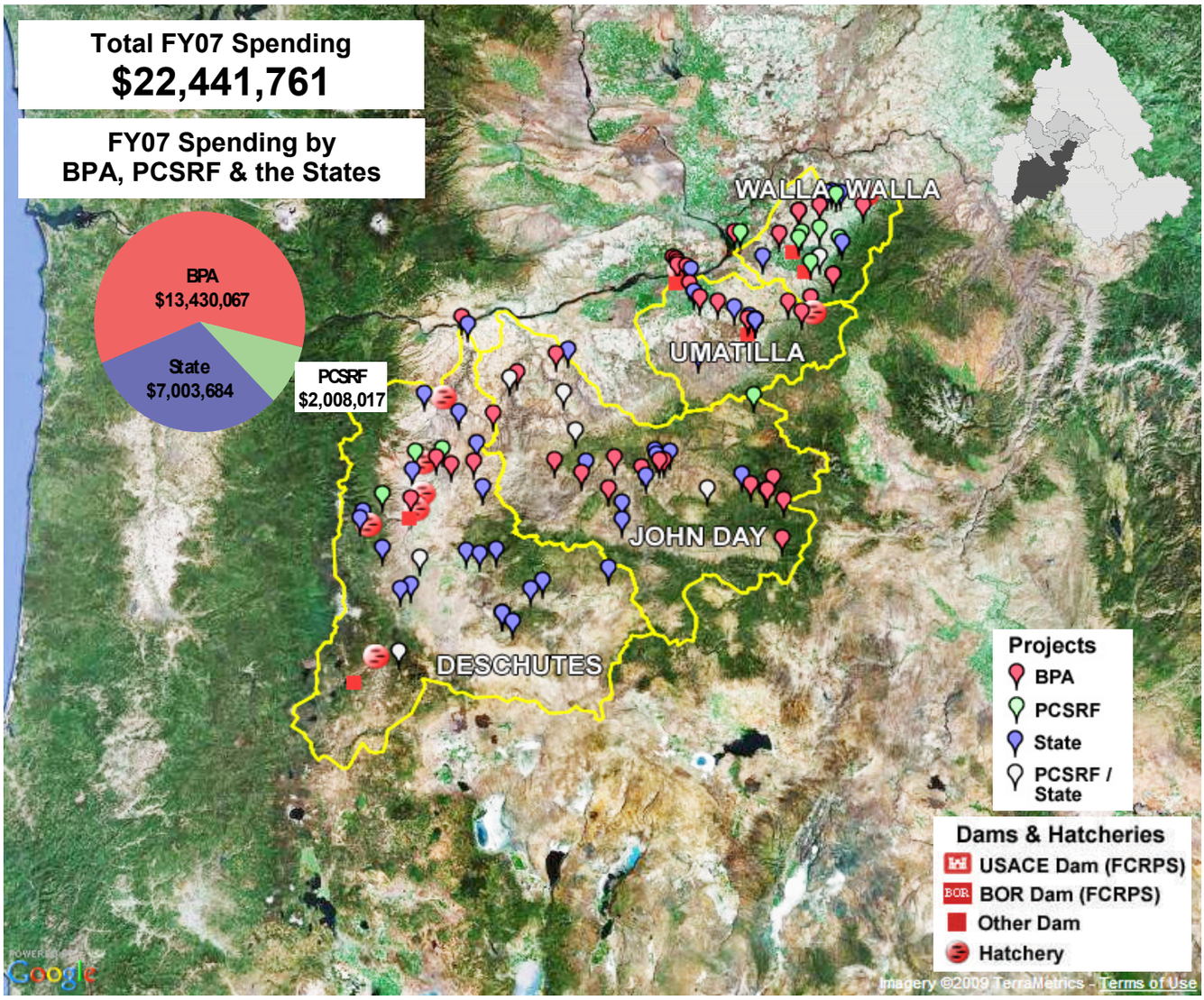
Columbia Plateau—South



Land Ownership
Federal……....39%
Private……57%
Tribal……...3%

The Columbia Plateau-South Province extends from The Dalles Dam at river mile 191 on the Columbia River to the Walla Walla River Subbasin (the mouth of the Walla Walla is at river mile 315), and encompasses an area of approximately 27,000 square miles. The province includes the east slope of the Cascade Mountains in Oregon to the west, and the Blue Mountains of northeast Oregon and southeast Washington to the east. Subbasins in the Columbia Plateau-South Province include the Deschutes, John Day, and Umatilla rivers in Oregon, and the Walla Walla River shared by Oregon and Washington. Summer steelhead and bull trout populations throughout the province are listed under the federal Endangered Species Act. Vegetation in most subbasins ranges from coniferous forest at higher elevations to perennial grassland at middle elevations to desert shrub-steppe at lower elevations. Most grassland and shrub-steppe communities have been replaced by agriculture. Cropland, both dryland and irrigated, comprise significant portions of each subbasin.

BPA FY 2008 Habitat Project Accomplishments in the Columbia Plateau-South Province			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Performance Indicator (Actual Value)**
Instream	Acquire water instream, install pipeline	99 cfs	85.2 cfs water protected
	Acquire water instream, install pipeline	29,267.2 acre-feet	26,081.9 acre-feet water protected
	Remove/breach dam, install fish passage structure	188.7 miles	165.7 habitat miles accessed
	Install pipeline, acquire water instream	371.1 miles	516.6 miles of primary stream improved
	Install pipeline, acquire water instream	736.2 miles	962.7 miles of total stream reach improved
	Increase instream habitat complexity	61 structures	56 structures installed
	Lease land	85.78 miles	49.16 miles protected
	Increase instream complexity, plant/remove vegetation	59 miles	79.65 stream miles treated
	Remove/install diversion	2 screens	2 screens addressed
	Realign, connect, and/or create channel	1.8 miles	1.8 stream miles before treatment
	Realign, connect, and/or create channel	1.9 miles	1.9 stream miles after treatment
	Install fish screen	82 acre-feet	82 acre-feet water screened
	Install fish screen	54.3 cfs	109.3 cfs diversion flow
Riparian-Upland	Install fence	27.75 mile	21.5 miles of fence installed
	Improve road	4 miles	4 miles treated
	Lease land	12,520.8 acres	13,376.8 acres protected
	Conduct controlled burn, plant vegetation, remove vegetation, upland erosion and sedimentation control	4,103.6 acres	2,218.8 acres treated
Wetland	Realign, connect, and/or create channel	3 acres	3 acres affected
Riparian	Lease land	108.66 miles	106.72 miles protected
	Plant vegetation	275.77 miles	55.57 miles planted

Habitat Improvement Project — Trout Creek Watershed Improvement Project

Initiated in 1994, the Trout Creek Watershed Restoration Project implements projects to improve instream and riparian habitat to assist in increasing the annual out-migrant population of Mid-Columbia ESU summer steelhead. Recent efforts in the Nye area have provided the following results (upper photos represent habitat conditions before the project was initiated):

Added stream length	3,857 feet
Average flood prone width increase	235%
Wetland acres added	9.0 acres
Added pool/riffle complexes	50 pools
Added alcove refugia	2 sites
Trees and shrubs planted	32,540
Native grass and forb seed planted	1,650 pounds
Acres enrolled in 15-year CREP	161 acres

Columbia Plateau—South

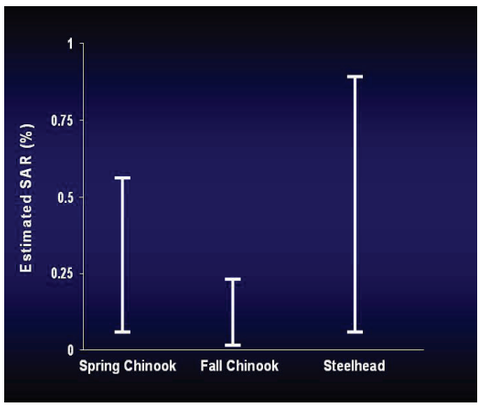
Focal Species in the Columbia Plateau-South Province[a]

Focal Species	Deschutes	John Day	Umatilla	Walla Walla
Bull Trout				
Chinook-Spring				Extirpated
Chinook-Fall				
Coho				
Pacific Lamprey				
Redband Trout				
Sockeye	Extirpated (anadromous)			
Steelhead—Summer				
Westslope Cutthroat Trout				

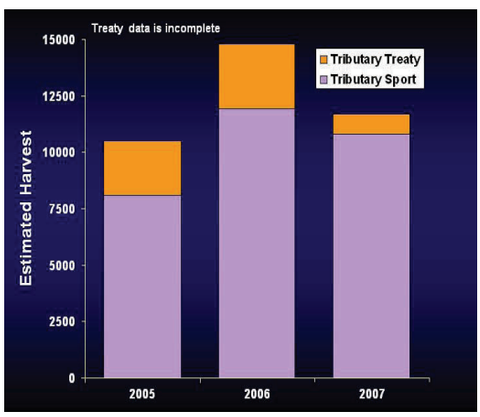
Not a focal species | Not listed | Species of Concern[b] | Threatened[c]

[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 Umatilla Hatchery (1994 to Present)[1]



Columbia Plateau-South Salmon and Steelhead Harvest[2,3]



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

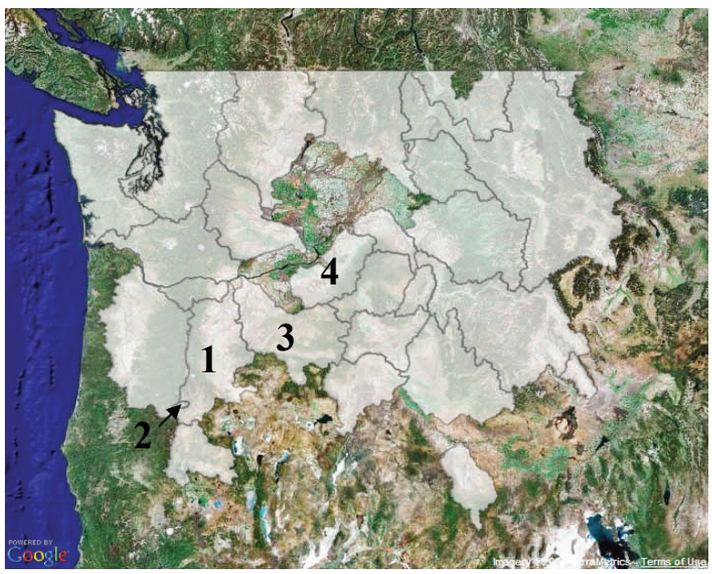
Species	Release Goal/ Released	Return Goal/Return to Collection Facility
Spring Chinook		/
Fall Chinook		/
Coho		/
Summer Steelhead		/
Winter Steelhead		/
Atlantic Salmon		
Brook Trout		
Kokanee		
Rainbow Trout		
TOTAL		/

Species/Race	Tributary Harvest— 2007	
	Sport	Treaty
Spring Chinook	1,418	433
Summer Chinook	0	0
Fall Chinook	582	460
Coho	192	Unknown
Winter Steelhead	0	0
Summer Steelhead	8,622	Unknown

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

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
Mid Columbia Steelhead	Cascade Eastern Slope	6	2	4	4,000-4,500	5,000
	John Day	5	1	3	4,750-6,250	6,250
	Umatilla/Walla Walla	3	0	2	2,500-3,500	3,500

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



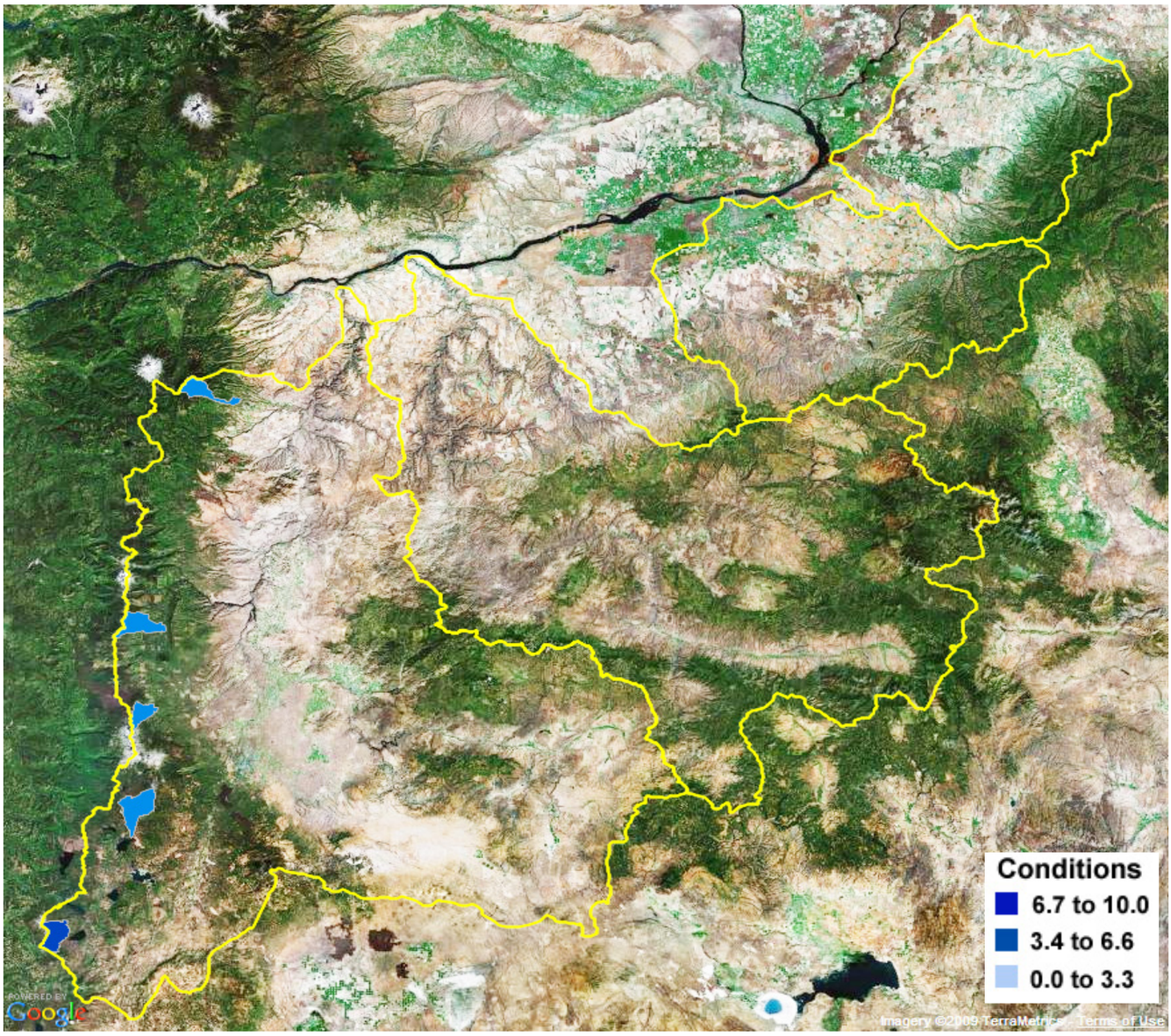
Recovery Unit	Number of cores	Abundance	Trend	Threat	Risk
Deschutes (1)	1	1,000-2,500	Increasing	Localized, substantial	Potential
Odell Lake (2)	1	1-50	Unknown	Substantial, imminent	High
John Day (3)	3	1-50 (unknown for Middle and North Fork)	Increasing	Substantial, imminent (2) Moderate, non-imminent (1)	At
Umatilla-Walla Walla (4)	3	1,100-3,000	Stable (2) Unknown (1)	Moderate, imminent	At (2) High (1)

Wildlife Habitat Losses by Hydroelectric Facility in the Columbia Plateau-South 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)	18,834		10,995

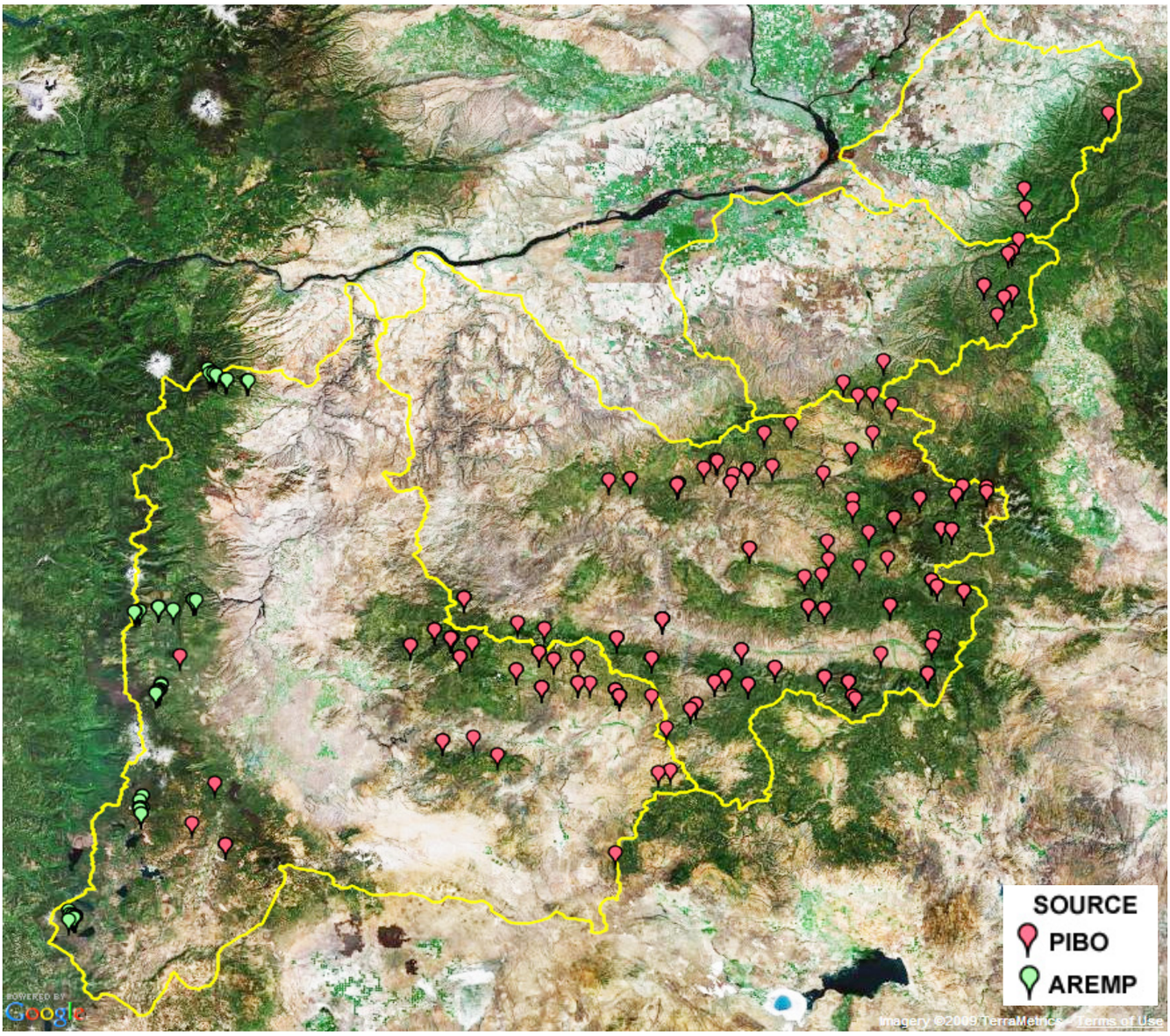
Columbia Plateau—South

Watershed Conditions for National Forest and Bureau of Land Management Lands in the Columbia Plateau-South 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.

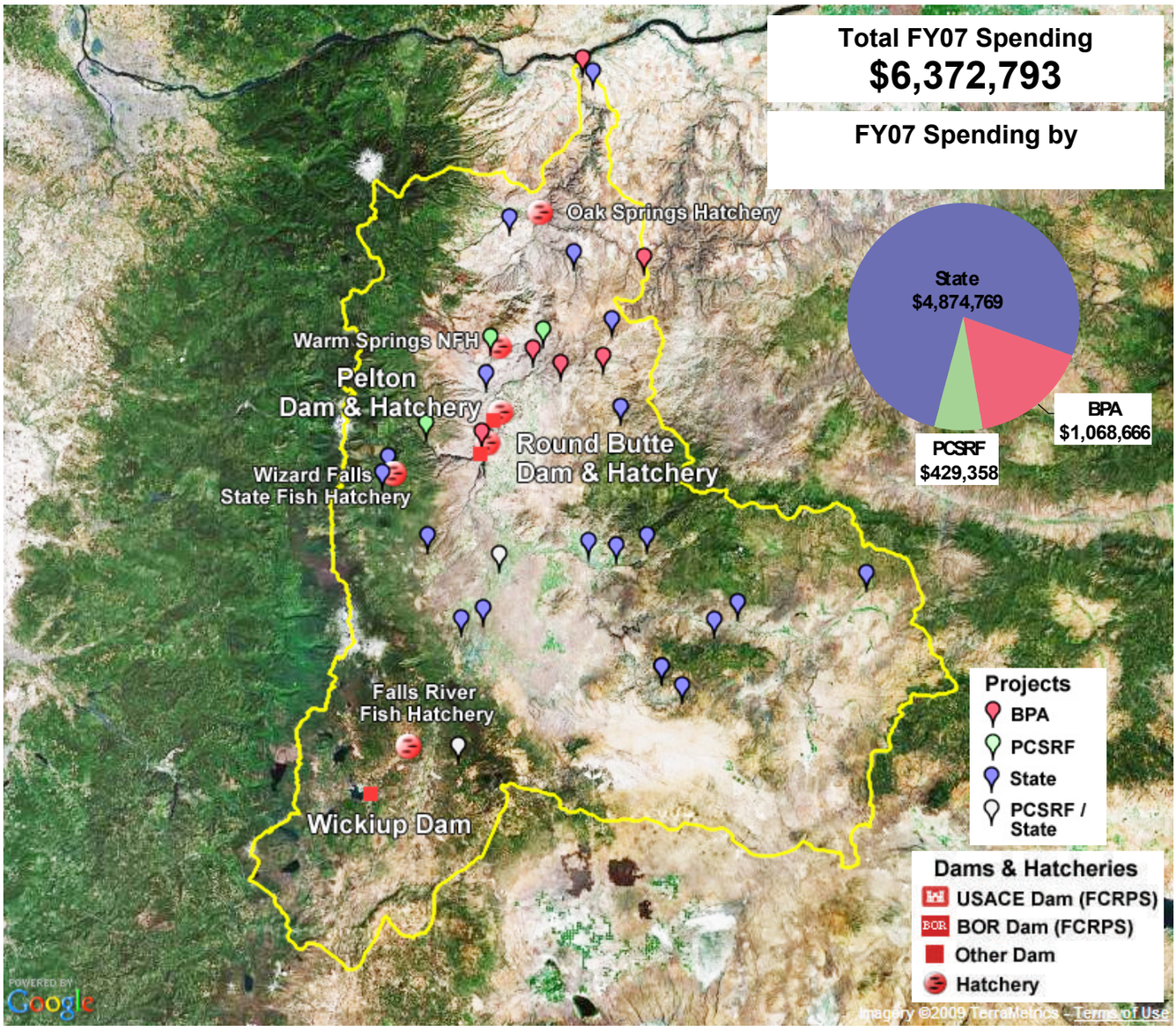
Stream Inventory Sites on National Forest and Bureau of Land Management Lands in the Columbia Plateau-South Province[4]



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]

Columbia Plateau—South



In the Deschutes River Subbasin, summer steelhead, Chinook salmon (both spring and fall runs), Sockeye salmon, Pacific lamprey, bull trout, and redband trout have been identified as focal species. Steelhead and bull trout are also listed as threatened under the federal Endangered Species Act (ESA). Steelhead in the subbasin are part of the Mid-Columbia River Distinct Population Segment (DPS), and bull trout are within the Deschutes Recovery Unit. Recovery criteria for a steelhead DPS do not necessarily require that all populations achieve viability (extinction risk = low) prior to de-listing; however, the recovery plan for Mid-Columbia River steelhead has specified that both existing Deschutes populations (Westside and Eastside) must achieve viability. A higher standard of broad-sense recovery requires that both populations become highly viable, and the extirpated Crooked River population be re-established. Recovery criteria for bull trout vary among recovery units. Anadromous sockeye salmon have been extirpated from the subbasin, but have no ESA status. Pacific lamprey are historically important as a cultural resource, and redband trout are important to the sport fishery.

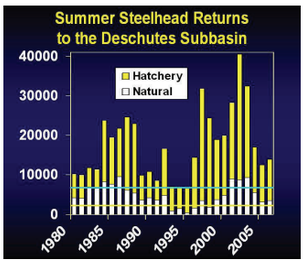
Subbasin: Deschutes

Key Factors Limiting Deschutes River Subbasin Focal Species[1,2,3]								
Factors for Decline/Limiting Factors/ Threats		**Species/Race, and Life-Stage Most Affected**						
		Spring Chinook	**Fall Chinook**	**Sockeye**	**Summer Steelhead**	**Pacific Lamprey**	**Bull Trout**	**Redband Trout**
Habitat	Floodplain Connectivity and Function	Juveniles	Juveniles		Fry, summer parr, winter parr			
	Channel Structure and Complexity	Juveniles	Juveniles		Fry, summer parr, winter parr			
	Riparian Areas and LWD Recruitment	Juveniles	Juveniles		Fry, summer parr, winter parr			
	Stream Flow	Juveniles	Juveniles		Eggs, fry, summer parr, winter parr	All	All	All
	Water Quality	Juveniles	Juveniles		Eggs, fry, summer parr, winter parr	All	All	All
	Fish Passage	Juveniles, adults	Juveniles, adults		Juveniles, adults		Juveniles, adults	Juveniles, adults
Hydro	Mainstem Columbia River Hydropower-related Adverse Effects	Juveniles	Juveniles		Fingerling through yearling			
	Passage to Areas Above Pelton-Round Butte Complex	Smolts, adults	Smolts, adults	Smolts, adults	Smolts, adults	Juveniles, adults	Juveniles, adults	
Hatchery	Hatchery Fish Interbreeding With Wild Fish				Adult Spawners			
Harvest	Mortality from Targeted Fishery		Adults					
Introduced Species	Competition with Introduced Species						Juveniles, adults	

BPA FY 2008 Habitat Project Accomplishments in the Deschutes Subbasin[8]			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Instream	Realign, connect, and/or create channel	1.9 miles	1.9 stream miles after treatment
	Realign, connect, and/or create channel	1.8 miles	1.8 stream miles before treatment
	Install fish screen	0.3 cfs	0.3 cfs diversion flow
	Acquire water instream	96.8 cfs	83.4 cfs water protected
	Acquire water instream	28,978.9 acre-feet	25,885.1 acre-feet water protected
	Install fish screen	82 acre-feet	82 acre-feet water screened
	Install pipeline, acquire water instream	362 miles	507.6 miles of primary stream improved
	Install pipeline, acquire water instream	722.2 miles	948.6 miles of total stream reach improved
Riparian-Upland	Lease land	546 acres	1,331.2 acres protected
Riparian	Lease land	15.88 miles	50.36 miles protected
Wetland	Realign, connect, and/or create channel	3 acres	3 acres affceted

Columbia Plateau—South

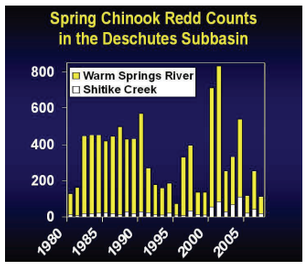
Steelhead

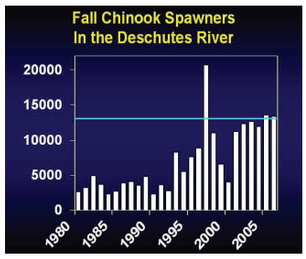


Summer

ESA Listing Status: Threatened
ESU: Mid Columbia
MPG: Cascades Eastern Slope Tributaries
Populations: Westside, Eastside, Crooked River (extirpated)
Recovery Plan Criteria: 1,000 natural adults each for Westside and Eastside populations[1]
Subbasin Plan Objectives: Westside = 4,500-5,500 natural adults (plus 1,600-1,850 in areas not currently accessible); Eastside = 2,400-2,900 natural adults; Crooked River = 700-1,000 natural adults[2]
***Status*:**
3,432 natural and 10,497 hatchery adults (Westside and Eastside combined, 2006)[4a]
Wild Juvenile Production:

Chinook





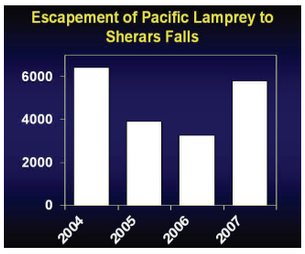
Spring

***ESA Listing Status*:** None
ESU: Mid Columbia
Subbasin Plan Objectives: 2,600-2,800 natural adults: 2,200-2,300 above Warm Springs National Fish Hatchery, and 400-500 in Shitike Creek[2]
Status: 114 redds: 99 above Warm Springs National Fish Hatchery and 15 in Shitike Creek (2007)[4b]
Wild Juvenile Production:

Fall

ESA Listing Status: None
ESU: Mid Columbia
Subbasin Plan Objective: 13,000-16,000 natural adults[2]
Status: 13,374 natural adults (2006)[4c]
Wild Juvenile Production:

Pacific Lamprey



ESA Listing Status: Species of Concern
Biological Objective: None
Status: 5,780 returning adults (based on recapture of fish marked at Sherars Falls) (2007)[5]

Sockeye

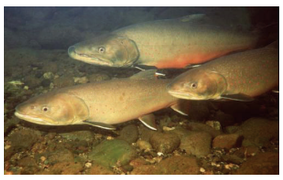
ESA Listing Status: None
***ESU*:** None
Biological Objective: None
Status: Anadromous form extirpated

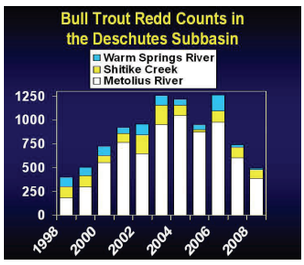
Recovery Status of ESA-Listed Steelhead in the Deschutes River Subbasin[1]

Population	Abundance Threshold	Mean Abundance (1996-2005)	Major Spawning Areas Occupied	Growth Rate	Recruits/Spawner	Current Viability
Westside	1,000	456	4 of 6	0.97-1.02 (1980-2005)	1.05 (1979-1998)	Low
Eastside	1,000	1,599	5 of 6	0.98-1.09 (1990-2005)	1.89 (1990-1999)	High

Subbasin: Deschutes

Bull Trout





ESA Listing Status: Threatened
Core Area: Lower Deschutes (Within Deschutes Recovery Unit)
Local Populations: Shitike Creek, Warm Springs River, and 3 Metolius River populations
Draft Recovery Plan Criteria: 1,500-3,000 adults, distributed among 5 or more local populations[5]
Status: 2,040 adults (2004)[2]
Warm Springs River
21 redds (2008)[5]
Shitike Creek
92 redds (2008)[5]
Metolius River
382 redds (2008)[6]
Abundance, Trend, Threat, and Risk Ranks (Lower Deschutes Core):
Abundance = 1,000-2,500
Short-term Trend = Increasing
Threat = Localized, substantial
Risk = Potential

Redband Trout

ESA Listing Status: Species of Concern
Population: Deschutes
Subbasin Plan Objective: 1,500-2,500 fish >8 inches per mile, Pelton Dam to Shearers Falls; 750-1,000 fish >8 inches per mile below Shearers Falls[2]
Status: No information since 2000

BPA-Funded Wildlife Projects in the Deschutes Subbasin

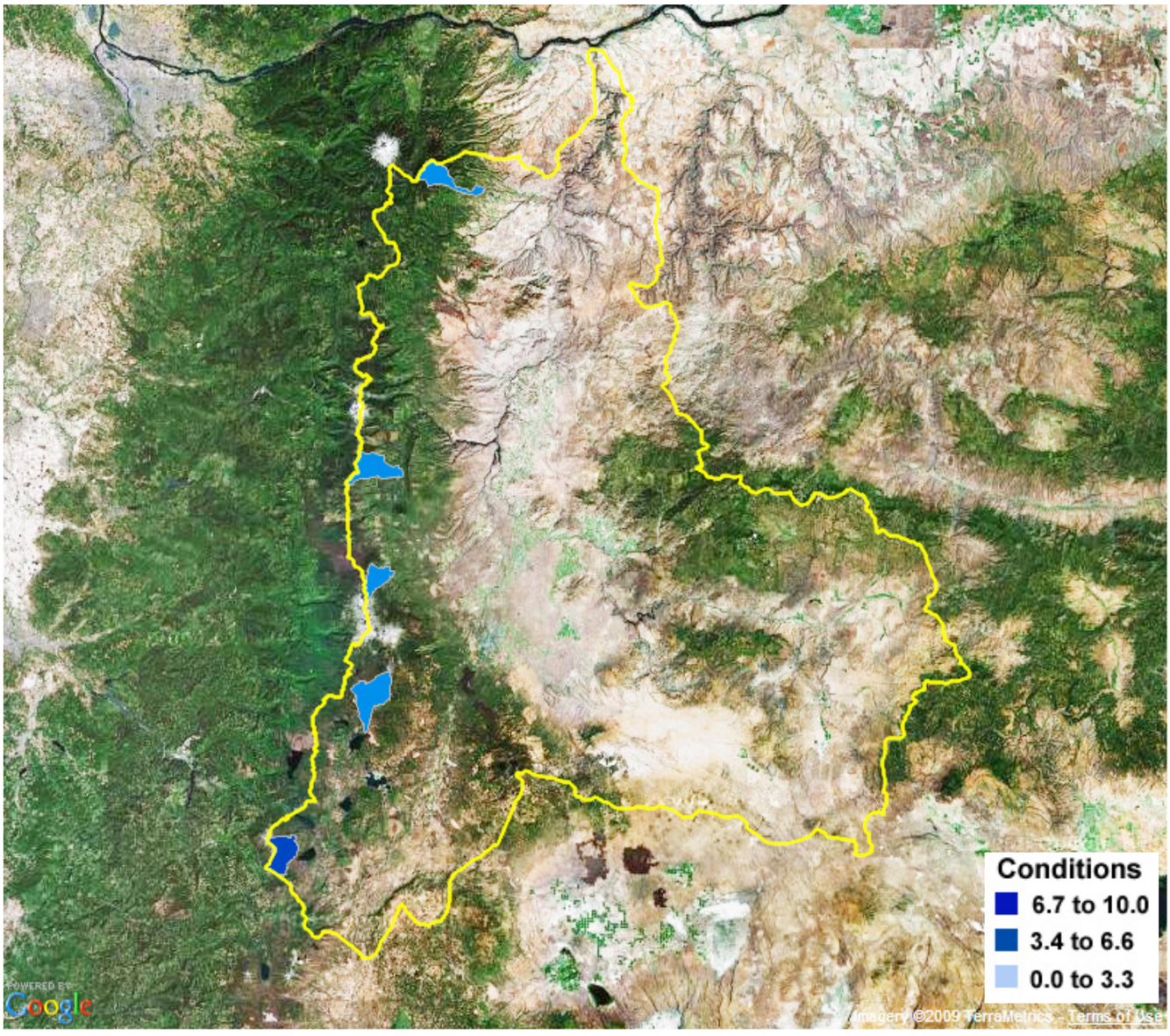
There are no wildlife projects in this subbasin.

2007 Hatchery Releases and Returns to Hatcheries in the Deschutes Subbasin

Hatchery/Acclimation Pond	Species	Release Goal/Released	Return Goal/Actual Return
Oak Springs	Cutthroat Trout	43,150/63,051	Not applicable
	Rainbow Trout	810,785/710,421	Not applicable
	Summer Steelhead	64,000/135,493	Fish released at other facilities
	Winter Steelhead	Unknown/1,870	Fish released at other facilities
Round Butte	Spring Chinook	320,000/336,023	/1,860
	Summer Steelhead	192,000/210,988	/6,076
Wizard Falls	Atlantic Salmon	12,000/2,198	Not applicable
	Brook Trout	65,050/82,849	Not applicable
	Cutthroat Trout	33,500/26,659	Not applicable
	Kokanee	539,500/462,045	Not applicable
	Rainbow Trout	776,200/875,074	Not applicable
Fall River	Rainbow Trout	180,175/177,228	Not applicable
Warm Springs	Spring Chinook	750,000/	700/
Total			

Columbia Plateau—South

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



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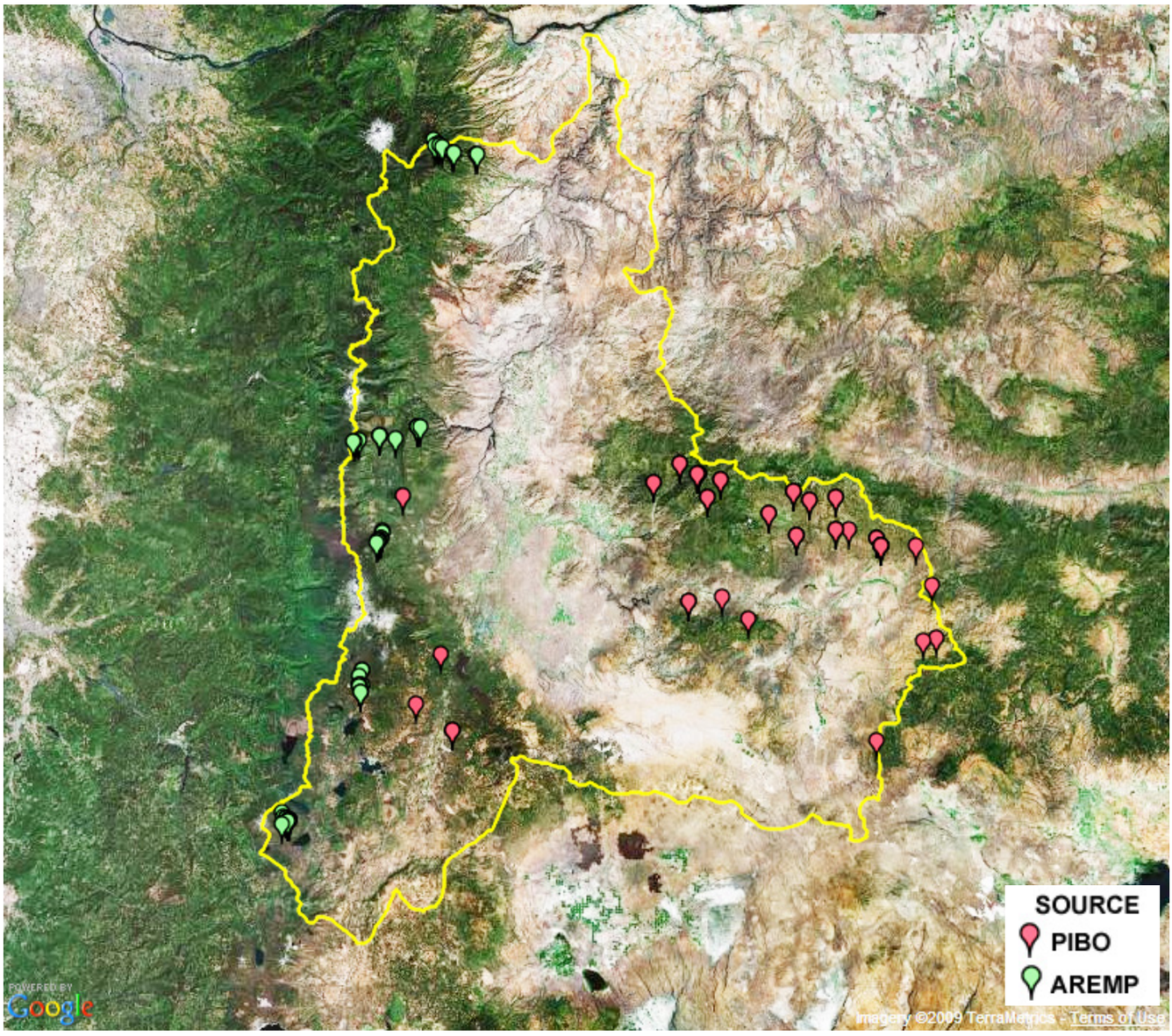
Subbasin: Deschutes

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



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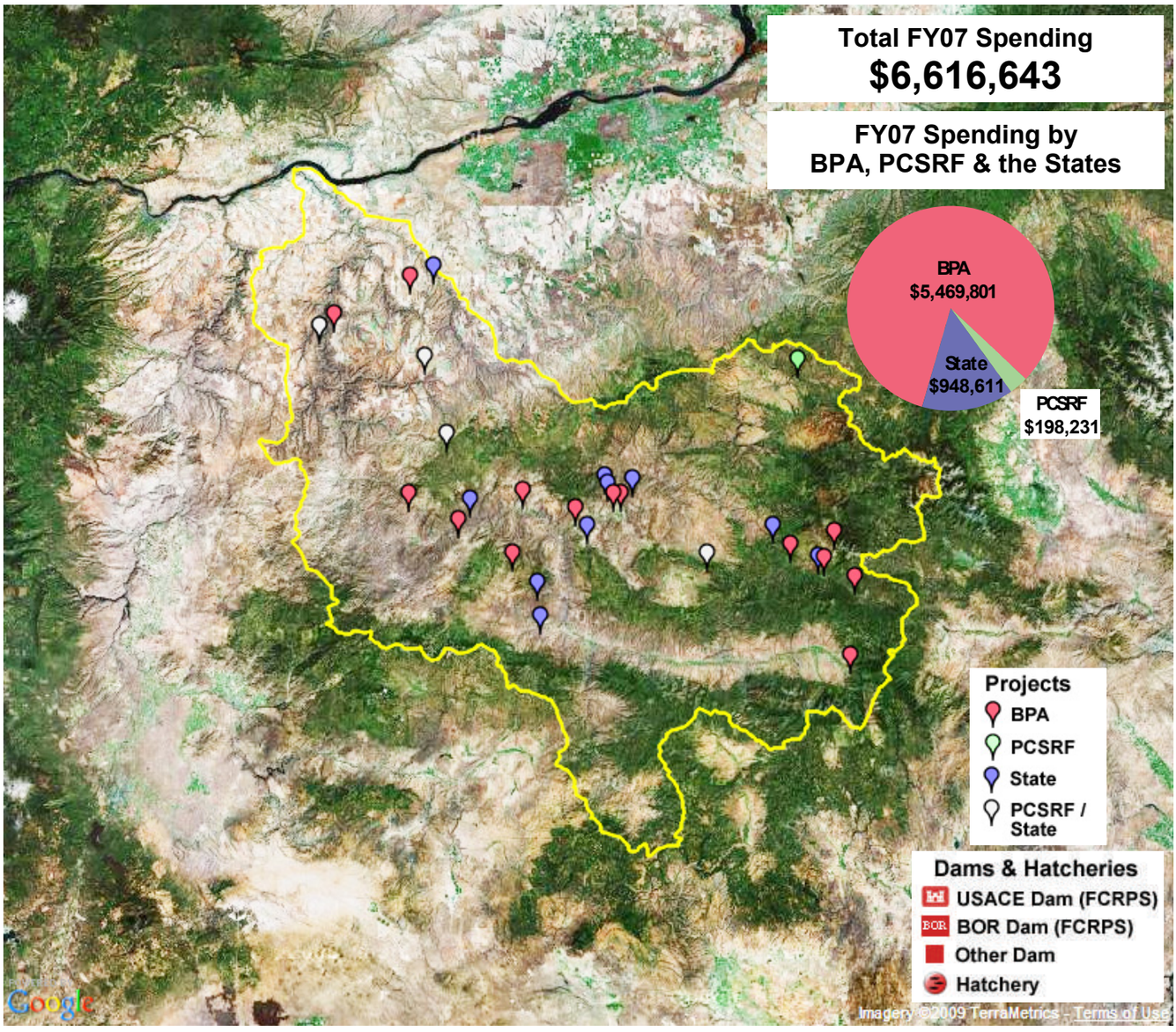
Columbia Plateau—South



In the John Day River Subbasin, summer steelhead, spring Chinook salmon, bull trout, redband trout, and west-slope cutthroat trout have been identified as focal species. Steelhead and bull trout are also listed as threatened under the federal Endangered Species Act (ESA). Steelhead in the subbasin are part of the Mid-Columbia River Distinct Population Segment (DPS), and bull trout are within the John Day Recovery Unit. Recovery criteria for a steelhead DPS do not necessarily require that all populations achieve viability (extinction risk = low) prior to de-listing. Recovery plan criteria for Mid-Columbia River steelhead specify that the North Fork population must remain highly viable, and the Lower Mainstem population must become viable. Either the Middle Fork or the Upper Mainstem population must become viable, with the other population being maintained. The South Fork population must also be maintained. A higher standard of broad-sense recovery requires that all populations become highly viable. Recovery criteria for bull trout vary among recovery units. Little is known about the status of redband and westlope cutthroat trout in the subbasin.

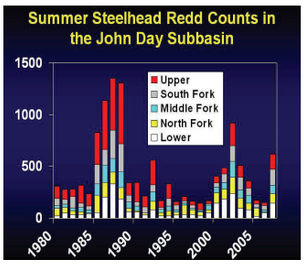
Subbasin: John Day

Key Factors Limiting John Day River Subbasin Focal Species[1,7,8]						
Factors for Decline/Limiting Factors/ Threats		**Species/Race, and Life-Stage Most Affected**				
		Spring Chinook	**Summer Steelhead**	**Bull Trout**	**Redband Trout**	**Westslope Cuthroat Trout**
Habitat	Floodplain Connectivity and Function	Juveniles	Fry, summer parr, winter parr			
	Channel Structure and Complexity	Juveniles	Fry, summer parr, winter parr	Juveniles, adults	Juveniles	Juveniles
	Riparian Areas and LWD Recruitment	Juveniles	Fry, summer parr, winter parr	Juveniles, adults	Juveniles	Juveniles
	Stream Flow	Eggs, juve-niles	Eggs, fry, summer parr, winter parr	All	All	All
	Water Quality	Eggs, juve-niles	Eggs, fry, summer parr, winter parr	All	All	All
	Fish Passage		All	Juveniles, adults		
Hydro	Mainstem Columbia River Hydropower-related Adverse Effects	Juveniles	Fingerling through year-ling			
Hatchery	Hatchery Fish Interbreed-ing With Wild Fish		Adult Spawn-ers			

BPA FY 2008 Habitat Project Accomplishments in the John Day Subbasin[8]			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Instream	Plant vegetation, remove vegetation	25 miles	27.40 stream miles treated
	Lease land	85.78 miles	49.16 miles protected
	Install pipeline	1.0 mile	1.0 miles of primary stream im-proved
	Install pipeline	1.0 mile	1.0 miles of total stream reach improved
	Remove/install diversion, install fish passage structure	43.7 miles	52.6 habitat miles accessed
	Remove/install diversion	2 screens	2 screens addressed
	Increase instream habitat complexity, remove vegetation	15.90 miles	16.15 stream miles treated
	Increase instream habitat complexity	40 structures	40 structures installed
	Install fish screen	42 cfs	97 cfs diversion flow
	Install pipeline	0.5 cfs	0.5 cfs water flow conserved
	Install pipeline	0.5 acre-feet	0.5 acre-feet water conserved
Riparian-Upland	Install fence	23 mile	16.75 miles of fence installed
	Lease land	755.8 acres	819.6 acres protected
	Conduct controlled burn, plant vegetation, remove vegetation, upland erosion and sedimentation control	1,378.6 acres	1,100.8 acres treated
Riparian	Plant vegetation, remove vegetation	25 miles	27.40 miles planted
	Lease land	85.78 miles	49.16 miles protected

Columbia Plateau—South

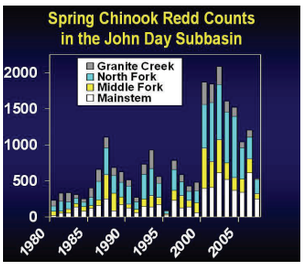
Steelhead



Summer

ESA Listing Status: Threatened
ESU: Mid Columbia
MPG: John Day River
Populations: Upper Mainstem, South Fork, Middle Fork, North Fork, Lower Mainstem
Recovery Plan Criteria: Upper Mainstem or Middle Fork = 1,000 natural adults, other must be maintained; North Fork must remain highly viable (currently 1,740 natural adults); Lower Mainstem = 2,250 natural adults; South Fork must be maintained[1]
Subbasin Plan Objective: Average run size of 49,000 fish to the John Day[7]
Status:
Upper Mainstem: 145 redds,
South Fork: 159 redds,
Middle Fork: 82 redds,
North Fork: 91 redds,
Lower Mainstem: 143 redds,
(all 2007)[4d]
Wild Juvenile Production:
Upper Mainstem = 23,264;
South Fork = 10,598;
Middle Fork = 14,784 (2006-07)[7a]

Chinook



Spring

***ESA Listing Status*:** None
ESU: Mid Columbia
Subbasin Plan Objective: Average run size of 20,000 adults and jacks to the John Day[7]
Status: 537 redds (2007)[4e]
Wild Juvenile Production: 40,615 (2006-07)[10]

Recovery Status of ESA-Listed Steelhead in the John Day River Subbasin[1]

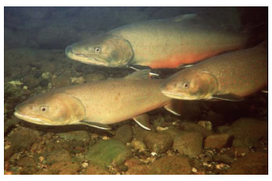
Population	Abundance Threshold	Mean Abundance (1996-2005)	Major Spawning Areas Occupied	Growth Rate (1980-2005)	Recruits/Spawner (1979-1998)	Current Viability
Upper Mainstem	1,000	524 (1994-2003)	5 of 5	0.99	2.14	Moderate
South Fork	500	259	3 of 3	0.98-0.99	2.06	Moderate
Middle Fork	1,000	756	2 of 2	1.00-1.10	2.45	Moderate
North Fork	1,500	1,740	8 of 8	1.00	2.41	Very High
Lower Mainstem	2,250	1,800	11 of 11	1.00-1.01	2.99 (1980-1998)	Moderate

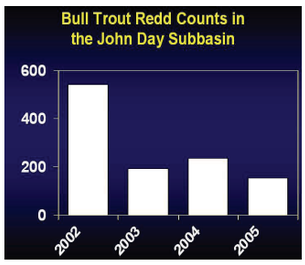
2007 Hatchery Releases and Returns to Hatcheries in the John Day Subbasin

There are no hatcheries in the John Day Subbasin.

Subbasin: John Day

Bull Trout





ESA Listing Status: Threatened
Core Area: John Day River (Within John Day River Recovery Unit)
Local Populations: North Fork (7 populations), Middle Fork (3 populations), Upper Mainstem (2 populations)
Draft Recovery Plan Criteria: 5,000 individuals distributed among 12 or more local populations[8]
Status: 154 redds in the subbasin (2005)[7,8,11]
Abundance, Trend, Threat, and Risk Ranks (Middle Fork John Day Core):
Abundance = Unknown
Short-term Trend = Increasing
Threat = Substantial, imminent
Risk = At
Abundance, Trend, Threat, and Risk Ranks (North Fork John Day Core):
Abundance = Unknown
Short-term Trend = Increasing
Threat = Substantial, imminent
Risk = At
Abundance, Trend, Threat, and Risk Ranks (Upper mainstem John Day Core):
Abundance = 1-50
Short-term Trend = Increasing
Threat = Moderate, non-imminent
Risk = At

Redband Trout

***ESA Listing Status*:** Species of Concern
Population: John Day
Biological Objective: None[7]
Status: Unknown (abundant in most headwater areas)

Westslope Cutthroat Trout

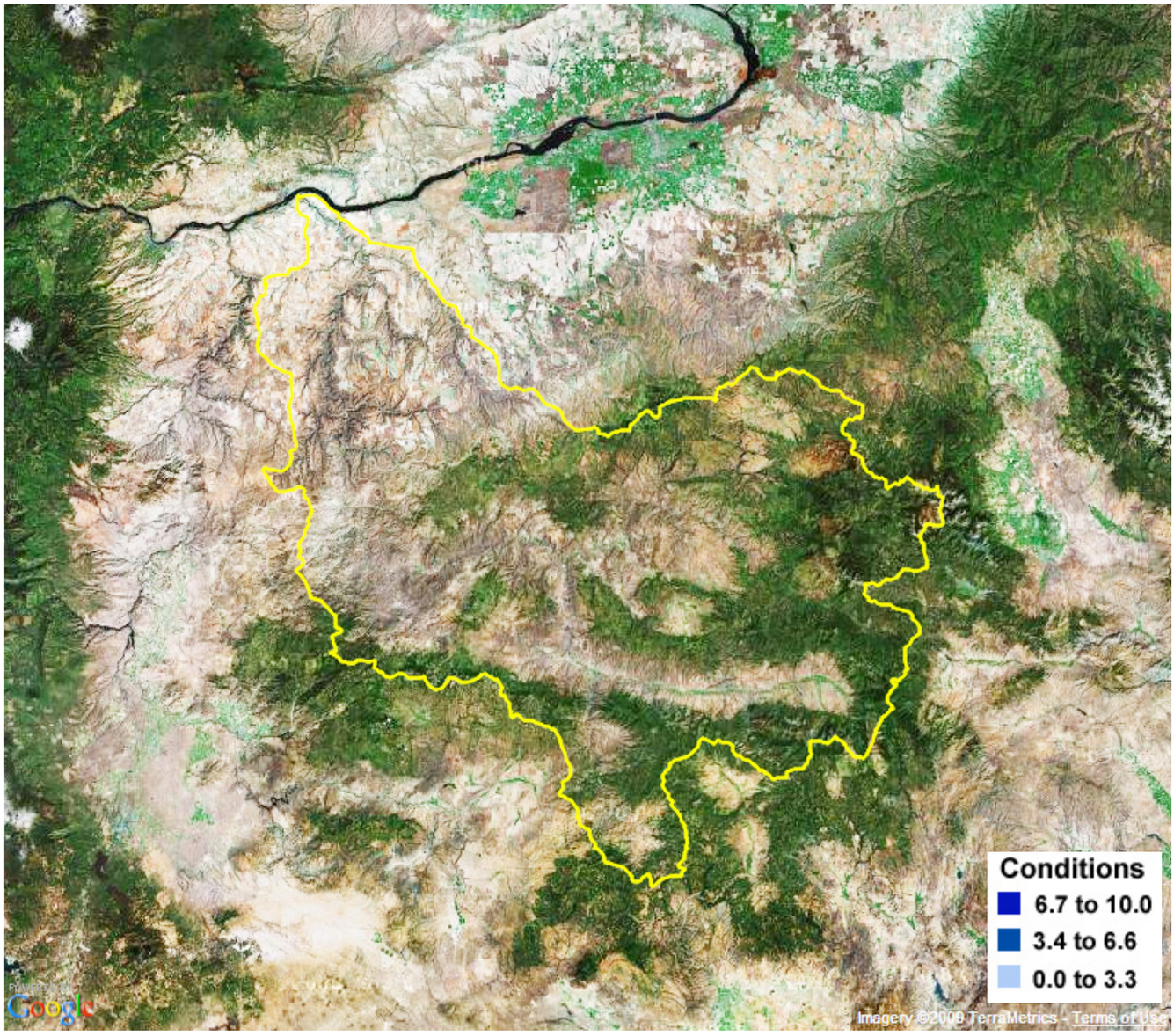
***ESA Listing Status*:** :Species of Concern
Biological Objective: None[7]
Status: Unknown (1,229 of 2,622 historically occupied stream miles are currently occupied)[7]

BPA-Funded Wildlife Projects in the John Day Subbasin

Project	Sponsor	Acres	HU	Habitat Type
Pine Creek Conservation Area	Confederated Tribes of the Warm Springs Reservation of Oregon	33,557	19,610	Shrub-steppe, interior grasslands

Columbia Plateau—South

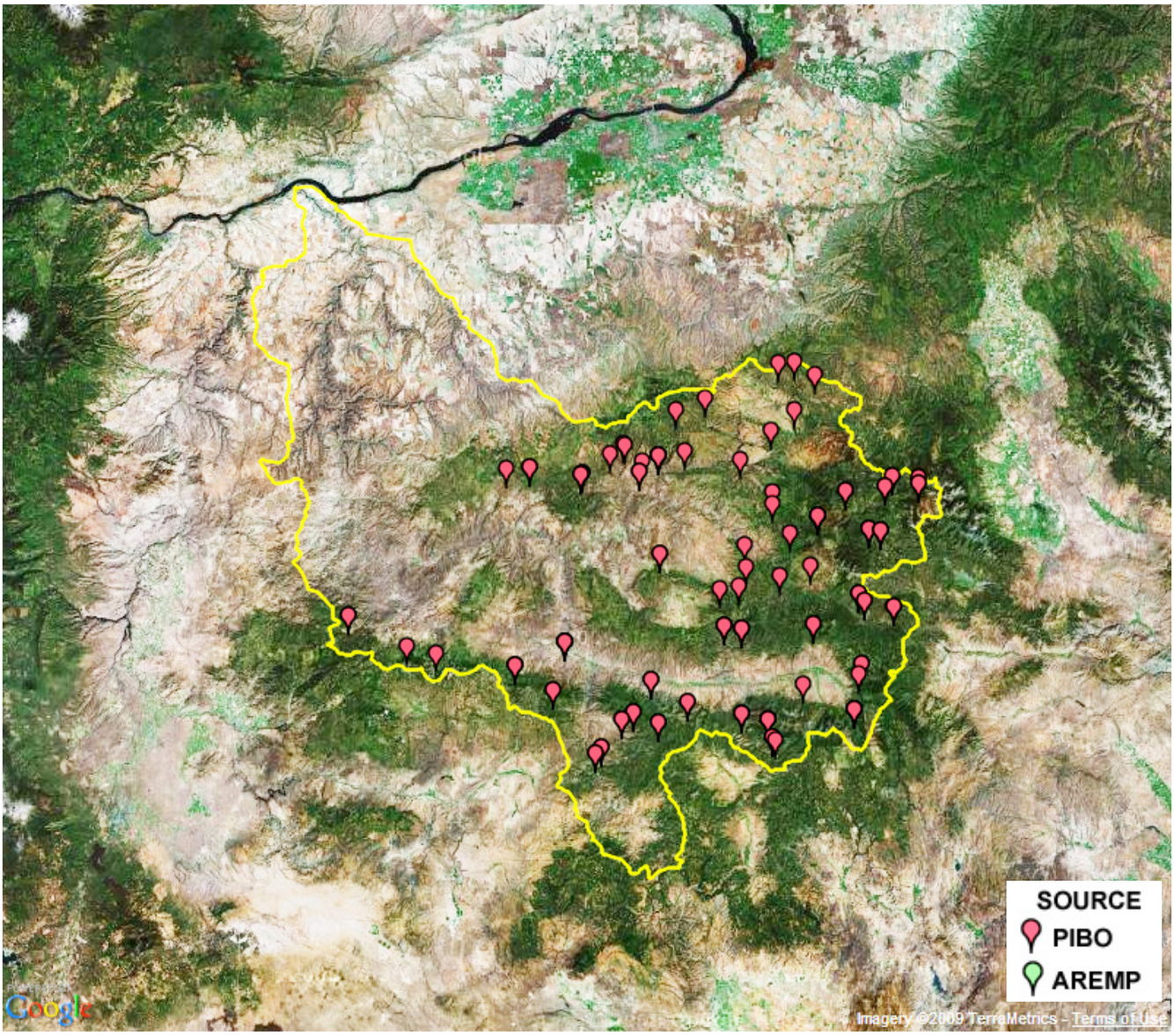
Watershed Conditions for National Forest and Bureau of Land Management Lands in the John Day Subbasin



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: John Day

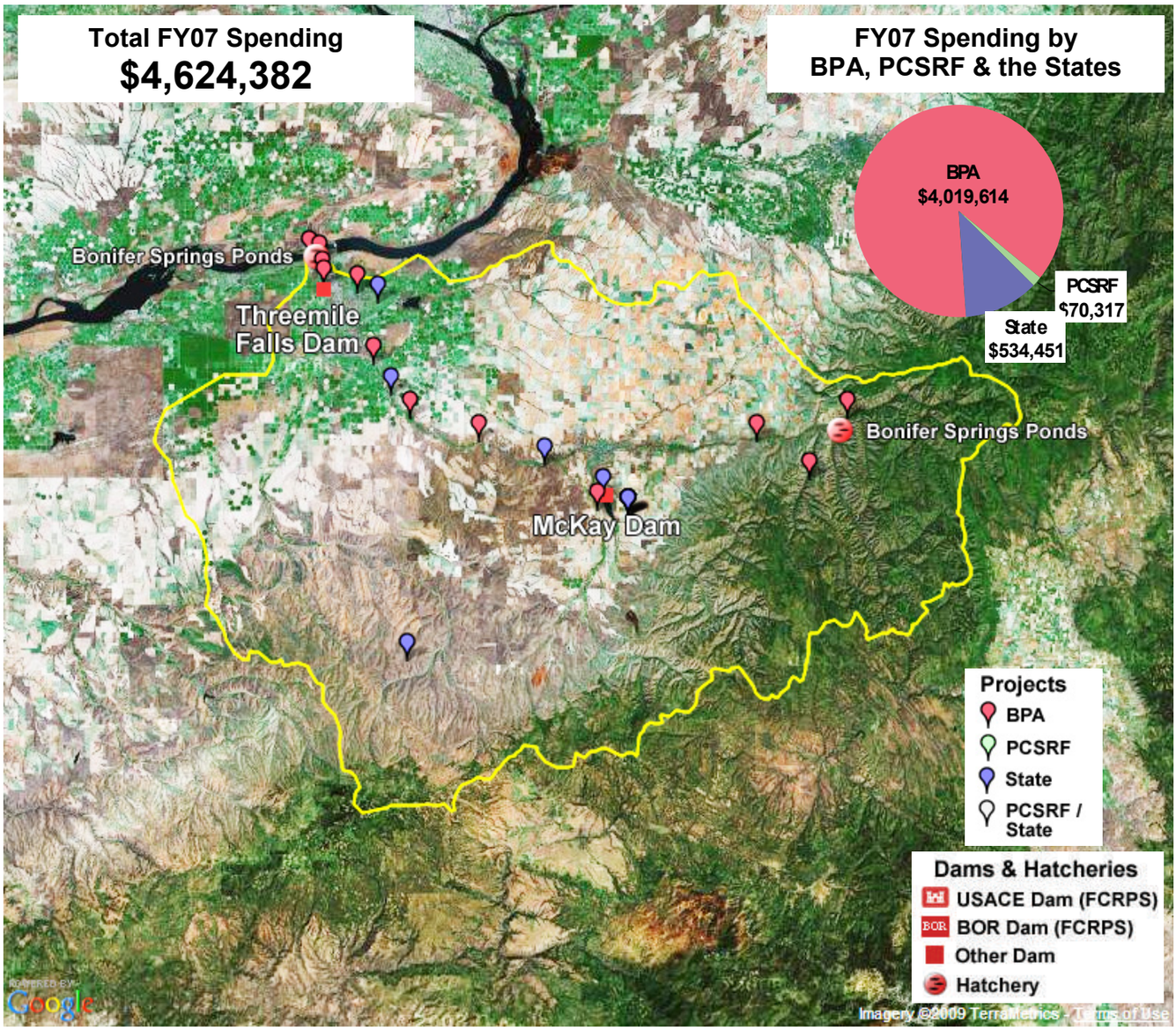
Stream Inventory Sites on National Forest and Bureau of Land Management Lands in the John Day Subbasin



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]

Columbia Plateau—South



In the Umatilla River Subbasin, summer steelhead, Chinook salmon (both spring and fall runs), coho salmon, and bull trout have been identified as focal species. Steelhead and bull trout are also listed as threatened under the federal Endangered Species Act (ESA). Steelhead in the subbasin are part of the Mid-Columbia River Distinct Population Segment (DPS), and bull trout are within the Umatilla/Walla Walla Recovery Unit. Recovery criteria for a steelhead DPS do not necessarily require that all populations achieve viability (extinction risk = low) prior to de-listing; however, the recovery plan for Mid-Columbia River steelhead has specified that the Umatilla population must achieve viability. A higher standard of broad-sense recovery requires that the population become highly viable. Recovery criteria for bull trout vary among recovery units. Chinook and coho salmon runs are rebuilding, but have no ESA status.

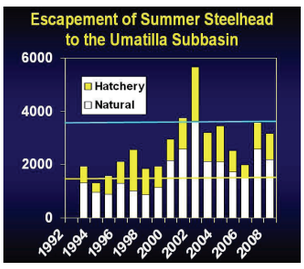
Subbasin: Umatilla

Key Factors Limiting Umatilla River Subbasin Focal Species[1,12,13]						
Factors for Decline/Limiting Factors/ Threats		**Species/Race, and Life-Stage Most Affected**				
		Spring Chinook	**Fall Chinook**	**Coho**	**Summer Steelhead**	**Bull Trout**
Habitat	Channel Structure and Complexity	Eggs, juveniles	Eggs, juveniles	Eggs, juveniles	Fry, summer parr, winter parr	Juveniles, adults
	Riparian Areas and LWD Recruitment					Juveniles, adults
	Stream Flow	Eggs, juveniles	Eggs, juveniles	Eggs, juveniles	Eggs, fry, summer parr, winter parr	All
	Water Quality	Eggs, juveniles	Eggs, juveniles	Eggs, juveniles	Eggs, fry, summer parr, winter parr	All
	Fish Passage	Adults	Adults	Adults	All	
Hydro	Mainstem Columbia River Hydropower-related Adverse Effects	Smolts	Smolts	Smolts	Smolts	
Hatchery	Hatchery Fish Interbreeding With Wild Fish				Adult Spawners	
Harvest	Mortality from Targeted Fishery		Adults	Adults		

BPA FY 2008 Habitat Project Accomplishments in the Umatilla Subbasin[8]			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Instream	Increase instream habitat complexity	18 miles	36 stream miles treated
	Acquire water instream	3 miles	3 miles of primary stream improved
	Acquire water instream	3 miles	3 miles of total stream reach improved
	Increase instream habitat complexity	20 structures	10 structures installed
	Acquire water instream	0.5 cfs	0.5 cfs water flow conserved
	Acquire water instream	130.5 acre-feet	130.5 acre-feet water conserved
	Remove/breach dam, install fish passage structure	45 miles	13 habitat miles accessed
Riparian-Upland	Install fence	3.25 miles	3.25 miles of fence installed
	Lease land	11,219 acres	11,226 acres protected
	Plant vegetation, remove vegetation	647 acres	925 acres treated
Riparian	Plant vegetation, remove vegetation	0.52 miles	0.52 miles planted
	Lease land	7 miles	7.2 miles protected

Columbia Plateau—South

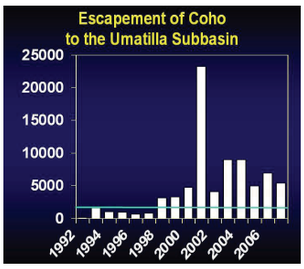
Steelhead



Summer

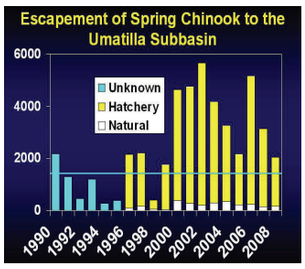
ESA Listing Status: Threatened
ESU: Mid Columbia
MPG: Umatilla/Walla Walla Rivers
Population: Umatilla
***Recovery Plan Criteria*:** 1,500 natural adults[1]
Subbasin Plan Objective: 3,610 natural adults[12]
Status: 2,191 natural adults and 961 hatchery adults returning to the river mouth (2007)[14]
Wild Juvenile Production:

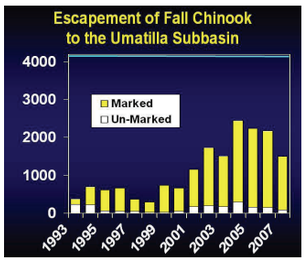
Coho



***ESA Listing Status*:** None
***ESU*:** None
***Subbasin Plan Objective*:** 1,568 natural adults[12]
***Status*:** 5,375 adults (natural and hatchery combined) returning to the river mouth (2007)[14]
Wild Juvenile Production:

Chinook





Spring

ESA Listing Status: None
ESU: Mid Columbia
Subbasin Plan Objective: 1,702 natural adults[12]
Status: 173 natural adults and 1,861 hatchery adults returning to the river mouth (2008)[14]
Wild Juvenile Production:

Fall

ESA Listing Status: None
ESU: Mid Columbia
Subbasin Plan Objective: 4,192 natural adults[12]
Status: 76 un-marked adults and 1,416 marked adults returning to the river mouth(2007)[14]
Wild Juvenile Production:

Recovery Status of ESA-Listed Steelhead in the Umatilla River Subbasin[1]

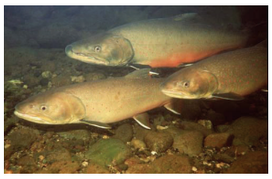
Population	Abundance Threshold	Mean Abundance (1995-2004)	Major Spawning Areas Occupied	Growth Rate (1980-2004)	Recruits/Spawner (1981-2000)	Current Viability
Umatilla River	1,500	1,472	8 of 13	0.99-1.04	1.50	Moderate

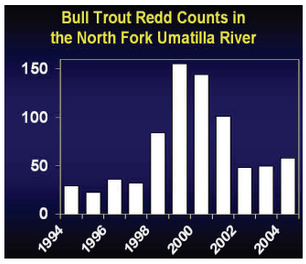
2007 Hatchery Releases and Returns to Hatcheries in the Umatilla Subbasin

Hatchery/Acclimation Pond	Species	Release Goal/Released	Return Goal/Actual Return
Minthorn Springs	Summer Steelhead	50,000/53,606	
Imeques	Spring Chinook	810,00/1,107,036	
Thornhollow	Fall Chinook	780,000/736,899	
Pendelton	Coho	1,500,000/1,510,214	
	Summer Steelhead	50,000/43,725	
Total			

Subbasin: Umatilla

Bull Trout





ESA Listing Status: Threatened
Core Area: Umatilla River (Within Umatilla-Walla Walla Recovery Unit)
Local Populations: North Fork Umatilla, South Fork Umatilla, North Fork Meacham Creek
Draft Recovery Plan Criteria: 500-5,000 adults distributed among three local populations[13]
Status: 133 adults in North Fork Umatilla (estimated to be ≥85% of Umatilla population) (2004)[12,13,15]

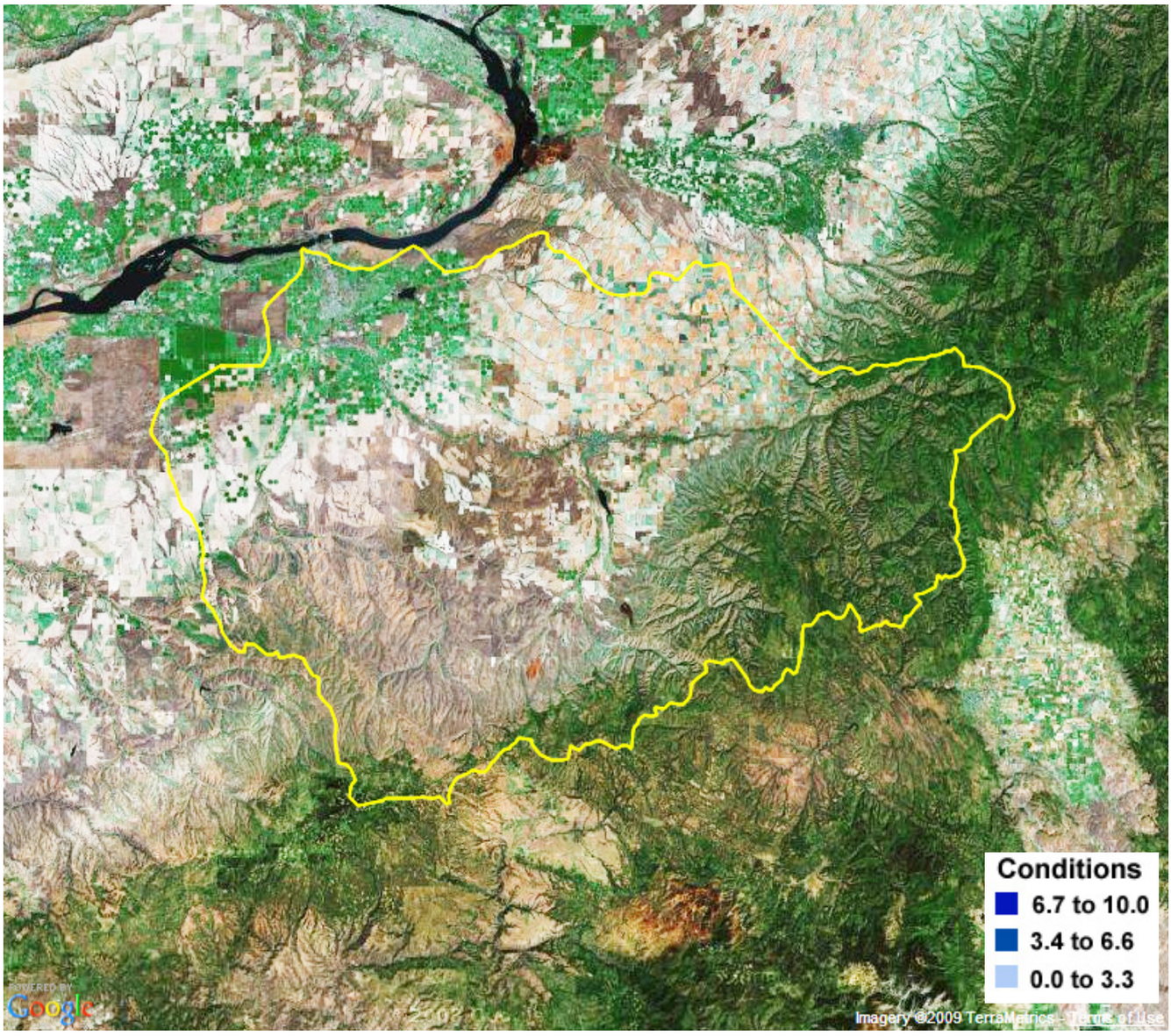
Ab*undance, Trend, Threat, and Risk Ranks (Umatilla Core):*
Abundance = 50-250
Short-term Trend = Unknown
Threat = Moderate, imminent
Risk = At

BPA-Funded Wildlife Projects in the Umatilla Subbasin

Project	Sponsor	Acres	HU	Habitat Type
Protect and Enhance the Wanaket Wildlife Mitigation Area	Umatilla Confederated Tribes	2,817	3,084	Shrub-steppe, grassland, emergent wetlands, piraian tree/shrub/ herbaceous, sand/cobble/ mud
Iskuulpa Watershed Project	Umatilla Confederated Tribes	5,936	4,568	Riparian shrub and hardwood, sand/gravel/ cobble/mud, grasslands, coniferous forests

Columbia Plateau—South

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



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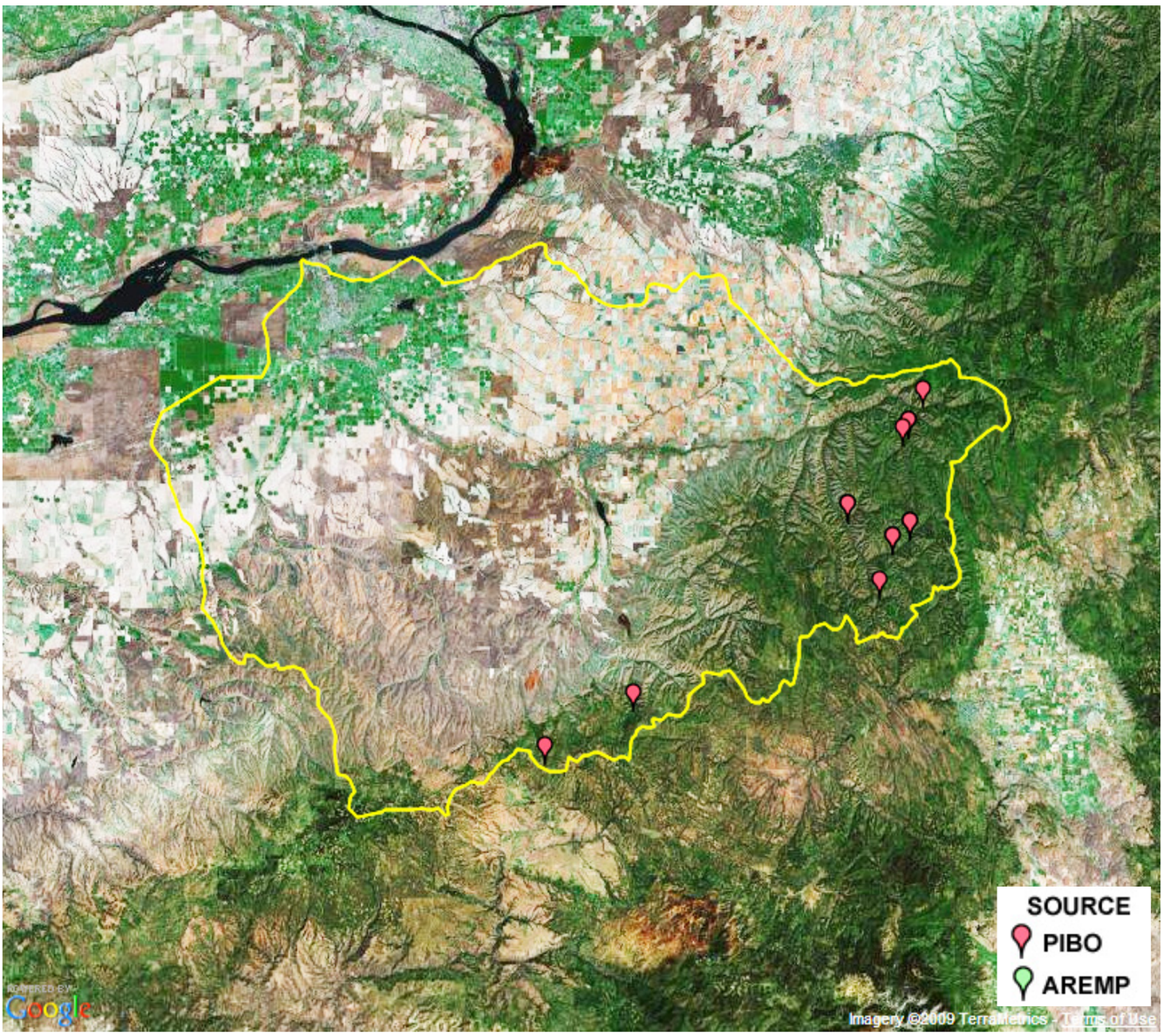
Subbasin: Umatilla

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



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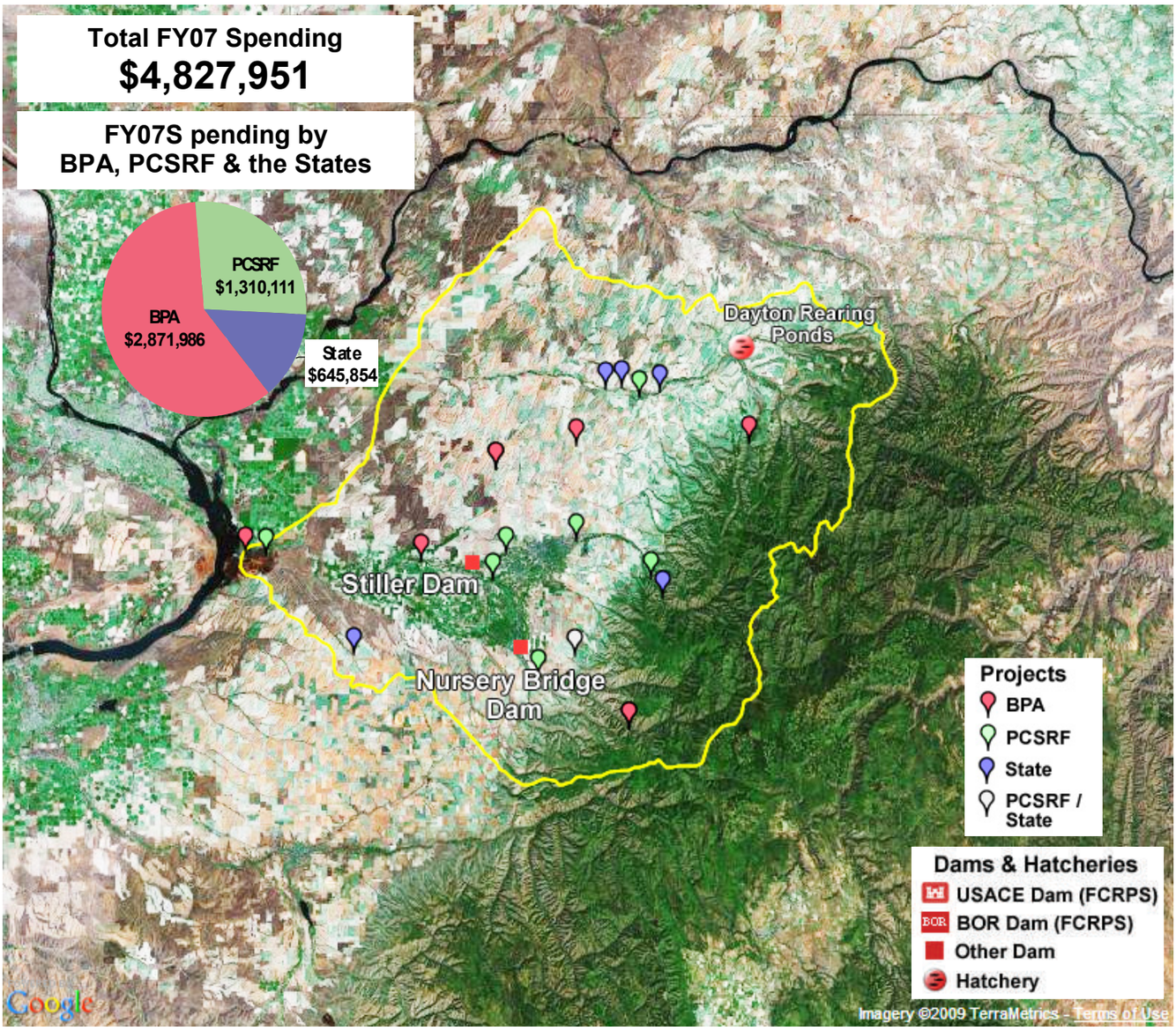
Columbia Plateau—South



In the Walla Walla River Subbasin, summer steelhead, spring Chinook salmon, 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 River Distinct Population Segment (DPS), and bull trout are within the Umatilla-Walla Walla Recovery Unit. Recovery criteria for a steelhead DPS do not necessarily require that all populations achieve viability prior to de-listing. The recovery plan for Mid Columbia River steelhead has specified that either the Walla Walla population or the Touchet population must achieve viability. The other population must be maintained. A higher standard of broad-sense recovery requires that both populations become highly viable. Recovery criteria for bull trout vary among recovery units. Spring Chinook salmon have been functionally extirpated but have been recently reintroduced.

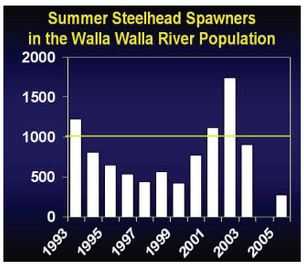
Subbasin: Walla Walla

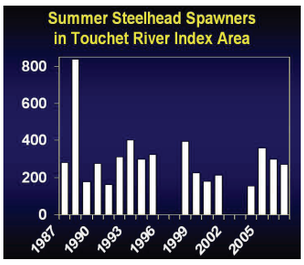
Key Factors Limiting Walla Walla River Subbasin Focal Species[1,13,16]				
Factors for Decline/Limiting Factors/Threats		**Species/Race, and Life-Stage Most Affected**		
		Spring Chinook	**Summer Steelhead**	**Bull Trout**
Habitat	Floodplain Connectivity and Function	Juveniles	Fry, summer parr, winter parr	
	Channel Structure and Complexity	Juveniles	Fry, summer parr, winter parr	Juveniles, adults
	Riparian Areas and LWD Recruitment			Juveniles, adults
	Stream Flow	All	Eggs, fry, summer parr, winter parr	All
	Water Quality	All	Eggs, fry, summer parr, winter parr	All
	Fish Passage	Adults	Summer parr, winter parr, adults	Juveniles, adults
Hydro	Mainstem Columbia River Hydropower-related Adverse Effects	Smolts	Smolts	
Hatchery	Hatchery Fish Interbreeding With Wild Fish		Adult Spawners	Juveniles, adults
	Competition with Hatchery Fish of Other Species			Juveniles, adults
Introduced Species	Competition with Introduced Species			Juveniles, adults

BPA FY 2008 Habitat Project Accomplishments in the Walla Walla Subbasin[8]			
Habitat Zone	**Project-type**	**Planned Value**	**FY 2008 Accomplishment (Actual Value)**
Instream	Acquire water instream	1.2 cfs	0.8 cfs water protected
	Acquire water instream	157.3 acre-feet	65.8 acre-feet water protected
	Install fish passage structure	100 miles	100 habitat miles accessed
	Acquire water instream	5.1 miles	5.1 miles of primary stream improved
	Acquire water instream	10.1 miles	10.1 miles of total stream reach improved
	Increase instream habitat complexity	0.1 miles	0.1 stream miles treated
	Increase instream habitat complexity	1 structure	6 structures installed
	Install fish screen	12 cfs	12 cfs diversion flow
Riparian-Upland	Install fence	1.5 mile	1.5 miles of fence installed
	Improve road	4 miles	4 miles treated
	Plant vegetation, remove vegetation	2,078 acres	193 acres treated
Riparian	Plant vegetation	0.25 miles	0.25 miles planted

Columbia Plateau—South

Steelhead





Summer

ESA Listing Status: Threatened
ESU: Mid Columbia
MPG: Umatilla/Walla Walla Rivers
Populations: Walla Walla, Touchet
***Recovery Plan Criteria*:** 1,000 natural adults for at least one population, the other must be maintained[1]
Subbasin Plan Objective: 4,600-5,600 total adult return: 3,000 natural and 1,600-2,600 hatchery (CTUIR objective only)[16]
Status:
Walla Walla: 905 natural spawners (2005)[1];
Touchet: 269 spawners in the index area (2007)[4f]
Wild Juvenile Production: 13,994 (2006)[17]

Chinook

Spring

ESA Listing Status: None
ESU: Mid Columbia
Subbasin Plan Objective: 3,000 natural and 2,500 hatchery adults (ODFW and CTUIR objective only)[16]

Status: Considered extirpated ; recently re-introduced
Wild Juvenile Production: 22,327 (2006)[17]

Recovery Status of ESA-Listed Steelhead in the Walla Walla River Subbasin[1]

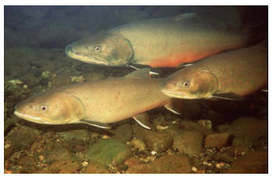
Population	Abundance Threshold	Mean Abundance (1996-2005)	Major Spawning Areas Occupied	Growth Rate	Recruits/Spawner	Current Viability
Walla Walla River	1,000	650	2 of 3	Unknown	1.34 (1993-2000)	Moderate
Touchet River	1,000	Unknown	2 of 2	Unknown	Unknown	Low

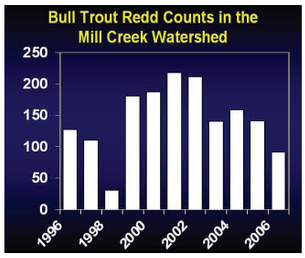
2007 Hatchery Releases and Returns to Hatcheries in the Walla Walla Subbasin

Hatchery/Acclimation Pond	Species	Release Goal/Released	Return Goal/Actual Return
Dayton Ponds	Summer Steelhead		/45
Total			

Subbasin: Walla Walla

Bull Trout





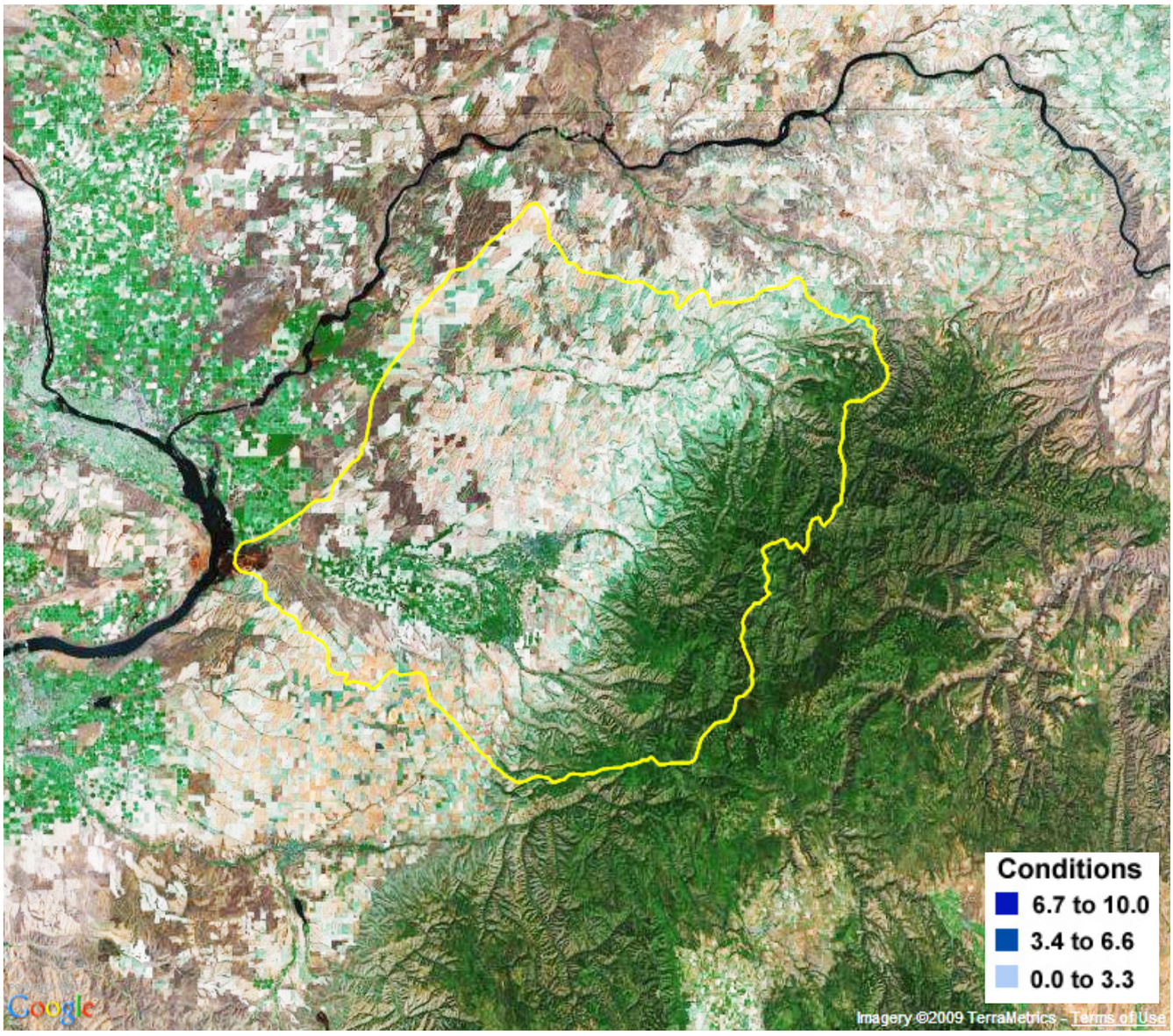
ESA Listing Status: Threatened
Core Area: Walla Walla River (Within Umatilla-Walla Walla Recovery Unit)
Local Populations: Upper Walla Walla, Mill Creek, Touchet River
Draft Recovery Plan Criteria: 3,000-5,000 adults distributed among three or more local populations[13]
Status: 91 redds in the Mill Creek Watershed (2006)[4g]
Abundance, Trend, Threat, and Risk Ranks (Walla Walla Core):
Abundance = 1,000-2,500
Short-term Trend = Stable
Threat = Moderate, imminent
Risk = At

BPA-Funded Wildlife Projects in the Walla Walla Subbasin

Project	Sponsor	Acres	HU	Habitat Type
Rainwater Wildlife Area	Umatilla Confederated Tribes	8,678	7,035	Riparian shrub and hardwood, sand/gravel/cobble/mud, grasslands, and coniferous forest

Columbia Plateau—South

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



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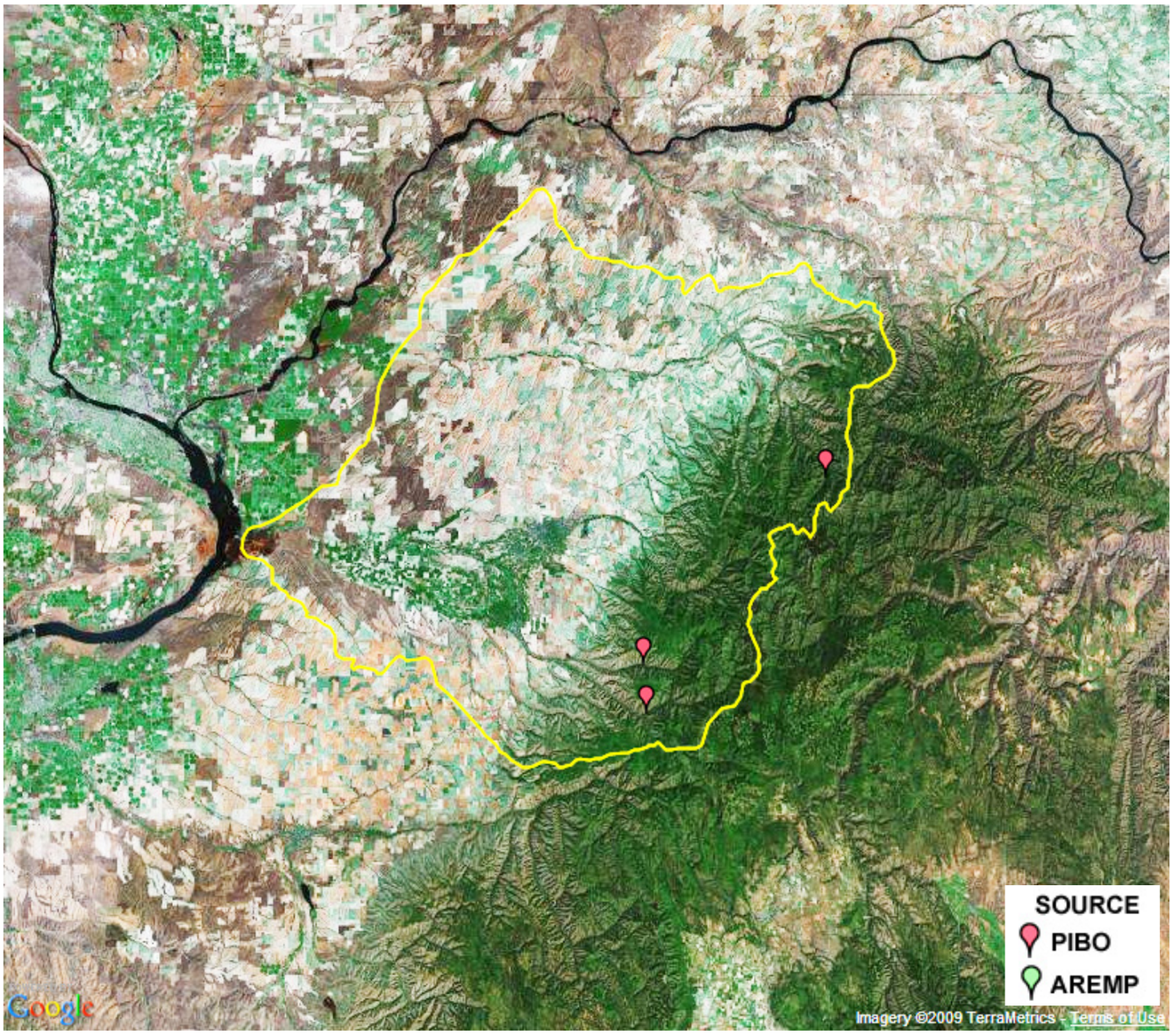
Subbasin: Walla Walla

Stream Inventory Sites on National Forest and Bureau of Land Management Lands in the Walla Walla 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]