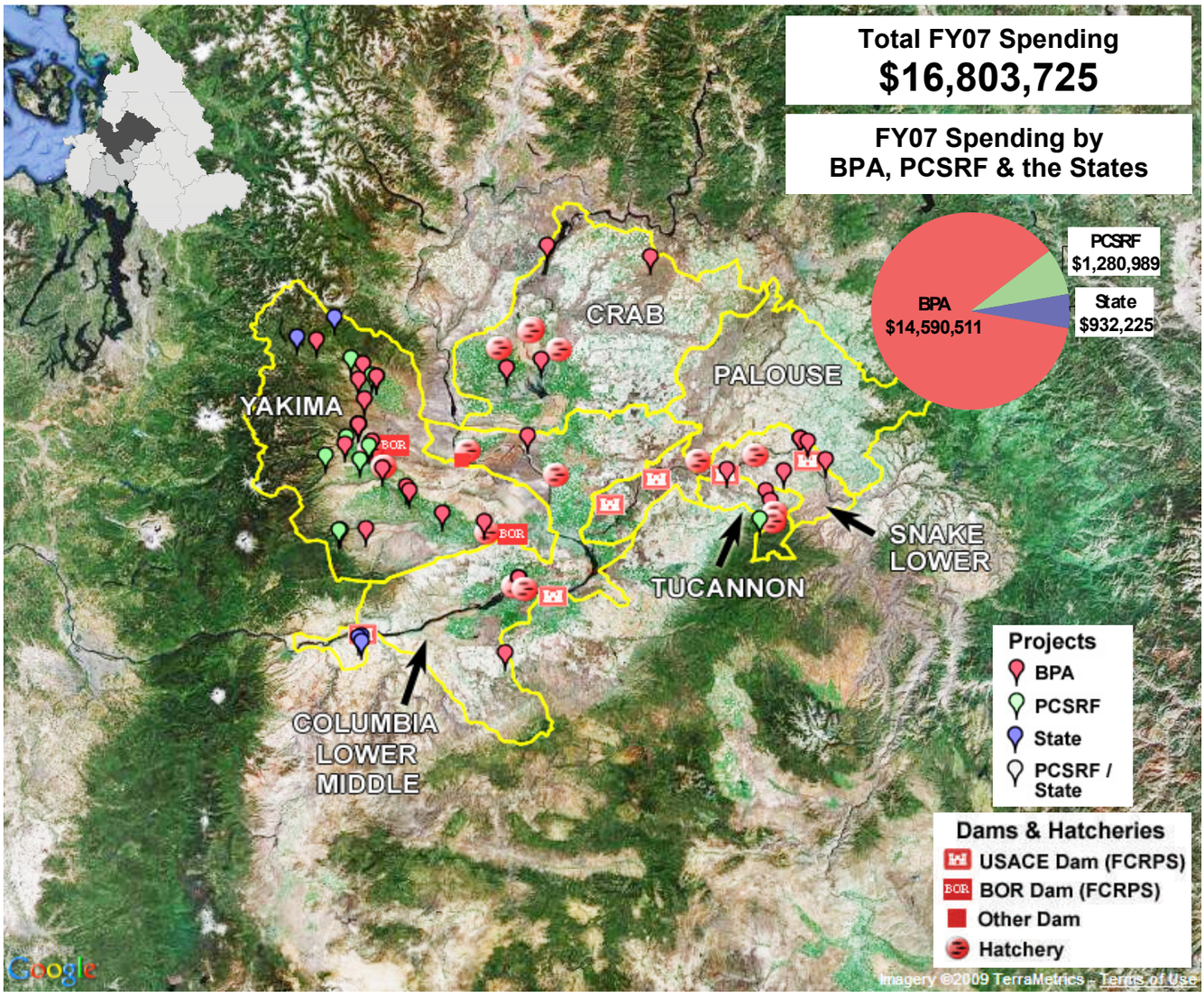
Columbia Plateau—North



The Columbia Plateau-North Province, located in central and eastern Washington, encompasses an area of 22,266 square miles. Subbasins in the Columbia Plateau–North Province include Crab Creek, Columbia Lower Middle, Palouse, Snake Lower, Tucannon, and the Yakima. Spring and fall Chinook, summer steelhead, and bull trout populations throughout the province are listed under the federal Endangered Species Act. Resources in this province have been impacted by extensive anthropogenic activities that have severely degraded riparian and in-stream habitat. In addition, natural hydrographs throughout the province have been severely altered due to hydro-operations, irrigation diversions, and forestry practices. Extensive portions of the principal streams within each of the subbasins are privately owned and managed for agricultural and forestry purposes.

Land Ownership
Federal……....9%
Private…….85%
Tribal……...6%

BPA FY 2008 Habitat Project Accomplishments in the Columbia Plateau-North Province			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Instream	Increase instream habitat complexity	0.25 miles	0.25 stream miles after treatment
	Increase instream habitat complexity	5 structures	5 structures installed
	Acquire water instream	8.1 cfs	3.1cfs water protected
	Acquire water instream	1,193.4 acre-feet	535.9 acre-feet water protected
	Acquire water instream	7.5 miles	7.5 miles of primary stream improved
	Acquire water instream	25 miles	25 miles of total stream reach improved
	Remove/breach dam, install fish passage structure	51.5 miles	51.5 miles accessed
	Install fish screen	19.8 cfs	62.9 cfs diversion flow
	Install fish screen	627 acre-feet	627 acre-feet screened
Riparian-Upland	Install fence	5.91 miles	6.19 miles of fence installed
	Lease land	98,481.6 acres	98,476.5 acres protected
	Practice no till and conservation tillage	1,867 acres	880 acres treated
	Plant/remove vegetation, create, restore, and /or enhance wetland	429 acres	406.2 acres treated
Riparian	Lease land	63.73 miles	73.73 miles protected
Upland	Upland erosion and sedimentation control	10 acres	10 acres treated

Habitat Improvement Project —

Columbia Plateau—North

Focal Species in the Columbia Plateau-North Province[a]

Focal Species	Columbia Lower Middle	Crab Creek	Palouse	Snake Lower	Tucannon	Yakima
Bluegill						
Bull Trout						
Chinook-Spring						
Chinook-Summer						
Chinook-Fall						
Westslope Cutthroat Trout						
Coho						
Kokanee						
Largemouth Bass						
Pacific Lamprey						
Rainbow Trout						
Smallmouth Bass						
Sockeye						Extirpated
Steelhead—Summer						
Walleye						
Yellow Perch						

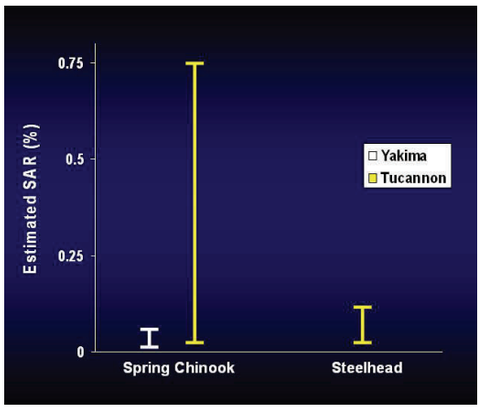
Not a focal species | Not listed | Species of Concern[b] | Threatened[c]

[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.

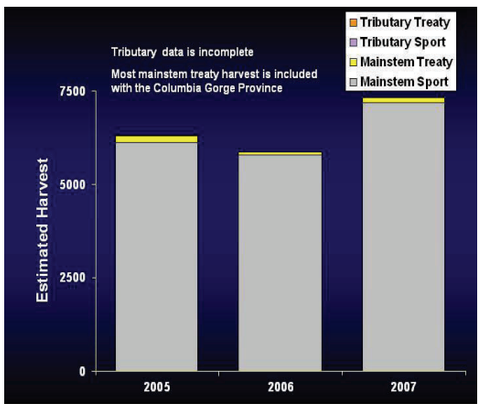
[b] USFWS Status

[c] ESA Status

Ranges in Smolt-to-Adult Return (SAR) for Hatchery Salmon and Steelhead Originating from the Columbia Plateau North (1994 to Present) [1]



Columbia Plateau North Salmon and Steelhead Harvest[2,3]



Species/ Race	Mainstem Harvest—2007		Tributary Harvest— 2007	
	Sport	Treaty	Sport	Treaty
Spring Chinook	775	0	Unknown	30
Summer Chinook	60	127	Unknown	0
Fall Chinook	665	0	Unknown	0
Coho	357	0	Unknown	0
Winter Steelhead	6	0	Unknown	0
Summer Steelhead	5,330	0	Unknown	Unknown

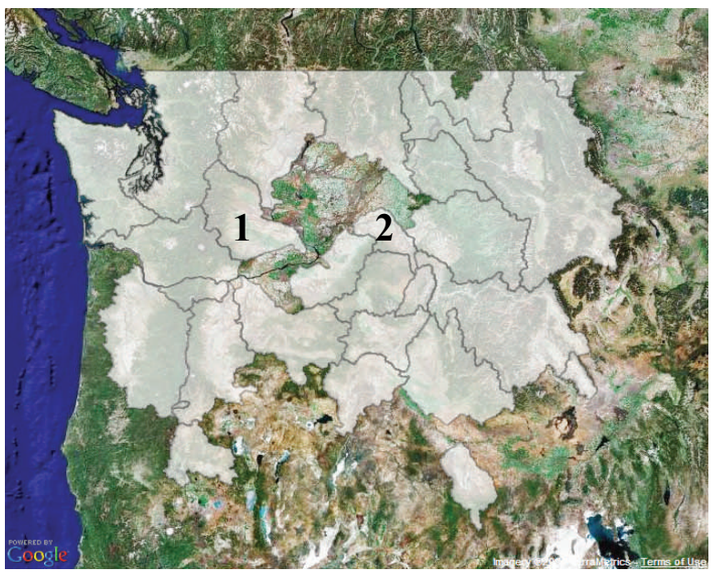
2007 Hatchery Releases and Returns to Hatcheries in the Columbia Plateau-North Province

Species	Release Goal/ Released	Return Goal/Return to Collection Facility
Spring Chinook		/
Fall Chinook		/
Coho		/
Summer Steelhead		/
Winter Steelhead		/
Atlantic Salmon		
Brook Trout		
Kokanee		
Rainbow Trout		
TOTAL		/

Status and Recovery Standards for ESA-Listed Salmon and Steelhead in the Columbia Plateau-North Province[4,5]

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	Lower Snake	2	0	2	1,250	1,250
Snake River Steelhead	Lower Snake	2	0	2	1,500	1,500
Mid Columbia Steelhead	Yakima	4	0	2	3,250	4,500

Bull Trout Status in the Columbia Plateau-North Province[39]



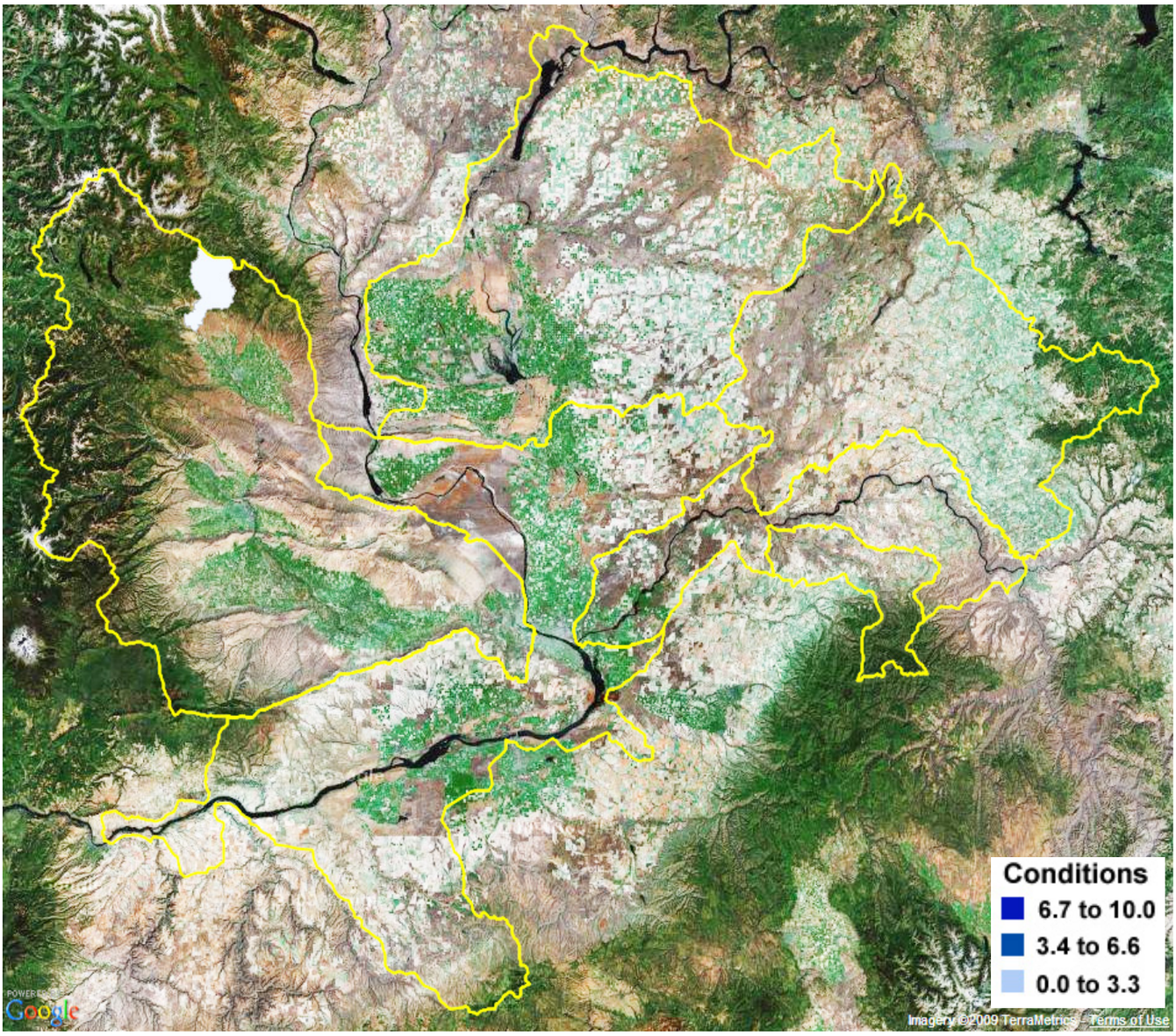
Recovery Unit	Number of cores	Abundance	Trend	Threat	Risk
Middle Columbia	1	250-1,000	Very rapid decline	Substantial, imminent	High
Snake River Washington	2	1,050-2,750	Unknown (1) Stable (1)	Substantial, imminent(1)	High (1) Potential (1)

Wildlife Habitat Losses by Hydroelectric Facility in the Columbia Plateau-North Province[8]

Dam	HU Lost	HU Credited in 2008	HU Credited (Gained)
John Day (OR)	18,280		7,199
John Day (WA)	18,280		7,199
McNary (OR)	4,710		2,749
McNary (WA)	19,834		10,995

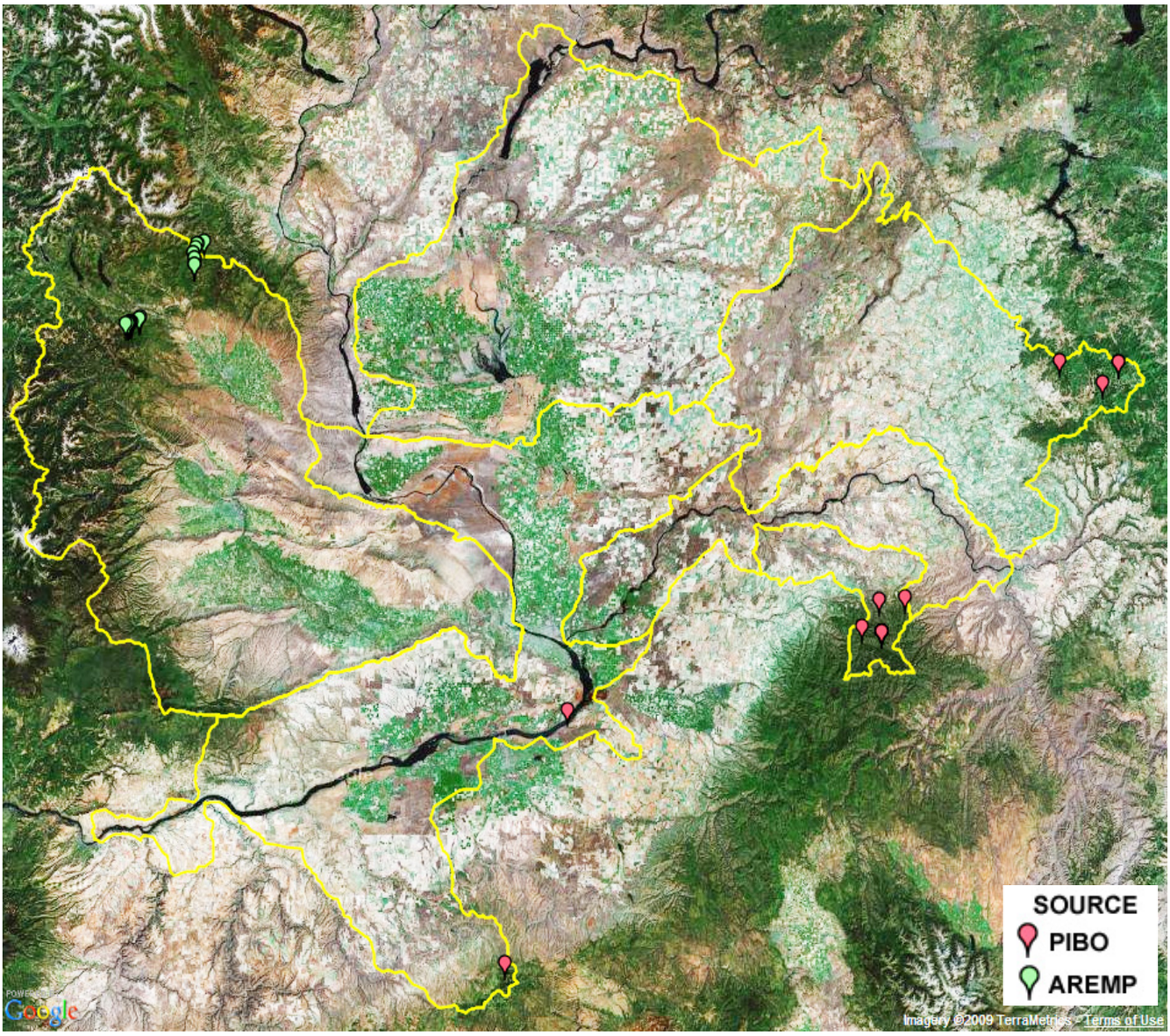
Columbia Plateau—North

Watershed Conditions for National Forest and Bureau of Land Management Lands in the Columbia Plateau-North 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 Columbia Plateau-North Province[4]



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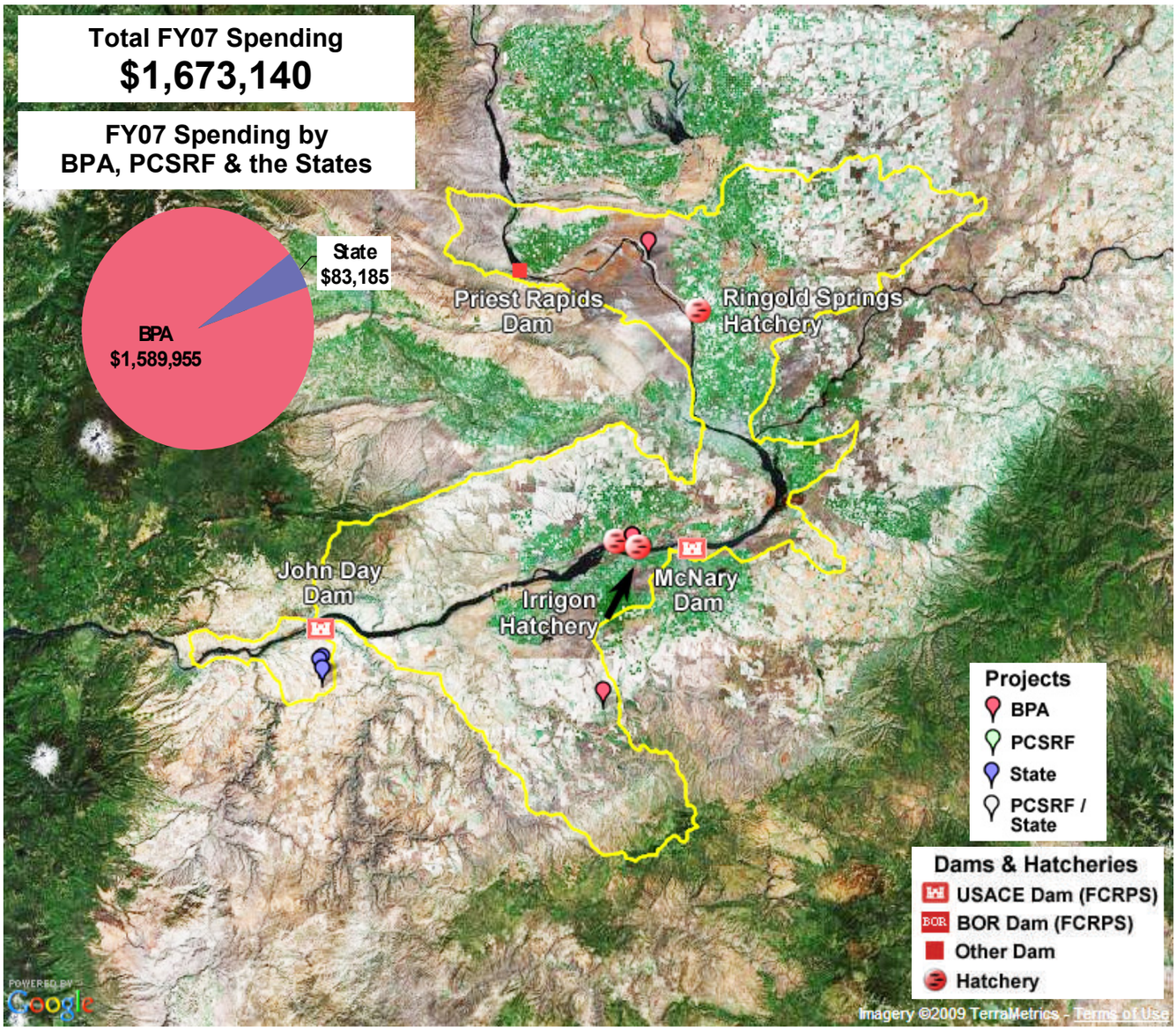
Columbia Plateau—North



In the Columbia Lower Middle Subbasin, summer steelhead, fall Chinook salmon, coho, and white sturgeon have been identified as focal species. Because this is a mainstem subbasin, multiple ESUs and DPSs are represented as fish pass through this subbasin. Threatened and Endangered populations of steelhead and Chinook salmon pass the dams in this subbasin on an annual basis.

Subbasin: Columbia Lower Middle

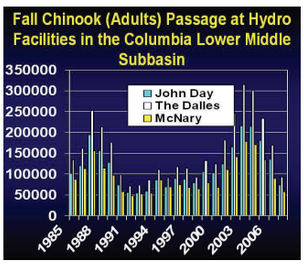
Key Factors Limiting Columbia Lower Middle Subbasin Focal Species
Factors limiting Columbia Lower Middle Subbasin focal species are described in the Mainstem section.

BPA FY 2008 Habitat Project Accomplishments in the Columbia Lower Middle Subbasin[8]

Habitat Zone	Project-type	Planned Value	FY 2008 Accomplishment (Actual Value)
Riparian-Upland	Plant/remove vegetation	110 acres	170 acres treated

Columbia Plateau—North

Chinook

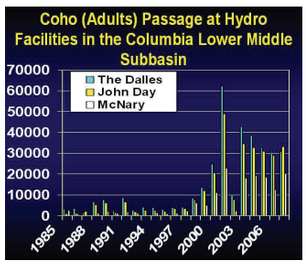


Fall

ESA Listing Status: Threatened and Endangered
ESU: Multiple upriver ESUs
MPG:Multiple upriver MPGs
Populations:Multiple upriver populations
Recovery Plan Criteria: Not applicable
Status: Mostly a migration corridor and holding area (limited spawning in the Wanapum and McNary dam tailraces)

Adult Counts (2007)
The Dalles Dam— 93,368
John Day Dam— 73,228
McNary Dam— 57,172

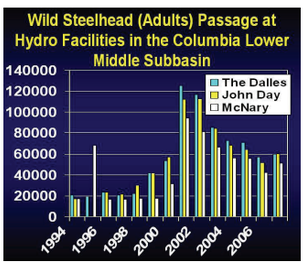
Coho



ESA Listing Status: None
ESU: None
MPG: None
Populations: Multiple upriver populations
Recovery Plan Criteria: Not applicable
Status: Mostly a migration corridor and holding area

(Adult Counts (2007)
The Dalles Dam— 30,664
John Day Dam— 33,019
McNary Dam— 20,217

Steelhead



Summer

ESA Listing Status: Threatened and Endangered
DPS: Multiple upriver ESUs
MPG: Multiple upriver ESUs
Populations: Multiple upriver populations
Recovery Plan Criteria: Not applicable
Status: Migration corridor and holding area

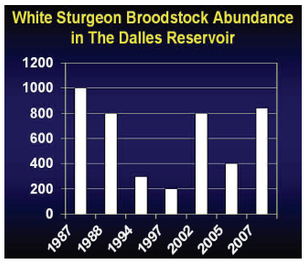
Wild Adult Counts (2007)
The Dalles Dam— 60,034
John Day Dam— 60,142
McNary Dam— 50,958

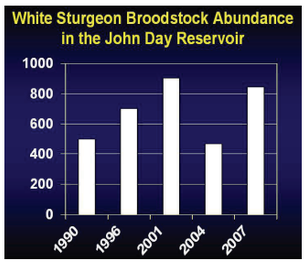
2007 Hatchery Releases and Returns to Hatcheries in the Subbasin

Hatchery/Acclimation Pond	Species	Release Goal/Released	Return Goal/Actual Return
Ringold Springs	Fall Chinook	/3,402,530	/118
	Summer Steelhead	/258,200	/424
Irrigon	Rainbow Trout	96,050/160,147	Not applicable
	Summer Steelhead	100,000/152,018 stocked in numerous acclimation ponds	11,200 back to Snake River basin/
Umatilla	Fall Chinook	300,000/306,695	12,000/
	Spring Chinook	810,000/666,223 stocked in numerous acclimation ponds	8,000/
	Summer Steelhead	150,000/137,753 stocked in numerous acclimation ponds	5,500/
	Coho	/1,016,797 stocked in numerous acclimation ponds	6,000/
Total			

Subbasin: Columbia Lower Middle

White Sturgeon





ESA Listing Status: None
Biological Objective: None
Status:

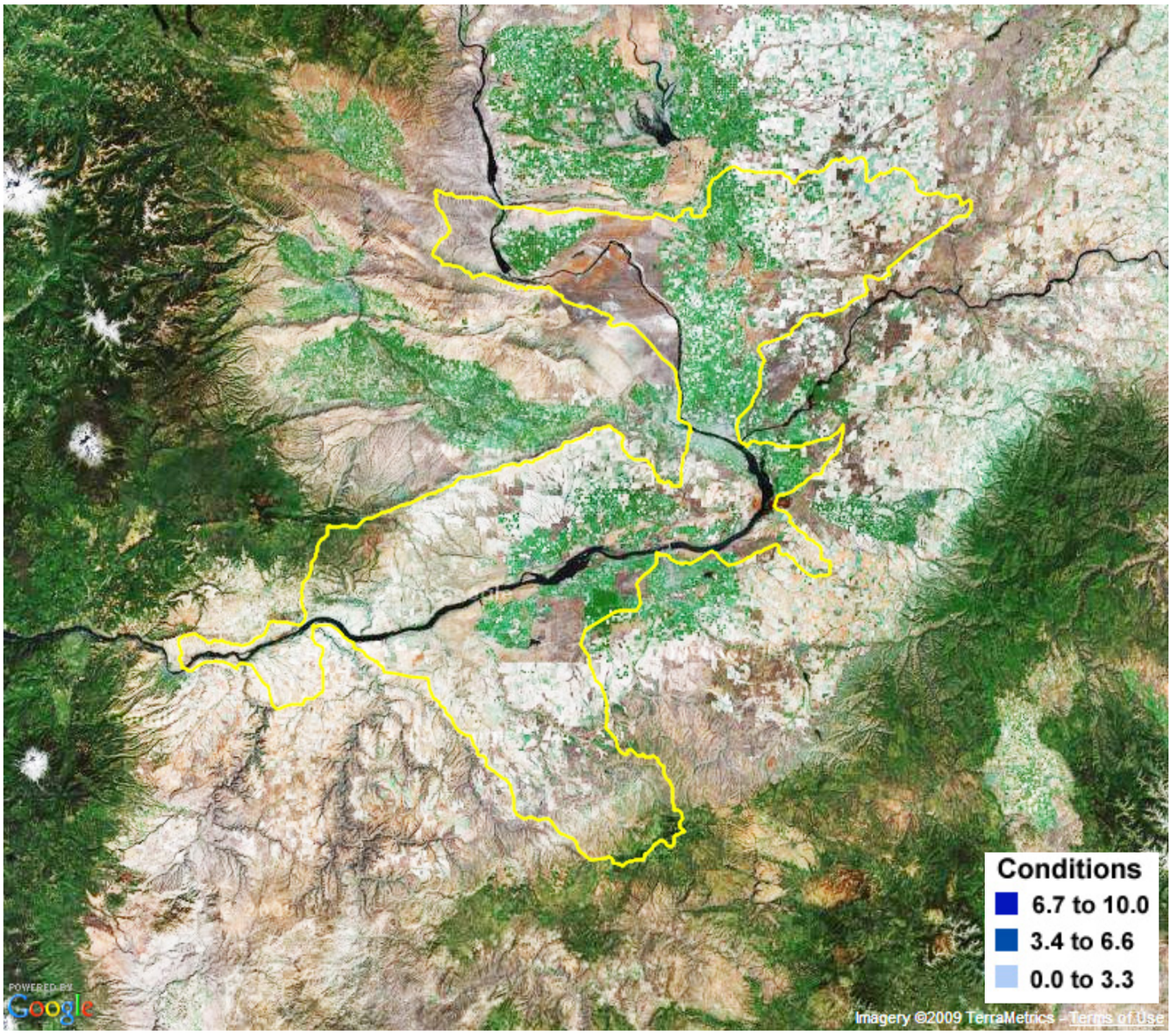
Broodstock Abundance

The Dalles Reservoir— 831(2008)
John Day Reservoir— 841 (2007)

BPA-Funded Wildlife Projects in the Columbia Lower Middle Subbasin				
Project	**Sponsor**	**Acres**	**HU**	**Habitat Type**
Sagebrush Flat Wildlife Mitigation	Washington Department of Fish and Wildlife	10,755	11,910	NA

Columbia Plateau—North

Watershed Conditions for National Forest and Bureau of Land Management Lands in the Columbia Lower Middle Subbasin



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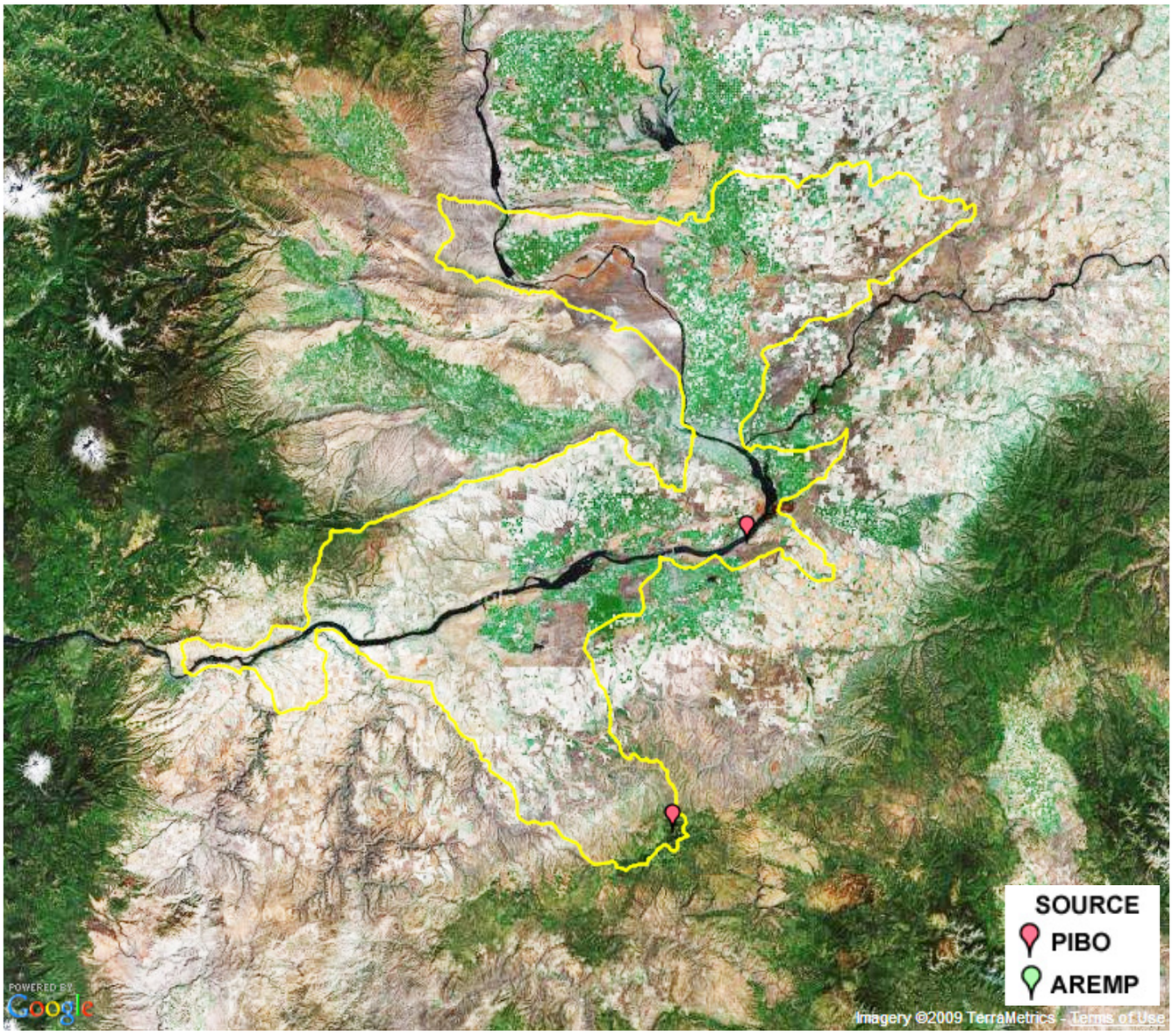
Subbasin: Columbia Lower Middle

Stream Inventory Sites on National Forest and Bureau of Land Management Lands in the Columbia Lower Middle Subbasin



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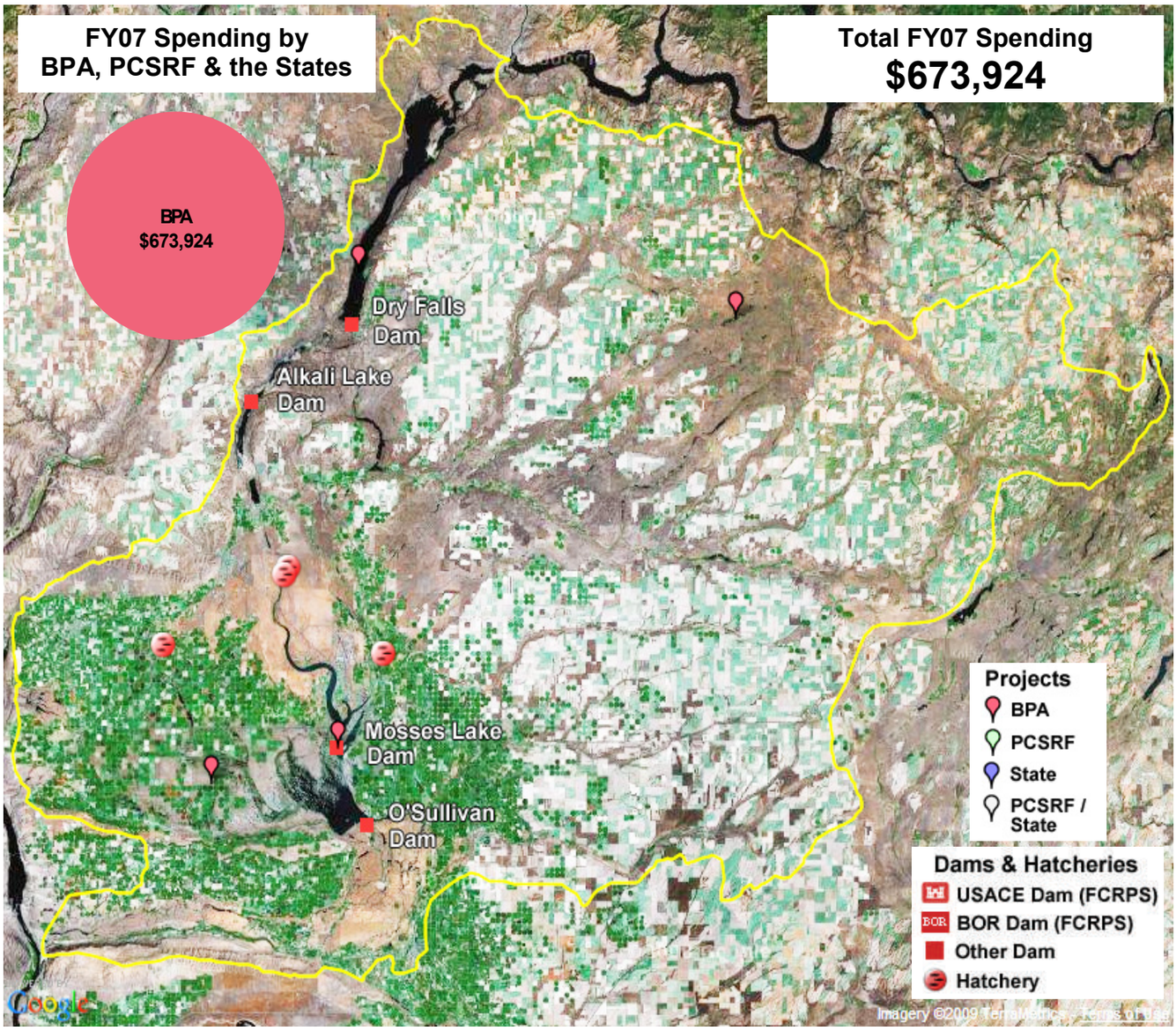
Columbia Plateau—North



In the Crab Creek Subbasin, summer steelhead, summer/fall Chinook salmon, kokanee, rainbow trout, large-mouth bass, smallmouth bass, bluegill, yellow perch, and walleye been identified as focal species. Steelhead are listed as threatened under the federal Endangered Species Act and are part of the Upper Columbia River Distinct Population Segment (DPS). 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. The recovery plan for Crab Creek does not address recovery criteria and that recovery of the Crab Creek population is not needed for recovery of the Upper Columbia Steelhead DPS.

Subbasin: Crab

Key Factors Limiting Crab Focal Species[1,2,5]										
Factors for Decline/Limiting Factors/Threats		**Species/Race, and Life-Stage Most Affected**								
		Summer/Fall Chinook	**Summer Steelhead**	**Kokanee**	**Rainbow Trout**	**Largemouth Bass**	**Smallmouth Bass**	**Bluegill**	**Yellow Perch**	**Walleye**
Habitat	Channel Structure and Complexity									
	Riparian Areas and LWD Recruit-ment									
	Stream Flow									
	Water Quality									
	Fish Passage									
Hydro	Mainstem Columbia River Hydro-power-related Adverse Effects									
Hatchery	Hatchery Fish Interbreeding With Wild Fish									
Harvest	Mortality from Targeted Fishery									
Introduced Species	Competition with Intro-duced Species									

BPA FY 2008 Habitat Project Accomplishments in the Crab Subbasin[8]			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Riparian-Upland	Plant/remove vegetation, create, restore, and/or enhance wetland	319 acres	236.2 acres treated
	Lease land	1,280 acres	1,280 acres protected

Columbia Plateau—North

Chinook

Summer/Fall

ESA Listing Status: None
ESU: Upper Columbia
MPG: Not applicable
Population: Crab
Biological Objective: None
Status: Unknown
Wild Juvenile Production: Unknown

Steelhead

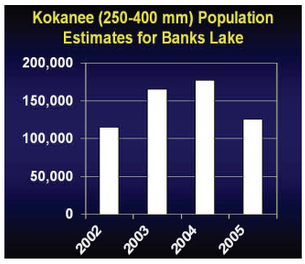
Summer

ESA Listing Status: Threatened
ESU: Upper Columbia
MPG: Wenatchee-Methow
Population: Crab
Draft Recovery Plan Criteria:
Status: Unknown
Wild Juvenile Production: Unknown

2007 Hatchery Releases and Returns to Hatcheries in the Crab Subbasin
There are no hatcheries in this subbasin.

Subbasin: Crab

Kokanee



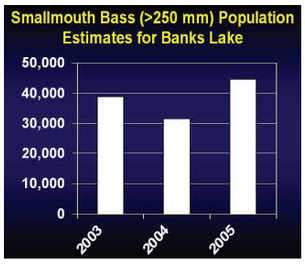
ESA Listing Status: None
Population: Banks Lake and Billy Clapp Reservoir
Biological Objectives: None
Status:
Banks Lake
124,810 fish 250-400mm (2005)[2]
relative abundance = 7.1% (gillnets) and 1.2% (boat electrofishing) (2005)[2]

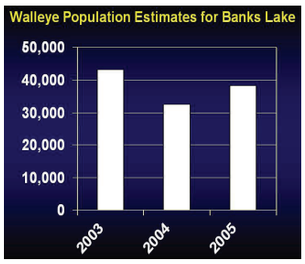
Bill Clapp
relative abundance = 35.1% (gillnets) and 0.0% (boat electrofishing) (2005)[2]

Rainbow Trout

ESA Listing Status: Species of concern
Biological Objectives: None
Status: Relative Abundance
Banks Lake
0.9% (gillnets) and 1.3% (boat electrofishing) (2005)[2]
Bill Clapp
1.2% (gillnets) and 3.8% (boat electrofishing) (2005)[2]

Largemouth Bass
Smallmouth Bass
Bluegill
Yellow Perch
Walleye





ESA Listing Status: None
Population: Banks Lake and Potholes Reservoir
Biological Objectives: None
Status:
Banks Lake Population Estimate
Smallmouth bass—44,487 fish >250mm (2005)[2]
Walleye—38,128 fish (2005)[2]

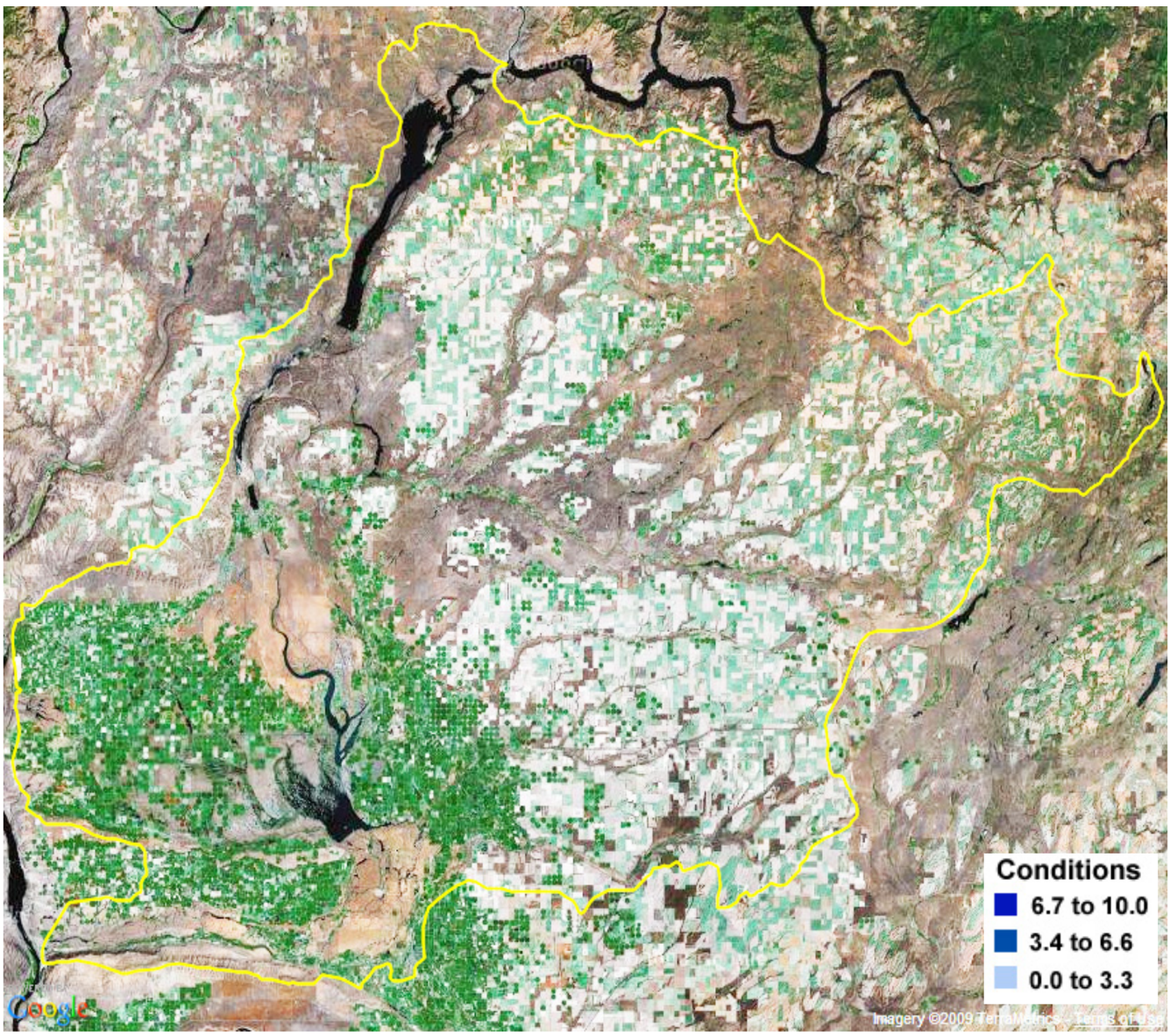
Banks Lake Relative Abundance
Bluegill — 0.0% (gillnets), 0.2% (boat electrofishing) (2005)[2]
Kokanee — 7.1% (gillnets), 1.2% (boat electrofishing) (2005)[2]
Largemouth Bass—1.8% (gillnets), 9.5%(boat electrofishing) (2005)[2]
Smallmouth Bass—7.9% (gillnets), 29.7% (boat electrofishing) (2005)[2]
Walleye— 10.7% (gillnets), 2.5%(boat electrofishing) (2005)[2]
Yellow Perch—45.7% (gillnets),
31.7% (boat electrofishing) (2005)[2]

BPA-Funded Wildlife Projects in Crab Subbasin

Project	Sponsor	Acres	HU	Habitat Type
Swanson Lakes Wildlife Area	Washington Department of Fish and Wildlife	20,065	22,172	NA
Desert Wildlife Area Operations and Maintenance	Washington Department of Fish and Wildlife	1,000	1,193	NA

Columbia Plateau—North

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



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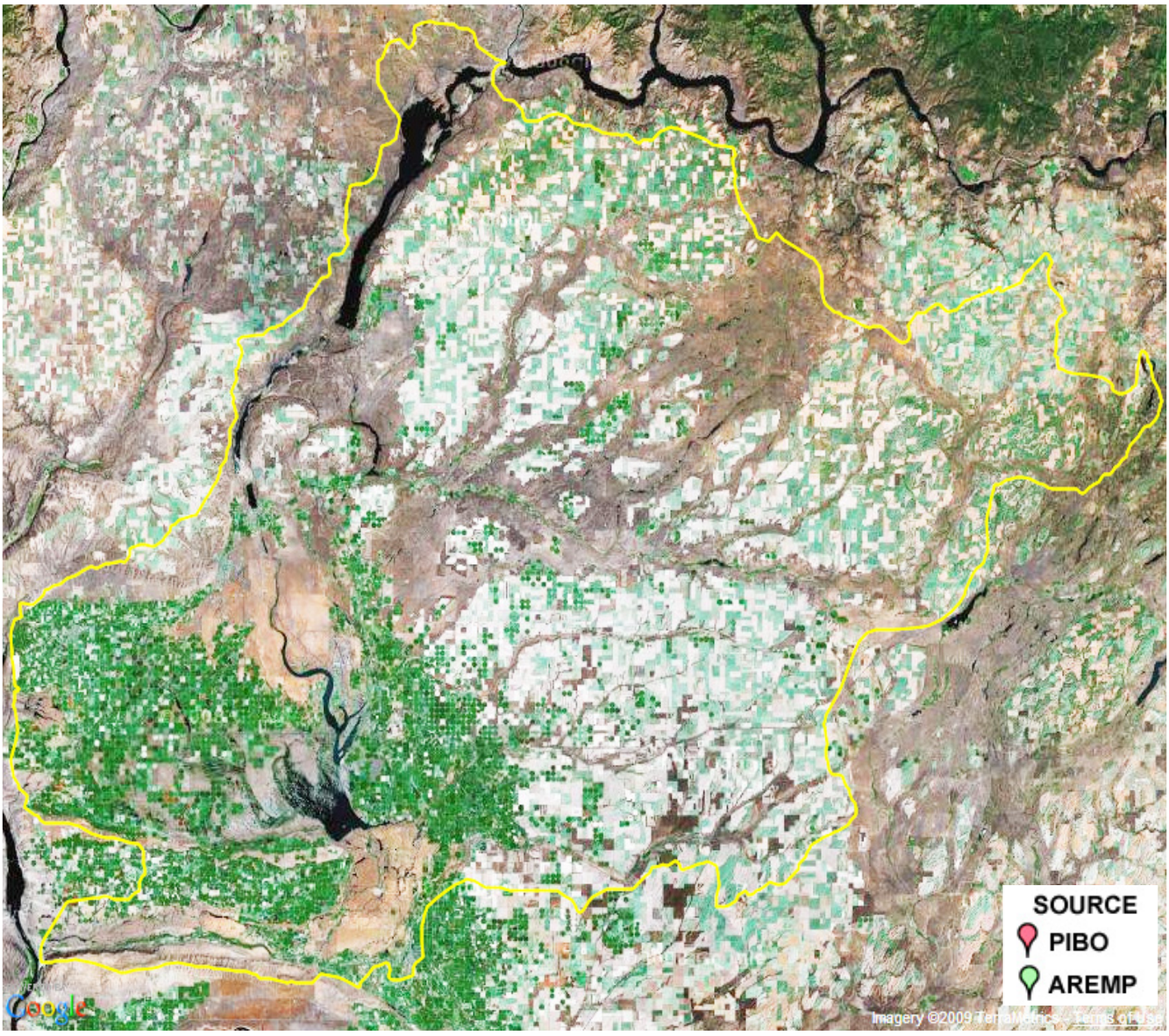
Subbasin: Crab

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



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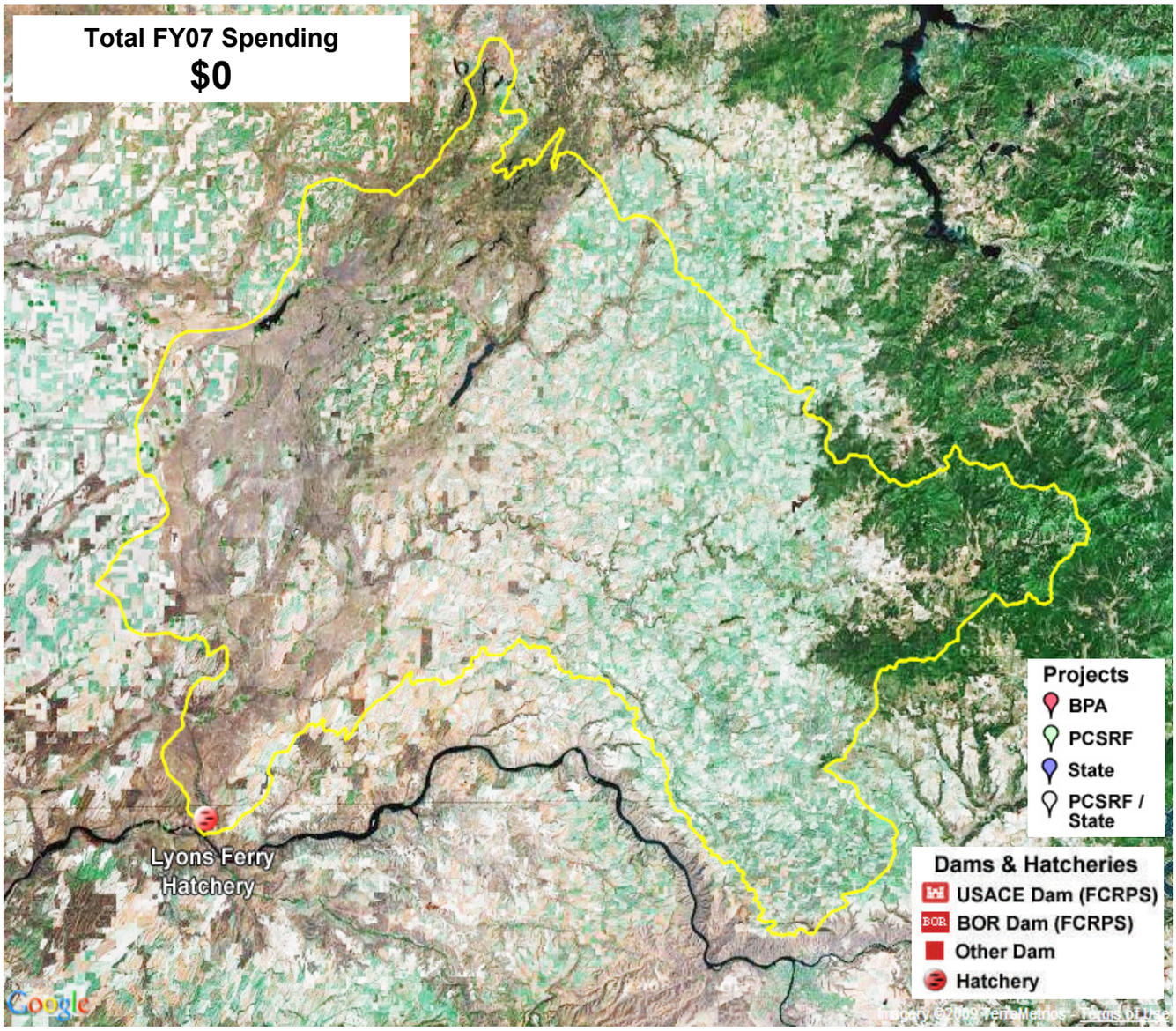
Columbia Plateau—North



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

Key Factors Limiting Palouse Focal Species
No Focal Species have been identified for this subbasin.

2007 Hatchery Releases and Returns to Hatcheries in the Palouse Subbasin
There are no hatcheries in this subbasin.

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

Subbasin: Palouse

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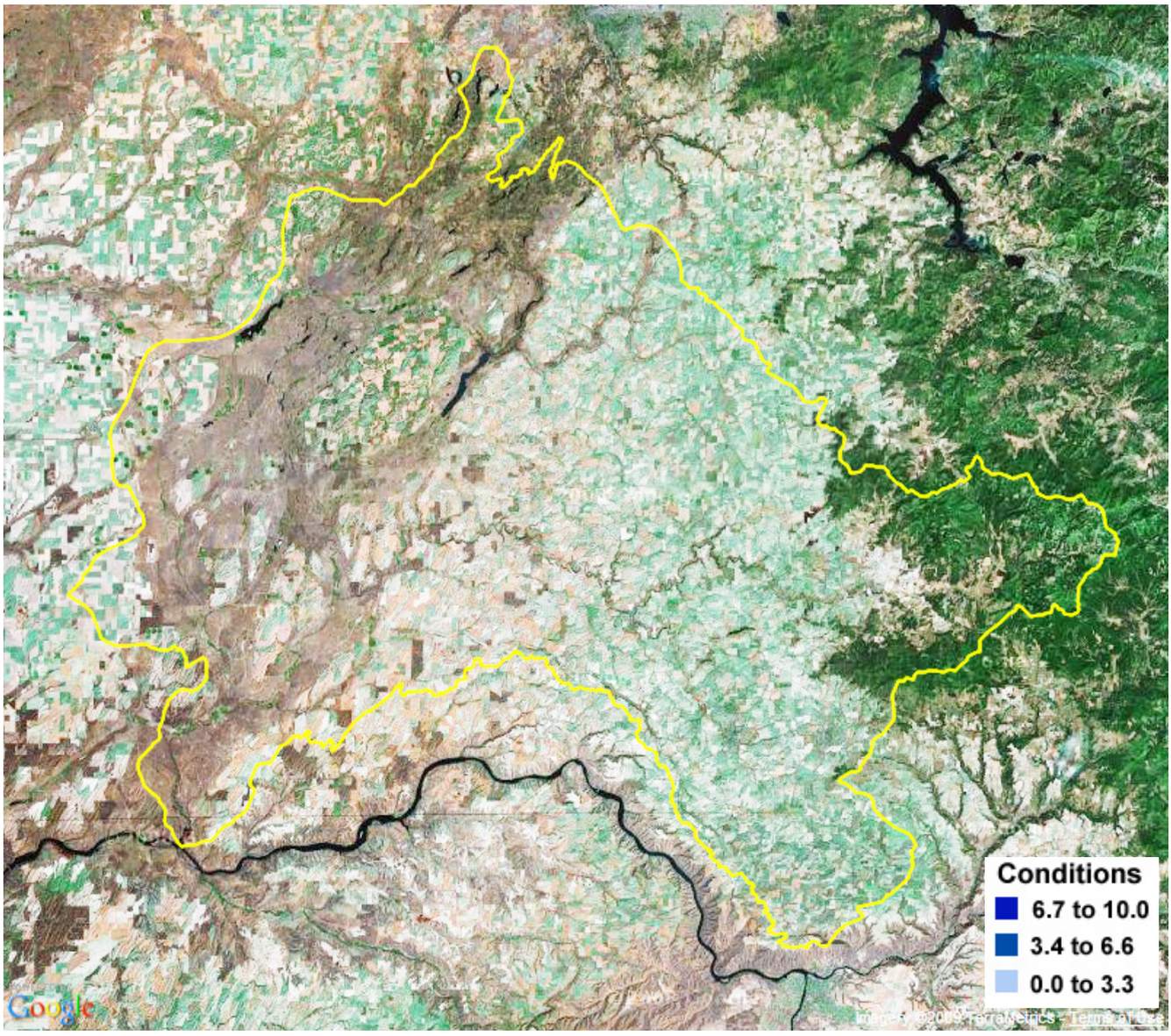
Columbia Plateau—North

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



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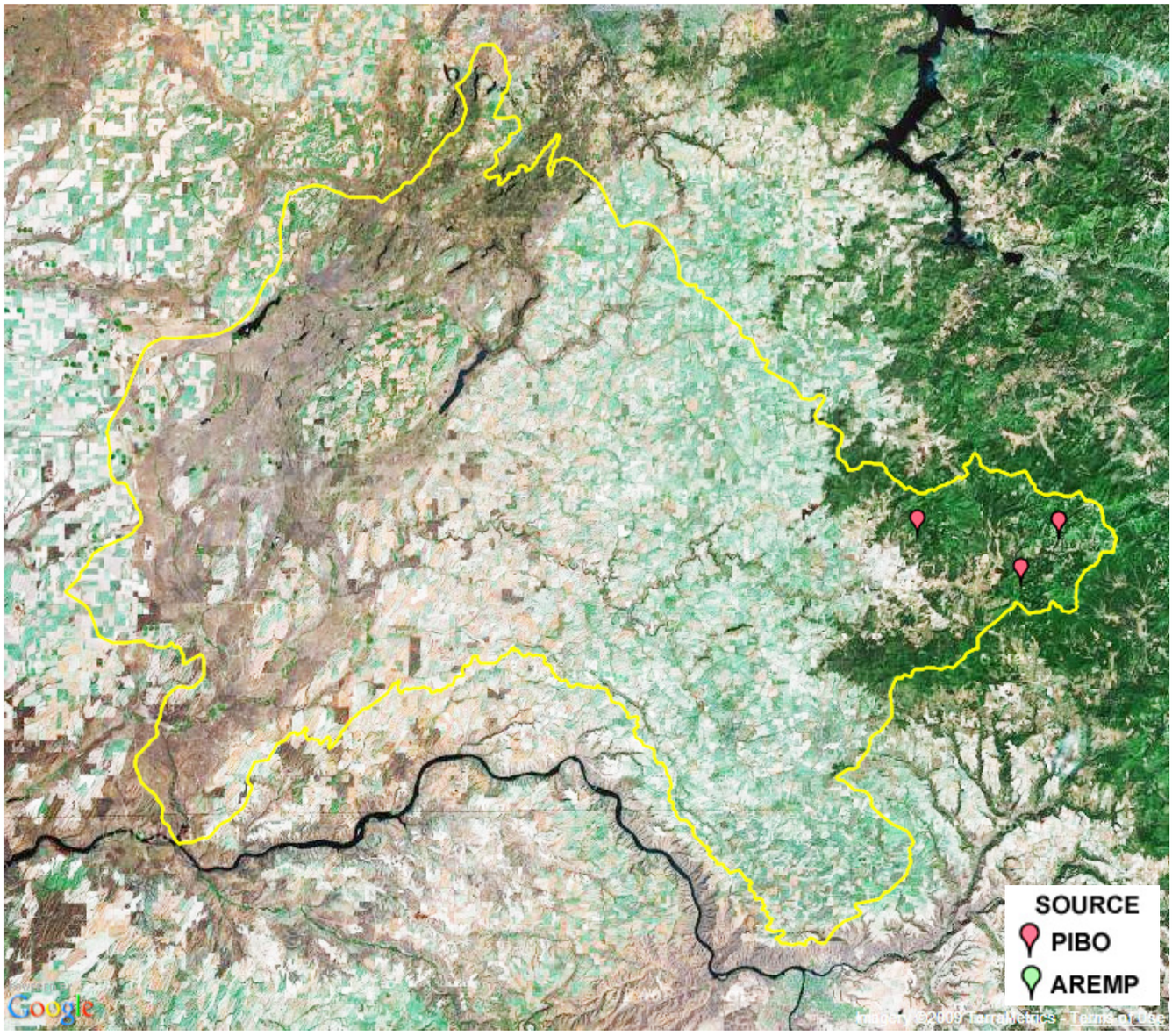
Subbasin: Palouse

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



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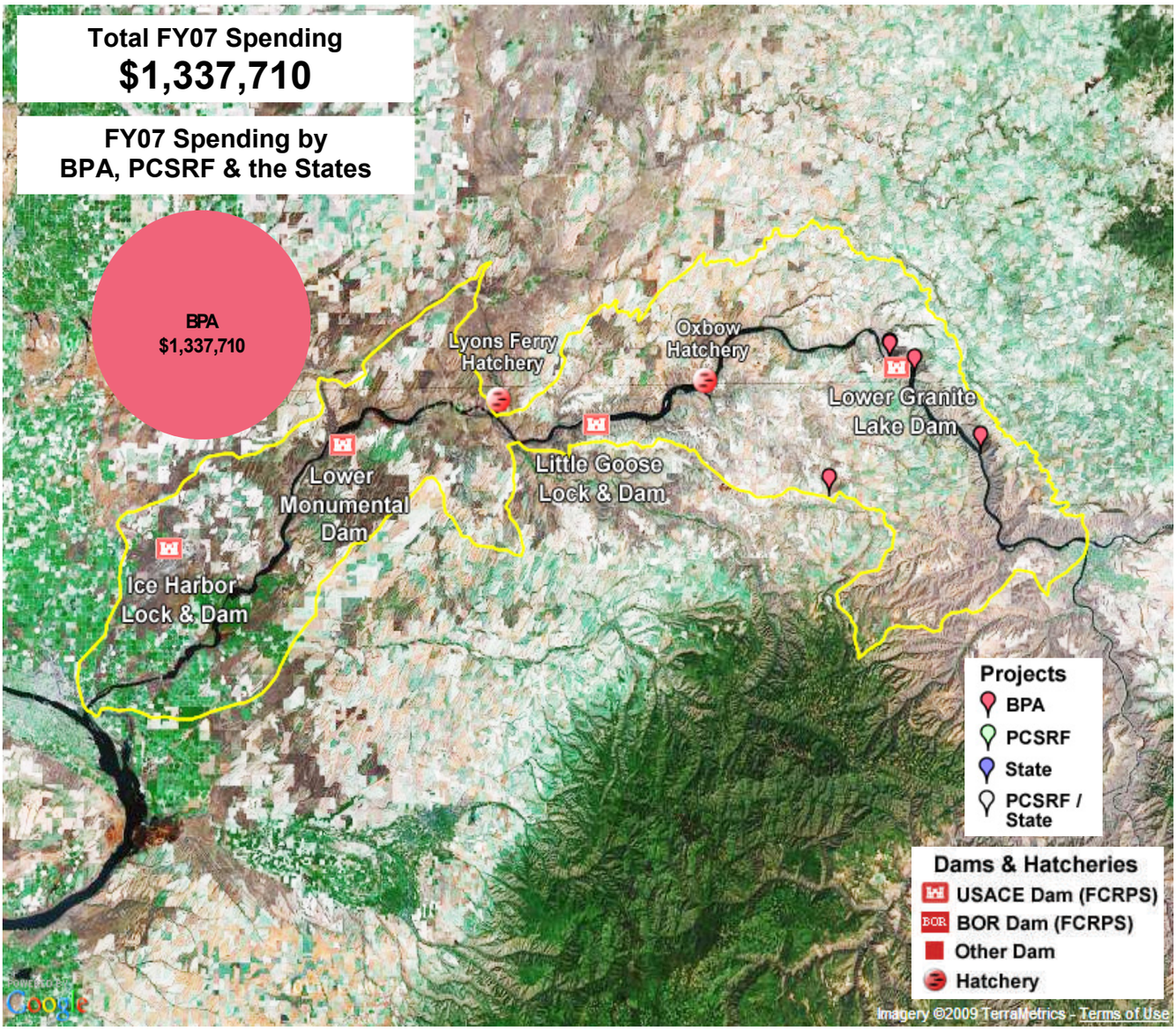
Columbia Plateau—North



In the Snake Lower Subbasin, summer steelhead been identified as a focal species. Steelhead are listed as threatened under the federal Endangered Species Act and are part of the Snake River Distinct Population Segment (DPS). As a mainstem subbasin, this subbasin serves a migration for several steelhead DPSs.

Subbasin: Snake Lower

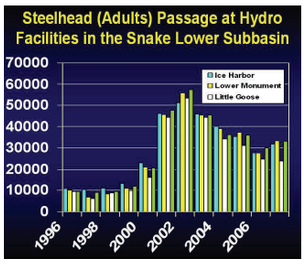
Key Factors Limiting Snake Lower Focal Species
Factors limiting Columbia Lower Middle Subbasin focal species are described in the Mainstem section

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

Habitat Zone	Project-type	Planned Value	FY 2008 Accomplishment (Actual Value)
Upland	Upland erosion and sedimentation control	10 acres	10 acres treated

Columbia Plateau—North

Steelhead



Summer

ESA Listing Status: Threatened
DPS: Snake River
MPG: Multiple
Population: Multiple upriver populations
Recovery Plan Criteria: Not applicable
Biological Objective: No numeric objective for adult escapement described in the subbasin plan
Almota Creek—62 returning adults expected if habitat objectives are attained
Deadman Creek—80 returning adults expected if habitat objectives are attained
Status:
Ice Harbor: 31,527 wild adults (2007)
Lower Monument: 33,236 (2007)
Little Goose: 23,905 (2007)
Lower Granite: 32, 998 (2007)

2007 Hatchery Releases and Returns to Hatcheries in the Snake Lower Subbasin
There are no hatcheries in this subbasin

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

Subbasin: Snake Lower

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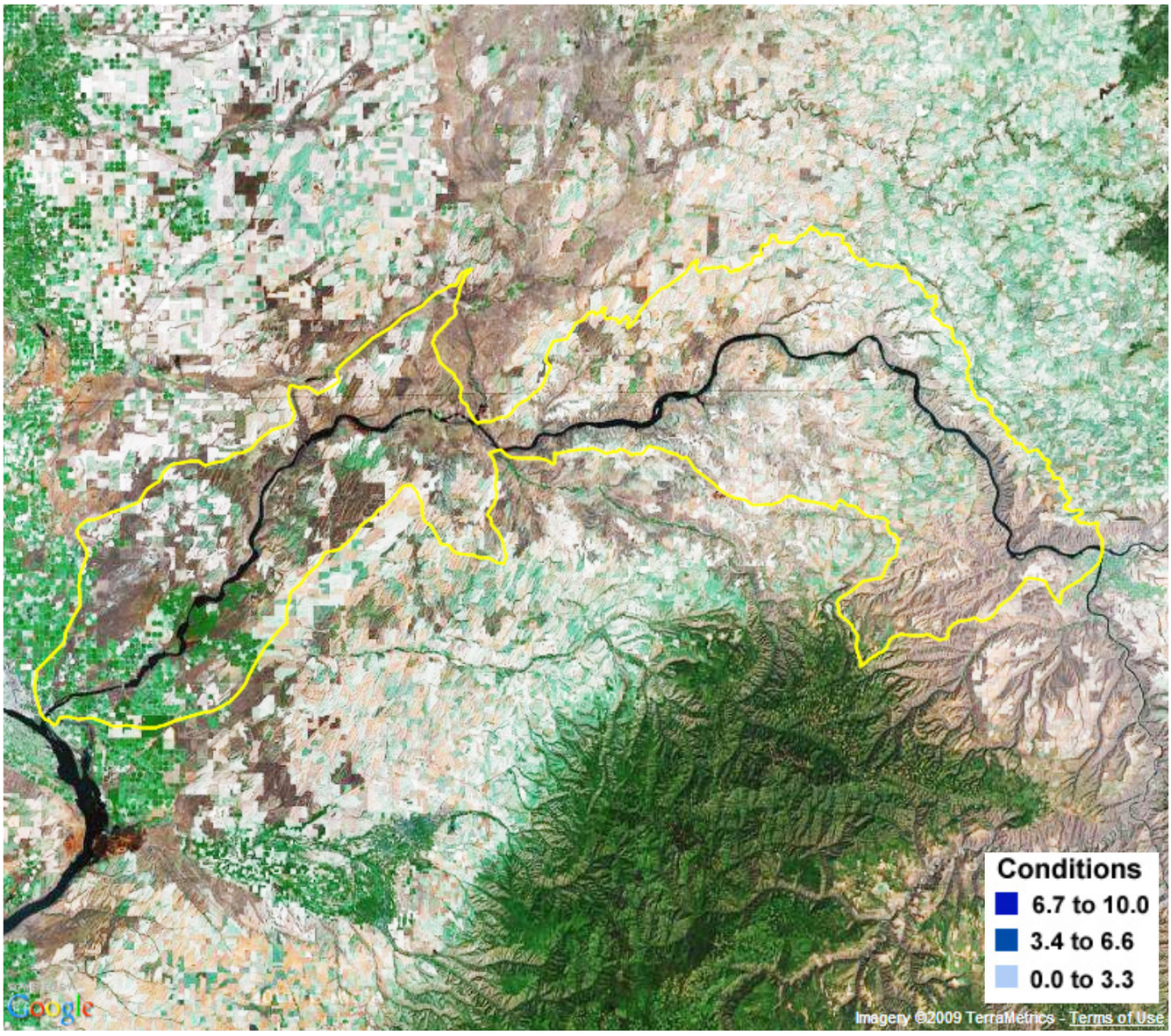
Columbia Plateau—North

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



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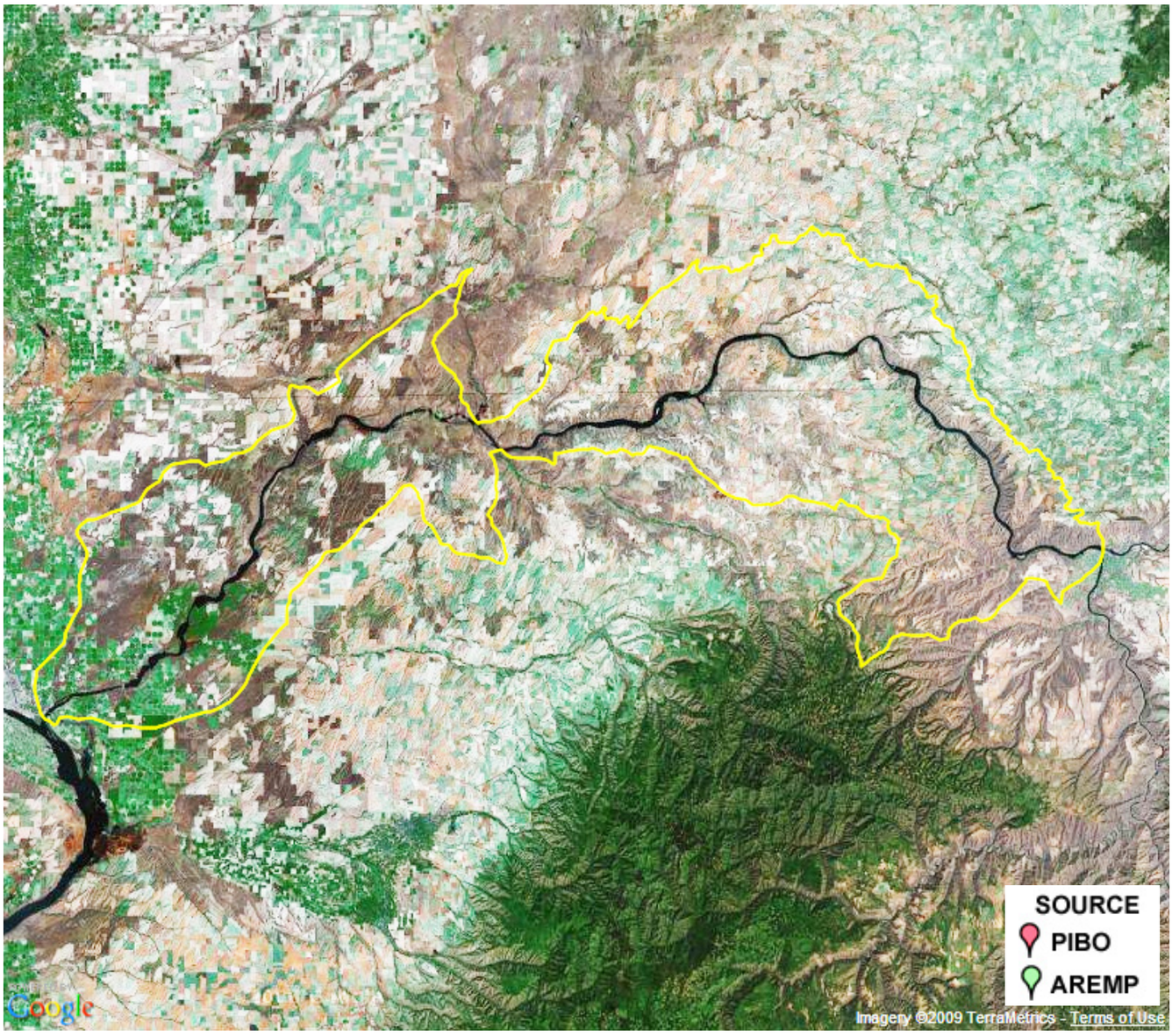
Subbasin: Snake Lower

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



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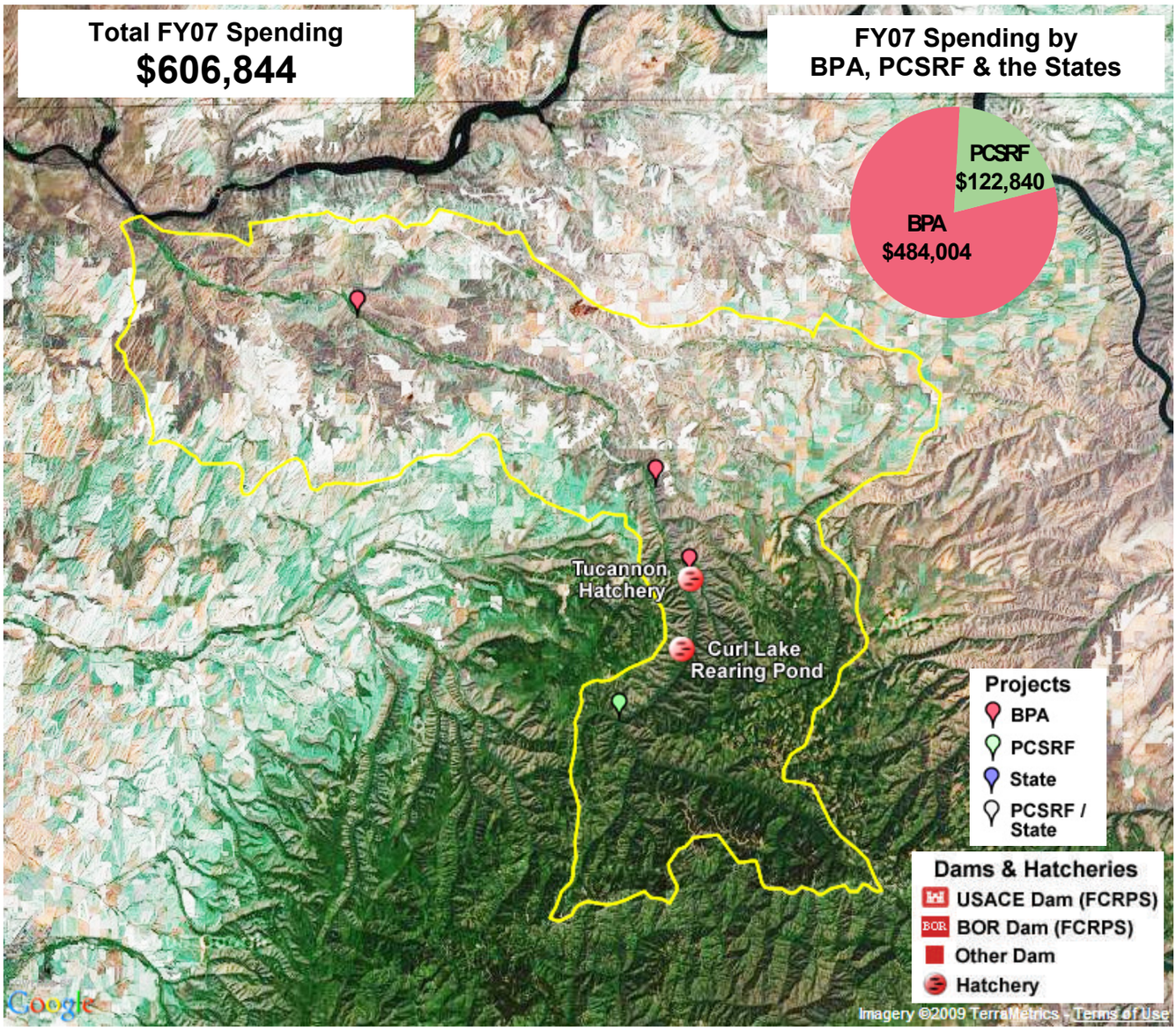
Columbia Plateau—North



In the Tucannon River Subbasin, summer steelhead, Chinook salmon (both spring and fall runs), 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), both races of Chinook salmon are part of the Snake River Evolutionarily Significant Unit (ESU), and bull trout are within the Snake River Washington 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 draft recovery plans for Snake River salmon and steelhead indicate that Tucannon populations should achieve viability. Fall Chinook 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.

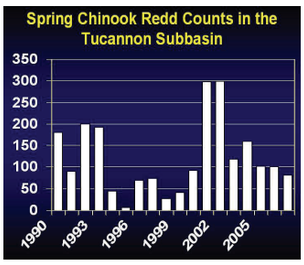
Subbasin: Tucannon

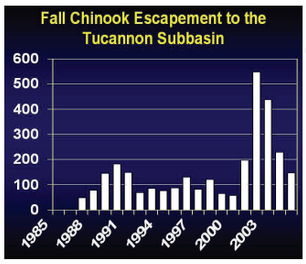
Key Factors Limiting Tucannon River Subbasin Focal Species[1,2,3]					
Factors for Decline/Limiting Factors/Threats		**Species/Race, and Life-Stage Most Affected**			
		Spring Chinook	**Fall Chinook**	**Summer Steelhead**	**Bull Trout**
Habitat	Estuary and Nearshore Marine Habitat Degradation	Smolts	Smolts	Smolts	
	Floodplain Connectivity and Function	Juveniles	Juveniles	Fry, summer parr, winter parr	
	Channel Structure and Complexity	Juveniles	Fry	Fry, summer parr, winter parr	Juveniles, adults
	Riparian Areas and LWD Recruitment	Juveniles	Juveniles	Fry, summer parr, winter parr	Juveniles, adults
	Stream Flow	Juveniles	Juveniles	Fry, summer parr, winter parr	Juveniles, adults
	Water Quality	Juveniles	Juveniles	Fry, summer parr, winter parr	All
	Fish Passage	Juveniles		Fry, summer parr, winter parr, adults	Juveniles, adults
Hydro	Mainstem Columbia River Hydropower-related Adverse Effects	Smolts	Smolts	Smolts	
Hatchery	Hatchery Fish Interbreeding With Wild Fish	Adult Spawners	Adult Spawners	Adult Spawners	
Harvest	Mortality from Targeted Fishery	Adults	Adults		
Predation/ Competition/ Disease	Predation by birds, fish, or marine mammals	Juveniles	Juveniles	Juveniles	

BPA FY 2008 Habitat Project Accomplishments in the Tuccanon Subbasin			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Instream	Install fish screen	15 cfs	15 cfs diversion flow
	Install fish screen	627 acre-feet	627 acre-feet water screened
Riparian-Upland	Practice no-till and conservation tillage systems	1,867 acres	880 acres treated
	Lease land	150.5 acres	150.5 acres protected
Riparian	Lease land	7.73 miles	7.73 miles protected

Columbia Plateau—North

Chinook





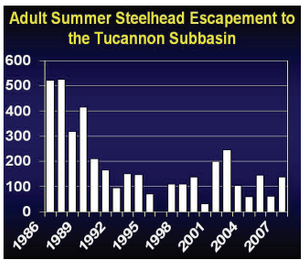
Spring

ESA Listing Status: Threatened
ESU: Snake River
MPG: Lower Snake Tributary
Population: Tucannon
Recovery Plan Criteria:
Status: 81 redds (2007)
Wild Juvenile Production:

Fall

ESA Listing Status: Threatened
ESU: Snake River
MPG: Lower Snake Tributary
Population: Tucannon
Recovery Plan Criteria:
Status: adult escapement (natural=%) (preliminary data—200)
Wild Juvenile Production:

Steelhead



Summer

Federal Designation: Threatened
DPS: Snake River
MPG: Tucannon-Asotin
Population: Tucannon
Recovery Plan Criteria:
Biological Objective: No numeric objective for adult escapement described in the subbasin plan
- 1,000 natural spawners[1]
- 948 natural-origin adults[2]
- 600 adults (existing habitat conditions) and 2,200-3,400 (future) adult escapement[2]
- 2,200 adults[3]
- 3,400 adults[2]
- 600 natural adults[2]

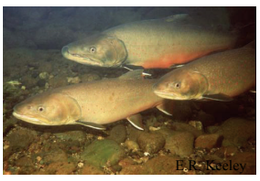
Status: 137 natural adults (2007)
Wild Juvenile Production:

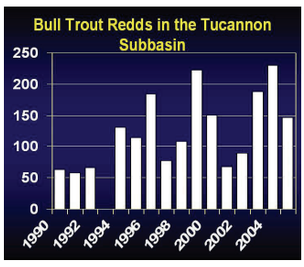
Recovery Status of ESA-Listed Steelhead and Chinook Salmon in the Tucannon Subbasin[1,4]

Population	Abundance Threshold	Mean Abundance	Major Spawning Areas Occupied	Growth Rate	Recruits/Spawner	Current Viability
Summer Steelhead						
Tucannon	500	177 (1986-2001)	1 of 1	Unknown	Unknown	Low
Spring Chinook Salmon						
Tucannon	750	88 (1994-2003)	1 of 1	1.00	0.86 (1979-98)	Low

Subbasin: Tucannon

Bull Trout





ESA Listing Status: Threatened
Core Population: Tucannon (Within Snake River Washington Recovery Unit)
Draft Recovery Plan Criteria: 1,000 adults
Status: redds (index areas only-preliminary data) (200)
Abundance, Trend, Threat, and Risk Ranks (Tucannon Core):
Abundance = 1,000-2,500
Short-term Trend = Stable
Threat = Widespread, low-severity
Risk = Potential

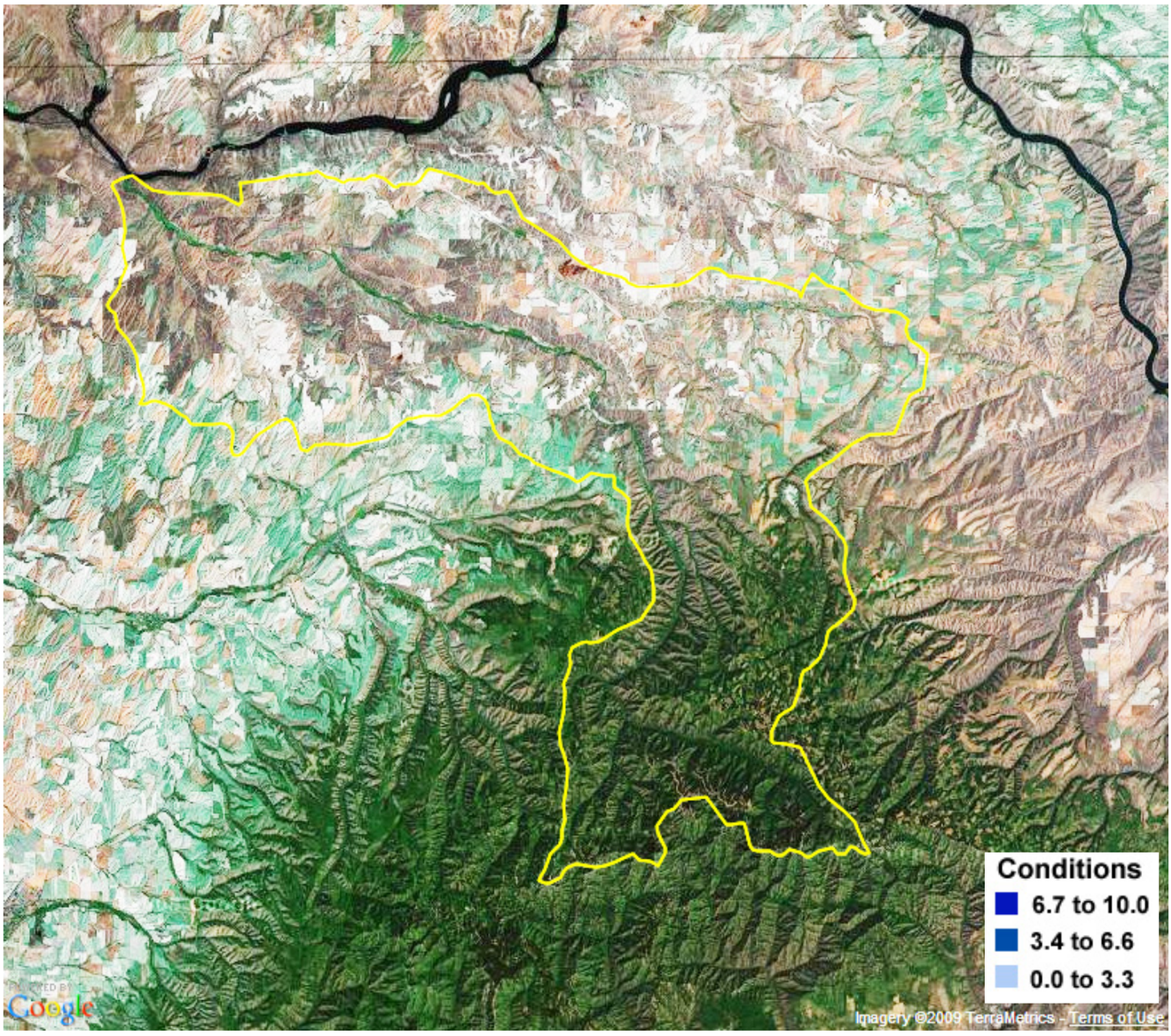
BPA-Funded Wildlife Projects in the Tucannon Subbasin
There are no wildlife projects in this subbasin.

2007 Hatchery Releases and Returns to Hatcheries in the Tuccanon Subbasin

Hatchery/Acclimation Pond	Species	Release Goal/Released	Return Goal/Actual Return
Tucannon	Spring Chinook	/239,522	/25
	Summer Steelhead	/62,940	/145 trapped at Tucannon trap (lower river)
Lyons Ferry	Fall Chinook	/1,174,312 stocked in numerous acclimation ponds (503,160 of these released at hatchery)	18,300 to the Snake River basin/12,010 trapped at hatchery (includes an unknown number of recaptures)
	Summer Steelhead	/463,353 stocked in numerous acclimation ponds (59,983 of these released at the hatchery)	4,656 to the Snake River basin/1,704 trapped at hatchery
	Spring Chinook	/239,522	/224 trapped at hatchery
Total		/2,179,649	

Columbia Plateau—North

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



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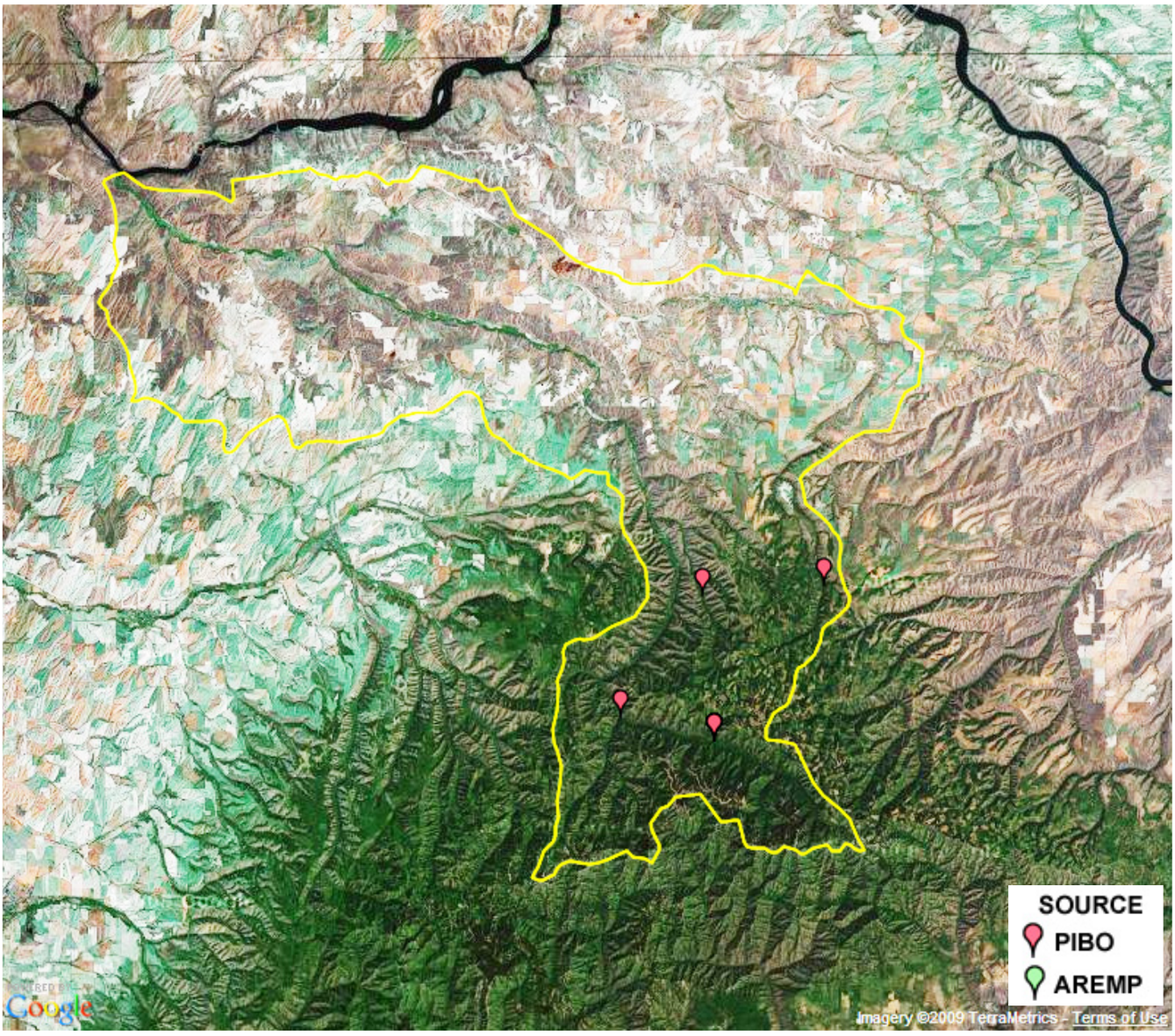
Subbasin: Tucannon

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



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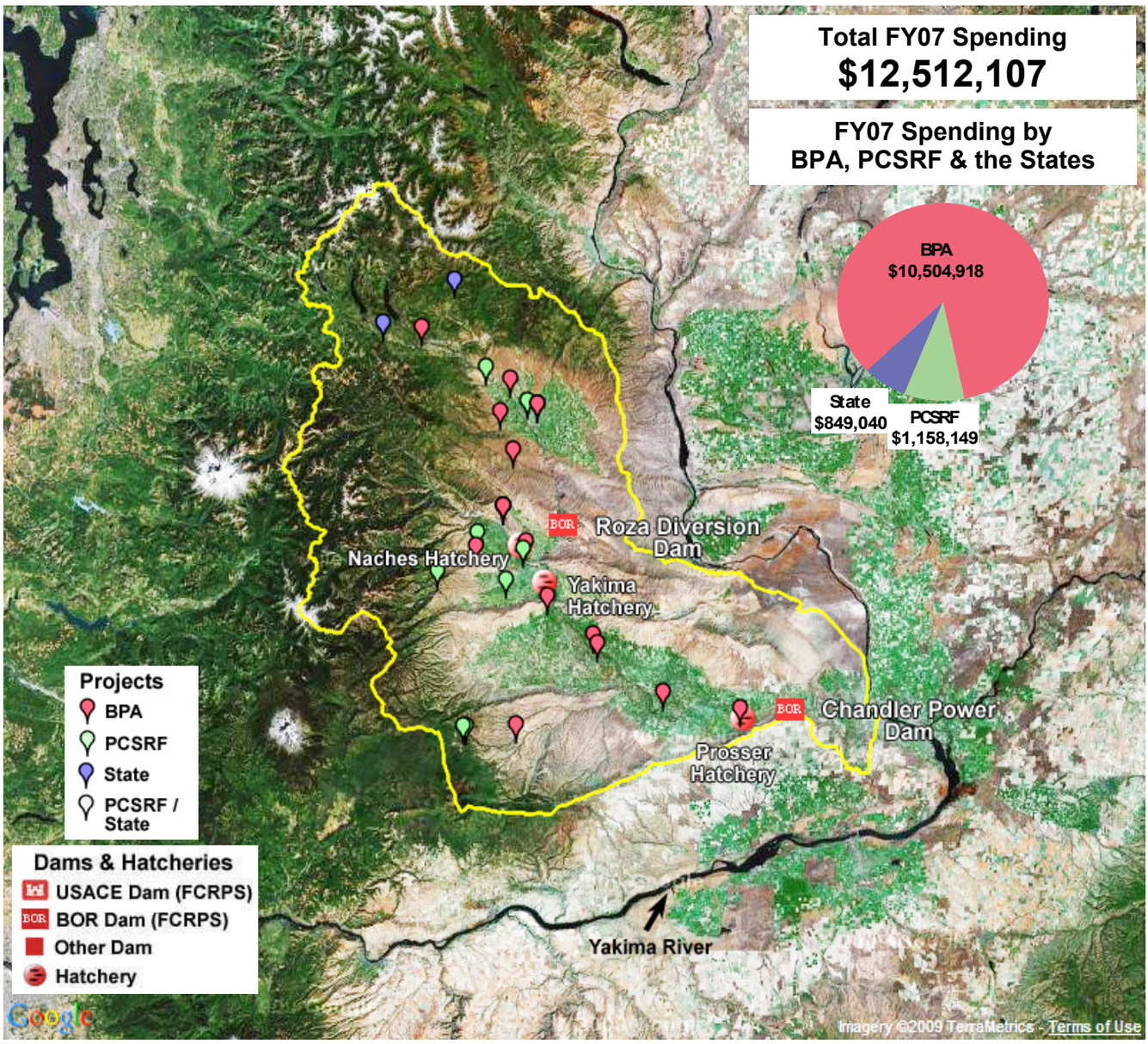
Columbia Plateau—North



In the Yakima River Subbasin, summer steelhead, Chinook salmon (both spring and fall runs), sockeye salmon, Pacific lamprey, and bull trout have been identified as focal species. Steelhead and bull trout are also listed as threatened under the federal Endangered Species Act. Steelhead in the subbasin are part of the Mid–Columbia Distinct Population Segment (DPS). Bull trout are within the Middle Columbia River Recovery Unit. Recovery criteria for a steelhead DPS do not necessarily require that all populations achieve viability (extinction risk = low) prior to de-listing. The draft recovery plan for Yakima steelhead therefore stipulates that to meet de-listing criteria, the Satus and Naches populations must achieve viability. Longer term recovery thresholds require all Yakima populations to become viable. Recovery criteria for bull trout vary among recovery units.

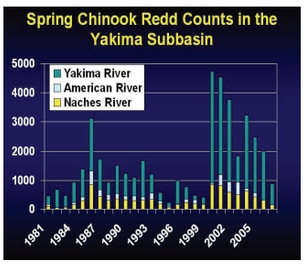
Subbasin: Yakima

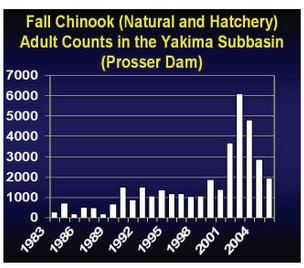
Key Factors Limiting Yakima River Subbasin Focal Species[5,6,7]							
Factors for Decline/Limiting Factors/ Threats		**Species/Race, and Life-Stage Most Affected**					
		Spring Chinook	**Fall Chinook**	**Sockeye**	**Summer Steelhead**	**Pacific Lamprey**	**Bull Trout**
Habitat	Estuary and Nearshore Marine Habitat Degradation	Smolts	Smolts		Smolts		
	Floodplain Connectivity and Function	Juveniles	Juveniles		Fry, summer parr, winter parr		
	Channel Structure and Complexity	Juveniles	Fry		Fry, summer parr, winter parr		Juveniles, adults
	Riparian Areas and LWD Recruitment	Juveniles	Juveniles		Fry, summer parr, winter parr		Juveniles, adults
	Stream Flow	Juveniles	Juveniles		Fry, summer parr, winter parr	Juveniles, adults	Juveniles, adults
	Water Quality	Juveniles	Juveniles		Fry, summer parr, winter parr	All	All
	Fish Passage	Juveniles		Juveniles, adults	Fry, summer parr, winter parr, adults	Juveniles, adults	Juveniles, adults
Hydro	Mainstem Columbia River Hydropower-related Adverse Effects	Smolts	Smolts	Smolts	Smolts	Juveniles, adults	
Harvest	Mortality from Targeted Fishery	Adults	Adults	Adults			
Predation/ Competition/Disease	Predation by or competition with non-native species	Juveniles	Juveniles				Juveniles, adults
	Predation by birds, fish, or marine mammals	Juveniles	Juveniles		Juveniles		

BPA FY 2008 Habitat Project Accomplishments in the Yakima Subbasin			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Instream	Increase instream habitat complexity	0.25 miles	0.25 stream miles after treatment
	Increase instream habitat complexity	5 structures	5 structures installed
	Acquire water instream	8.1 cfs	3.1cfs water protected
	Acquire water instream	1,193.4 acre-feet	535.9 acre-feet water protected
	Acquire water instream	7.5 miles	7.5 miles of primary stream improved
	Acquire water instream	25 miles	25 miles of total stream reach improved
	Remove/breach dam, install fish passage structure	51.5 miles	51.5 miles accessed
	Install fish screen	4.8 cfs	47.9 cfs diversion flow
Riparian-Upland	Install fence	5.91 miles	6.19 miles of fence installed
	Lease land	97,051.1 acres	97,046 acres protected
Riparian	Lease land	56 miles	66 miles protected

Columbia Plateau—North

Chinook





Spring

ESA Listing Status: None
ESU: None
MPG: Yakima
Population:
Recovery Plan Criteria: None
Biological Objective: Fish technical committee could not come to consensus on abundance targets[1]
Status: 874 redds (2007)
Wild Juvenile Production:

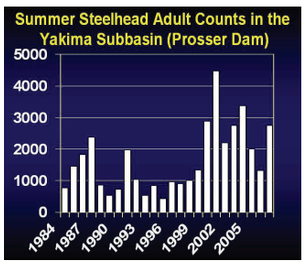
Fall

ESA Listing Status: None (not native to the subbasin)
ESU: None
MPG: Yakima
Population:
Recovery Plan Criteria: None
Biological Objective: Fish technical committee could not come to consensus on abundance targets[1]
Status: 1920 adults (natural and hatchery) at Prosser Dam (2005)
Wild Juvenile Production:

Sockeye

ESA Listing Status: None (extirpated)
ESU: None
Biological Objective: Fish technical committee could not come to consensus on abundance targets[1]
Status: Extirpated

Steelhead



Summer

ESA Listing Status: Threatened
ESU: Middle Columbia
MPG: Yakima
Population:
Recovery Plan Criteria:
Naches River — 2,000 adults
Satus Creek — 1,500 adults
Toppenish Creek — 1,800 adults
Upper Yakima River—7,700 adults
Status: 2753 natural adults at Prosser Dam (2007)
Satus Creek — 87 redds (2007)
Toppenish Creek — 42 redds (2007)
Wild Juvenile Production:

Pacific Lamprey

ESA Listing Status: Species of concern
Biological Objectives: Fish technical committee could not come to consensus on abundance targets[1]
Status: Fewer than 15 have been identified in the subbasin since 1999[7]

Recovery Status of ESA-Listed Steelhead in the Yakima Subbasin[6]

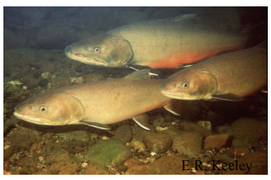
Population	Abundance Threshold	Mean Abundance (1995-2004)	Major Spawning Areas Occupied	Growth Rate	Recruits/Spawner (1985-99)	Current Viability
Satus	1,000	379	2 of 2	Unknown	1.40	Moderate
Toppenish	500	322	2 of 2	Unknown	1.60	Moderate
Naches	1,500	472	7 of 8	Unknown	1.12	Low
Upper Yakima	1,500	85	7 of 14	Unknown	1.12	Low

BPA-Funded Wildlife Projects in the Yakima Subbasin

Project	Sponsor	Acres	HU	Habitat Type
Sunnyside Wildlife Mitigation	Washington Department of Fish and Wildlife	8,391	5,170	NA
Wenas Widlife Area Operations and Maintenance	Washington Department of Fish and Wildlife	74,020	19,254	NA
Yakama Nation Wetland and Riparian Restoration	Yakima Nation	21,000	NA	Shrub-steppe/interior grasslands, Interior riparian wetlands

Subbasin: Yakima

Bull Trout



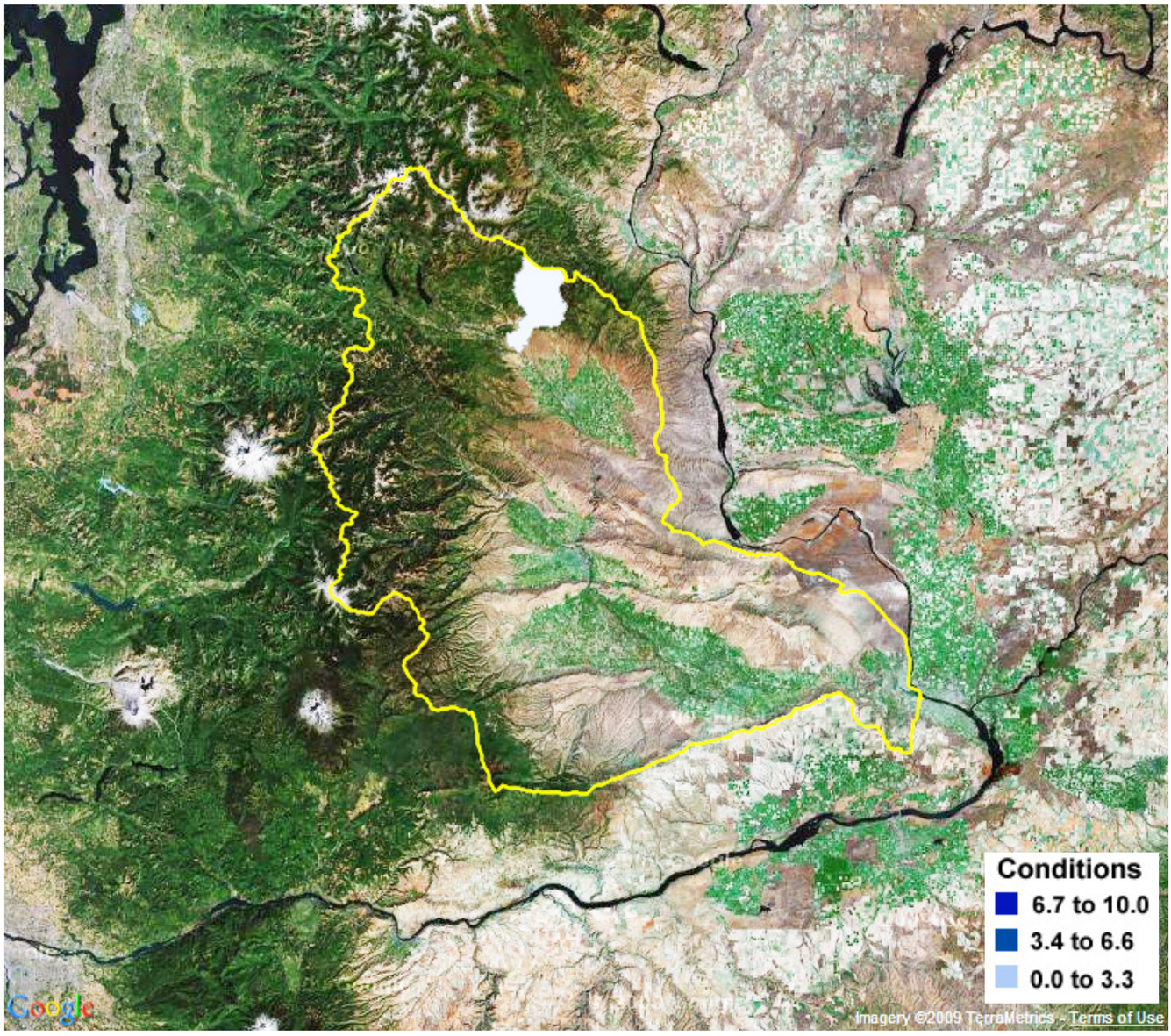
ESA Listing Status: Threatened
Core Population: Yakima (Within Middle Columbia River Recovery Unit)
Draft Recovery Plan Criteria: 2,550 – 3,050 adults
Status: 1,082 WDFW
Abundance, Trend, Threat, and Risk Ranks (Yakima Core):
Abundance = 250-1,000
Short-term Trend = Very rapid decline
Threat = Substantial, imminent
Risk = High

2007 Hatchery Releases and Returns to Hatcheries in the Yakima Subbasin

Hatchery/Acclimation Pond	Species	Release Goal/Released	Return Goal/Actual Return
Prosser	Fall Chinook	/630,002	
	Coho	/84,581	
Marion Drain	Fall Chinook	/15,731 (received from Yakama Hatchery)	
Yakama	Fall Chinook	/15,731 (stocked in Marion Pond)	
Priest Rapids	Fall Chinook	/6,743,101	
Cle Elum	Spring Chinook	/860, 002 (stocked in numerous acclimation ponds)	
Easton	Spring Chinook	/281,150 (received from Cle Elum Hatchery)	
Clark Flat	Spring Chinook	/287,127 (received from Cle Elum Hatchery)	
Jack Creek	Spring Chinook	/291,725 (received from Cle Elum Hatchery)	
Total		/8,333,417	

Columbia Plateau—North

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



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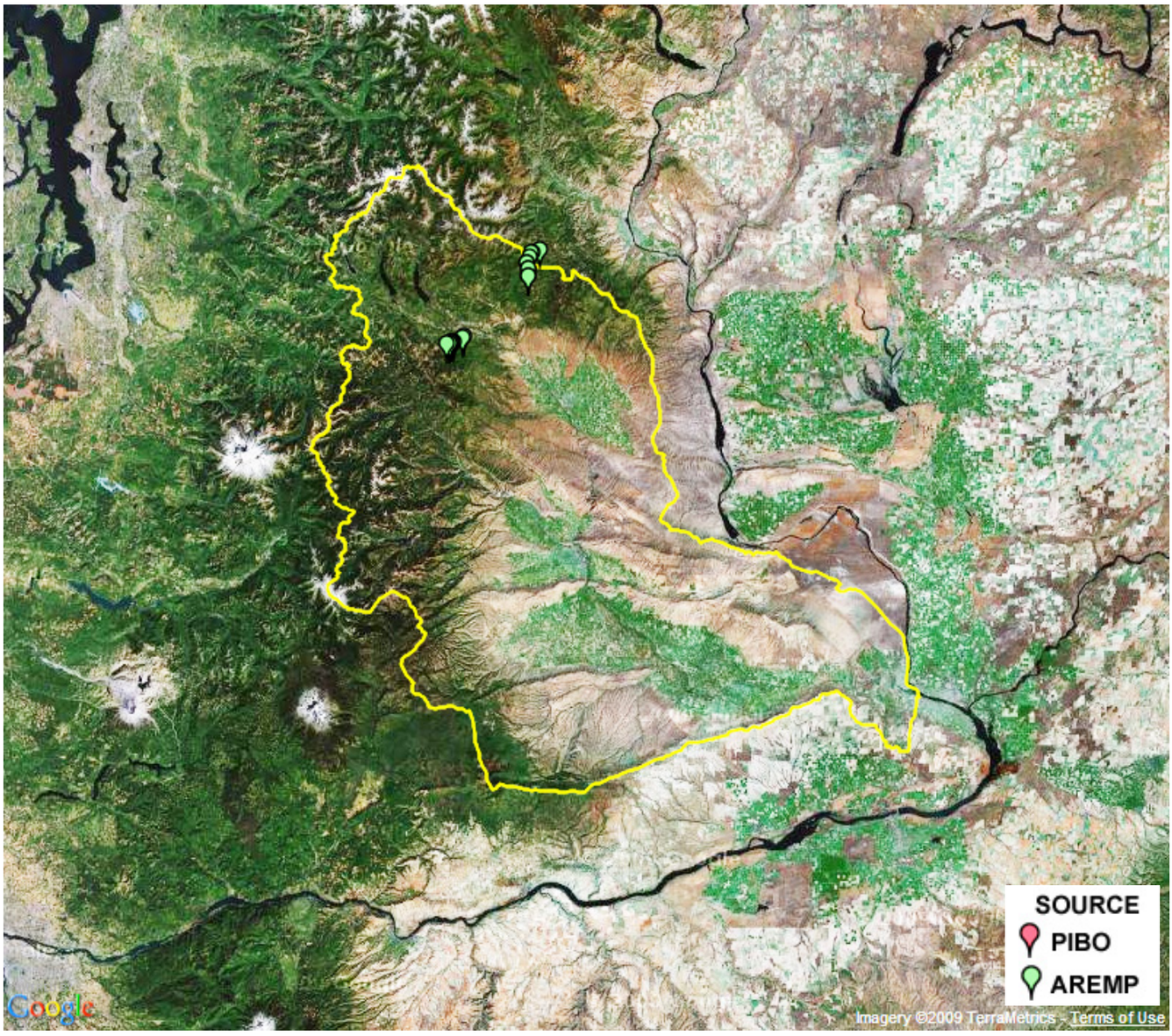
Subbasin: Yakima

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



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]