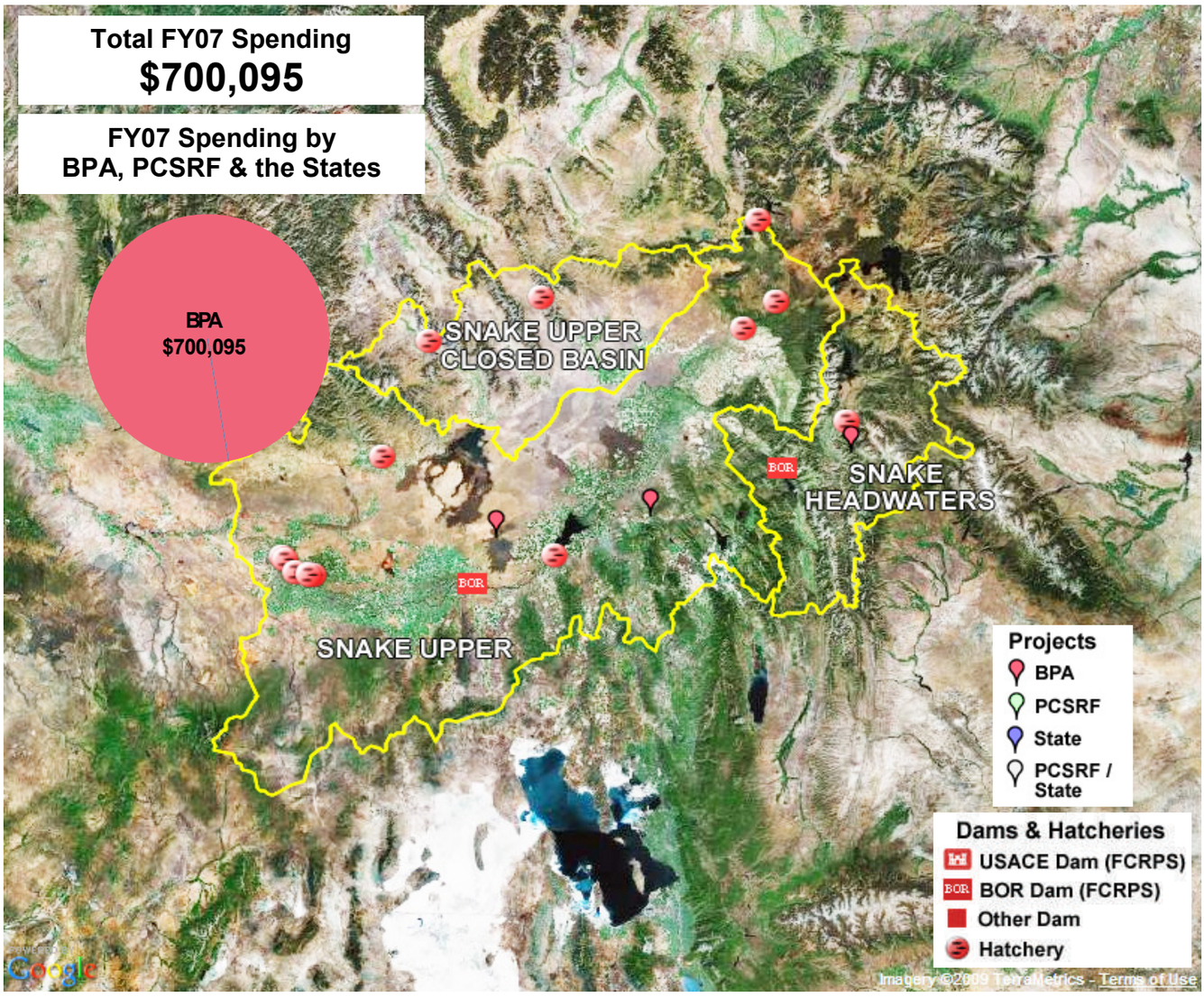
Upper Snake



Land Ownership
Federal……....61%
Private…….37%
Tribal……...2%

The Upper Snake Province, located in southeastern Idaho and western Wyoming, encompasses an area of 23,339 square miles. Subbasins in the Upper Snake Province include the Upper Snake, Upper Snake Closed, and Snake Headwaters. Bull trout, Snake River physa snail, and Utah valvata snail populations throughout the province are listed under the federal Endangered Species Act. This province is characterized by habitat conditions that range from pristine to severely degraded and represents 14% of the land area and 14% of the surface water runoff within the Columbia River Basin. Although the province does not directly support anadromous fish it does provide flows to the Lower Snake River that are important for spawning and fry/smolt migrations. Forestry, ranching, agriculture, mining, and recreation are significant factors in the economy of communities in the province.

BPA FY 2008 Habitat Project Accomplishments in the Upper Snake Province[1]			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Instream	Increase instream habitat complexity, remove vegetation	0.25 miles	0 stream miles treated
	Increase instream habitat complexity	12 structures	0 structures installed
	Acquire water instream	2.3 cfs	2.3 cfs water conserved
	Acquire water instream	430.5 acre-feet	430.5 acre-feet water conserved
	Acquire water instream	0.5 miles	0.5 miles of primary stream improved
	Acquire water instream	3.4 miles	3.4 miles of total stream reach improved
Riparian-Upland	Install fence	2.95 miles	2.25 miles of fence installed
	Plant/remove vegetation, create, restore, and/or enhance wetlands	3,471.9 acres	3,345.7 acres treated
Riparian	Plant/remove vegetation	0.5 miles	0 miles planted

Habitat Improvement Project —Habitat Restoration/Enhancement Fort Hall Reservation 2007 Annual Report[2,3]

The Fort Hall Indian Reservation, located in southeastern Idaho, is drained by more than 40 streams of which several are with strongholds of Yellowstone cutthroat trout. Of particular importance are the spring-fed, low gradient streams in the Fort Hall Bottoms. Bottoms streams provide critical wintering, spawning, and nursery habitats for adfluvial and resident salmonids. In addition, wintering and nesting waterfowl, shorebirds, and raptors also use the Bottoms. During 2006 and 2007 habitat enhancement and protection efforts included sloping, fencing, and planting wetland plus at sites along several creeks in the Bottoms. In 2006, sloping projects occurred along Spring Creek (head-end) where 70 m of stream bank were treated. Treatments included sloping, plantings, and fencing efforts. From 2006-2007, a total of 5,450 wetland plugs were planted along riparian areas. To assist with the protection of the banks, the Shoshone Bannock Tribes installed approxi-

Upper Snake

Focal Species in the Upper Snake Province[a]

Focal Species	Upper Snake, Headwaters, Closed Basin
Bull Trout	
Mountain Whitefish	
Snake River Physa Snail	
Utah Valvata Snail	
Yellowstone Cutthroat Trout	

Not listed | Species of Concern | Threatened | Endangered

[a]Focal species were identified by subbasin planners during the Northwest Power and Conservation Council's subbasin planning process. Since the completion of subbasin planning, the list of focal species has been amended through the Fish and Wildlife Program Amendment process. This list represents the most current suite of focal species.
[b] USFWS Status
[c] ESA Status

2007 Hatchery Releases in the Upper Snake Province[4]

Species	Released
Rainbow trout	
Westslope cutthroat trout	
Yellowstone cutthroat trout	
Yellowstone westslope cutthroat trout x rainbow trout	
Arctic grayling	
Kokanee	
Lake trout	
Splake	
Coho	
Steelhead	1,461,421
Total	

Bull Trout Status in the Upper Snake Province[39]

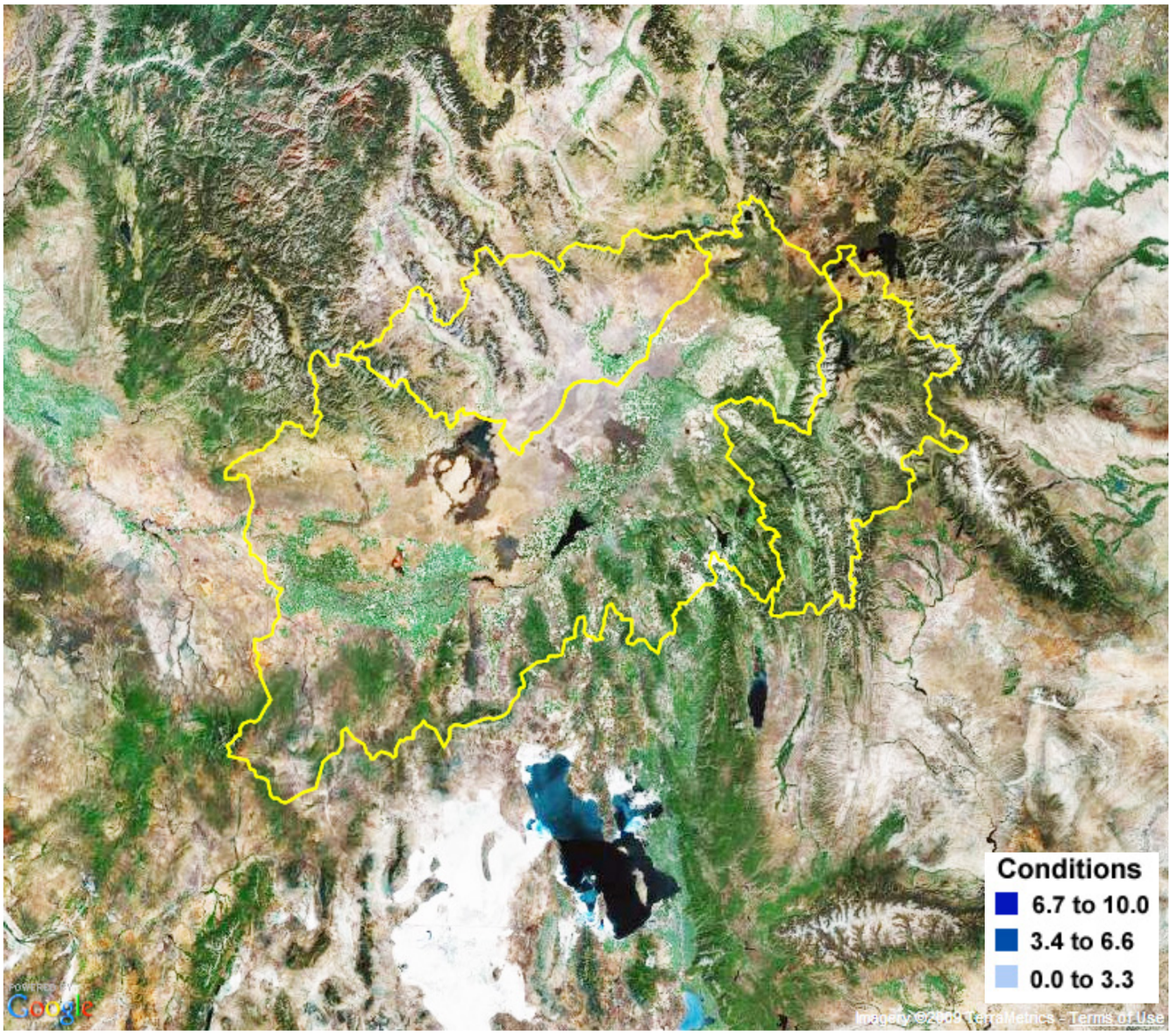
Recovery Unit	Number of cores	Abundance	Trend	Threat	Risk
Little Lost River (1)	1	Unknown	Unknow	Substantial, imminent	At

Wildlife Habitat Losses by Hydroelectric Facility in the Upper Snake Province

Dam	HU Lost	HU Credited in 2008	HU Credited (Gained)
Minidoka	10,503		5,129
Palisades	37,070		0

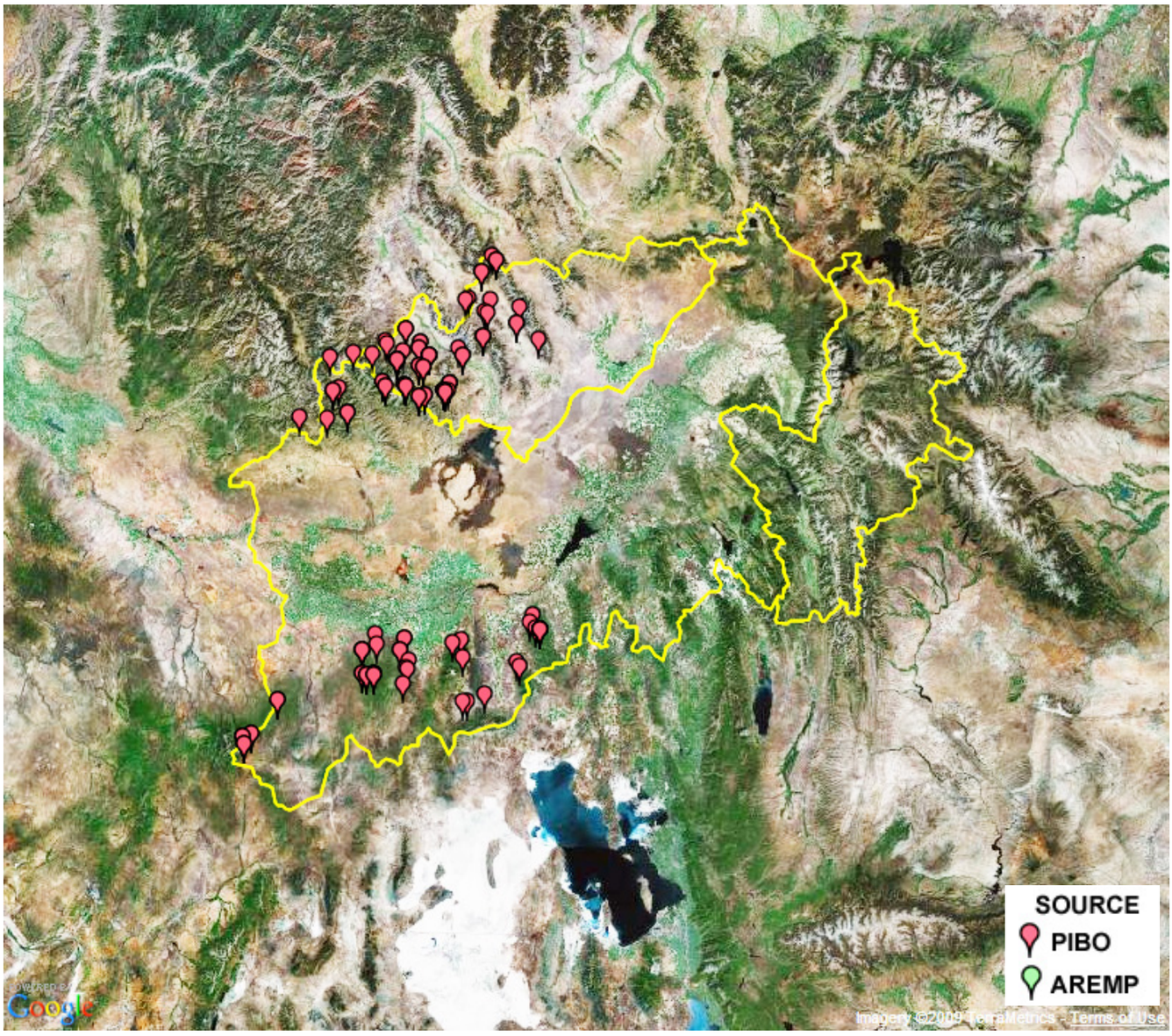
Upper Snake

Watershed Conditions for National Forest and Bureau of Land Management Lands in the Upper Snake Province



Watershed condition is based upon work completed by the USDA Forest Service (FS) and USDI Bureau of Land Management (BLM) Aquatic and Riparian Effectiveness Monitoring Program (AREMP). AREMP personnel evaluate the status and trend of watershed condition on FS, BLM, and National Park Service administered lands within the range of the Northern Spotted Owl. Watershed condition scores are determined for all watersheds that contain a minimum of 25 percent federal ownership. AREMP applies a decision support model to evaluate the premise that watersheds are in good condition. Watersheds are judged to be in good condition where the physical processes, such as wood and sediment delivery, and habitat attributes are adequate to maintain or improve the diversity and abundance of native or desired non-native aquatic species.[7] A score of 10 indicates full support for the premise that a watershed is in good condition and a score of 0 indicates no support for the premise. A fifteen-year assessment of watersheds is being done in 2009, with an expected publication date of early 2010.

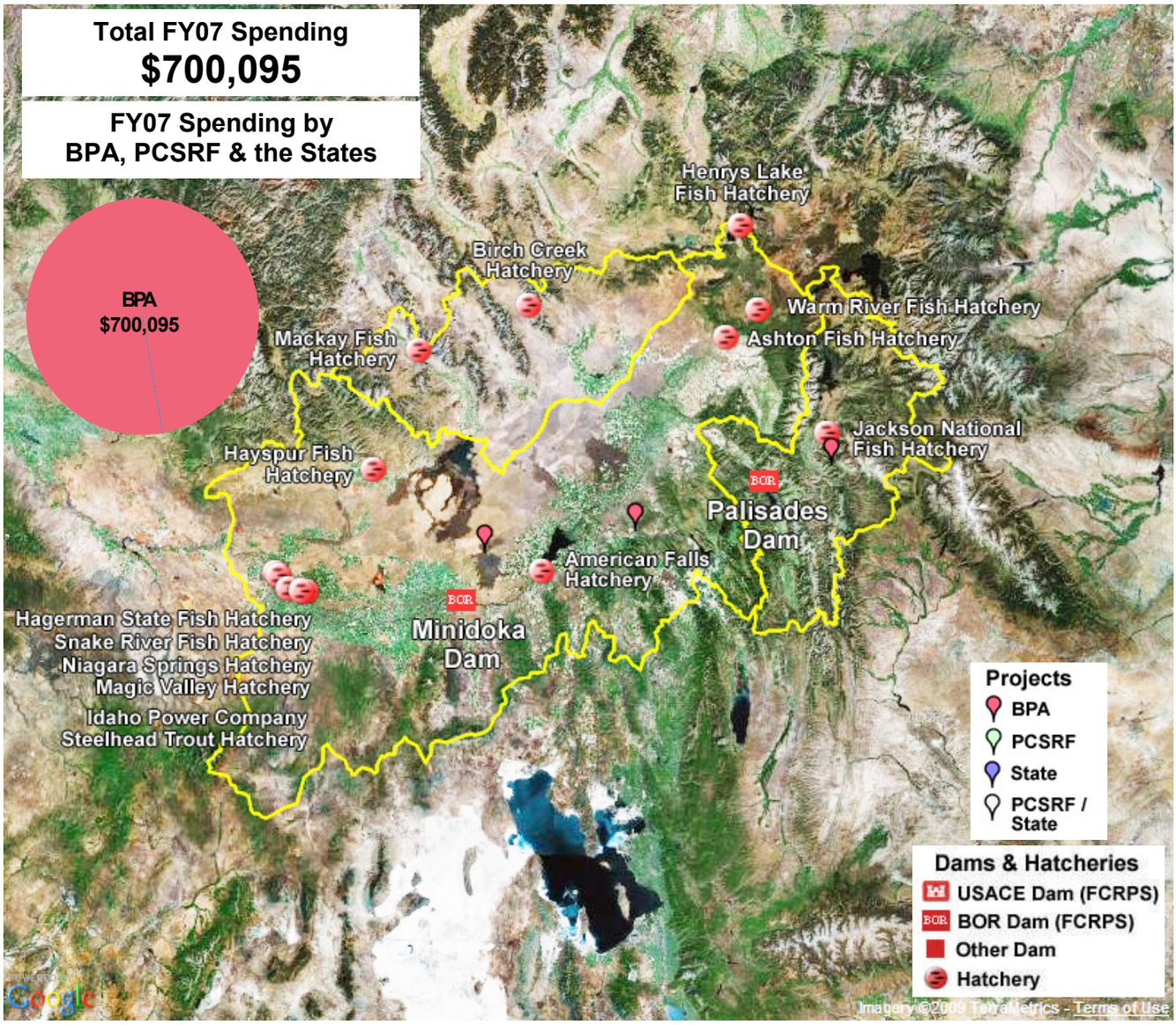
Stream Inventory Sites on National Forest and Bureau of Land Management Lands in the Upper Snake Province[4]



Green Symbol—Indicates locations where stream information is collected by the USDA Forest Service and USDI Bureau and Land Management through the Aquatic and Riparian Effectiveness Monitoring Program (AREMP).

Red Symbol—Indicates locations where stream inventory information is collected by the USDA Forest Service and USDI Bureau and Land Management through the PacFish/InFish Biological Opinion Monitoring Program (PIBO). The locations and information reported are for the sentinel and integrator sites used to track habitat status and trend within the PIBO area over time.[8]

Upper Snake



In the Snake Upper, Headwaters, and Closed Subbasins, bull trout and Yellowstone cutthroat trout have been identified as focal species. Bull trout are listed as threatened under the federal Endangered Species Act. The one bull trout core found in the subbasin is within the Lost River Recovery Unit. Draft Recovery criteria for bull trout vary among recovery units and core areas.

Subbasins: Upper, Headwaters, Closed

Key Factors Limiting Snake Upper, Closed, and Headwater Subbasin Focal Species			
Factors for Decline/Limiting Factors/Threats		**Species and Life-Stage Most Affected**	
		Bull Trout	**Yellowstone Cutthroat Trout**
Habitat	Floodplain Connectivity and Function	Juveniles and adults	Juveniles and adults
	Channel Structure and Complexity	Juveniles and adults	Juveniles and adults
	Riparian Areas and LWD Recruitment	Juveniles and adults	Juveniles and adults
	Stream Flow	All life stages	All life stages
	Water Quality	All life stages	All life stages
	Fish Passage	Juveniles and adults	Juveniles and adults
Hydro	Hydroelectric and Flood-control-related Adverse Effects	All life stages	All life stages
Harvest	Mortality from Illegal Harvest	Adults	Adult
Predation/Competition/ Disease	Predation by or competition with non-native species	Juveniles and adults	Juveniles and adults
Hatchery	Hatchery Fish Interbreeding With Wild Fish	Adults	Adults

BPA FY 2008 Habitat Project Accomplishments in the Snake Upper and Closed Subbasins			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Instream	Increase instream habitat complexity, remove vegetation (Upper)	0.25 miles	0 stream miles treated
	Increase instream habitat complexity (Upper)	12 structures	0 structures installed
	Acquire water instream (Closed Subbasin)	2.3 cfs	2.3 cfs water conserved
	Acquire water instream (Closed Subbasin)	430.5 acre-feet	430.5 acre-feet water conserved
	Acquire water instream (Closed Subbasin)	0.5 miles	0.5 miles of primary stream improved
	Acquire water instream (Closed Subbasin)	3.4 miles	3.4 miles of total stream reach improved
Riparian-Upland	Install fence (Upper)	2.95 miles	2.25 miles of fence installed
	Plant/remove vegetation, create, restore, and/or enhance wetlands (Upper)	3,471.9 acres	3,345.7 acres treated
Riparian	Plant/remove vegetation (Upper)	0.5 miles	0 miles planted

Upper Snake

Yellowstone Cutthroat Trout

ESA Listing Status: Species of Concern
Biological Objective: None
Status:
South Fork Snake River
Conant Reach—2,244/mile age-1 fish

Teton River
Teton Valley—48/mile age-1 fish
Lower Teton—149/mile age-1 fish

Blackfoot River—19 adult fish collected

Bull Trout

ESA Listing Status: Threatened
Core Population: Little Lost River (Within the Lost River Recovery Unit)
Biological Objective: 6,750 adults
Status: Abundance estimates for recovery unit
45,534 fish (±95% CI = 24,575)[3]
Density Estimate (Lost River Basin)
2.6 fish /100m^2 (2004)[4]

Abundance, Trend, Threat, and Risk Ranks (Little Lost River Core):
Abundance = Unknown
Short-term Trend = Unknown
Threat = Substantial, imminent
Risk = At

2007 Hatchery Releases in the Subbasins

Hatchery/Acclimation Pond	Species	Release Goal/Released
Grace	Rainbow trout, three subspecies of cutthroat trout, lake trout, and splake	Fish produced at this facility are stocked primarily in Southeast Idaho.
Ashton	Rainbow trout, Yellowstone cutthroat trout, and arctic grayling	Rainbow trout produced at this facility are stocked in the Upper Snake region whereas arctic grayling are released into mountain lakes statewide.
Henry's Lake	Yellowstone cutthroat trout and rainbow trout x Yellowstone cutthroat trout	Egg take facility (no hatching or rearing occurs at this hatchery). In the fall of each year 1 million Yellowstone cutthroat trout and 200,000 hybrids are released into Henry's lake
American Falls	Rainbow trout	Fish produced at this facility are stocked in Southeast and northern Idaho for anglers to catch.
Niagara Springs	Steelhead	Facility goal is to rear 400,000 pounds of steelhead smolts to sustain steelhead runs below Hells Canyon Dam and the Salmon River.
Magic Valley	Steelhead	Facility goal is to rear approximately 2 million smolts for the purpose of sustaining Salmon River steelhead runs
Hayspur	Rainbow trout (Hayspur and Kamloops strains) and westslope cutthroat trout	Egg production facility
Hagerman National	Steelhead	Not available/1,461,421 (released directly into the Salmon River drainage)
Hagerman State	Rainbow trout (sterile), coho, and steelhead	Coho are released in Cascade Reservoir
Idaho Power Company Steelhead		
Mackay	Rainbow trout, Yellowstone cutthroat trout, kokanee, and arctic grayling	Not available

BPA-Funded Wildlife Projects in the Snake Upper, Closed, and Headwater Subbasins

Project	Sponsor	Acres	HU	Habitat Type
Southern Idaho Wildlife Mitigation Program	Idaho Department of Fish and Wildlife	NA	NA	NA

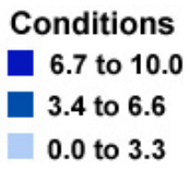
Subbasins: Upper, Headwaters, Closed

This page intentionally left blank.

[1] Meyer, K and J. Lamansky, Jr. 2004. Assessment of Native Salmonids above Hells Canyon Dam, Idaho, 2003-2004 Annual Report, Project Number 199800200, 38 electronic pages, BPA Report DOE/BP-00004261-3.
[2] United States Fish and Wildlife Service. 2003. Chapter 19, Little Lost River Recovery Unit 18, Idaho. *In*: U. S. Fish and Wildlife Service. Bull Trout (*Salvelinus confluentus*) Recovery Plan. Portland, Oregon.
[3] IDFG. Response to the U.S. Fish and Wildlife Service. Idaho Department of Fish and Game. Unpublished Report.
[4] High, B. Idaho Department of Fish and Game. Personal Communication.

Upper Snake

Watershed Conditions for National Forest and Bureau of Land Management Lands in the Upper, Headwaters, Closed Subbasins



Watershed condition is based upon work completed by the USDA Forest Service (FS) and USDI Bureau of Land Management (BLM) Aquatic and Riparian Effectiveness Monitoring Program (AREMP). AREMP personnel evaluate the status and trend of watershed condition on FS, BLM, and National Park Service administered lands within the range of the Northern Spotted Owl. Watershed condition scores are determined for all watersheds that contain a minimum of 25 percent federal ownership. AREMP applies a decision support model to evaluate the premise that watersheds are in good condition. Watersheds are judged to be in good condition where the physical processes, such as wood and sediment delivery, and habitat attributes are adequate to maintain or improve the diversity and abundance of native or desired non-native aquatic species.[7] A score of 10 indicates full support for the premise that a watershed is in good condition and a score of 0 indicates no support for the premise. A fifteen-year assessment of watersheds is being done in 2009, with an expected publication date of early 2010.

Subbasins: Upper, Headwaters, Closed

Stream Inventory Sites on National Forest and Bureau of Land Management Lands in the Upper, Headwaters, Closed Subbasins

SOURCE
PIBO
AREMP

Green Symbol—Indicates locations where stream information is collected by the USDA Forest Service and USDI Bureau and Land Management through the Aquatic and Riparian Effectiveness Monitoring Program (AREMP).

Red Symbol—Indicates locations where stream inventory information is collected by the USDA Forest Service and USDI Bureau and Land Management through the PacFish/InFish Biological Opinion Monitoring Program (PIBO). The locations and information reported are for the sentinel and integrator sites used to track habitat status and trend within the PIBO area over time.[8]