



NMFS-SWR-HCD

Pilarcitos Creek Watershed

Area	Hydrologic Units	Calwater Subbasins ---	(Planning Watersheds)
18,485 Acres	18050006	220220001	Pilarcitos Creek (7323 acres)
7481 Hectares	4th Field HUC	220220002	Mills Creek (5331 acres)
29 Square Miles		220220003	Pilarcitos Lake (5831 acres)
	2202		
Location			
San Mateo County			

Species Potential	Miles of Streams with Species Present
Central California Coast Coho Santa Cruz Mountains Diversity Stratum - Dependent Population	<u>Coho</u> 0 CDFG, Coho Distribution, May 2007
Central California Coast Steelhead Santa Cruz Mountains Diversity Stratum - Potentially Independent Population	<u>Steelhead</u> 22 NOAA Fisheries, Critical Habitat Redesignation, 2005

Critical Habitat	
Central California Coast Steelhead	22 Miles of Stream
Central California Coast Coho	All accessible river reaches between Punta Gorda & San Lorenzo River including 2 San Francisco Bay streams: Arroyo Corte Madera del Presidio and Corte Madera Creek (64 FR 24049)

Miles of Waterway ^A	Miles	Number of Dams ^C
Naturally Occurring Waterways		15
Connector	0	4 - Impassable
Canal / Ditch	0	4 - Temporally impassable
Pipeline / Aquaduct	0	2 - Partially Impassable
Intermittent Stream	24	1 - Unknown passage status
Perennial Stream	27	4 - Not passage barrier
Artificial Path	3	

^AUSGS National Hydrography Dataset, High Resolution, 2004. 1:24,000

^CPassage Assessment Database, Pacific States Marine Fisheries Commission, 2005

USGS Gaging Stations ^B	Number of Barriers ^C
Pilarcitos Lake near Hillsborough USGS11162618	28
Pilarcitos Creek below Stone Dam near Hillsborough USGS11162620	15 Dams (xx Impassable) 13 Road Crossings (2 Impassable)

^BUS Environmental Protection Agency BASINS Project, 2001

^CPassage Assessment Database, Pacific States Marine Fisheries Commission, 2006

EPA Total Maximum Daily Load Classification (TMDL) ^I
None Defined

^IState Water Resources Control Board, 2003

Appropriated Waterways ^J
Pilarcitos Creek is a Fully Appropriated Stream

^JCalifornia State Water Resources Control Board, 1998.



Average Annual Precipitation^E

32.3 inches

Average Annual Precipitation Range^E

22.5 - 35"

^ECalifornia Mean Annual Precipitation Zones, 1900-1960, CA Department of Forestry, 1990**Roads^A**

Miles

Roads in Watershed

Primary Road or Highway

0

Secondary and connecting road, state highways

8

Local, neighborhood, and rural road, city street, unseparated

38

Vehicular trail, road passable only by 4WD vehicle, unseparated

2

Driveway or service road

0

Total Miles

49

Road Density

Miles of Roads per SqMi of Watershed

1.7

Miles of Roads per SqMi of 100m Riparian Buffer*

2.0

*Buffer is 100 meters on either side of the stream centerline

^AU.S. Census Bureau - Tiger 2000, 2002. 1:24,000**Slope^D**

Acres

Percent of watershed

Lands of 0-2 percent slope

647

3%

Lands of 2-4 percent slope

634

3%

Lands of 4-10 percent slope

1,126

6%

Lands of 10-15 percent slope

963

5%

Lands of 15-30 percent slope

4,243

23%

Lands of 30-60 percent slope

8,935

48%

Lands of 60-100 percent slope

1,930

10%

Lands of > 100 percent slope

8

0%

Elevation Range

0-2048 ft.

0-625 m

^DSlope derived from USGS 10 meter Digital Elevation Models (DEM's)**Vegetation^G**

Acres

Percent of watershed

Agriculture

909

5%

Annual grassland

1,614

9%

Barren

168

1%

Conifer Forest

Closed-Cone Pine- Cypress

10

0%

Douglas Fir

2,150

12%

Montane Hardwood-Conifer

30

0%

Redwood

40

0%

Unknown Conifer Type

741

4%

Hardwood Woodland

Coastal Oak Woodland

203

1%

Valley Foothill Riparian

79

0%

Other (Eucalyptus)

2

0%

Pasture

7

0%

Shrub

10,976

59%

Urban

1,342

7%

Water

124

1%

Wetland

77

0%

^GMulti-source Land Cover Data (2002 v2), CA Department of Forestry, 2002. 100 meter Grid

Erodability of Watershed^F	Acres	Percent of watershed
Ranking = 6	18,485	100%

^FDepartment of Conservation, Division of Mines and Geology; minimum mapping unit: approx. 8000 acres
Watersheds were rated based on slope, precipitation, and lithologic susceptibility to failure. Total erosion potential is based on a combination of the landslide potential, debris slide potential, and the surface erosion potential. Rating 0-10 [0 = Low slide potential, 10 = High slide potential]

Land Ownership^H	Acres	Percent of watershed
Private	17,080	92%
Local	3	0%
State (Parks)	1,403	8%

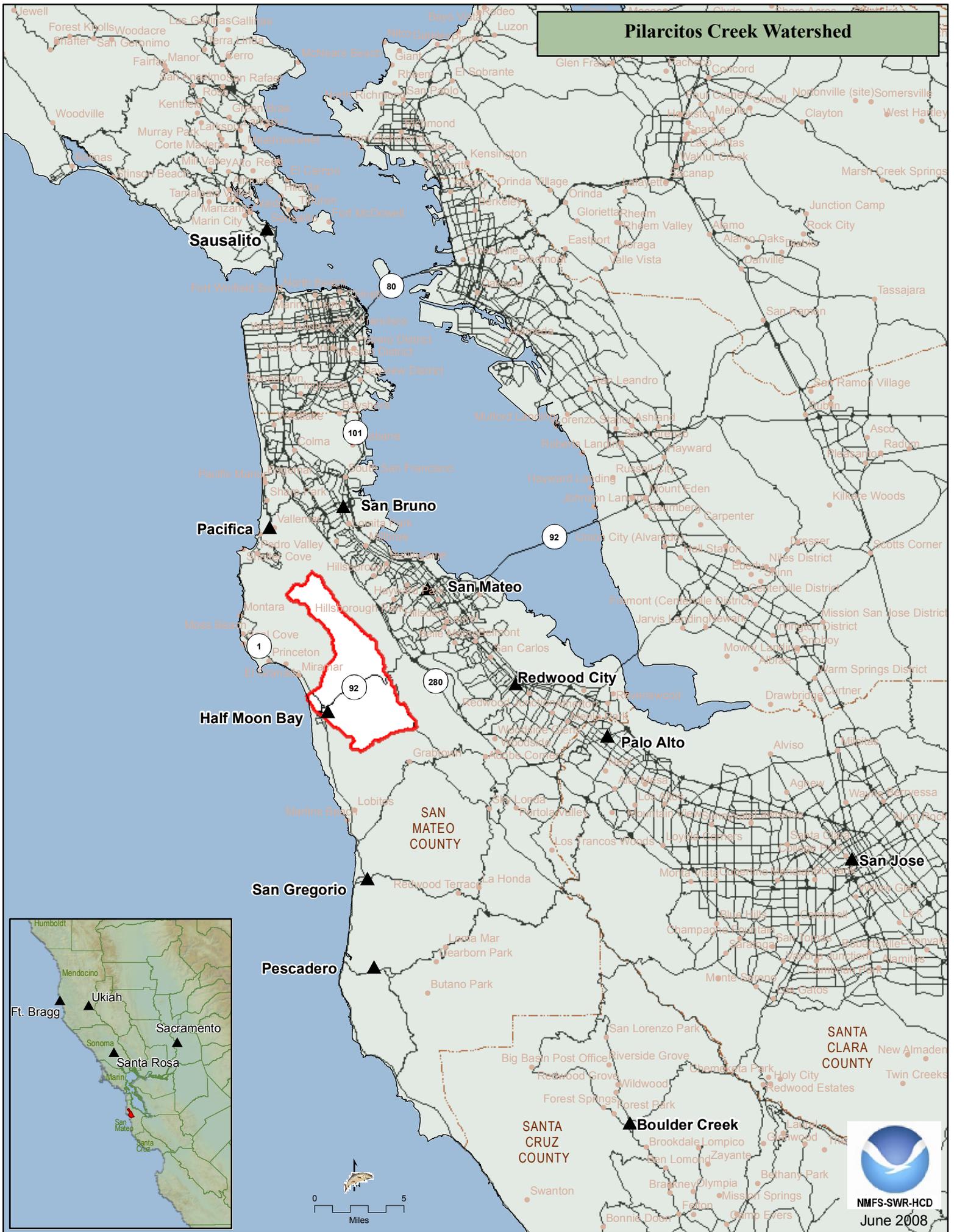
^HManagement Landscape, CA Department of Forestry, 2002

Population^I	Housing^I
Total Population within the watershed -- 5,655 People	Total Housing Units within the watershed -- 2,021 Houses
	Housing Density
	0 to Less than 1 Housing Unit / 160 Acres 78%
	1 Unit / 160 Acres to 1 Unit / 20 Acres 7%
	1 Unit / 20 Acres to 1 Unit / 5 Acres 9%
	1 Unit / 5 Acres to 2 Units / Acre 5%
	2 Units / Acres to Greater than or Equal to 5 Units / Acre 1%

^ICensus 2000 Block Data (Migrated), CA Department of Forestry, 2003



Pilarcitos Creek Watershed



Pilarcitos Creek Watershed



**Pilarcitos Creek Watershed
CalWater Planning Watersheds**



Pilarcitos Lake
5831

Pilarcitos Creek
7323

Mills Creek
5331



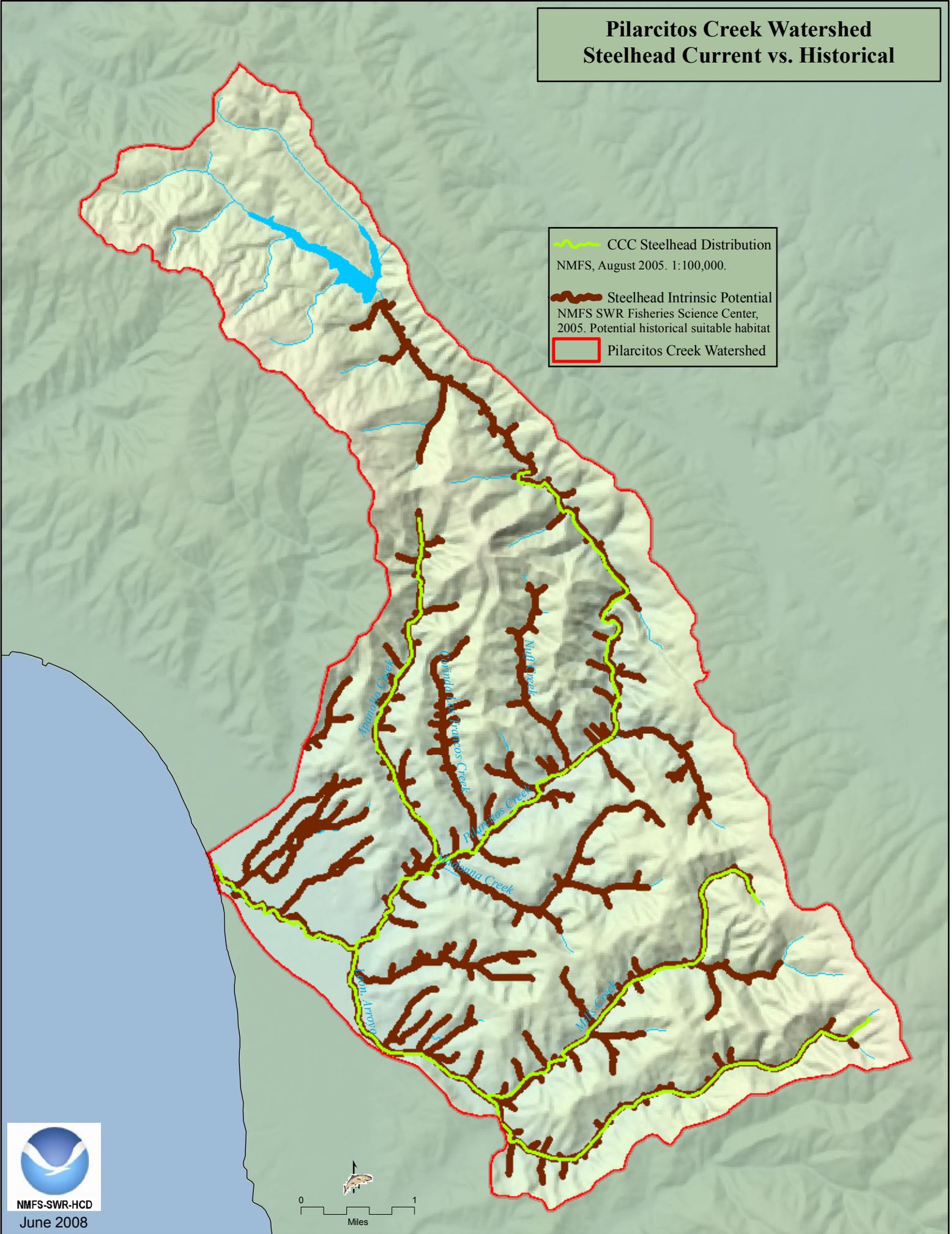
Pilarcitos Creek Watershed Fish Distribution and Critical Habitat

-  CCC Steelhead Distribution and Critical Habitat
National Marine Fisheries Service, August 2005. 1:100,000.
-  1:24,000 Streams
USGS National Hydrography Dataset, 2004. 1:24,000
-  Pilarcitos Creek Watershed



Pilarcitos Creek Watershed Steelhead Current vs. Historical

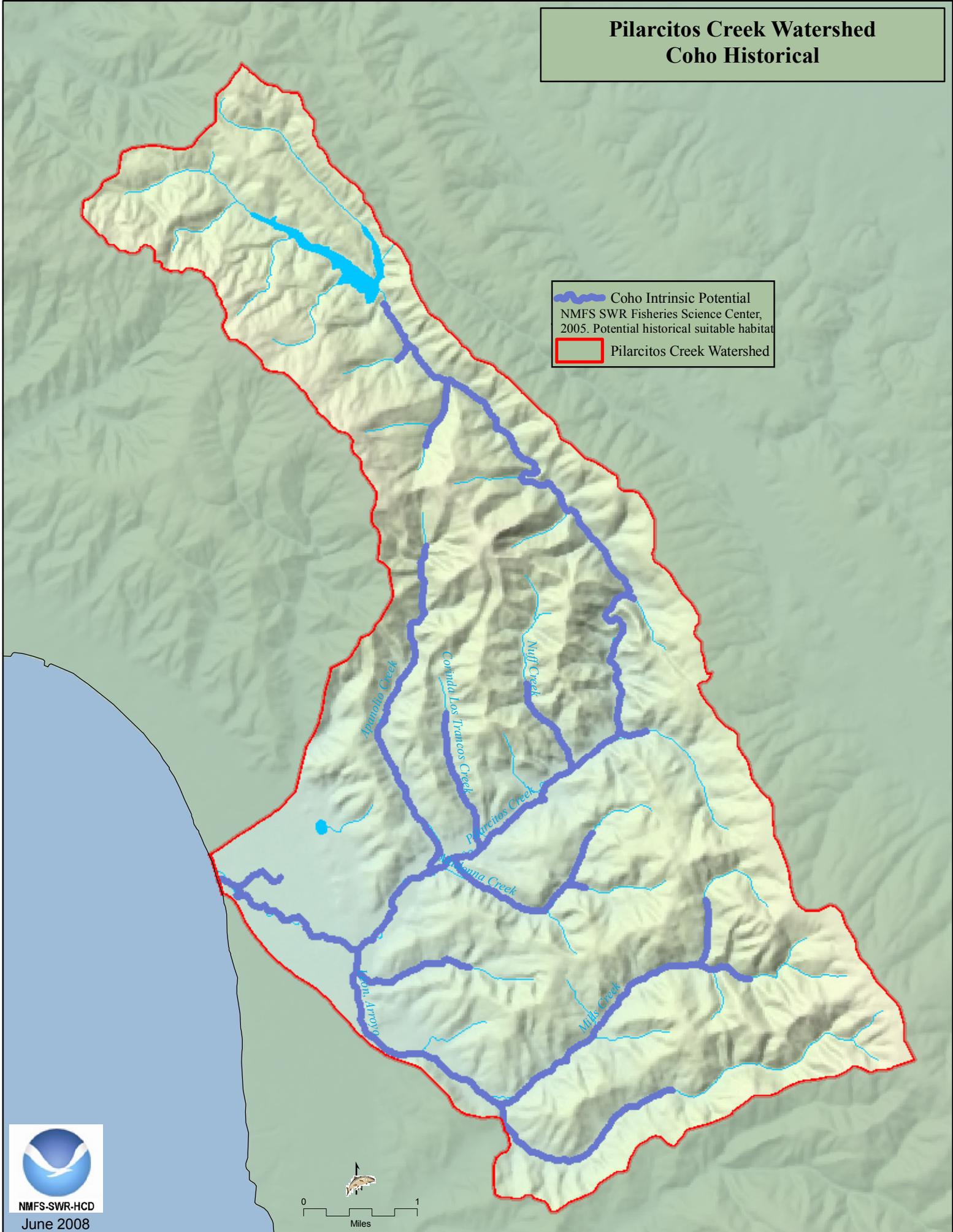
-  CCC Steelhead Distribution
NMFS, August 2005. 1:100,000.
-  Steelhead Intrinsic Potential
NMFS SWR Fisheries Science Center,
2005. Potential historical suitable habitat
-  Pilarcitos Creek Watershed



Pilarcitos Creek Watershed Coho Historical

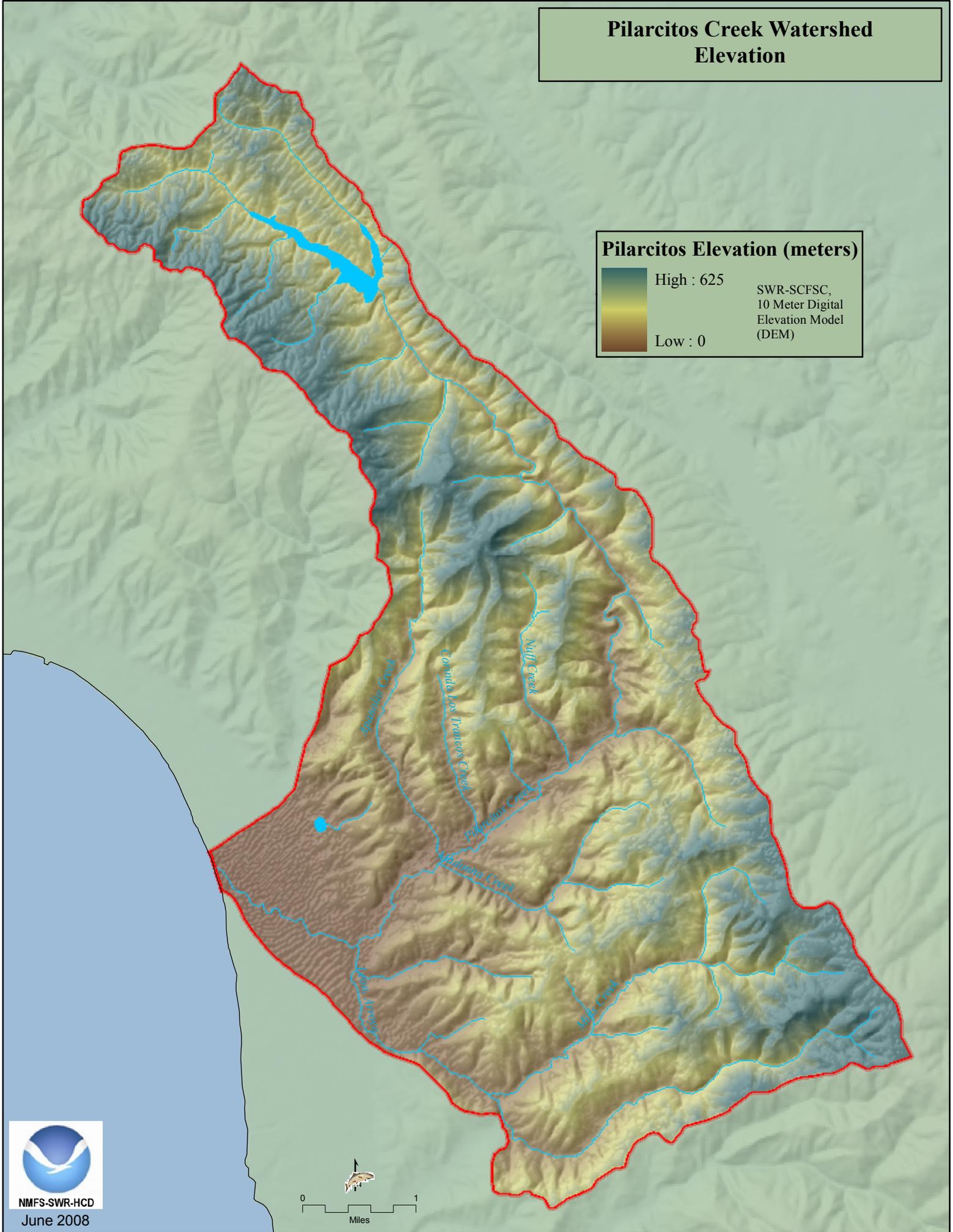
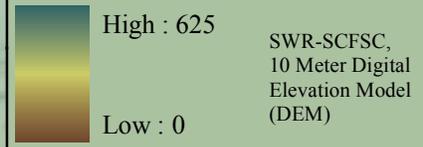
 Coho Intrinsic Potential
NMFS SWR Fisheries Science Center,
2005. Potential historical suitable habitat

 Pilarcitos Creek Watershed



Pilarcitos Creek Watershed Elevation

Pilarcitos Elevation (meters)



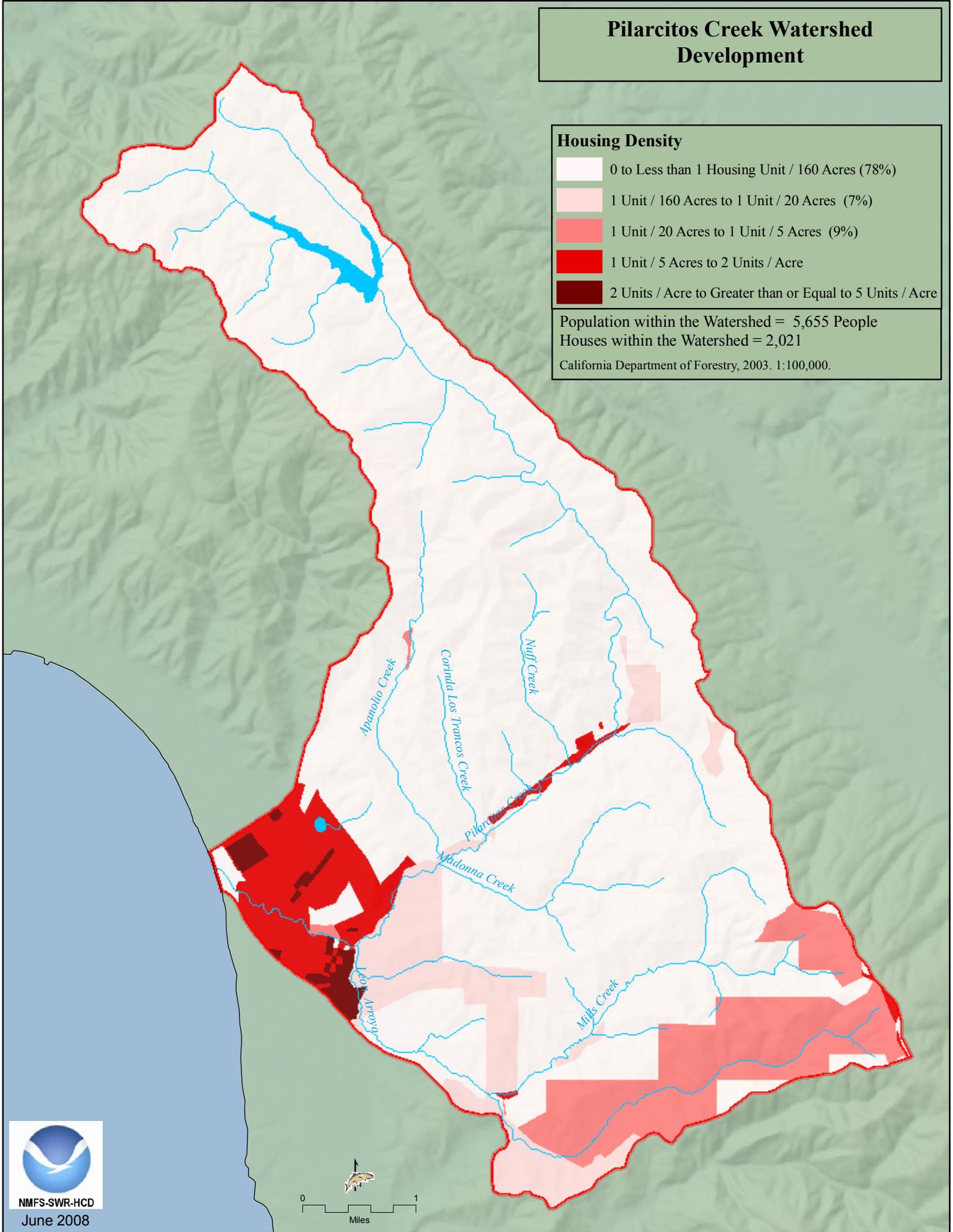
Pilarcitos Creek Watershed Development

Housing Density

- 0 to Less than 1 Housing Unit / 160 Acres (78%)
- 1 Unit / 160 Acres to 1 Unit / 20 Acres (7%)
- 1 Unit / 20 Acres to 1 Unit / 5 Acres (9%)
- 1 Unit / 5 Acres to 2 Units / Acre
- 2 Units / Acre to Greater than or Equal to 5 Units / Acre

Population within the Watershed = 5,655 People
Houses within the Watershed = 2,021

California Department of Forestry, 2003. 1:100,000.

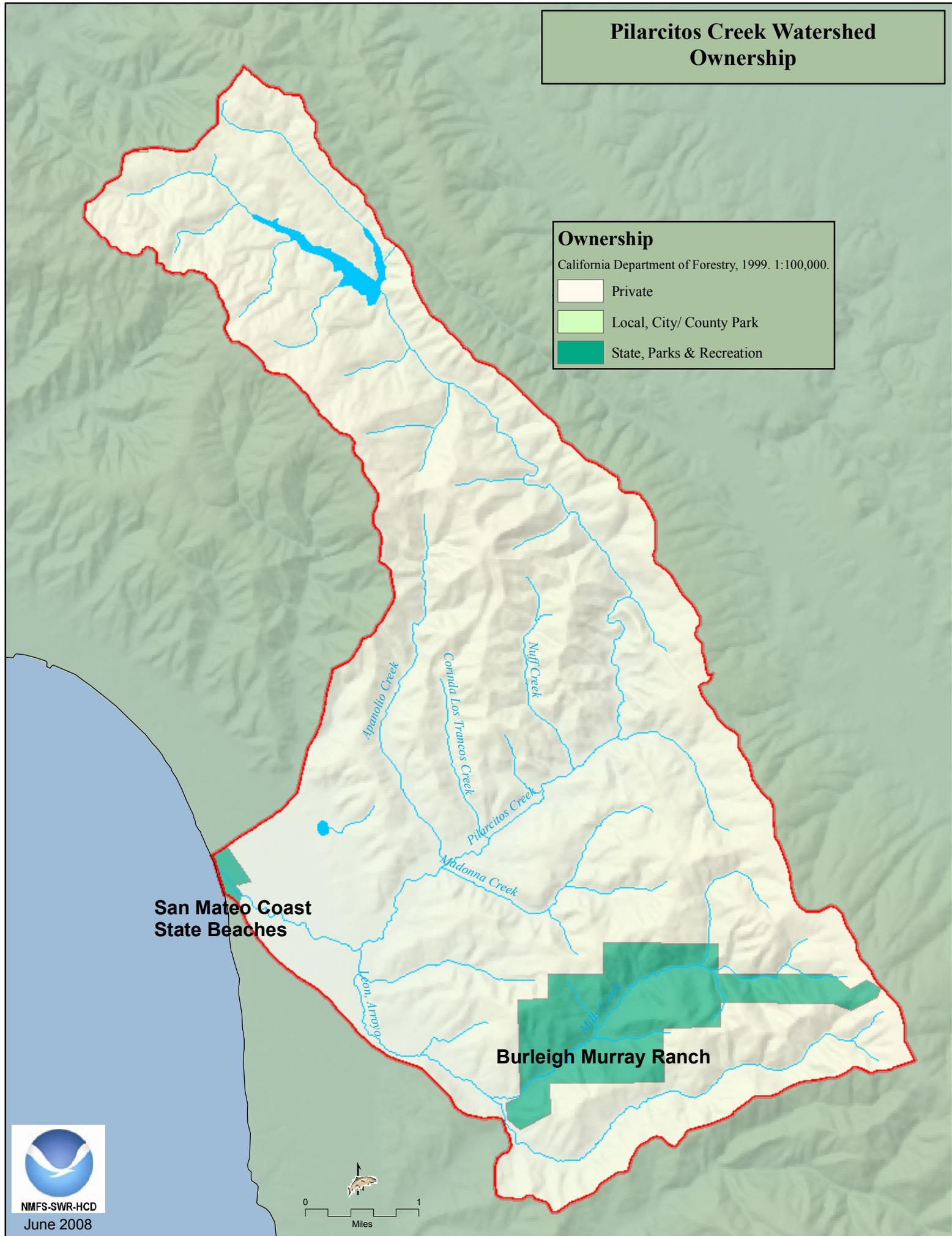


Pilarcitos Creek Watershed Ownership

Ownership

California Department of Forestry, 1999. 1:100,000.

- Private
- Local, City/ County Park
- State, Parks & Recreation



Pilarcitos Creek Watershed Road Density

~ Roads

U.S. Census Bureau - Tiger 2000, 2002. 1:24,000

Road Density (Miles of Road per Square Mile of Watershed)

0 - 1.0

1.1 - 2.0

2.1 - 3.1

Overall Watershed
Density = 1.7 Miles / SqMi



Pilarcitos Creek Watershed Road Density in the Riparian Corridor

— Road Segments within the 200 meter Riparian Corridor
U.S. Census Bureau - Tiger 2000, 2002. 1:24,000

— 1:24,000 Streams
USGS National Hydrography Dataset, 2004. 1:24,000

200 Meter Riparian Buffer (100 m on either side of stream centerline)

Overall Riparian Corridor Density = 2.0 Miles / SqMi of Corridor

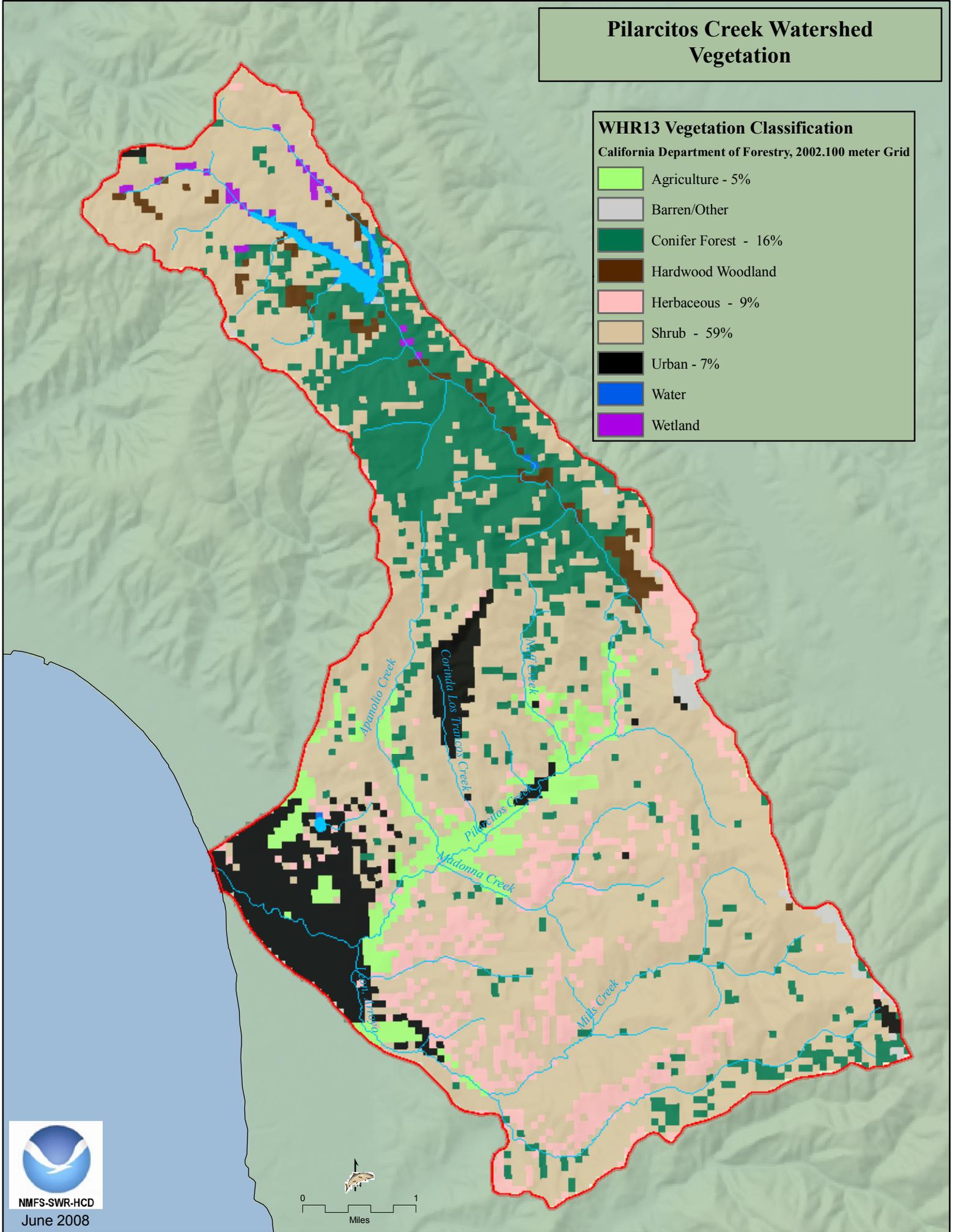


Pilarcitos Creek Watershed Vegetation

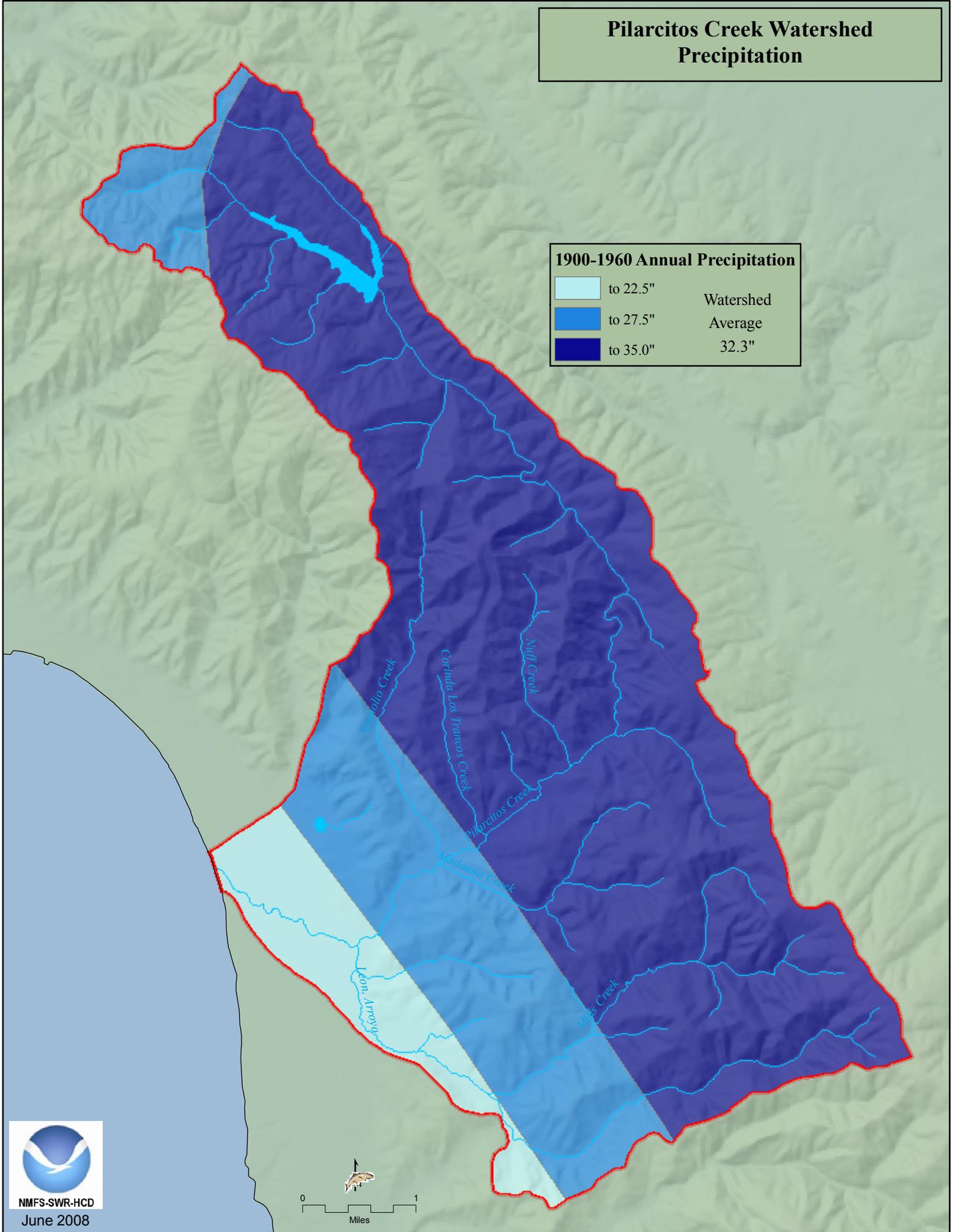
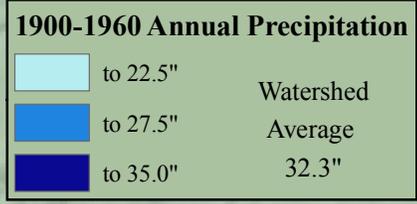
WHR13 Vegetation Classification

California Department of Forestry, 2002.100 meter Grid

-  Agriculture - 5%
-  Barren/Other
-  Conifer Forest - 16%
-  Hardwood Woodland
-  Herbaceous - 9%
-  Shrub - 59%
-  Urban - 7%
-  Water
-  Wetland



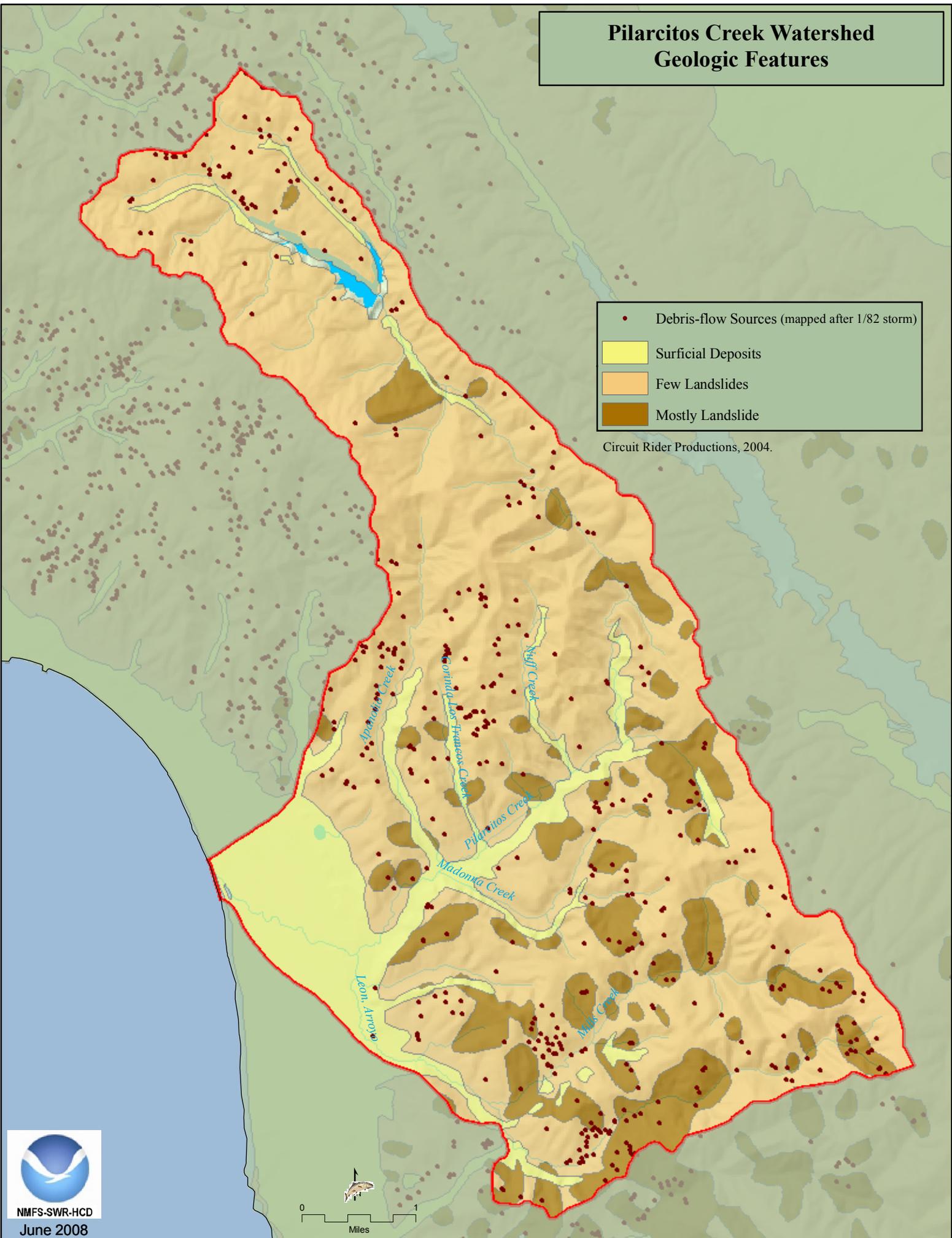
Pilarcitos Creek Watershed Precipitation



Pilarcitos Creek Watershed Geologic Features

- Debris-flow Sources (mapped after 1/82 storm)
- Surficial Deposits
- Few Landslides
- Mostly Landslide

Circuit Rider Productions, 2004.

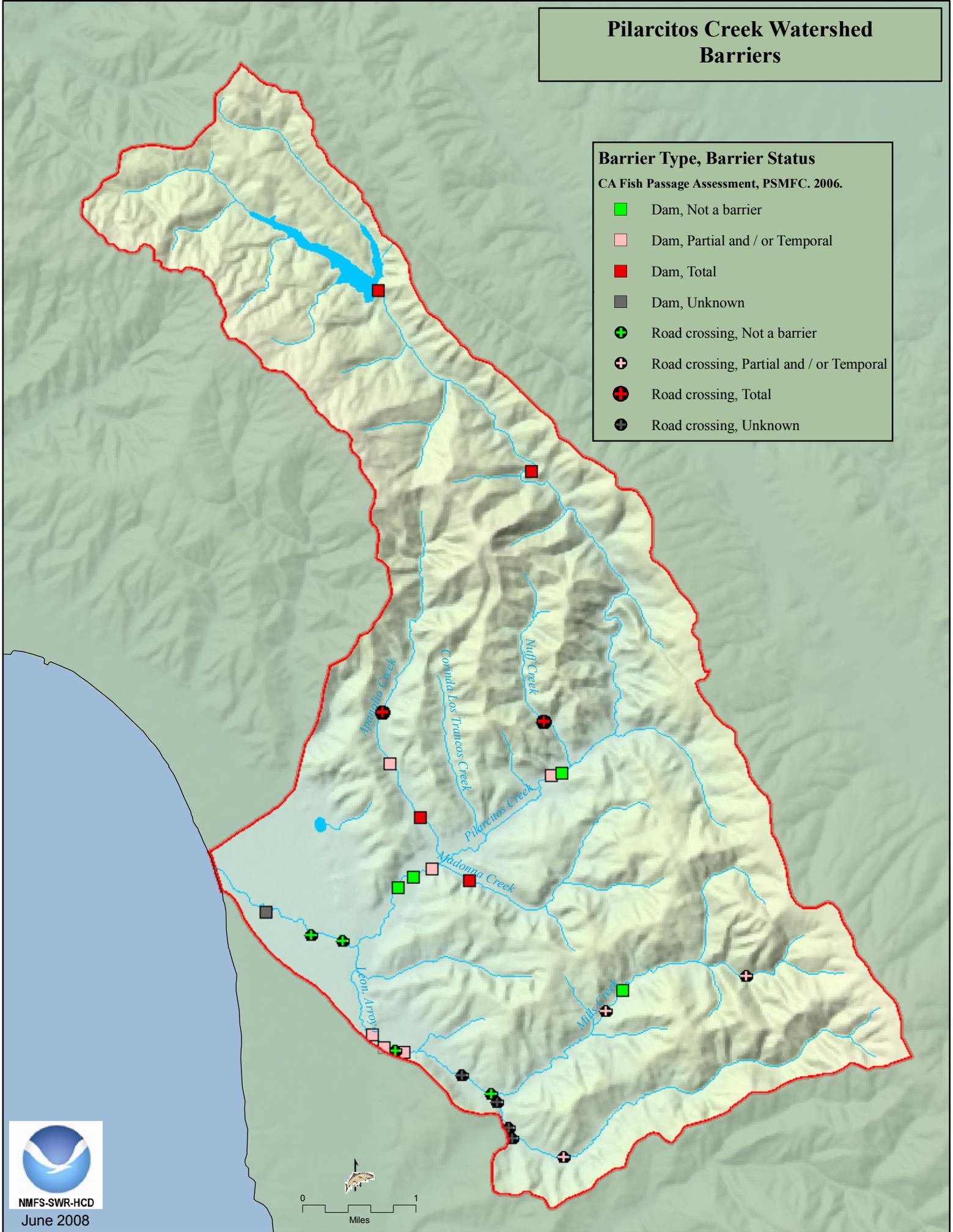


Pilarcitos Creek Watershed Barriers

Barrier Type, Barrier Status

CA Fish Passage Assessment, PSMFC, 2006.

- Dam, Not a barrier
- Dam, Partial and / or Temporal
- Dam, Total
- Dam, Unknown
- + Road crossing, Not a barrier
- + Road crossing, Partial and / or Temporal
- + Road crossing, Total
- + Road crossing, Unknown



Pilarcitos Creek Watershed Industrial Discharge / Gages / Mines

-  Mine
-  Hazardous & Solid Waste Site
-  USGS Streamgages

BASINS, USEPS, 2001

SAN MATEO DISPOSAL CO
HALFMOON BAY MAINTENANCE STATION
CALIFORNIA EVERGREEN NURSERY

P G&E HALF MOON BAY SERVICE CENTER
GREEN HOUSE CLEANERS
CURLEY AND RED'S BODY SHOP
BRASIL CROWN CLEANERS
EXXON SERVICE STATION NO 7-3753
EDWARD ANDREINI & SONS - and - ANDREINI BROS INC
HALF MOON BAY FIRE DEPT



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June 2008



Pilarcitos Creek Watershed Public Consultation Tracking System

● RMS / PCTS Record

Current as of May 9, 2008 (PCTS)
and Jan. 25, 2008 (RMS).
Only those records with a
Latitude and Longitude
entered appear here

Complaint from
concerned citizen
on Equestrian Trail
through Pilarcitos
Lagoon on State
Parks & Rec. lands

San Mateo State Route 92 Slide Repair

Arroyo Leon
Agriculture Dams

Dam removal on Mills Creek,
Burleigh Murray State Park



NMFS-SWR-HCD
June 2008



References

Watersheds

calwater_ver2_2
vector digital data
California Watersheds (CALWATER 2.2)
California Department of Forestry and Fire
Protection
1:24,000
1999
<http://www.ca.nrcs.usda.gov/features/calwater/>

Distribution

Coho_Distribution
vector digital data
Eric Haney - CDFG - NCNCR-ISB
1:100,000
2006
Draft
<http://www.calfish.org/>

CCC_Steelhead_Distribution_06_2005
vector digital data
National Marine Fisheries Service (NOAA
Fisheries)
1:100,000
August 2005
<http://swr.nmfs.noaa.gov/salmon/layers/finalgis.htm>

Critical Habitat

CCC_Steelhead_ch_06_2005
vector digital data
National Marine Fisheries Service (NOAA
Fisheries)
1:100,000
August 2005
<http://swr.nmfs.noaa.gov/salmon/layers/finalgis.htm>

Hydrology

1806 NHD Flowline
vector digital data
National Hydrography Dataset High Resolution
United States Geological Survey
1:24,000
2004

Dams

Dams_2005
vector digital data

Goslin, M.,
Santa Cruz Fishery Science Center
National Marine Fisheries Service
2005
<http://swfsc.noaa.gov/>

Barriers and Diversions

pad_september2006
vector digital data
California Fish Passage Assessment Database
Pacific States Marine Fisheries Commission
September 2006
<http://www.calfish.org/>

Gaging Stations

gages
vector digital data
Better Assessment Science Integrating point and
Nonpoint Sources (BASINS)
United States Environmental Protection Agency
2001
<http://www.epa.gov/waterscience/basins/>

Total Maximum Daily Load (TMDL)

R2_rivers_2002 303d
vector digital data
State Water Resources Control Board (SWRCB)
California Environmental Protection Agency
2002

Precipitation

California Mean Annual Precipitation Zones, 1900-
1960
Vector digital data
California Department of Forestry and Fire
Protection 1990
1:100,000
<http://frap.cdf.ca.gov/data/frapgisdata/select.asp>

Roads

TGRR00
vector digital data
Roads
United States Census Bureau
1:100000
2000
<http://www.census.gov/geo/www/tiger/>

Elevation

Spln_mos_02
10 Meter Digital Elevation Model (DEM)
NOAA Fisheries, Santa Cruz Laboratory
2003

Vegetation

fveg02_2
raster digital data
Multi-source Land Cover Data
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Protection
100 meter Grid
2002
<http://frap.cdf.ca.gov/data/frapgisdata/select.asp>

Erodability

Srp_landslide
Landslide Areas
Vector digital data
Circuit Rider Productions, Inc.
2004

Srp_82_debrisfl_Source
Debris Flow Sources
Vector digital data
Circuit Rider Productions, Inc.
2004

Land Ownership

GOVTOWNA
vector digital data
California Department of Forestry Forest and
Rangeland Resources Assessment Program
Bureau of Land Management Surface Management
1:100,000
September 1999
<http://old.casil.ucdavis.edu/casil/gis.ca.gov/teale/govtowna/>

Developed Area and Population

Census 2000 Block Data (Migrated)
vector digital data
California and the Department of Forestry and Fire
Protection, FRAP
2003
1:100,000
<http://frap.cdf.ca.gov/data/frapgisdata/select.asp>

Imagery

naip_1-1_2n_s_ca081_2006_1 (San Mateo)
remote-sensing image
raster digital data

National Agriculture Imagery Program (NAIP)
USDA-FSA Aerial Photography Field Office
Salt Lake City, Utah
2006
<http://datagateway.nrcs.usda.gov/GatewayHome.html>

Historic Suitable Habitat (Coho, Steelhead)

Intrinsic Potential Model
vector digital data
NOAA Fisheries
Santa Cruz Laboratory, Santa Cruz, CA
2005
<http://swfsc.noaa.gov/>

Toxins

Hazardous_&_solid_waste_sites
Better Assessment Science Integrating point and
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vector digital data
United States Environmental Protection Agency
2001
<http://www.epa.gov/waterscience/basins/>

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<http://www.epa.gov/waterscience/basins/>

Records Management System (RMS)

Public Consultation Tracking System (PCTS)
National Marine Fisheries Service
Oracle Databases
2008

Fully Appropriated Streams

Declaration of Fully Appropriated Stream Systems
State Water Resources Control Board
State of California
November 19, 1998
<http://www.waterrights.ca.gov/html/faslist.htm>