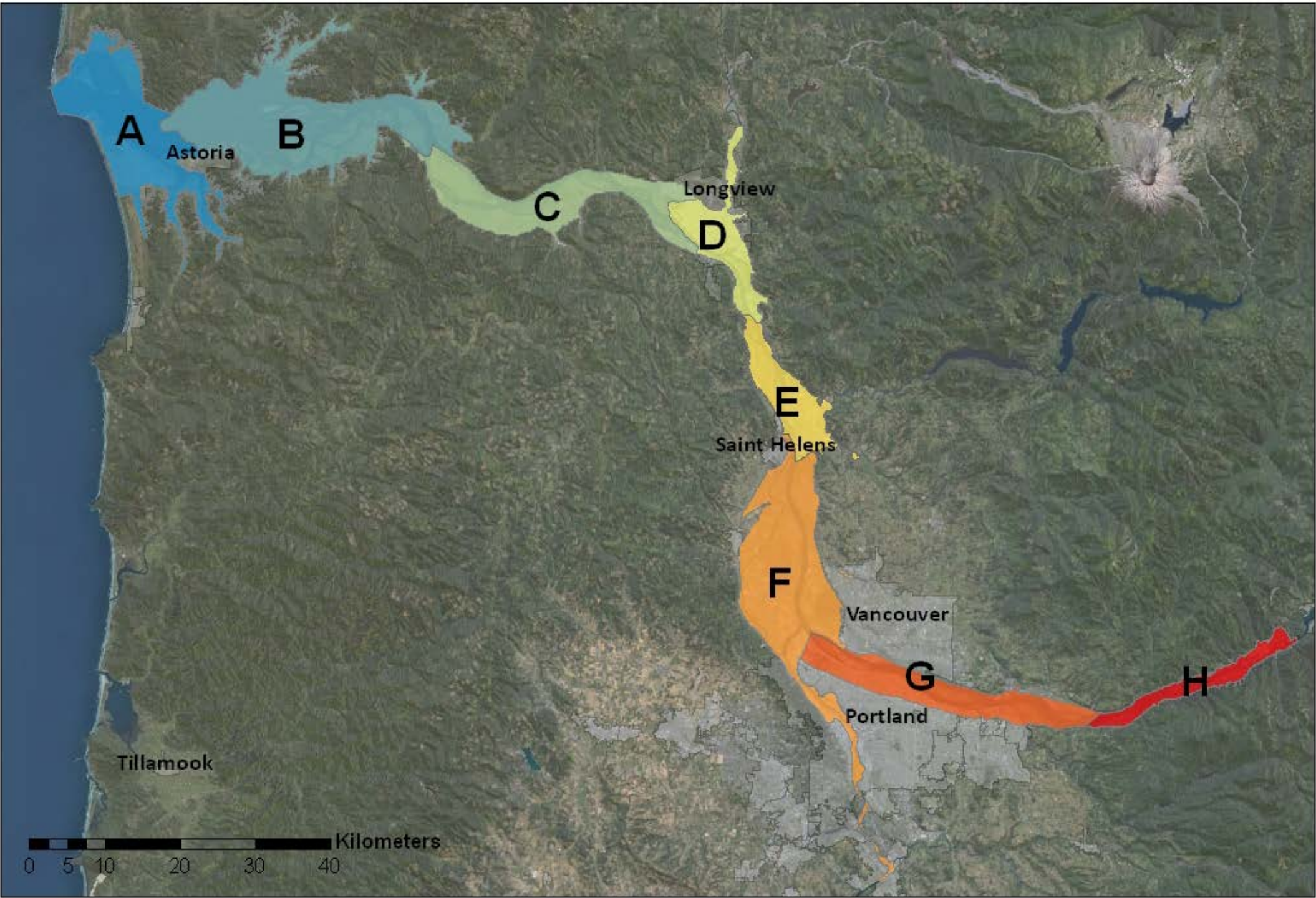


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<b>Idaho</b>		
<b>Lemhi</b>		
Completion Report: Lemhi River L-3 Wasteway Diversion Fish Barrier	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L-3.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L-3.pdf</a>	Feb-08
Completion Report: Lemhi River L-9 Diversion Replacement	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L9.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L9.pdf</a>	Dec-07
Completion Report: Lemhi River L-13 Irrigation Fish Screen Replacement	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L-13.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L-13.pdf</a>	Oct-07
Completion Report: Lemhi River L-44 Irrigation Diversion Replacement	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L44.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L44.pdf</a>	Oct-07
Completion Report: Lemhi River L-35A Fish Screen and Headgate Replacement	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L35A.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L35A.pdf</a>	Oct-07
Flow Characterization Study: Instream Flow Assessment, Hawley Creek and Eighteenmile Creek, Idaho	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/phase/sim/hawley-flowassessment.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/phase/sim/hawley-flowassessment.pdf</a>	Jun-07
Completion Report: L-3 and L-3A Irrigation Diversion Replacement	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L3-L3A.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/lemhi/completion/L3-L3A.pdf</a>	May-07
<b>Little Salmon</b>		
Completion Report: Squaw Creek Culvert Fish Passage Improvement Project	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/littlesalmon/sqawcrk-culvert.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/littlesalmon/sqawcrk-culvert.pdf</a>	Feb-08
<b>Upper Salmon</b>		
Pole Flat Area Baseline Condition Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/upper Salmon/poleflat.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/upper Salmon/poleflat.pdf</a>	Oct-12
Bonanza Reach Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/upper Salmon/bonanza.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/upper Salmon/bonanza.pdf</a>	Sept-12
Yankee Fork Tributary Assessment	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/upper Salmon/yf/index.html">http://www.usbr.gov/pn/fcrps/ce/idaho/upper Salmon/yf/index.html</a>	Jan-12
Completion Report: East Fork Salmon River EF/10 and EF/11 Irrigation Diversion Consolidation Project	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/upper Salmon/ef10-11.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/upper Salmon/ef10-11.pdf</a>	Jul-07
Completion Report: Garden Creek and Gini Canal Crossing Project	<a href="http://www.usbr.gov/pn/fcrps/ce/idaho/upper Salmon/gini-garden.pdf">http://www.usbr.gov/pn/fcrps/ce/idaho/upper Salmon/gini-garden.pdf</a>	Jul-07

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Attachment 4: Action Agency 2011 Estuary Habitat Projects





Attachment 4 – Table 1. Action Agency 2007-2012 Estuary Habitat Projects

Location (Reach A–H)	Project Name	Project Number	Lead Agency/ Sponsor	Estuary Module Action (Project Subactions Addressing Identified Limiting Factors)	Linear Miles of Riparian Stream/ Channel Improved 2007-2012	Acres Restored 2007-2012	Ocean SBUs	Stream SBUs	<sup>1</sup> SBU Type	Status	Was this Action Specific in the 2010- 2013 IP?
Completed in 2007											
A	Fort Clatsop – Phase 1	2003-011-00	BPA / CREST	CRE 10.2 Remove tide gates to improve the hydrology between wetlands and the channel and to provide juveniles with physical access to off-channel habitat; use a habitat connectivity index to prioritize projects		45	0.25	0.1	BA Final	Completed in 2007	No
F	Scappoose Bot- tomlands Resto- ration	2003-011-00	BPA / Estuary Partnership	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes man- aging vegetation on dikes and levees to enhance ecological function and adding shore- line/instream complexity for juvenile salmonid refugia	2		0.1	0.1	BA Final	Completed in 2007	No
				CRE 15.3 Implement projects to address infestations on public and private lands		30					
G	Ramsey Lake Restoration	N/a	COE	CRE 10.3 Upgrade tide gates where (1) no other options exist, (2) upgraded structures can provide appropriate access for juveniles, and (3) ecosystem function would be improved over current conditions		5	0.12	0.05	BA Final	Completed in 2007	No
TOTAL completed in 2007					2	80	0.47	0.25			
Completed in 2008											
A	Walluski River North	2003-011-00	BPA / Columbia Land Trust	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes man- aging vegetation on dikes and levees to enhance ecological function and adding shore- line/instream complexity for juvenile salmonid refugia	0.7		0.065	0.027	ERTG Final	Completed in 2008	No
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels		15					
				CRE 15.3 Implement projects to address infestations on public and private lands		5.5					
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increas- ing habitat quality		3.9					
B	Big Creek	2003-011-00	BPA / CREST	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes man- aging vegetation on dikes and levees to enhance ecological function and adding shore- line/instream complexity for juvenile salmonid refugia	0.3		0.033	0.022	ERTG Final	Completed in 2008	No
				CRE 10.3 Upgrade tide gates where (1) no other options exist, (2) upgraded structures can provide appropriate access for juveniles, and (3) ecosystem function would be improved over current conditions		13.3					
				CRE 15.3 Implement projects to address infestations on public and private lands		2.8					

<sup>1</sup> **Preliminary SBU Score:** One member of BPA's ecosystem restoration partners (Columbia Land Trust, Cowlitz Indian Tribe, Columbia River Estuary Study Taskforce, Lower Columbia Estuary Partnership, and Washington Department of Fish and Wildlife) used the Expert Regional Technical Group's (ERTG) scoring criteria, scoring spreadsheet, and the SBU calculator to provide preliminary SBU scores of project concepts. Partners recused themselves from scoring their own projects. The concepts consisted of a project goal map showing the 2-year flood inundation and all CRE restoration activities. Additionally, a representative of the BPA and Corps do a blind QA/QC analysis.

**BA Final SBU Score:** Final scores that were included in the Biological Assessment were scores completed prior to the formation of the ERTG and were scored by the BPA contractor that developed the original SBU scoring mechanism. All BA final SBU scores were incorporated by NOAA as part of the Biological Opinion (BiOp).

**ERTG Preliminary SBU Scores:** If a project includes a type of restoration that has not been previously reviewed by the ERTG or if a project requires significant funding early in process the AAs ask the ERTG for a preliminary score. These scores are not considered final but rather provide the AA with some level of assurance that the project is still worth pursuing. Once the project gets far enough along in the design phase then the projects are taken to the ERTG for a final SBU score.

**ERTG Final SBU Scores:** Most if not all projects have either an AA or ERTG preliminary score to insure that the project meets selection criteria (see Preliminary SBU scores above). Once a project reaches approximately 60% design, an ERTG template is completed and then sent to the ERTG for their review. In almost all cases the ERTG is then taken on a site visit to better evaluate the potential of each project. After The ERTG scoring is documented by the ERTG facilitator and then an ERTG Project SBU Report is developed. All scores are considered final unless the project constructed deviates in any significant way from the project presented to the ERTG. To date no project has been constructed in a manner deemed different enough to require re-scoring.

**AA Final Scores:** AA final scores are only used to calculate the benefit of passive restoration associated with land acquisitions. The AAs use a similar approach to the ERTG, incorporating CRE subaction information from the Estuary Module of the Lower Columbia River Recovery Plan. The AAs provide scores for certainty of success, habitat capacity and quality, and access using the same criteria as the ERTG.

**Attachment 4 – Table 1. Action Agency 2007-2012 Estuary Habitat Projects**

Location (Reach A–H)	Project Name	Project Number	Lead Agency/ Sponsor	Estuary Module Action (Project Subactions Addressing Identified Limiting Factors)	Linear Miles of Riparian Stream/ Channel Improved 2007-2012	Acres Restored 2007-2012	Ocean SBUs	Stream SBUs	<sup>1</sup> SBU Type	Status	Was this Action Specific in the 2010- 2013 IP?
H	Mirror Lake – Phase 1	2003-011-00	BPA /Estuary Partnership	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes man-aging vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia	0.7		0.0905	0.0425	ERTG Final	Completed in 2008	No
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increas-ing habitat quality		3					
				CRE 10.3 Upgrade tide gates where (1) no other options exist, (2) upgraded structures can provide appropriate access for juveniles, and (3) ecosystem function would be improved over current conditions		165					
G	Sandy River Delta Riparian Forest Restora-tion	2003-011-00 1999-025-00	Corp / BPA / USFS (Ash Creek Forestry)	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes man-aging vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia	0.6		0.0037	0.0037	ERTG Final	Completed in 2008	Yes
				CRE 15.3 Implement projects to address infestations on public and private lands		255					
B	Wolf Bay – Phase 1	2003-011-00	BPA / Columbia Land Trust	CRE 9.3 Actively purchase off-channel habitats in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are degraded but have good restoration potential, or (3) are highly degraded but could benefit from long-term res-toration solutions		70.2	0.0313	0.0117	AA Final	Completed in 2008	No
C	Willow Grove – Phase 1	2003-011-00	BPA / Columbia Land Trust	CRE 9.3 Actively purchase off-channel habitats in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are degraded but have good restoration potential, or (3) are highly degraded but could benefit from long-term res-toration solutions		304	0.3	0.08	BA Final	Completed in 2008	No
F	Scappoose Bay	2003-011-00	BPA / Estuary Partnership	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes man-aging vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia	2		0.003	0.003	ERTG Final	Completed in 2008	No
				CRE 15.3 Implement projects to address infestations on public and private lands		41					
TOTAL completed in 2008					4.3	878.7	0.5265	0.1899			
Completed in 2009											
A	Perkins Creek	2003-011-00	BPA / CREST	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes man-aging vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia	0.3		0.003	0.002	ERTG Final	Completed in 2009	No
				CRE 10.3 Upgrade tide gates where (1) no other options exist, (2) upgraded structures can provide appropriate access for juveniles, and (3) ecosystem function would be improved over current conditions		1.1					
				CRE 15.3 Implement projects to address infestations on public and private lands		1.1					
G	Columbia Slough	2003-011-00	BPA / City of Portland	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes man-aging vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia	0.8		0.011	0.008	ERTG Final	Completed in 2009	No
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increas-ing habitat quality		3.4					
B	Crazy Johnson – Phase 1	2003-011-00	BPA / Columbia Land Trust	CRE 1.3 Actively purchase riparian areas in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are intact, or (3) are degraded but have good restoration potential		150.9	0.0117	0.0117	AA Final	Completed in 2009	No
B	Elochoman Slough – Phase 1	2003-011-00	BPA / WDFW / Columbia Land Trust	CRE 9.3 Actively purchase off-channel habitats in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are degraded but have good restoration potential, or (3) are highly degraded but could benefit from long-term res-toration solutions		196.4	0.0997	0.0374	AA Final	Completed in 2009	No

**Attachment 4 – Table 1. Action Agency 2007-2012 Estuary Habitat Projects**

Location (Reach A–H)	Project Name	Project Number	Lead Agency/ Sponsor	Estuary Module Action (Project Subactions Addressing Identified Limiting Factors)	Linear Miles of Riparian Stream/ Channel Improved 2007-2012	Acres Restored 2007-2012	Ocean SBUs	Stream SBUs	<sup>1</sup> SBU Type	Status	Was this Action Specific in the 2010- 2013 IP?
B	Gray's River - Gorley Springs	2003-011-00	BPA / CREST	CRE 1.3 Actively purchase riparian areas in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are intact, or (3) are degraded but have good restoration potential		40	0.24	0.23	BA Final	Completed in 2009	No
				CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia	1.9						
G	Vancouver Water Resources Wet- land	P2#142455	Corps / City of Vancouver	CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels		10	0.06	0.06	BA Final	Completed in 2009	Yes
TOTAL completed in 2009					3	402.9	0.4254	0.3491			
Completed in 2010											
A	Haven Island	2003-011-00	BPA / Columbia Land Trust	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia	1.5		0.134	0.046	ERTG Final	Completed in 2010	No
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels		27.8					
				CRE 15.3 Implement projects to address infestations on public and private lands		67.6					
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality		1.6					
H	Mirror Lake – Phase 2	2003-011-00	BPA / Estuary Partnership	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia	1.4		0.0905	0.0425	ERTG Final	Completed in 2010	Yes
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality		3.3					
G	Sandy River Del- ta Riparian For- est Restoration	2003-011-00 1999-025-00	Corp / BPA / USFS (Ash Creek Forestry)	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia	2.8		0.0062	0.0062	ERTG Final	Completed in 2010	Yes
				CRE 15.3 Implement projects to address infestations on public and private lands		192					
B	Julia Butler Han- sen NWR	P2#1173986	Corp	CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality		110	0.06	0.02	BA Final	Completed in 2010	Yes
				CRE 15.3 Implement projects to address infestations on public and private lands		210					
TOTAL completed in 2010					5.7	612.3	0.2907	0.1147			
Completed in 2011											
A	Fort Columbia	2010-004-00	BPA / CREST	CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality		5.1	0.173	0.078	ERTG Final	Completed in 2011	Yes
				CRE 10.3 Upgrade tide gates where (1) no other options exist, (2) upgraded structures can provide appropriate access for juveniles, and (3) ecosystem function would be improved over current conditions		80.0					
B	Mill Road (Grays River)	2003-011-00	BPA / Columbia Land Trust	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia	0.5		0.397	0.128	ERTG Final	Completed in 2011	Yes

**Attachment 4 – Table 1. Action Agency 2007-2012 Estuary Habitat Projects**

Location (Reach A–H)	Project Name	Project Number	Lead Agency/ Sponsor	Estuary Module Action (Project Subactions Addressing Identified Limiting Factors)	Linear Miles of Riparian Stream/ Channel Improved 2007-2012	Acres Restored 2007-2012	Ocean SBUs	Stream SBUs	<sup>1</sup> SBU Type	Status	Was this Action Specific in the 2010- 2013 IP?
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality		1.5					
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels		46.2					
				CRE 15.3 Implement projects to address infestations on public and private lands		46.2					
G	Sandy River Delta Riparian Forest Restoration	2003-011-00 1999-025-00	BPA / USFS (Ash Creek Forestry)	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia	0.6		0.0031	0.0031	ERTG Final	Restoration completed in phases from 2008 through 2011.	Yes
				CRE 15.3 Implement projects to address infestations on public and private lands		194					
C	Germany Creek-Floodplain	2003-011-00	BPA / Columbia Land Trust	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia	0.4		0.09	0.09	BA Final	Completed in 2011	No
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality		2					
				CRE 15.3 Implement projects to address infestations on public and private lands		6.6					
<b>TOTAL completed in 2011</b>					<b>1.5</b>	<b>381.6</b>	<b>0.6631</b>	<b>0.2991</b>			
<b>Completed in 2012</b>											
A	Otter Point	2010-004-00 2003-011-00	BPA / CREST	CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality		3.9	0.234	0.080	ERTG Final	Completed in 2012	Yes
				CRE 15.3 Implement projects to address infestations on public and private lands		19.3					
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels		30.0					
A	Colewort Creek (Nutel Landing)	2010-004-00	BPA / CREST	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia	0.4		0.117	0.043	ERTG Final	Completed in 2012	No
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels		14					
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality		3.9					
				CRE 15.3 Implement projects to address infestations on public and private lands		17.5					
B	Gnat Creek - Phase 1	2010-004-00	BPA / CREST	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia	0.5		0.07	0.02	ERTG Final	Completed in 2012	No
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels		19					
B	South Tongue Poing (Liberty Lane)	2003-011-00	BPA / CREST	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia	0.3		0.006	0.003	ERTG Final	Completed in 2012	No
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality		0.5					
				CRE 10.2 Remove tide gates to improve the hydrology between wetlands and the channel and to provide juveniles with physical access to off-channel habitat; use a habitat connectivity index to prioritize projects		6.8					



**Attachment 4 – Table 1. Action Agency 2007-2012 Estuary Habitat Projects**

Location (Reach A–H)	Project Name	Project Number	Lead Agency/ Sponsor	Estuary Module Action (Project Subactions Addressing Identified Limiting Factors)	Linear Miles of Riparian Stream/ Channel Improved 2007-2012	Acres Restored 2007-2012	Ocean SBUs	Stream SBUs	<sup>1</sup> SBU Type	Status	Was this Action Specific in the 2010- 2013 IP?
				CRE 15.3 Implement projects to address infestations on public and private lands		7.7					
C	Abernathy Creek	2009-016-00	BPA / WDFW	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes man-aging vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia	0.9		0.013	0.009	ERTG Final	Completed in 2012	Yes
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increas-ing habitat quality		1.8					
				CRE 10.3 Upgrade tide gates where (1) no other options exist, (2) upgraded structures can provide appropriate access for juveniles, and (3) ecosystem function would be improved over current conditions		2.7					
A	Wallacut River – Phase 1	2010-073-00 2003-011-00	BPA / Columbia Land Trust	CRE 9.3 Actively purchase off-channel habitats in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are degraded but have good restoration potential, or (3) are highly degraded but could benefit from long-term res-toration solutions		81.6	.0510	.0191	AA Final	Completed in 2012	No
B	Grays Bay, Deep River Confluence – Phase 1	2010-073-00	BPA / Columbia Land Trust	CRE 9.3 Actively purchase off-channel habitats in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are degraded but have good restoration potential, or (3) are highly degraded but could benefit from long-term res-toration solutions (3 properties: #1 (55 acres) purchased in 2012; #2 & #3 (49.7 total acres) anticipated in 2013)		55	.0477	.0179	AA Final	Completed in 2012	No
B	Elochoman Slough – Phase 2	2010-073-00	BPA / WDFW / Columbia Land Trust	CRE 1.3 Actively purchase riparian areas in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are intact, or (3) are degraded but have good restoration potential		89.6	.0069	0.0069	AA Final	Completed in 2012	No
E	Columbia Stock Ranch – Phase 1	2010-073-00	BPA / COE / Columbia Land Trust	CRE 9.3 Actively purchase off-channel habitats in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are degraded but have good restoration potential, or (3) are highly degraded but could benefit from long-term res-toration solutions		646.2	0.7113	0.2667	AA Final	Completed in 2012	No
B	Knappton Cove – Phase 1	2010-073-00 2003-011-00	BPA / Columbia Land Trust	CRE 9.3 Actively purchase off-channel habitats in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are degraded but have good restoration potential, or (3) are highly degraded but could benefit from long-term res-toration solutions		436	0.3	0.3	BA Final	Completed in 2012	No
TOTAL completed in 2012					2.1	1435.5	1.5569	0.7656			
Total completed 2007-2012					18.6	3791.0	3.9326	1.9684			
Projects initiated by 2012, completion anticipated in 2013 & beyond (metrics are included within Estuary Module Action)											
A	Sharnelle Fee	2010-004-00	BPA / CREST	CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (50 Acres)			0.25	.1	BA Final	Restoration initiated in 2012; antici-pate restoration completion in 2013	No
A	Skipanon Slough, 8 <sup>th</sup> St. Dam	2010-004-00	BPA / CREST	CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (299.3 Acres)			1.3087	0.4027	Preliminary	Design initiated in 2012; antici-pate restoration completion in 2014	No

**Attachment 4 – Table 1. Action Agency 2007-2012 Estuary Habitat Projects**

Location (Reach A–H)	Project Name	Project Number	Lead Agency/Sponsor	Estuary Module Action (Project Subactions Addressing Identified Limiting Factors)	Linear Miles of Riparian Stream/Channel Improved 2007-2012	Acres Restored 2007-2012	Ocean SBUs	Stream SBUs	<sup>1</sup> SBU Type	Status	Was this Action Specific in the 2010-2013 IP?
A	Wallacut River – Phase 2	2010-073-00 2003-011-00	BPA / Columbia Land Trust	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia (1.8 miles)			0.2974	0.1022	Preliminary	Acquisition complete in 2012, anticipate restoration completion in 2014	No
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (1.9 Acres)							
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (35.5 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (81.6 Acres)							
A	Chinook River	2010-070-00	BPA / WDFW	CRE 9.3 Actively purchase off-channel habitats in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are degraded but have good restoration potential, or (3) are highly degraded but could benefit from long-term restoration solutions (202 Acres)			0.7584	0.3226	Preliminary	Feasibility complete in 2012, anticipate Acquisition in 2013 and Restoration completion in 2014	No
				CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia (7.9 miles)							
				CRE 10.3 Upgrade tide gates where (1) no other options exist, (2) upgraded structures can provide appropriate access for juveniles, and (3) ecosystem function would be improved over current conditions (175.8 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (490 Acres)							
A	Walooski-Young's Bay Confluence	2012-015-00	BPA / Cowlitz Tribe	CRE 9.3 Actively purchase off-channel habitats in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are degraded but have good restoration potential, or (3) are highly degraded but could benefit from long-term restoration solutions (163.4 Acres)			2.0748	0.7083	ERTG Preliminary	Feasibility complete in 2012; anticipate restoration completion in 2014	No
				CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia (0.7 Miles)							
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (13.2 Acres)							
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (164.5 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (164.5 Acres)							
B	Grays Bay, Deep River Confluence – Phase 2 & 3	2010-073-00	BPA / Columbia Land Trust	CRE 9.3 Actively purchase off-channel habitats in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are degraded but have good restoration potential, or (3) are highly degraded but could benefit from long-term restoration solutions (3 properties: #1 (55 acres) purchased in 2012; #2 & #3 (49.7 total acres) anticipated in 2014)			0.872	0.3728	Preliminary	Acquisition #1 complete in 2012; continue to negotiate parcel #2 & #3; anticipate Restoration completion in 2016	No
				CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia (3.5 miles)							
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (10.4 Acres)							
				CRE 10.2 Remove tide gates to improve the hydrology between wetlands and the channel and to provide juveniles with physical access to off-channel habitat; use a habitat connectivity index to prioritize projects (159.5 Acres)							

**Attachment 4 – Table 1. Action Agency 2007-2012 Estuary Habitat Projects**

Location (Reach A–H)	Project Name	Project Number	Lead Agency/Sponsor	Estuary Module Action (Project Subactions Addressing Identified Limiting Factors)	Linear Miles of Riparian Stream/Channel Improved 2007-2012	Acres Restored 2007-2012	Ocean SBUs	Stream SBUs	<sup>1</sup> SBU Type	Status	Was this Action Specific in the 2010-2013 IP?
				CRE 15.3 Implement projects to address infestations on public and private lands (185.1 Acres)							
B	Grays Bay-Kandoll Farm Phase 2	2010-073-00	BPA / Columbia Land Trust	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia (6.2 Miles)			1.059	0.36	ERTG Final	Restoration initiated in 2012; anticipate restoration completion in 2013	No
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (163 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (84 Acres)							
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (8.6 Acres)							
B	Karlson Island	2010-004-00	BPA / CREST	CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (4.7 Acres)			0.5202	0.1722	Preliminary	Design initiated in 2012; anticipate restoration completion in 2014	No
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (81 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (160 Acres)							
B	Elochoman Slough – Phase 3	2010-073-00 2010-070-00	BPA / WDFW / Columbia Land Trust	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia (0.9 miles)			0.3418	0.1535	Preliminary	Completed acquisition #1 in 2009 and acquisition #2 in 2012, design initiated in 2012; anticipate restoration completion in 2014	No
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (9.2 Acres)							
				CRE 10.3 Upgrade tide gates where (1) no other options exist, (2) upgraded structures can provide appropriate access for juveniles, and (3) ecosystem function would be improved over current conditions (222.8 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (296.5 Acres)							
B	Gnat Creek - Phase 2	2010-004-00	BPA / CREST	CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (67.8 Acres)			0.432	0.133	ERTG Final	Design initiated in 2012; anticipate restoration completion in 2013	No
B	Miller Sands	TBD	COE / Oregon Division of State Lands	CRE 6.3 Dispose of dredged materials using techniques identified through the demonstration projects and region-wide planning (325.8 Acres)			0.6095	0.3513	Preliminary	Pre cost-share feasibility initiated in 2012	No
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (48.2 Acres)							
B	Julia Butler Hansen NWR – Steamboat Slough	TBD	COE	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia (6.1 miles)			0.8	0.3	Preliminary	Design initiated in 2012; anticipate restoration completion in 2013	No
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (9.8 Acres)							
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (106.1 Acres)							
				CRE 10.3 Upgrade tide gates where (1) no other options exist, (2) upgraded structures can provide appropriate access for juveniles, and (3) ecosystem function would be improved over current conditions (15.2 Acres)							

**Attachment 4 – Table 1. Action Agency 2007-2012 Estuary Habitat Projects**

Location (Reach A–H)	Project Name	Project Number	Lead Agency/ Sponsor	Estuary Module Action (Project Subactions Addressing Identified Limiting Factors)	Linear Miles of Riparian Stream/ Channel Improved 2007-2012	Acres Restored 2007-2012	Ocean SBUs	Stream SBUs	<sup>1</sup> SBU Type	Status	Was this Action Specific in the 2010- 2013 IP?
				CRE 15.3 Implement projects to address infestations on public and private lands (53 Acres)							
B	Wallace Island Complex (not proper)	TBD	COE	CRE 6.3 Dispose of dredged materials using techniques identified through the demonstration projects and region-wide planning (688 Acre) CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (76.6 Acres)			1.1317	0.6435	Preliminary	Pre cost-share feasibility initiated in 2012	No
B	Julia Butler Hansen NWR- Tenasilahe Island Phase 2 (TK Slough)	TBD	COE / USFWS	CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (22.2 Acres) CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (122.5 Acres) CRE 15.3 Implement projects to address infestations on public and private lands (111.2 Acres)			0.90	0.32	Preliminary	Pre cost-share feasibility initiated in 2012	No
B	Skamokawa Creek – Phase 2	2003-011-00	BPA / Estuary Partnership	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia (4 miles) CRE 10.3 Upgrade tide gates where (1) no other options exist, (2) upgraded structures can provide appropriate access for juveniles, and (3) ecosystem function would be improved over current conditions (8.6 Acres) CRE 15.3 Implement projects to address infestations on public and private lands (30 Acres) CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (31.9 Acres)			0.077	0.052	ERTG Final	Restoration initiated in 2012; anticipate restoration completion in 2013	No
C	LA (Louisiana Swamp)	2003-011-00	BPA / Estuary Partnership	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia (0.7 miles) CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (31.7 Acres) CRE 15.3 Implement projects to address infestations on public and private lands (31.7 Acres) CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (1.88 Acres)			0.143	0.047	ERTG Final	Design initiated in 2012; anticipate restoration completion in 2013	No
C	Kerry Island	2010-073-00	BPA / Columbia Land Trust	CRE 9.3 Actively purchase off-channel habitats in urban and rural settings that (1) cannot be effectively protected through regulation, (2) are degraded but have good restoration potential, or (3) are highly degraded but could benefit from long-term restoration solutions (110 Acres) CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia (2 miles) CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (4.9 Acres) CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (95.5 Acres) CRE 15.3 Implement projects to address infestations on public and private lands (107.6 Acres)			0.7644	0.2567	Preliminary	Acquisition negotiations in 2012; anticipate acquisition in 2013 and restoration completion in 2015	No



**Attachment 4 – Table 1. Action Agency 2007-2012 Estuary Habitat Projects**

Location (Reach A–H)	Project Name	Project Number	Lead Agency/ Sponsor	Estuary Module Action (Project Subactions Addressing Identified Limiting Factors)	Linear Miles of Riparian Stream/ Channel Improved 2007-2012	Acres Restored 2007-2012	Ocean SBUs	Stream SBUs	<sup>1</sup> SBU Type	Status	Was this Action Specific in the 2010-2013 IP?
D	Dibblee Point	2010-004-00	BPA / CREST	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia (0.4 miles)			0.021	0.01	ERTG Final	Restoration initiated in 2012; anticipate restoration completion in 2013	No
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (1.1 Acres)							
				CRE 10.2 Remove tide gates to improve the hydrology between wetlands and the channel and to provide juveniles with physical access to off-channel habitat; use a habitat connectivity index to prioritize projects (12.10 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (2.1 Acres)							
E	Columbia Stock Ranch – Phase 2	2010-073-00	BPA / COE / Columbia Land Trust	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia (7.4 Miles)			4.441	1.432	ERTG Preliminary	Acquisition completed in 2012; anticipate restoration completion in 2014	No
				CRE 6.2 Identify and implement dredged material beneficial use demonstration projects, including the notching and scrape-down of previously disposed materials and placement of new materials for habitat enhancement and/or creation (16.3 Acres)							
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (3 Acres)							
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (360.3 Acres)							
				CRE 10.2 Remove tide gates to improve the hydrology between wetlands and the channel and to provide juveniles with physical access to off-channel habitat; use a habitat connectivity index to prioritize projects (9.9 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (746.6 Acres)							
E	Large Dike Breach-Reach E	n/a	BPA	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia (38 miles)			31.0	11.08	ERTG Preliminary	Feasibility initiated in 2012	No
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (272.8 Acres)							
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (2063 Acres)							
F	Honeyman Creek	2003-011-00	BPA / Estuary Partnership	CRE 10.2 Remove tide gates to improve the hydrology between wetlands and the channel and to provide juveniles with physical access to off-channel habitat; use a habitat connectivity index to prioritize projects (58 Acres)			0.103	0.041	ERTG Final	Restoration initiated in 2012; anticipate restoration completion in 2013	No
F	Sauvie Island-North Unit Phase #1	2010-004-00	BPA / CREST	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shore-line/instream complexity for juvenile salmonid refugia (1 Miles)			0.9953	0.3153	Preliminary	Design initiated in 2012; anticipate restoration completion in 2013	No
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (122.8 Acres)							

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Location (Reach A–H)	Project Name	Project Number	Lead Agency/Sponsor	Estuary Module Action (Project Subactions Addressing Identified Limiting Factors)	Linear Miles of Riparian Stream/Channel Improved 2007-2012	Acres Restored 2007-2012	Ocean SBUs	Stream SBUs	<sup>1</sup> SBU Type	Status	Was this Action Specific in the 2010-2013 IP?
				CRE 15.3 Implement projects to address infestations on public and private lands (16.4 Acres)							
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (2.5 Acres)							
F	Oaks Bottom Section 536	n/a	Corps / City of Portland	CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality 33 Acres)			0.158	0.076	ERTG Final	Cost-share feasibility study initiated in 2012	Yes
				CRE 10.2 Remove tide gates to improve the hydrology between wetlands and the channel and to provide juveniles with physical access to off-channel habitat; use a habitat connectivity index to prioritize projects (88 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (30 Acres)							
F	Ridgefield NWR: Ridgeport Dairy Unit-Post Office Lake	P2#331430	Corps / USFWS	CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (142.6 Acres)			1.0992	0.352	Preliminary	Design initiated in 2012, anticipate restoration completion in 2014	Yes
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (5.6 Acres)							
F	Ridgefield NWR – Ridgeport Dairy Campbell Lake & Slough	TBD	Corps / USFWS	CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (1.5 Acres)			0.536	0.2175	Preliminary	Pre cost-share feasibility initiated in 2012	
				CRE 10.2 Remove tide gates to improve the hydrology between wetlands and the channel and to provide juveniles with physical access to off-channel habitat; use a habitat connectivity index to prioritize projects (157.5 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (222.3 Acres)							
F	Shillapoo Wildlife Area	P2#323863 2009-016-00	Corps / BPA / WDFW	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia (TBD)			TBD	TBD	TBD	Feasibility initiated in 2012; anticipate restoration completion 2014+	Yes
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (TBD)							
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (TBD)							
				CRE 10.2 Remove tide gates to improve the hydrology between wetlands and the channel and to provide juveniles with physical access to off-channel habitat; use a habitat connectivity index to prioritize projects (TBD)							
				CRE 15.3 Implement projects to address infestations on public and private lands (TBD)							
G	Sandy River Dam Removal	P2#142456	Corps / USFS	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia (1.0 Miles)			0.44	0.158	ERTG Final	Design initiated in 2012, anticipate restoration completion in 2013	Yes
				CRE 6.2 Identify and implement dredged material beneficial use demonstration projects, including the notching and scrape-down of previously disposed materials and placement of new materials for habitat enhancement and/or creation (0.69 Acres)							
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (5.8 Acres)							
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (50.7 Acres)							

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Location (Reach A–H)	Project Name	Project Number	Lead Agency/ Sponsor	Estuary Module Action (Project Subactions Addressing Identified Limiting Factors)	Linear Miles of Riparian Stream/ Channel Improved 2007-2012	Acres Restored 2007-2012	Ocean SBUs	Stream SBUs	<sup>1</sup> SBU Type	Status	Was this Action Specific in the 2010- 2013 IP?
				CRE 15.3 Implement projects to address infestations on public and private lands (1 Acre)							
G	Steigerwald NWR	TBD	BPA / COE	CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (84 Acres)			4.31	1.579	ERTG Preliminary	Pre cost-share feasibility initiated in 2012; anticipate restoration completion 2014+	No
				CRE 10.1 Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels (510 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (1060 Acres)							
G	Thousand Acres, Sandy River Delta	2003-011-00	BPA / Estuary Partnership	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia (4.5 miles)			0.3600	0.2103	Preliminary	Design initiated in 2012, anticipate restoration completion in 2014	No
				CRE 6.2 Identify and implement dredged material beneficial use demonstration projects, including the notching and scrape-down of previously disposed materials and placement of new materials for habitat enhancement and/or creation (13 Acres)							
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (29 Acres)							
				CRE 10.2 Remove tide gates to improve the hydrology between wetlands and the channel and to provide juveniles with physical access to off-channel habitat; use a habitat connectivity index to prioritize projects (52 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (400 Acres)							
H	Horsetail Creek	2003-011-00	BPA / Estuary Partnership	CRE 1.4 Restore and maintain ecological benefits in riparian areas; this includes managing vegetation on dikes and levees to enhance ecological function and adding shoreline/instream complexity for juvenile salmonid refugia (1.3 miles)			0.062	0.034	ERTG Final	Design initiated in 2012; anticipate restoration completion in 2013	No
				CRE 9.4 restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality (12 Acres)							
				CRE 10.3 Upgrade tide gates where (1) no other options exist, (2) upgraded structures can provide appropriate access for juveniles, and (3) ecosystem function would be improved over current conditions (96 Acres)							
				CRE 15.3 Implement projects to address infestations on public and private lands (30 Acres)							
Projects not yet initiated, but anticipate completion prior to 2018											
All	See IP Section 3 for additional details						24.4	8.06	Preliminary	Projects not yet initiated	n/a
Projects not implemented											
B	Megler Creek	2010-004-00 2003-011-00	BPA / CREST	No metrics to report						Project not implemented <sup>2</sup>	Yes
A	Lower Chinook River Acquisition	2003-011-00	BPA / Columbia Land Trust	No metrics to report						Project not implemented <sup>3</sup>	Yes

<sup>2</sup> Project does not fit new strategy of reconnecting lost floodplain habitats and tidal influence.

<sup>3</sup> Project fits new strategy, but could not be implemented due to circumstances beyond AA's control

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C	Hump-Fisher Shallow Water	P2#323863 2009-016-00	Corps / BPA / WDFW	No metrics to report						Project not implemented <sup>3</sup>	Yes
D	Cottonwood Is- land	P2#323863 2009-016-00	Corps / BPA / WDFW	No metrics to report						Project not implemented <sup>3</sup>	Yes
E	Tryon Creek	n/a	BPA / City of Portland	No metrics to report						Project not implemented <sup>3</sup>	Yes
E	Oaks Bottom	n/a	BPA / City of Portland	No metrics to report						Project not implemented <sup>3</sup>	Yes
E	Deer Island Res- toration (Tide- gate Retro)	2003-011-00	BPA / Columbia SWCD	No metrics to report						Project not implemented <sup>3</sup>	Yes
E	Mudd Lake Res- toration	2003-011-00	BPA / Clark County	No metrics to report						Project not implemented <sup>3</sup>	Yes
F	John R Palensky	1991-078-00	Corps / BPA	No metrics to report						Project not implemented <sup>3</sup>	Yes