

Watershed Characterization

San Gregorio Creek Watershed

Area	Hydrologic Units	Calwater Subbasins ---	(Planning Watersheds)
33,301 Acres	18050006	2202300001	La Honda Creek (7327 Acres)
13,476 Hectares	4th Field HUC	2202300002	Harrington Creek (8274 Acres)
52 Square Miles		2202300003	El Corte de Madera Creek (6333 Acres)
	2203	2202300004	Clear Creek (5390 Acres)
Location	4th Field Calwater	2202300005	Mindego Creek (5977 Acres)
San Mateo County			

Species Potential	Miles of Streams with Species Present
Central California Coast Steelhead Santa Cruz Mountains Diversity Stratum - Independent Population	<u>Steelhead</u> 40 NOAA Fisheries, Critical Habitat Redesignation, 2005
Central California Coast Coho Santa Cruz Mountains Diversity Stratum - Dependent Population	<u>Coho</u> 2 CDFG, Coho Distribution, May 2007

Critical Habitat	
Central California Coast Steelhead	40 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		11
Intermittent Stream	70	4 - Impassable
Perennial Stream	46	1 - Not a Barrier
Artificial Path	1	3 - Temporal Barriers 3 - Unknow Barrier Status
^C Passage Assessment Database, Pacific States Marine Fisheries Commission, 2005		

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

USGS Gaging Stations ^B	Number of Barriers ^C
11162570	47
San Gregorio Creek at San Gregorio	11 Dams 11 Road Crossings (2 Impassable, 7 Temp. &/or Partially Impassable) 21 Natural Barriers (Chutes, Falls, Log Jams, etc. (11 Impassable))
^C Passage Assessment Database, Pacific States Marine Fisheries Commission, 2006	

EPA Total Maximum Daily Load Classification (**TMDL**)^I
 Low Priority - High Coliform Count Medium Priority - Sediment/Siltation
 Sources: Nonpoint Sources
^IState Water Resources Control Board, 2003

Appropriated Waterways^J
 San Gregorio Creek is Fully appropriated (6/1 to 10/31)
^JCalifornia State Water Resources Control Board, 1998.

Average Annual Precipitation ^E	Average Annual Precipitation Range ^E
31.1"	18 - 45"

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



Roads^A	Miles
Roads in Watershed	
Secondary and connecting road, state highways	22
Local, neighborhood, and rural road, city street, unseparated	99
Vehicular trail, 4WD	12
Driveway or service road	23
Total Miles	

Road Density	
Miles of Roads per SqMi of Watershed	3.0
Miles of Roads per SqMi of 100m Riparian Buffer*	3.2

*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	294	1%
Lands of 2-4 percent slope	401	1%
Lands of 4-10 percent slope	1,962	6%
Lands of 10-15 percent slope	2,629	8%
Lands of 15-30 percent slope	10,994	33%
Lands of 30-60 percent slope	14,910	45%
Lands of 60-100 percent slope	2,103	6%
Lands of 100-117 percent slope	9	0%

Elevation Range	0 - 2569 ft.	0 - 783 m
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^DSlope derived from USGS 10 meter Digital Elevation Models (DEM's)

Vegetation^G	Acres	Percent of watershed
Agriculture	247	1%
Annual grassland	7,665	23%
Conifer Forest		
Douglas Fir	462	1%
Montane Hardwood-Conifer	106	0%
Redwood	8,090	24%
Unknown Conifer	2,192	7%
Hardwood Forest		
Montane Hardwood	2	0%
Hardwood Woodland		
Coastal Oak Woodland	210	1%
Shrub	12,980	39%
Urban	1,366	4%
Water	10	0%

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

Erodability of Watershed^F	Acres	Percent of watershed
All of watershed is ranked as 5	33,301	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	32,526	98%
Local (City / County Park)	672	2%
State (Parks & Recreation)	103	0%

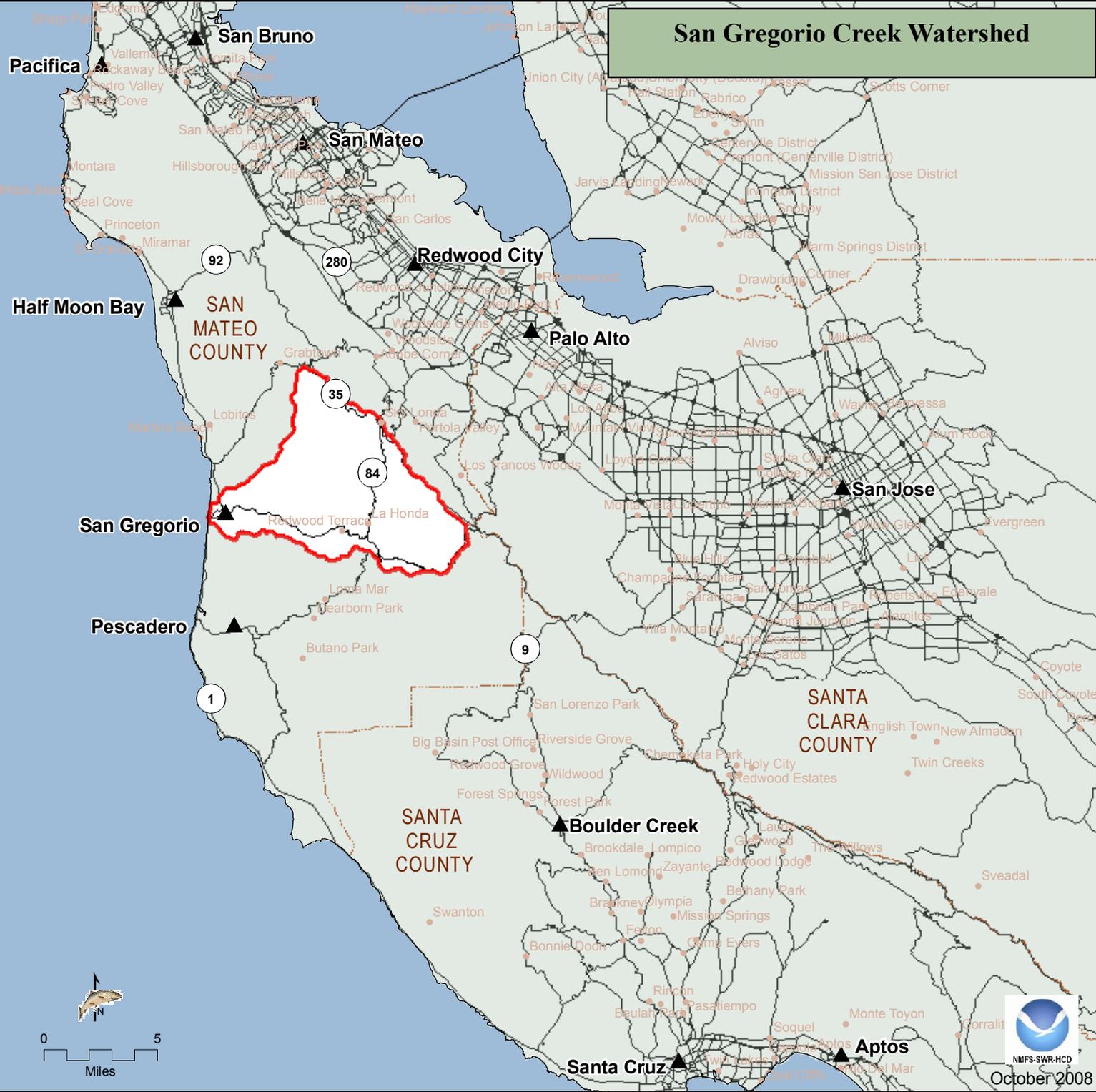
^HManagement Landscape, CA Department of Forestry, 2002

Population^I	Housing^I
Total Population within the watershed -- 2,458 People	Total Housing Units within the watershed -- 1,007 Houses
	Housing Density
	0 to Less than 1 Housing Unit / 160 Acres 40%
	1 Unit / 160 Acres to 1 Unit / 20 Acres 54%
	1 Unit / 20 Acres to 1 Unit / 5 Acres 4%
	1 Unit / 5 Acres to 2 Units / Acre 2%
	2 Units / Acres to Greater than or Equal to 5 Units / Acre

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

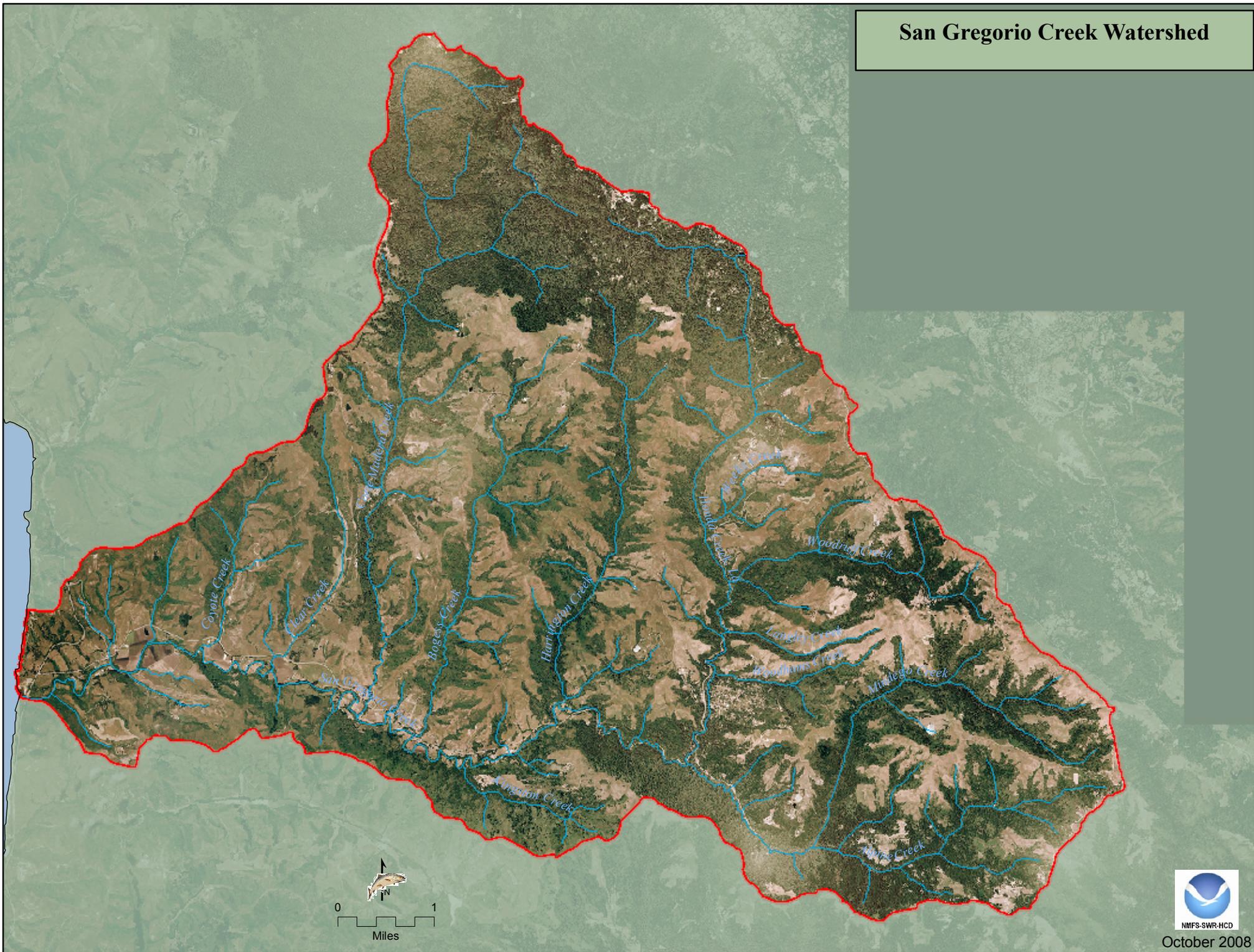


San Gregorio Creek Watershed



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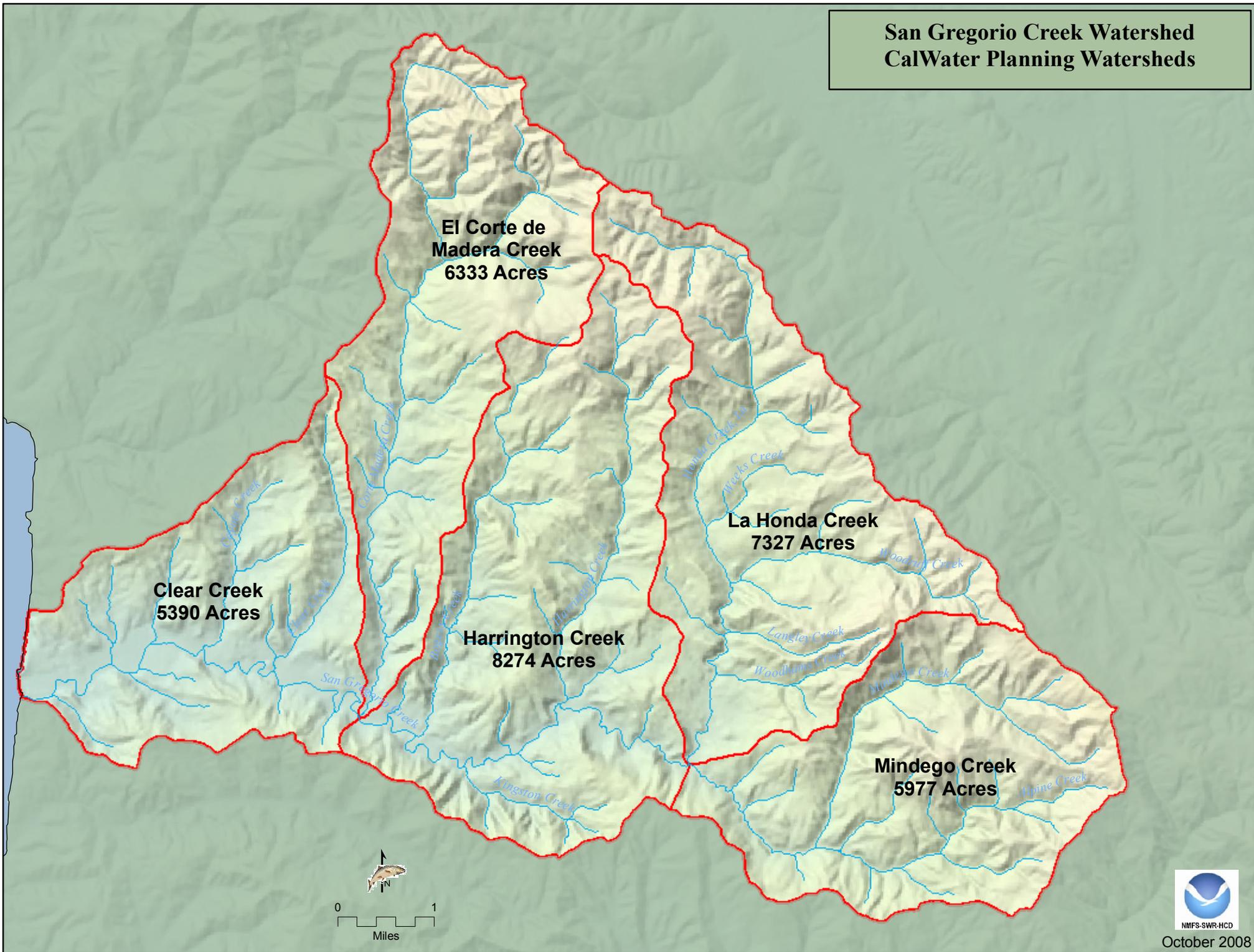
San Gregorio Creek Watershed



NMFS-SWR-HCD

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**San Gregorio Creek Watershed
CalWater Planning Watersheds**

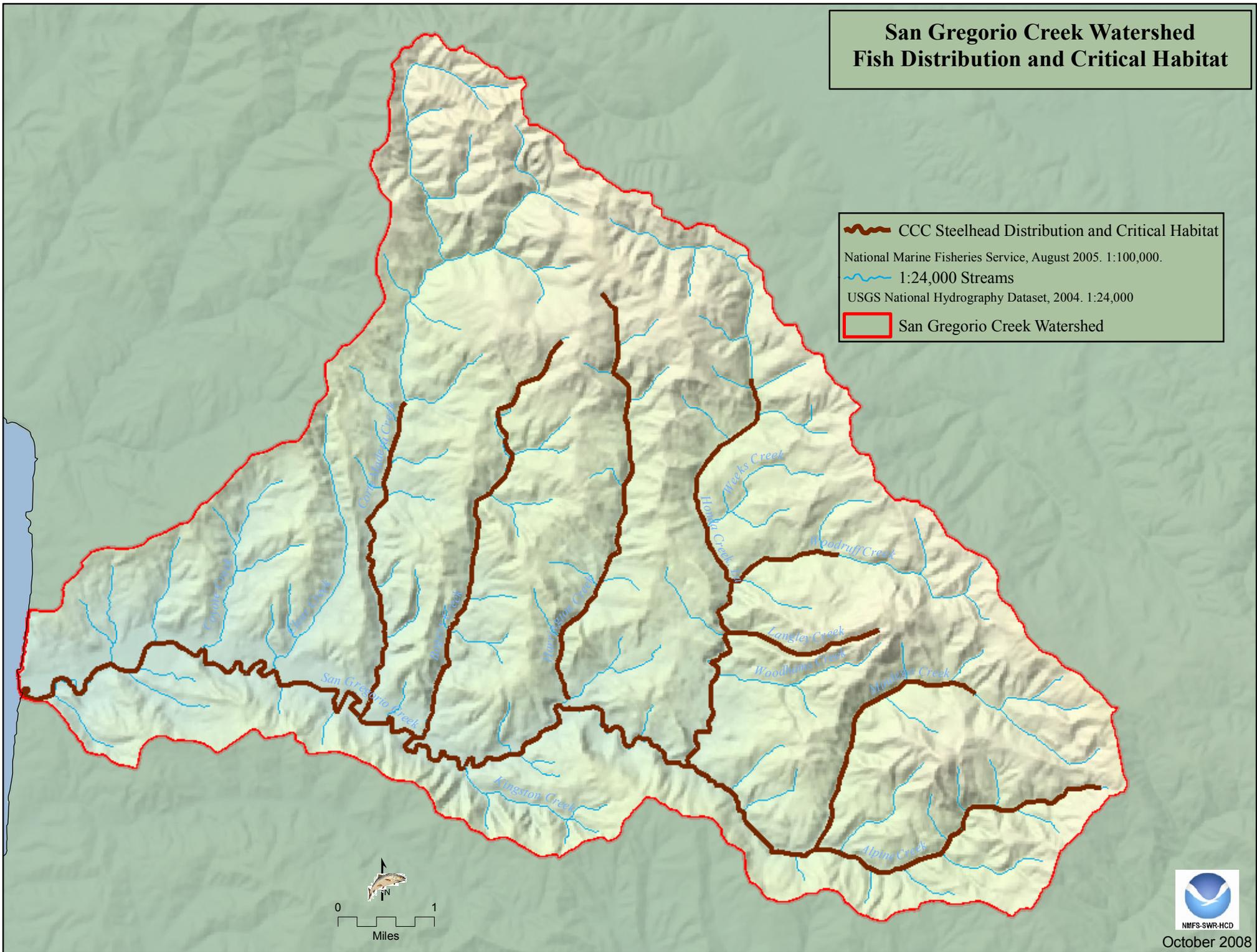


San Gregorio Creek Watershed Fish Distribution and Critical Habitat

 CCC Steelhead Distribution and Critical Habitat
National Marine Fisheries Service, August 2005. 1:100,000.

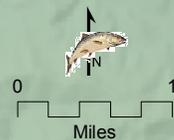
 1:24,000 Streams
USGS National Hydrography Dataset, 2004. 1:24,000

 San Gregorio Creek Watershed



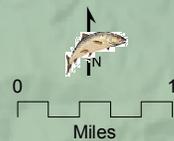
San Gregorio Creek Watershed Steelhead Current vs. Historical

-  Current CCC Steelhead Distribution
National Marine Fisheries Service, August 2005.
1:100,000.
-  Steelhead Intrinsic Potential
NMFS SWR Fisheries Science Center, 2005.
Potential historical suitable habitat
-  1:24,000 Streams
USGS National Hydrography Dataset, 2004. 1:24,000
-  San Gregorio Creek Watershed



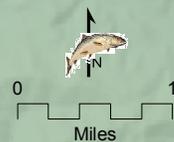
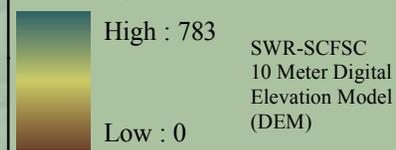
San Gregorio Creek Watershed Coho Historical

-  Coho Intrinsic Potential
NMFS SWR Fisheries Science Center, 2005.
Potential historical suitable habitat
-  1:24,000 Streams
USGS National Hydrography Dataset, 2004.
1:24,000
-  San Gregorio Creek Watershed



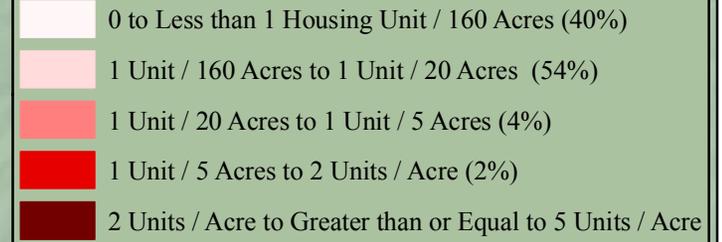
San Gregorio Creek Watershed Elevation

San Gregorio Elevation (Meters)

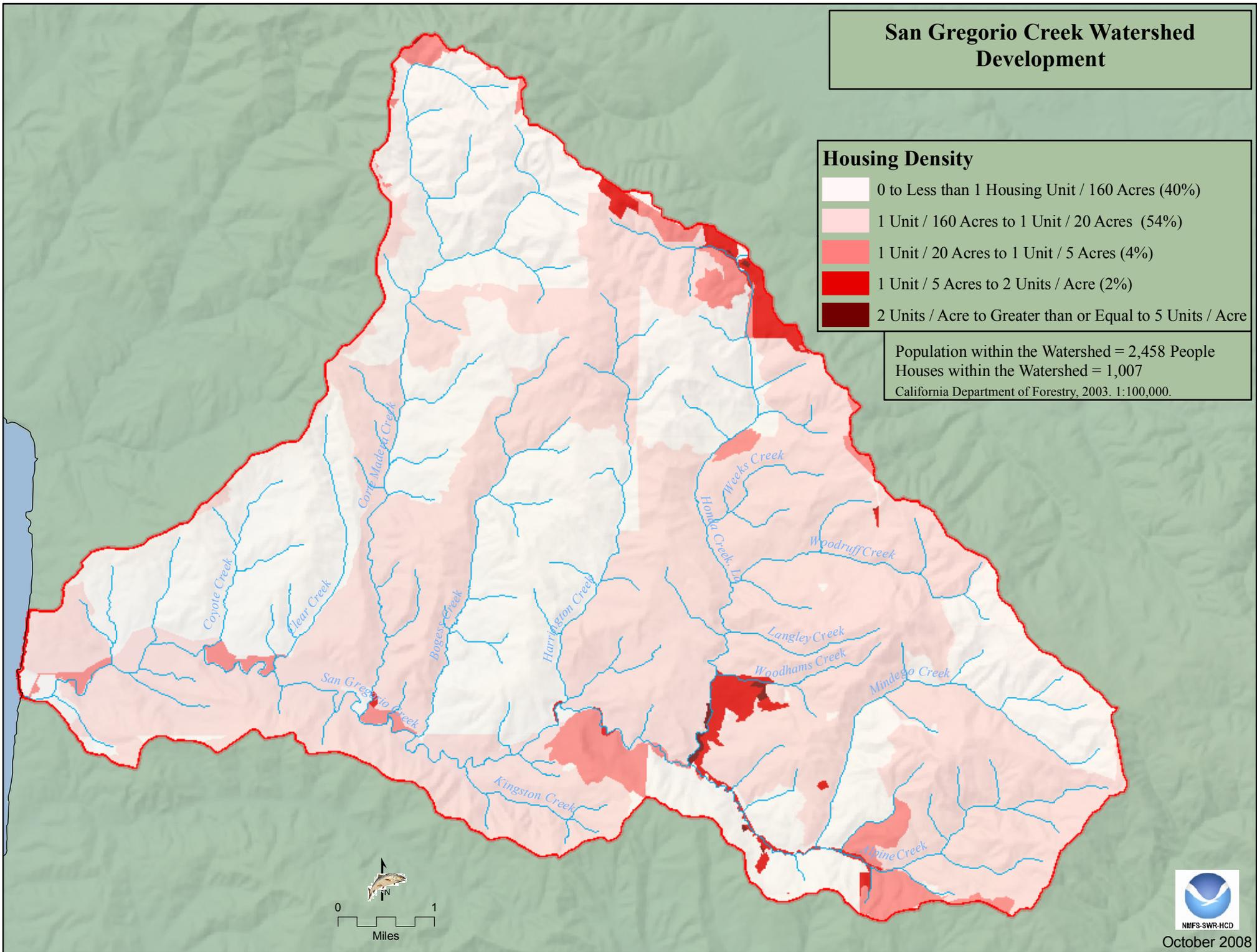


San Gregorio Creek Watershed Development

Housing Density



Population within the Watershed = 2,458 People
Houses within the Watershed = 1,007
California Department of Forestry, 2003. 1:100,000.

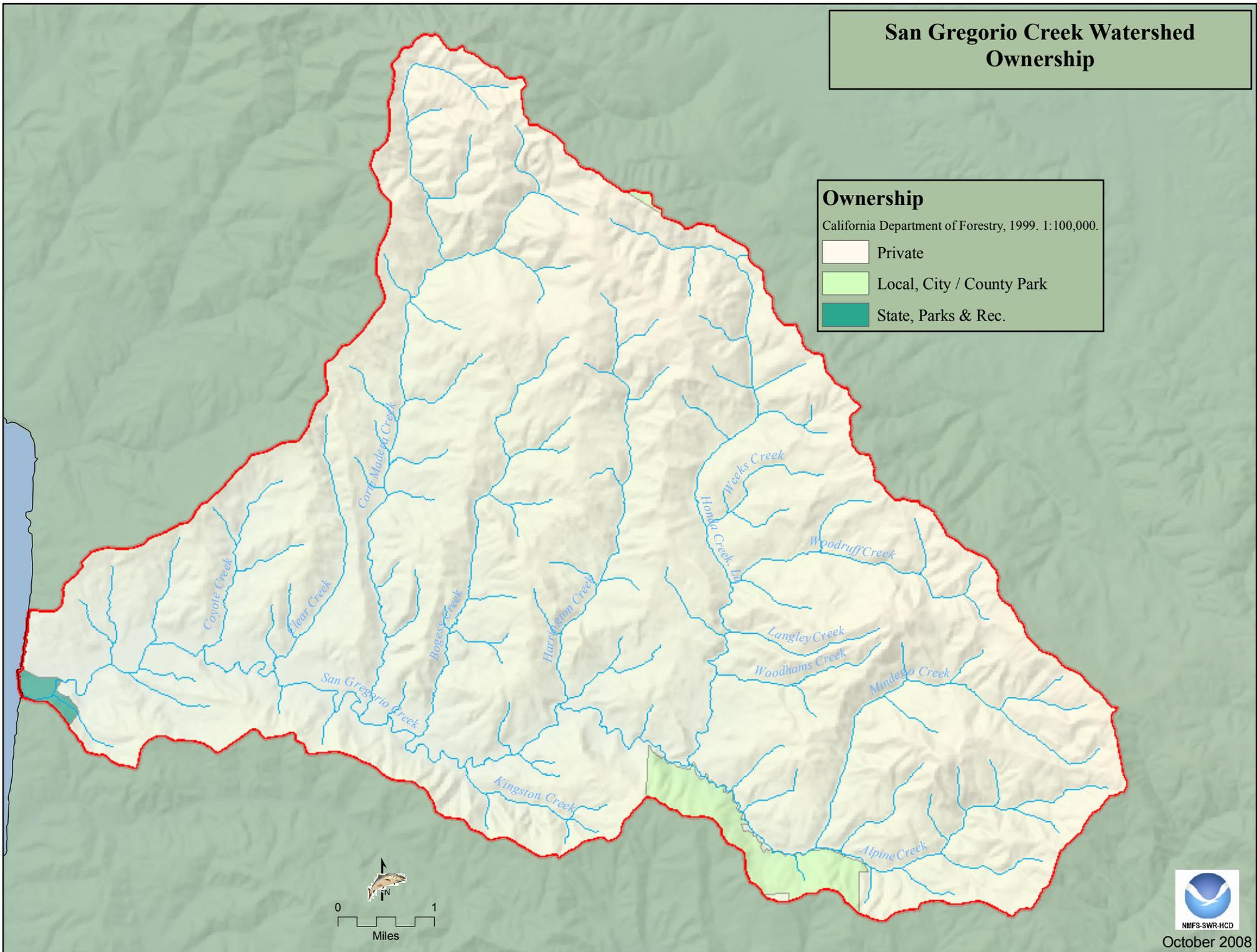


San Gregorio Creek Watershed Ownership

Ownership

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

- Private
- Local, City / County Park
- State, Parks & Rec.



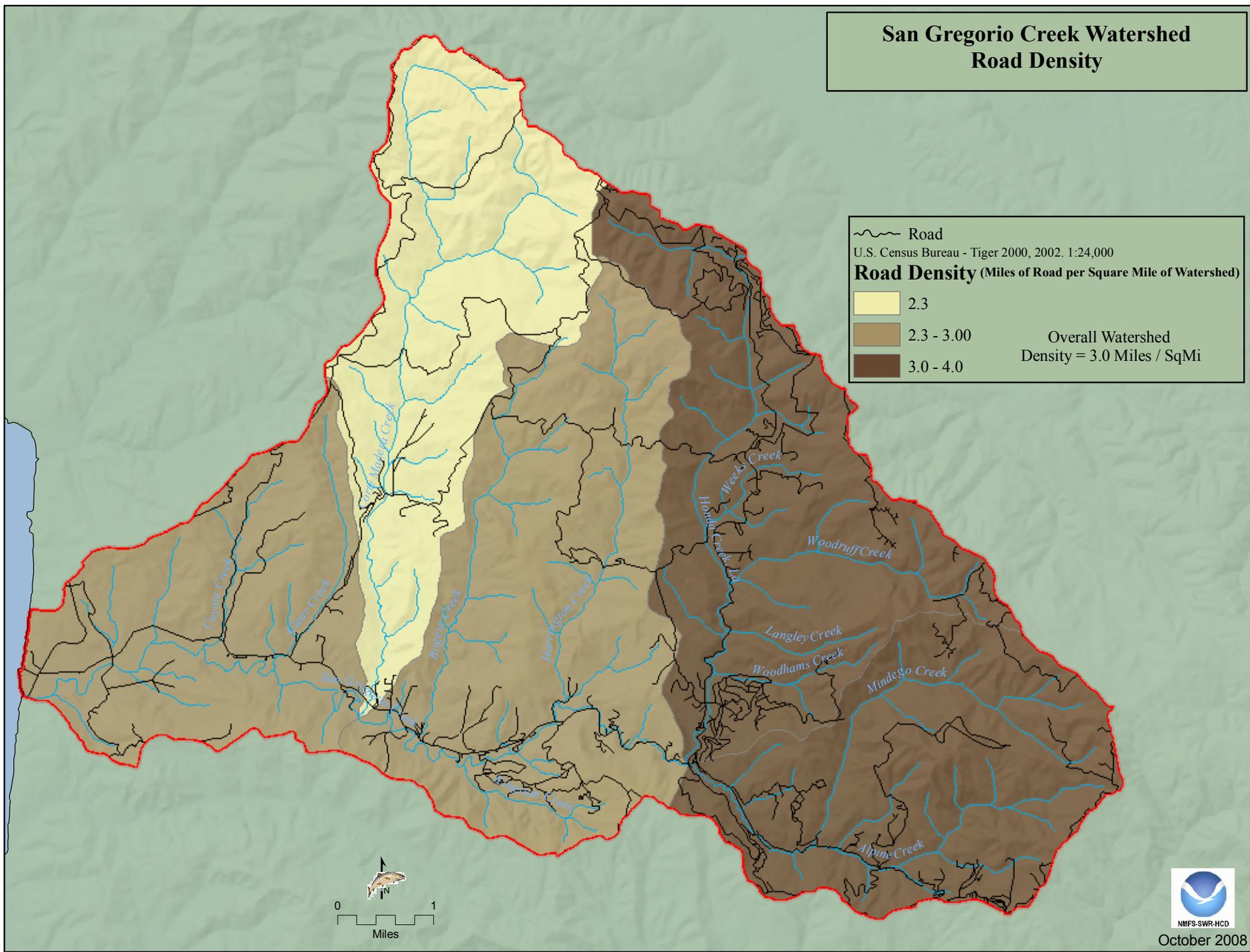
San Gregorio Creek Watershed Road Density

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

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

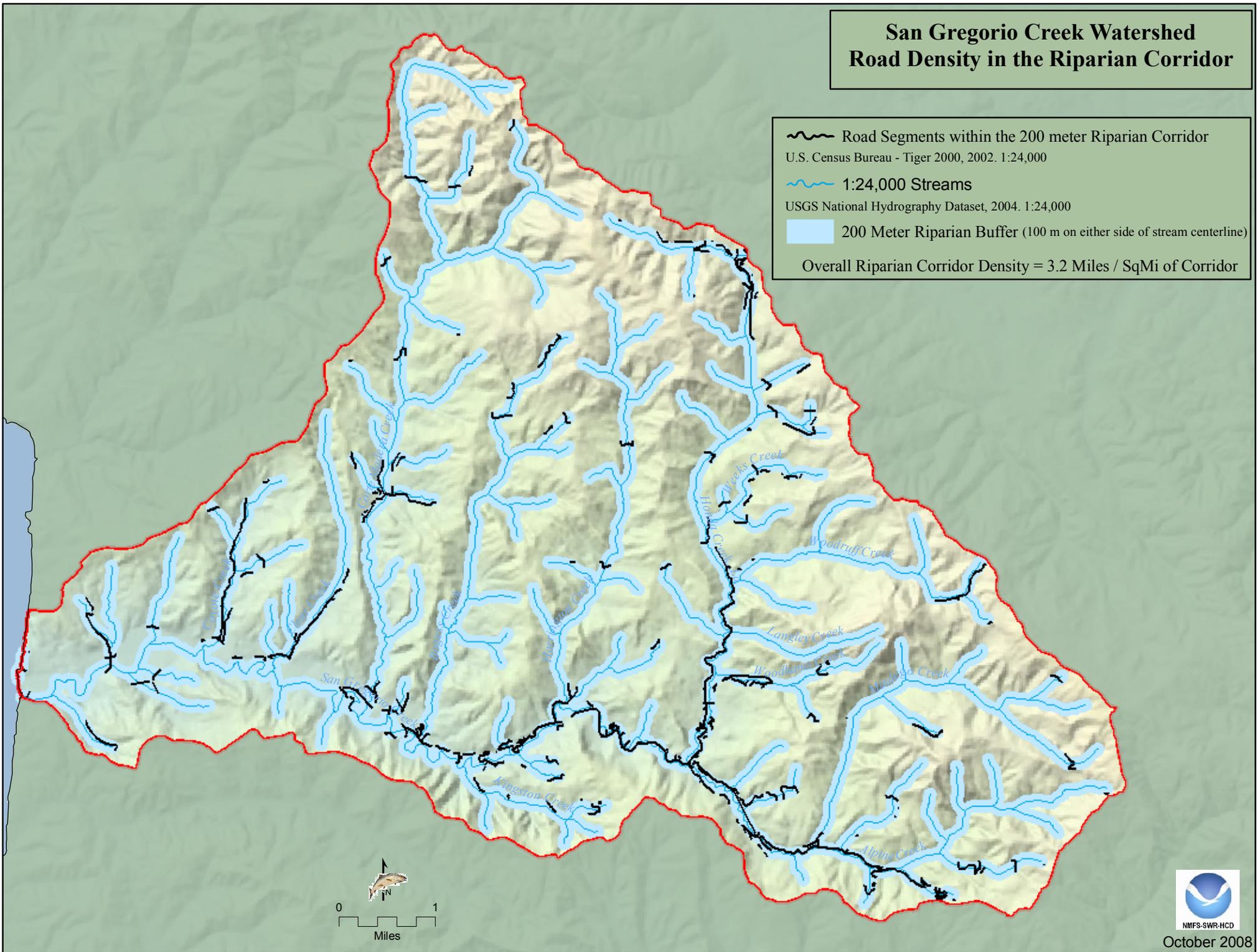
Light Yellow	2.3
Medium Brown	2.3 - 3.00
Dark Brown	3.0 - 4.0

Overall Watershed
Density = 3.0 Miles / SqMi



San Gregorio 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 = 3.2 Miles / SqMi of Corridor

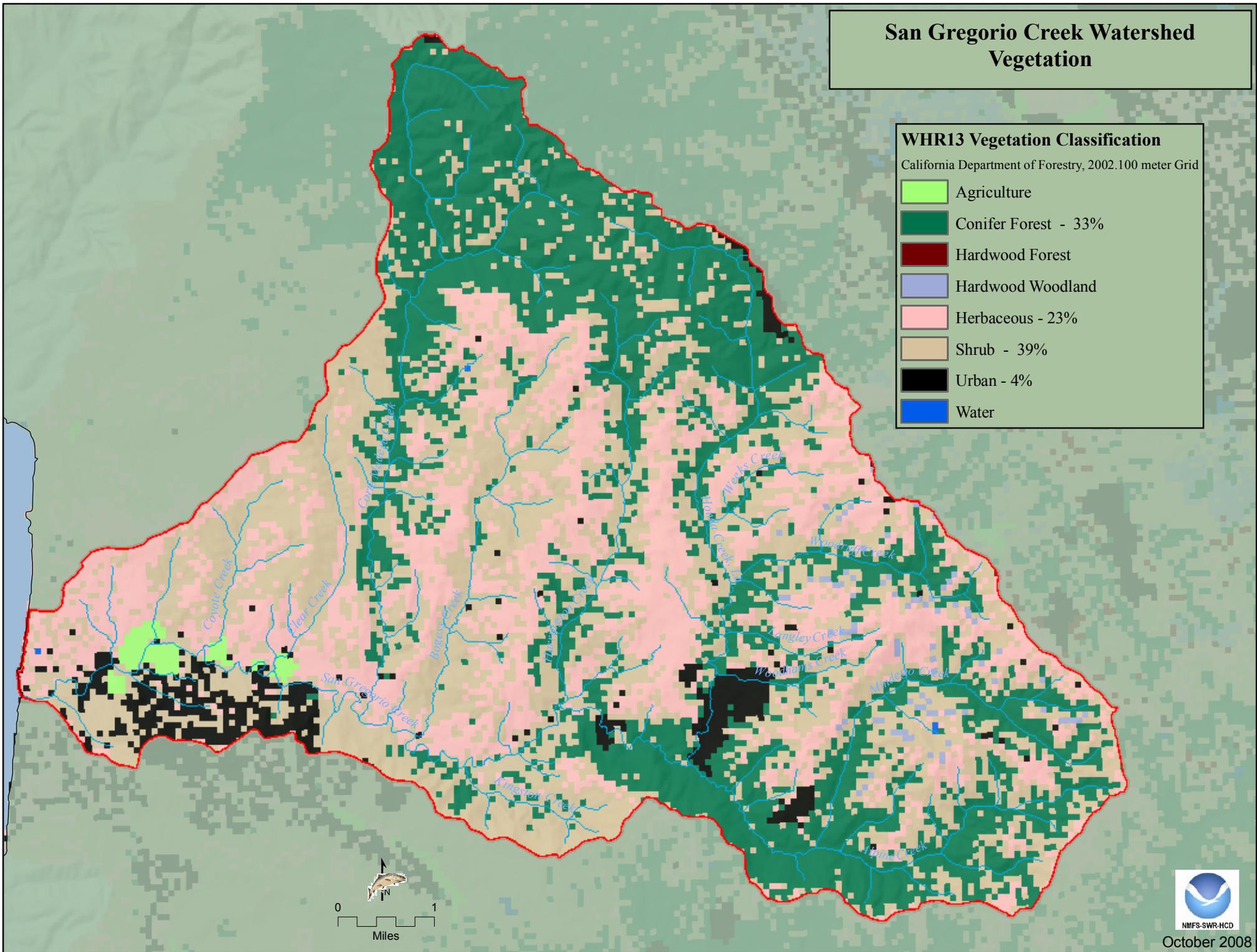


San Gregorio Creek Watershed Vegetation

WHR13 Vegetation Classification

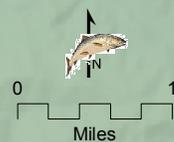
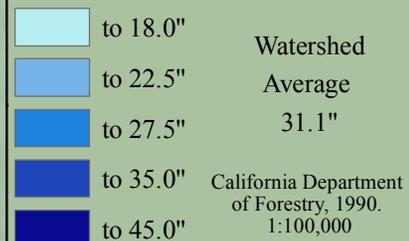
California Department of Forestry, 2002.100 meter Grid

-  Agriculture
-  Conifer Forest - 33%
-  Hardwood Forest
-  Hardwood Woodland
-  Herbaceous - 23%
-  Shrub - 39%
-  Urban - 4%
-  Water



San Gregorio Creek Watershed Precipitation

1900-1960 Annual Precipitation

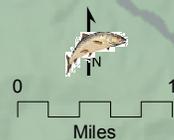


San Gregorio Creek Watershed Flood Zone

FEMA Flood Zones

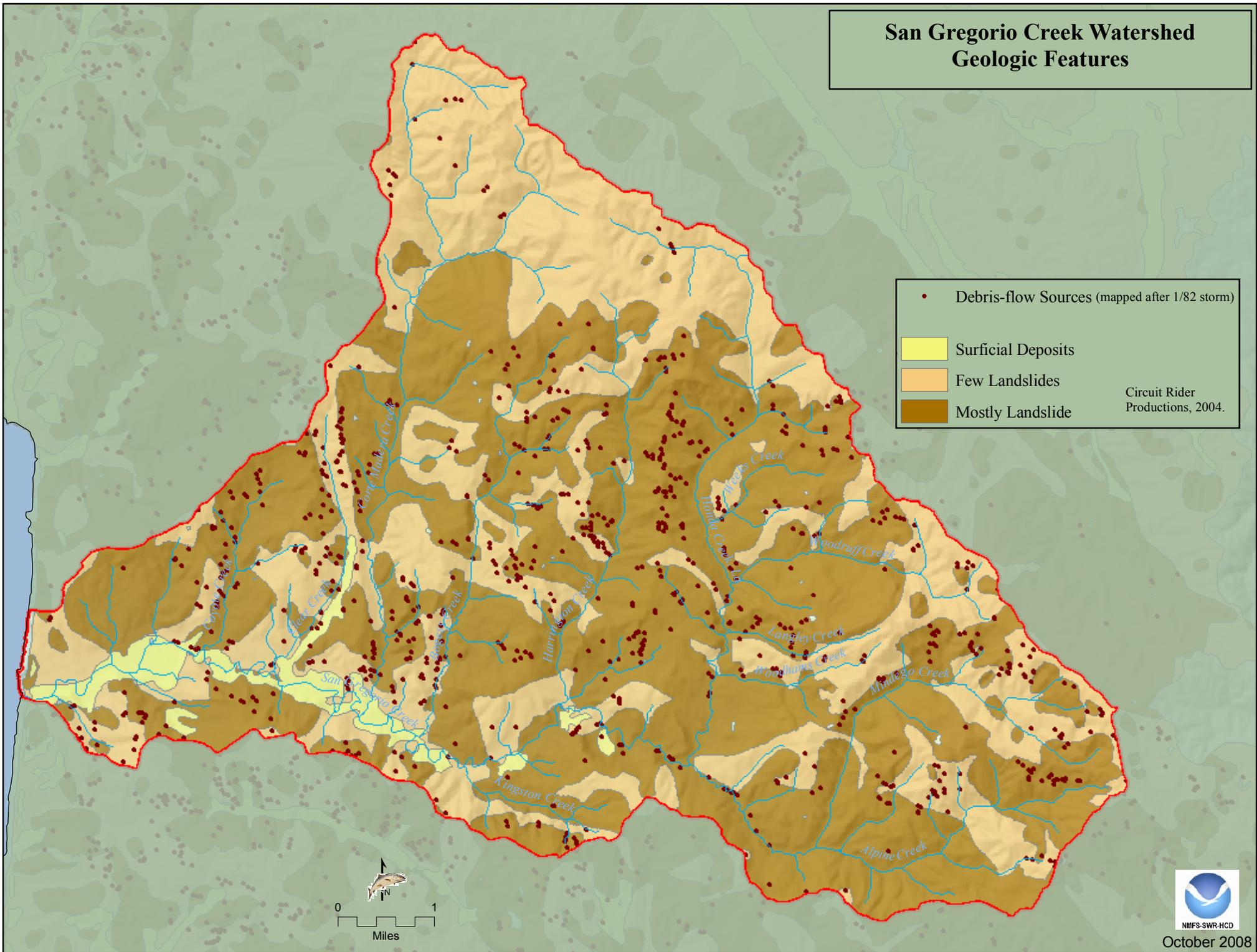
FEMA, 1996. 1:24,000

- 100 Year Flood Zone
- 500 Year Flood Zone



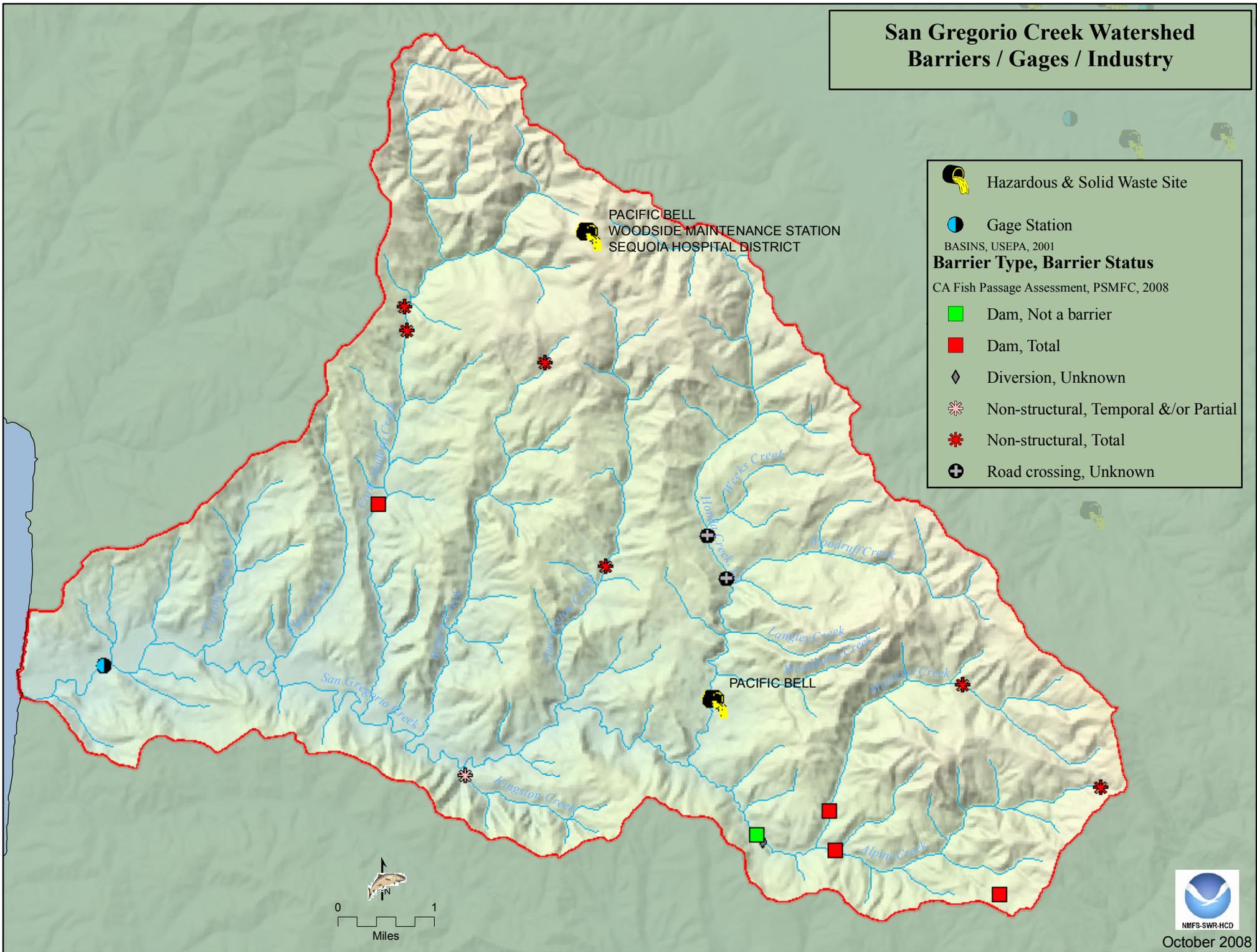
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San Gregorio Creek Watershed Geologic Features



San Gregorio Creek Watershed Barriers / Gages / Industry

-  Hazardous & Solid Waste Site
 -  Gage Station
- BASINS, USEPA, 2001
- Barrier Type, Barrier Status**
CA Fish Passage Assessment, PSMFC, 2008
-  Dam, Not a barrier
 -  Dam, Total
 -  Diversion, Unknown
 -  Non-structural, Temporal &/or Partial
 -  Non-structural, Total
 -  Road crossing, Unknown



San Gregorio Creek Watershed Public Consultation Tracking System

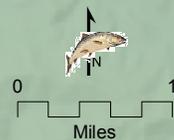
Complaint on Midpeninsula Regional Open Space District lands in El Corte de Madra

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

Section 7 consultation on the issuance of section 10(a)1(A) Permit 10017, California Department of Parks and Recreation, Pescadero Marsh Natural Pres

US Route 84 Storm Damage Restoration

PGE's Pilarcitos Creek Bank Stabilization Project



References

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California Department of Forestry and Fire
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Distribution

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vector digital data
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Draft
<http://www.calfish.org/>

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

Critical Habitat

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Hydrology

1805 NHD Flowline
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National Hydrography Dataset High Resolution
United States Geological Survey
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Dams

Dams_2005
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Santa Cruz Fishery Science Center
National Marine Fisheries Service
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<http://swfsc.noaa.gov/>

Barriers and Diversions

pad_september2008
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Pacific States Marine Fisheries Commission
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<http://www.calfish.org/>

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Better Assessment Science Integrating point and
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United States Environmental Protection Agency
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<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
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Precipitation

California Mean Annual Precipitation Zones, 1900-
1960
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Elevation

Spln_mos_02
10 Meter Digital Elevation Model (DEM)
NOAA Fisheries, Santa Cruz Laboratory
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fveg02_2
raster digital data
Multi-source Land Cover Data
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Erodability

Srp_landslide
Landslide Areas
Vector digital data
Circuit Rider Productions, Inc.
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Srp_82_debrisfl_Source
Debris Flow Sources
Vector digital data
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Protection, FRAP
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1:100,000
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Imagery

naip_1-1_2n_s_ca081_2004_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
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<http://swfsc.noaa.gov/>

Toxins

Hazardous_&_solid_waste_sites
Better Assessment Science Integrating point and
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vector digital data
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Fully Appropriated Streams

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State Water Resources Control Board
State of California
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<http://www.waterrights.ca.gov/html/faslist.htm>

Flood Zones

FEMA Flood Insurance Maps 1996
Vector digital data
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Q3 Flood Data Program
1996
<http://www.fema.gov/>