

**Habitat Improvement Program Biological Opinion
2013/9724
01EOFW00-2013-F-0199
2013 Annual Monitoring Report**



**Bonneville Power Administration
Portland, Oregon
February 19th, 2014**



Habitat Improvement Program Biological Opinion
NMFS No. 2013/09724
USFWS No. 01EOFW00-2013-F-0199
2013 Annual Monitoring Report
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This is the first annual monitoring report required under the Habitat Improvement Program III Biological Opinion (HIP III). This report generally summarizes activities completed in calendar year 2013 and reports on the incidental take resulting from those activities. There is also information on 2012 activities not included in the 2012 Activities Annual Report because Project Completion Forms (PCF) were received too late for inclusion in that year's report. These late PCFs would not have significantly altered the outcome of last year's incidental take reporting.

Background

Consultation Summary

The Habitat Improvement Program is carried out according to the BPA's authority under the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Public Law 96-501) throughout the Columbia River basin to mitigate for the effects of the Federal Columbia River Power System on fish, wildlife, and their habitat.

The National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) previously issued two 5-year Biological Opinions (BOs) and Essential Fish Habitat (EFH) consultations on the effects of BPA's Habitat Improvement Program on federally listed anadromous salmon and steelhead on August 1st 2003 (NMFS No. 2003/00750) and January 10, 2008 (NMFS No. 2007/03996).

On July 2, 2012, the BPA submitted a new BA to NMFS and re-initiated formal consultation for the Habitat Improvement Program -. A third BO (HIP III) was signed on March 21, 2013 (NMFS No. 2013/09724) to cover 2013 and into the future until such time consultation is reinitiated by either BPA or NMFS.

On July 27, 2013, the United States Fish and Wildlife Service (USFWS) received a BA for initiating formal consultation on the HIP III proposed action. The initial BA addressed effects of the proposed action on the federally threatened bull trout (*Salvelinus confluentus*) and threatened Oregon chub (*Oregonichthys crameri*).

Upon review of the initial BA by the USFWS's Oregon Fish and Wildlife Office, a recommendation was made to BPA to include federally listed and proposed wildlife and plant species in the consultation. BPA agreed to the request and the USFWS offered to help develop project design criteria and conservation measures for wildlife and plants to minimize the proposed action's effects. A final BA amendment from BPA was received by the USFWS on August 26, 2013 that analyzed the effects of the action on terrestrial species.

On September 20, 2013, USFWS submitted a draft final BO to BPA. BPA's comments on the

draft BO were received by USFWS on October 21, 2013, and a final BO (USFWS No. 01EOFW00-2013-F-0199) was signed by the USFWS on November 8, 2013.

Activities Authorized under the HIP II & HIP III BO

The HIP II BO authorized nine categories and 30 subcategories of habitat improvement actions, while the HIP III BO authorizes 31 habitat improvement activities in nine categories. BPA has removed some categories considered to have no effect and added activities that are new to HIP such as piling removal, low flow consolidation, headcut and grade stabilization, boulder structures, engineered logjams, and channel reconstruction. These added activities have allowed project sponsors to submit for coverage 52 actions that would have previously required individual BA submittals. The number of submissions The number of projects submitted in 2013 under the respective HIP BOs are listed in Tables 1 and 2. Because the HIP III was not signed until March 2013 many projects were submitted for coverage under the previous HIP II BO. The number of actions covered under the HIP III in 2013 may seem low compared to previous years, but is similar when accounting for the compressed timeframe.

Table 1. Activities authorized under the HIP II BO submitted for coverage in 2013. Some projects proposed to utilize more than one category/subcategory of action. Category totals are bold.

Category	Subcategory	Actions
Surveying, Construction, Operation, and Maintenance Activities		10
Planning and Habitat Protection Actions		3
	Survey Stream Channels, Floodplains, and Uplands; Install Stream Monitoring	3
Devices such as Steamflow and Temperature Monitors		0
	Acquire Fee-Title Easement, Enter into Cooperative Agreements, and/or Lease Land and/or Water	0
	Protect Streambanks Using Bioengineering Methods	0
Small-Scale Instream Habitat Actions		2
	Install Habitat-Forming Natural Materials Instream Structures (Large Wood, Boulders, and Gravel)	0
	Improve Secondary Channel Habitats	0
	Create Rehabilitate, and Enhance Riparian and Wetland Habitat	1
	Improve Fish Passage	1
	Supplement In-Channel Nutrients	0
Livestock Impact Reduction		2
	Construct Fencing for Grazing Control	2
	Install Off-Channel Watering Facilities	0
	Harden Fords for Livestock Crossing of Streams	0
Control of Soil Erosion from Upland Farming		1
	Create Upland Conservation Buffers	0
	Implement Conservation Cropping Systems	0
	Stabilize Soils via Planting and Seeding	1
	Implement Erosion Control Practices	0
Irrigation and Water Delivery/Management Actions		5
	Convert Delivery System to Drip or Sprinkler Irrigation	1
	Convert Water Conveyance from Open Ditch to Pipeline or Line Leaking Ditches and Canals	1
	Convert from Instream Diversions to Groundwater Wells for Primary Water Sources	0

	Install or Upgrade/Maintain Existing Fish Screens	2
	Consolidate Diversions, or Replace Existing Irrigation Diversion with Pump Station, or Remove Unneeded Diversion Structures	1
	Install or Replace Return Flow Cooling Systems	0
	Install Irrigation Water Siphon Beneath Waterway	0
Native Plant Community Establishment and Protection		20
	Plant Vegetation	3
	Manage Vegetation Using Physical Controls	4
	Manage Vegetation Using Herbicides	13
Road Actions		2
	Maintain Roads	1
	Maintain, Remove, and Replace Bridges, Culverts, and Fords	1
	Decommission Roads	0
Special Actions		0
	Install/Develop Wildlife Structures	0

Table 2. Activities authorized under the HIP III BO and the number of projects that submitted for coverage in 2013. Some projects proposed to utilize more than one category/subcategory of action. Category totals are bold.

Category	Subcategory	Activities	Actions
1. Fish Passage Restoration.			19
	A. Profile Discontinuities.		9
		a. Dams, Water Control or Legacy Structure Removal.	1
		b. Consolidate, or Replace Existing Irrigation Diversions.	3
		c. Headcut and Grade Stabilization.	3
		d. Low Flow Consolidation.	0
		e. Providing Fish Passage at an Existing Facility.	2
	B. Transportation Infrastructure.		10
		f. Bridge and Culvert Removal or Replacement.	8
		g. Bridge and Culvert Maintenance.	0
		h. Installation of Fords.	2
2. River, Stream, Floodplain, and Wetland Restoration.			33
		a. Improve Secondary Channel and Wetland Habitats.	6
		b. Set-back or Removal of Existing, Berms, Dikes, and Levees.	2
		c. Protect Streambanks Using Bioengineering Methods.	4
		d. Install Habitat-Forming Natural Material Instream Structures (Large Wood, Boulders, and Spawning Gravel).	11
		e. Riparian Vegetation Planting.	19
		f. Channel Reconstruction.	2
3. Invasive and Non-Native Plant Control.			47
		a. Manage Vegetation using Physical Controls.	18
		b. Manage Vegetation using Herbicides.	39
4. Piling Removal.			0
5. Road and Trail Erosion Control, Maintenance, and Decommissioning.			2
		a. Maintain Roads.	2
		b. Decommission Roads.	0
6. In-channel Nutrient Enhancement.			0
7. Irrigation and Water Delivery/Management Actions.			17
		a. Convert Delivery System to Drip or Sprinkler Irrigation.	3
		b. Convert Water Conveyance from Open Ditch to Pipeline or Line Leaking Ditches or Canals.	4

	c. Convert from Instream Diversions to Groundwater Wells for Primary Water Sources.	0
	d. Install or Replace Return Flow Cooling Systems.	1
	e. Install Irrigation Water Siphon Beneath Waterway.	2
	f. Livestock Watering Facilities.	4
	g. Install New or Upgrade/Maintain Existing Fish Screens.	3
8. Fisheries, Hydrologic, and Geomorphologic Surveys.		18
9. Special Actions (for Terrestrial Species).		3
	a. Install/develop Wildlife Structures.	0
	b. Fencing construction for Livestock Control	1
	c. Implement Erosion Control Practices.	0
	d. Plant Vegetation.	2
	e. Tree Removal for LW Projects.	0

Incidental Take Reporting under the NMFS HIP III BO

The NMFS HIP III BO defines four categories of incidental take based on the likelihood of adverse effects to ESA-listed anadromous salmonids each with their own reinitiation triggers (see also Table 5).

Short-term impacts to water quality (e.g., suspended sediment, temperature, dissolved oxygen demand and contaminants).

The total length of stream reach that is modified by construction each year.

90 projects per year that include near or in-water construction is a threshold for reinitiating consultation.

The visible increase in suspended sediment associated with construction activities.

- a. up to 50 feet from the project area in streams that are 30 feet wide or less;
- b. up to 100 feet from the discharge point or nonpoint source of runoff for streams between 30 and 100 feet wide;
- c. up to 200 feet from the discharge point or nonpoint source for streams greater than 100 feet wide; and
- d. up to 300 feet from the discharge point or nonpoint source for areas subject to tidal or coastal scour.

Short-term impacts to water quality (e.g., due to application of chemical herbicides).

Up to 1,000 total riparian acres may be treated in a calendar year under this programmatic consultation.

Short-term decreases in function of physical habitat features (e.g. floodplain connectivity, natural cover, riparian vegetation, instream flow, stream substrate, space, and safe passage conditions).

No reinitiation trigger given in the HIP III

Juvenile fish handling and dewatering during work area isolation.

Capture and/or mortality of listed juvenile salmonids during work area isolation is limited to 7500 captured and 375 injured or killed per calendar year. This is further

broken down by recovery domain. In the Willamette-Lower Columbia (WLC) recovery domain, up to 1,200 juvenile salmonids may be taken and up to 60 may be killed. For the Interior Columbia (IC) recovery domain, 5,925 juvenile fish captured with 296 fish injured or killed per calendar year; and for the Oregon Coast (OC) recovery domain, 375 juvenile fish captured and 19 injured or killed per calendar year.

Results

Project Notification Forms Submitted in 2013

Table 3 lists all project notification forms (PNFs) submitted in 2013 to our reporting system and then to NMFS & USFWS via the e-mail box according to the HIP III BO notification rules. Prior to the signing of the HIP III in March 2013, BPA submitted projects for coverage under the HIP II in 2013. Tables 3a and 3b indicate the number of projects submitted to each field office and habitat branch, respectively. A total of 73 notifications were submitted.

- Twelve of the project notifications listed requested a variance to the HIP III BO. All variance requests were approved.
- Sixteen of the notifications were for herbicide use (HU) only; therefore they do not require a follow-up PCF, but those projects are required to report their use of herbicides.
- Seven notifications were withdrawn after submission.
- Only 14 projects were submitted to the USFWS email box.

As of the writing of this report 2/11/14, 14 projects have completion reports either due or past due.

Table 3a. HIP III BO Project Notification Forms Submitted to each NMFS and USFWS Geographic Area of Responsibility in 2013. Projects with shading had a variance request. Projects with a complete status have a PCF, herbicide report, or both in this report. Projects listed in italics were submitted for NMFS HIP II coverage prior to the finalized HIP III.

Project #	Contract #	Project Title	NMFS Habitat Branch	USFWS Field Office	Status
1983-350-00	60242A	<i>Nez Perce Tribal Hatchery O & M</i>	<i>N Idaho</i>	NA	AH13 due
1983-435-00	CR-232047A	<i>Umatilla Hatchery Satellite Facilities O&M</i>	<i>E Oregon</i>	NA	Complete
1987-100-01	60836A	<i>Umatilla Anadromous Fish Habitat – Umatilla Tribe</i>	<i>E Oregon</i>	NA	Complete
1987-100-02	60131A	<i>Umatilla Anadromous Fish Habitat</i>	<i>E Oregon</i>	NA	Complete
1989-035-00	59669A	<i>Umatilla Hatchery O & M</i>	<i>E Oregon</i>	NA	Complete
1990-005-01	CR-234218A	<i>Umatilla Natural Production M & E</i>	<i>E Oregon</i>	NA	AH13 due
1990-092-00	60141A	<i>Wanaket Wildlife Area</i>	<i>E Oregon</i>	NA	Complete
1992-094-01	59275A	<i>Scotch Creek Willife Mitigation</i>	<i>E Washington</i>	NA	AH13 due
1998-010-05	CR-231186A	<i>Fall Chinook Acclimation Facilities Snake/Clearwater Rivers</i>	<i>N Idaho</i>	NA	Complete
2000-021-00	CR-228889A	<i>Ladd Marsh Wildlife Mitigation</i>	<i>E Oregon</i>	NA	Withdrawn
2002-014-00	58977A	<i>Sunnyside Wildlife Mitigation Area</i>	<i>E Washington</i>	NA	AH13 due
2003-012-00	59514A	<i>Shillapoo Wildlife Area</i>	<i>SW Washington</i>	NA	AH13 due
2006-004-00	55102A	<i>WDFW Wenas Wildlife Area</i>	<i>E Washington</i>	NA	AH13 due
2007-224-00	56701B	<i>Okanogan Subbasin Plan 2012</i>	<i>E Washington</i>	NA	Withdrawn
2007-398-00	52299A	<i>YTAHP_Teanaway River_3M Ditch Project</i>	<i>E Washington</i>	NA	Complete

Project #	Contract #	Project Title	NMFS Habitat Branch	USFWS Field Office	Status
2007-402-00	57759A	EXP IDFG Sockeye Salmon Captive Broodstock	S Idaho	NA	Complete
2010-072-00	58410B	Lemhi River Restoration Project	S Idaho	NA	Complete
2011-004-00	56036B	John R. Palensky Wildlife Area	WB/LC	NA	Complete
1983-435-00	CR-270403	Umatilla Hatchery Satellite Facilities Herbicide Use	Columbia Basin	La Grande	Ongoing
1983-436-00	62976A	Umatilla Fish Passage Operation and Maintenance	E Oregon	NA	Ongoing
1984-021-00	60620A	John Day Habitat Enhancement Project – 2013	E Oregon	NA	Complete
1987-100-01	60836B	Umatilla River Habitat Restoration with Confederated Tribes of the Umatilla Indian Reservation	Columbia Basin	NA	Ongoing
1987-100-01	CR-270402A	Umatilla River Habitat Restoration with Confederated Tribes of the Umatilla Indian Reservation	Columbia Basin	La Grande	Ongoing
1989-035-00	63378A	Umatilla Hatchery Herbicide Use	Columbia Basin	Portland	Ongoing
1990-005-01	CR-234218B	CHaMP Habitat Monitoring	E Oregon	NA	Complete
1990-044-00	61299A	Coeur D'Alene Fisheries Habitat Restoration	N Snake	Spokane	Ongoing
1990-092-00	63865A	Wanaket Wildlife Area	Columbia Basin	La Grande	Ongoing
1992-009-00	61460A	Yakima Phase II/Huntsville Screens Operations and Maintenance	E Washington	NA	Ongoing
1992-026-01	CR-262458A	Catherine Creek – RM 44 Stream and Fish Habitat Restoration Project – Phase I (CC-44 Project)	E Oregon	NA	PCF Due
1992-048-00	60431A	Hellsgate Winter Range	E Washington	NA	AH13 due
1992-059-00	62045A	Amazon Basin/West Eugene Wetlands	WB/LC	NA	Ongoing
1994-018-06	59663A	Tucannon Stream and Riparian Restoration	E Washington	NA	PCF Due
1995-057-00	62940A	Idaho Department Fish and Game Operations and Maintenance	S Snake	E Idaho	Ongoing
1995-057-00	63060A	Idaho Department Fish and Game Administration	S Snake	NA	Ongoing
1995-057-02	63492A	Shoshone-Bannock Wildlife Mitigation	S Snake	NA	Ongoing
1996-035-01	56662A	South Fork Ahtanum Creek Forest Road Improvement	E Washington	NA	Complete
1996-035-01	56662B	Upper Toppenish Creek Culvert Removal & Ford Installation	E Washington	NA	Complete
1996-046-01	61253A	Walla Walla Fish Habitat Enhancement -Touchet River Indigo Control	E Oregon	NA	Complete
1996-046-01	61253B	Walla Walla River Basin Fish Habitat Enhancement	E Oregon	NA	PCF Due
1996-060-01	60770A	Isqúlktp Creek Watershed Project 2013	E Washington	NA	PCF Due
1996-080-00	59955A	NE Oregon Wildlife Project - Precious Lands	E Oregon	NA	PCF Due
1996-083-00	61475A	Willow Creek Weed Treatment 2013	E Oregon	NA	Complete
1996-083-00	61475B	Willow Creek Weed Treatment 2013	E Oregon	NA	Ongoing
1997-013-25	56662A	Yakima Klickitat Fisheries Project Operations & Maintenance: Upper Yakima Supplementation Complex	Columbia Basin	NA	Ongoing
1997-013-25	56662B	Lower Yakima - Supplementation Complex Operation & Maintenance	Columbia Basin	NA	Ongoing
1997-056-00	CR-231770A	Klickitat Watershed Enhancement	E Washington	NA	Complete
1997-056-00	CR-231770B	Klickitat Watershed Enhancement	E Washington	NA	Complete
1997-056-00	CR-231770C	Klickitat Watershed Enhancement	E Washington	NA	Complete
1997-056-00	56662B	Klickitat Watershed Enhancement	Columbia Basin	Wenatchee	Ongoing
1998-010-05	63211A	Fall Chinook Acclimation – Big Canyon Acclimation site and Sweetwater Compound	N Snake	Boise	Ongoing
1998-010-05	63211B	Fall Chinook Acclimation – Captain John Rapids Site	N Snake	Lacey	Ongoing
1998-021-00	62296A	Hood River Fish Habitat	Columbia Basin	Portland	Ongoing
1998-022-00	59924A	Pine Creek Conservation Area 2013	E Oregon	NA	PCF Due

Project #	Contract #	Project Title	NMFS Habitat Branch	USFWS Field Office	Status
1998-028-00	60805A	Trout Creek Watershed Restoration	C Oregon	NA	Complete
1999-017-00	61000A	Protect and Restore Lapwai Creek Watershed	N Idaho	NA	Ongoing
2000-026-00	61608A	Rainwater Wildlife Area	E Washington	NA	Complete
2000-031-00	60597A	North Fork John Day Habitat Enhancement Project 2013	E Oregon	NA	PCF Due
2000-039-00	60695A	Walla Walla Salmonid Production M&E	E Washington	NA	Complete
2001-041-00	60726A	Forrest Conservation Area	E Oregon	NA	Complete
2001-041-00	60962A	Forrest Conservation Area	E Oregon	NA	Complete
2002-013-01	58768A	Water Entity - Water Transaction Program	E Oregon	NA	Complete
2002-050-00	61553A	Asotin County Conservation District – Luhn Bridge Project	E Washington	NA	Complete
2002-059-00	62671A	Yankee Fork Restoration: Preacher’s Cove 2014	S Snake	E Idaho	Ongoing
2002-070-00	61265A	Lapwai Creek Anadromous Habitat	N Idaho	NA	Ongoing
2003-012-00	63005A	Shillapoo Wildlife Area	SW Washington	Lacey	Ongoing
2006-005-00	63046A	Asotin Creek Wildlife Mitigation	E Washington	NA	Ongoing
2007-156-00	56662B	Rock Creek Fish and Habitat Assessment	E Washington	NA	Ongoing
2007-224-00	61158A	Antoine Creek Culvert Replacement	Columbia Basin	NA	Withdrawn
2007-224-00	61162A	Okanogan Subbasin Habitat Implementation Program	E Washington	NA	Complete
2007-224-00	61162B	Antoine Creek Culvert Replacement	E Washington	NA	Withdrawn
2007-397-00	56228D	John Day Tributary Passage and Flow CAP 2013	E Oregon	NA	Complete
2007-397-00	56228E	John Day Tributary Passage and Flow CAP	Columbia Basin	NA	Complete
2007-398-00	56617A	Yakima Basinwide Tributary Passage and Flow	E Washington	NA	Complete
2007-398-00	60456A	YTAHP- Cowiche Creek—Cowiche Creek Water Users Association	E Washington	Wenatchee	Ongoing
2007-399-00	58717A	Upper Salmon Screen Tributary Passage	S Idaho	NA	Complete
2007-402-00	CR-235312A	EXP IDFG Sockeye Salmon Captive Broodstock	S Idaho	NA	Complete
2008-311-00	60648A	Natural Production Management and Monitoring	Columbia Basin	NA	Ongoing
2008-603-00	57289B	Sulphur Creek Restoration, Water Conservation and Pipeline Project	S Idaho	NA	Ongoing
2008-604-00	61571A	Lower Clearwater and Potlatch Watersheds Habitat Improvements: Dutch Flat Dam	N Idaho	NA	Complete
2008-604-00	61571B	Lower Clearwater and Potlatch Watersheds Habitat Improvements: Dutch Flat Dam	N Idaho	NA	Withdrawn
2008-710-00	59958A	Development of an Integrated Strategy for Chum Salmon Restoration in the Tributaries Below Bonneville Dam	SW Washington	NA	Complete
2009-012-00	61505A	Green Island Crossing Restoration	WB/LC	NA	Complete
2011-004-00	60447A	Railroad Island	WB/LC	NA	Complete
2011-004-00	62538A	Oregon Department of Fish and Wildlife Operation and Maintenance	WB/LC	NA	Ongoing
2011-008-00	59477A	Technical Support for Biological Opinion Research Monitoring & Evaluation Coordinated Assessments	Columbia Basin	Portland	Complete
2011-014-00	58343A	Installing PIT tag array	C Washington	NA	Complete
2011-014-00	58343B	Installing half duplex PIT arrays in Hood River, Fifteenmile and Mill creeks	C Oregon	NA	Complete

The number of projects submitted for HIP III coverage to USFWS field offices in 2013 are presented in Table 3b. Table 3b also denotes the current status of the projects, Because the programmatic coverage was finalized late in the year there have been few submissions to date

and most of these projects are still active. We expect an increase in the number of projects submitted in upcoming years.

Table 3b. Number of HIP 3 projects submitted to USFWS Field Offices in 2013.

USFWS Field Office	Status	Number of Projects
Boise	Active	1
E Idaho	Active	2
La Grande	Active	3
Lacey	Active	2
Portland	Complete	1
	Active	2
Spokane	Active	1
Wenatchee	Active	2

The number of projects submitted for HIP coverage to NMFS field offices in 2013 are presented in Tables 3c and 3d. Because the programmatic coverage was finalized in March 2013, there were many submissions under the previous HIP II BO. Additionally, there was a restructuring of the NMFS habitat branches and their geographic areas of responsibility. Central Oregon, Eastern Oregon, Central Washington and Eastern Washington habitat branches were loosely reorganized into the Columbia Basin Habitat Branch. Northern Idaho and Southern Idaho branches were reorganized into Northern and Southern Snake habitat branches.

Table 3c. Number of HIP projects submitted to NMFS Habitat Branches in 2013. Note that Habitat Branches were reorganized in October 2013.

Habitat Branch	HIP BO	Status	# of Projects
C Oregon	III	Complete	2
C Washington	III	Complete	1
Columbia Basin	III	Complete	2
		Active	11
		Withdrawn	1
E Oregon	II	AH13 due	1
		Complete	5
		Withdrawn	1
	III	Complete	8
		Active	2
		PCF Due	5
E Washington	II	AH13 due	3
		Complete	1
		Withdrawn	1
	III	AH13 due	1
		Complete	10
		Active	4
		PCF due	2
N Idaho	II	Withdrawn	1
		AH13 due	1
		Complete	1
	III	Complete	1
		Active	2
N Snake	III	Withdrawn	1
		Active	3
		Complete	3
S Idaho	II	Active	3
		Complete	2
	III	Complete	2
S Snake	III	Active	1
		Complete	1
		Active	4
SW Washington	II	Complete	1
		AH13 due	1
	III	Active	1
WB/LC	II	Complete	1
		Complete	2
	III	Active	2

Project Completion Forms Submitted in 2013 (as of 2/12/2014)

As previously mentioned, a total of 73 PNFs were submitted in 2013, of these 7 were withdrawn, 17 were herbicide use only, and 14 are still awaiting completed PCFs. This leaves a total of 35 project completion forms (PCF) submitted for work completed in 2013 (Table 4). Every PCF listed in the tables below was submitted to NMFS via e-mail to hip.nwr@noaa.gov between 4/13/2013 to 2/12/14. Additionally, copies of the PCFs listed in Table 4 are included in Appendix A. Projects employing HIP BO coverage exclusively for herbicide use do not require a PCF and are not included in Table 3. However, these projects are addressed under the section entitled “Herbicide Use” and are reported in Table 7.

Table 4. Project Completion Forms submitted for work completed in 2013. Projects in bold type indicate that the project coverage was submitted under HIP II guidelines.

Project #	Contract #	Submitted	In-water work	Herbicides
1983-436-00	59045A	12/12/2013		Y
1987-100-01	60836A	1/30/2014		Y
1987-100-02	60131A	12/12/2013		Y
1990-005-01	CR-234218B	12/5/2013	Y	
1990-092-00	60141A	1/30/2014	Y	Y
1996-035-01	56662A	1/9/2014	Y	
1996-035-01	56662B	1/9/2014	Y	
1997-056-00	CR-231770A	1/6/2014		Y
1997-056-00	CR-231770B	1/6/2013	Y	
1997-056-00	CR-231770C	1/6/2013		
1998-021-00	58390B	11/15/2013		
1998-028-00	60805A	2/3/2014	Y	
1996-060-01	60770A	2/13/14		
2000-001-00	56647A	10/18/2013	Y	
2000-039-00	60695A	1/6/2014	Y	
2001-041-00	60962A	1/6/2014		Y
2002-013-01	58768A	11/6/2013	Y	
2002-050-00	61553A	2/3/2014		
2002-070-00	57048A	11/6/2013	Y	
2007-092-00	53830A	8/14/2013	Y	
2007-127-00	56442A	6/5/2013	Y	
2007-224-00	61162A	1/16/2014	Y	
2007-397-00	56228D	2/6/2014		Y
2007-397-00	56228E	2/3/2014	Y	
2007-398-00	52299A	9/16/2013		
2007-398-00	56617A	8/21/2013	Y	
2007-399-00	58717A	2/11/2014	Y	Y
2008-604-00	61571A	2/4/2014	Y	
2008-710-00	59958A	11/14/2013		

Project #	Contract #	Submitted	In-water work	Herbicides
2009-012-00	61505A	12/12/2013	Y	
2010-072-00	58410B	7/5/2013	Y	
2011-004-00	56036B	11/14/2013		
2011-008-00	59477A	1/6/2014	Y	
2011-014-00	58343A	5/30/2013	Y	

Actions Resulting in Incidental Take

A total of 54 reports (34 PCFs, 20 herbicide use forms) were returned to BPA for work completed in 2013. These projects had potential for incidental take of ESA-listed salmonids. The activities that have potential for incidental take as defined by the HIP III BO are listed in Table 5. In each category, the allowable take far exceeded the actual amount of take resulting from completed projects. The majority of HIP III BO coverage was for herbicide activities.

Table 5. Incidental take - allowable and actual in 2013.

Take Category		Allowable Take Limits	Actual Take
Capture and mortality of listed salmonids by recovery domain	IC – all take	5925	841
	IC – mortality	296	12
	OC – all take	375	0
	OC - mortality	19	0
	WLC – all take	1200	0
	WLC - mortality	60	0
In-stream/near-stream construction		90 projects/year	12 projects
Instream Activities (non-construction)		50 projects/year	9 projects
Herbicide Use		2500 riparian acres	414 acres

Instream and Near-stream Construction

Twenty-one PCFs submitted with this report indicated instream construction work in 2013 (Table 6). The total number of in-stream construction projects reported in this annual report is 20 projects. This is far below the limit of 90 projects allowed by the HIP III BO. Five of these projects reported no observable turbidity plume as a result of construction. The majority of projects resulting in observable turbidity reported a plume length between five and 500 ft. See the following section “Activities that Resulted in Non-Compliance” for further information regarding these projects.

Table 6. Projects Involving Instream Construction, 2013.

Project #	Contract #	In-water work start	In-water work end	Turbidity plume (ft)
1997-056-00 ¹	CR-231770B	7/3/13	10/31/2013	100 ²
1998-028-00 ³	60805A	10/17/2013	10/31/2013	0
2000-001-00 ¹	56647A	9/18/2012	10/11/2012	200 ⁴
2002-070-00	57048A	5/1/2012	4/30/2013	0
2007-127-00 ¹	56442A	10/16/2012	10/18/2012	100 ⁴
2007-224-00 ¹	61162A	10/23/2013	10/23/2013	50
2007-397-00	56228D	7/15/2013	8/31/2013	100
2007-397-00	56228E	7/15/2013	9/30/2013	0
2007-399-00 ¹	58717A	8/6/2013	9/20/2013	600 ²
2008-604-00 ¹	61571A	8/22/2013	10/14/2013	150 ⁵
2009-012-00	61505A	9/26/2013	11/15/2013	5
2010-072-00 ¹	58410B	4/12/2013	4/24/2013	500 ⁴

¹Project had take of listed salmonids; see Table 8. ²Exceeded turbidity levels. ³Work completed in the dry. ⁴Project completed within HIP II turbidity limits ⁵Project had an approved variance for exceeding turbidity levels.

Instream Work not Involving In- or Near-stream Construction

BPA received 9 PCFs documenting instream work not involving near- or in-water construction (Table 7). One of the projects included instream work completed in 2012. This is below the limit of 50 projects allowed by the HIP III BO. These projects included installing PIT tag arrays, fencing, fish screen maintenance, and bank stabilization. Most activities occurred during periods of low or no flow in the stream. One project exceeded the HIP III guidelines for turbidity levels. See the following section “Activities that Resulted in Non-Compliance” for further information regarding these projects.

Table 7. Projects involving instream work in 2013. Shaded rows indicate instream projects completed in 2013, but not reported in the respective Annual Report.

Project Title	Project #	Instream work start	Instream work end	Turbidity plume (ft)
1990-005-01	CR-234218B	7/8/2013	8/26/2013	3
1990-092-00	60141A	2/1/2013	11/1/2013	0
1996-035-01	56662A	10/31/2013	10/31/2013	0
1996-035-01 ¹	56662B	10/9/2013	10/9/2013	0
2000-039-00 ²	60695A	7/29/2013	7/31/2013	150
2002-013-01	58768A	5/1/2013	7/11/2013	0
2007-092-00	53830A	7/1/2012	10/11/2012	30
2011-008-00	59477A	10/7/2014	10/11/2013	0
2011-014-00	58343A	5/14/2013	5/14/2013	0

¹Work completed in the dry. ²See section on non-compliance.

Capture or Mortality of Listed Salmonids

Seven projects completed activities that resulted in the capture or mortality of ESA-listed salmonids during work site isolation and dewatering activities, combining for a total take of 841 ESA-listed salmonids from the IC recovery domain (Table 8). Most of the fish were released unharmed outside of the respective project areas, with 12 mortalities reported in 2013. These

totals remained below the HIP III BO's allowable yearly take limits for the IC (5925 total take, 296 mortality).

Table 8. Projects resulting in capture/mortality of listed salmonids, 2013.

Project #	Contract #	Habitat Branch	Field Office	IC		OC		WLC	
				All take	Mortality	All take	Mortality	All take	Mortality
1997-056-00	CR-231770B	E WA	NA	337 ¹	2	-	-	-	-
2000-001-00	56647A	E WA	NA	28	-	-	-	-	-
2007-224-00	61162A	E WA	NA	101	1	-	-	-	-
2008-604-00	61571A	N Idaho	NA	177	4	-	-	-	-
2007-127-00	56442A	S Idaho	NA	22	0	-	-	-	-
2007-399-00	58717A	S Idaho	NA	152	5	-	-	-	-
2010-072-00	58410B	S Idaho	NA	24	0	-	-	-	-
Total				841	12	0	0	0	0

¹MCR Chinook ESU.

Herbicide Use

During the 2013 reporting period, BPA received herbicide use forms for 21 projects, listed in Table 9. The remaining projects indicated that herbicides were used in *riparian* areas and complied with the HIP III terms and conditions for applying herbicides. For the purposes of reporting, '*riparian*' is defined as land within 150 feet of any natural water occupied by listed salmonids during any part of the year or designated as critical habitat; or within 100 feet of any other natural water. 'Upland' is defined as all other lands. The projects listed in Table 8 treated 414 riparian acres and 2500 upland acres with herbicides. This amount is well below the limit of 2,500 riparian acres set forth by the HIP III BO.

Table 9. Projects that employed the use of Herbicides in 2013.

Habitat Branch	Project #	Contract #	Acres treated	
			Riparian	Upland
E OR	1983-435-00	CR-232047A	5.3	33
	1984-021-00	60620A	34	12
	1987-100-01	60836A	36.5	9
	1989-035-00	59669A	0	4
	1990-092-00	60141A	0	114.7
	1996-046-01	61253A	15	0
	1996-080-00	59955A	20	350
	1996-083-00	61475A	11.03	51.83
	2000-031-00	60597A	9	3.5
	2001-041-00	60726A	0	3
		60962A	83	240
E WA	1997-056-00	CR-231770A	1.25	3
	1996-060-01	60770A	5.04	17.2
	2000-026-00	61608A	9.4	182.2
	2006-005-00	63046A	0	287.75
N Idaho	1983-350-00	60242A	0	194
	1998-010-05	CR-231186A	4	8
S Idaho	2007-402-00	57759A	0	5
		CR-235312A	0	5
SW WA	2003-012-00	59514A	177	722
WB/LC	2011-004-00	60447A	1.5	0
Totals	19	21	414.02	2499.68

Activities that Resulted in Non-Compliance

During 2013, three projects had activities that exceeded the HIP III reinitiation triggers.

Upper Salmon Screen Tributary Passage (project 2007-399-00, contract 58717A)

Explanation: This project was a series of actions consisting of a diversion and culvert replacement and siphon installation in southern Idaho, Lemhi County. The instream work from the culvert replacement exceeded the HIP III turbidity standards, but the project proponent had utilized all HIP III conservation measures and had an approved variance request for exceeding the turbidity reinitiation trigger. It is worth noting that in 2012, the same project proponent reported a turbidity plume of 500 feet in the same area for a similar project (Upper Salmon Tributary Passage Project 2007-399-00, Contract 54777A). This indicates that large turbidity plumes may be due to the local geomorphology. We will continue to monitor projects in this area more closely.

Klickitat Watershed Enhancement Project (Project# 1997-056-00, Contract# CR-231770B)

Explanation: This project was a bridge culvert replacement, large wood placement, and secondary channel creation located in Eastern Washington on the Klickitat River. Instream work

was completed at two sites which exceeded turbidity limits set forth in the HIP III BO during channel reconnection activities. Each of the sites was a separate activity (Teepee Creek Project Phase 2, Upper Klickitat Phase 3). Turbidity higher than background was observed downstream. The plumes did not persist longer than 4 hours. In addition, there was a large fish capture (337 *Onchorhynchus mykiss*) due to the work. However, in 2012 the same project proponent within the same area with a similar action had an excessively large fish capture (2360) and kill (89) (Klickitat Watershed Enhancement Project Project# 1997-056-00, Contract# 52388-B) and observed turbidity plumes of approximately 2500 and 1500 feet in length. The project proponent indicates that this is likely due to the high clay content of native soils in the bed and banks which stay in suspension for a longer period of time. BPA will continue to monitor this project proponent and require further measures to minimize turbidity pulses.

Walla Walla Salmonid Production Monitoring and Evaluation (Project 2000-039-00, Contract 60695A)

Explanation: This project is located in Mud Creek, a tributary of the Wall Walla River and was purely to install a PIT Tag antenna. A 2-foot wide trench was dug using hand tools across the river (59 feet) about 9 inches deep. The plume of silt dissipated over 20 yards as it went downstream.

At one point, the project sponsor had to dig into the bank to get enough length for the antenna about one foot. This developed a heavier plume near the shoreline but was a onetime event and occurred over a short amount of time (~1/2 hour). The turbidity level returned to background levels well before the next day's activities. The nature of this project, digging a trench across the entire river and into the bank, resulted in a significant amount of excavated material that was likely side-cast into the river. BPA will work with the project proponent and the Services to see if any other measures could be taken to minimize such increases in the future.

Restoration Review Team (RRT) History and Challenges

BPA's RRT first convened at the end of January 2013. Since the RRT was a new concept to BPA, the RRT initially met every week for a month in order to establish guidelines, and draft a charter and bylaws. Staff members volunteered their time and team assignments were made. As this was the first QA/QC team designed to review restoration projects, there was a steep learning curve. RRT staff members varied in both technical and hydraulic review skill sets and because the HIP3 was not yet signed, responsibilities were somewhat amorphous. Following the signing of the Biological Opinion in March, and through a substantial number of project reviews during the field season, roles and responsibilities have become more clearly defined.

Initially, the RRT staff trained the Environmental Planning and Analysis Group (KEC), who work directly with project sponsors and BPA contract managers for ESA environmental compliance. This was the easiest task as a majority of RRT members were taken directly from the KEC group and the KEC group had previous experience with the HIP and HIP2 through the years. A dedicated internal application was programmed and designed in which EC leads from KEC could submit projects for RRT review, and the RRT could track, respond, and automatically create an administrative record (Appendix C).

BPA's habitat project implementation group (KEW) was then informed of the role of the RRT and how to integrate the HIP3 BO requirements into their contractual agreements. This was more of a challenge as it represented changes to their accustomed workflow, and many KEW members were not conversant with the HIP3. Two separate presentations to the KEW group were completed.

Finally, project sponsors had to be informed of the new requirements for project submittal and new requirements under the HIP3. This was the biggest challenge as project sponsors are decentralized all throughout the Columbia Basin with differing attitudes and expertise on the HIP3. The RRT made a point to travel to project sponsors directly during initial conceptual design meetings in which the process was explained and the HIP3 was introduced. Project sponsors responded with mixed reactions, from enthusiasm to apprehension. We have held many face-to-face meetings across the basin and distributed an abridged HIP3 handbook. Another significant challenge is communicating to the project sponsors to submit conceptual designs early to the RRT and to utilize the RRT as a source of technical assistance rather than another regulatory hurdle. We have worked to incorporate early review notifications into the contract planning process.

A regional letter was sent out in January 2014 following the signing of the USFWS HIP document to all fish and wildlife contract managers and project managers describing HIP3 changes and sharing the web location to find more information on the RRT process and HIP3 (http://efw.bpa.gov/environmental_services/Environmental_Compliance_Fish_Wildlife_Projects.pdf).

Currently, the RRT meets every 3 weeks and has 8 dedicated staff members who meet regularly to discuss and review projects. We are continuously looking for innovative ideas to streamline the process and ensure compliance with the HIP3. Currently, we have only one hydraulic engineer that is qualified to perform the technical analysis required for high risk projects. This can be a bottleneck during periods of high project volume. We are currently seeking to train another engineer and additional RRT team members to assist in technical reviews.

In the future, the RRT wishes to invite interagency partners to attend our meetings on a quarterly basis and utilize opportunities to piggyback off of existing processes (i.e. Level 1 meetings). We continuously seek feedback on how best to make this happen.

RRT Work Load

To date, 44 actions have been submitted to the RRT for review (Appendix C). Thus far, 29 of these actions have completed review. 5 of these projects were determined to be outside of the HIP3 and either recommended for individual consultation or alternative approaches. 14 of these actions were implemented in 2013; 21 are scheduled for implementation in calendar year 2014; and 4 in calendar year 2015.

In terms of risk level, RRT reviews are broken down in table XXX. We expect the number of submittals for high risk actions to increase. Note that high risk actions would previously have required a Biological Assessment and an individual Section 7 Consultation.

Table 10: Actions¹ Submitted for RRT Review.

	2013	2014	2015
Low Risk	5	2	0
Medium Risk	7	12	1
High Risk	2	7	3

¹ Actions typically are a work element in a single contract, but sometimes can involve more than one work element or more than one contract.

APPENDIX A

2013 Project Completion Forms from Table 3

APPENDIX B

2013 Actual Herbicide Use Forms

APPENDIX C

RRT Project Review List