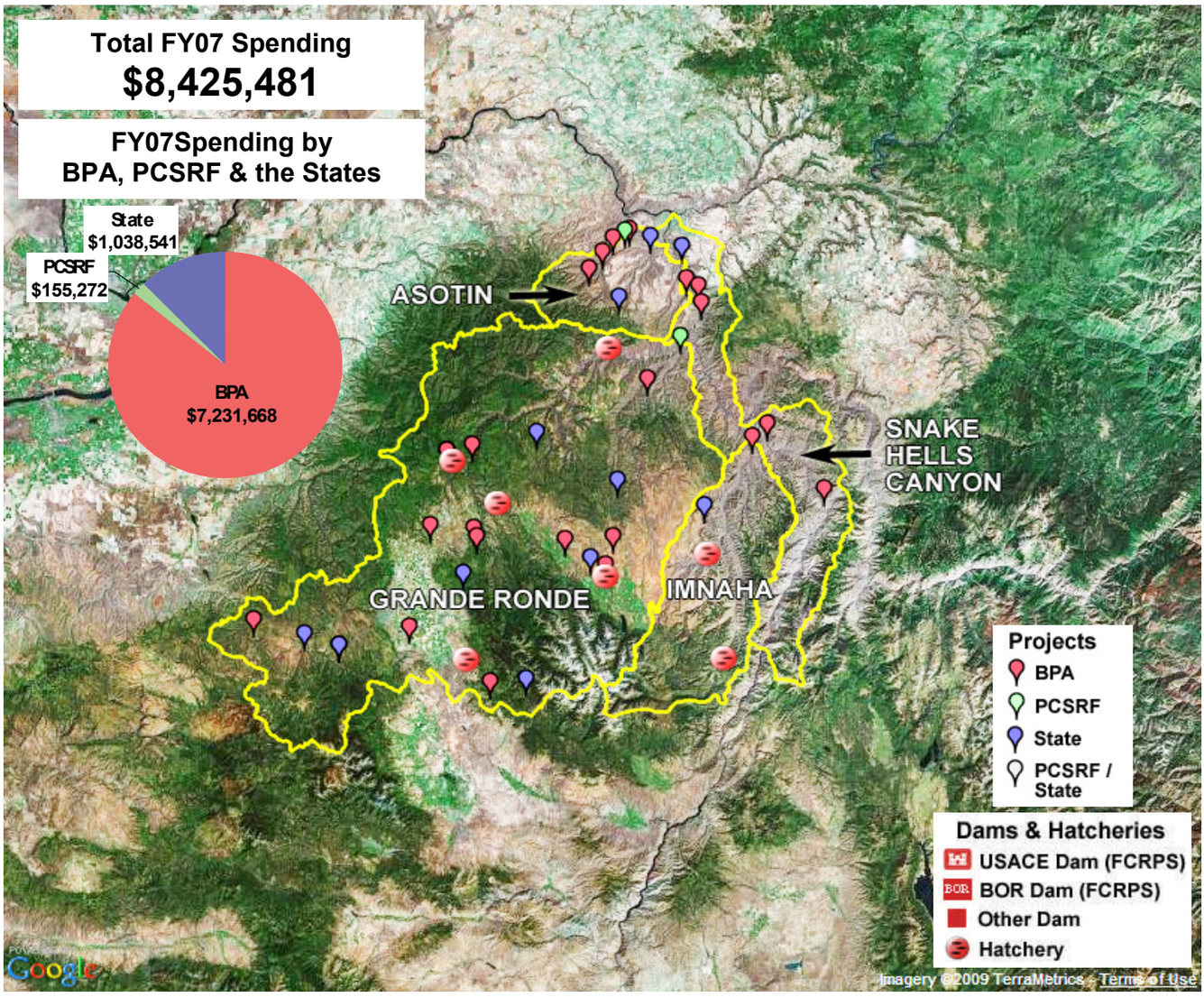
Blue Mountain



The Blue Mountain Province includes the Asotin Creek, Grande Ronde River, and Imnaha River subbasins, as well as the Snake River and small tributaries between the mouth of the Clearwater River at Lewiston, Idaho (river mile 138) and Hells Canyon Dam (river mile 247) which encompass 6,036 square miles. Chinook, summer steelhead, sockeye, and bull trout populations within the province are listed under the federal Endangered Species Act. Rugged peaks reaching 7,700 feet in the Blue Mountains and 10,000 feet in the Wallowa Mountains influence the character of the subbasins. Much of the higher elevation land is publicly owned, whereas privately owned land is generally at lower elevations along streams and on valley floors. Most of the Snake Hells Canyon Subbasin is publicly owned, and is protected or managed using conservation based strategies. The Blue Mountain Province is sparsely populated, with the economy largely dependent on agriculture, forestry, ranching, and mining.

Land Ownership
Federal……....19%
Private……81%
Tribal……...0%

BPA FY 2008 Habitat Project Accomplishments in the Blue Mountain Province[8]			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Performance Indicator (Actual Value)**
Instream	Increase instream habitat complexity	200 structures	93 structures installed
	Realign, connect, and/or create channel	2.5 miles	2.1 stream miles after treatment
	Realign, connect, and/or create channel	0.7 miles	1.4 stream miles before treatment
	Increase instream habitat complexity, remove vegetation	2.50 miles	2.10 stream miles treated
	Acquire water instream	17.2 cfs water	17.2 cfs of water protected
	Acquire water instream	2,309.9 acre-feet	2,309.9 acre-feet water protected
	Acquire water instream	3.2 miles	3.2 miles of primary stream reach improved
	Acquire water instream	15.9 miles	17.5 miles of total stream reach improvement
	Install fish passage structure	9 miles accessed	16.5 miles accessed
Riparian	Plant vegetation	8.8 miles	9.3 miles planted
Riparian-Upland	Conduct controlled burn, plant/remove vegetation, practice no-till and conservation tillage, upland erosion and sedimentation control, create, restore and/or enhance wetland	4,383.3 acres	2,297.5 acres treated
	Install fence	6.50 miles	5.27 miles of fence installed
	Decommission/relocate/improve road.	59.6 miles	42.58 road miles treated
Wetland	Realign, connect, and/or create channel	41 acres	41 acres affected

Habitat Improvement Project — Asotin Creek Watershed Project

Asotin Creek is a vital Snake River tributary for salmonid production. Endangered Species Act-listed populations of summer steelhead, bull trout, and spring Chinook as well as rainbow trout reside in Asotin Creek. Asotin Creek has been recognized by the Washington Department of Fish and Wildlife as being a reserve for wild steelhead. Habitat protection and improvement are essential for to meeting the management goals associated with preservation and restoration of the subbasin's focal species.

Anadromous fish production in Asotin Creek is affected by stream temperatures, sediment deposition, turbidity, loss of riparian vegetation, and lack suitable resting and rearing pool habitat. Through the Asotin County Conservation District's Bonneville Power and Administration Power-funded Asotin Creek Watershed Project, efforts have been underway for several years to restore and protect prioritized habitat through the use of in-stream, riparian, and upland best management practices.

From 2005-2006, 1,646 feet of fence was installed along streams to limit or eliminate the access of cattle or other livestock to waterways. In addition, 18,500 trees were planted in riparian areas to act as buffers between developed or agricultural land and streams. Another practice in the Asotin Subbasin includes the use of direct seed and no-till farming practices. These practices increase the amount of time that farm land has vegetated cover and reduces the amount of soil disturbance, while still producing crops. The result of these farming practices is that less sediment is introduced into streams During the 2005-2006 period, 1,687 acres of land was farmed using the direct seed technique. Instream restoration included the completion of 5,115 feet of natural channel design for steelhead passage and long-term spawning and rearing.

Blue Mountain

Focal Species in the Blue Mountain Province[a]

Focal Species	Asotin	Grande Ronde	Imnaha	Snake Hells Canyon
Bull Trout				
Chinook-Spring/ Summer				
Chinook-Fall				
Pacific Lamprey				
Redband Trout				
Sockeye				
Steelhead—Summer				
White Sturgeon				

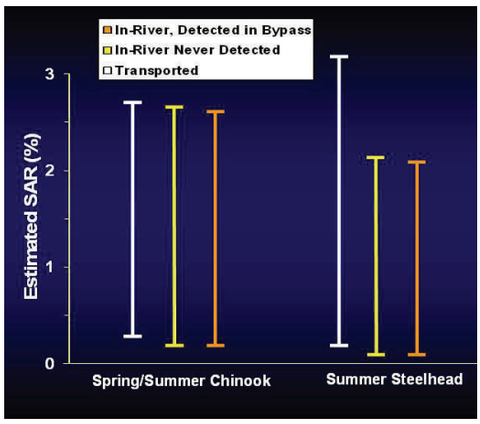
Not a focal species | Not listed | Species of Concern[b] | Threatened[c]

[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.

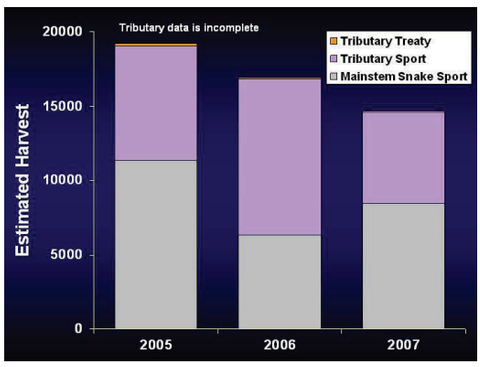
[b] USFWS Status

[c] ESA Status

Ranges in Aggregate Smolt-to-Adult Return (SAR) for Wild Salmon and Steelhead Originating from the Blue Mountain and Mountain Snake Provinces (returns to Lower Granite Dam)[1]



Blue Mountain Province Salmon and Steelhead Harvest[2,3,4]



2007 Hatchery Releases and Returns to Hatcheries in the Blue Mountain Province

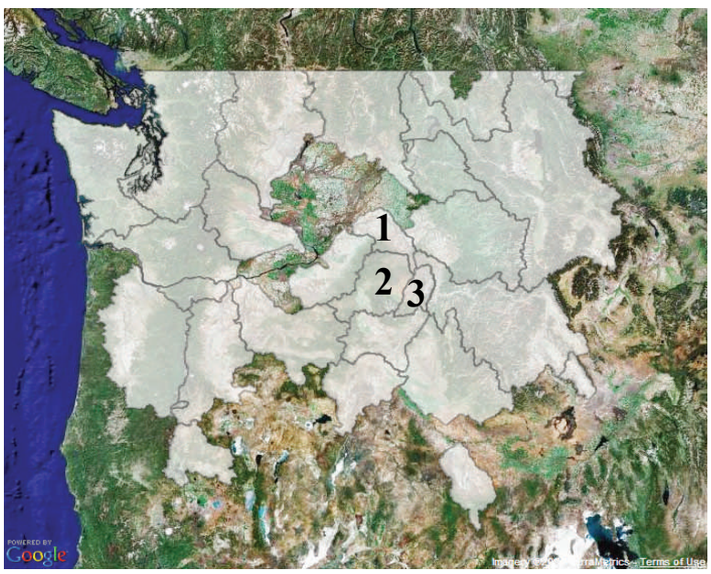
Species	Release Goal/ Released	Return Goal/Return to Collection Facility
Spring Chinook	872,800/643,233	/1,331
Fall Chinook	1,850,000/1,882,725	/Unknown
Summer Steelhead	985,000/969,295	/5,982
TOTAL	3,707,800/3,495,253	/7,313

Species/ Race	Mainstem Snake River—2007		Tributaries 2007	
	Sport	Treaty	Sport	Treaty
Spring Chinook	0	0	106	64
Summer Steelhead	8,463	0	6,030	Unknown

Status and Recovery Standards for ESA-Listed Salmon and Steelhead in the Blue Mountain Province[5,6]

ESU or DPS	Major Population Group (MPG)	Populations and Viability			Number of Natural Spawners	
		No. of Populations	No. Meeting Viability Standards	Minimum No. Needed to Meet Standards	Minimum if MPG Viability Standards Met	Minimum if all Populations Meet Standards
Snake River Spring/Summer Chinook	Grande Ronde/Imnaha	8	0	Unknown	Unknown	6,250
Snake River Steelhead	Grand Ronde	4	1	2	Unknown	4,000
	Imnaha	1	0	1	1,000	1,000

Bull Trout Status in the Blue Mountain Province



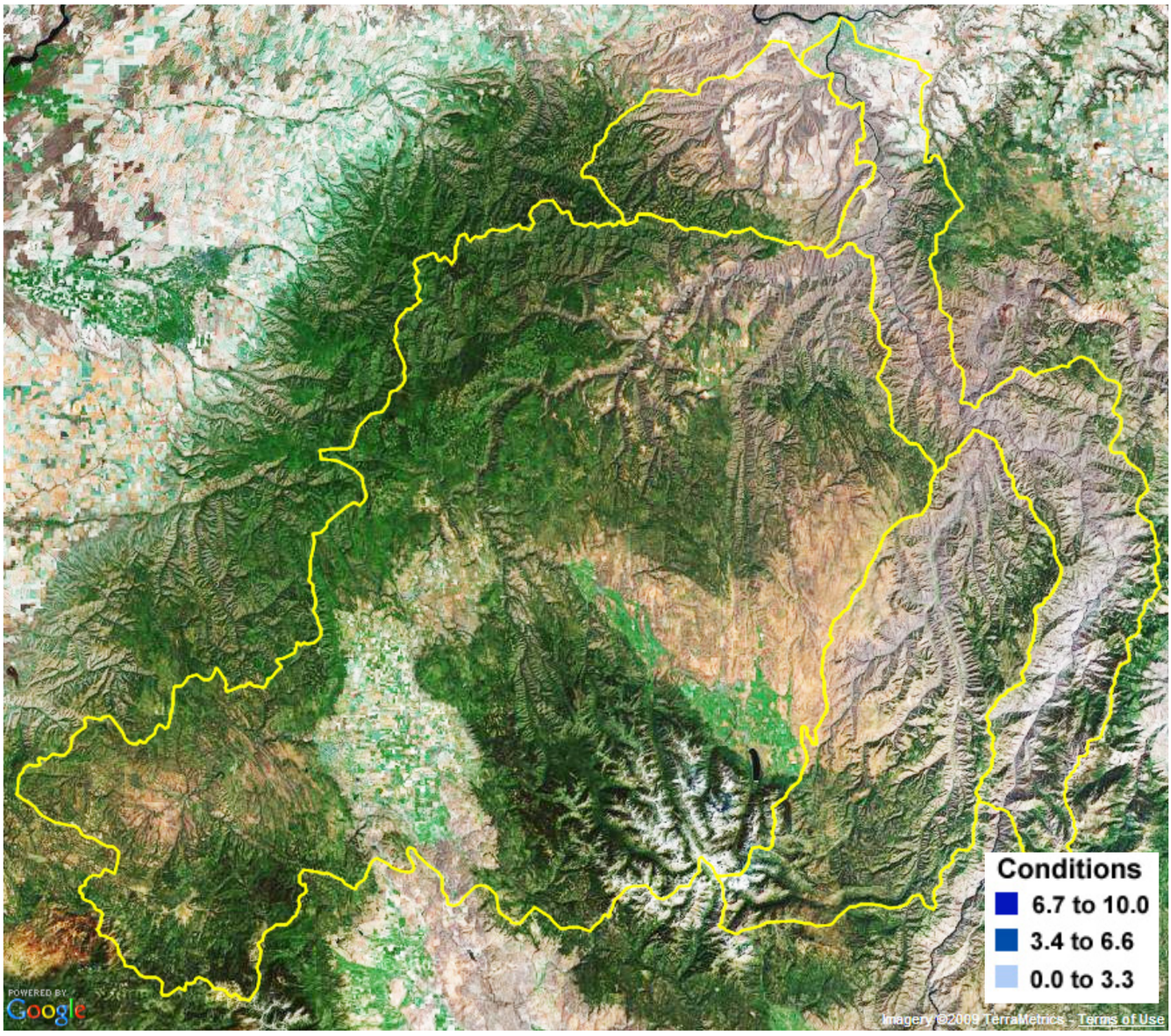
Recovery Unit	Number of cores	Abundance	Trend (Number)	Threat (Number)	Risk (Number)
Snake River (1) Washington	2	1,050-2,750	Unknown (1) Stable (1)	Substantial, imminent (1) Widespread, low-severity (1)	High (1) Potential (1)
Grande Ronde River (2)	2	300-1,250	Stable (2)	Widespread, low-severity (1) Slightly (1)	At (1) Potential (1)
Imnaha-Snake River (3)	3	130-670	Unknow (2) Stable (1)	Untreatened (2) Widespread, low-severity (1)	Unknown (2) Potential (1)

Wildlife Habitat Losses by Hydroelectric Facility in the Blue Mountain[8]

No losses associated with hydro facilities in this province.

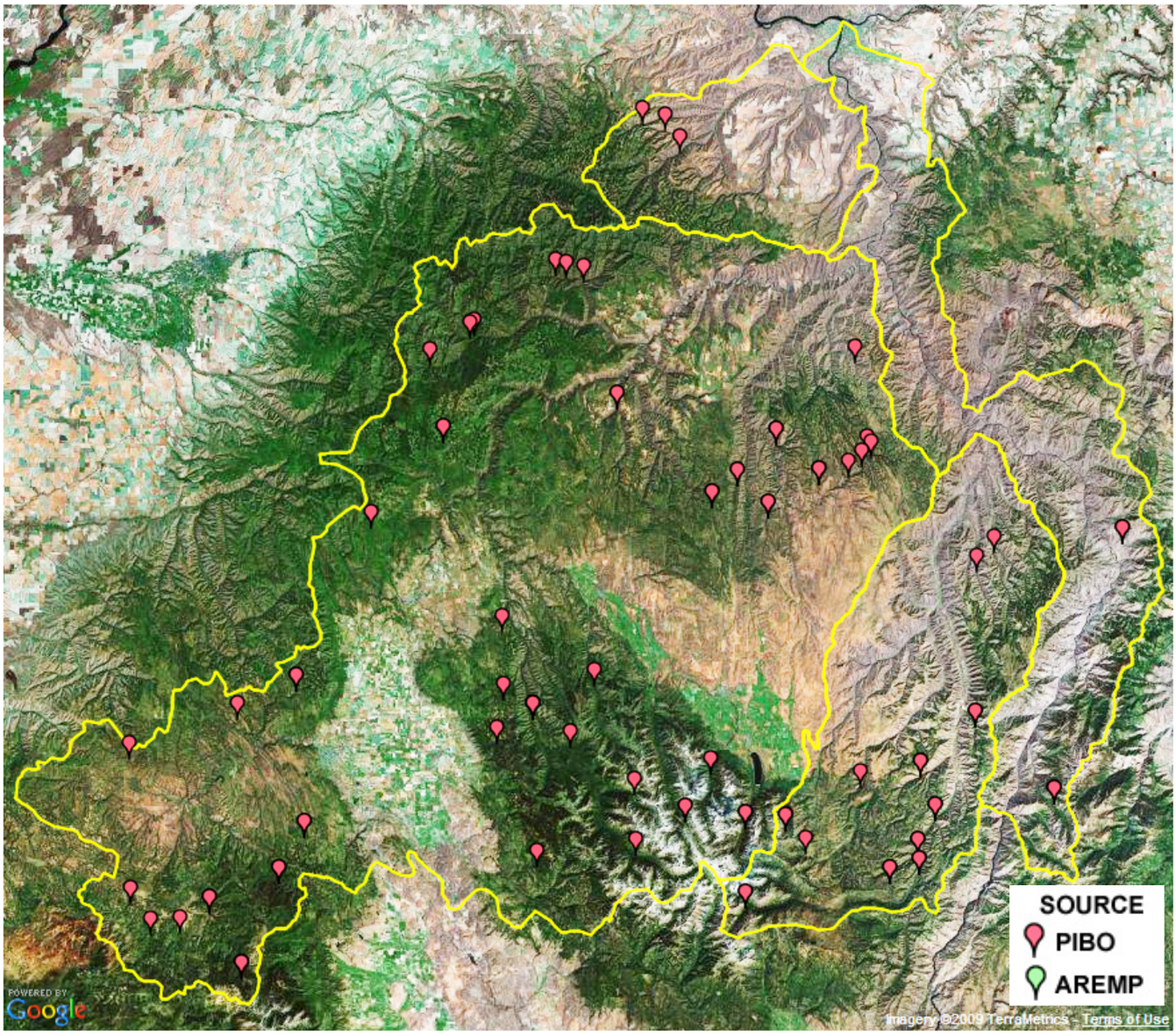
Blue Mountain

Watershed Conditions for National Forest and Bureau of Land Management Lands in the Blue Mountain Province[52]



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.

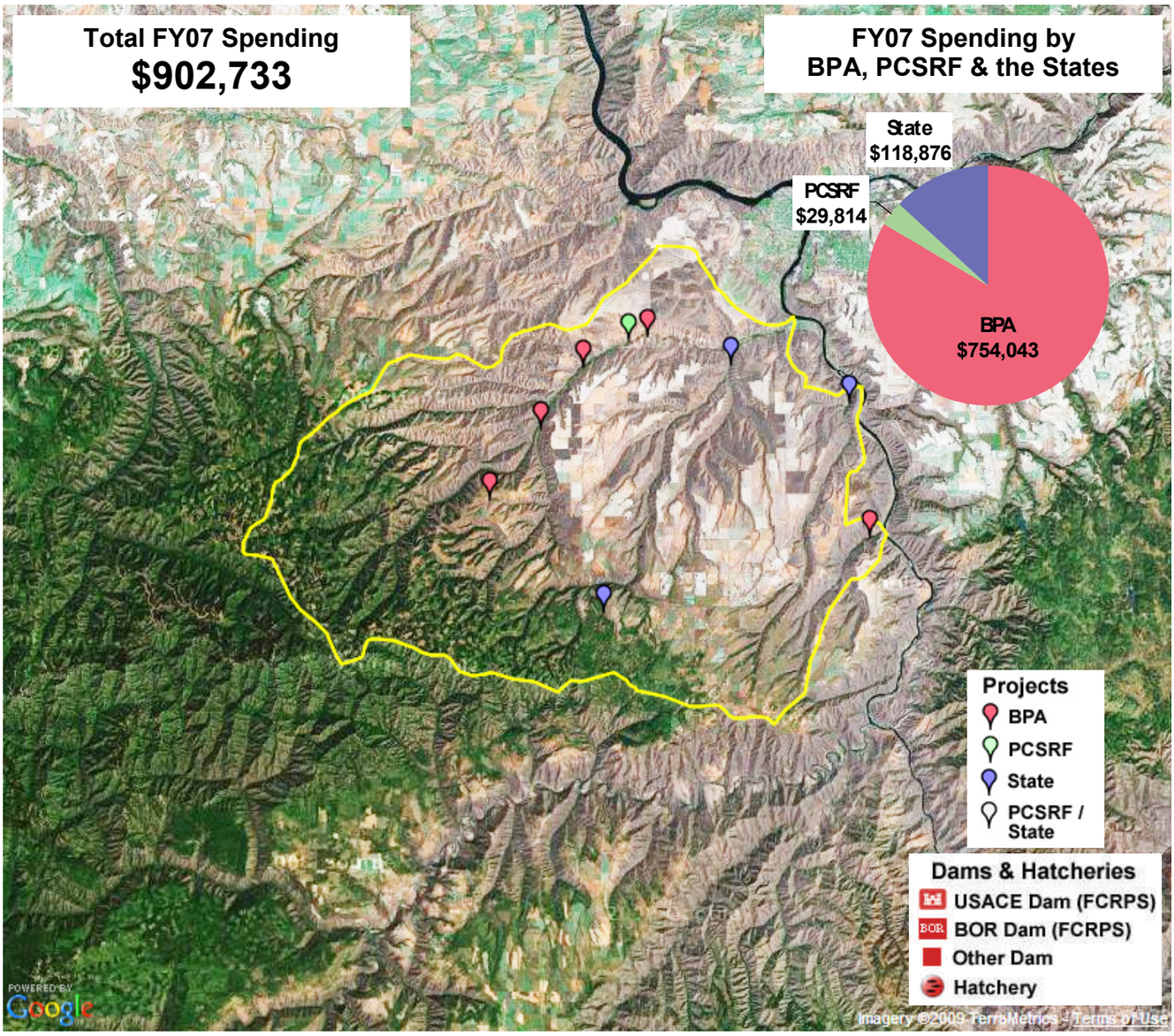
Stream Inventory Sites on National Forest and Bureau of Land Management Lands in the Blue Mountain Province[53,54]



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]

Blue Mountain



In the Asotin Creek Subbasin, summer steelhead, spring Chinook salmon, and bull trout have been identified as focal species. All are also listed as threatened under the federal Endangered Species Act. Steelhead in the subbasin are part of the Snake River Distinct Population Segment (DPS), Chinook salmon are part of the Snake River Evolutionarily Significant Unit (ESU), and bull trout are within the Snake River Recovery Unit. Recovery criteria for a steelhead DPS or a salmon ESU do not necessarily require that all populations achieve viability (extinction risk = low) prior to de-listing; however, the recovery plan for both Snake River steelhead and Chinook salmon requires the Asotin populations to achieve viability. Recovery criteria for bull trout vary among recovery units.

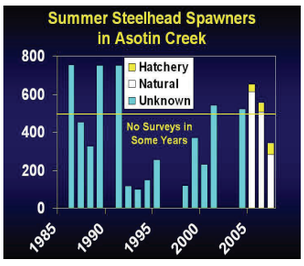
Subbasin: Asotin

Key Factors Limiting Asotin River Subbasin Focal Species[1,2]				
Factors for Decline/Limiting Factors/Threats		**Species/Race, and Life-Stage Most Affected**		
		Spring Chinook	**Summer Steelhead**	**Bull Trout**
Habitat	Estuary and Nearshore Marine Habitat Degradation	Smolts	Smolts	
	Floodplain Connectivity and Function	Juveniles, adults	Fry, summer parr, winter parr	Juveniles, adults
	Channel Structure and Complexity	Juveniles, adults	Fry, summer parr, winter parr	Juveniles, adults
	Riparian Areas and LWD Recruitment	Juveniles, adults	Fry, summer parr, winter parr	Juveniles, adults
	Water Quality	All	Eggs, fry, winter parr	All
	Fish Passage			Juveniles, adults
Hydro	Mainstem Columbia River Hydro-power-related Adverse Effects	Smolts	Smolts	
Harvest	Mortality from Targeted Fishery	Adults		

BPA FY 2008 Habitat Project Accomplishments in the Asotin Subbasin[8]			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Riparian-Upland	Plant vegetation	500 acres	475 acres planted

Blue Mountain

Steelhead



Summer

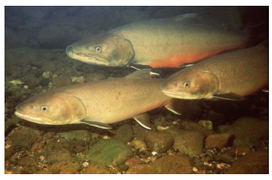
ESA Listing Status: Threatened
ESU: Snake River
MPG: Lower Snake River
Population: Asotin Creek
Draft Recovery Plan Criteria: 500 natural adults[1]
Status: 283 natural and 60 hatchery adults spawning in the wild above George Creek (2007)[3,4a]
Wild Juvenile Production: 50,375 juveniles emigrating (2007)[3]

Chinook

Spring

ESA Listing Status: Threatened
ESU: Snake River
MPG: Lower Snake River
Draft Recovery Plan Criteria: 500 natural adults[1]
Population: Asotin Creek
Status: 3 redds (2007)[4b]
Wild Juvenile Production: 2,553 juveniles emigrating (2007)[3]

Bull Trout



ESA Listing Status: Threatened
Core Area: Asotin Creek (Within the Snake River Recovery Unit)
Local Populations: North Fork Asotin Creek, Cougar Creek
Draft Recovery Plan Criteria: 700 adults distributed among 7 local populations[2]
Status: 7 adults captured in trap at river km 7 (2007)[3]; total abundance estimated at ≤ 300 adults[2]
Abundance, Trend, Threat, and Risk Ranks (Asotin Creek Core):
Abundance = 50-250
Short-term Trend = Unknown
Threat = Substantial, imminent
Risk = High
Wild Juvenile Production: Unknown

Recovery Status of ESA-Listed Steelhead and Chinook Salmon in the Asotin Creek Subbasin[1]

Population	Abundance Threshold	Mean Abundance	Major Spawning Areas Occupied	Growth Rate	Recruits/Spawner (1981-2000)	Current Viability
Summer Steelhead						
Asotin Creek	500	Data insufficient	3 of 3	Unknown	Unknown	Moderate
Spring Chinook Salmon						
Asotin Creek	500	Unknown	1 of 1	Unknown	Unknown	Functionally Extirpated

2007 Hatchery Releases and Returns to Hatcheries in the Asotin Subbasin

There are no hatcheries located in the Asotin Subbasin

BPA-Funded Wildlife Projects in the Asotin Subbasin

Project	Sponsor	Acres	HU	Habitat Type
Asotin Wildlife	Washington Department of Fish and Wildlife	10,146	Unknown	Interior grasslands, riparian

Subbasin: Asotin

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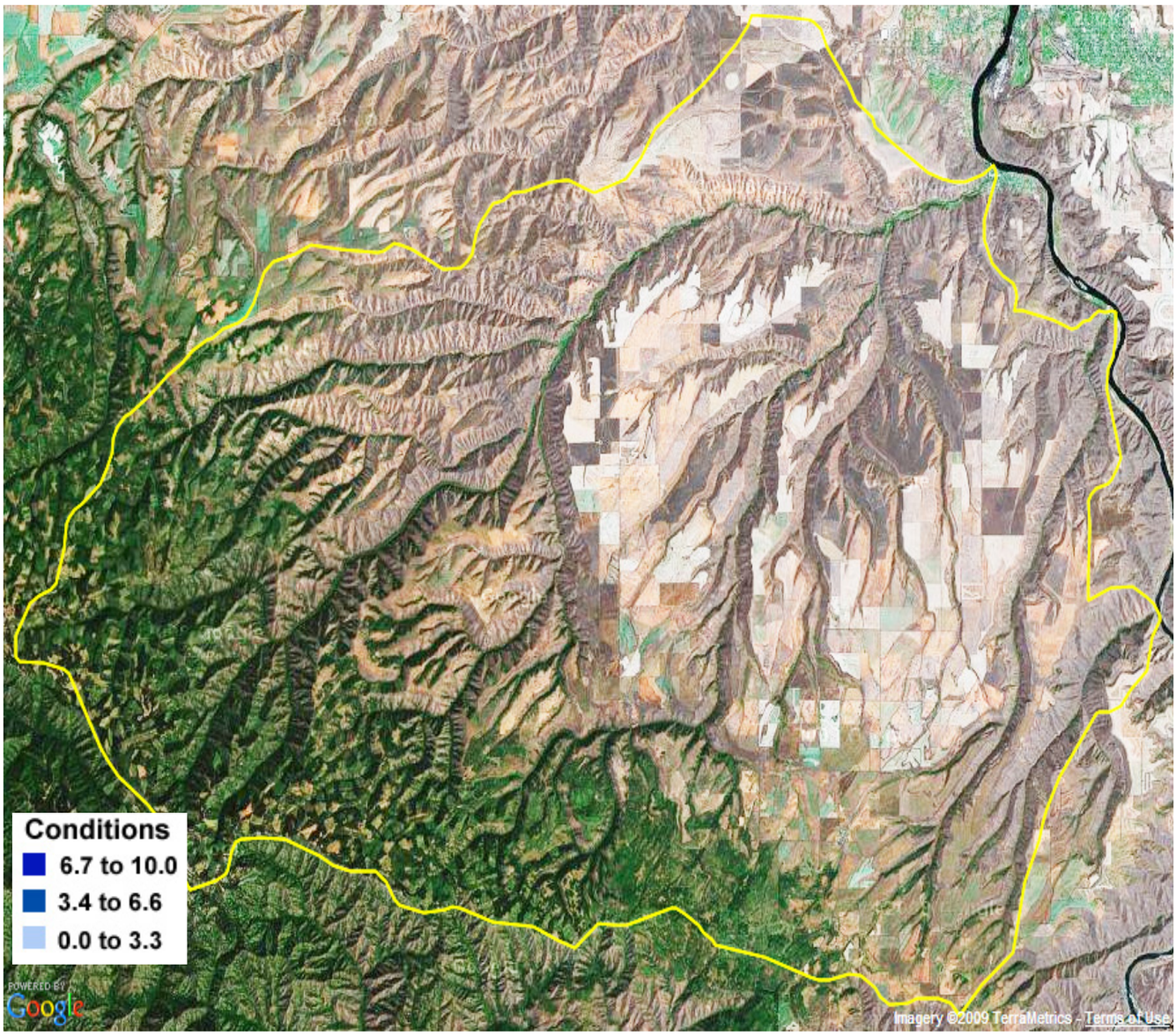
Blue Mountain

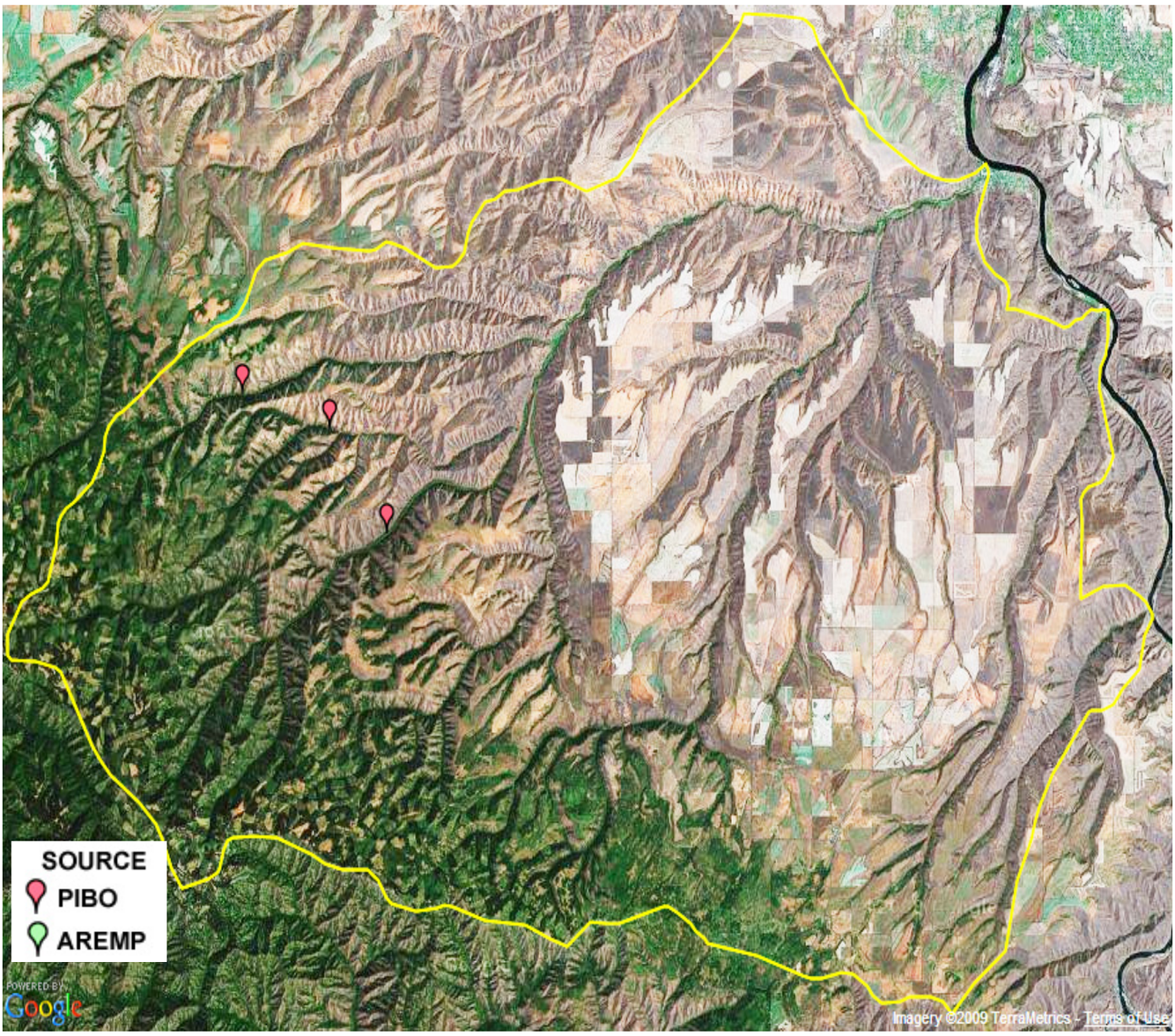
Watershed Conditions for National Forest and Bureau of Land Management Lands in the Asotin Subbaisn



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.

Subbasin: Asotin

Stream Inventory Sites on National Forest and Bureau of Land Management Lands in the Asotin Subbaisn



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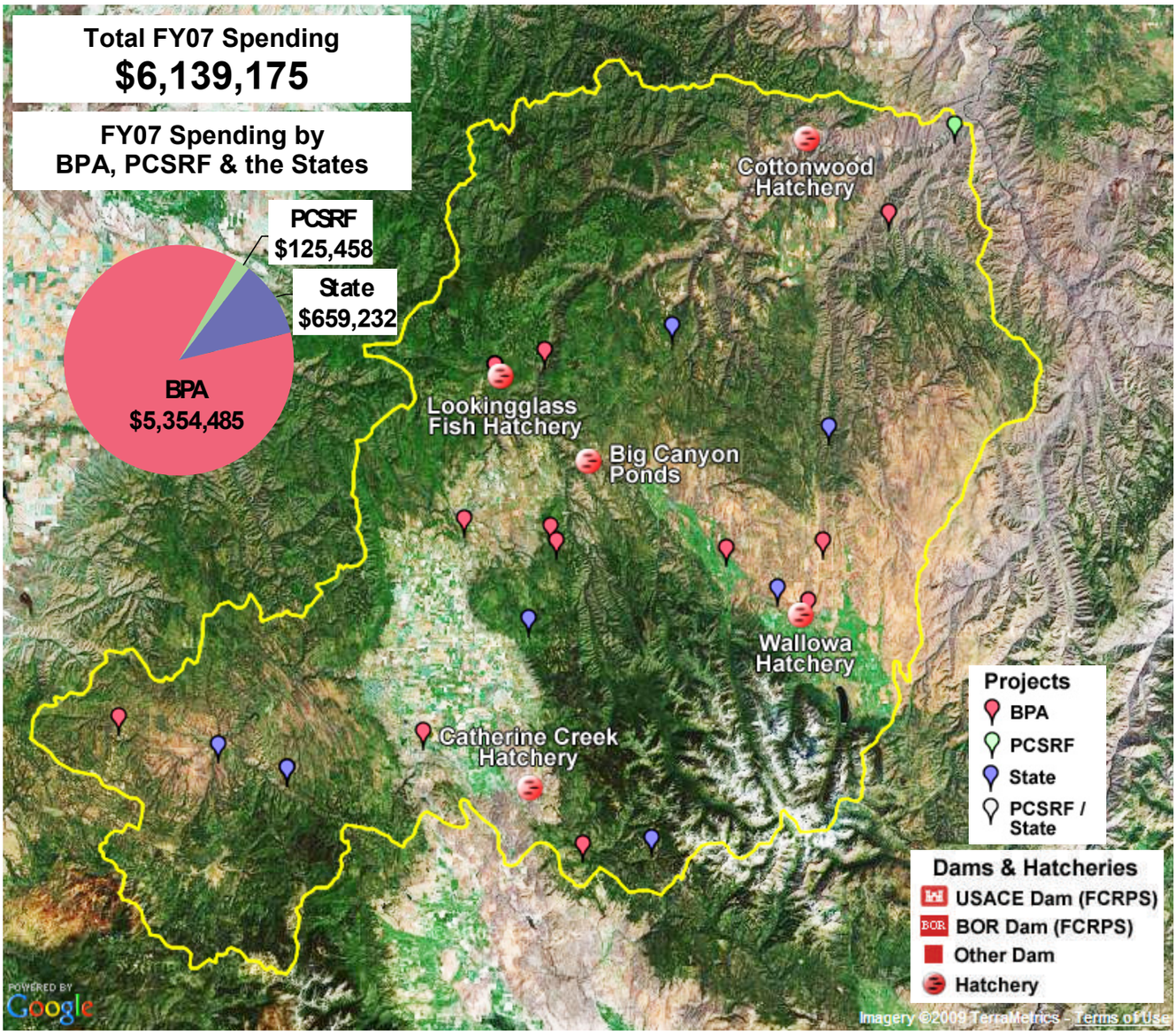
Red Symbol—Indicates locations where stream inventory information is collected by the USDA Forest Service and USDI Bureau and Land Management through the PacFish/InFish Biological Opinion Monitoring Program (PIBO). The locations and information reported are for the sentinel and integrator sites used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

Blue Mountain



In the Grand Ronde River Subbasin, summer steelhead, spring Chinook salmon, and bull trout have been identified as focal species. All are also listed as threatened under the federal Endangered Species Act. Steelhead in the subbasin are part of the Snake River Distinct Population Segment (DPS), Chinook salmon are part of the Snake River Evolutionarily Significant Unit (ESU), and bull trout are within the Grand Ronde River Recovery Unit. Recovery criteria for a steelhead DPS or a salmon ESU do not necessarily require that all populations achieve viability (extinction risk = low) prior to de-listing. Recovery plans for Snake River steelhead and salmon have not been completed; however, recovery of Snake River steelhead will likely require the Joseph Creek population to remain highly viable, the Upper Grande Ronde population to become viable, and either the Wallowa or Lower Grande Ronde population to become viable. A number of options exist regarding viability of Chinook salmon populations. Recovery criteria for bull trout vary among recovery units.

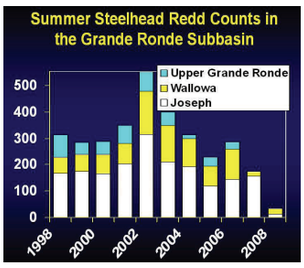
Subbasin: Grande Ronde

Key Factors Limiting Grande Ronde River Subbasin Focal Species[5,6]				
Factors for Decline/Limiting Factors/Threats		**Species/Race, and Life-Stage Most Affected**		
		Spring Chinook	**Summer Steelhead**	**Bull Trout**
Habitat	Estuary and Nearshore Marine Habitat Degradation	Smolts	Smolts	
	Floodplain Connectivity and Function	Juveniles	Fry, summer parr, winter parr	Juveniles, adults
	Channel Structure and Complexity	Juveniles	Fry, summer parr, winter parr	Juveniles, adults
	Riparian Areas and LWD Recruitment	Juveniles	Fry, summer parr, winter parr	Juveniles, adults
	Stream Flow	Juveniles	Summer parr	
	Water Quality	Eggs	Eggs	All
	Fish Passage	Adults	Adults	Juveniles, adults
Hydro	Mainstem Columbia River Hydro-power-related Adverse Effects	Smolts	Smolts	
Harvest	Mortality from Targeted Fishery	Adults		

BPA FY 2008 Habitat Project Accomplishments in the Grande Ronde Subbasin[8]			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Instream	Realign, connect, and/or create channel	0.3 miles	0.5 stream miles after treatment
	Realign, connect, and/or create channel	0.5 miles	0.3 stream miles before treatment
	Increase instream habitat complexity, remove vegetation	0.50 miles	0.50 stream miles treated
	Increase instream habitat complexity	23 structures	25 structures installed
Wetland	Realign, connect, and/or create channel	0.5 acres	0.6 acres affected
Riparian-Upland	Plant vegetation, remove vegetation, create, restore, and/or enhance wetland	48 acres	334.4 acres treated
	Install fence	1 mile	0.83 miles of fence installed
	Improve road	30 miles	30 miles of road treated
Riparian	Plant vegetation, remove vegetation	5 miles	1.67 miles planted

Blue Mountain

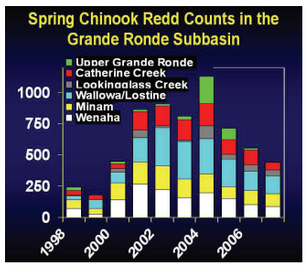
Steelhead



Summer

***ESA Listing Status*:** Threatened
***ESU*:** Snake River
MPG: Grande Ronde
Populations: Upper Grande Ronde, Wallowa, Lower Grande Ronde, Joseph Creek
Draft Recovery Plan Criteria: Unknown.
Subbasin Plan Objective: 5,000 natural adults[5]
***Status*:**
Wallowa = 22 redds,
Joseph Creek = 12 redds (most surveys not conducted in 2008)[4c],
Wild Juvenile Production:
Upper Grande Ronde = 12,632;
Catherine Creek (Upper Grande Ronde) = 13,715;
Lostine River (Wallowa) = 3,162;
Minam River (Wallowa) = 11,831
(all 2006-07)[7]

Chinook



Spring

***ESA Listing Status*:** Threatened
***ESU*:** Snake River
MPG: Grande Ronde-Imnaha
Populations: Upper Grande Ronde, Catherine Creek, Lookingglass Creek, Wallowa-Lostine, Minam, Wenaha
Draft Recovery Plan Criteria: Unknown.
***Status*:**
Upper Grande Ronde = 1 redd,
Catherine Creek = 57 redds,
Lookingglass Creek = 53 redds,
Wallowa-Lostine, = 140 redds,
Minam = 101 redds,
Wenaha = 86 redds, (all 2007)[4d]
Wild Juvenile Production:
Upper Grande Ronde = 17,109;
Catherine Creek = 13,831;
Lostine River = 46,183;
Minam River = 37,719
(all 2006-07)[7]

Recovery Status of ESA-Listed Steelhead and Chinook Salmon in the Grande Ronde Subbasin[8,9]

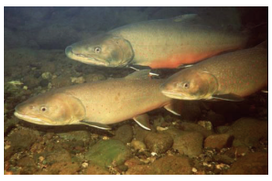
Population	Abundance Threshold	Mean Abundance (1996-2005)	Major Spawning Areas Occupied	Growth Rate (1981-2000)	Recruits/Spawner (1981-2000)	Current Viability
Summer Steelhead						
Upper Grande Ronde	1,500	1,226	Unknown	Unknown	2.29	Moderate
Wallowa	1,000	Unknown	Unknown	Unknown	Unknown	Moderate
Lower Grande Ronde	1,000	Unknown	Unknown	Unknown	Unknown	Unknown
Joseph Creek	500	2,132			2.58	Very High
Spring Chinook Salmon						
Upper Grande Ronde	1,000	38	1 of 3	Unknown	0.42	Low
Catherine Creek	750	89	1 of 2	0.97	0.75	Low
Lookingglass Creek	500	—	—	Unknown	Unknown	Functionally Extirpated
Wallowa-Lostine	1,000	276	3 of 3	1.05	0.78	Low
Minam	750	337	2 of 2	1.05	1.02	Low
Wenaha	750	376	1 of 1	1.10	0.74	Low

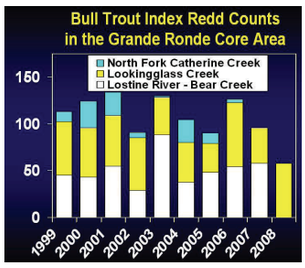
2007 Hatchery Releases and Returns to Hatcheries in the Grande Ronde Subbasin

Hatchery/Acclimation Pond	Species	Release Goal/Released	Return Goal/Actual Return
Big Canyon	Summer Steelhead	320,000/322,368	/844
Little Sheep	Summer Steelhead	165,000/167,804	/1,713
Wallowa	Summer Steelhead	500,000/479,123	/2,837
Cottonwood Creek	Summer Steelhead		/558
Catherine Creek	Spring Chinook	68,000/71,280	/234
Grande Ronde	Spring Chinook	130,500/139,423	/73
Lookingglass	Spring Chinook	314,300/	/215
Total			/6,504

Subbasin: Grande Ronde

Bull Trout





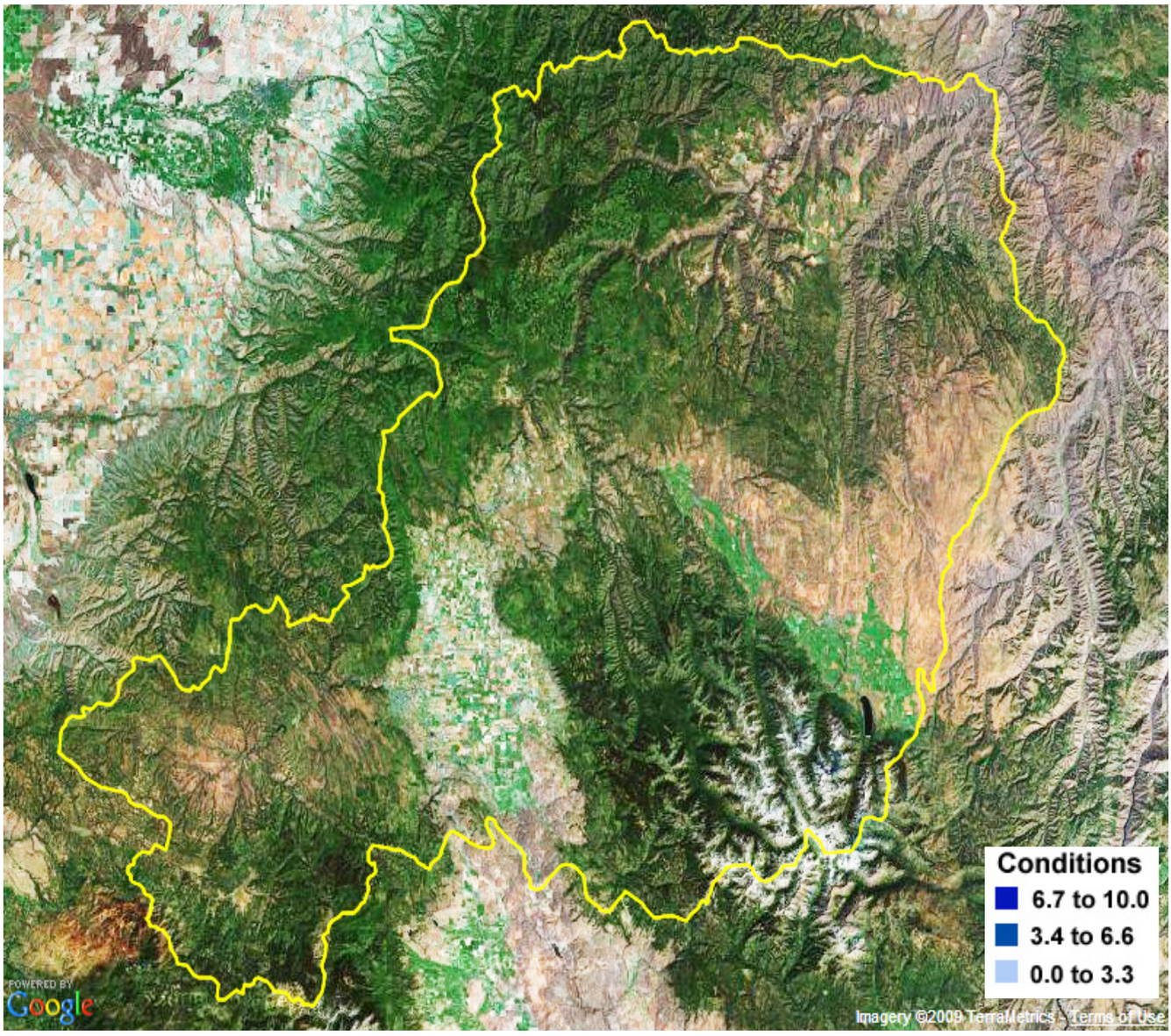
ESA Listing Status: Threatened
Core Areas: Grande Ronde and Little Minam (Within the Grande Ronde River Recovery Unit)
Local Populations:
Grande Ronde Core Area- Upper Grande Ronde River, Catherine Creek, Minam River/Deer Creek, Lostine River/Deer Creek, Hurricane Creek, Wenaha River, Lookingglass Creek;
Little Minam Core Area– Little Minam River
Draft Recovery Plan Objective: Grande Ronde Core Area– 5,000 adults distributed among 8 local populations;
Little Minam Core Area– 1,000 adults[6]
Status: 58 redds in Lookinglass Creek (2008)[10]
Abundance, Trend, Threat, and Risk Ranks (Grande Ronde Core):
Abundance = 50-250
Short-term Trend = Stable
Threat = Widespread, low-severity
Risk = At
Abundance, Trend, Threat, and Risk Ranks (Little Minam Core):
Abundance = 250-1,000
Short-term Trend = Stable
Threat = Slightly
Risk = Potential

BPA-Funded Wildlife Projects in the Grande Ronde Subbasin

Project	Sponsor	Acres	HU	Habitat Type
Precious Lands Wildlife Management Area	Nez Perce Tribe	16,286	19,967	Eastside grasslands, ponderosa pine forests, riparian areas, quaking aspen, dry land shrub
Securing Wildlife Mitigation Sites—Oregon, Ladd March Wildlife Management Area	Oregon Department of Fish and Wildlife	919	647	Wetlands, eastside grasslands

Blue Mountain

Watershed Conditions for National Forest and Bureau of Land Management Lands in the Grande Ronde Subbasin



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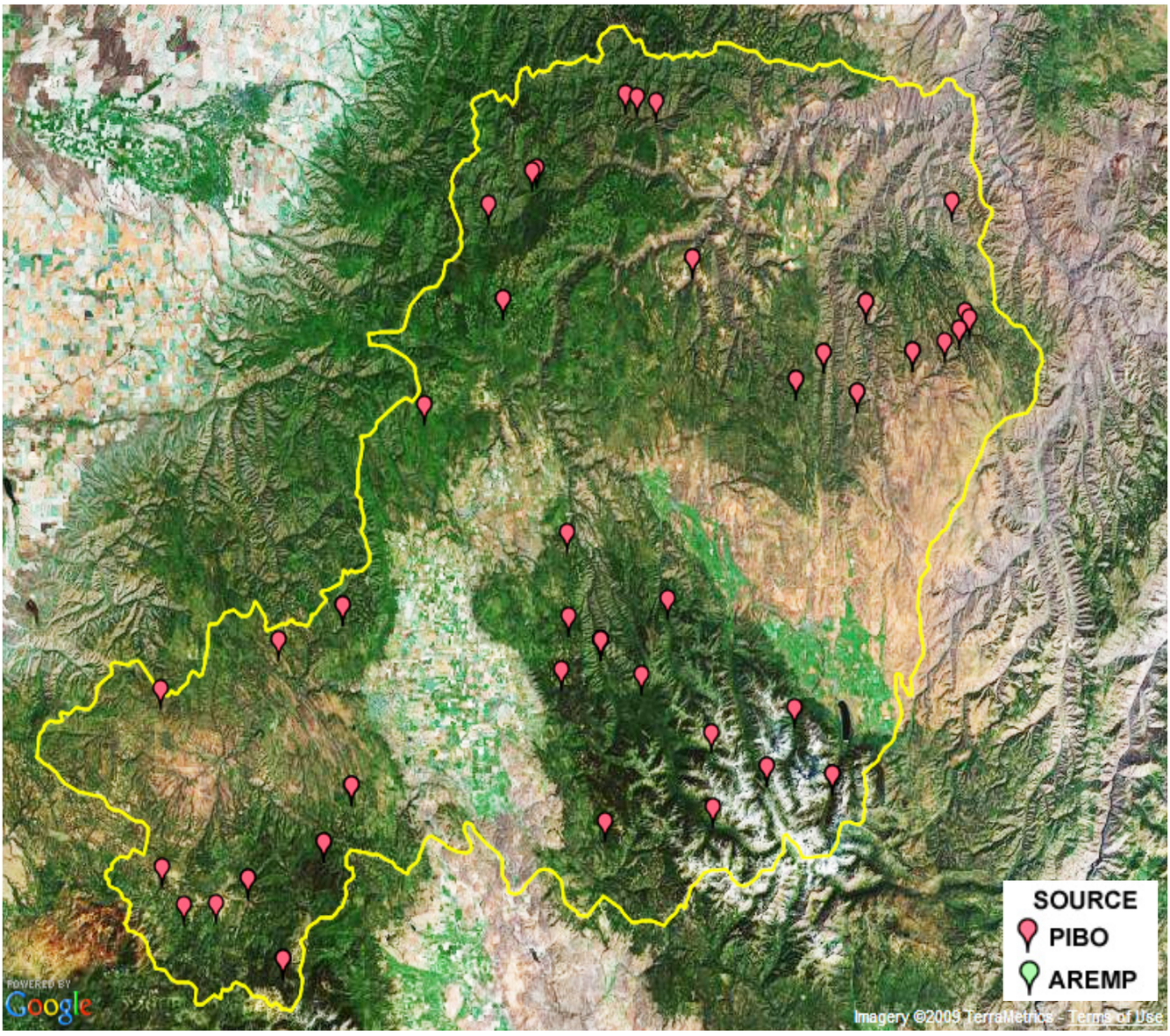
Subbasin: Grande Ronde

Stream Inventory Sites on National Forest and Bureau of Land Management Lands in the Grande Ronde Subbasin



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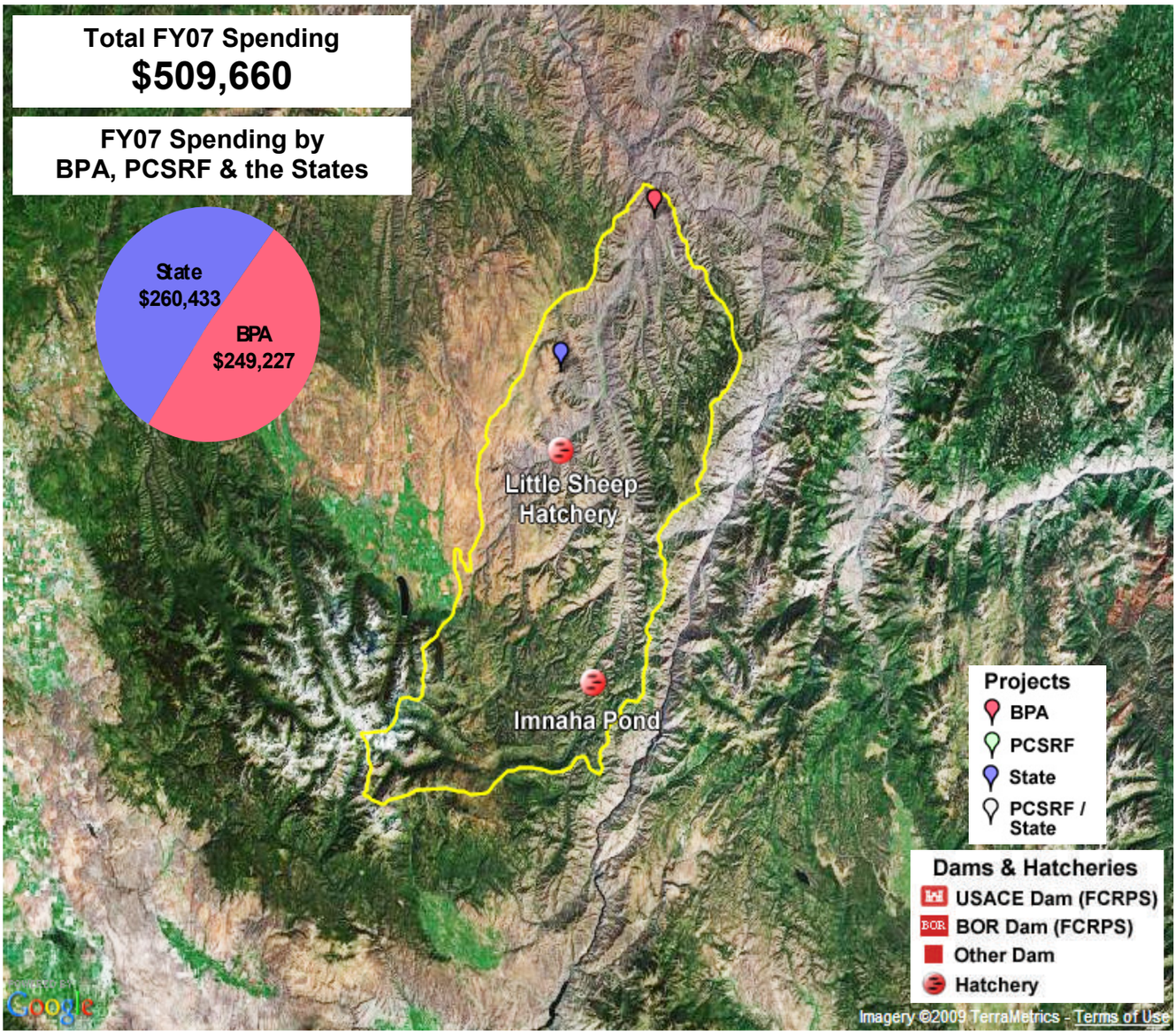
Blue Mountain



In the Imnaha River Subbasin, summer steelhead, spring/summer Chinook salmon, Pacific lamprey and bull trout have been identified as focal species. All but Pacific lamprey are also listed as threatened under the federal Endangered Species Act. Steelhead in the subbasin are part of the Snake River Distinct Population Segment (DPS), Chinook salmon are part of the Snake River Evolutionarily Significant Unit (ESU), and bull trout are within the Imnaha-Snake Rivers Recovery Unit. Recovery criteria for a steelhead DPS or a salmon ESU do not necessarily require that all populations achieve viability (extinction risk = low) prior to de-listing. Recovery plans for Snake River steelhead and salmon have not been completed; however, recovery of both Snake River steelhead and Snake River Chinook salmon will likely require the Imnaha River populations to become viable. Recovery criteria for bull trout vary among recovery units.

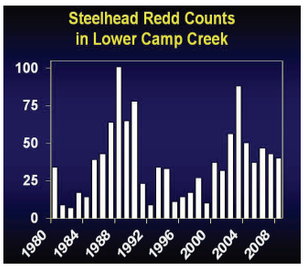
Subbasin: Imnaha

Key Factors Limiting Imnaha River Subbasin Focal Species[11,12]					
Factors for Decline/Limiting Factors/ Threats		**Species/Race, and Life-Stage Most Affected**			
		Spring Chinook	**Fall Chinook**	**Summer Steelhead**	**Bull Trout**
Habitat	Estuary and Nearshore Marine Habitat Degradation	Smolts	Smolts	Smolts	
	Floodplain Connectivity and Function	Juveniles	Juveniles	Fry, summer parr, winter parr	Juveniles, adults
	Channel Structure and Complexity	Juveniles, adults	Juveniles	Fry, summer parr, winter parr	Juveniles, adults
	Riparian Areas and LWD Recruitment	Juveniles	Juveniles	Fry, summer parr, winter parr	Juveniles, adults
	Stream Flow	Adults	Adults	All	
	Water Quality	Eggs, juveniles	Eggs, juveniles	Eggs, juveniles	All
	Fish Passage				Juveniles, adults
Hydro	Mainstem Columbia River Hydropower-related Adverse Effects	Smolts	Smolts	Smolts	
Harvest	Mortality from Targeted Fishery	Adults	Adults		

BPA FY 2008 Habitat Project Accomplishments in the Imnaha Subbasin[8]
There are no BPA-funded habitat improvement efforts in this subbasin.

Blue Mountain

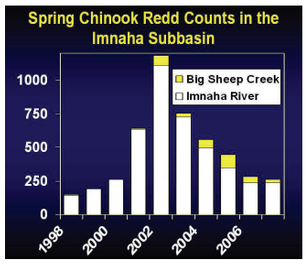
Steelhead



Summer

ESA Listing Status: Threatened
ESU: Snake River
MPG: Imnaha
Population: Imnaha
Draft Recovery Plan Criteria: Unknown.
Subbasin Plan Objective: 2,100 natural adults (4,315 total return)[11]
Status:
40 redds in Camp Creek (2008)[4e]
Wild Juvenile Production: 59,504 (2007)[13]

Chinook



Spring

ESA Listing Status: Threatened
ESU: Snake River
MPG: Grande Ronde-Imnaha
Populations: Imnaha, Big Sheep Creek
Draft Recovery Plan Criteria: Unknown.
Subbasin Plan Objective: 3,800 natural adults (5,740 total return)[11]
Status: 260 redds among two populations (2007)[4f]
Wild Juvenile Production: 106,350 (fall 2006); 172,145 (spring 2007)[13]

Fall

ESA Listing Status: Threatened
ESU: Snake River
Draft Recovery Plan Criteria: Unknown.
Subbasin Plan Objective: 3,000 natural adults[11]
Status: Unknown

Pacific Lamprey

ESA Listing Status: Species of Concern
Biological Objective: None
Status: Unknown

Recovery Status of ESA-Listed Steelhead and Spring Chinook Salmon in the Imnaha River Subbasin[8, 9]

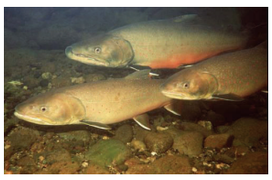
Population	Abundance Threshold	Mean Abundance (1996-2005)	Major Spawning Areas Occupied	Growth Rate (1978-1997)	Recruits/Spawner (1978-1997)	Current Viability
Summer Steelhead						
Imnaha River	1,500	Unknown		Unknown	Unknown	Moderate
Spring/Summer Chinook Salmon						
Imnaha River	1,000	395	1 of 1	1.05	0.80	Low
Big Sheep Creek	500	4	—	Unknown	0.29	Functionally Extirpated

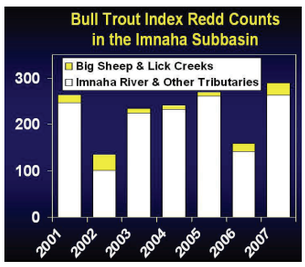
2007 Hatchery Releases and Returns to Hatcheries in the Imnaha Subbasin

Hatchery	Species	Release Goal/Released	Return Goal/Actual Return
Imnaha Pond	Spring Chinook	360,000/432,530	/1,331
Total		360,000/432,530	/1,331

Subbasin: Imnaha

Bull Trout



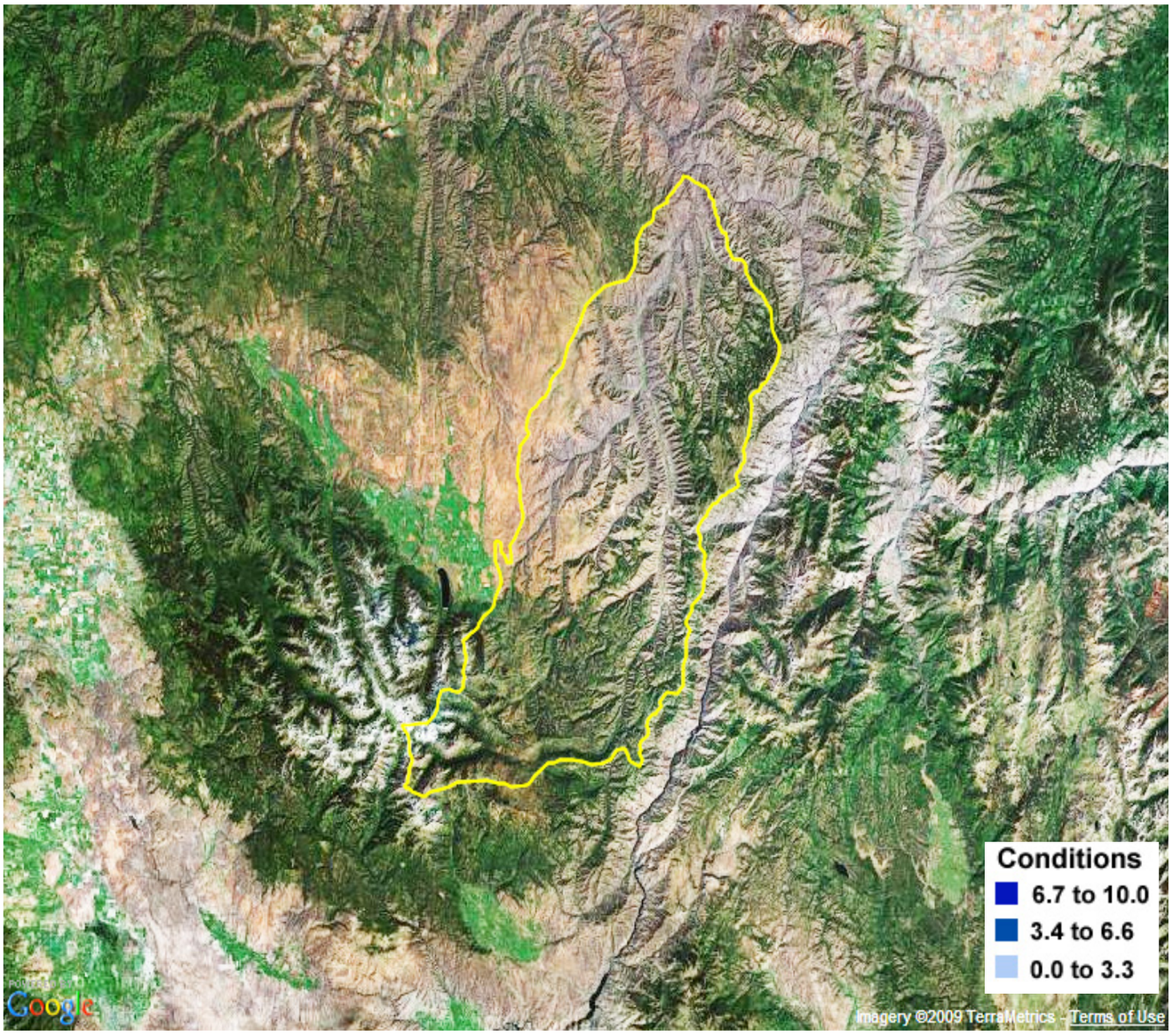


ESA Listing Status: Threatened
Core Areas: Imnaha (Within the Imnaha-Snake Rivers Recovery Unit)
Local Populations: Imnaha River, Big Sheep Creek, Little Sheep Creek, McCully Creek
Draft Recovery Plan Criteria:
5,000 adults (no delineation among local populations)[12]
Status:
262 redds in index areas of the Imnaha River ; 27 in index areas of Big Sheep and Lick Creeks (2007)[14]; overall abundance estimated at approximately 4,000 adults[12]
Abundance, Trend, Threat, and Risk Ranks (Imnaha Core):
Abundance = 250-1,000
Short-term Trend = Stable
Threat = Widespread, low-severity
Risk = Potential
Wild Juvenile Production: Unknown

BPA-Funded Wildlife Projects in the Imnaha Subbasin
There are no wildlife projects in this subbasin

Blue Mountain

Watershed Conditions for National Forest and Bureau of Land Management Lands in the Imnaha Subbasin



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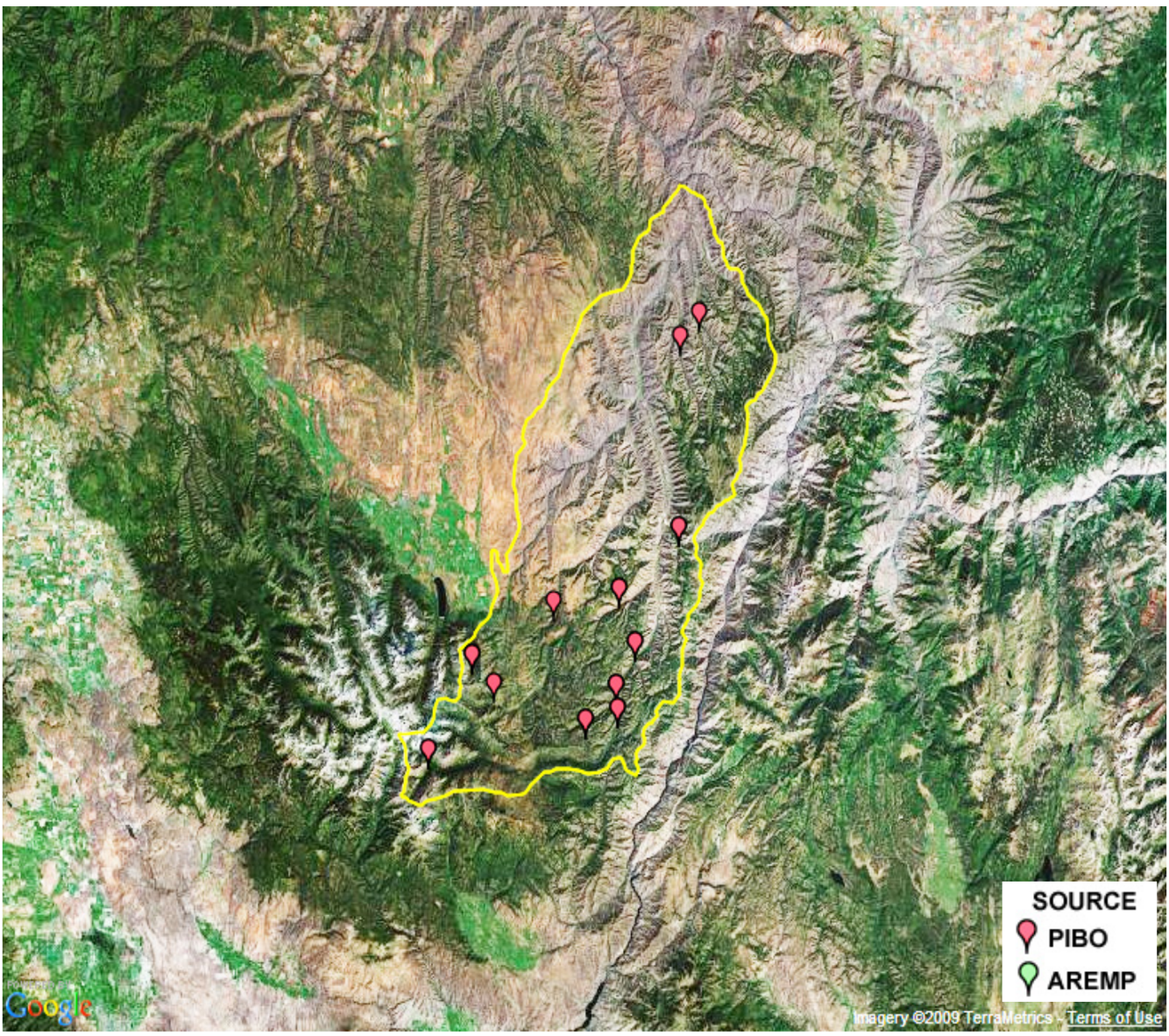
Subbasin: Imnaha

Stream Inventory Sites on National Forest and Bureau of Land Management Lands in the Imnaha Subbasin



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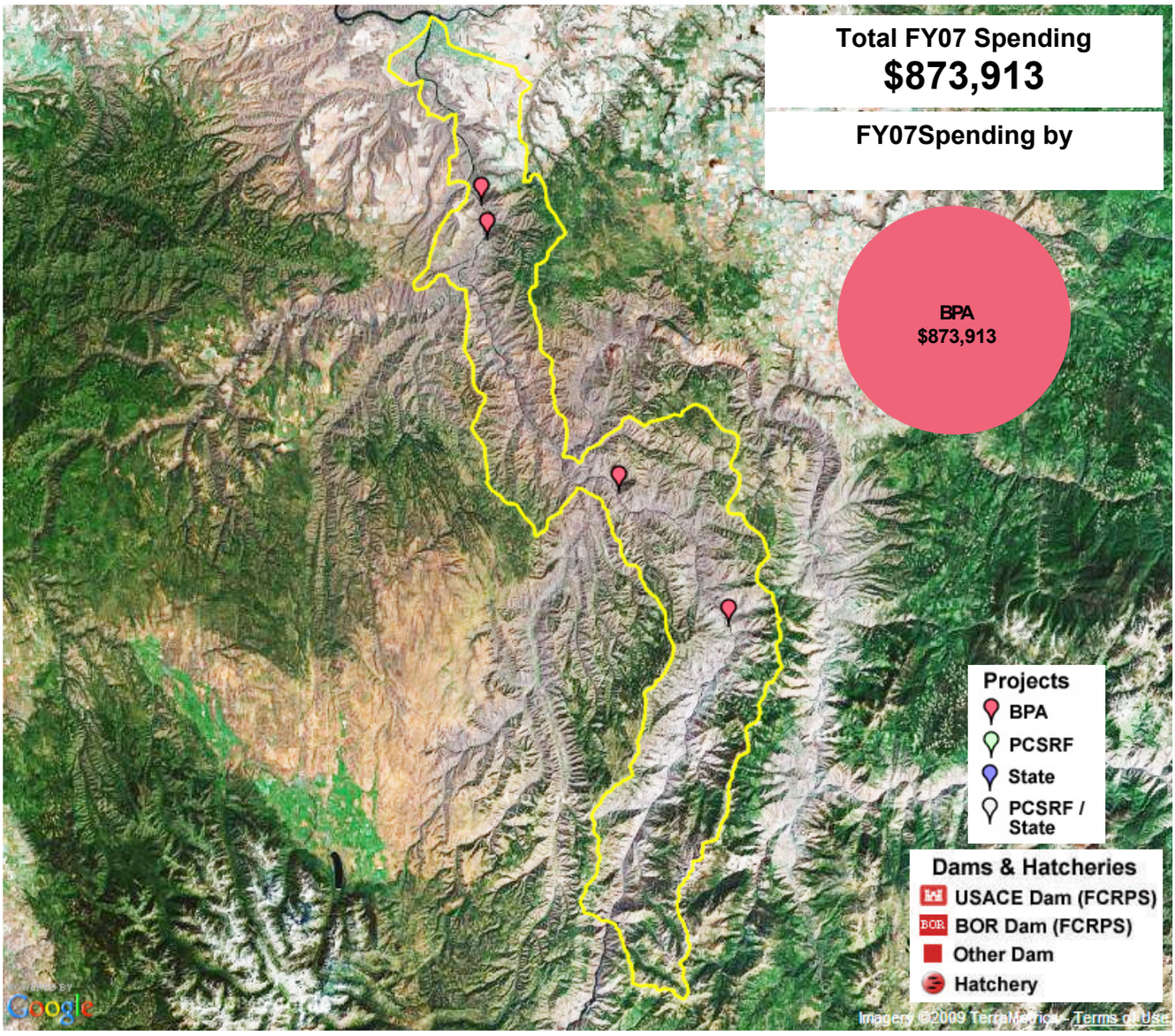
Blue Mountain



In the Snake Hells Canyon Subbasin, summer steelhead, Chinook salmon (both spring/summer and fall runs), sockeye salmon, Pacific lamprey, bull trout, redband trout, and white sturgeon have been identified as focal species. Steelhead, Chinook salmon and bull trout are also listed as threatened under the federal Endangered Species Act. Steelhead in the subbasin are part of the Snake River Distinct Population Segment (DPS), Chinook and sockeye salmon are each part of the Snake River Evolutionarily Significant Unit (ESU) for their species, and bull trout are within the Imnaha-Snake Rivers Recovery Unit. No distinct spawning populations of steelhead, spring/summer Chinook salmon, or sockeye have been identified for the subbasin. Fall Chinook spawners are part of the Lower Snake River Mainstem population, which is the only extant population of Snake River fall Chinook. Recovery criteria have not been fully developed for fall Chinook. Recovery criteria for bull trout vary among recovery units.

Subbasin: Snake Hells Canyon

Key Factors Limiting Snake Hell Canyon Subbasin Focal Species
Factors limiting Snake Hells Canyon Subbasin focal species are described in the Mainstem section.

BPA FY 2008 Habitat Project Accomplishments in the Snake Hells Canyon Subbasin[8]

Habitat Zone	Project-type	Planned Value	FY 2008 Accomplishment (Actual Value)
Instream	Install well, install pipeline, install sprinkler, acquire water instream	5.0 miles	5.0 miles of primary stream reach improved
	Install well, install pipeline, install sprinkler, acquire water instream	7.0 miles	7.0 miles of total stream reach improvement
	Install well, install pipeline, install sprinkler, acquire water instream	2.3 cfs	2.3 cfs of water conserved
	Install well, install pipeline, install sprinkler, acquire water instream	1,810.0 acre-feet	1,180.0 acre-feet of water conserved
	Increase instream habitat complexity	54 structures	54 structures installed

Blue Mountain

Steelhead

Summer

ESA Listing Status: Threatened
ESU: Snake River
Biological Objective:
4% smolt to adult return (SAR) rate to Lower Granite Dam[15]
Status:
157,214 (32,998 wild) adults passed Lower Granite Dam (2007)[16]

Chinook

Spring/Summer

ESA Listing Status: Threatened
ESU: Snake River
Biological Objective:
4-6% SAR rate to Lower Granite Dam[15]
Status: 30,217 adults passed Lower Granite Dam (spring and summer combined—2007)[16]

Fall

ESA Listing Status: Threatened
ESU: Snake River
Biological Objective:
3% SAR rate to Lower Granite Dam[15]
Status: 10,167 adults passed Lower Granite Dam (2007)[16]

Sockeye

ESA Listing Status: Endangered
ESU: Snake River
Biological Objective: None
Status: 52 adults passed Lower Granite Dam (2007)[16]

Pacific Lamprey

ESA Listing Status: Species of Concern
Biological Objective: None
Status: Unknown

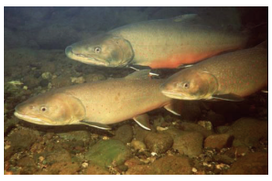
2007 Hatchery Releases and Returns to Hatcheries in the Snake Hells Canyon Subbasin[42, 59]

Hatchery	Species	Release Goal/Released	Return Goal/Actual return
Pittsburg Landing	Fall Chinook	/547,607	
Big Canyon	Fall Chinook	/662,186	
Captain John Rapids	Fall Chinook	/672,932	
Total		1,850,000/1,882,725	

**Fish released from Pittsburg Landing, Big Canyon, and Captain John Rapids acclimation sites originate from broodfish collected at Lyons Ferry Hatchery. In 2007, 1,549 adults and 1,186 jacks (fall Chinook) returned to the Lyons Hatchery. In addition, another 664 adults and 484 jacks were trapped at Lower Granite Dam and hauled to Lyons Ferry Hatchery*

Subbasin: Snake Hells Canyon

Bull Trout



ESA Listing Status: Threatened
Core Areas: Sheep Creek, Granite Creek (Within the Imnaha-Snake Rivers Recovery Unit)
Local Populations: Sheep Creek, Granite Creek
Draft Recovery Plan Criteria: No numeric objective (abundance estimates considered a research need)[12]
Status: Unknown
Abundance, Trend, Threat, and Risk Ranks (Granite Creek Core):
Abundance = Unknown
Short-term Trend = Unknown
Threat = Unthreatened
Risk = Unknown
Abundance, Trend, Threat, and Risk Ranks (Sheep Creek Core):
Abundance = Unknown
Short-term Trend = Unknown
Threat = Unthreatened
Risk = Unknown
Wild Juvenile Production: Unknown

Redband Trout

ESA Listing Status: Species of Concern
Population: Lower Snake River; McGraw Creek[15]
Biological Objective: None
Status: Unknown[17]

White Sturgeon

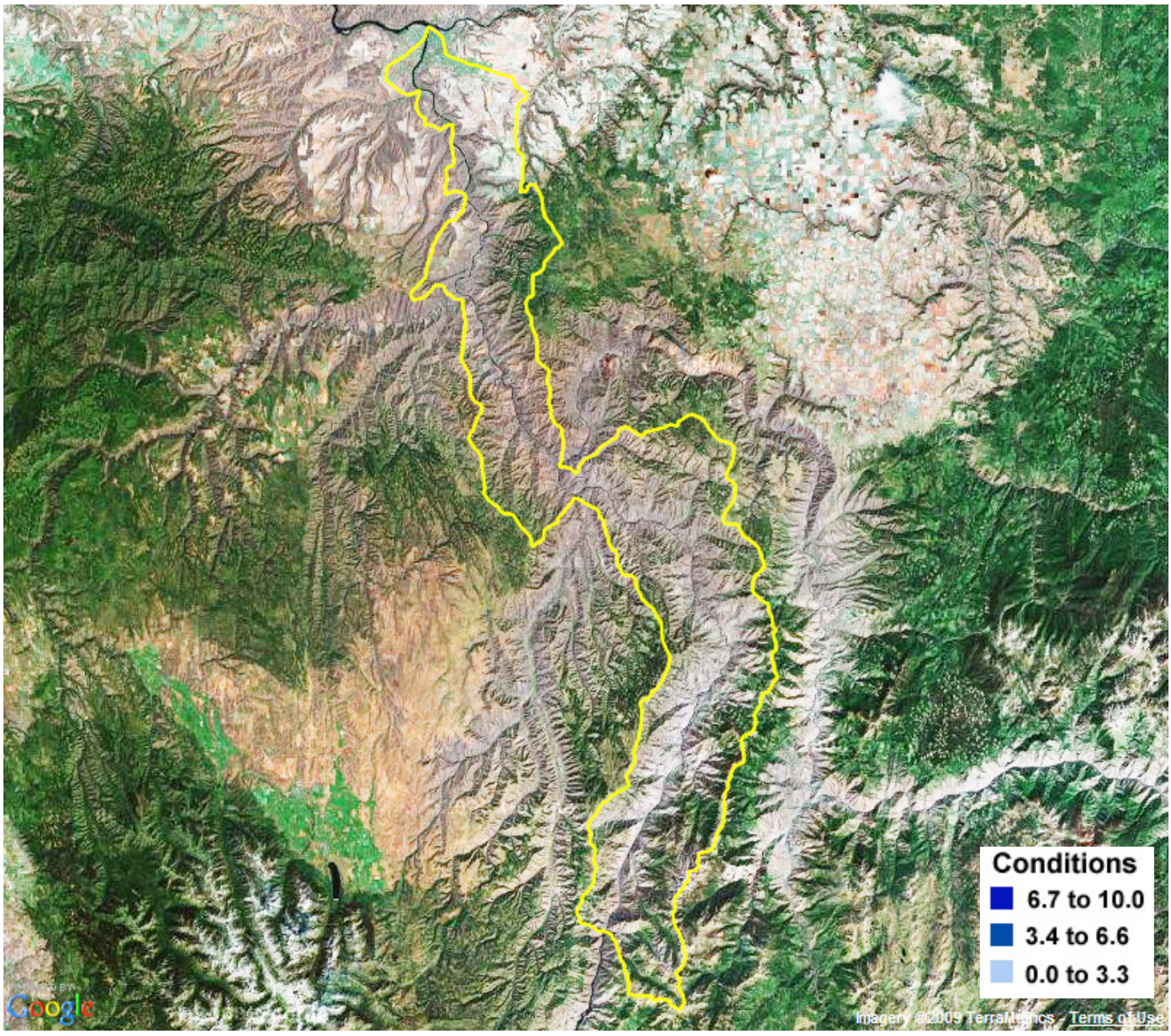
Shedd Aquarium

ESA Listing Status: None
Biological Objectives: 5,840 fish >60 cm; 30% from 92-183 cm, and 10% > 183 cm[15]
Status: No information since 1999

BPA-Funded Wildlife Projects in the Snake Hells Canyon Subbasin
There are no wildlife projects in this subbasin

Blue Mountain

Watershed Conditions for National Forest and Bureau of Land Management Lands in the Snake Hells Canyon Subbasin



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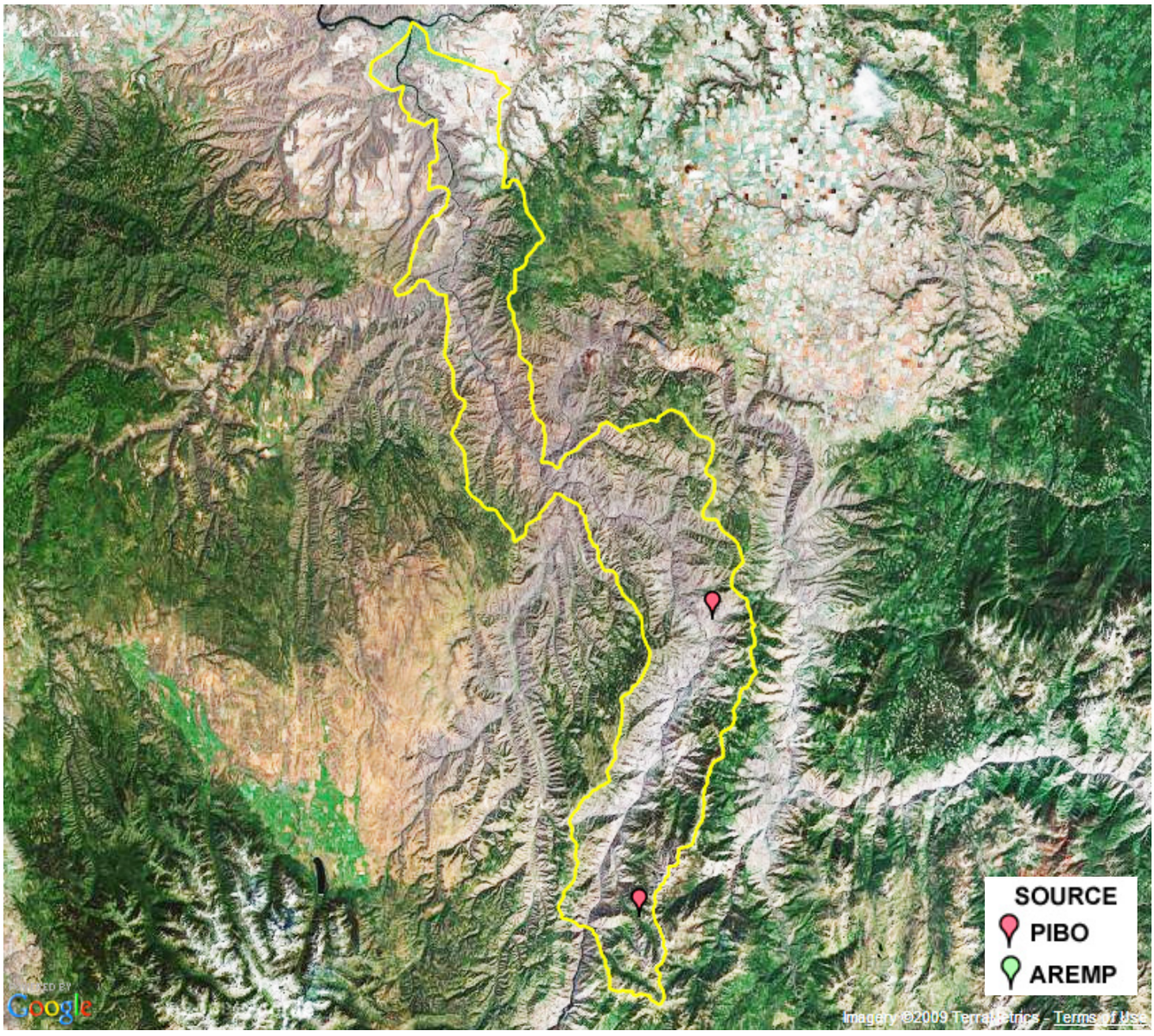
Subbasin: Snake Hells Canyon

Stream Inventory Sites on National Forest and Bureau of Land Management Lands
Snake Hells Canyon Subbasin



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McLeod, B. 2008. Fall Chinook Acclimation Project, Annual Report 2007, Project No. 199801005, 43 electronic pages. (Snake Hells Canyon Hatchery information)