March 2009

NMFS-SWR-HCD

Russian River Watershed

Area	Hydrologic Units	Calwater Subbasins ---	(Planning Watersheds)
949,229 Acres	18010110	1114120001	Lower East Gray Creek (8016 Acres)
384,134 Hectares	4th Field **HUC**	1114120002	Bearpen Creek (9328 Acres)
1,483 Square Miles		1114120005	Upper East Gray Creek (3516 Acres)
	1141, 1142, 11143	1114110104	Adam and Eve Redwoods (14434 Acres)
Location	4th Field **Calwater**	1114120003	East Austin Creek (8984 Acres)
Sonoma County			
Mendocino County			

1114120004	Ward Creek (9990 Acres)	1114230104	Van Buren Creek (7928 Acres)
1114110302	Hulbert Creek (10875 Acres)	1114220104	Santa Rosa Creek (9019 Acres)
1114110101	Porter Creek (4782 Acres)	1114220101	Rincon Creek (6660 Acres)
1114110304	Korbel River (6592 Acres)	1114220102	Pine Creek Reservoir (4491 Acres)
1114110102	Mirabel Park (3750 Acres)	1114220103	Monroe (11051 Acres)
1114110402	Freezeout Creek (8953 Acres)	1114220201	Santa Rosa Creek Reservoir (6375 Acres)
1114110301	Pocket Canyon (4229 Acres)	1114210001	Blucher Creek (15455 Acres)
1114110103	Green Valley Creek (4940 Acres)	1114210002	Laguna de Santa Rosa (31964 Acres)
1114110401	Willow Creek (11556 Acres)	1114220202	Upper Matanzas Creek (3839 Acres)
1114110303	Dutch Bill Creek (12614 Acres)	1114210003	Crane Creek (9180 Acres)
1114110202	Purrington Creek (10944 Acres)	1114220203	South Fork Matanzas Creek (8038 Acres)
1114110201	Atascadero Creek (8551 Acres)	1114320103	Boyes Creek (5726 Acres)
1114110402	Mouth of Russian River (8953 Acres	1114320106	Adobe Creek (3355 Acres)
1114240103	Elkhorn Creek (7975 Acres)	1114330301	Corral Creek (6620 Acres)
1114240101	Ingram Creek (4719 Acres)	1114330102	Walker Creek (11701 Acres)
1114250104	Edwards Creek (7053 Acres)	1114330302	Mariposa Creek (6211 Acres)
1114240102	Soda Creek (6223 Acres)	1114320107	Upper East Fork Russian River (6763 Acres)
1114250101	Ash Creek (9924 Acres)	1114320104	Burright Creek (7697 Acres)
1114260102	Squaw Creek (9103 Acres)	1114320101	Williams Creek (3819 Acres)
1114240203	Cherry Creek (10382 Acres)	1114330304	Redwood Valley (7522 Acres)
1114260103	Frasier Creek (4947 Acres)	1114330305	Salt Hollow Creek (5550 Acres)
1114260203	Lower Big Sulphur Creek (7490 Acre	1114330101	Mill Creek (7117 Acres)
1114240201	McChristian Creek (4278 Acres)	1114320102	Bevans Creek (5301 Acres)
1114240204	Galloway Creek (10230 Acres)	1114320105	East Fork East Canal (2502 Acres)
1114240202	Lower Dry Creek (9346 Acres)	1114330200	Jack Smith Creek (7036 Acres)
1114250102	Cloverdale Creek (7065 Acres)	1114330303	Seward Creek (2167 Acres)
1114260101	Middle Big Sulphur Creek (5806 Acr	1114320400	Mewhinney Creek (8844 Acres)
1114260202	N. Branch Little Sulphur Creek (488	1114320502	Guntley Ranch (3516 Acres)
1114260104	Upper Big Sulphur Creek (7468 Acre	1114320600	Lake Mendocino (7787 Acres)
1114250103	Icaria Creek (8803 Acres)	1114310101	York Creek (7444 Acres)
1114260201	Lower Little Sulfur Creek (5889 Acre	1114320501	Lower Cold Creek (4358 Acres)
1114240305	Smith Creek (8060 Acres)	1114310102	Calpella (2341 Acres)
1114250202	Gill Creek (10169 Acres)	1114320503	Upper Cold Creek (7292 Acres)
1114260204	Upper Little Sulfur Creek (7028 Acre	1114310301	Upper Ackerman Creek (8696 Acres)
1114240401	Strawberry Creek (8321 Acres)	1114310200	Hensley Creek (4157 Acres)
1114240301	Dutcher Creek (5963 Acres)	1114311001	Talmage (13445 Acres)
1114250301	Sausal Creek (7963 Acres)	1114310302	Lower Ackerman Creek (3224 Acres)
1114250201	Miller Creek (9739 Acres)	1114311002	Sulfer Creek (7958 Acres)
1114250401	McDonnell Creek (6094 Acres)	1114310400	Orrs Creek (5518 Acres)
1114240302	Lower Lake Sonoma Creek (5833 A	1114311003	McClure Creek (4141 Acres)
1114250303	Gird Creek (11598 Acres)	1114311004	Gibson Creek (4238 Acres)
1114240303	Grape Creek (9864 Acres)	1114311005	Willow Creek (5493 Acres)
1114250404	Briggs Creek (7915 Acres)	1114310503	Upper Robinson Creek (5941 Acres)
1114240402	Warm Springs Creek (7802 Acres)	1114311006	Howell Creek (4704 Acres)
1114240501	Pechaco Creek (6801 Acres)	1114310502	Lower Robinson Creek (5866 Acres)
1114250403	Maacama Creek (6743 Acres)	1114311007	Romer (1542 Acres)
1114240502	Redwood Log Creek (7671 Acres)	1114310501	South Branch Robinson Creek (4279 Acres)

1114250402	Kellogg Creek (8789 Acres)	1114311008	Morrison Creek (6027 Acres)
1114240304	Lower Dry Creek (11185 Acres)	1114311101	Jandrew Gorge (2197 Acres)
1114250302	Brooks Creek (15973 Acres)	1114311104	McNab Creek (7809 Acres)
1114240601	Wallace Creek (3340 Acres)	1114311102	Parsons Creek (5451 Acres)
1114250503	Bidwell Creek (3932 Acres)	1114310603	Main Stem Feliz Creek (15182 Acres)
1114250502	Lower Franz Creek (5033 Acres)	1114311103	Crawford Creek (7403 Acres)
1114240603	Palmer Creek (7443 Acres)	1114310702	McDowell Creek (10015 Acres)
1114240602	Felta Creek (3989 Acres)	1114310601	Middle Fork Feliz Creek (4841 Acres)
1114250501	Upper Franz Creek (6108 Acres)	1114310602	Johnson Creek (6617 Acres)
1114230202	Upper Windsor Creek (6942 Acres)	1114310802	Coleman Creek (9500 Acres)
1114230103	Mark West Springs (6645 Acres)	1114310701	Duncan Springs (11252 Acres)
1114230102	Porter Creek (6224 Acres)	1114310900	Cummiskey Creek (9981 Acres)
1114230201	Pool Creek (22058 Acres)	1114310801	Salt Spring Creek (5602 Acres)
1114230101	Humbug Creek (5407 Acres)	1114310803	Tyler Creek (9213 Acres)

Species Potential	Miles of Streams with Species Present
Central California Coast **Steelhead**	Steelhead
North Coastal and Interior Diversity Strata	713
Multiple subpopulations(Inependent, Potentially Independent, Dependent)	NOAA Fisheries, Critical Habitat Redesignation, 2005
Central California Coast **Coho**	Coho
Coastal Gualala Diversity Stratum	138
- Independent Population	CDFG, Coho Distribution, May 2007
California Coastal Chinook	Chinook
Central Coastal Diversity Stratum	160
- Independent Population	NOAA Fisheries, Critical Habitat Redesignation, 2005

Critical Habitat

Central California Coast Steelhead	550 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)
California Coastal Chinook	147 Miles of Stream

Miles of Waterway[A]	Miles	Number of Dams[C]
Naturally Occurring Waterways		146
Intermittent Stream	2297	16 - Impassable
Perennial Stream	794	6 - Not a Barrier
Canal / Ditch	42	31 - Partial / Temporal Barriers
Connector	6	91 - Unknow Barrier Status
Pipeline	1	
Artificial Path	220	[C]Passage Assessment Database, Pacific States Marine Fisheries Commission, 2008

[A]USGS National Hydrography Dataset, High Resolution, 2004. 1:24,000

USGS **Gaging Stations**[B]		Number of **Barriers**[C]
11460940	11464500	2460
11461000	11464860	146 Dams
11461400	11465000	548 Road Crossings (60 Impassable,
11461500	11465050	141 Temp. &/or Partially Impassable)
11461501	11465200	1696 Diversions
11461800	11465450	56 Natural Barriers (Chutes, Falls, Log Jams, etc. (18 Impassable))
11462000	11465500	
11462050	11465800	[C]Passage Assessment Database,
11462100	11466500	Pacific States Marine Fisheries Commission, 1978
11462125	11466800	
11462500	11466850	
11462690	11467000	
11462700	11467006	
11463000	11467040	
11463160	11471000	
11463200	11471100	
11463210	91155123110001	
11463680	384131123013401	
11463900	384142123013701	
11463940	384346123021701	
11464000	2520-N	
11464010	3878-1	
11464050	8645-N	
11464400		

EPA Total Maximum Daily Load Classification (**TMDL**)[I]

Sediment/siltation, Temperature, Specific Conductivity, Low Dissolved Oxygen, Mercury, Nitogen, Phosphorous, Pathogens

Sources: construction/Land Development, Dam Construction, Disturbed Sites, Erosil/Siltation, Flow Regulation Modification, Silviculture, Habitat Modification, Hydromodification, Nonpoint Source, Removal of Riparian Vegetation, Agriculture, Grazing, Storm Runoff, Channel Erosion, Channelization, Irrigated Crop Production, Upstream Impoundment, Geothermal Development, Drainage/Filling of Wetlands, Resource Extraction, Internal Nutrient Cycling, Point Source

[I]State Water Resources Control Board, 2003

Approriated Waterways[J]

Robinson Creek is Fully Appropriated (7/01-10/31)
Feliz Creek is Fully appropriated (8/01 to 10/31)
Mark West Creek is Fully appropriated (5/01 to 10/31)
Green Valley Creek is Fully appropriated (6/15 to 10/31)
Atascadero Creek is Fully appropriated (6/15 to 10/31)
Laguna de Santa Rosa is Fully appropriated (6/01 to 10/31)
Santa Rosa Creek is Fully appropriated (6/01 to 10/31)
Tri to Gill Creek is Fully appropriated (6/01 to 9/30)
Unnamed Trib is Fully appropriated (6/01 to 10/31)

[J]California State Water Resources Control Board, 1998.

Average Annual **Precipitation**[E]	Average Annual **Precipitation Range**[E]
44.2"	27.5 - 85"

[E]California Mean Annual Precipitation Zones, 1900-1960, CA Department of Forestry, 1990

Roads[A]	Miles
Roads in Watershed	
Primary Road / Highway	96
Secondary and connecting road, state highways	115
Local, neighborhood, and rural road, city street, unseparated	3903
Vehicular trail, 4WD	140
Driveway or service road	198
Total Miles	4452

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

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

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

Slope[D]	Acres	Percent of watershed
Lands of 0-2 percent slope	104,031	11%
Lands of 2-4 percent slope	37,545	4%
Lands of 4-10 percent slope	74,909	8%
Lands of 10-15 percent slope	57,612	6%
Lands of 15-30 percent slope	208,766	22%
Lands of 30-60 percent slope	369,694	39%
Lands of 60-100 percent slope	94,076	10%
Lands of 100-472 percent slope	2,477	0%
Elevation Range	0 - 4,498 ft.	0 - 1,371 m

[D]Slope derived from USGS 10 meter Digital Elevation Models (DEM's)

Vegetation[G]	Acres	Percent of watershed
Agriculture	122,038	13%
Annual grassland	167,023	18%
Barren	2,402	0%
Conifer Forest		
Closed Cone-Pine-Cypress	9,153	1%
Douglas Fir	71,228	7%
Klamath Mixed Conifer	79	0%
Montane Hardwood-Conifer	11,196	1%
Ponderosa Pine	161	0%
Redwood	32,524	3%
Unknown Conifer	5	0%
Hardwood Forest		
Montane Hardwood	356,565	38%
Montane Riparian	2,768	0%
Hardwood Woodland		
Blue Oak Foothill Pine	5,323	1%
Blue Oak Woodland	6,165	1%
Coastal Oak Woodland	2,520	0%
Eucalytus	423	0%
Valley Foothill Riparian	1,443	0%
Valley Oak Woodland	571	0%
Shrub	82,686	9%
Urban	65,814	7%
Water	8,671	1%
Wetland	1,196	0%

[G]Multi-source Land Cover Data (2002 v2), CA Department of Forestry, 2002. 100 meter Grid

Erodability of Watershed[F]	Acres	Percent of watershed
Rank of 0	14,773	2%
Rank of 3	89,272	9%
Rank of 4	55,977	6%
Rank of 5	32,855	3%
Rank of 6	319,030	34%
Rank of 7	147,588	16%
Rank of 8	43,776	5%
Rank of 9	0	0%

25% of Watershed not Rated for erodability

[F]Department 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	875,768	92%
Local (City / County Park)	607	0%
State (Fish & Game)	765	0%
State (Parks & Recreation)	10,693	1%
State (University)	5,200	1%
State (Other)	282	0%
Federal (ACOE)	19,700	2%
Federal (BIA)	2,095	0%
Federal (BLM)	34,040	4%
Federal (Forest Service)	78	0%

[H]Management Landscape, CA Department of Forestry, 2002

Population[I]	Housing[I]	
Total Population within the watershed -- 379,996 People	Total Housing Units within the watershed -- 148,578 Houses	
	Housing Density	
	0 to Less than 1 Housing Unit / 160 Acres	51%
	1 Unit / 160 Acres to 1 Unit / 20 Acres	30%
	1 Unit / 20 Acres to 1 Unit / 5 Acres	10%
	1 Unit / 5 Acres to 2 Units / Acre	7%
	2 Units / Acres to Greater than or Equal to 5 Units / Acre	2%

[I]Census 2000 Block Data (Migrated), CA Department of Forestry, 2003

Russian River Watershed

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March 2009

Russian River Watershed

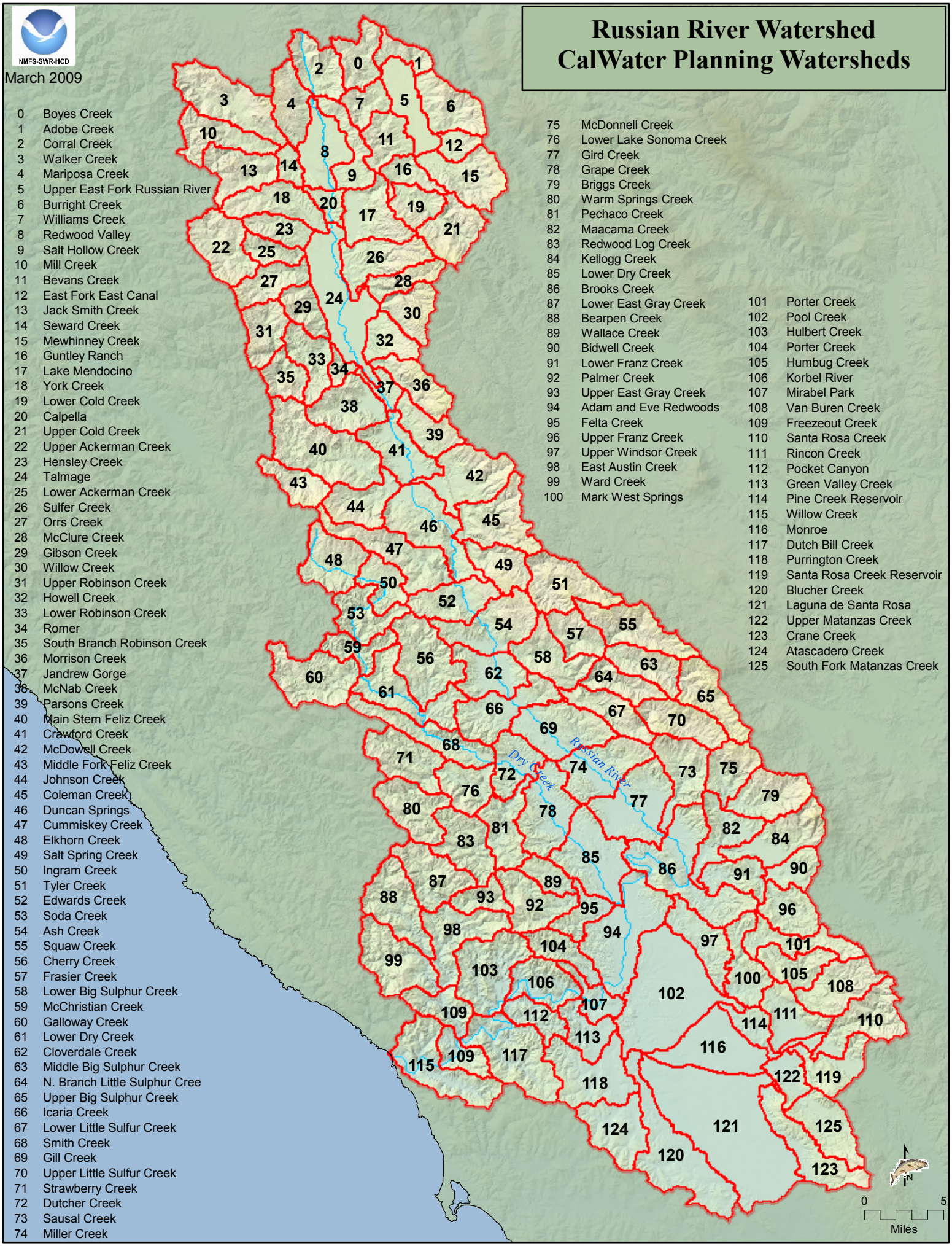
NMFS-SWR-HCD

March 2009

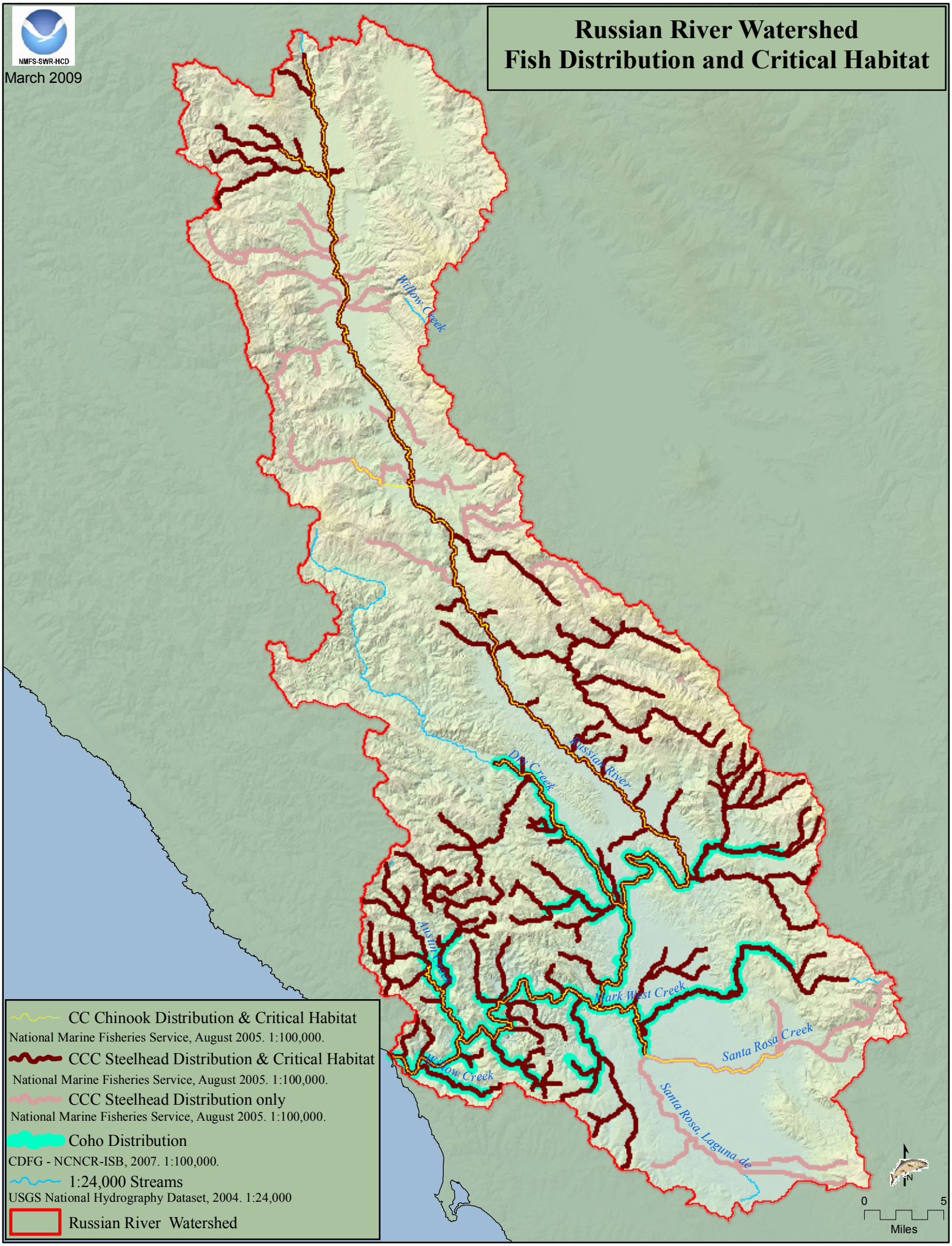
Russian River Watershed
CalWater Planning Watersheds

NMFS-SWR-HCD

March 2009



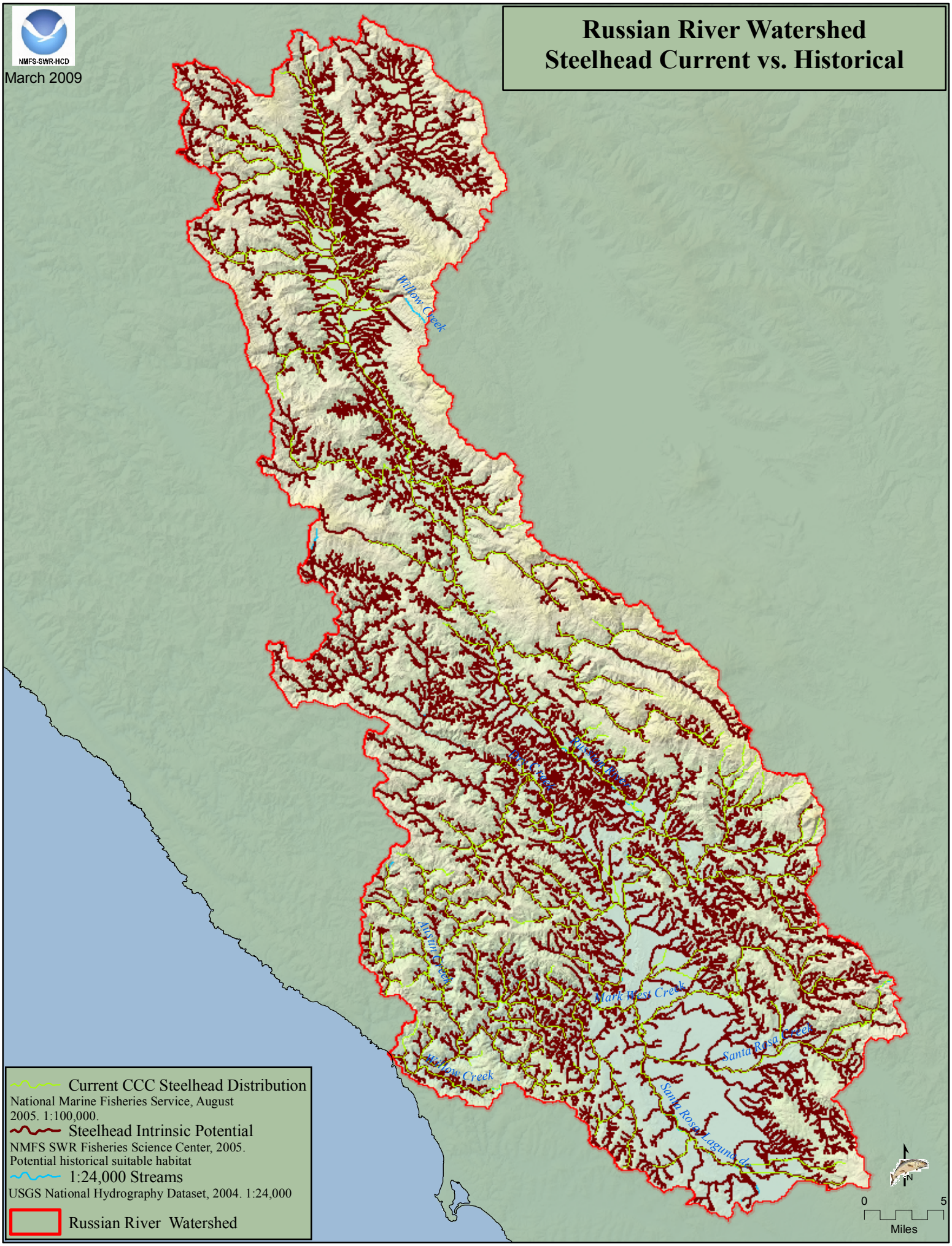
0 Boyes Creek
1 Adobe Creek
2 Corral Creek
3 Walker Creek
4 Mariposa Creek
5 Upper East Fork Russian River
6 Burright Creek
7 Williams Creek
8 Redwood Valley
9 Salt Hollow Creek
10 Mill Creek
11 Bevans Creek
12 East Fork East Canal
13 Jack Smith Creek
14 Seward Creek
15 Mewhinney Creek
16 Guntley Ranch
17 Lake Mendocino
18 York Creek
19 Lower Cold Creek
20 Calpella
21 Upper Cold Creek
22 Upper Ackerman Creek
23 Hensley Creek
24 Talmage
25 Lower Ackerman Creek
26 Sulfer Creek
27 Orrs Creek
28 McClure Creek
29 Gibson Creek
30 Willow Creek
31 Upper Robinson Creek
32 Howell Creek
33 Lower Robinson Creek
34 Romer
35 South Branch Robinson Creek
36 Morrison Creek
37 Jandrew Gorge
38 McNab Creek
39 Parsons Creek
40 Main Stem Feliz Creek
41 Crawford Creek
42 McDowell Creek
43 Middle Fork Feliz Creek
44 Johnson Creek
45 Coleman Creek
46 Duncan Springs
47 Cummiskey Creek
48 Elkhorn Creek
49 Salt Spring Creek
50 Ingram Creek
51 Tyler Creek
52 Edwards Creek
53 Soda Creek
54 Ash Creek
55 Squaw Creek
56 Cherry Creek
57 Frasier Creek
58 Lower Big Sulphur Creek
59 McChristian Creek
60 Galloway Creek
61 Lower Dry Creek
62 Cloverdale Creek
63 Middle Big Sulphur Creek
64 N. Branch Little Sulphur Cree
65 Upper Big Sulphur Creek
66 Icaria Creek
67 Lower Little Sulfur Creek
68 Smith Creek
69 Gill Creek
70 Upper Little Sulfur Creek
71 Strawberry Creek
72 Dutcher Creek
73 Sausal Creek
74 Miller Creek
75 McDonnell Creek
76 Lower Lake Sonoma Creek
77 Gird Creek
78 Grape Creek
79 Briggs Creek
80 Warm Springs Creek
81 Pechaco Creek
82 Maacama Creek
83 Redwood Log Creek
84 Kellogg Creek
85 Lower Dry Creek
86 Brooks Creek
87 Lower East Gray Creek
88 Bearpen Creek
89 Wallace Creek
90 Bidwell Creek
91 Lower Franz Creek
92 Palmer Creek
93 Upper East Gray Creek
94 Adam and Eve Redwoods
95 Felta Creek
96 Upper Franz Creek
97 Upper Windsor Creek
98 East Austin Creek
99 Ward Creek
100 Mark West Springs
101 Porter Creek
102 Pool Creek
103 Hulbert Creek
104 Porter Creek
105 Humbug Creek
106 Korbel River
107 Mirabel Park
108 Van Buren Creek
109 Freezeout Creek
110 Santa Rosa Creek
111 Rincon Creek
112 Pocket Canyon
113 Green Valley Creek
114 Pine Creek Reservoir
115 Willow Creek
116 Monroe
117 Dutch Bill Creek
118 Purrington Creek
119 Santa Rosa Creek Reservoir
120 Blucher Creek
121 Laguna de Santa Rosa
122 Upper Matanzas Creek
123 Crane Creek
124 Atascadero Creek
125 South Fork Matanzas Creek


Russian River Watershed
Fish Distribution and Critical Habitat
NMFS-SWR-HCD
March 2009
Willow Creek
Russian River
Dry Creek
Austin Creek
Mark West Creek
Santa Rosa Creek
Willow Creek
Santa Rosa, Laguna de
CC Chinook Distribution & Critical Habitat
National Marine Fisheries Service, August 2005. 1:100,000.
CCC Steelhead Distribution & Critical Habitat
National Marine Fisheries Service, August 2005. 1:100,000.
CCC Steelhead Distribution only
National Marine Fisheries Service, August 2005. 1:100,000.
Coho Distribution
CDFG - NCNCR-ISB, 2007. 1:100,000.
1:24,000 Streams
USGS National Hydrography Dataset, 2004. 1:24,000
Russian River Watershed
N
0
5
Miles

Russian River Watershed
Steelhead Current vs. Historical

NMFS-SWR-HCD

March 2009



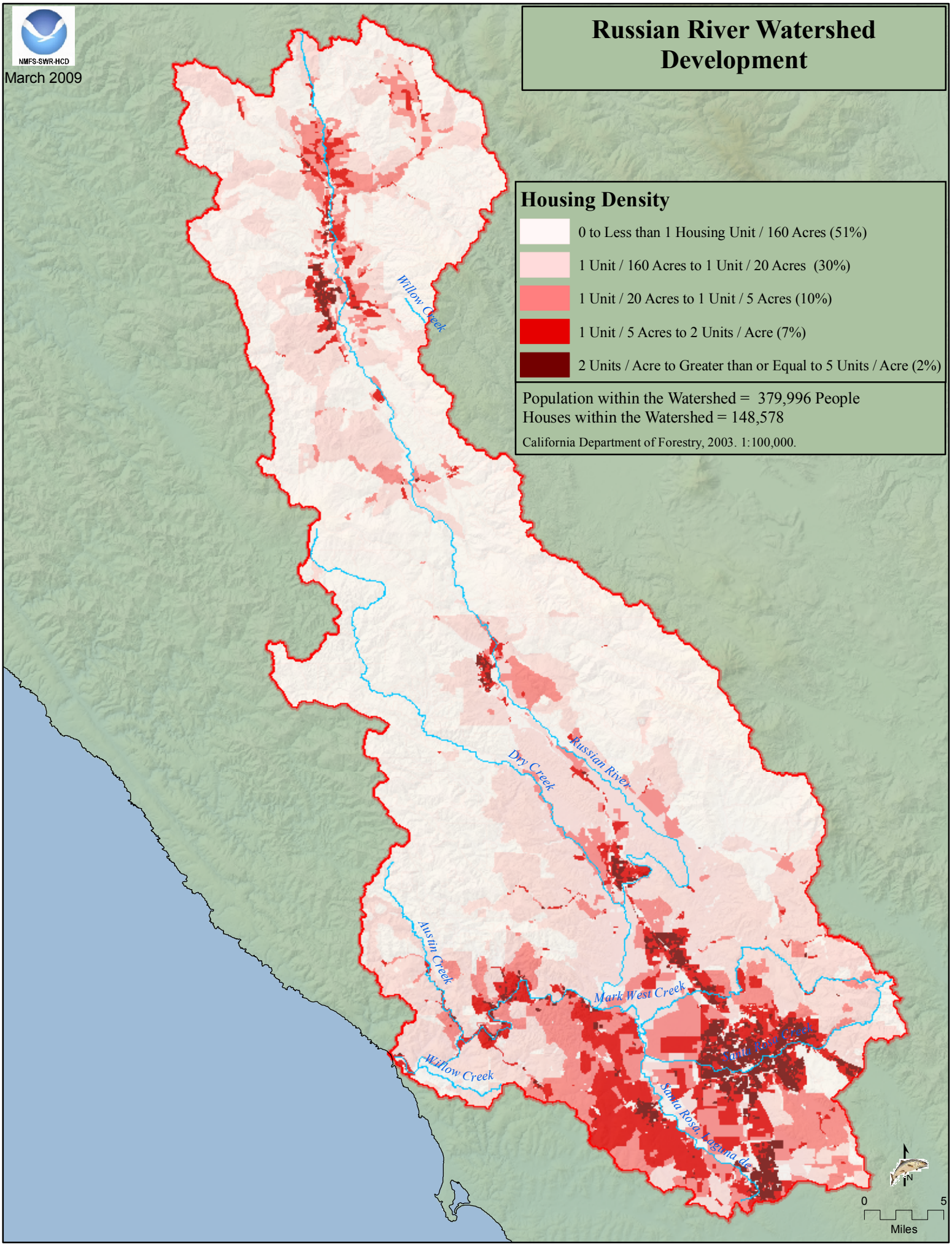
Russian River Watershed
Coho Current vs. Historical

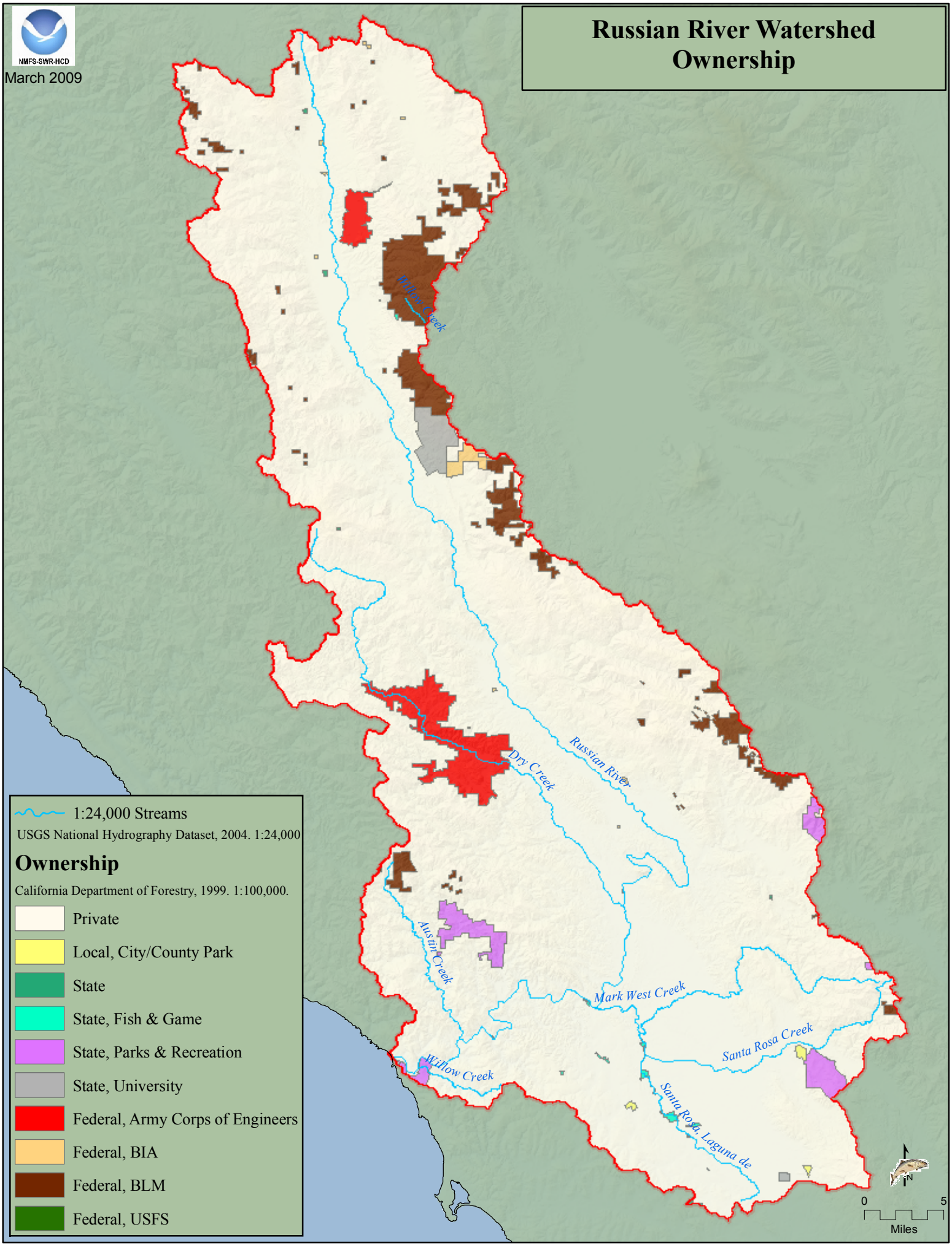
NMFS-SWR-HCD

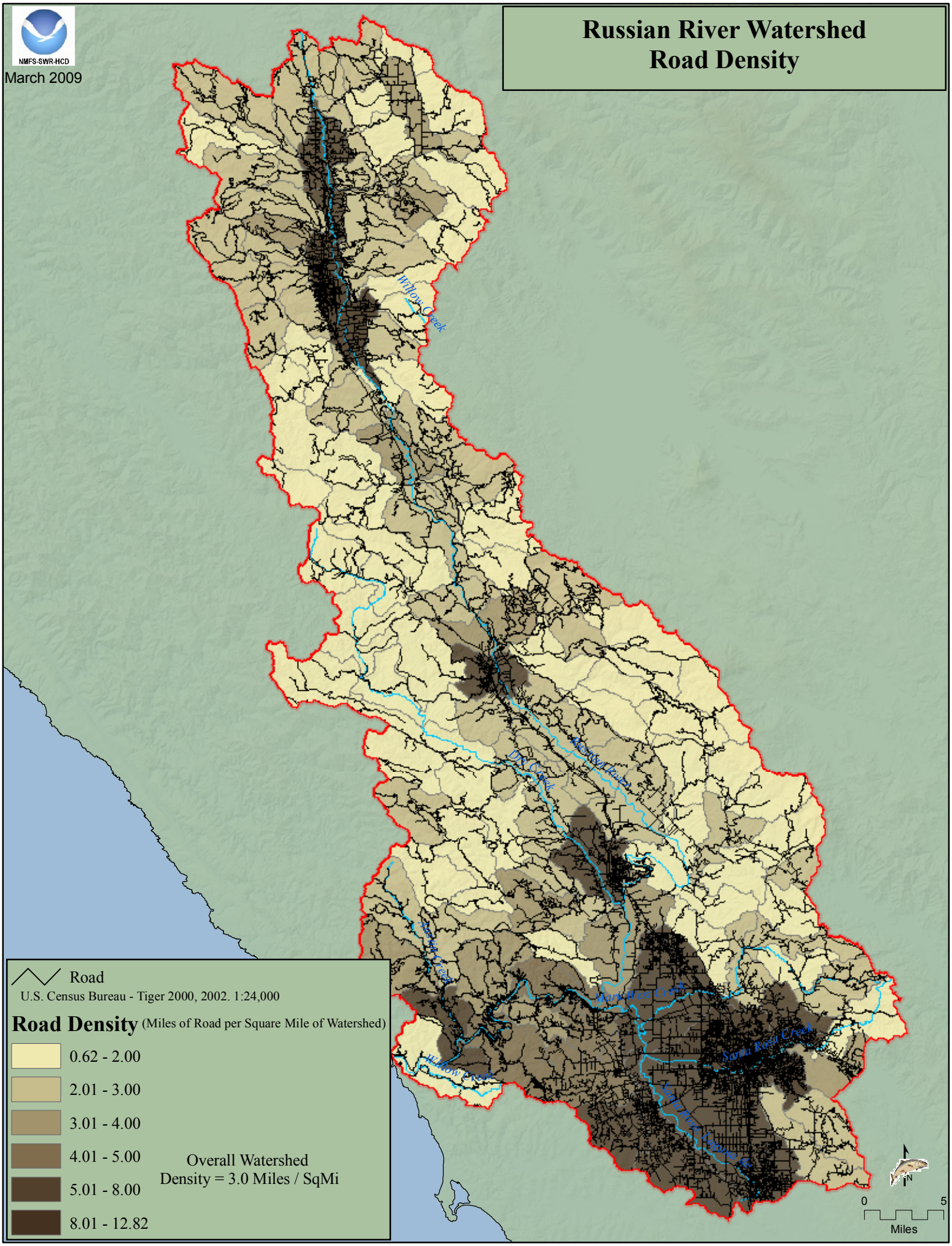
March 2009

NMFS-SWR-HCD
March 2009
Russian River Watershed
Chinook Current vs. Historical
Willow Creek
Russian River
Dry Creek
Austin Creek
Mark West Creek
Santa Rosa Creek
Willow Creek
Santa Rosa, Laguna de
Current CC Chinook Distribution
National Marine Fisheries Service, August 2005. 1:100,000.
Chinook Intrinsic Potential
NMFS SWR Fisheries Science Center, 2005.
Potential historical suitable habitat
1:24,000 Streams
USGS National Hydrography Dataset, 2004. 1:24,000
Russian River Watershed
N
0
5
Miles

NMFS-SWR-HCD
March 2009
Russian River Watershed
Elevation
Willow Creek
Russian River
Dry Creek
Austin Creek
Mark West Creek
Santa Rosa Creek
Mill Creek
Santa Rosa, Laguna de
Russian River Elevation (Meters)
High : 1371
Low : 0
USGS
10 Meter Digital
Elevation
Model (DEM)
N
0
5
Miles


NMFS-SWR-HCD
March 2009
Russian River Watershed Development
Housing Density
0 to Less than 1 Housing Unit / 160 Acres (51%)
1 Unit / 160 Acres to 1 Unit / 20 Acres (30%)
1 Unit / 20 Acres to 1 Unit / 5 Acres (10%)
1 Unit / 5 Acres to 2 Units / Acre (7%)
2 Units / Acre to Greater than or Equal to 5 Units / Acre (2%)
Population within the Watershed = 379,996 People
Houses within the Watershed = 148,578
California Department of Forestry, 2003. 1:100,000.
Willow Creek
Russian River
Dry Creek
Austin Creek
Mark West Creek
Santa Rosa Creek
Willow Creek
Santa Rosa, Laguna de
N
0
5
Miles

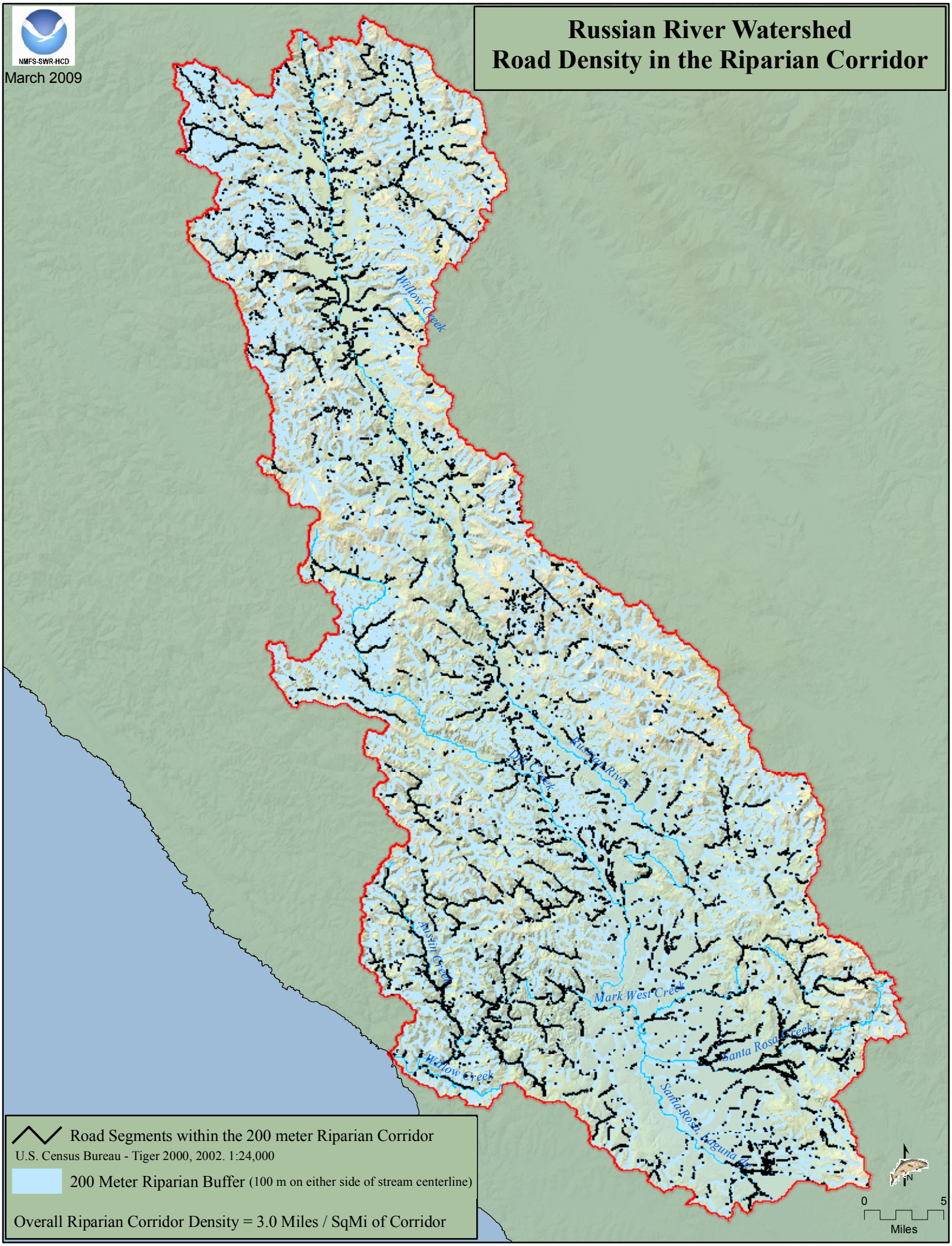

Russian River Watershed Ownership
NMFS-SWR-HCD
March 2009
Willow Creek
Dry Creek
Russian River
Austin Creek
Mark West Creek
Santa Rosa Creek
Willow Creek
Santa Rosa, Laguna de
1:24,000 Streams
USGS National Hydrography Dataset, 2004. 1:24,000
Ownership
California Department of Forestry, 1999. 1:100,000.
Private
Local, City/County Park
State
State, Fish & Game
State, Parks & Recreation
State, University
Federal, Army Corps of Engineers
Federal, BIA
Federal, BLM
Federal, USFS
N
0
5
Miles

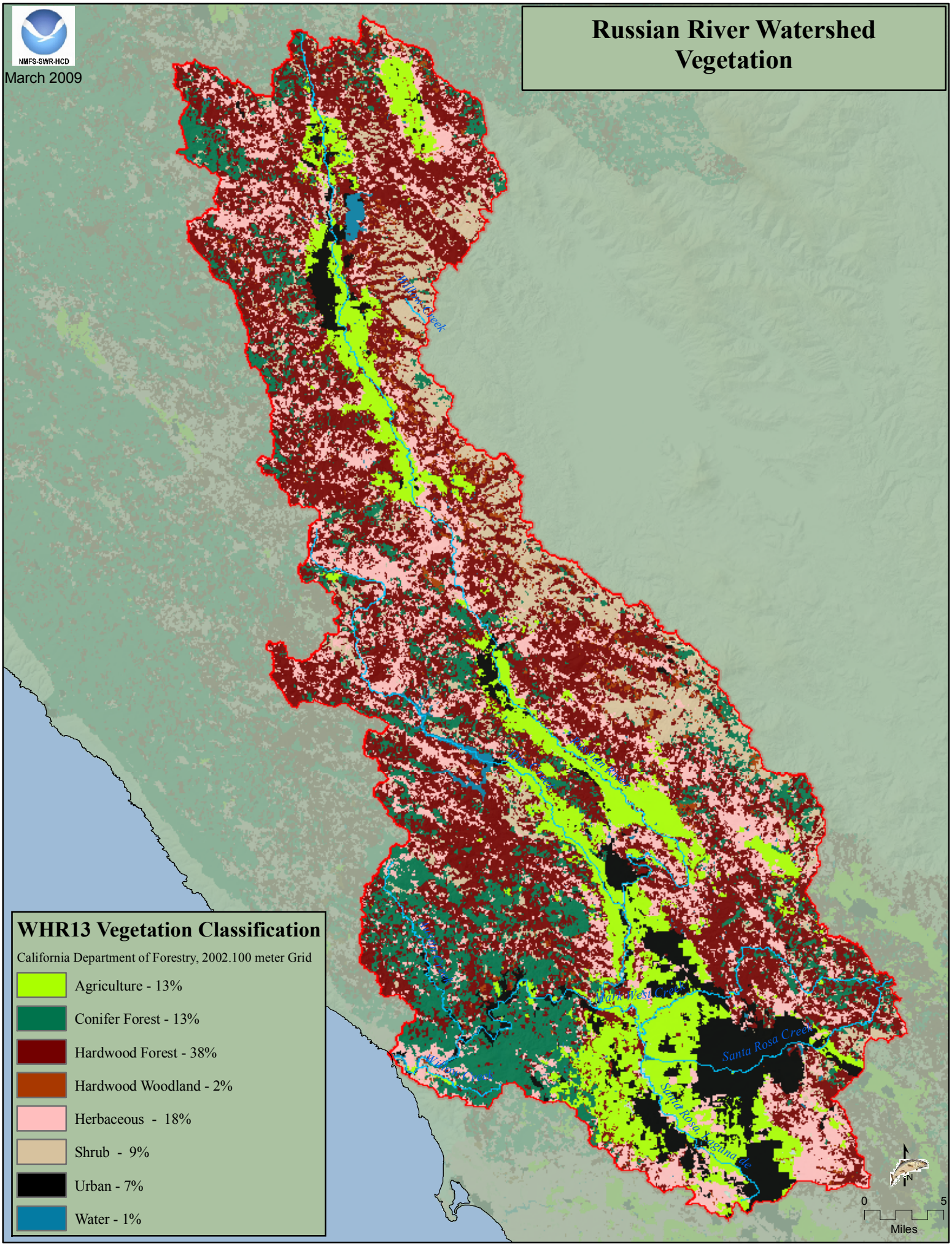

NMFS-SWR-HCD
March 2009
Russian River Watershed
Road Density
Willow Creek
Mill Creek
Dry Creek
Mark West Creek
Santa Rosa Creek
Mission Creek
Willow Creek
Road
U.S. Census Bureau - Tiger 2000, 2002. 1:24,000
Road Density (Miles of Road per Square Mile of Watershed)
0.62 - 2.00
2.01 - 3.00
3.01 - 4.00
4.01 - 5.00
5.01 - 8.00
8.01 - 12.82
Overall Watershed
Density = 3.0 Miles / SqMi
N
0
5
Miles

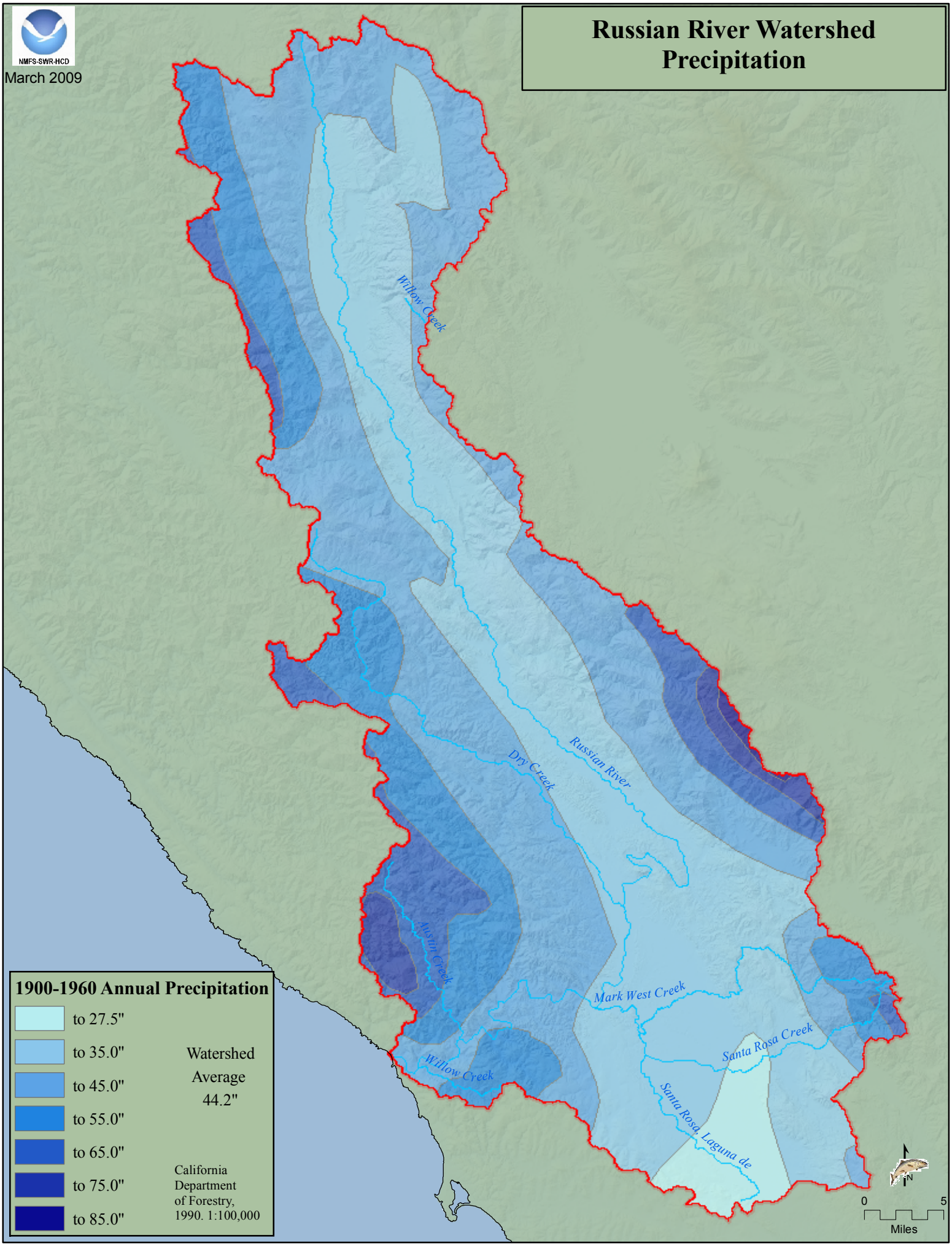
Russian River Watershed
Road Density in the Riparian Corridor

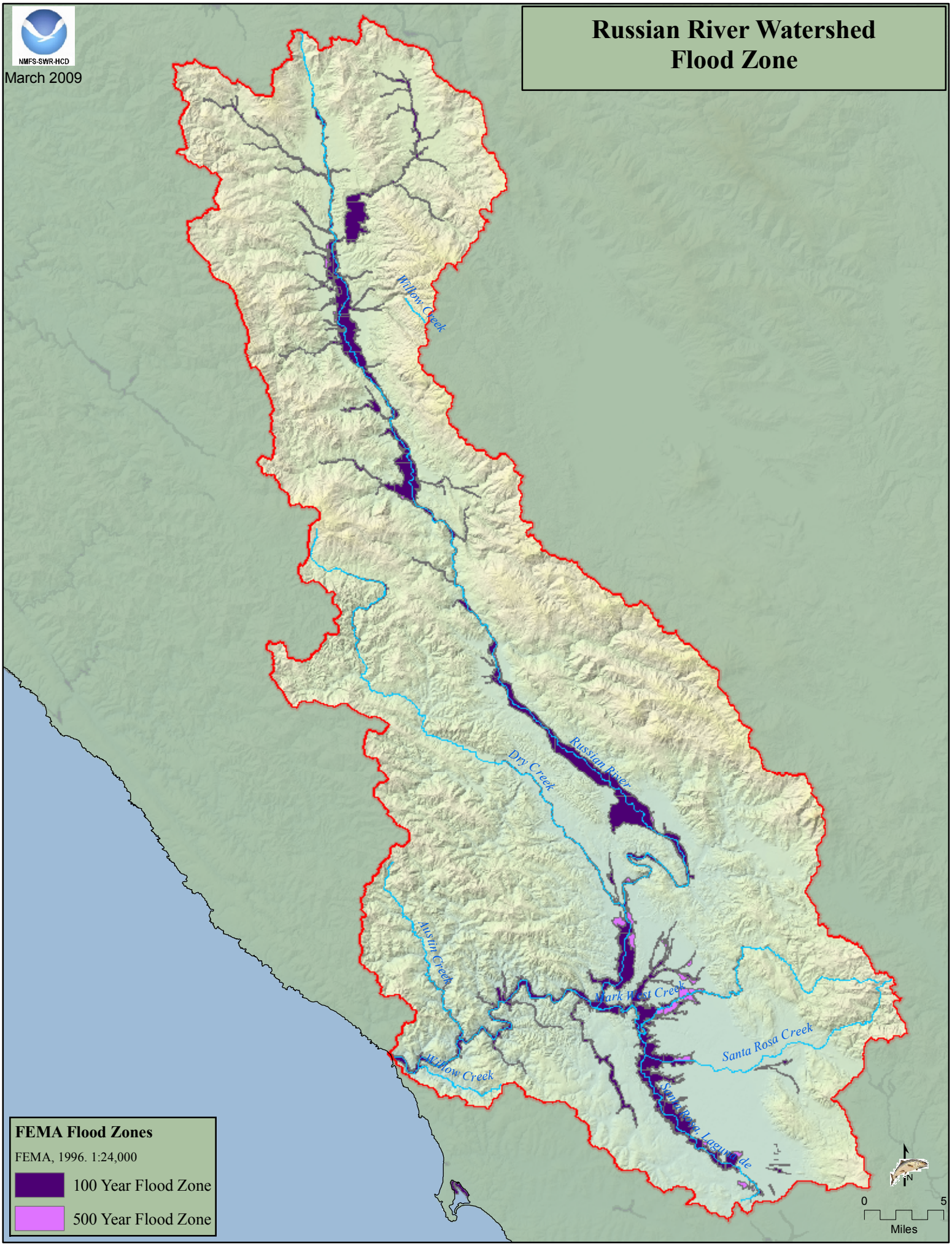
NMFS-SWR-HCD

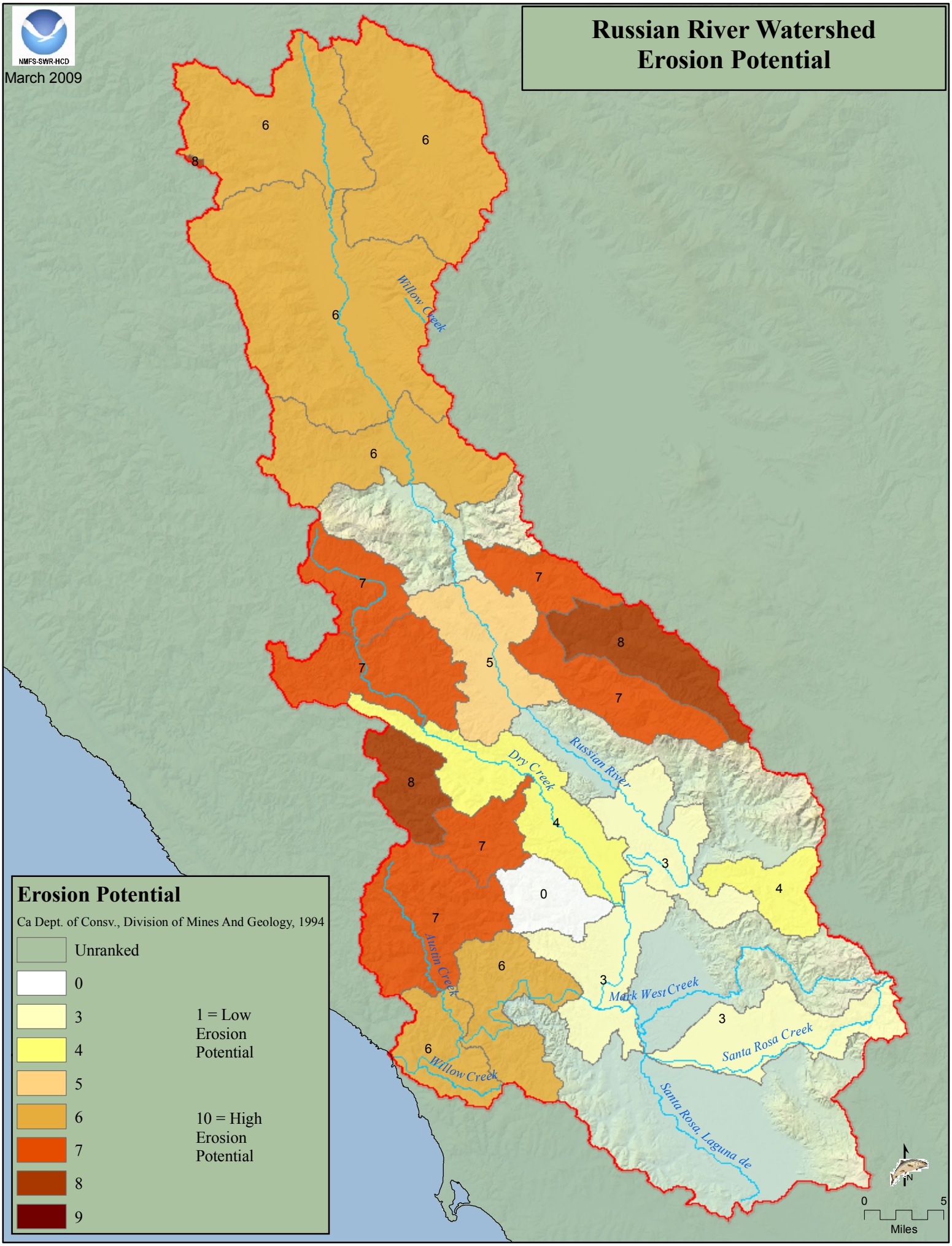
March 2009

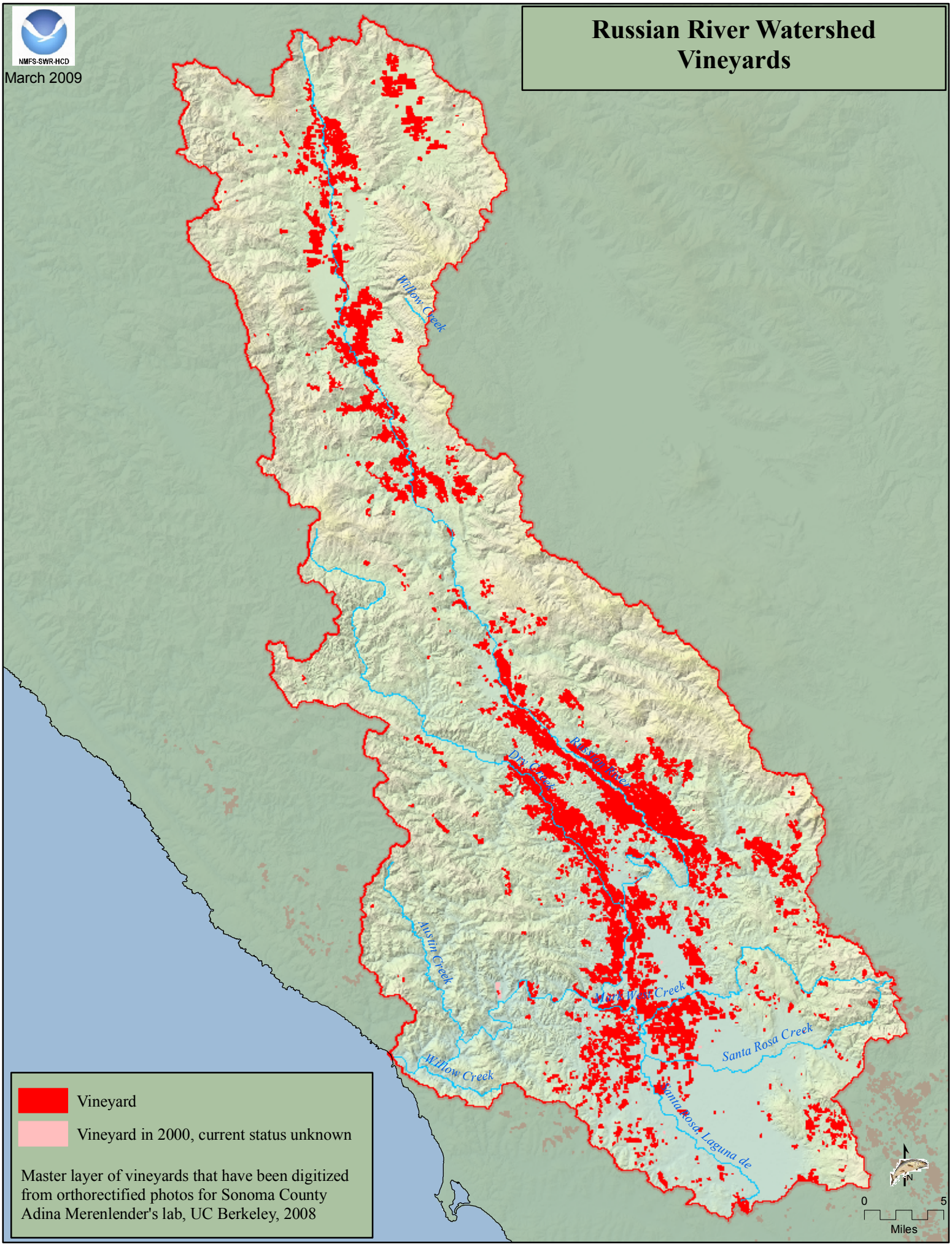


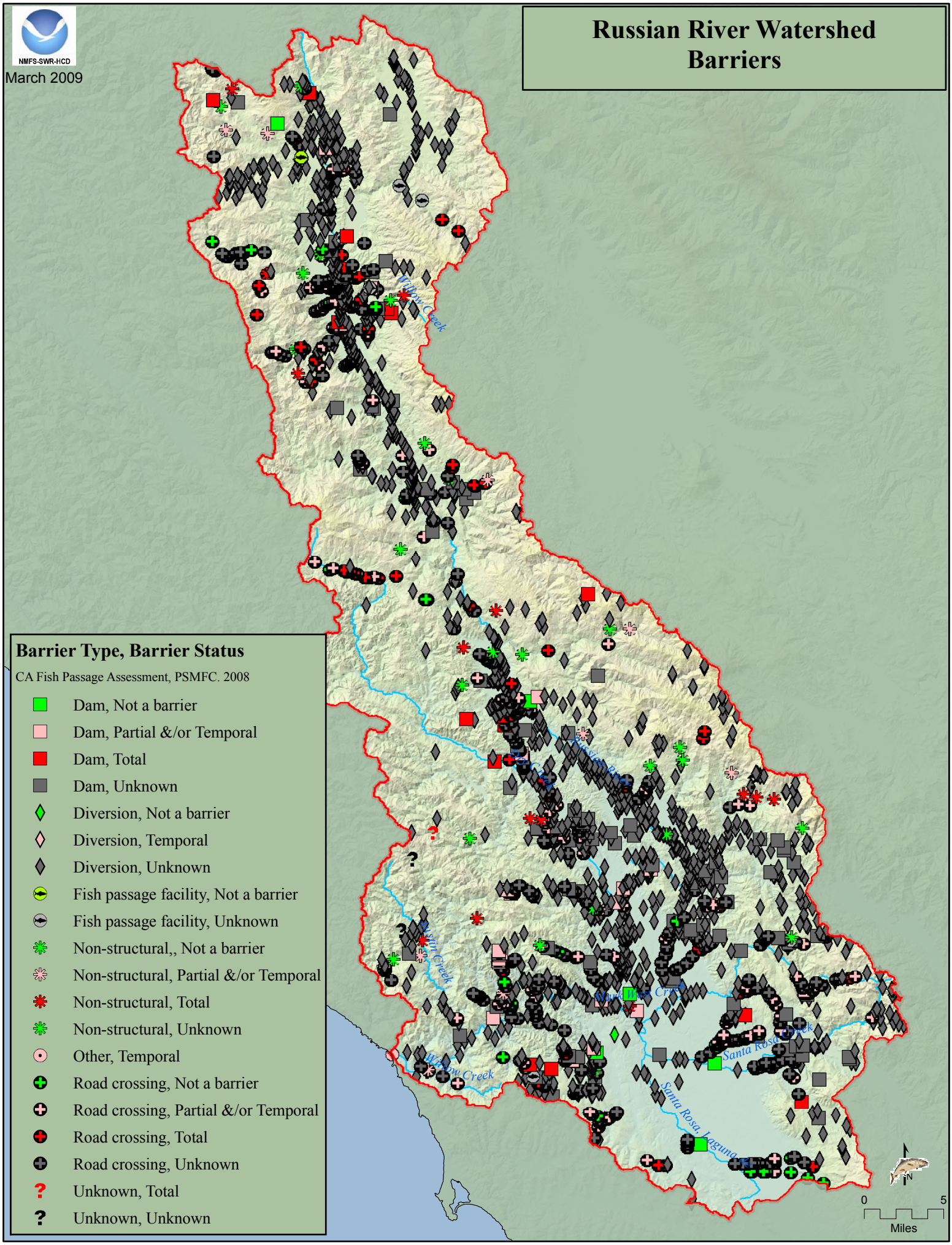

NMFS-SWR-HCD
March 2009
Russian River Watershed
Vegetation
Santa Rosa Creek
WHR13 Vegetation Classification
California Department of Forestry, 2002.100 meter Grid
Agriculture - 13%
Conifer Forest - 13%
Hardwood Forest - 38%
Hardwood Woodland - 2%
Herbaceous - 18%
Shrub - 9%
Urban - 7%
Water - 1%
0
5
Miles

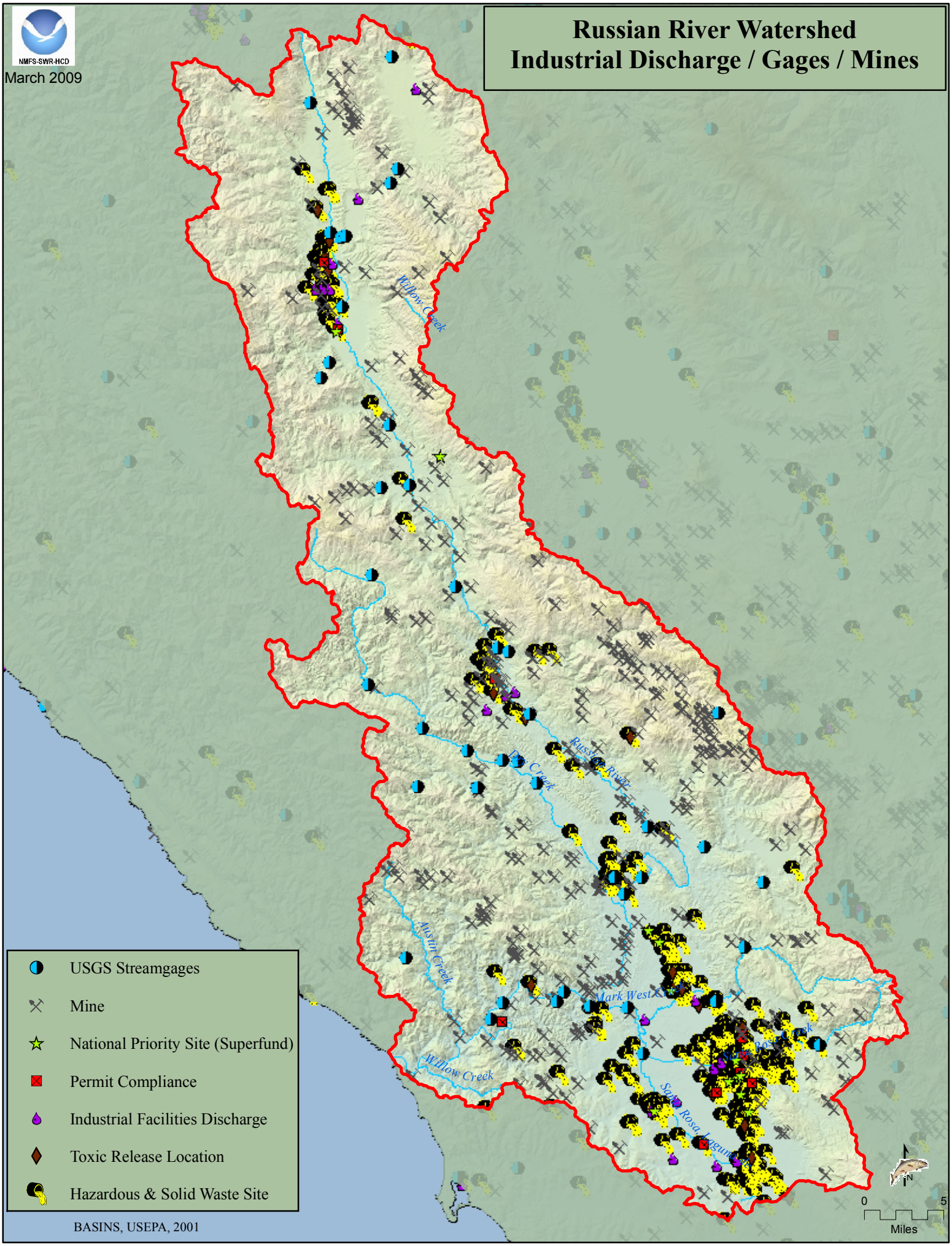

NMFS-SWR-HCD
March 2009
Russian River Watershed Precipitation
Willow Creek
Russian River
Dry Creek
Austin Creek
Mark West Creek
Santa Rosa Creek
Willow Creek
Santa Rosa, Laguna de
1900-1960 Annual Precipitation
to 27.5"
to 35.0"
to 45.0"
to 55.0"
to 65.0"
to 75.0"
to 85.0"
Watershed Average 44.2"
California Department of Forestry, 1990. 1:100,000
N
0
5
Miles

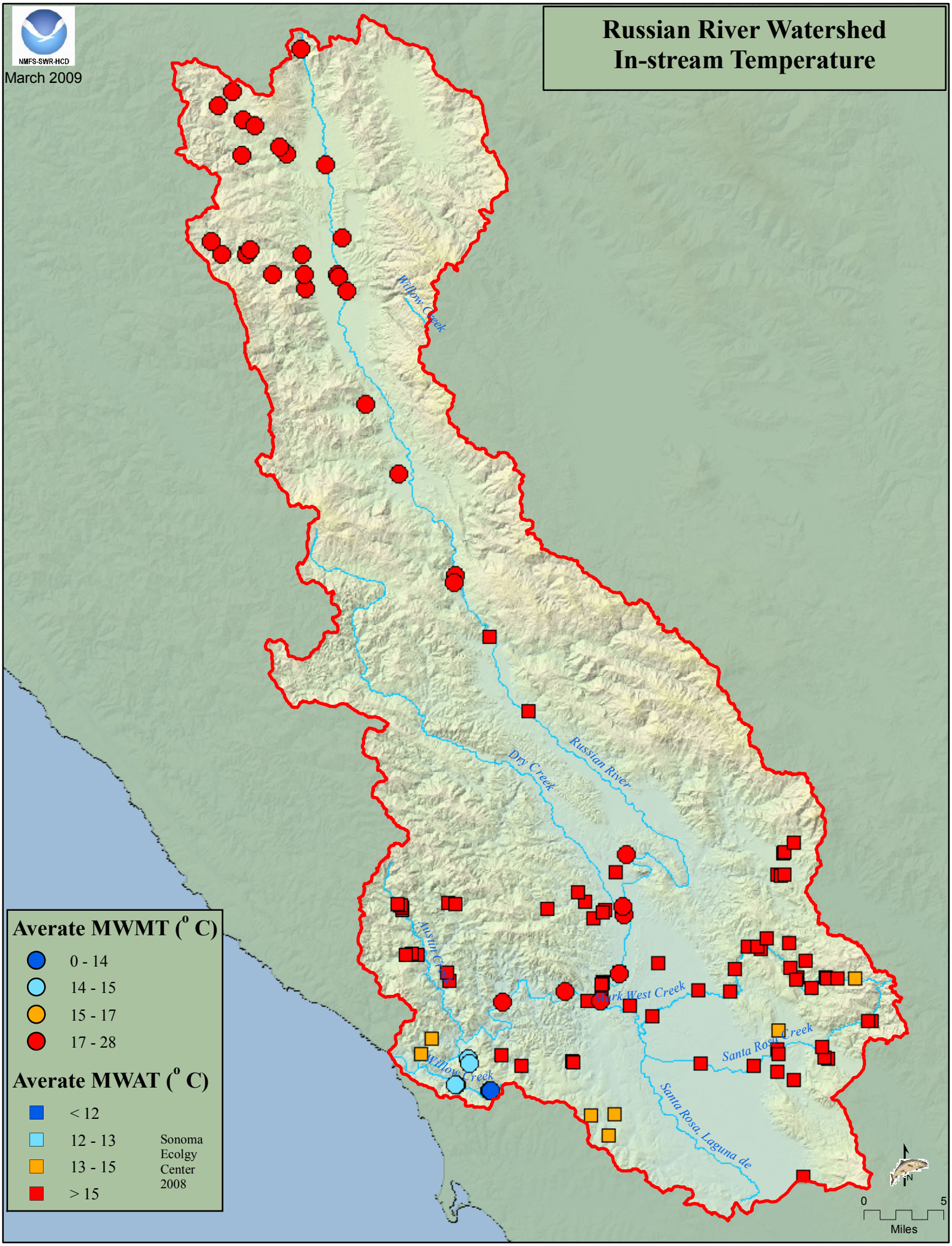

Russian River Watershed
Flood Zone
NMFS-SWR-HCD
March 2009
Willow Creek
Russian River
Dry Creek
Austin Creek
Mark West Creek
Santa Rosa Creek
Willow Creek
Laguna de
FEMA Flood Zones
FEMA, 1996. 1:24,000
100 Year Flood Zone
500 Year Flood Zone
N
0
5
Miles


Russian River Watershed
Erosion Potential
NMFS-SWR-HCD
March 2009
Willow Creek
Dry Creek
Russian River
Austin Creek
Mark West Creek
Santa Rosa Creek
Santa Rosa, Laguna de
Willow Creek
Erosion Potential
Ca Dept. of Consv., Division of Mines And Geology, 1994
Unranked
0
3
4
5
6
7
8
9
1 = Low Erosion Potential
10 = High Erosion Potential
0
5
Miles
N


Russian River Watershed
Vineyards
NMFS-SWR-HCD
March 2009
Willow Creek
Russian River
Dry Creek
Austin Creek
Mark West Creek
Santa Rosa Creek
Willow Creek
Santa Rosa
Laguna de
Vineyard
Vineyard in 2000, current status unknown
Master layer of vineyards that have been digitized from orthorectified photos for Sonoma County Adina Merenlender's lab, UC Berkeley, 2008
N
0
5
Miles


NMFS-SWR-HCD
March 2009
Russian River Watershed
Barriers
Willow Creek
Russian River
Dry Creek
Mark West Creek
Santa Rosa Creek
Santa Rosa, Laguna de
Mill Creek
Willow Creek
Barrier Type, Barrier Status
CA Fish Passage Assessment, PSMFC. 2008
Dam, Not a barrier
Dam, Partial &/or Temporal
Dam, Total
Dam, Unknown
Diversion, Not a barrier
Diversion, Temporal
Diversion, Unknown
Fish passage facility, Not a barrier
Fish passage facility, Unknown
Non-structural,, Not a barrier
Non-structural, Partial &/or Temporal
Non-structural, Total
Non-structural, Unknown
Other, Temporal
Road crossing, Not a barrier
Road crossing, Partial &/or Temporal
Road crossing, Total
Road crossing, Unknown
Unknown, Total
Unknown, Unknown
0
5
Miles


Russian River Watershed
Industrial Discharge / Gages / Mines
NMFS-SWR-HCD
March 2009
Willow Creek
Russian River
Dry Creek
Austin Creek
Mark West Creek
Willow Creek
Santa Rosa Laguna
USGS Streamgages
Mine
National Priority Site (Superfund)
Permit Compliance
Industrial Facilities Discharge
Toxic Release Location
Hazardous & Solid Waste Site
BASINS, USEPA, 2001
0
5
Miles
N


NMFS-SWR-HCD
March 2009
Russian River Watershed
In-stream Temperature
Willow Creek
Dry Creek
Russian River
Austin Creek
Mark West Creek
Santa Rosa Creek
Willow Creek
Santa Rosa, Laguna de
Averate MWMT (° C)
0 - 14
14 - 15
15 - 17
17 - 28
Averate MWAT (° C)
< 12
12 - 13
13 - 15
> 15
Sonoma Ecolgy Center 2008
N
0
5
Miles

Russian River Watershed Public Consultation Tracking System

NMFS-SWR-HCD

March 2009

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August 2005
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CCC_Steelhead_ch_06_2005
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Minimum Mapping Unit: Approximately 8000 Acres (20,000 Hectares)
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