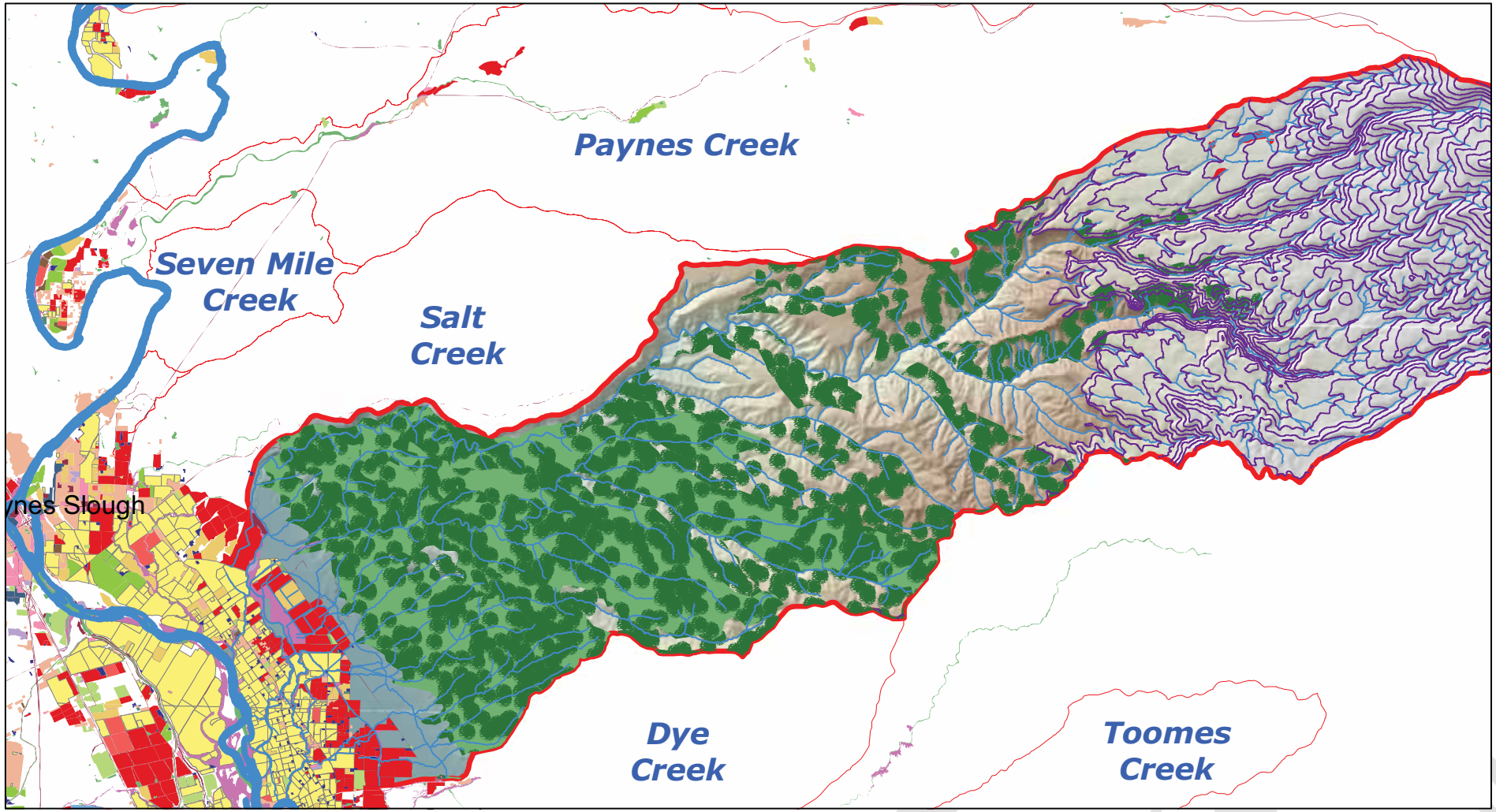


Tehama East Watershed Assessment Atlas

Physiographic Features of Ten Watersheds in Eastern Tehama County

TCRCD

CAL FED BAY-DELTA PROGRAM

Funding for this project has been provided from the California Department of Water Resources under Proposition 50 as a part of the CALFED Bay-Delta Watershed Program

Introduction

The Tehama East Watersheds are located in northern California along the eastern edge of the Sacramento Valley. To the north, they are bordered by the Battle Creek watershed, Butte County to the east and south, and Plumas County to the east, while the Sacramento River to the west terminates the flow of these water courses associated with the Tehama East Watersheds. The general locations of the watersheds are shown in Figure 1. The Tehama East Watersheds encompass 377,974 acres and are comprised of Antelope Creek watershed, Dye Creek watershed, Hoag Slough watershed, Inks Creek watershed, Paynes Creek watershed, Paynes Slough watershed, Salt Creek watershed, Seven Mile Creek watershed, and Toomes Creek watershed (See Figure 1 – Watersheds). Not included in this survey are Battle Creek watershed, Deer Creek watershed, and Mill Creek watershed. The reason for this exclusion is that those watersheds have had extensive analysis in the past and are represented by organized interest groups, including the Battle Creek Watershed Conservancy, the Deer Creek Watershed Conservancy, and the Mill Creek Watershed Conservancy.

The topography of the Tehama East Watersheds ranges from relatively flat plains along the floor of the Sacramento Valley to the mountainous upper reaches moving up the watersheds eastwardly. Many of the watersheds of Tehama East are relatively low in elevation and therefore receive little precipitation in the form of snowfall (See Figure 2 – Snowline). In fact, six of the ten watersheds are below 3,000 feet at their highest points. This tends to create a situation where flows, especially for some of the smaller watersheds (Inks, Seven Mile, and Salt Creeks) are flashy and brief.

The rural population density of Tehama County is approximately nineteen persons per square mile overall, while the density of population for these watersheds is vastly smaller, perhaps two to four persons per square mile. The largest community in the selected watersheds is the eastern portion of Red Bluff (the Sacramento River bisects Red Bluff and Tehama County), with an overall current population of 14,025. Other communities in selected watersheds include Dairyville, Dales, Paynes Creek, Vina, and Ponderosa Sky Ranch. Timber, ranching, and farming are the primary resource activities throughout these watersheds, with mineral resource extraction playing a minor role. Livestock utilizing pasture and range dominate the agricultural activities in the uplands, while orchards and pastures for livestock are most prominent in the lower parts of the watersheds.

Farley Lake Photo: Cathie Benjamin

Purpose

The purpose of the Tehama East Watershed Assessment Atlas is to present to the public an assemblage of digital databases associated specifically with Tehama County resources, both cultural and natural. The use of GIS – Geographic Information Systems – allows for analysis and presentation of information in an easier to understand format. While GIS analysis should not be considered the final word on any subject, it is a tool for performing preliminary analysis.

A Word About GIS

GIS, Geographic Information Systems, utilizes a set of actions on computer software and hardware, in association with organizing, storing, retrieving, analyzing and displaying digital data that is geographically referenced to real-world coordinates. The results of a GIS computer mapping system provide products which allow complex information to be presented in a visual format.

Datasets collected for this project are, for the most part, publicly available. With regard to those datasets that are not publicly available, every effort has been made to protect private information. Digital data that is presented in this atlas is presented with a description of the dataset and its potential uses. Some datasets contain very basic information and location. Other datasets can be much more complex than illustrated in the featured map and can provide attributes with a wealth of information concerning the associated feature.

An important factor concerning GIS analysis is scale. Scale is essentially associated with the relationship of the measured distance within a digital dataset and the actual distance on the ground. Not all datasets are created equal, and they should not be treated equally. Many datasets are appropriate when associated with projects that look at information at a small scale, as in presenting data on a statewide basis. On the other hand, when working at a larger scale, such as at a Dye Creek watershed scale, certain datasets are not appropriate.

This atlas is not the end of the story; it is really just the beginning. In the future, these datasets will be used to help planning efforts. The ultimate purpose of GIS is to provide support at a minimal cost for making decisions based on spatial data. Furthermore, GIS modeling utilizes the process of creating new GIS products from existing datasets.

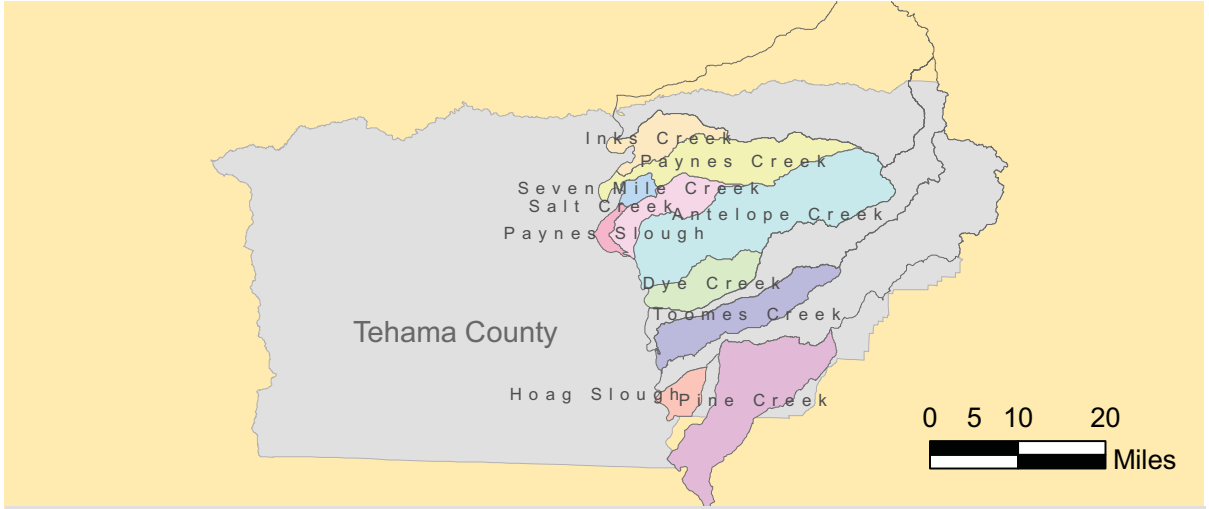
We at Tehama County Resource Conservation District have produced this GIS atlas for the citizens of Tehama County in an effort to provide a tool to better understand their county and their resources.

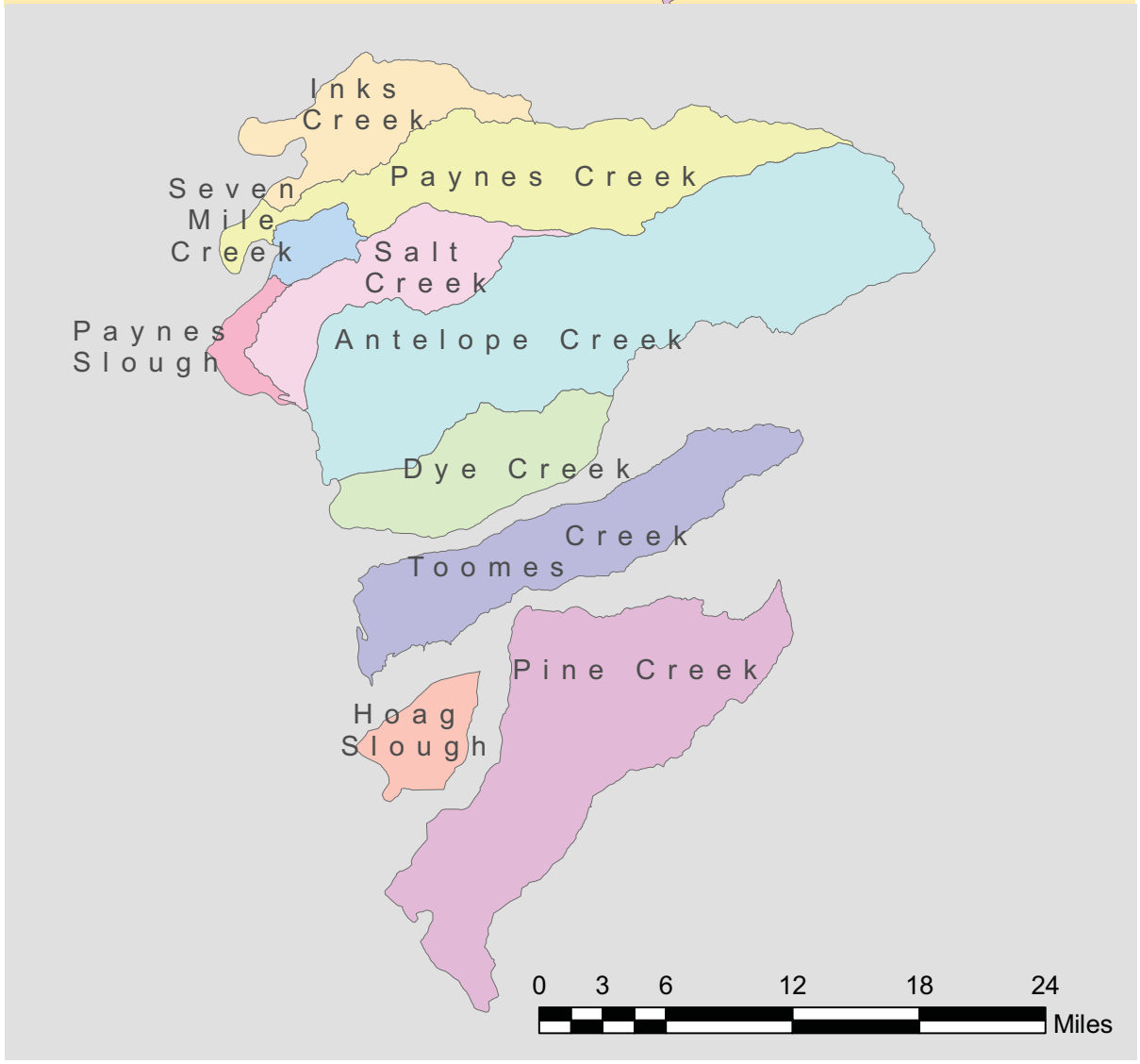
Finally, we must include this qualification to those products produced by GIS:

Disclaimer: Tehama County Resource Conservation District makes no warranties as to the suitability of this mapping product for any particular purpose. The spatial data provided herein does not meet survey standards and does not carry legal authority to determine a boundary or the location of fixed works. This map is for visualization only and should not be used as a navigational aid. Further, this map does not necessarily reflect the opinions or policies of the employees or Board of Directors of Tehama County Resource Conservation District.

Tehama East Watershed Assessment

Watersheds of Tehama East



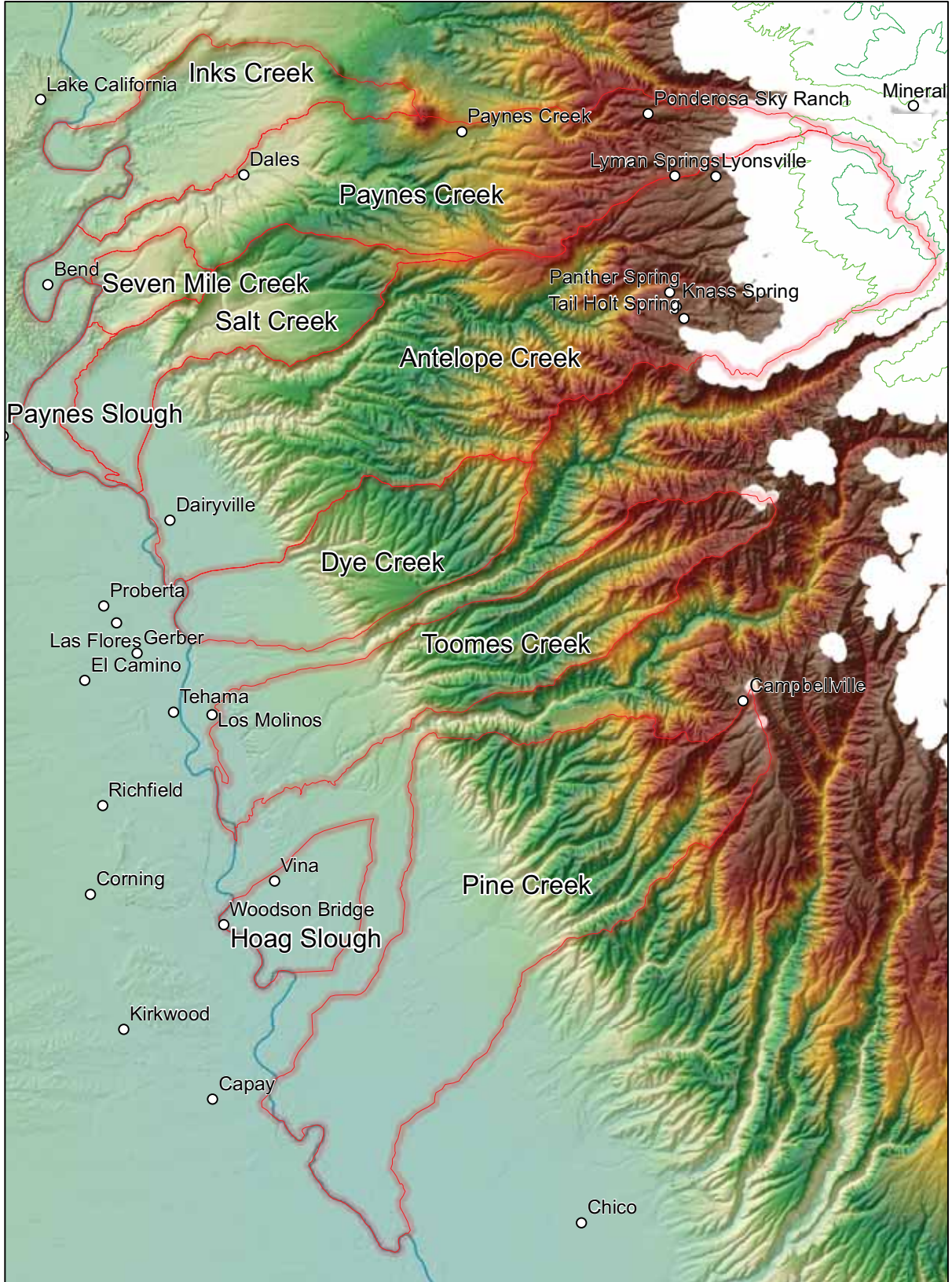


Antelope Creek: 129,017 Acres
Dye Creek: 31,552 Acres
Hoag Slough: 12,758 Acres
Inks Creek: 26,166 Acres
Paynes Creek: 61,391 Acres
Paynes Slough: 5,926 Acres
Salt Creek: 29,413 Acres
Seven Mile Creek: 6,810 Acres
Toomes Creek: 48,775 Acres

Tehama County Resource Conservation District

Tehama East Watershed Assessment

Snow Level
Tehama East Watersheds



In the past, the 4,000 foot elevation mark was generally considered the snowline. However, climate scientists have suggested that the snow elevation may rise in California. Precipitation may remain approximately the same, but the events may have a higher elevation snowline. For many of the Tehama East Watersheds this may mean little or no snow will fall within their boundaries, thereby making their runoff flashy and brief, with many of them unable to sustain a year-round flow.

KEY

4,000 Foot Plus Elevation

Higher Contour Lines

5,000 Feet

6000 Feet

Watershed Boundary

N
W E
S

Tehama County Resource Conservation District

0 2 4 8 12 16

Miles

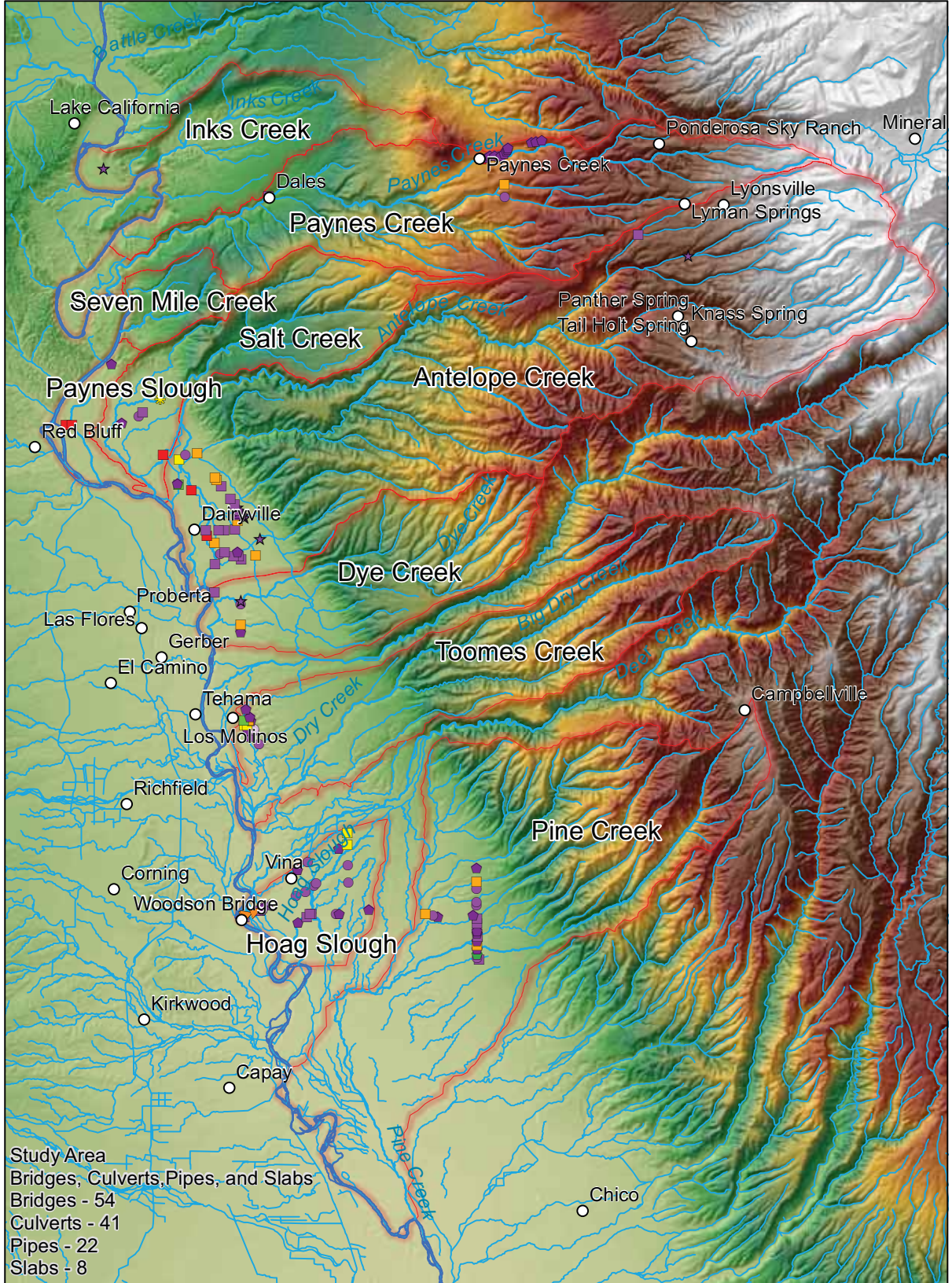
Maps by Characteristics

Bridges, Culverts, Pipes, and Slabs

Tehama East Watershed Assessment

Bridges, Culverts, Pipes, and Slabs Tehama East Watersheds

"For habitat protection, ecological connectivity should be a goal of stream-road crossing designs. The narrowest scope of crossing design is to pass floods. The next level is requiring fish passage. The next level includes sizing the crossing for sediment and debris passage. For ecosystem health, "ecological connectivity" is necessary. Ecological connectivity includes fish, sediment, debris, other organisms and channel/floodplain processes. Ken Bates - WDFW"
Quoted from:
nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=3546



KEY

- Bridge-Abandoned
- Bridge-Green
- Bridge-Orange
- Bridge-Purple
- Bridge-Purple/Green
- Bridge-Purple/Orange
- Bridge-Red
- Bridge-Yellow
- Bridge-Yellow (One Lane)
- Culvert-Green
- Culvert-Orange/Green
- Culvert-Purple
- Culvert-Yellow
- Pipe-Purple (Non County)
- Pipe-Abandoned
- Pipe-Purple
- Slab-Abandoned
- Slab-Purple

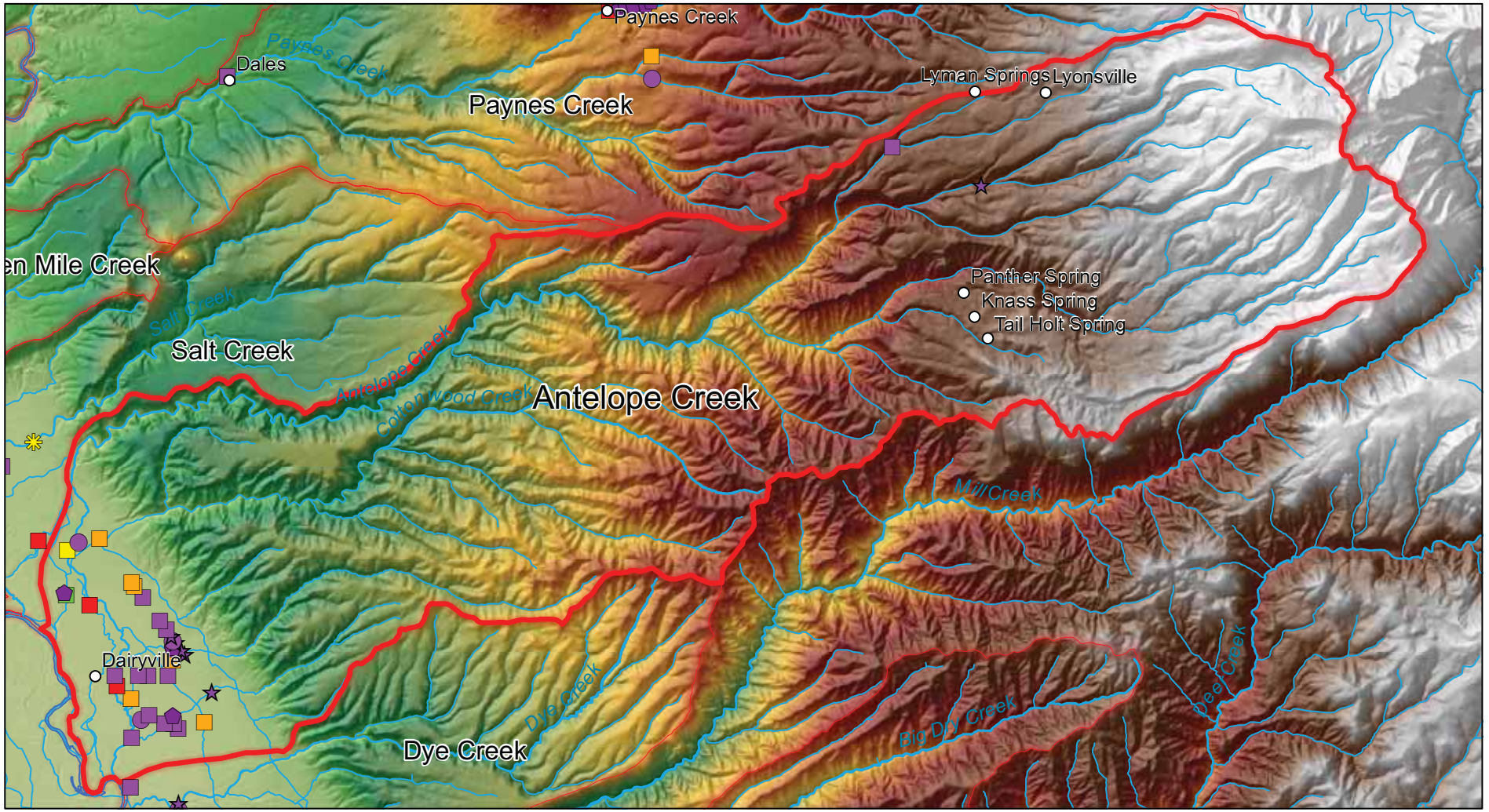
Tehama County Public Works Department

Watershed Boundary

N
W E
S

Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10
Miles



Tehama East Watershed Assessment

Bridges, Culverts, Pipes, and Slabs Antelope Creek

N
W E
S

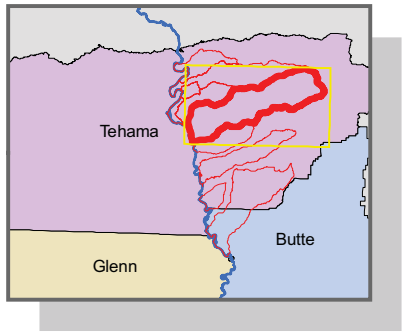
TCRCD

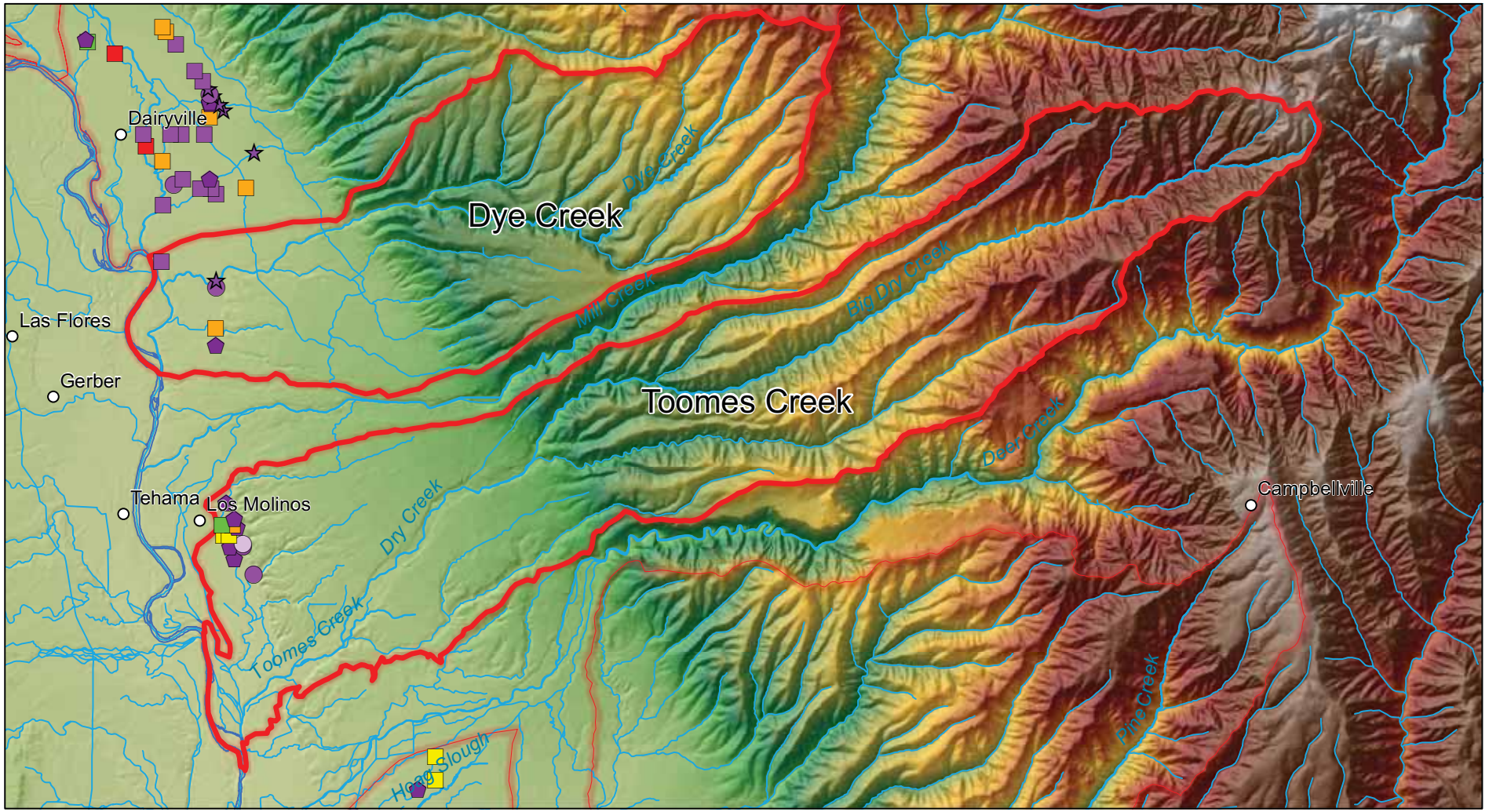
Tehama County Resource Conservation District
(c) 2010

0 2 4 8
Miles

KEY

- Bridge-Abandoned
- Bridge-Green
- Bridge-Orange
- Bridge-Purple
- Bridge-Purple/Green
- Bridge-Purple/Orange
- Bridge-Red
- Bridge-Yellow
- Bridge-Yellow (One Lane)
- Culvert-Green
- Culvert-Orange/Green
- Culvert-Purple
- Culvert-Yellow
- Pipe-Purple (Non County)
- Pipe-Abandoned
- Pipe-Purple
- Slab-Abandoned
- Slab-Purple
- Watershed Boundary



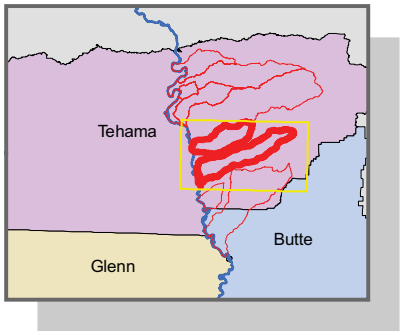


Tehama East Watershed Assessment

Bridges, Culverts, Pipes, and Slabs
Dye and Toomes Creeks

KEY

- Bridge-Abandoned
- Bridge-Green
- Bridge-Orange
- Bridge-Purple
- Bridge-Purple/Green
- Bridge-Purple/Orange
- Bridge-Red
- Bridge-Yellow
- Bridge-Yellow (One Lane)
- Culvert-Green
- Culvert-Orange/Green
- Culvert-Purple
- Culvert-Yellow
- Pipe-Purple (Non County)
- Pipe-Abandoned
- Pipe-Purple
- Slab-Abandoned
- Slab-Purple
- Watershed Boundary



N
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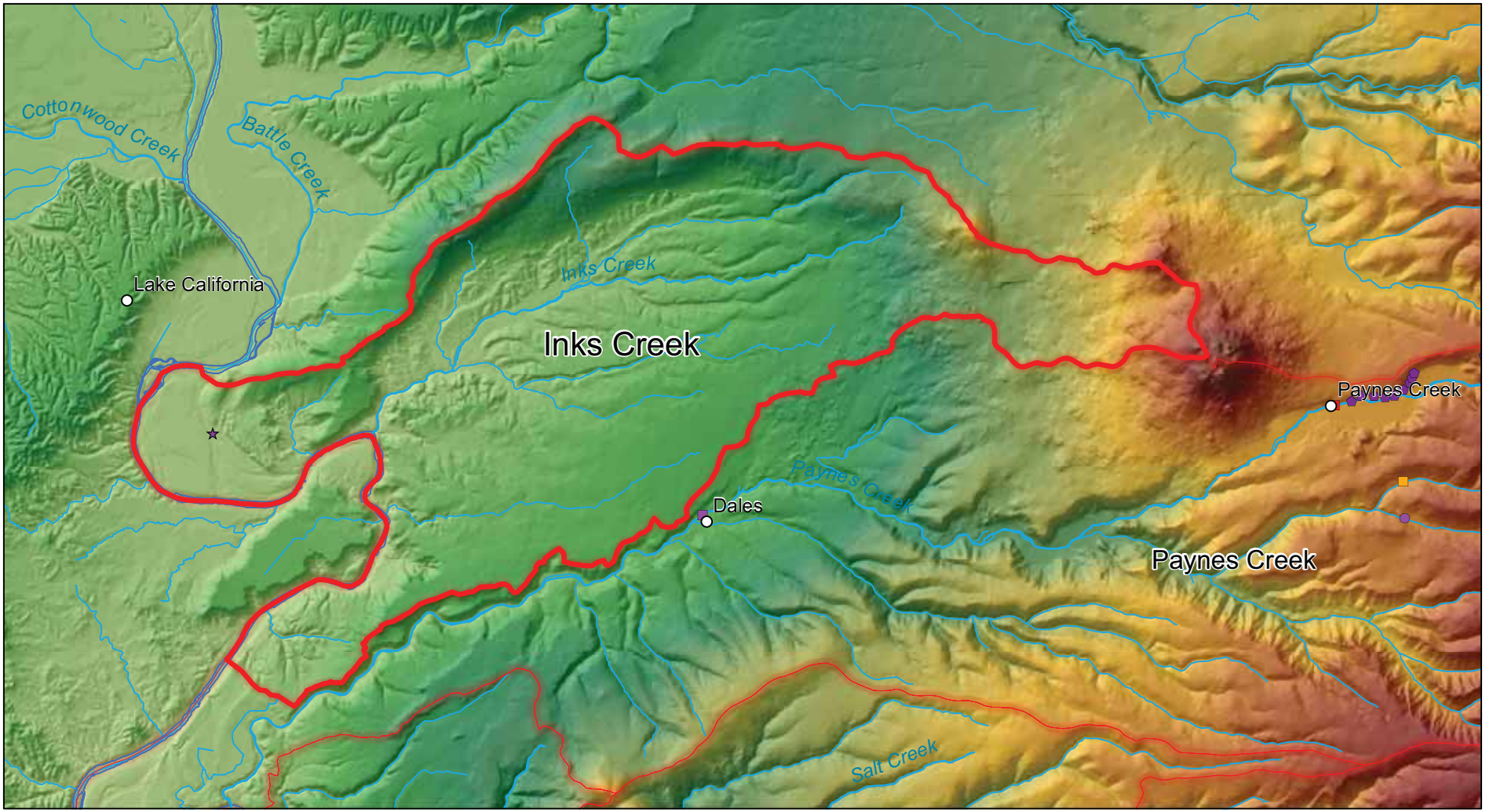
0 1.5 3 6
Miles

Tehama County Resource Conservation District
(c) 2010



Tehama East Watershed Assessment

Bridges, Culverts, Pipes, and Slabs Inks Creek

N
W E
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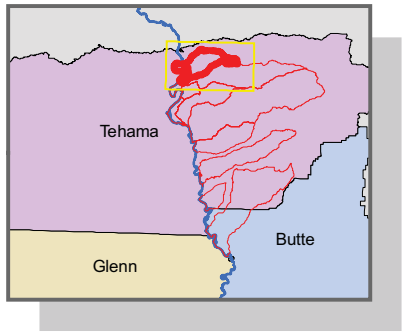
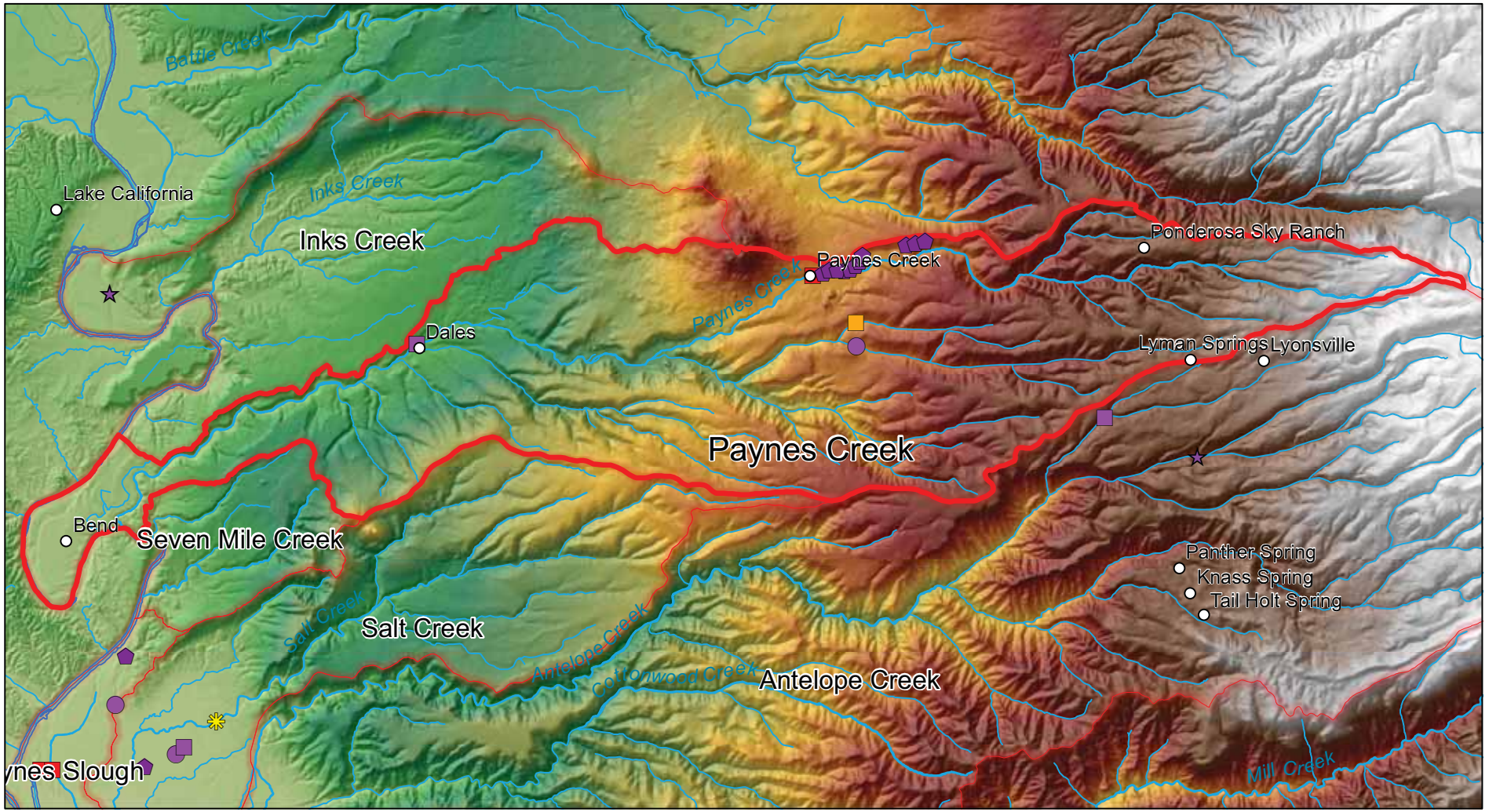
0 1.25 2.5 5
Miles

Tehama County Resource Conservation District
(c) 2010

KEY

- Bridge-Abandoned
- Bridge-Green
- Bridge-Orange
- Bridge-Purple
- Bridge-Purple/Green
- Bridge-Purple/Orange
- Bridge-Red
- Bridge-Yellow
- Bridge-Yellow (One Lane)
- Culvert-Green
- Culvert-Orange/Green
- Culvert-Purple
- Culvert-Yellow
- Pipe-Purple (Non County)
- Pipe-Abandoned
- Pipe-Purple
- Slab-Abandoned
- Slab-Purple
- Watershed Boundary





Tehama East Watershed Assessment

Bridges, Culverts, Pipes, and Slabs Paynes Creek

N
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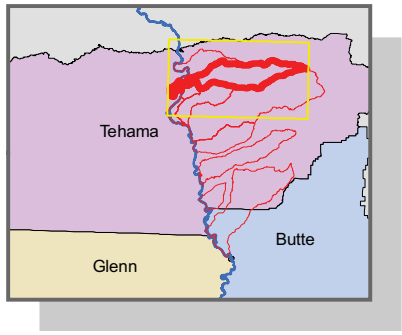
TCRCD

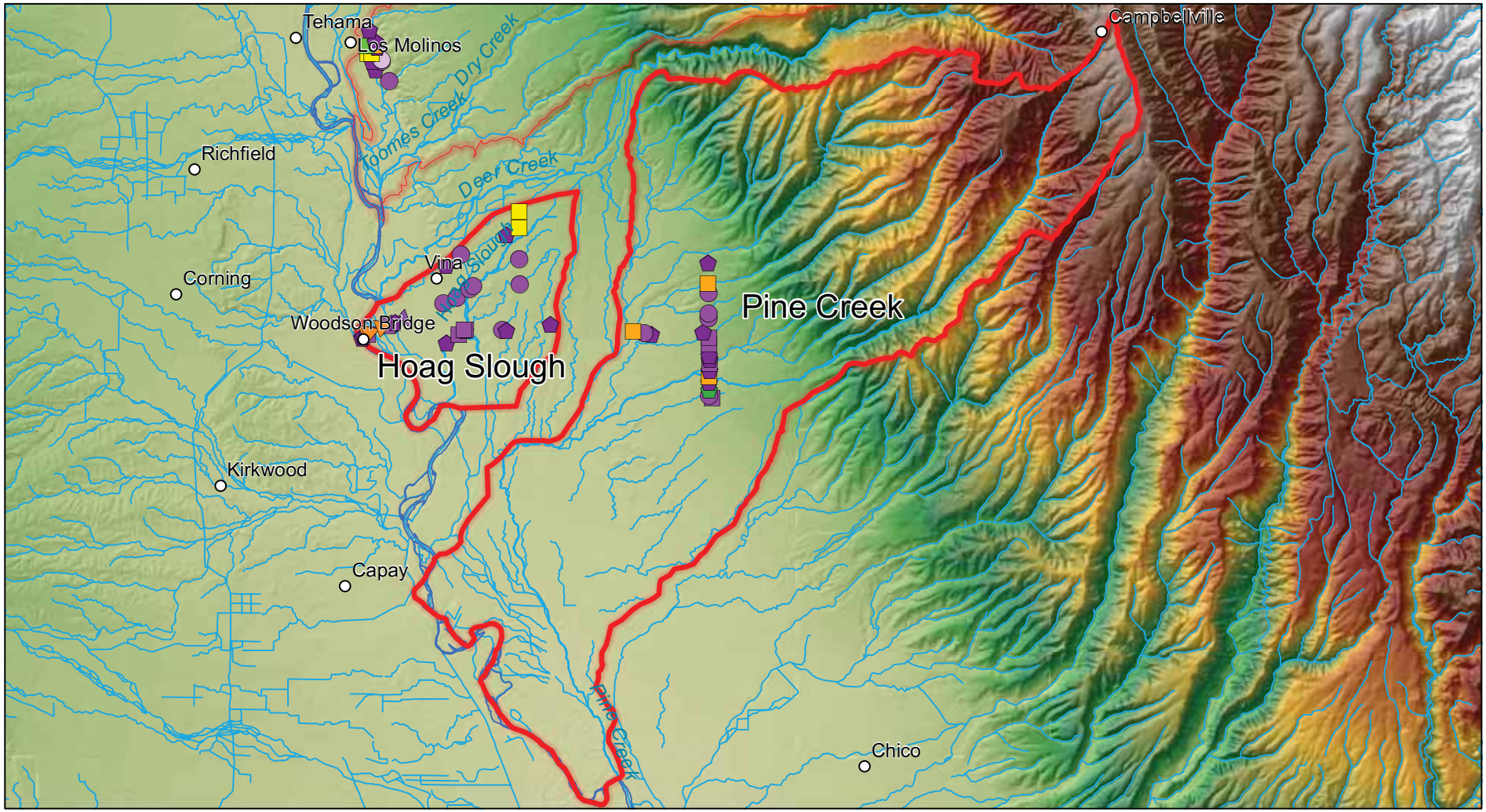
Tehama County Resource Conservation District
(c) 2010

0 2 4 8
Miles

KEY

- Bridge-Abandoned
- Bridge-Green
- Bridge-Orange
- Bridge-Purple
- Bridge-Purple/Green
- Bridge-Purple/Orange
- Bridge-Red
- Bridge-Yellow
- Bridge-Yellow (One Lane)
- Culvert-Green
- Culvert-Orange/Green
- Culvert-Purple
- Culvert-Yellow
- Pipe-Purple (Non County)
- Pipe-Abandoned
- Pipe-Purple
- Slab-Abandoned
- Slab-Purple
- Watershed Boundary





Tehama East Watershed Assessment

Bridges, Culverts, Pipes, and Slabs
Hoag Slough and Pine Creek

N
W E
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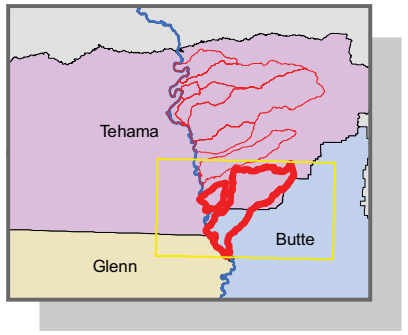
TCRCD

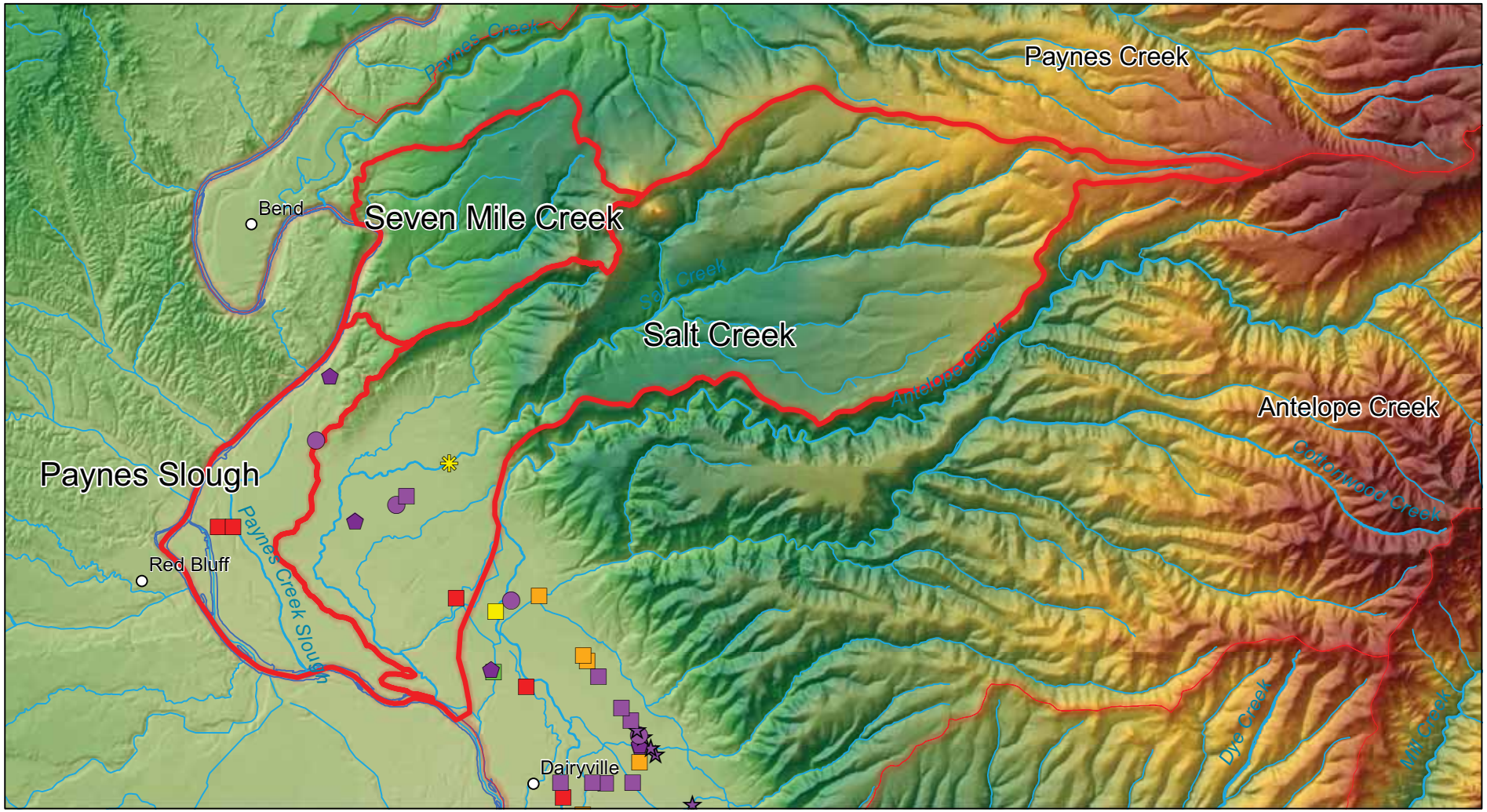
Tehama County Resource Conservation District
(c) 2010

0 2 4 8
Miles

KEY

- Bridge-Abandoned
- Bridge-Green
- Bridge-Orange
- Bridge-Purple
- Bridge-Purple/Green
- Bridge-Purple/Orange
- Bridge-Red
- Bridge-Yellow
- Bridge-Yellow (One Lane)
- Culvert-Green
- Culvert-Orange/Green
- Culvert-Purple
- Culvert-Yellow
- Pipe-Purple (Non County)
- Pipe-Abandoned
- Pipe-Purple
- Slab-Abandoned
- Slab-Purple
- Watershed Boundary





Tehama East Watershed Assessment

Bridges, Culverts, Pipes, and Slabs Paynes Slough, Salt, and Seven Mile Creeks

N
W E
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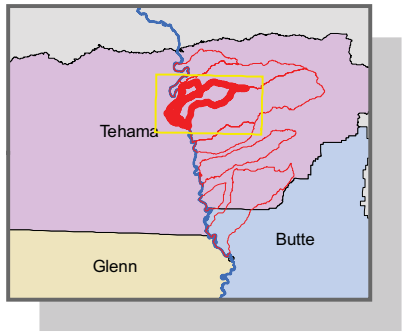
TCRCD

Tehama County Resource Conservation District
(c) 2010

0 1.5 3 6
Miles

KEY

- Bridge-Abandoned
- Bridge-Green
- Bridge-Orange
- Bridge-Purple
- Bridge-Purple/Green
- Bridge-Purple/Orange
- Bridge-Red
- Bridge-Yellow
- Bridge-Yellow (One Lane)
- Culvert-Green
- Culvert-Orange/Green
- Culvert-Purple
- Culvert-Yellow
- Pipe-Purple (Non County)
- Pipe-Abandoned
- Pipe-Purple
- Slab-Abandoned
- Slab-Purple
- Watershed Boundary

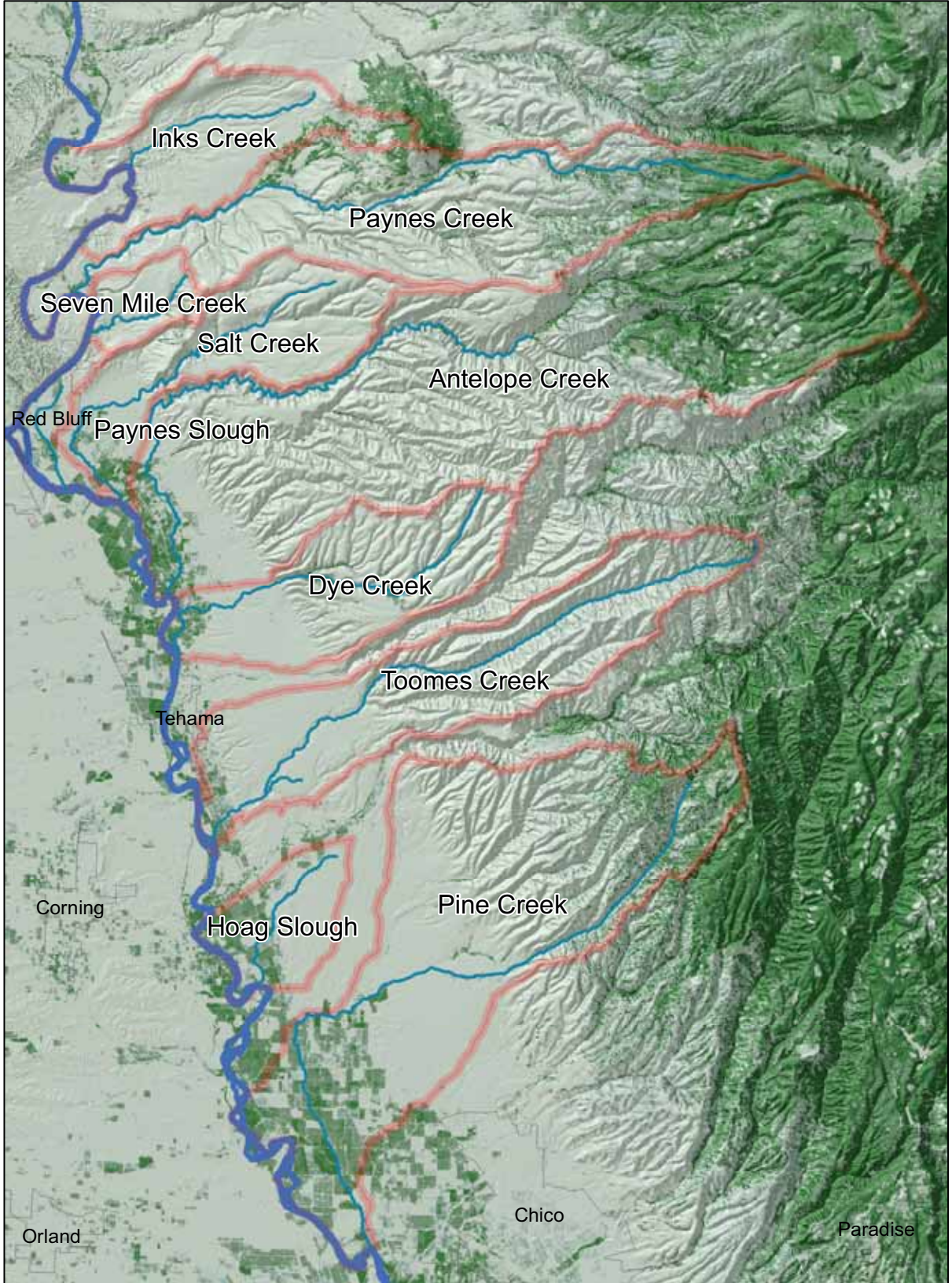


Maps by Characteristics

Canopy Cover

Tehama East Watershed Assessment

Canopy Cover
Pine Creek & Hoag Slough



Background from USGS: "The National Land Cover Characterization project is part of the interagency Multi-Resolution Land Characterization (MRLC) initiative involving three divisions of the US Geological Survey (National Mapping Division, Water Resources Division, and the Biological Resources Division), the Environmental Protection Agency, the National Oceanic and Atmospheric Administration, and the US Forest Service. These agencies have a requirement for a nationally consistent land cover dataset, and in 1993 these agencies combined financial resources to purchase Landsat Thematic Mapper data covering the entire United States. The USGS/EROS Data Center took the lead to process the data and develop the National Land Cover Dataset (NLCD. Procedures to evaluate the accuracy of the final product have been developed, and private contractors are completing accuracy assessments."

http://www.lib.ncsu.edu/gis/nlcd.html

KEY

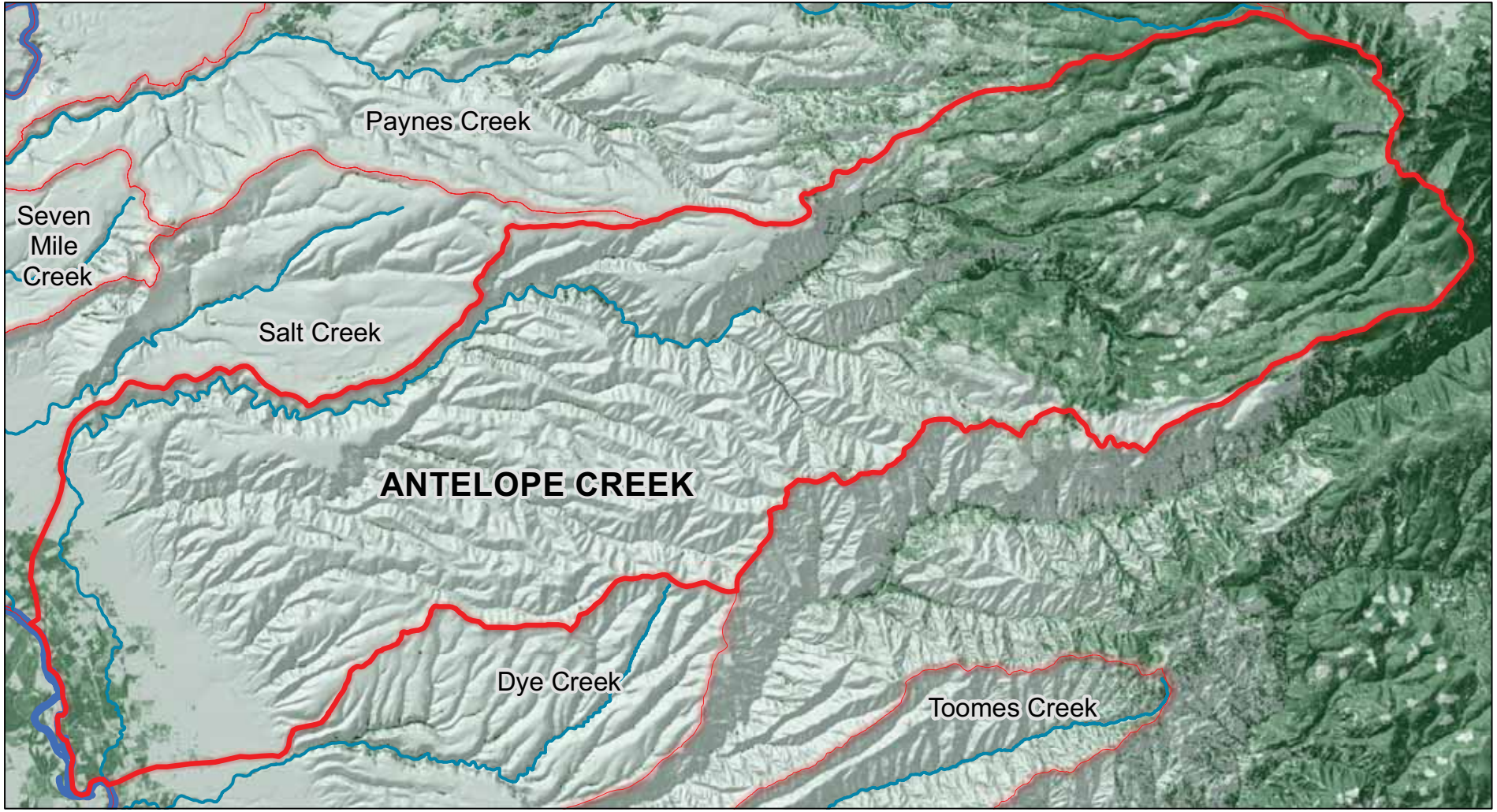
Canopy Cover Percent

- 0 - 15%
- 15 - 41%
- 41 - 60%
- 60 - 76%
- 76 - 100%
- Urban Areas
- Streams/Rivers
- Watershed Boundary

0 2.5 5 10 Miles

N W E S

Tehama County Resource Conservation District



Tehama East Watershed Assessment

CANOPY COVER
Antelope Creek

0 1 2 4 6 8 Miles

N
W E
S

TCRCD

Tehama County Resource Conservation District

KEY

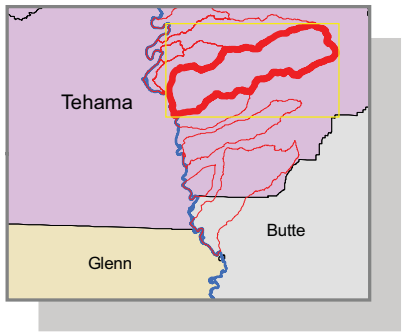
Canopy Cover Percent

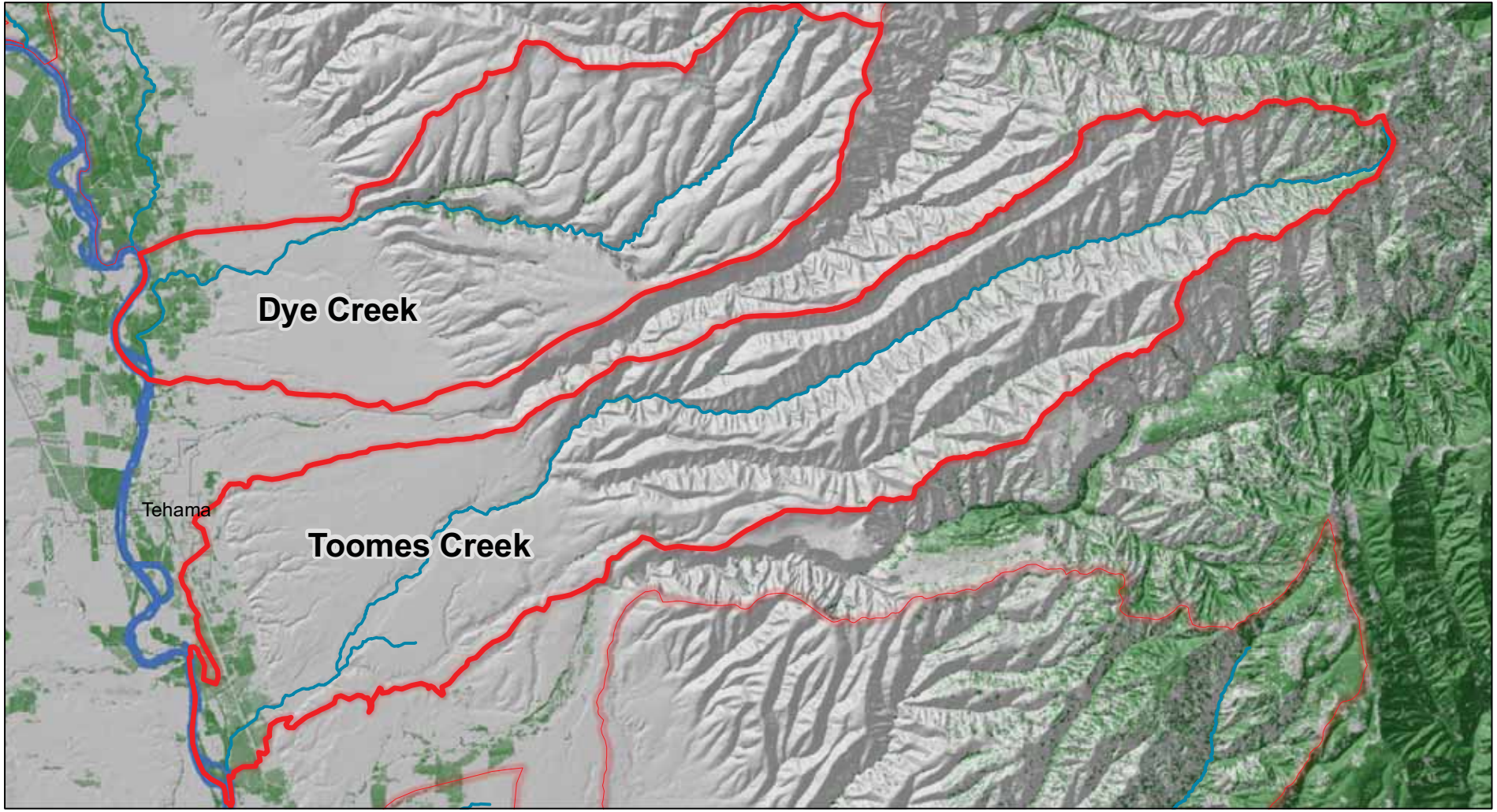
- 0 - 15%
- 15 - 41%
- 41 - 60%
- 60 - 76%
- 76 - 100%

Streams/Rivers

Watershed Boundary

http://seamless.usgs.gov/products/nlcd01.php





Tehama East Watershed Assessment

CANOPY COVER

Dye and Toomes Creeks

0 2.5 5 10 Miles

N W E S

TCRCD

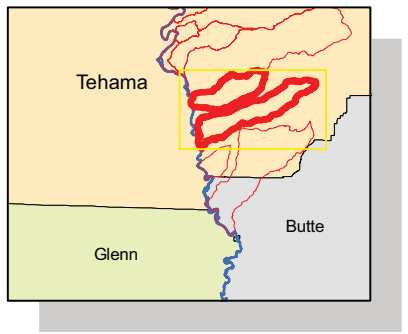
Tehama County Resource Conservation District

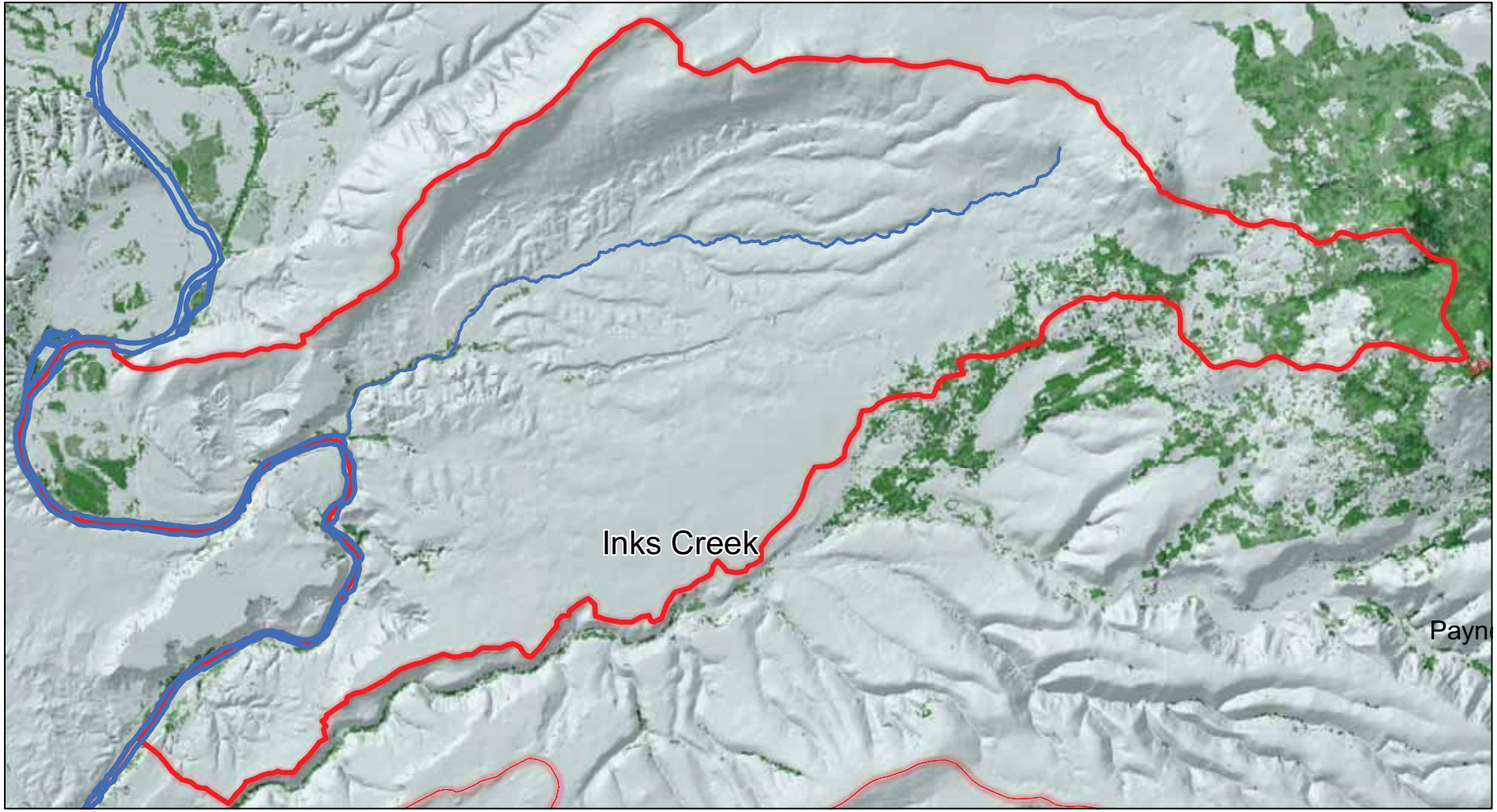
KEY

Canopy Cover Percent

- 0 - 15%
- 15 - 41%
- 41 - 60%
- 60 - 76%
- 76 - 100%
- Urban Areas
- Streams/Rivers
- Watershed Boundary

http://seamless.usgs.gov/products/nlcd01.php





Tehama East Watershed Assessment

CANOPY COVER
Inks Creek

0 0.5 1 2 3 4 Miles

N W E S

TCRCD

Tehama County Resource Conservation District

KEY

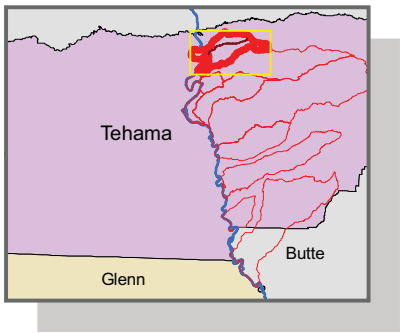
Canopy Cover Percent

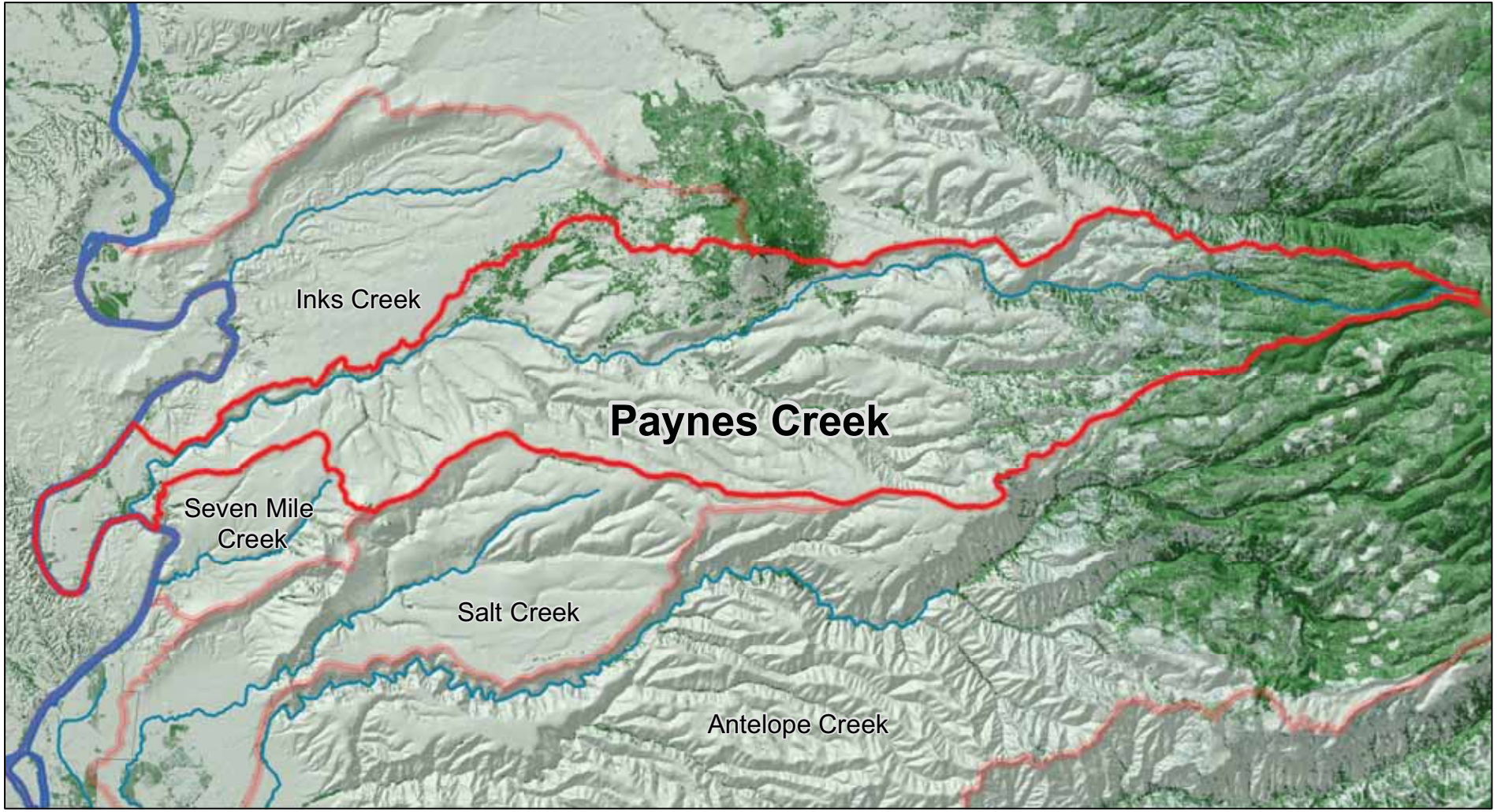
- 0 - 15%
- 15 - 41%
- 41 - 60%
- 60 - 76%
- 76 - 100%

Streams/Rivers

Watershed Boundary

http://seamless.usgs.gov/products/nlcd01.php





Tehama East Watershed Assessment

CANOPY COVER

Paynes Creek

0 1 2 4 6 8 Miles

N W E S

Tehama County Resource Conservation District

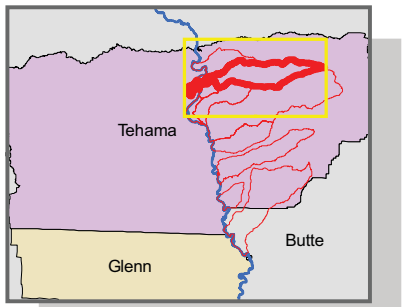
(c) 2010

KEY

Canopy Cover Percent

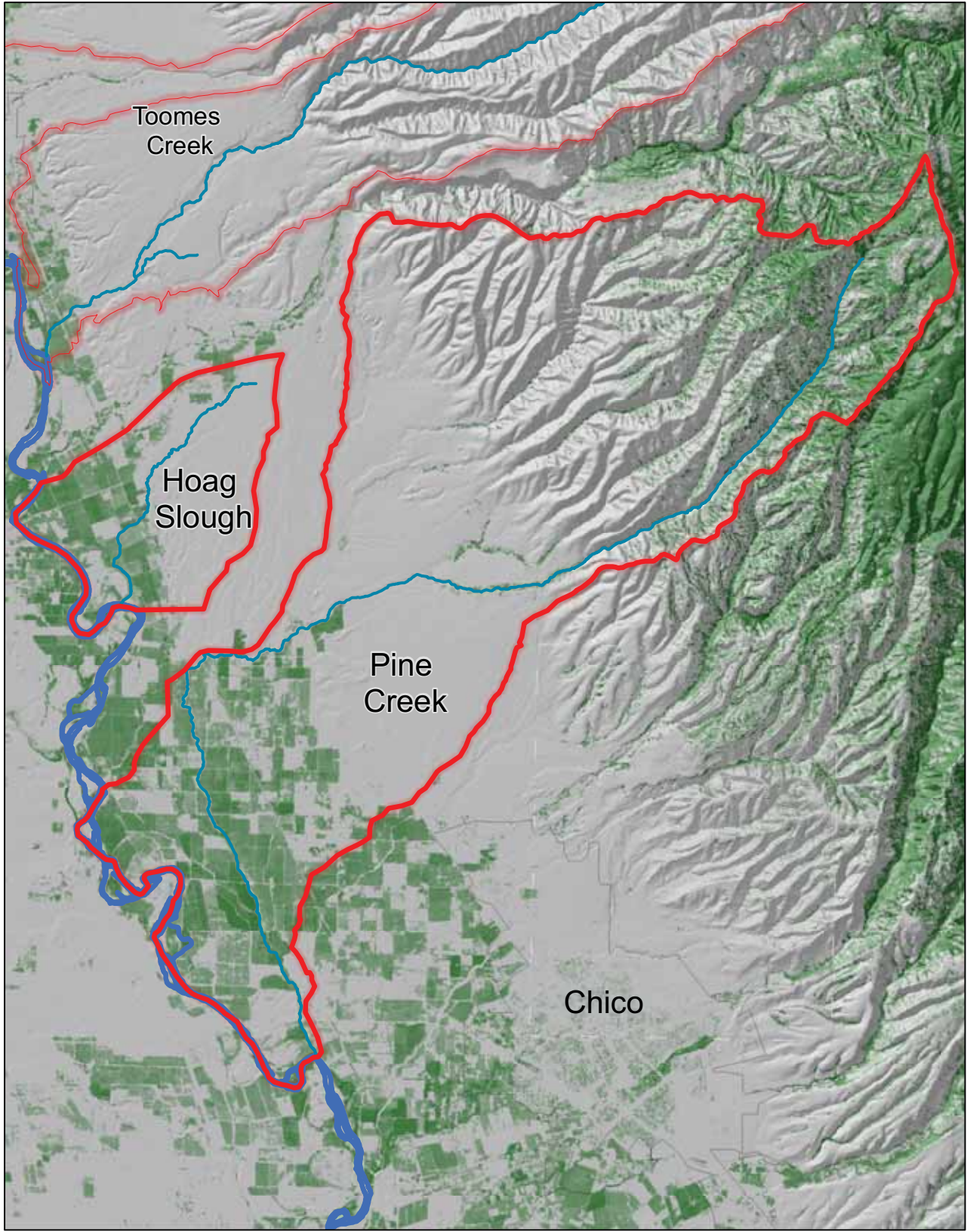
- 0 - 15%
- 15 - 41%
- 41 - 60%
- 60 - 76%
- 76 - 100%
- Urban Areas
- Streams/Rivers
- Watershed Boundary

http://seamless.usgs.gov/products/nlcd01.php



Tehama East Watershed Assessment

CANOPY COVER
Hoag Slough and Pine Creek



KEY

Canopy Cover Percent

- 0 - 15%
- 15 - 41%
- 41 - 60%
- 60 - 76%
- 76 - 100%
- Urban Areas
- Streams/Rivers
- Watershed Boundary

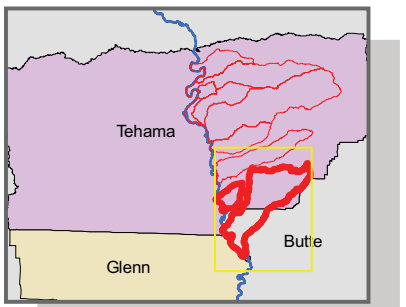
0 1 2 4 6 8 Miles

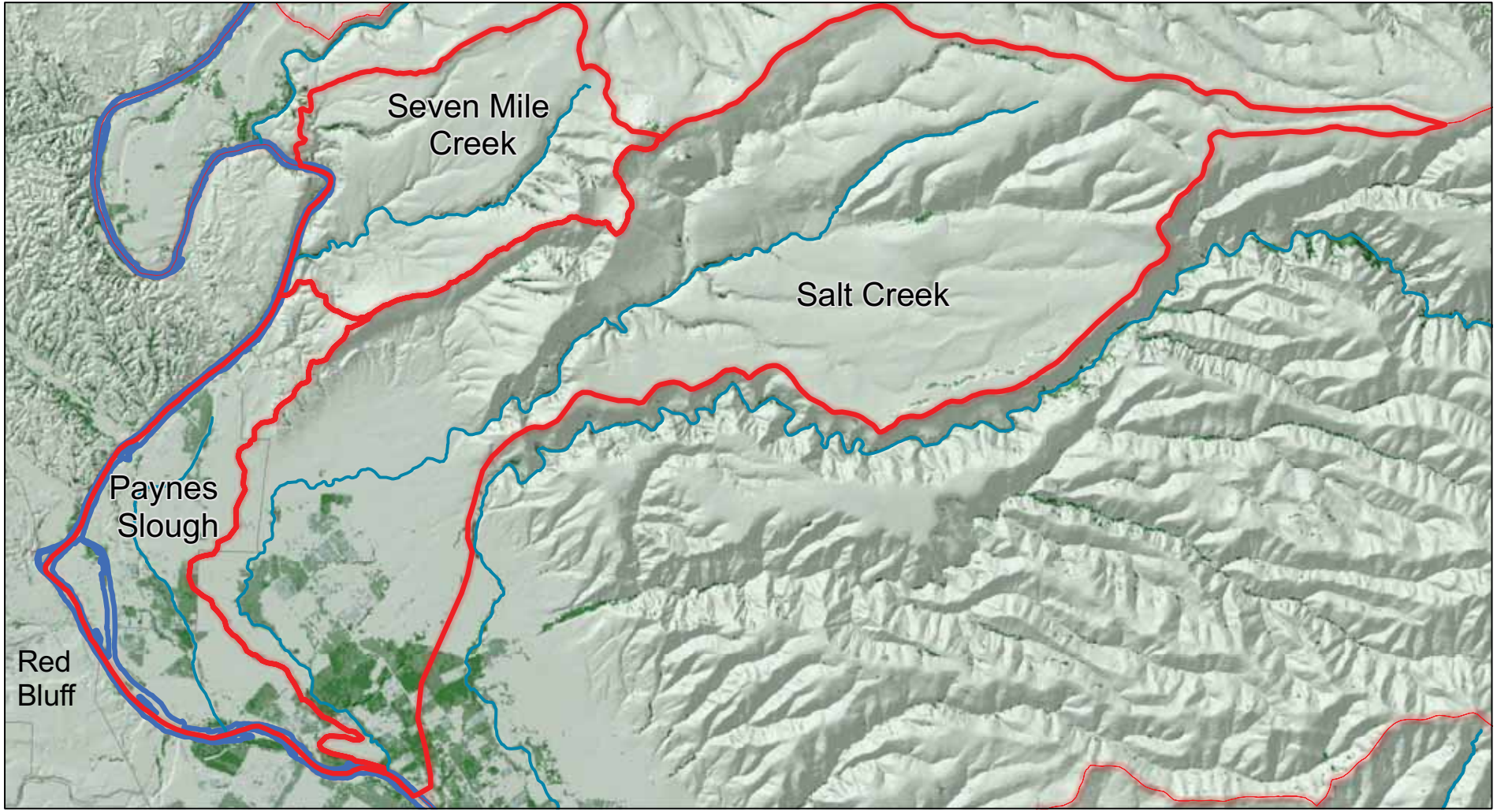
N W E S

TCRCD

Tehama County Resource Conservation District

http://seamless.usgs.gov/products/nlcd01.php





Tehama East Watershed Assessment

CANOPY COVER
Seven Mile Creek
Paynes Slough
Salt Creek

0 0.5 1 2 3 4
Miles

N
W E
S

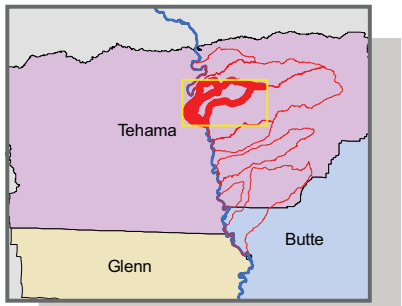
Tehama County Resource Conservation District

(c) 2010

KEY

Canopy Cover Percent

- 0 - 15%
- 15 - 41%
- 41 - 60%
- 60 - 76%
- 76 - 100%
- Urban Areas
- Streams/Rivers
- Watershed Boundary



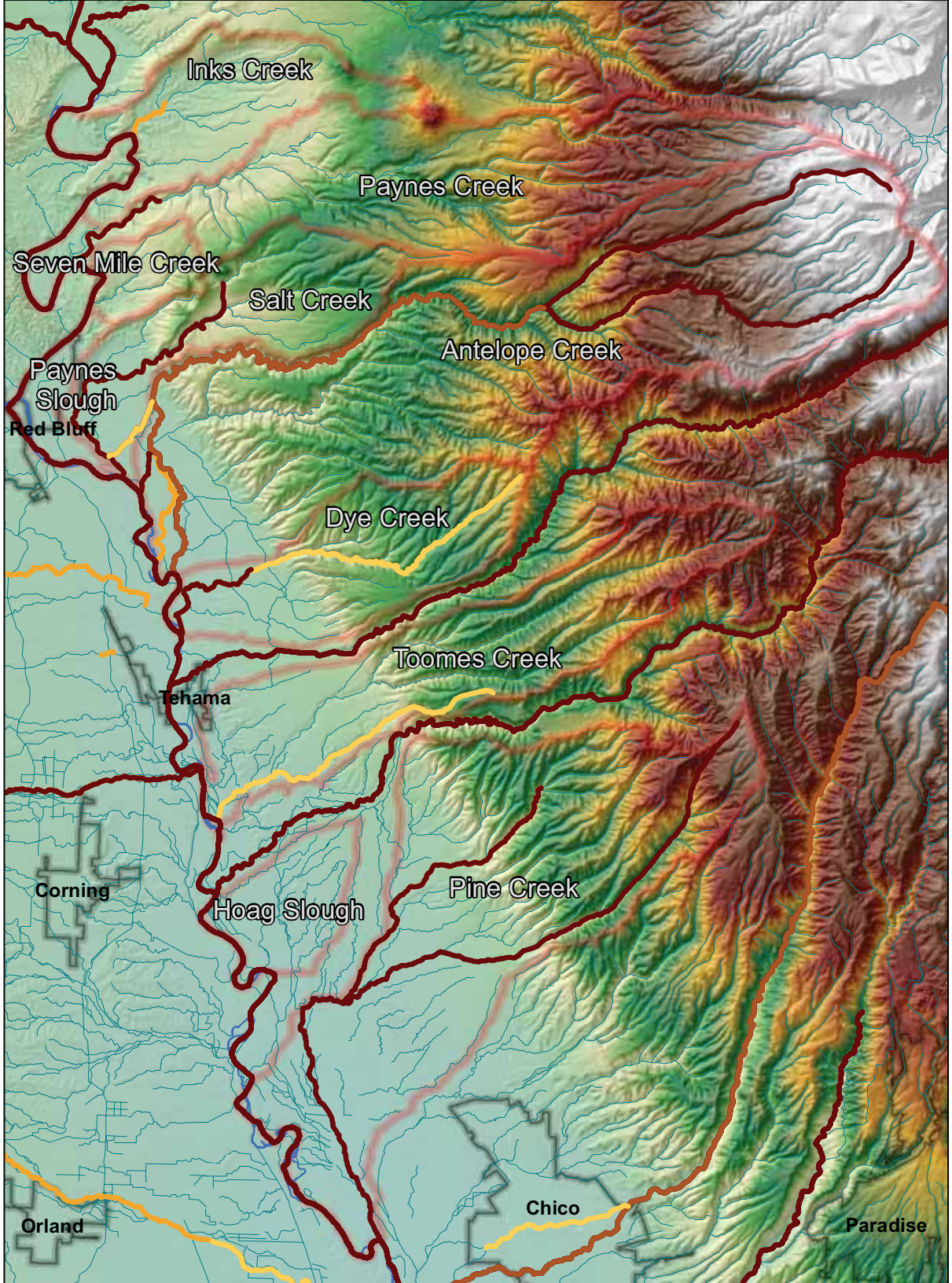
http://seamless.usgs.gov/products/nlcd01.php

Maps by Characteristics

Chinook Surveys

Tehama East Watershed Assessment

Chinook Surveys By Year



"The CalFish Abundance Database was generated from fully routed 1:100,000 hydrography. In a few cases streams had to be added to the hydrography dataset in order to provide a means to create shapefiles to represent abundance data associated with them. Streams added were digitized at no more than 1:24,000 scale based on stream line images portrayed in 1:24,000 Digital Raster Graphics (DRG).

These features generally represent abundance counts resulting from stream surveys. The linear features in this layer typically represent the location for which abundance data records apply. This would be the reach or length of stream surveyed, or the stream sections for which a given population estimate applies. In some cases the actual stream section surveyed was not specified, and linear features represent the entire stream. In many cases there are multiple datasets associated with the same length of stream, and so linear features overlap."

Quoted from:
http://www.calfish.org/Portals/0/DataMaps/DataDownLoad/Chinook_Abundance_Metadata.htm

KEY

Streams/Rivers

Urban Areas

Watershed Boundary

Year of Survey

1959 - 1970
1971 - 1986
1987 - 1993
1994 - 1998
1999 - 2003

http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx

0 2.5 5 10 Miles

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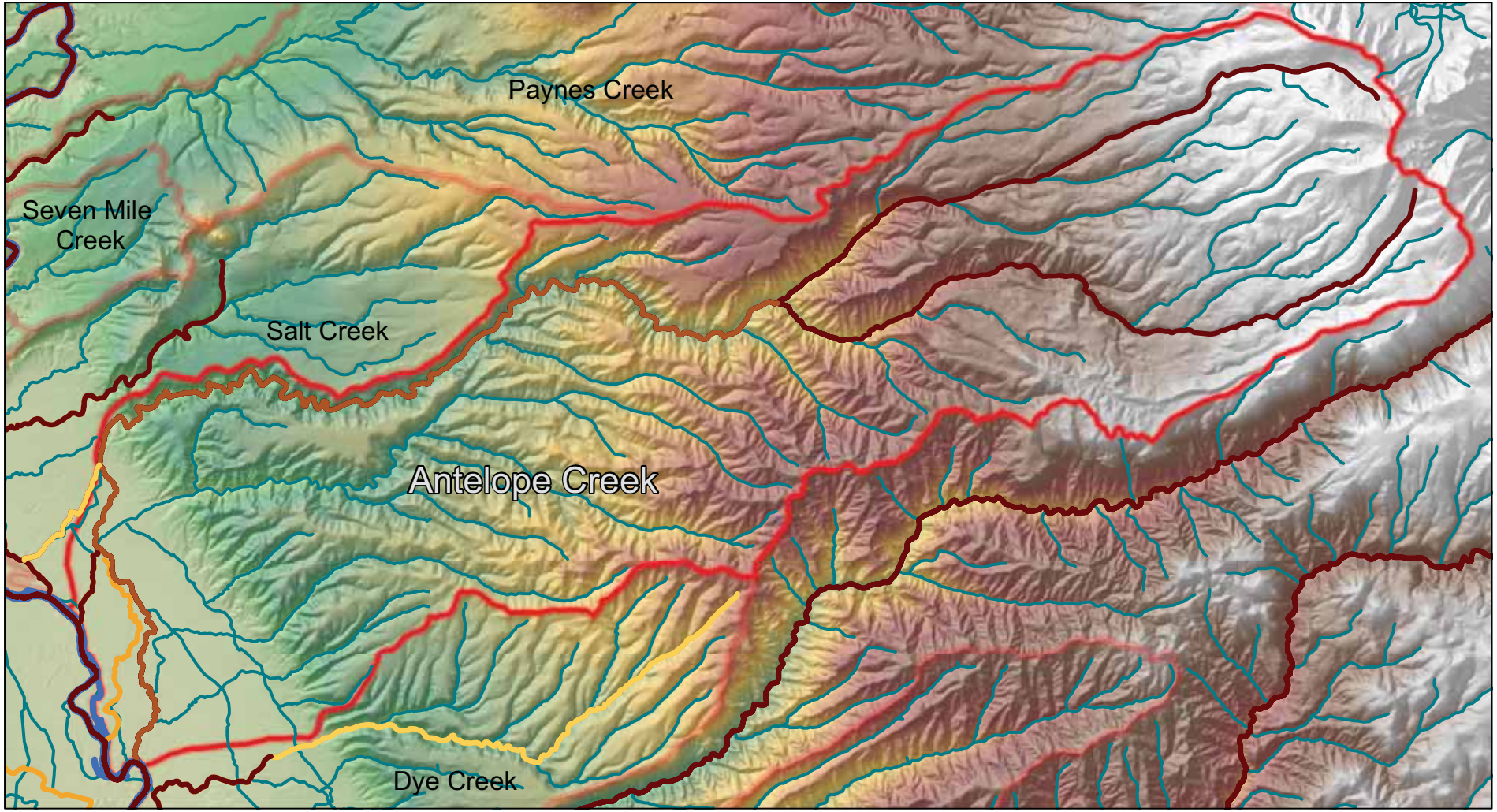
Tehama County Resource Conservation District



Tehama East Watershed Assessment

Chinook Surveys By Year
Antelope Creek

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Tehama County Resource Conservation District
(c)2010

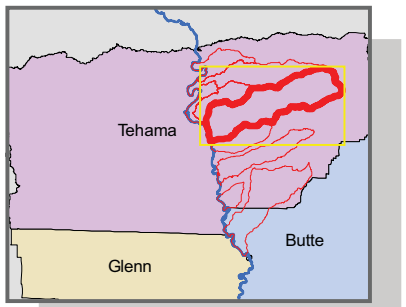
0 2.5 5 10
Miles

KEY

- Streams/Rivers
- Urban Areas
- Watershed Boundary

Year of Survey

- 1959 - 1970
- 1971 - 1986
- 1987 - 1993
- 1994 - 1998
- 1999 - 2003



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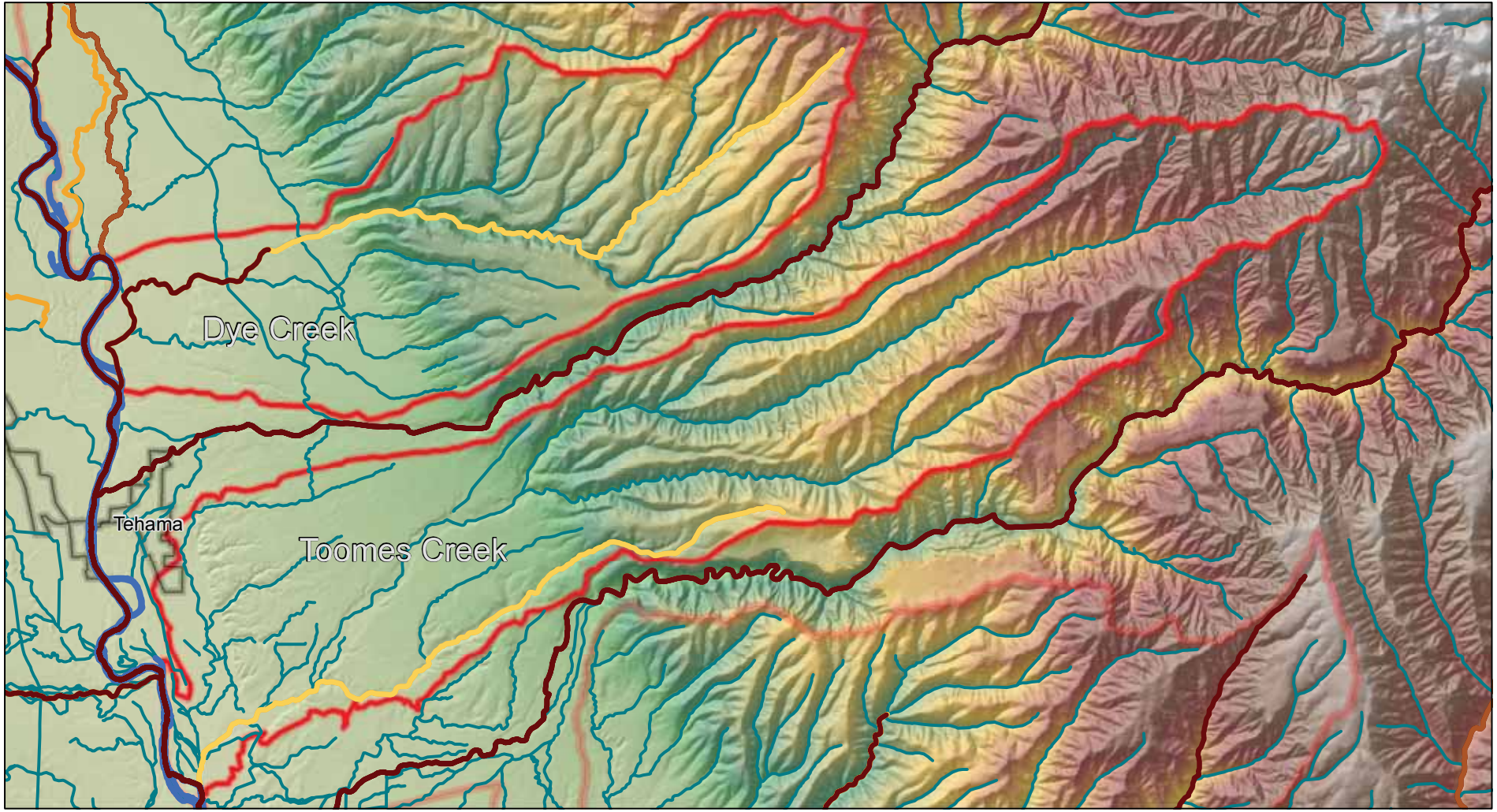

Tehama East Watershed Assessment

Chinook Surveys By Year
Dye Creek and Toomes Creek

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(c)2010

0 2 4 8 Miles

KEY

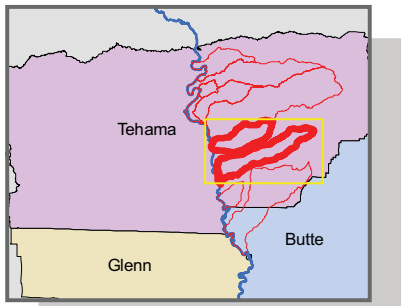
Streams/Rivers

Urban Areas

Watershed Boundary

Year of Survey

1959 - 1970
1971 - 1986
1987 - 1993
1994 - 1998
1999 - 2003



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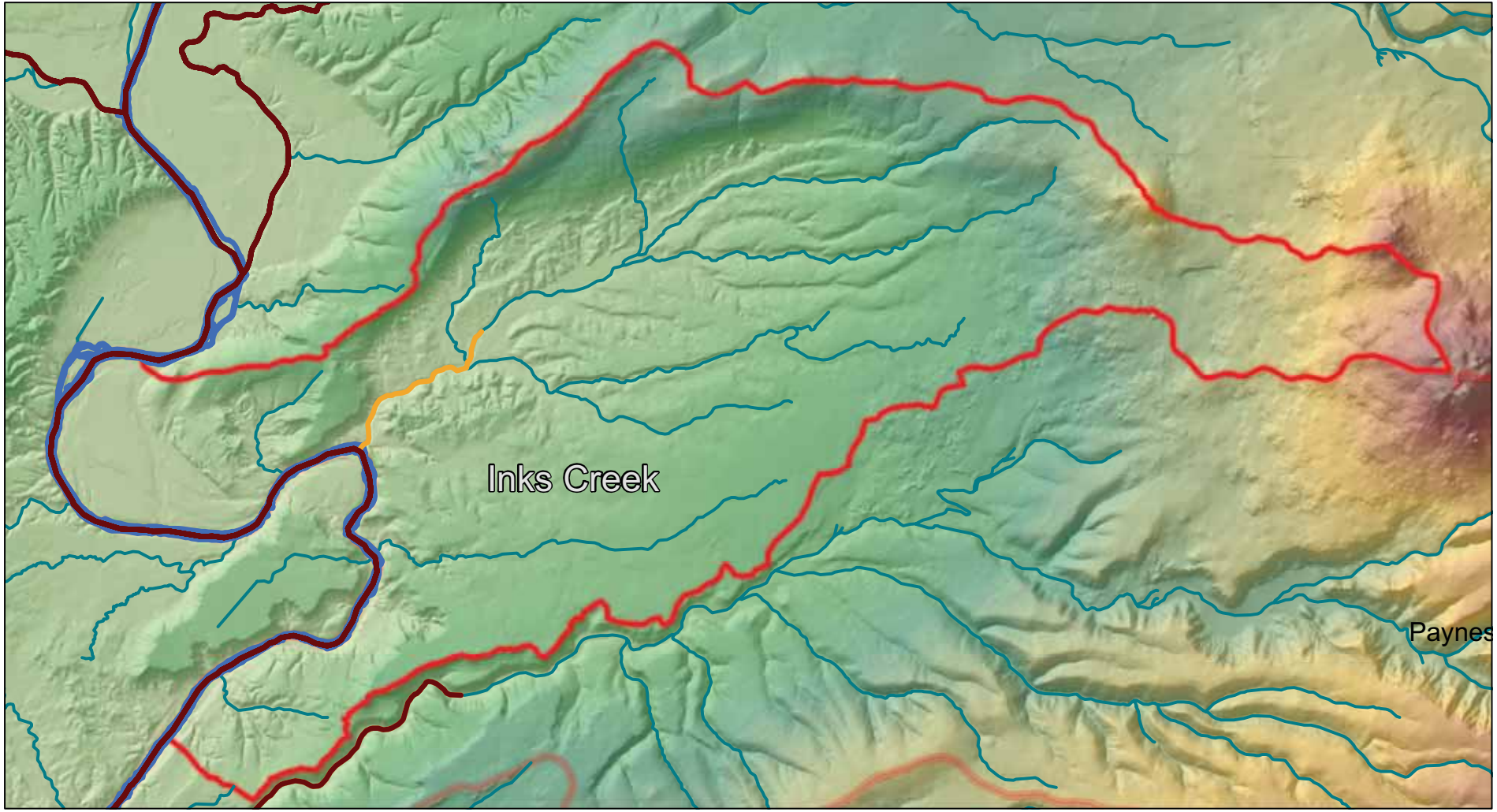


Tehama East Watershed Assessment

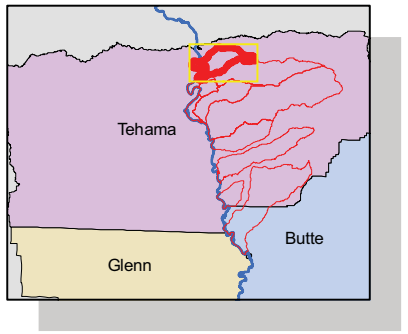
Chinook Surveys By Year
Inks Creek

KEY

- Streams/Rivers
- Urban Areas
- Watershed Boundary

Year of Survey

- 1959 - 1970
- 1971 - 1986
- 1987 - 1993
- 1994 - 1998
- 1999 - 2003



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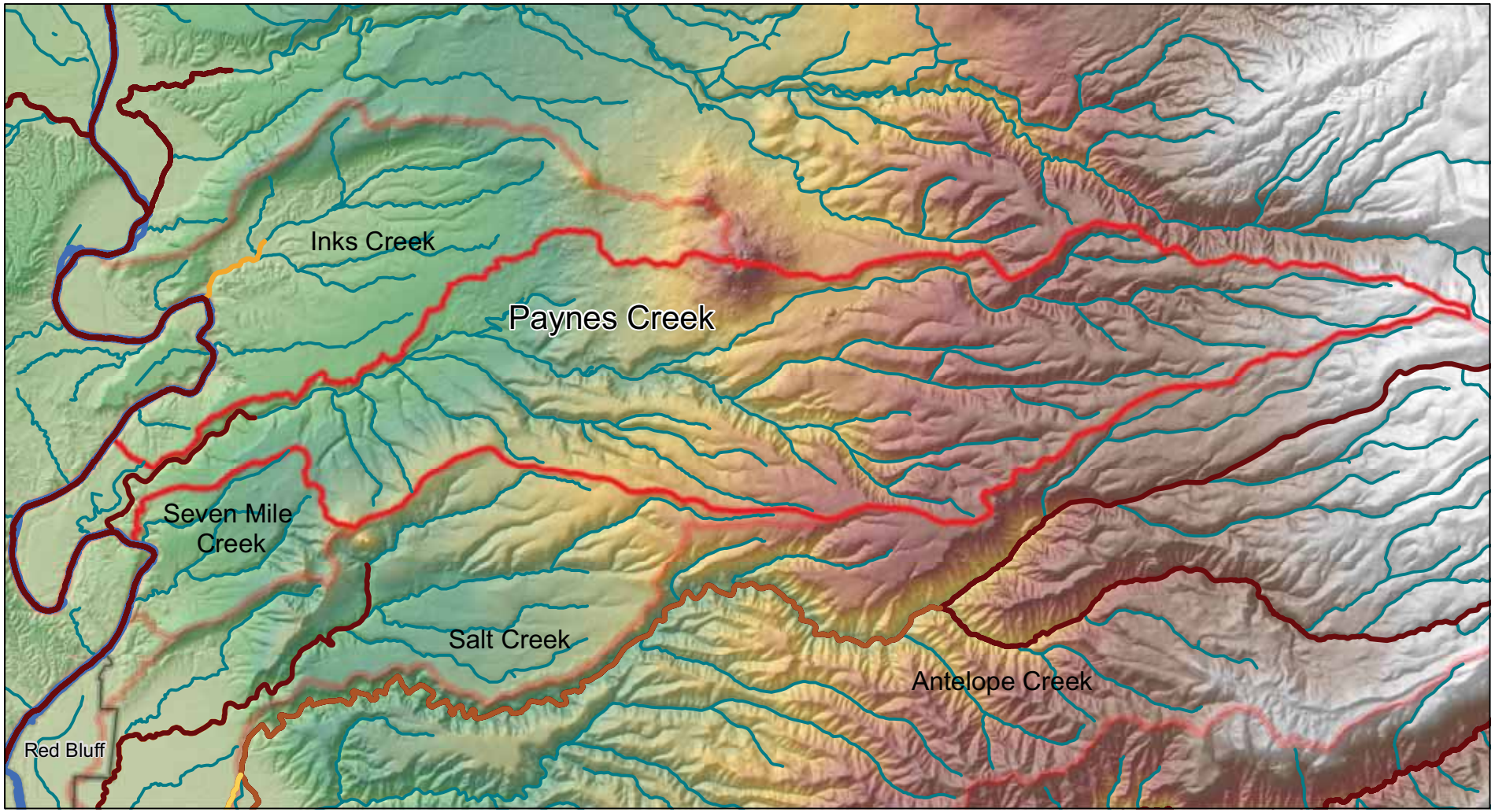
Tehama County Resource Conservation District

0 1 2 4 Miles

http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx



Tehama East Watershed Assessment

Chinook Surveys By Year
Paynes Creek

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Tehama County Resource Conservation District
(c)2010

0 2.5 5 10
Miles

KEY

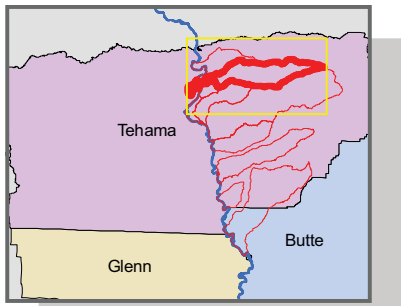
Streams/Rivers

Urban Areas

Watershed Boundary

Year of Survey

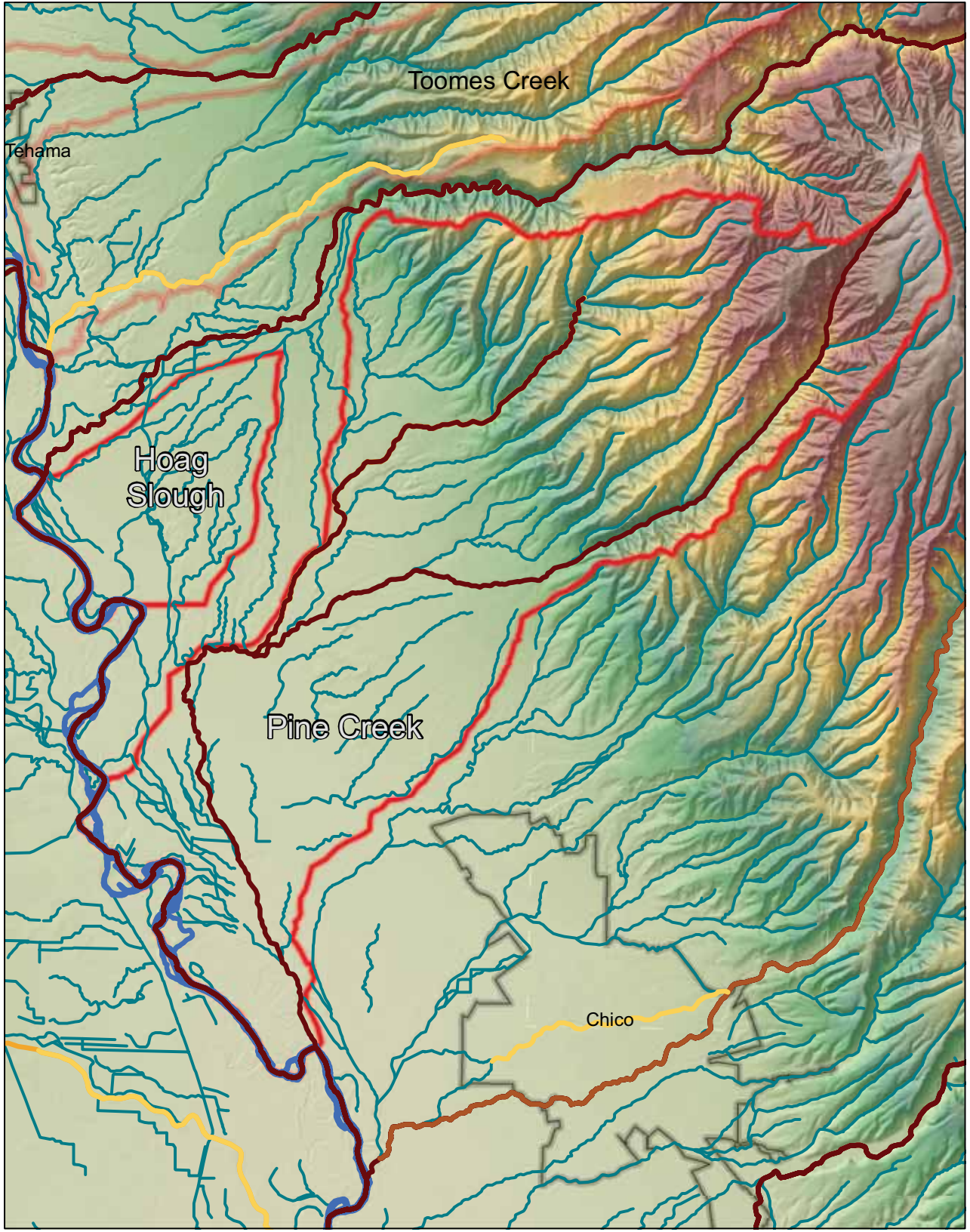
1959 - 1970
1971 - 1986
1987 - 1993
1994 - 1998
1999 - 2003



http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx

Tehama East Watershed Assessment

Chinook Surveys By Year
Hoag Slough and Pine Creek



KEY

- Streams/Rivers
- Urban Areas
- Watershed Boundary

Year of Survey

- 1959 - 1970
- 1971 - 1986
- 1987 - 1993
- 1994 - 1998
- 1999 - 2003

http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx

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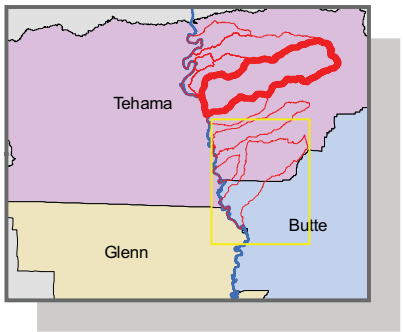
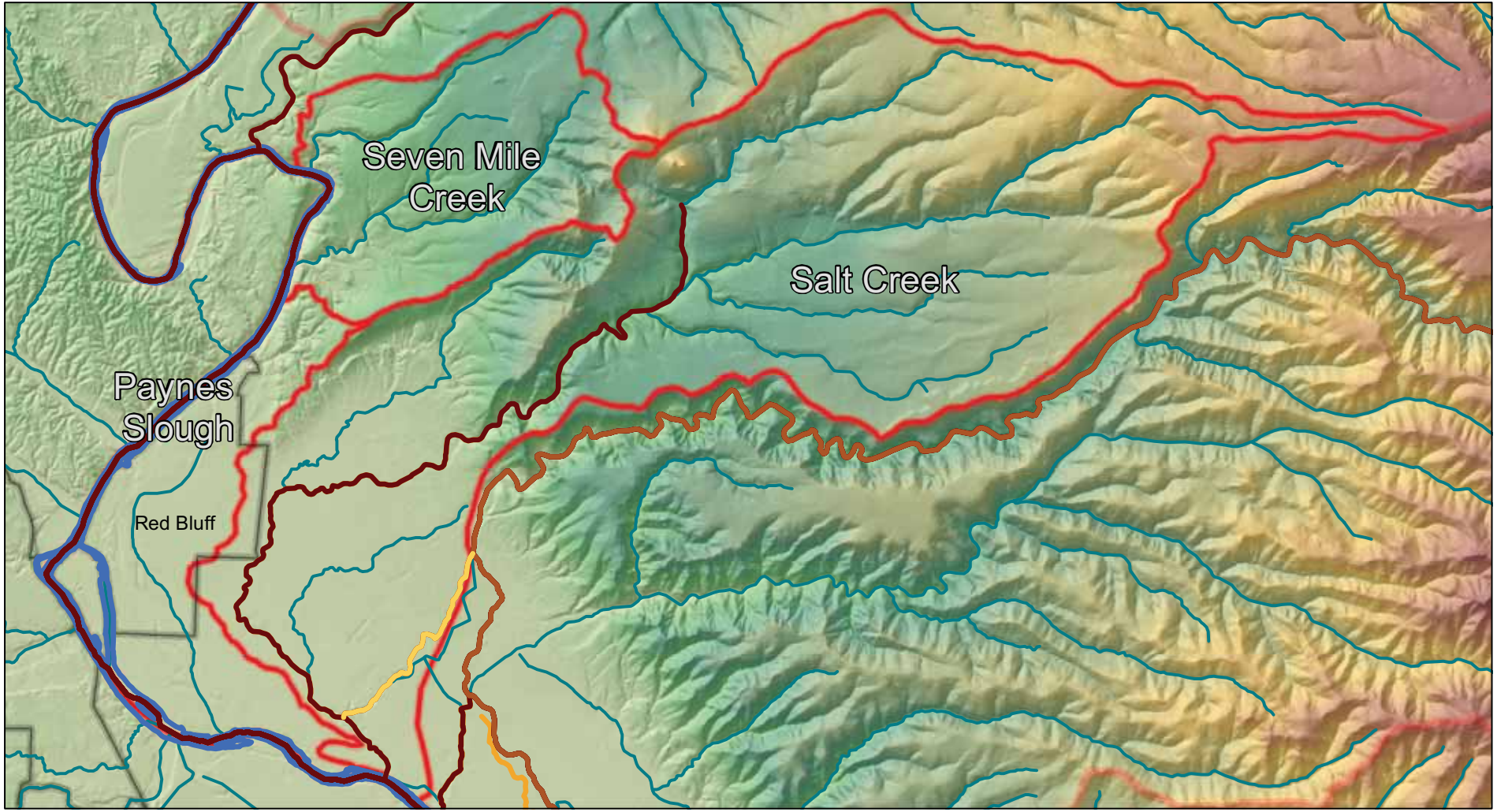
0 1.5 3 6 Miles





Tehama East Watershed Assessment

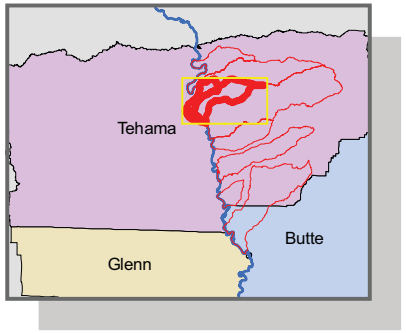
Chinook Surveys By Year
Seven Mile Creek, Paynes Slough, and Salt Creek

KEY

- Streams/Rivers
- Urban Areas
- Watershed Boundary

Year of Survey

- 1959 - 1970
- 1971 - 1986
- 1987 - 1993
- 1994 - 1998
- 1999 - 2003



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Tehama County Resource Conservation District
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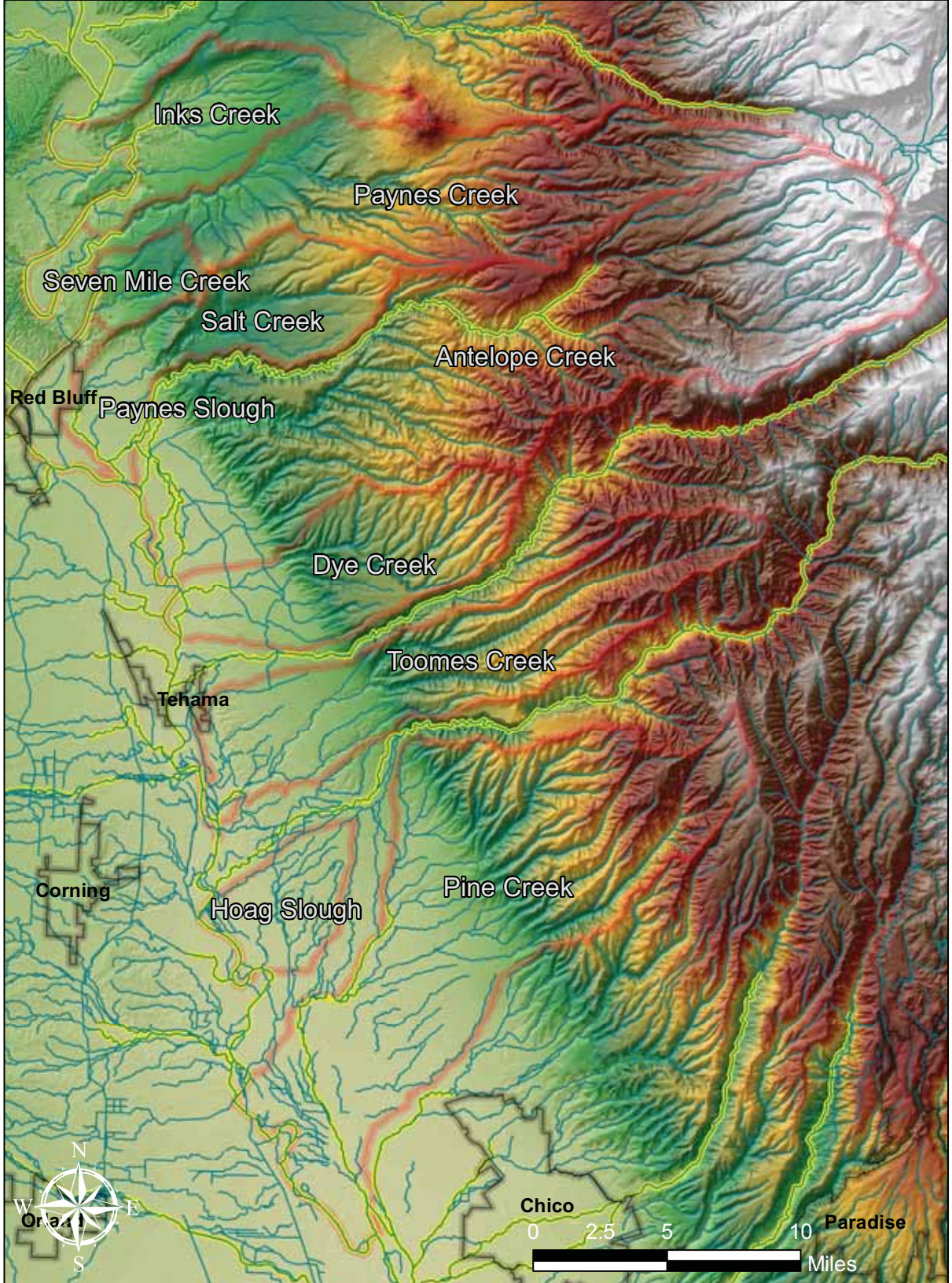
0 2.5 5 Miles

http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx

Maps by Characteristics

Critical Habitat: Spring-run Chinook



Tehama East Watershed Assessment

Critical Habitat Spring-Run Chinook

"Four distinct runs of Chinook salmon spawn in the Sacramento-San Joaquin River system, named for the season when the majority of the run enters freshwater as adults. Spring-run Chinook enter the Sacramento River from late March through September. Adults hold in cool water habitats through the summer, then spawn in the fall from mid-August through early October. Spring-run juveniles migrate soon after emergence as young-of-the-year, or remain in freshwater and migrate as yearlings.

Spring-run Chinook were historically the most abundant race in the Central Valley. Now only remnant runs remain in Butte, Mill, Deer, Antelope, and Beegum Creeks, tributaries to the Sacramento River. In the mainstem Sacramento River and the Feather River, early-running Chinook salmon occur, but significant hybridization with fall-run has occurred. Due to the small number of non-hybridized populations remaining and low population sizes, Central Valley spring-run were listed as threatened under both the state and federal endangered species acts in 1999."

"This dataset depicts areas designated for Chinook Critical Habitat as well as habitat type and quality in the Central Valley Spring-run Evolutionarily Significant Unit (ESU). These data represent the stream segments identified as Critical Habitat by the National Marine Fisheries Service (NOAA Fisheries) Southwest Regional Office (SWR). The linework for this layer is based on the California Department of Fish and Game (CDFG) and Pacific States Marine Fisheries Commission (PSMFC) 1:100,000 scale stream based routed hydrography. SWR biologists divided the routed hydrography into stream segments using the best available information to represent local Chinook distribution and habitat."

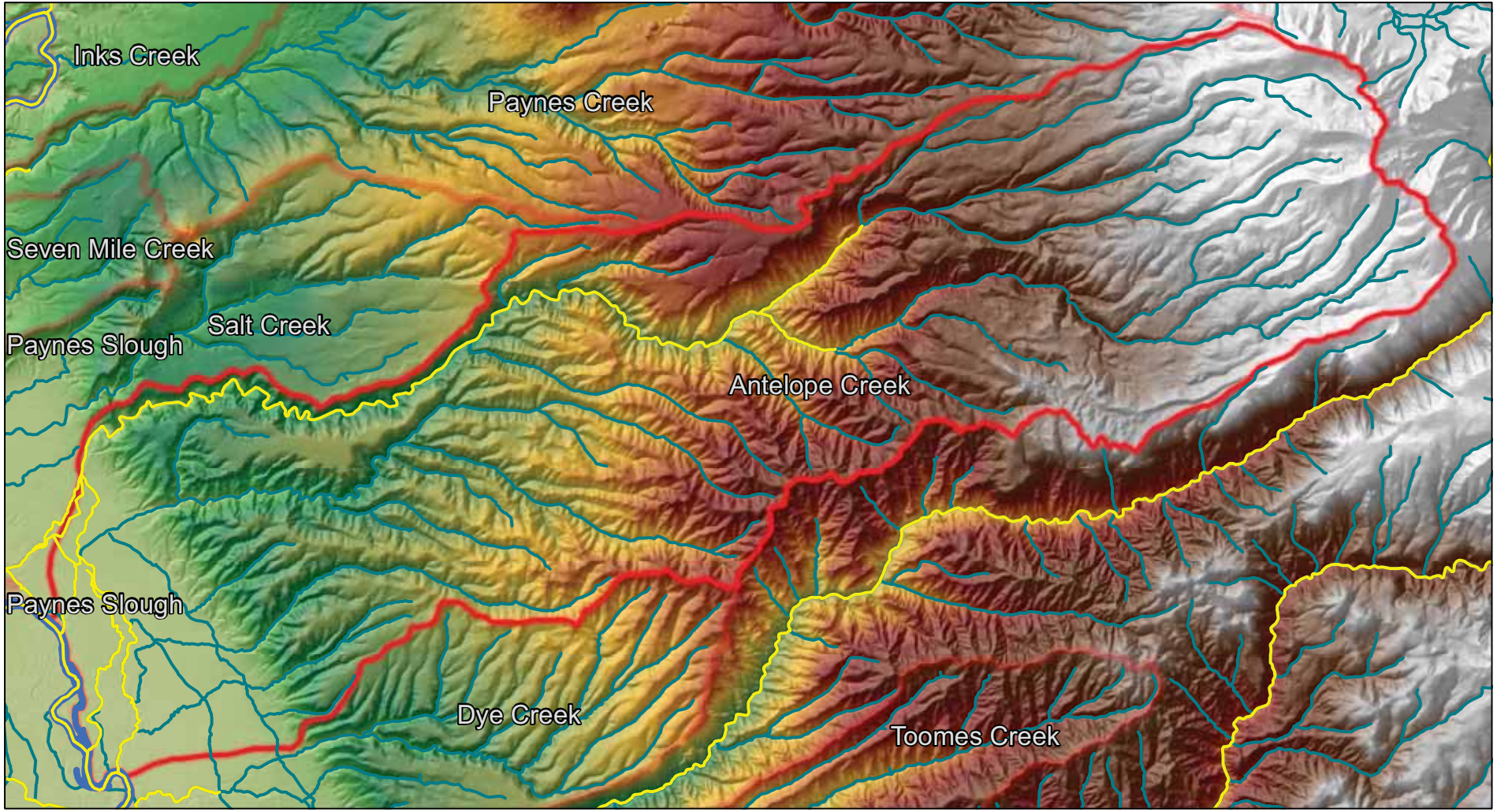
Quoted from: http://www.dfg.ca.gov/fish/Resources/Chinook/CValleySpring.asp
http://www.calfish.org/Portals/0/DataMaps/DataDownLoad/Chinook_Abundance_Metadata.htm

KEY

- Critical Habitat Spring-Run Chinook
- Streams/Rivers
- Urban Areas
- Watershed Boundary

Tehama County Resource Conservation District

http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx

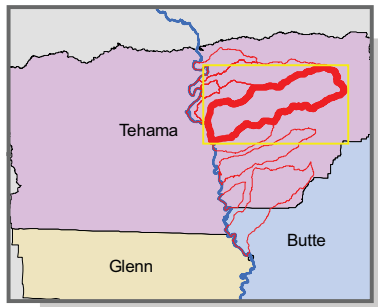


Tehama East Watershed Assessment

Critical Habitat - Spring-Run Chinook
Antelope Creek

KEY

- Critical Habitat - Spring-Run Chinook
- Springs/Rivers
- Urban Areas
- Watershed Boundary



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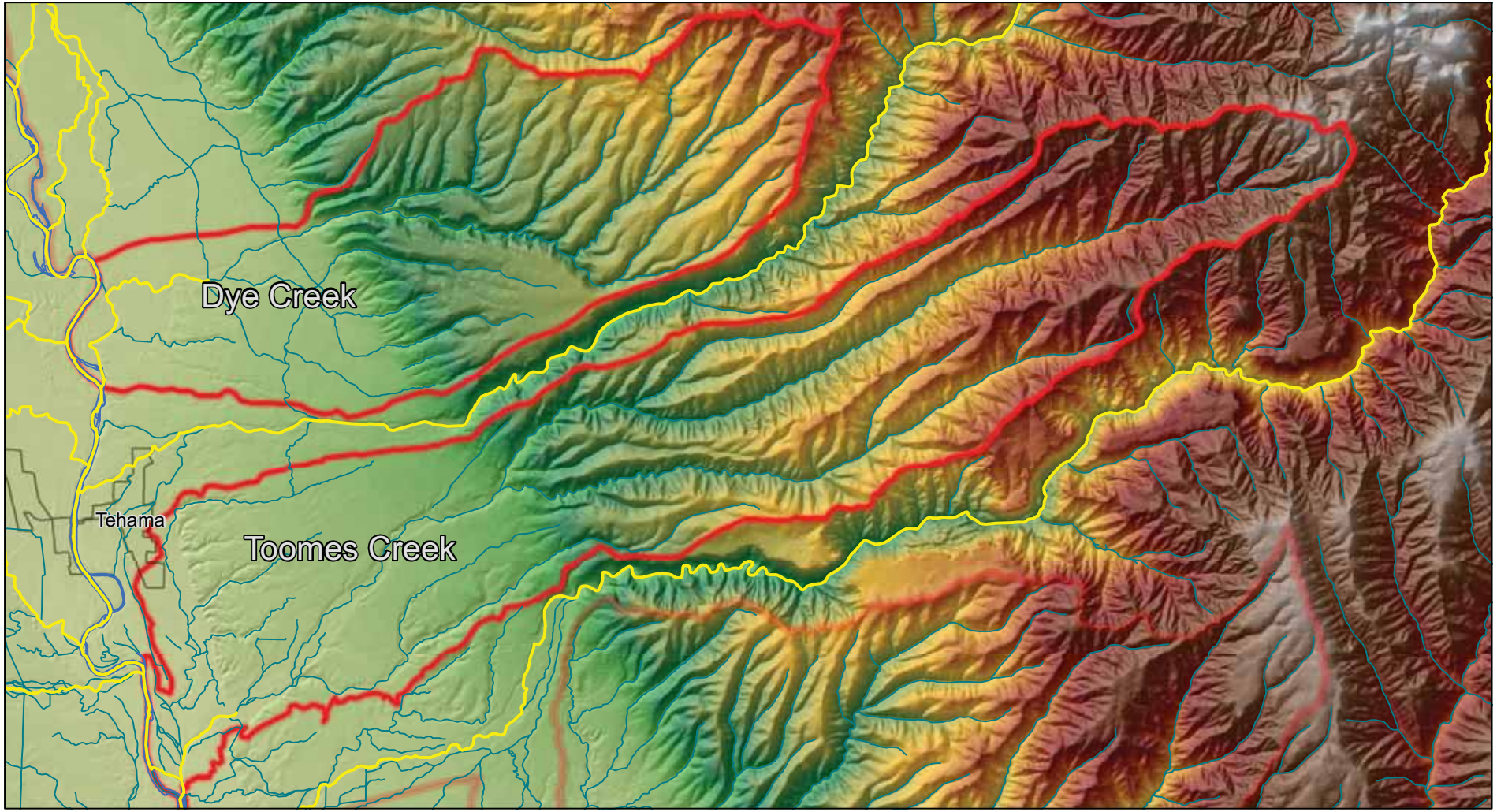
0 2.5 5 10 Miles

http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx

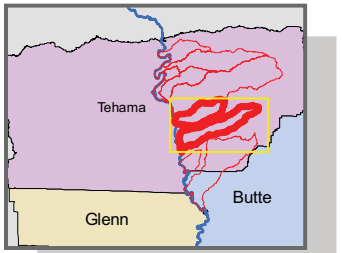


Tehama East Watershed Assessment

Critical Habitat - Spring-Run Chinook
Dye Creek and Toomes Creek

KEY

- Critical Habitat - Spring-Run Chinook
- Springs/Rivers
- Urban Areas
- Watershed Boundary



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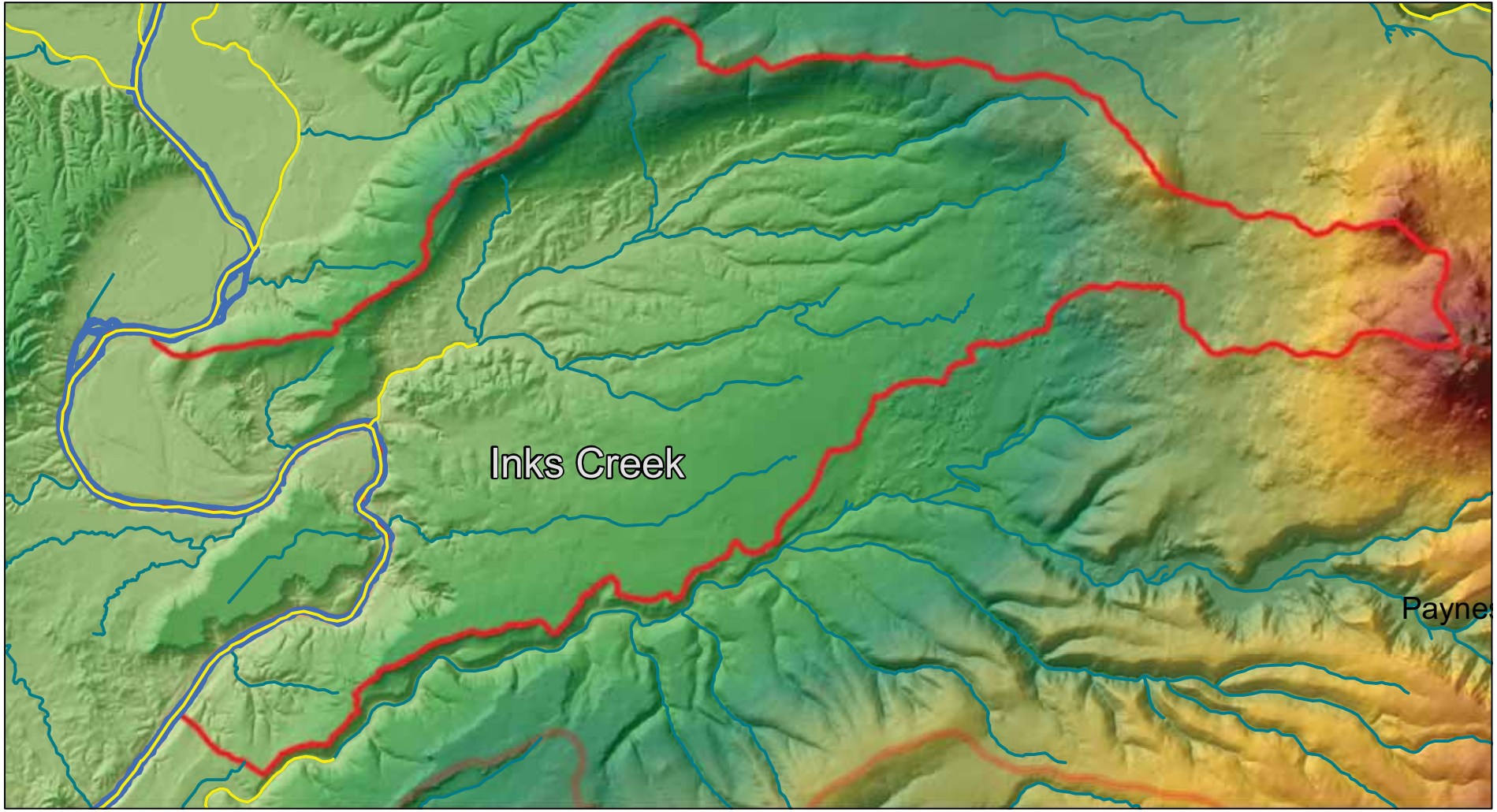
Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10 Miles

http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx

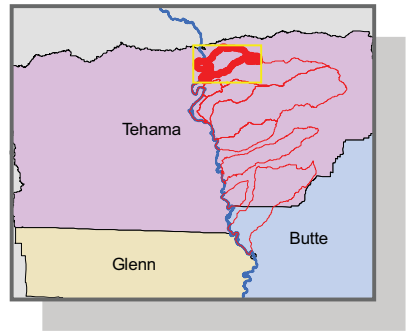


Tehama East Watershed Assessment

Critical Habitat - Spring-Run Chinook
Inks Creek

KEY

- Critical Habitat - Spring-Run Chinook
- Springs/Rivers
- Urban Areas
- Watershed Boundary



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Tehama County Resource Conservation District
(c) 2010

0 0.5 1 2 3 4
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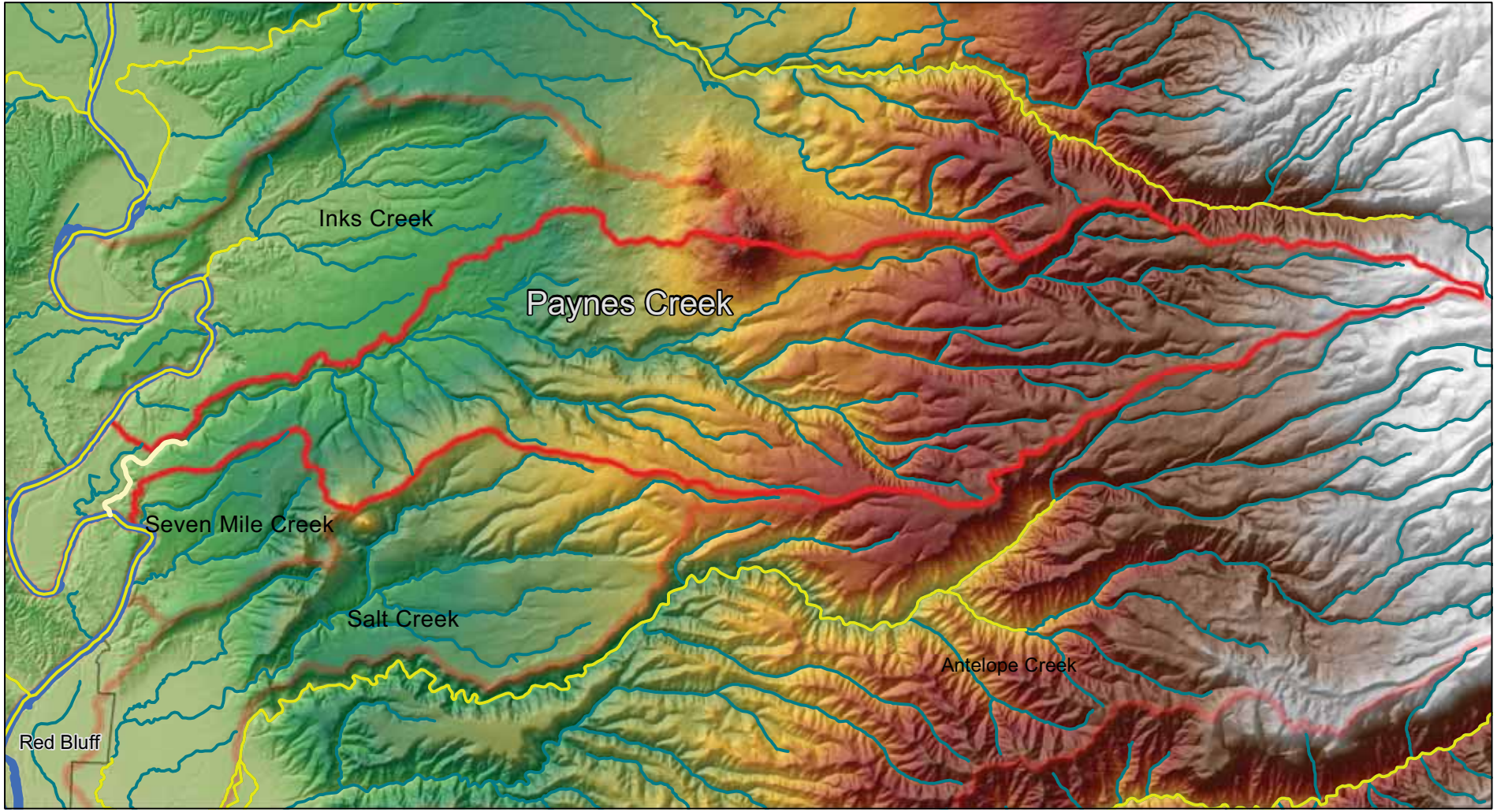
http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx

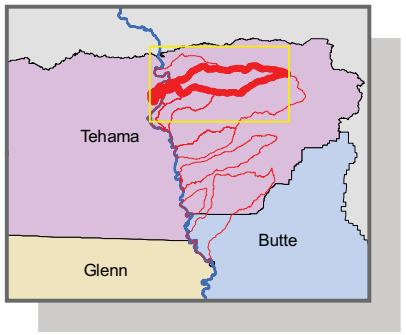


Tehama East Watershed Assessment

Critical Habitat - Spring-Run Chinook
Paynes Creek

KEY

- Critical Habitat - Spring-Run Chinook
- Springs/Rivers
- Urban Areas
- Watershed Boundary



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Miles

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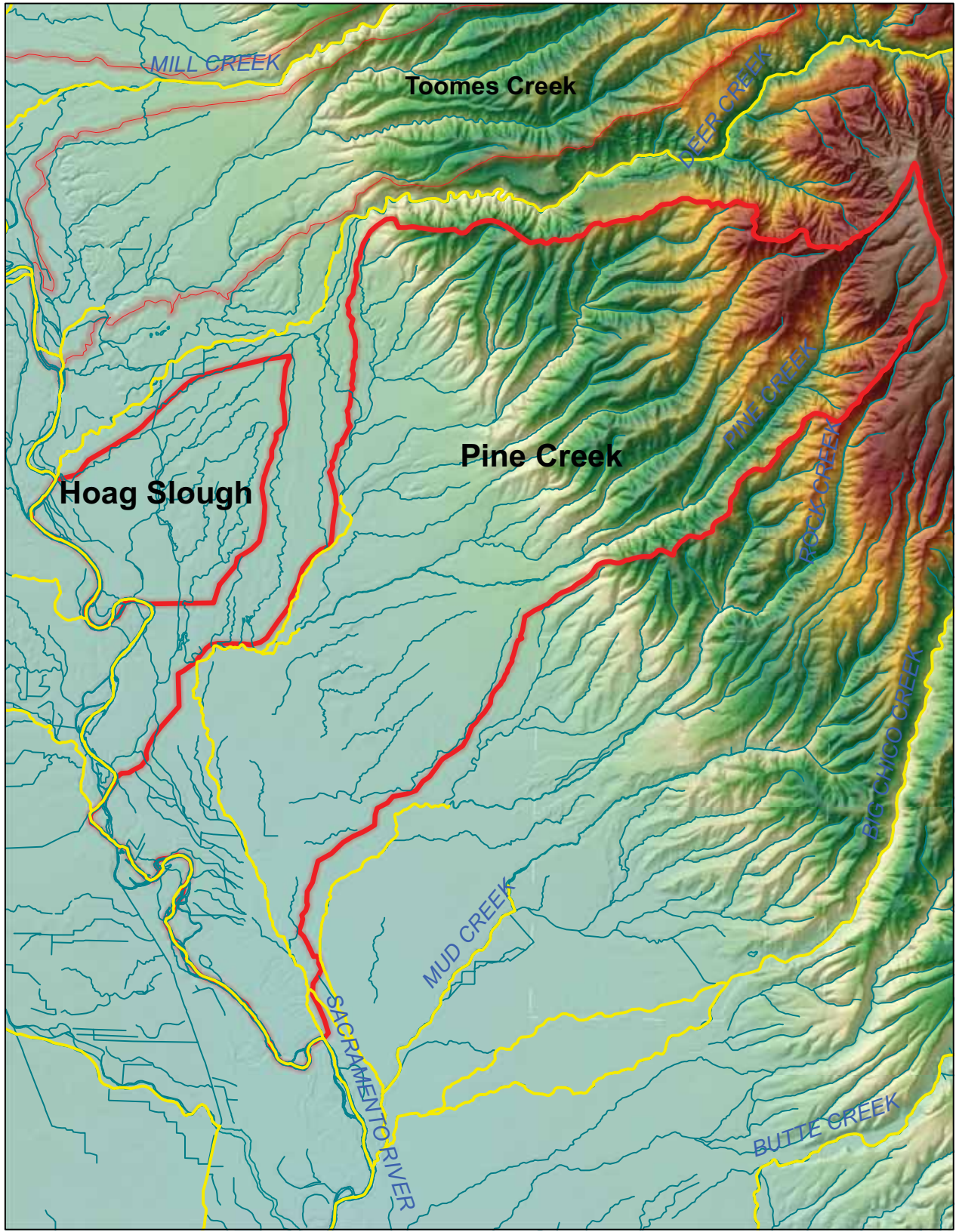
Tehama County Resource Conservation District
(c) 2010

http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx

Tehama East Watershed Assessment

Critical Habitat
Spring-Run Chinook
Hoag Slough and Pine Creek

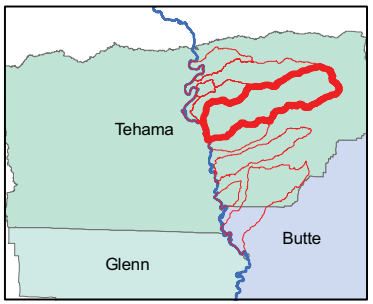


KEY

Critical Habitat - Spring-Run Chinook

http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx

Watershed Boundary



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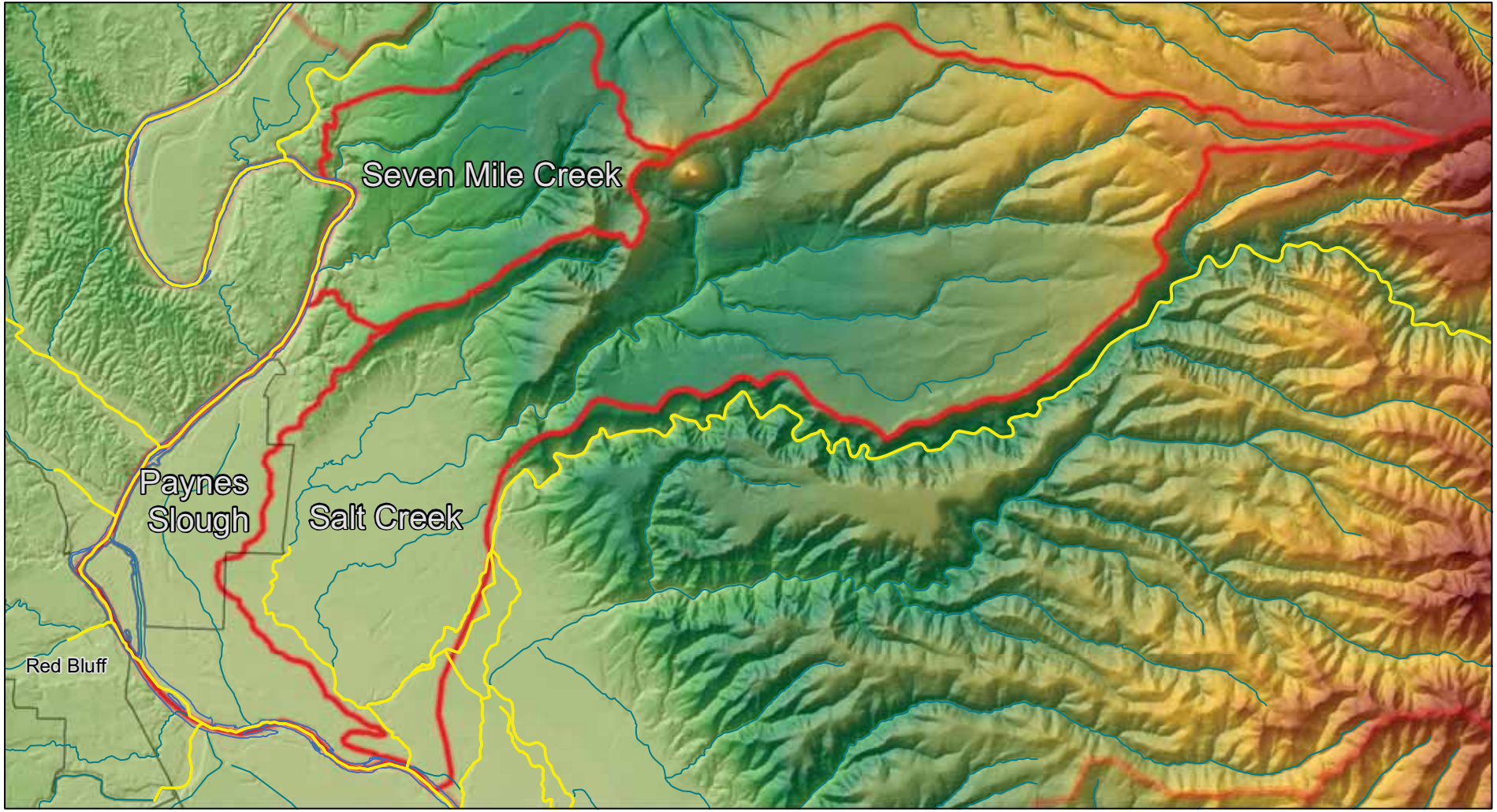
Tehama County Resource Conservation District
(c) 2010

0 1 2 4 6 8
Miles

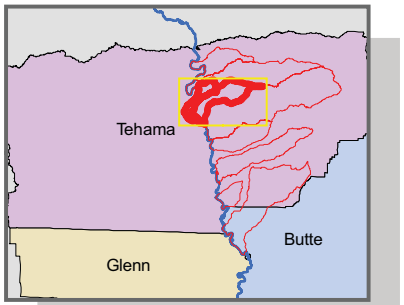


Tehama East Watershed Assessment

Critical Habitat - Spring-Run Chinook
Paynes Slough
Salt Creek
Seven Mile Creek

KEY

- Critical Habitat - Spring-Run Chinook
- Springs/Rivers
- Urban Areas
- Watershed Boundary



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0 1 2 4
Miles

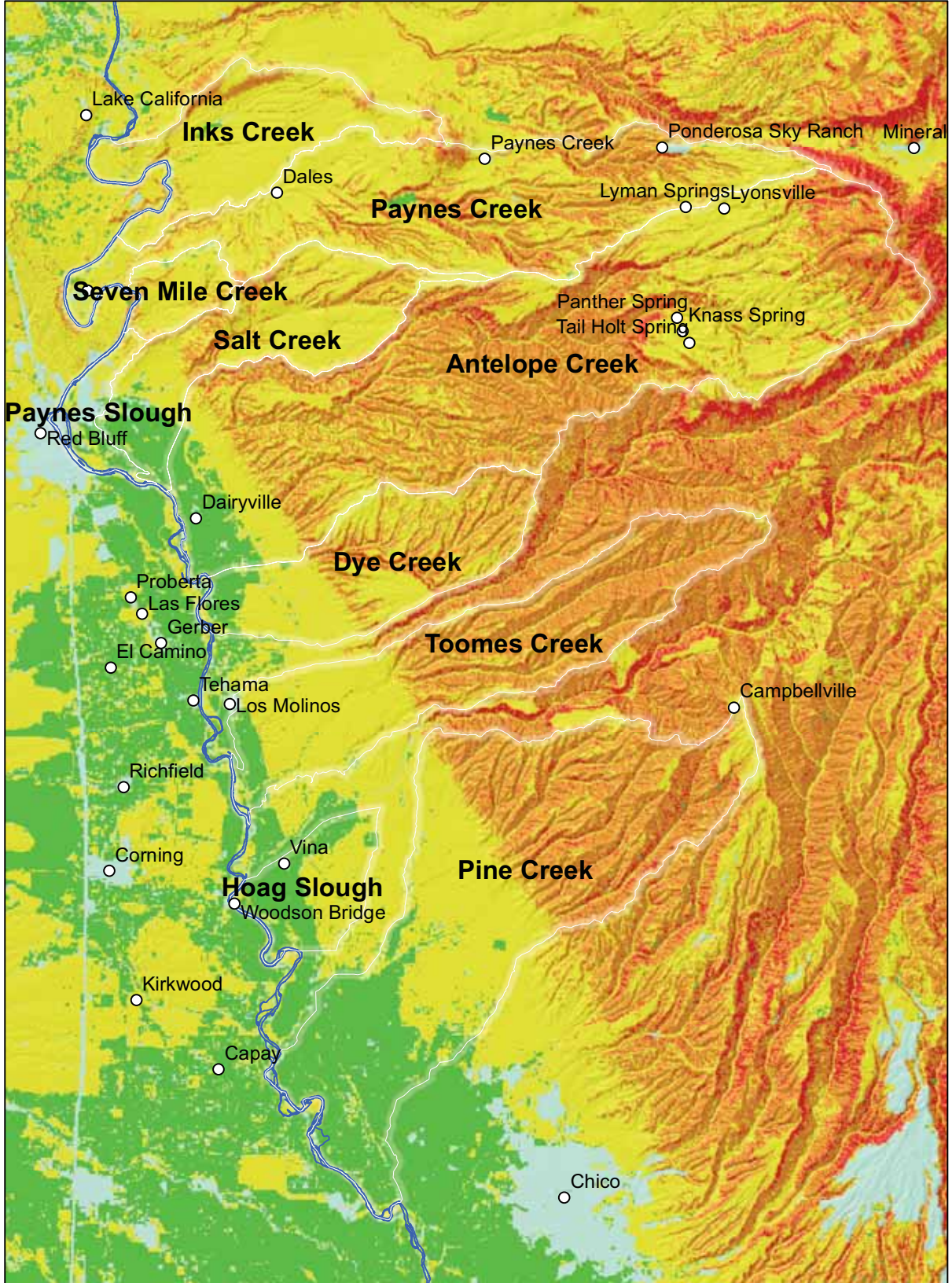
http://www.calfish.org/DataampMaps/CalFishDataDownloads/tabid/93/Default.aspx

Maps by Characteristics

Erosion Potential

Tehama East Watershed Assessment

Post-fire Erosion Potential Tehama East Watersheds



"This data represents FRAP's best estimate of the Revised Universal Soil Loss Equation (RUSLE) in a post-wildfire environment. FRAP adapted RUSLE, used for agricultural soil loss, for wildland post-fire erosion based on the interaction of fire threat (FTHRT04_1) and vegetation (FVEG02_2) cover. The resulting soil loss estimates are grouped into 3 erosion classes (Low, Moderate, and High)."

Quoted from:
http://frap.cdf.ca.gov/data/frapgisdata/output/perod.txt

KEY

Erosion Classification

- -1 : Areas without a Fuel Rank (generally Ag or Barren)
- 0 : Water and Urban areas outside scope of analysis
- 1 : Low
- 2 : Moderate
- 3 : High

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=perod

Watershed Boundary

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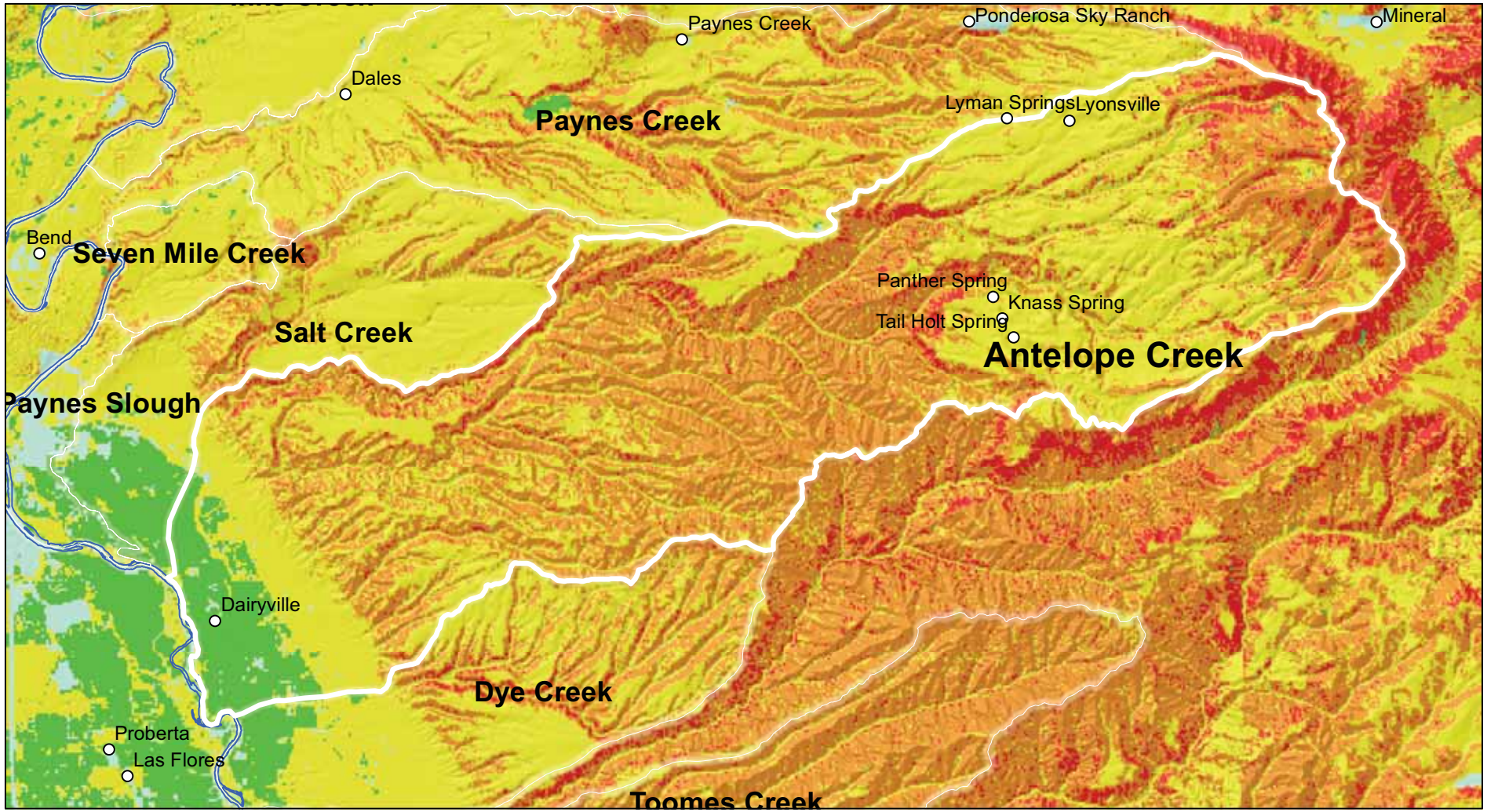
Tehama County Resource Conservation District
(c) 2010

0 3.5 7 14
Miles



Tehama East Watershed Assessment

Post-fire Erosion Potential
Antelope Creek

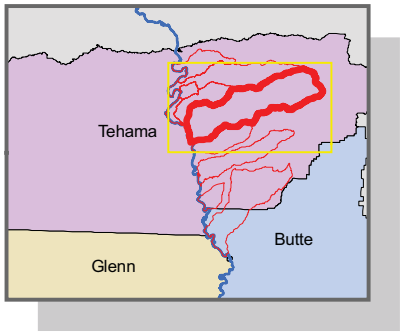
KEY

Erosion Classification

- -1 : Areas without a Fuel Rank (generally Ag or Barren)
- 0 : Water and Urban areas outside scope of analysis
- 1 : Low
- 2 : Moderate
- 3 : High

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=perod

Watershed Boundary



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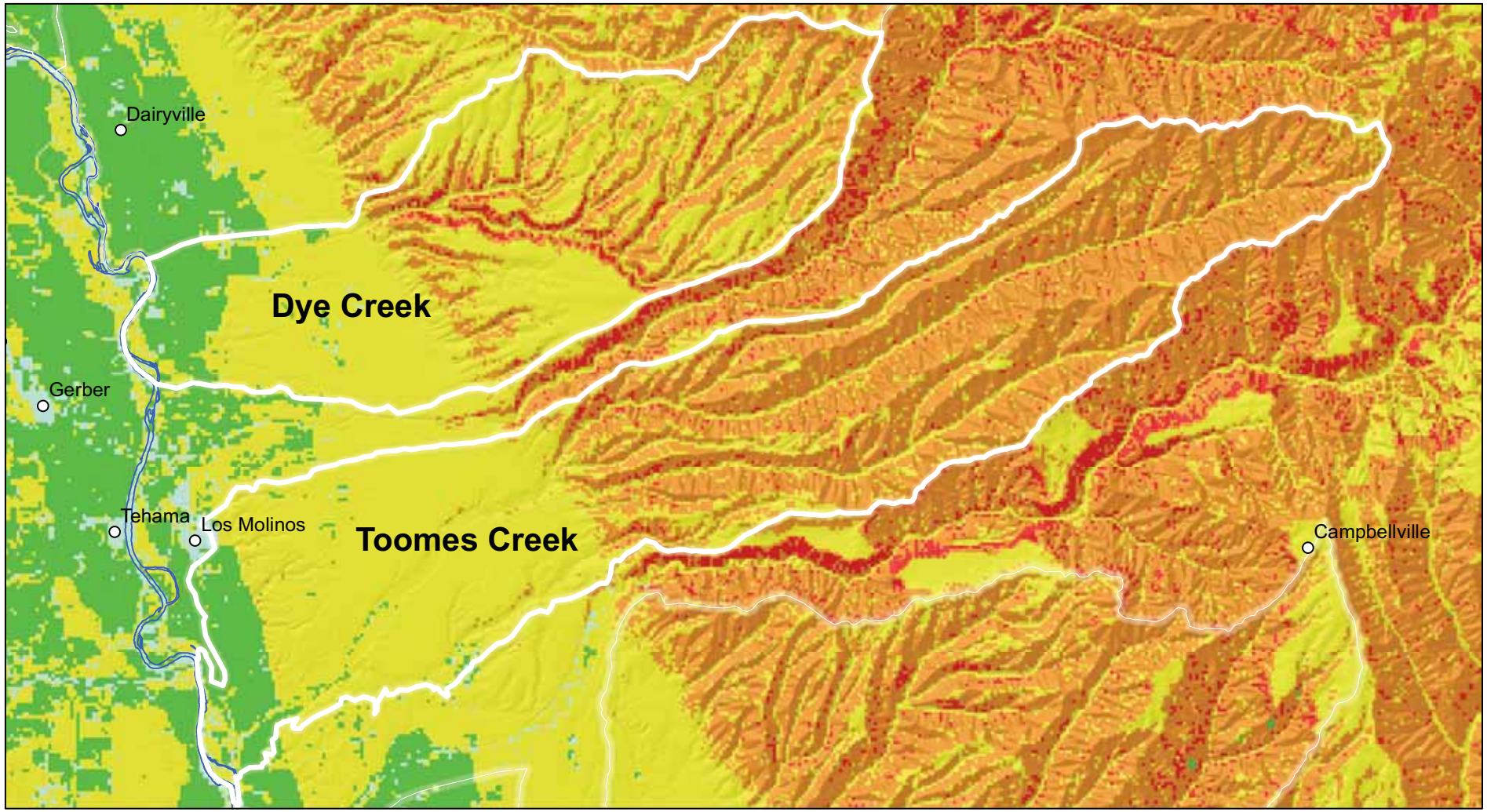
Tehama County Resource Conservation District
(c) 2010

0 3 6 12 Miles



Tehama East Watershed Assessment

Post-fire Erosion Potential
Dye and Toomes Creeks

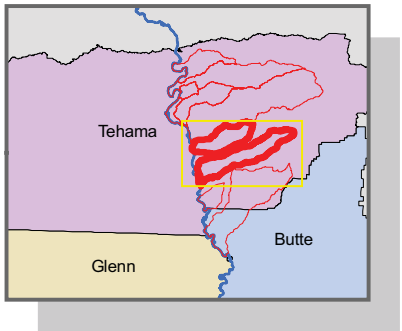
KEY

Erosion Classification

- -1 : Areas without a Fuel Rank (generally Ag or Barren)
- 0 : Water and Urban areas outside scope of analysis
- 1 : Low
- 2 : Moderate
- 3 : High

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=perod

Watershed Boundary



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Tehama County Resource Conservation District
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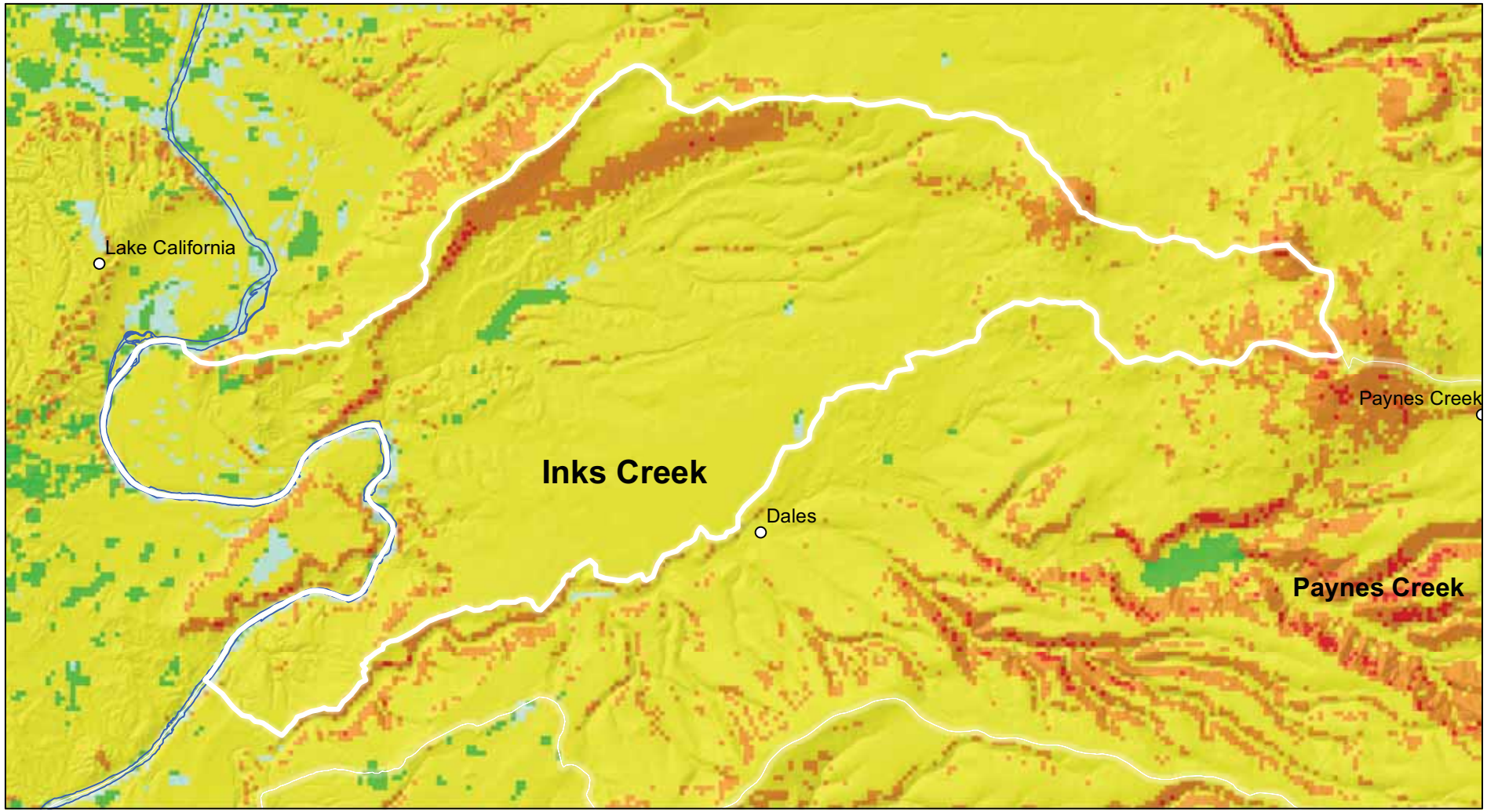
0 2 4 8 Miles



Tehama East Watershed Assessment

Post-fire Erosion Potential
Inks Creek

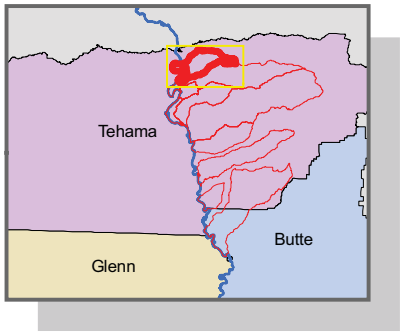
KEY

Erosion Classification

- -1 : Areas without a Fuel Rank (generally Ag or Barren)
- 0 : Water and Urban areas outside scope of analysis
- 1 : Low
- 2 : Moderate
- 3 : High

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=perod

Watershed Boundary



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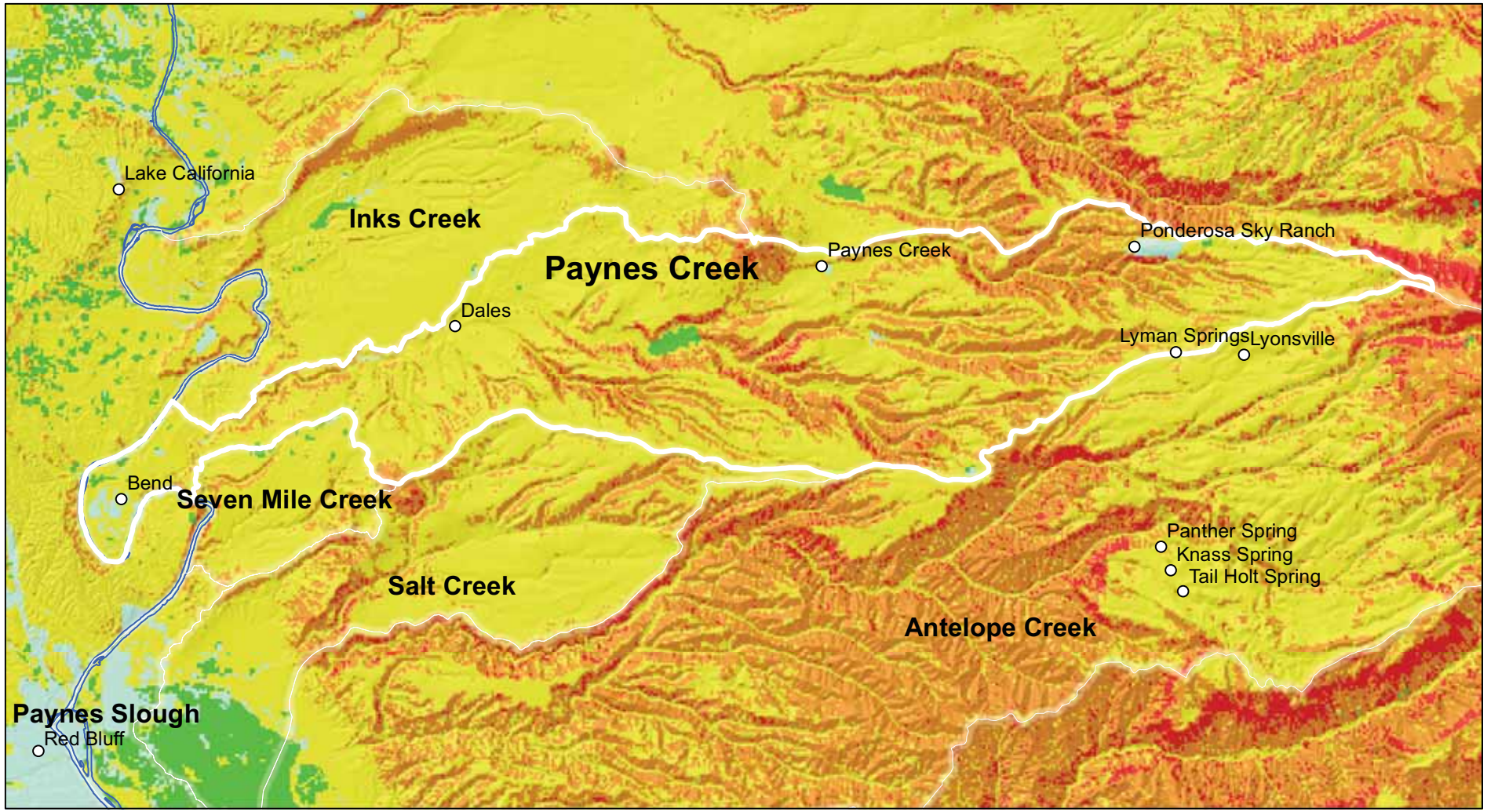
Tehama County Resource Conservation District
(c) 2010

0 1.25 2.5 5 Miles



Tehama East Watershed Assessment

Post-fire Erosion Potential
Paynes Creek

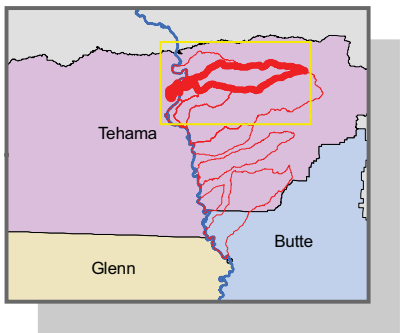
KEY

Erosion Classification

- -1 : Areas without a Fuel Rank (generally Ag or Barren)
- 0 : Water and Urban areas outside scope of analysis
- 1 : Low
- 2 : Moderate
- 3 : High

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=perod

Watershed Boundary



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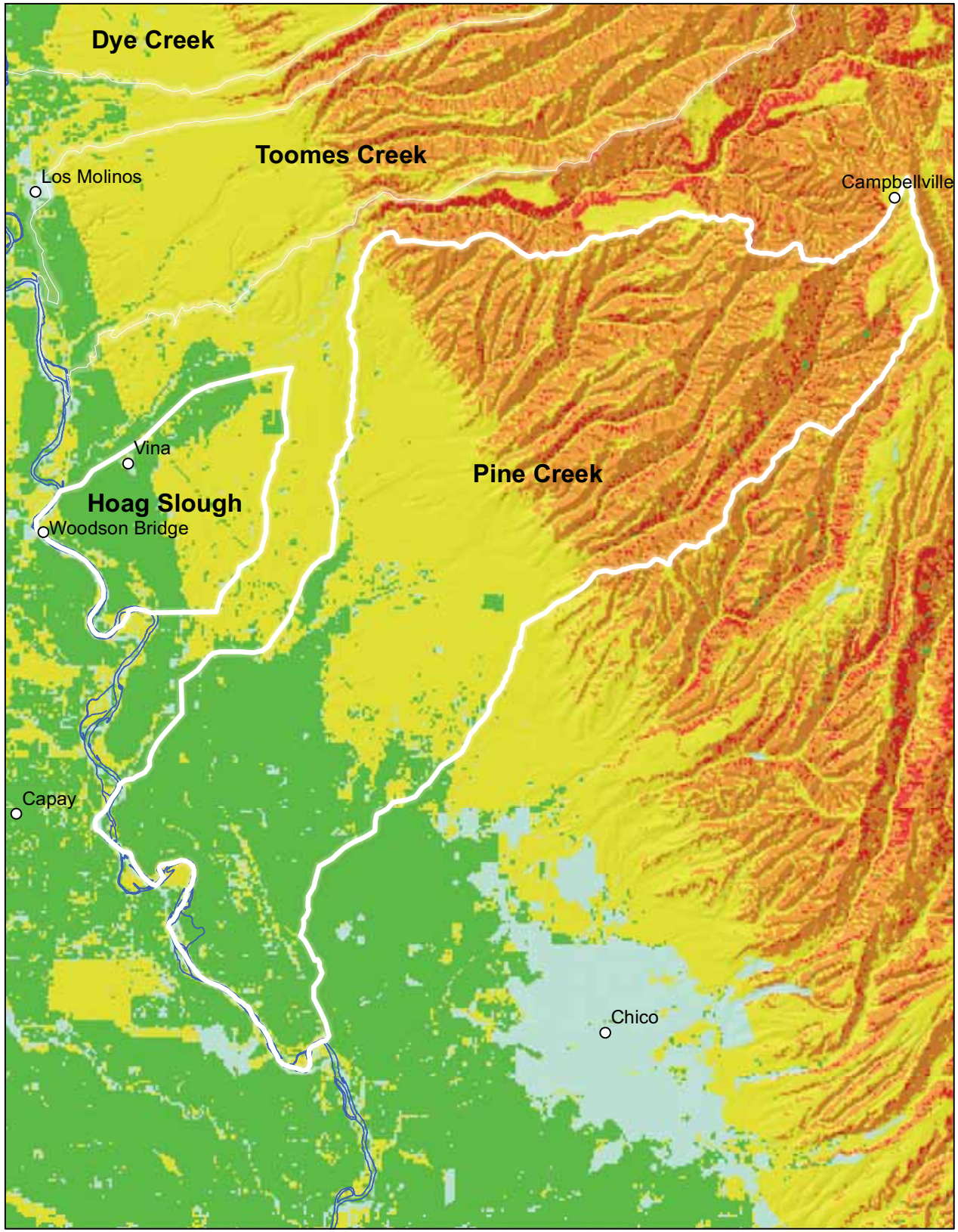
Tehama County Resource Conservation District
(c) 2010

0 3 6 12 Miles

Tehama East Watershed Assessment

Post-fire Erosion Potential
Antelope Creek



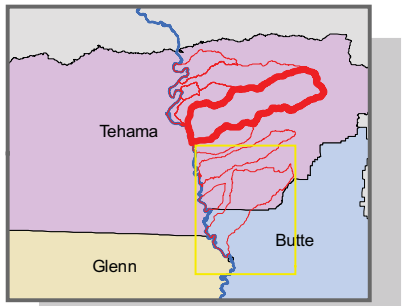
KEY

Erosion Classification

- -1 : Areas without a Fuel Rank (generally Ag or Barren)
- 0 : Water and Urban areas outside scope of analysis
- 1 : Low
- 2 : Moderate
- 3 : High

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=perod

Watershed Boundary



N
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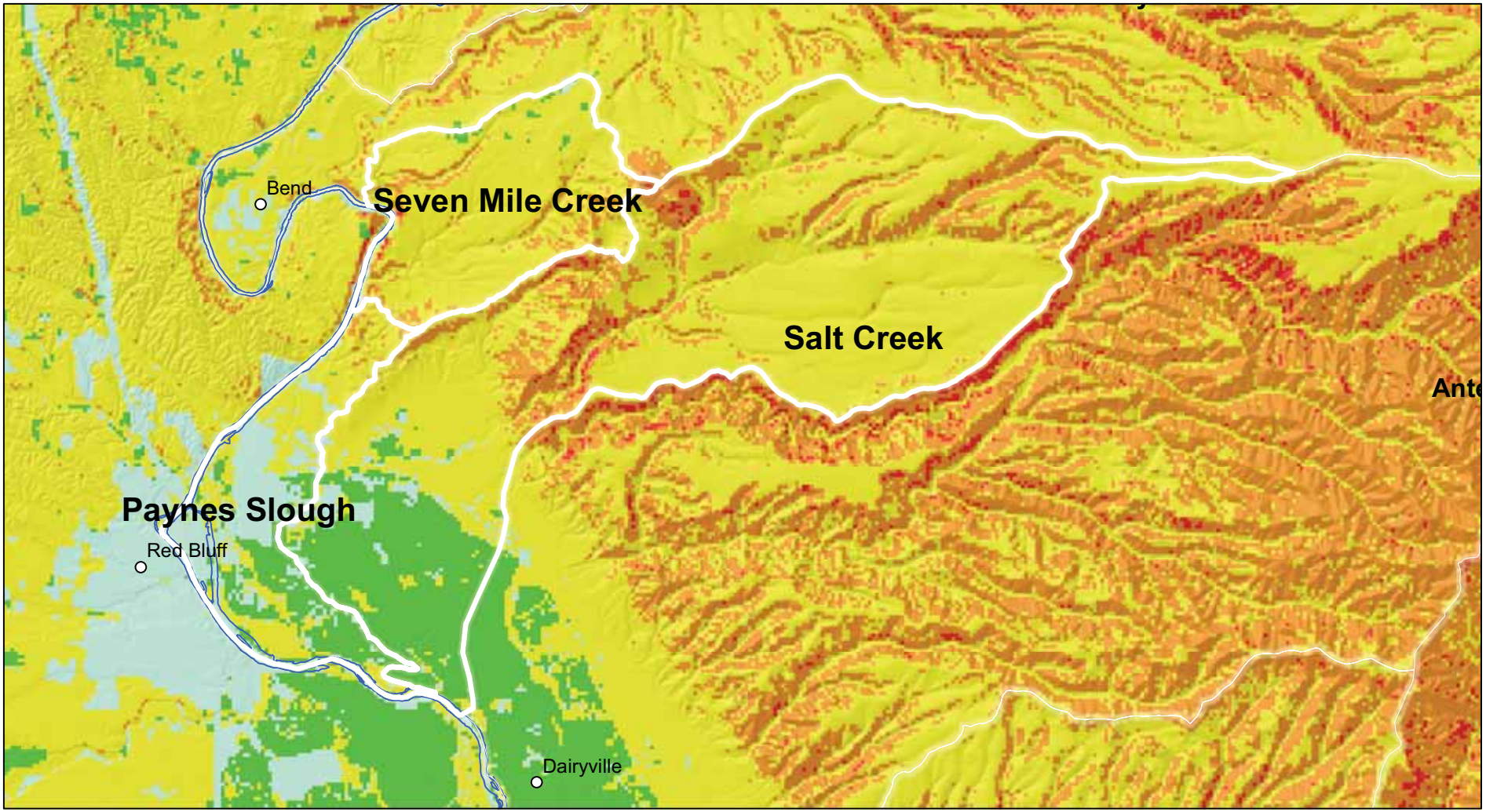
S

TCRCD

Tehama County Resource Conservation District
(c) 2010

0 2 4 8
Miles



Tehama East Watershed Assessment

Post-fire Erosion Potential Paynes Slough, Salt, and Seven Mile Creeks

N
W E
S

Tehama County Resource Conservation District
(c) 2010

0 1.5 3 6
Miles

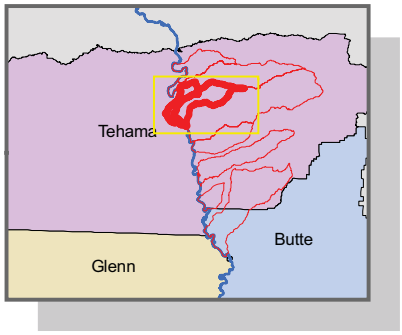
KEY

Erosion Classification

- -1 : Areas without a Fuel Rank (generally Ag or Barren)
- 0 : Water and Urban areas outside scope of analysis
- 1 : Low
- 2 : Moderate
- 3 : High

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=perod

Watershed Boundary

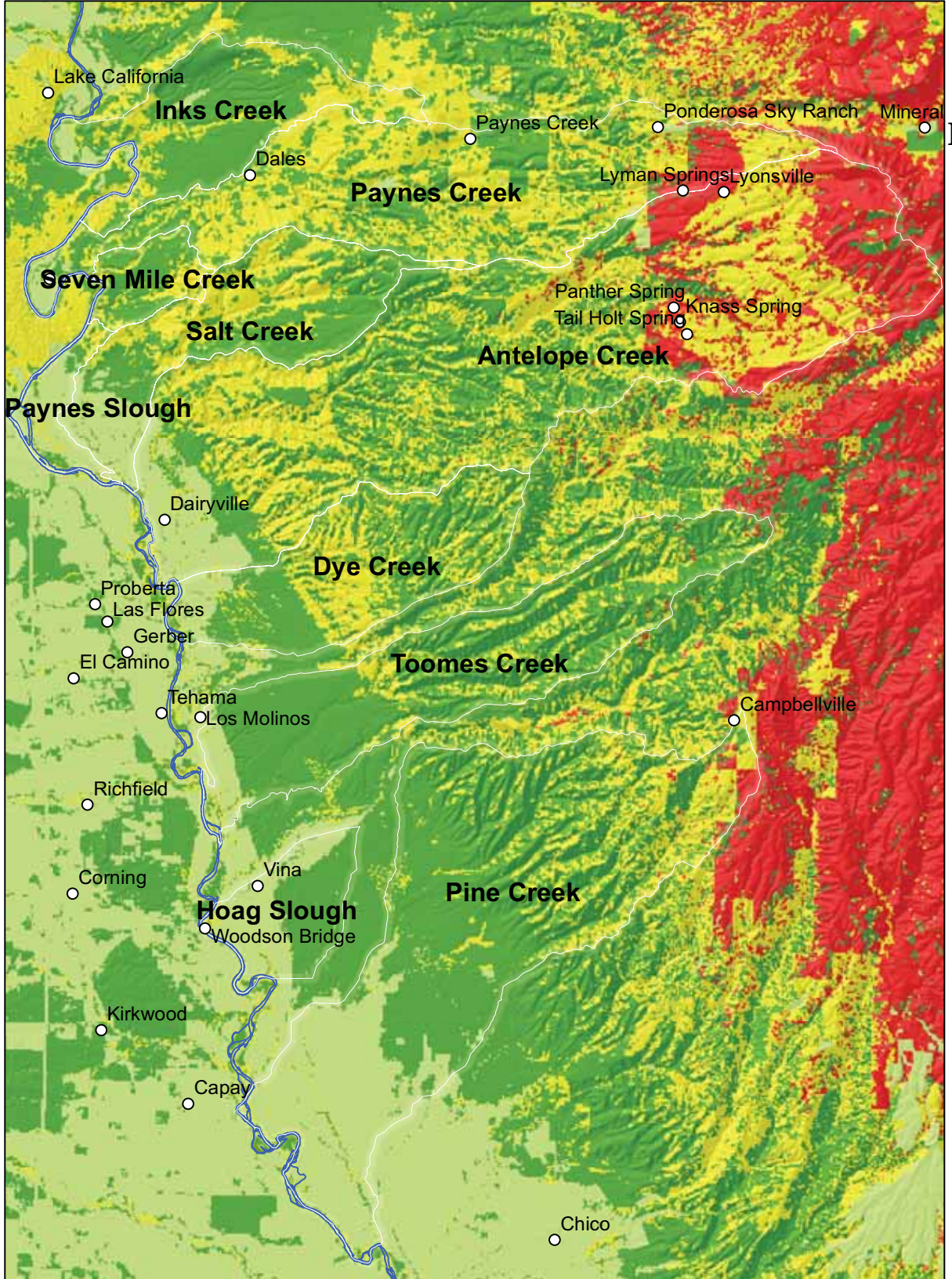


Maps by Characteristics

Fire: Condition Classification

Tehama East Watershed Assessment

Fire Regime and Condition Class
Condition Class
Tehama East Watersheds



"Condition class refers to the general deviation of ecosystems from their presettlement natural fire regime (See REGIME and REGIME_CAL), and can be viewed as a measure of sensitivity to fire damage to key elements and processes typical of those ecosystems, or fire-related risk to ecosytem health. Fundamental to this idea is that current expected fires are compared to historic fire regimes with respect to fire frequency, size and patchiness, and effects on key ecosystem elements and processes. Thus, these classes are then assigned based on current vegetation type and structure, an understanding of its pre-settlement fire regime, and current conditions regarding expected fire frequency and potential fire behavior. As a result of these efforts, Condition Classes were defined as the relative risk of losing key components that define an ecosystem (Hardy et al., 2001). The conceptual basis is that for fire-adapted ecosystems, much of their ecological structure and processes are driven by fire, and disruption of fire regimes leads to changes in plant composition and structure, uncharacteristic fire behavior and other disturbance agents (pests), altered hydrologic processes and increased smoke production. Condition Class 1 is associated with low level disruption of fire regime, and consequently low risk to loss or damage. Condition Class 2 indicates some degree of departure from natural regimes, with assoicated changes in ecosystem composition and structure that render future fires a likelihood of some loss and change in elements and processes. Condition class 3 is highly divergent from natural regime conditions, and presents the highest level of risk of loss." Quoted from: http://frap.cad.ca.gov/data/frapgisdata/output/cafrcc.txt

KEY

Condition Class

1 3

2 9 - None Assigned

N W E S

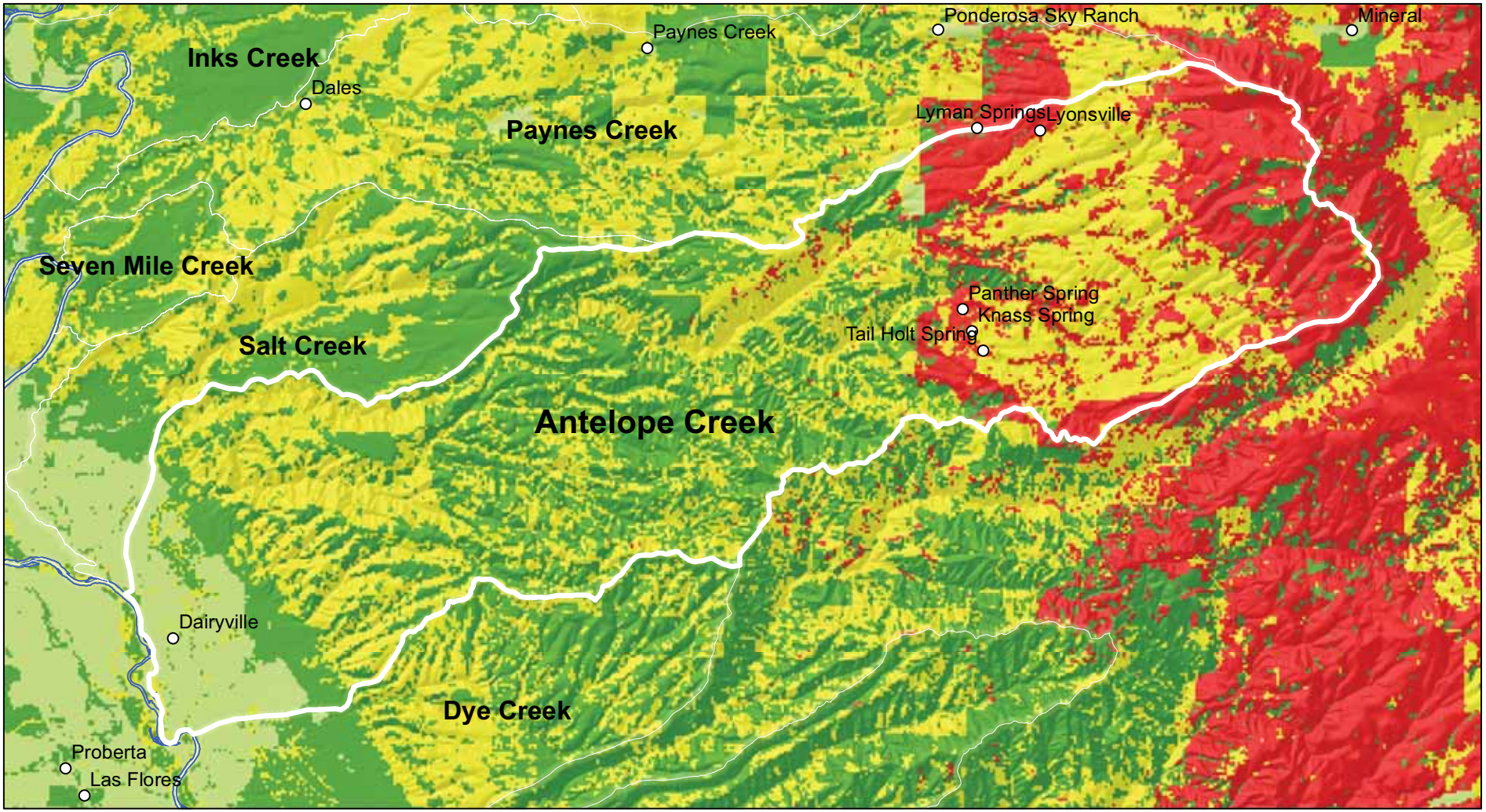
http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary

0 2 4 8 Miles

TCRCD

Tehama County Resource Conservation District



Tehama East Watershed Assessment

Fire Regime and Condition Class
Condition Class
Antelope Creek

N
W E
S

Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10
Miles

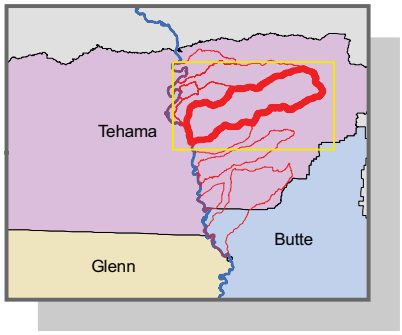
KEY

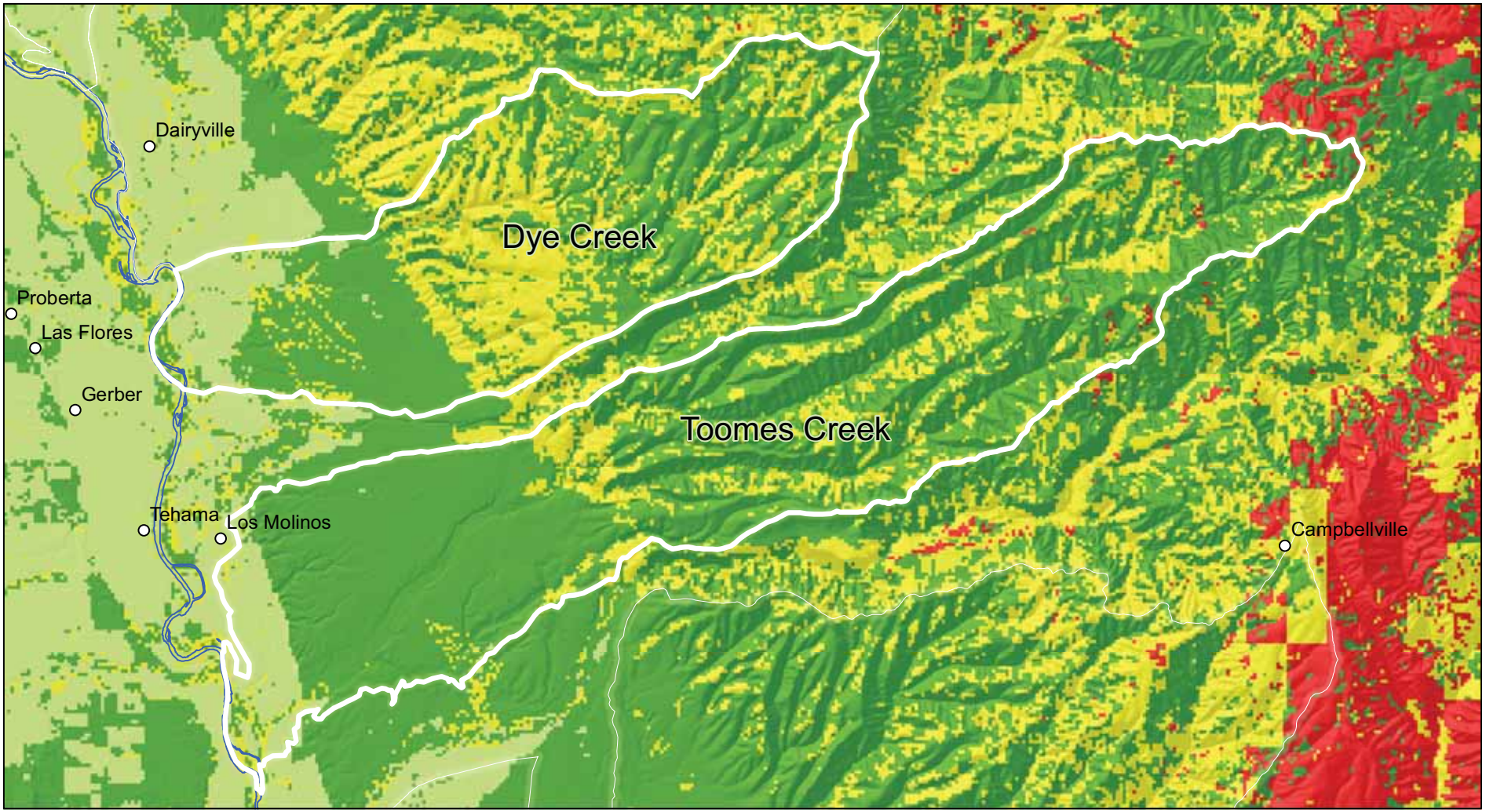
Condition Class

1
2
3
9 - None Assigned

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary





Tehama East Watershed Assessment

Fire Regime and Condition Class
Condition Class
Dye and Toomes Creeks

N
W E
S

Tehama County Resource Conservation District
(c) 2010

0 2 4 8
Miles

KEY

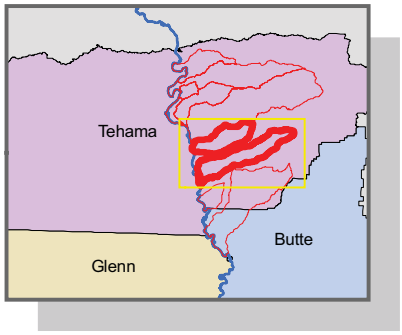
Condition Class

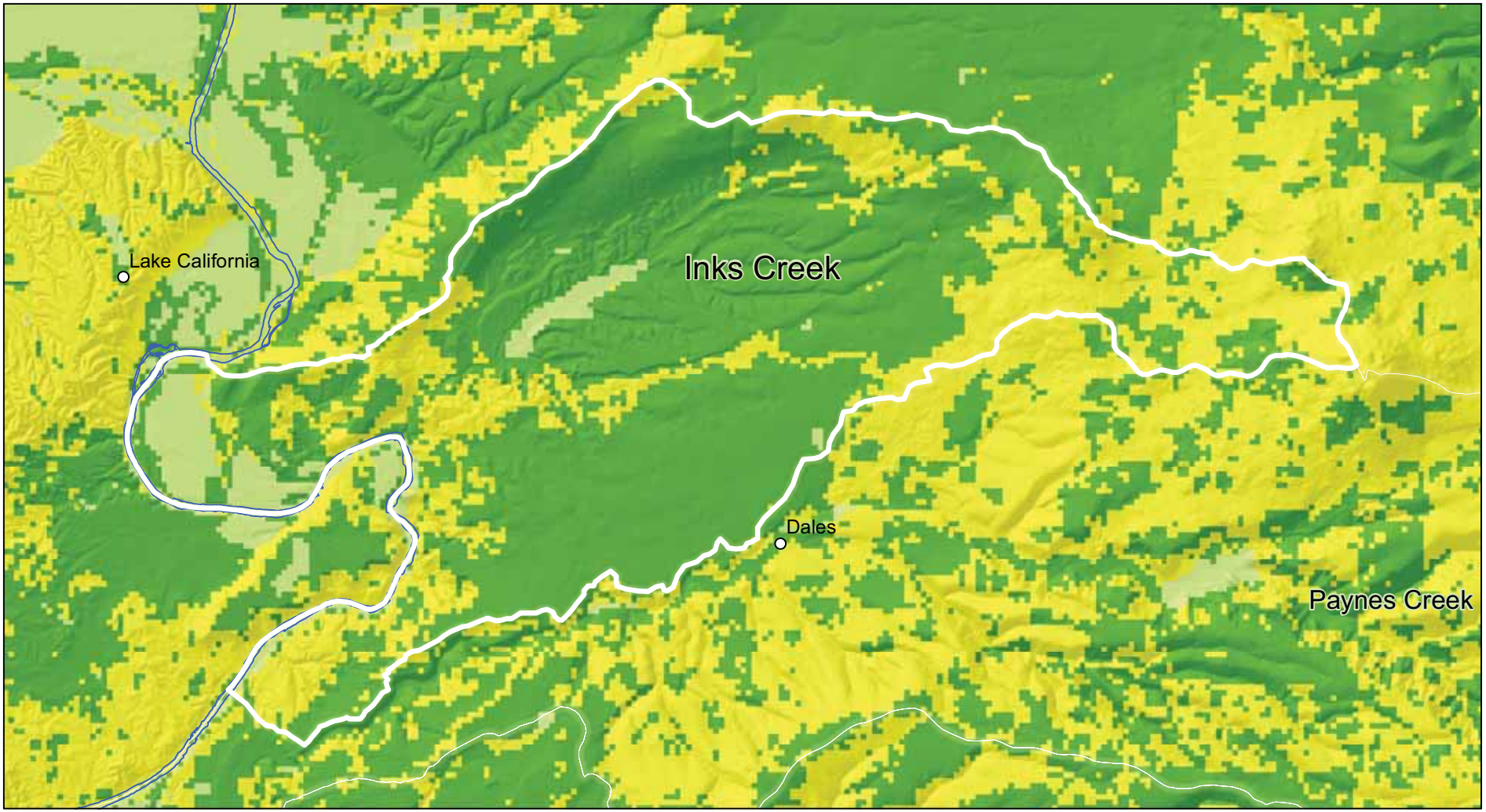
1 3

2 9 - None Assigned

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary





Tehama East Watershed Assessment

Fire Regime and Condition Class
Condition Class
Inks Creek

N
W E
S

TCRCD

Tehama County Resource Conservation District
(c) 2010

0 1.25 2.5 5
Miles

KEY

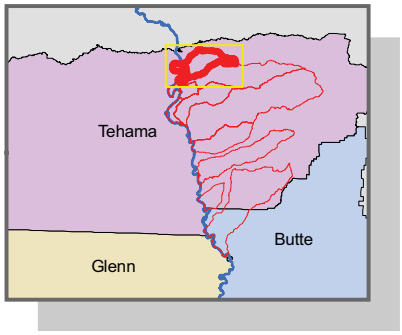
Condition Class

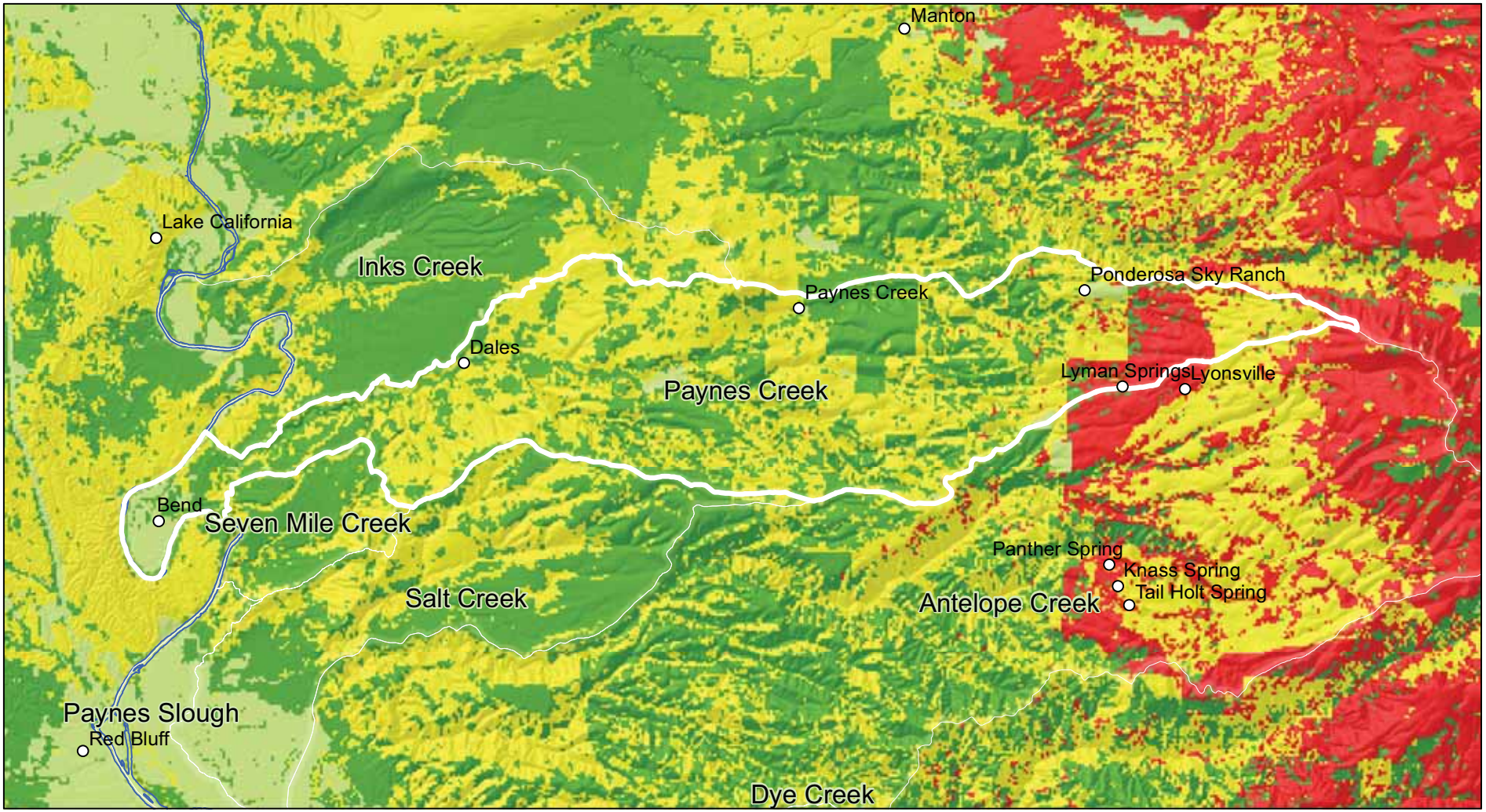
1 3

2 9 - None Assigned

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary





Tehama East Watershed Assessment

Fire Regime and Condition Class
Condition Class
Paynes Creek

TCRCD

Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10
Miles

KEY

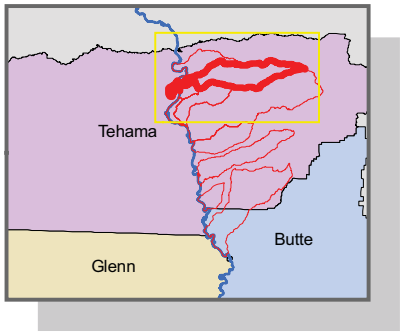
Condition Class

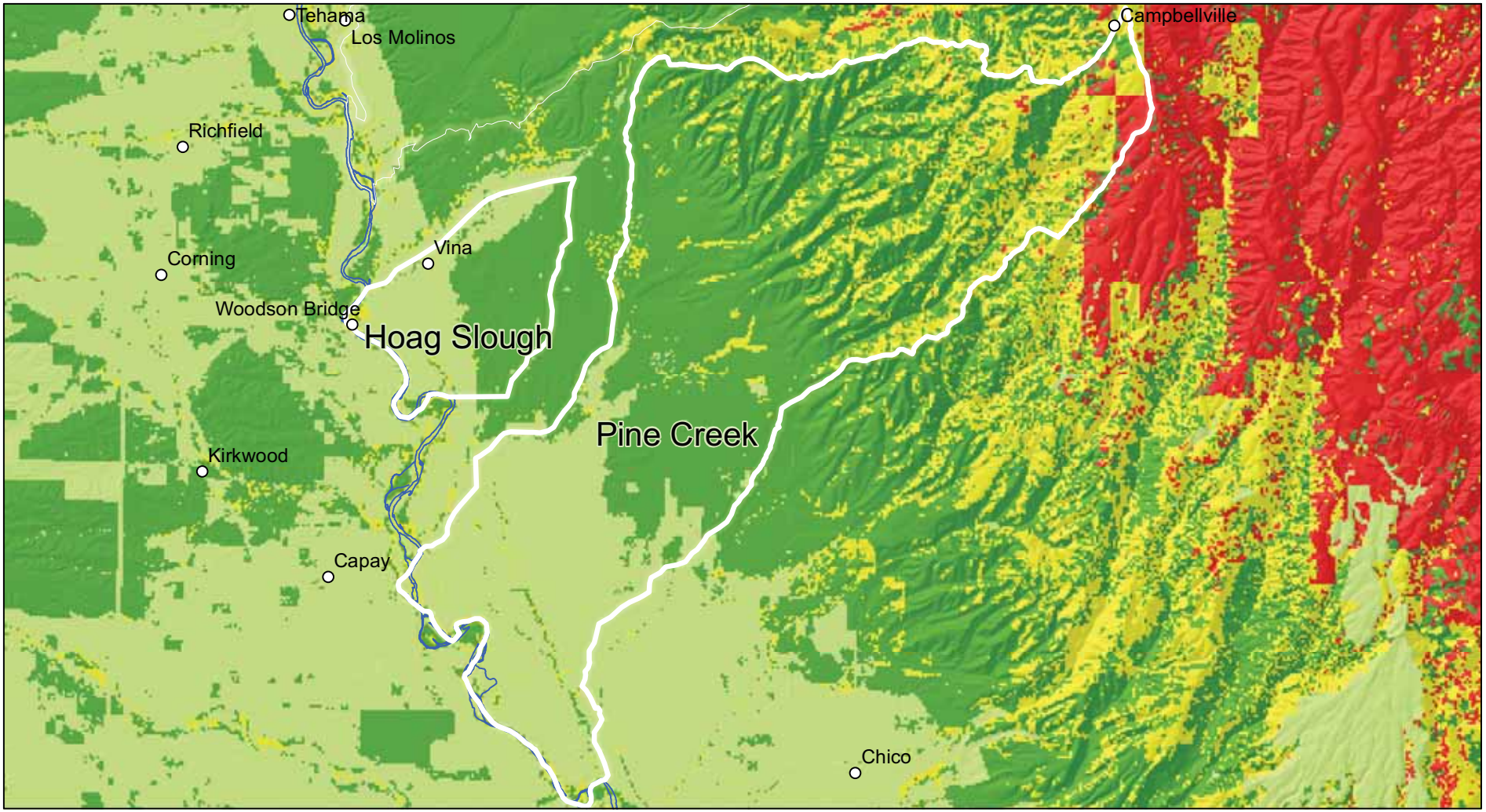
1 3

2 9 - None Assigned

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary





Tehama East Watershed Assessment

Fire Regime and Condition Class
Condition Class
Hoag Slough and Pine Creek

N
W E
S

Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10
Miles

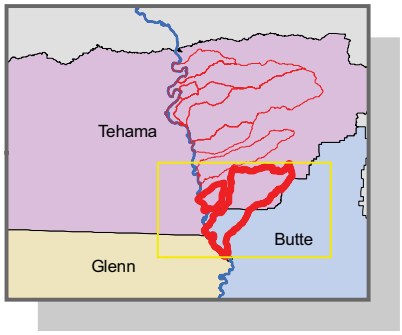
KEY

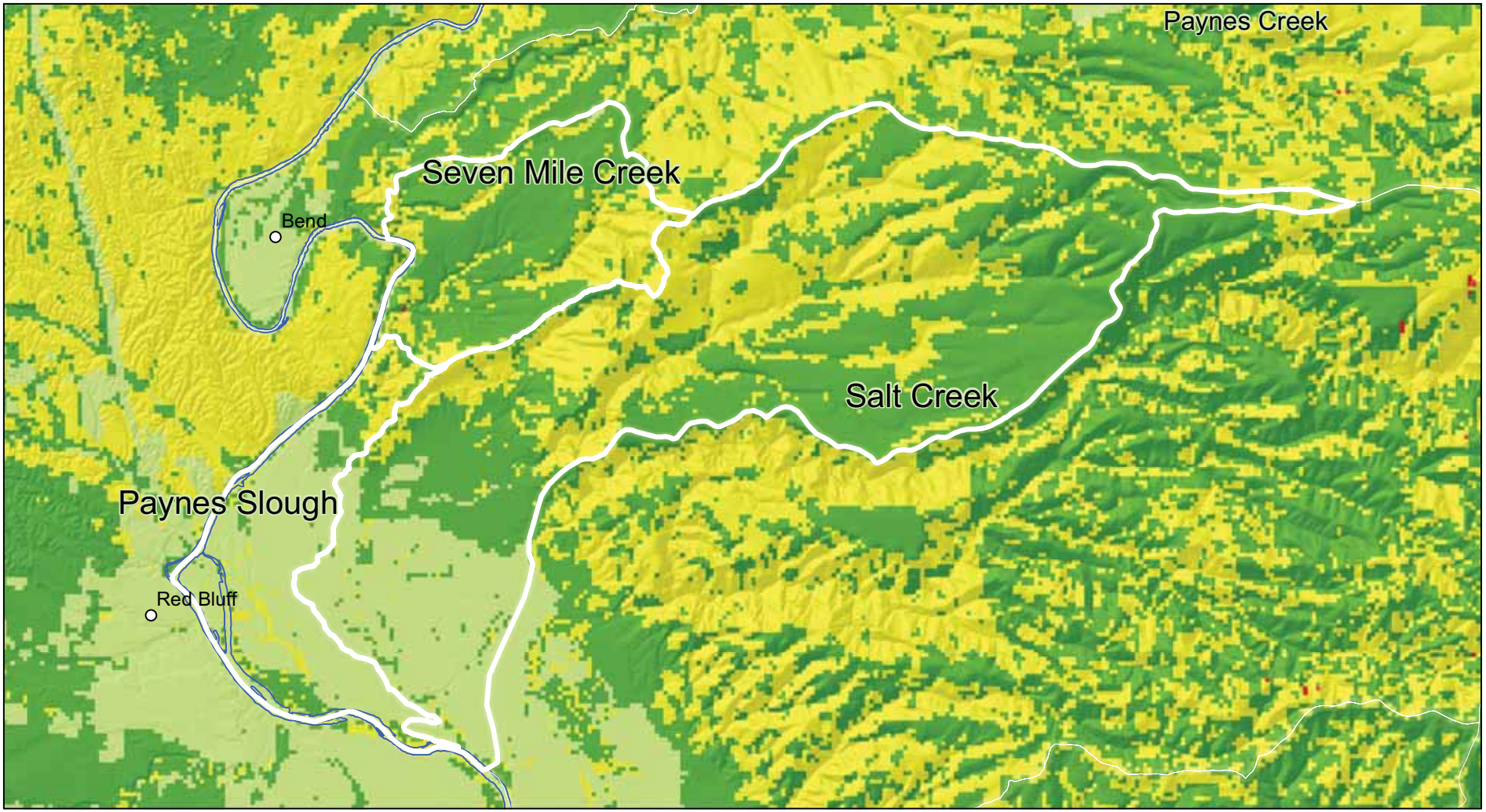
Condition Class

1
2
3
9 - None Assigned

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary





Tehama East Watershed Assessment

Fire Regime and Condition Class
Condition Class
Paynes Slough, Salt, and Seven Mile Creeks

N
W E
S

TCRCD

Tehama County Resource Conservation District
(c) 2010

0 1.5 3 6
Miles

KEY

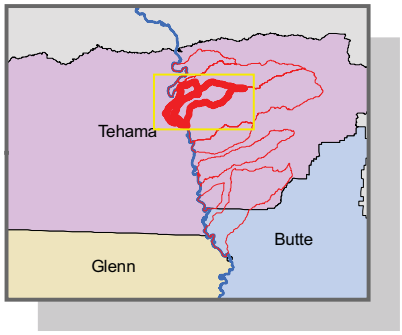
Condition Class

1 3

2 9 - None Assigned

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary

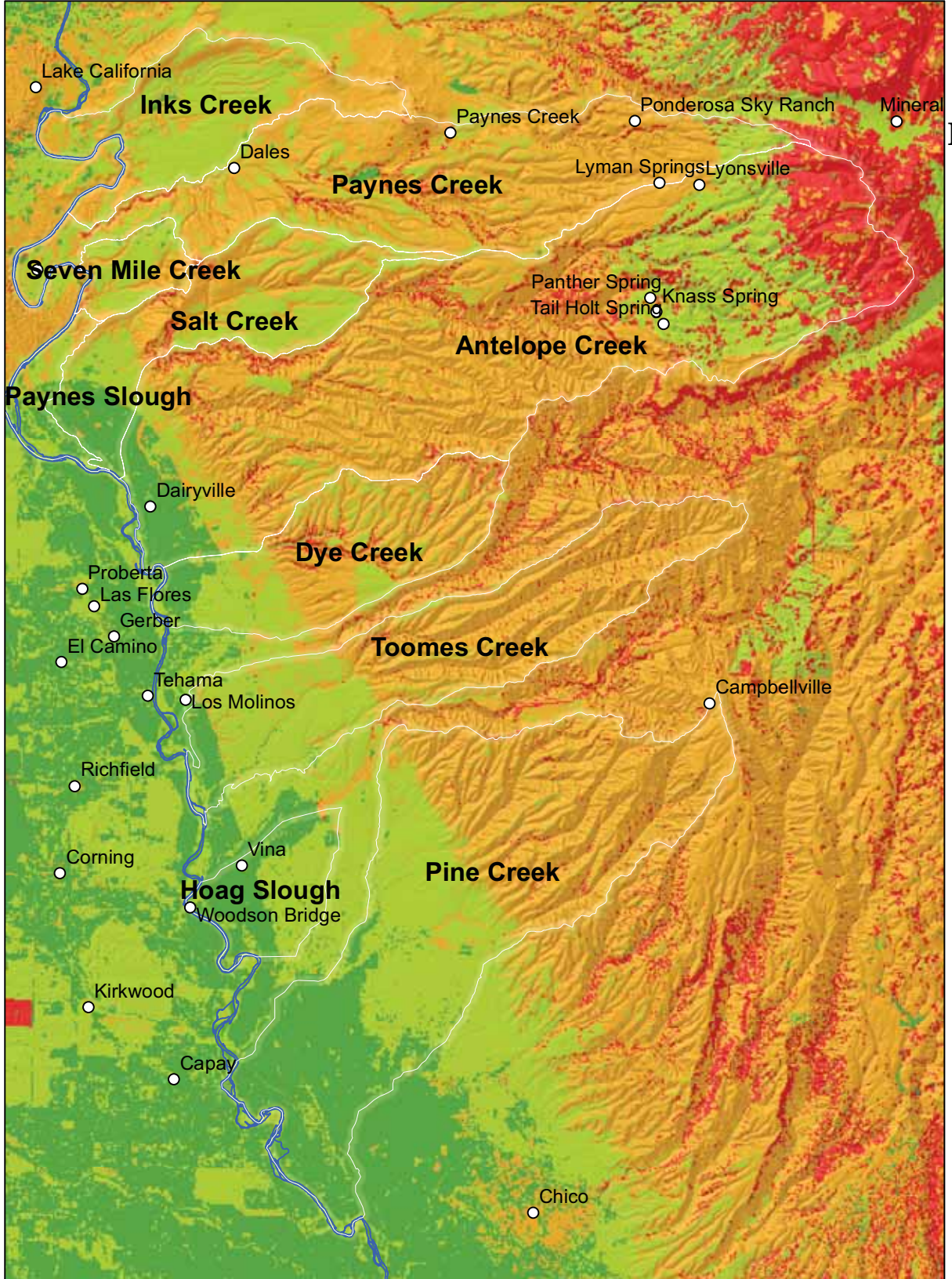


Maps by Characteristics

Fire: Fuel Ranking

Tehama East Watershed Assessment

Fire Regime and Condition Class Fuel Ranking Tehama East Watersheds



"CDF has developed a Fuel Rank assessment methodology for the California Fire Plan to identify and prioritize pre-fire projects that reduce the potential for large catastrophic fire. The fuel ranking methodology assigns ranks based on expected fire behavior for unique combinations of topography and vegetative fuels under a given severe weather condition (wind speed, humidity, and temperature). The procedure makes an initial assessment of rank based on an assigned fuel model (see surface fuels) and slope; then potentially increases ranks based on the amount of ladder and/or crown fuel present to arrive at a final fuel rank. Initially developed at a 30 meter scale, this 100 meter representation of the data are combined with other data and used to identify wildfire threats."

Quoted from:
http://frap.cad.ca.gov/data/frapgisdata/output/cafrcc.txt

KEY

Fuel Ranking

- -1 - Little or No Hazard
- 1 - Moderate Hazard
- 2 - High Hazard
- 3 - Very High Hazard

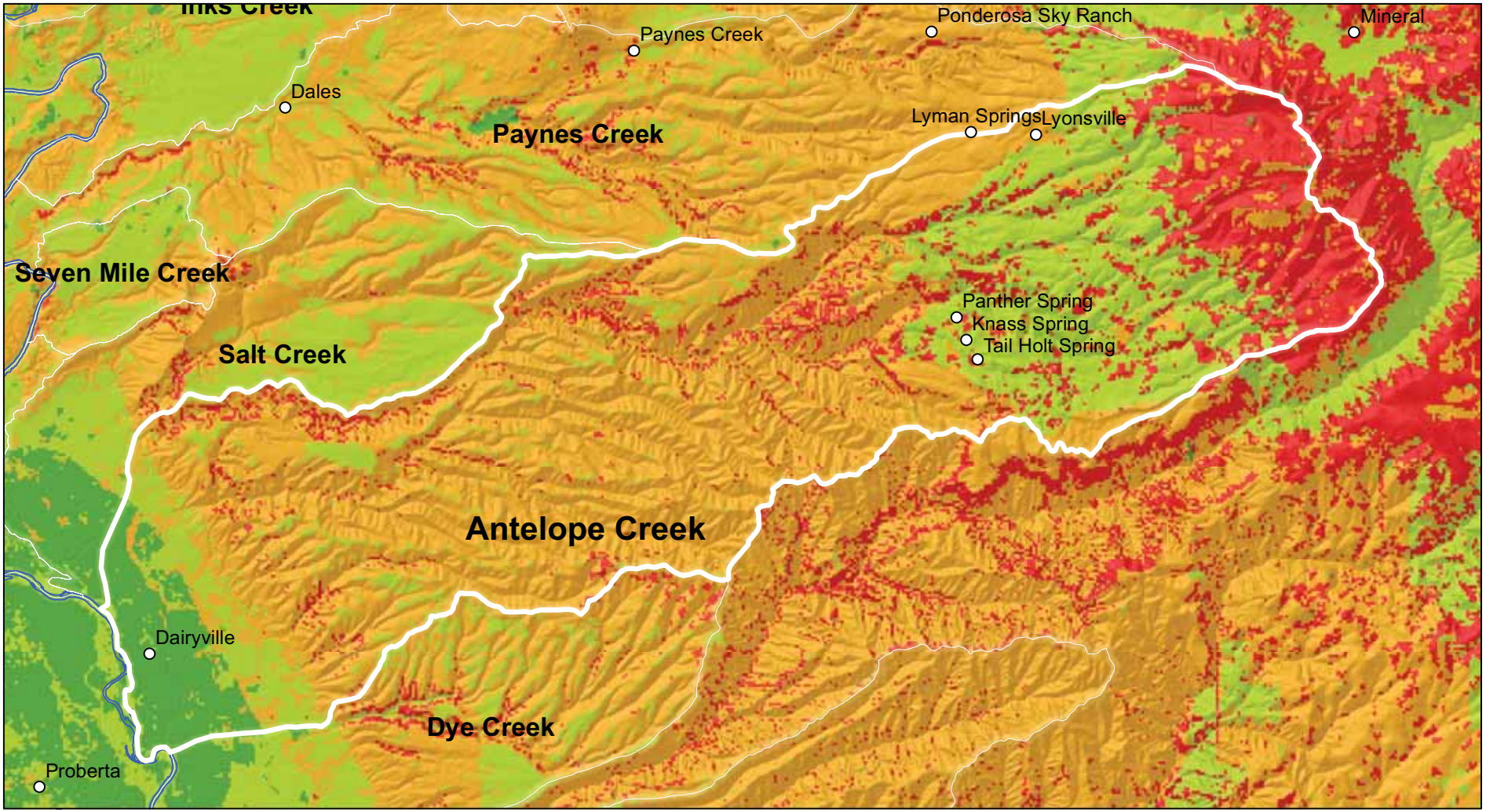
http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary

N
W E
S

Tehama County Resource Conservation District
(c) 2010

0 2 4 8
Miles



Tehama East Watershed Assessment

Fire Regime and Condition Class Fuel Ranking Antelope Creek

N
W E
S

TCRCD

Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10
Miles

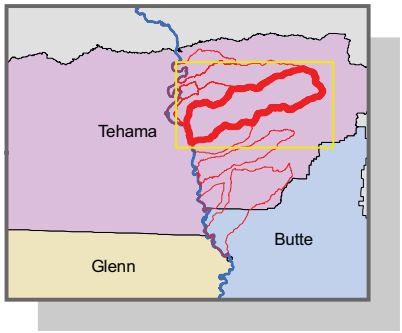
KEY

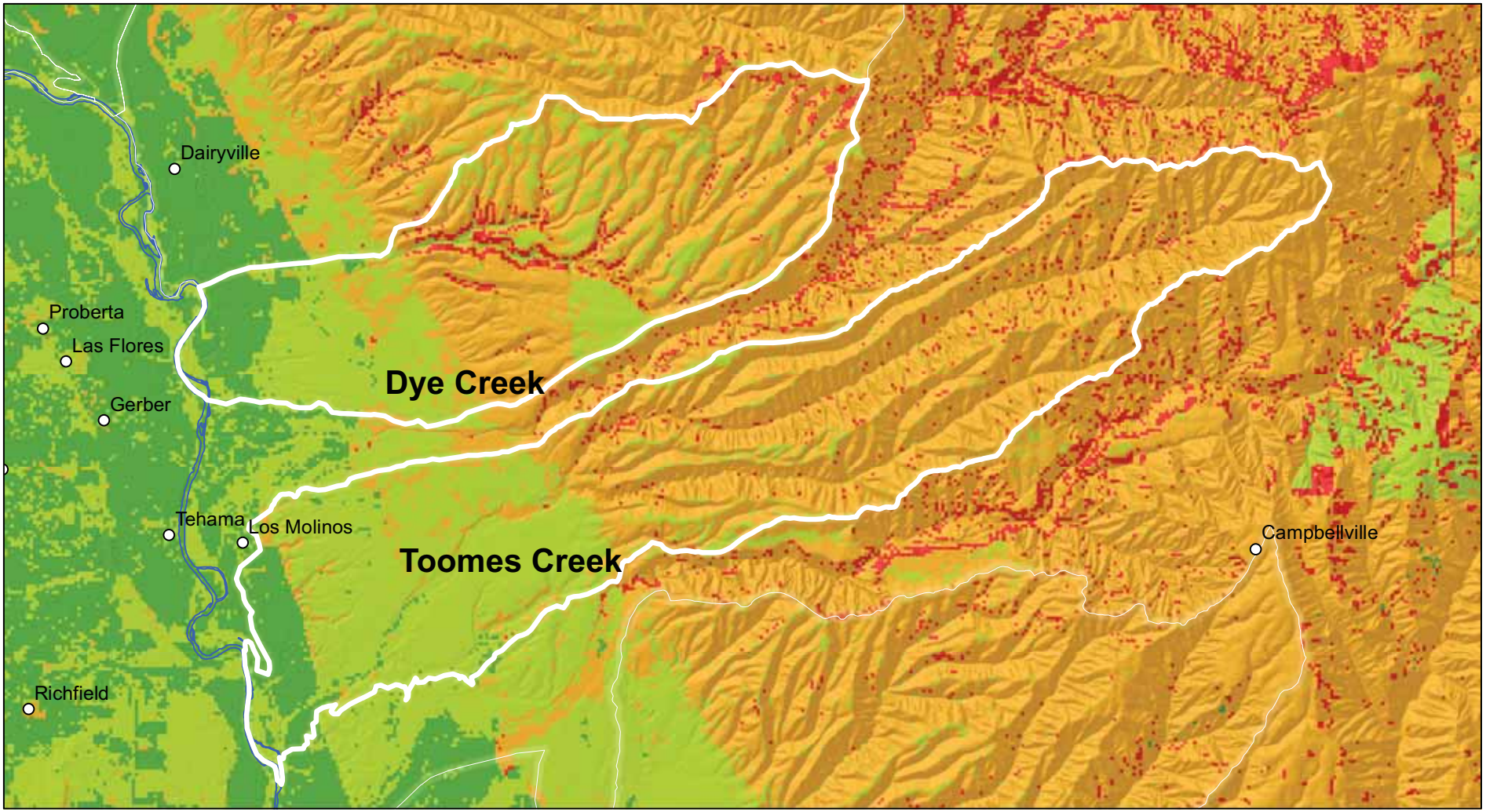
Fuel Ranking

- -1 - Little or No Hazard
- 1 - Moderate Hazard
- 2 - High Hazard
- 3 - Very High Hazard

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary





Tehama East Watershed Assessment

Fire Regime and Condition Class Fuel Ranking Dye and Toomes Creeks

N
W E
S

TCRCD

Tehama County Resource Conservation District
(c) 2010

0 2 4 8
Miles

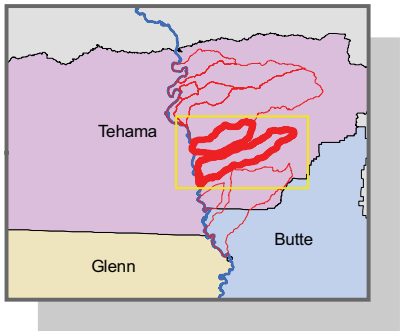
KEY

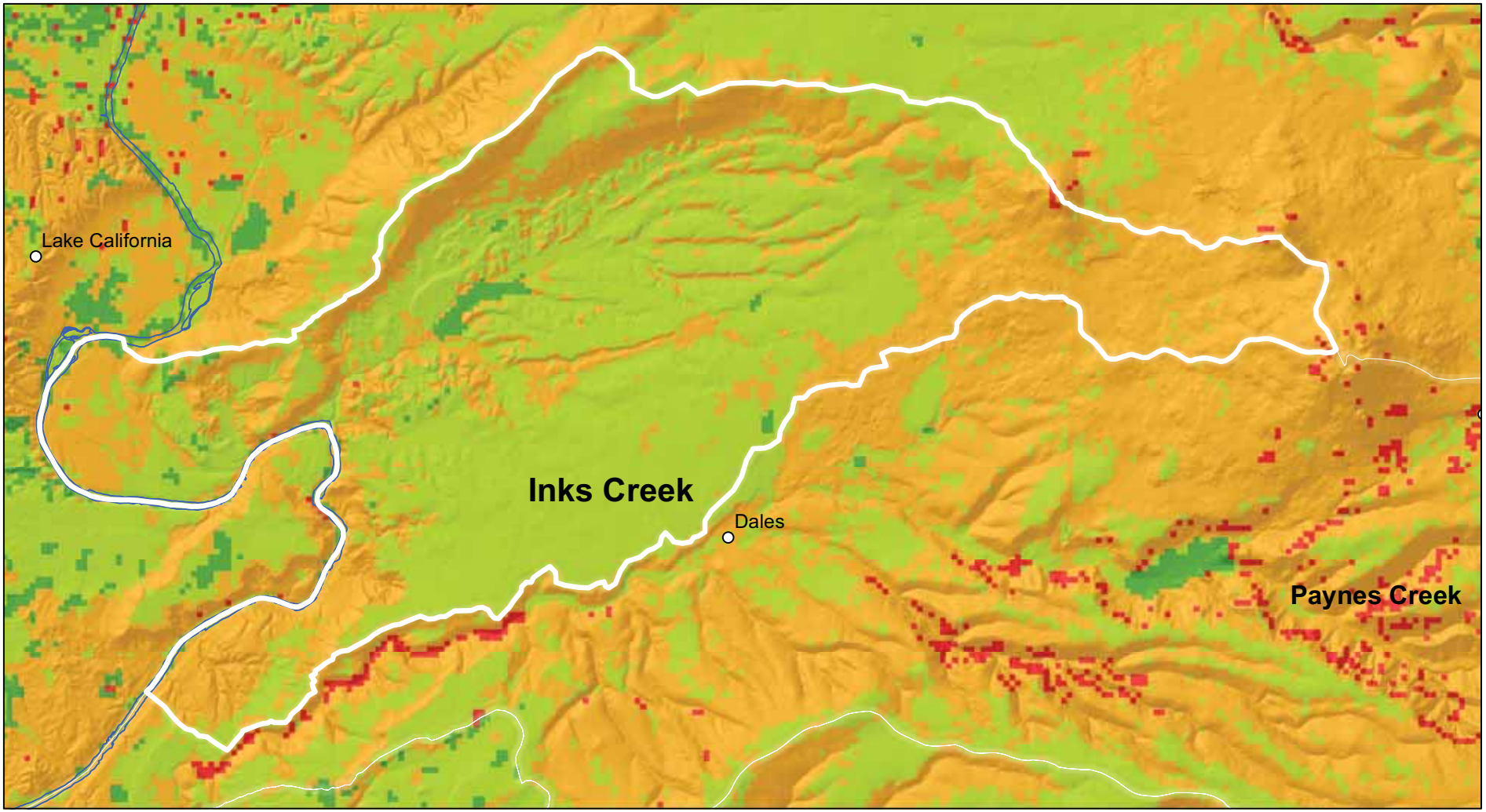
Fuel Ranking

- -1 - Little or No Hazard
- 1 - Moderate Hazard
- 2 - High Hazard
- 3 - Very High Hazard

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary





Tehama East Watershed Assessment

Fire Regime and Condition Class Fuel Ranking Inks Creek

N
W E
S

TCRCD

Tehama County Resource Conservation District
(c) 2010

0 1.25 2.5 5
Miles

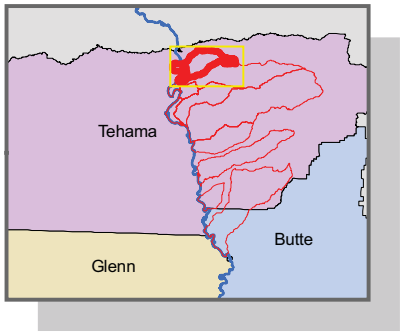
KEY

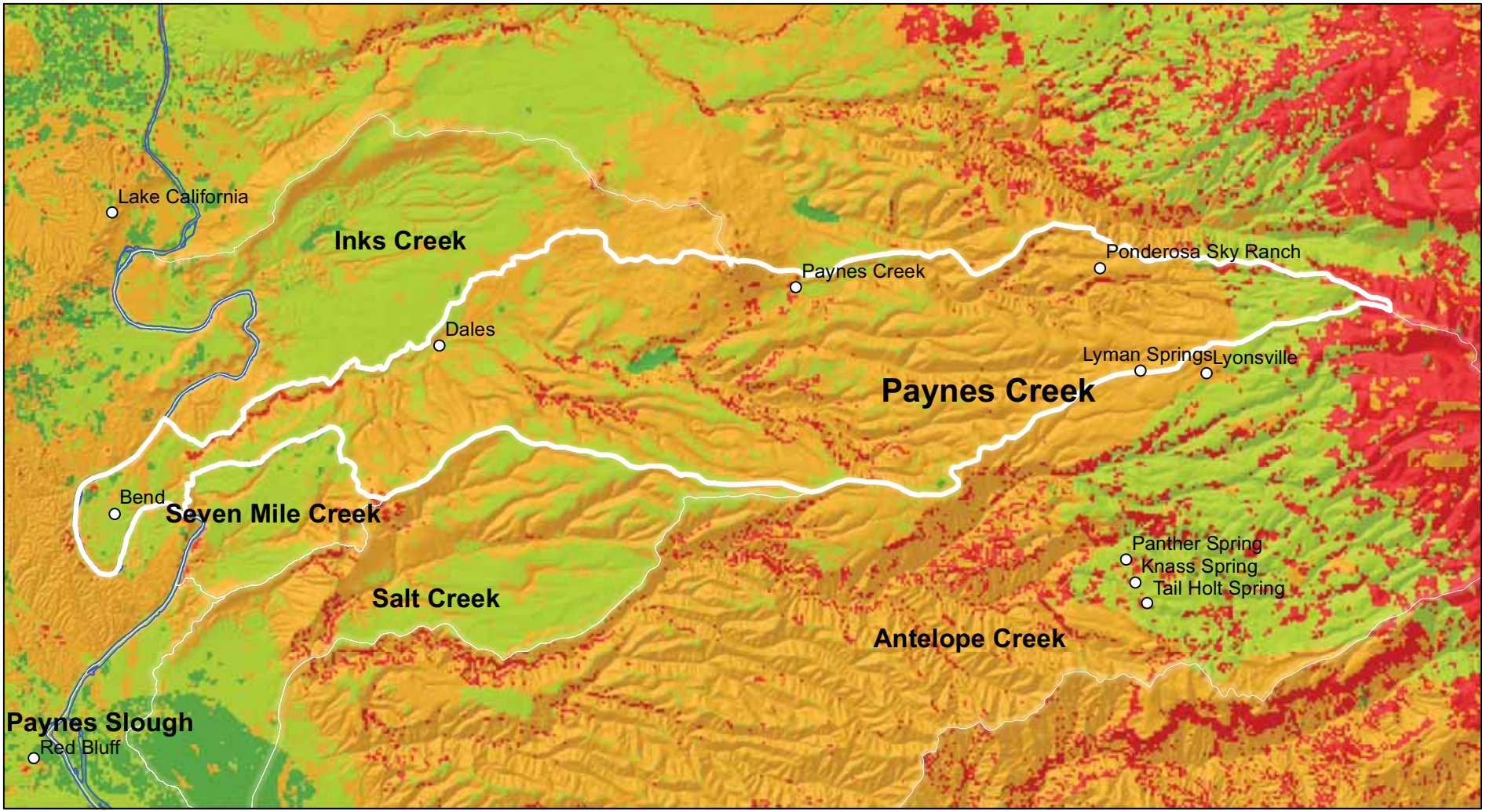
Fuel Ranking

- -1 - Little or No Hazard
- 1 - Moderate Hazard
- 2 - High Hazard
- 3 - Very High Hazard

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary





Tehama East Watershed Assessment

Fire Regime and Condition Class Fuel Ranking Paynes Creek

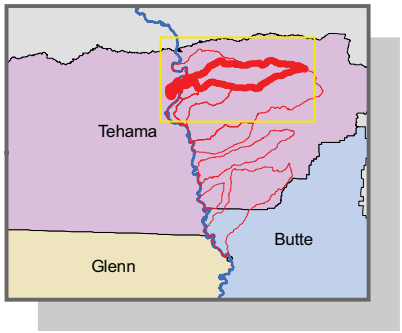
KEY

Fuel Ranking

- -1 - Little or No Hazard
- 1 - Moderate Hazard
- 2 - High Hazard
- 3 - Very High Hazard

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary



N
W E
S

TCRCD

Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10 Miles

Tehama East Watershed Assessment

Fire Regime and Condition Class Fuel Ranking Hoag Slough and Pine Creek

Toomes Creek

Tehama

Los Molinos

Campbellville

Vina

Woodson Bridge

Hoag Slough

Pine Creek

Capay

Chico

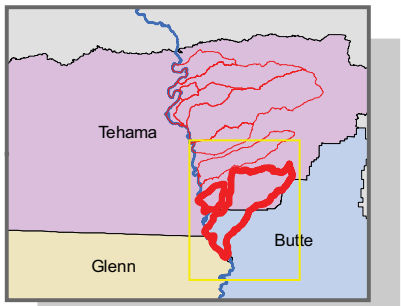
KEY

Fuel Ranking

- -1 - Little or No Hazard
- 1 - Moderate Hazard
- 2 - High Hazard
- 3 - Very High Hazard

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary



N
W
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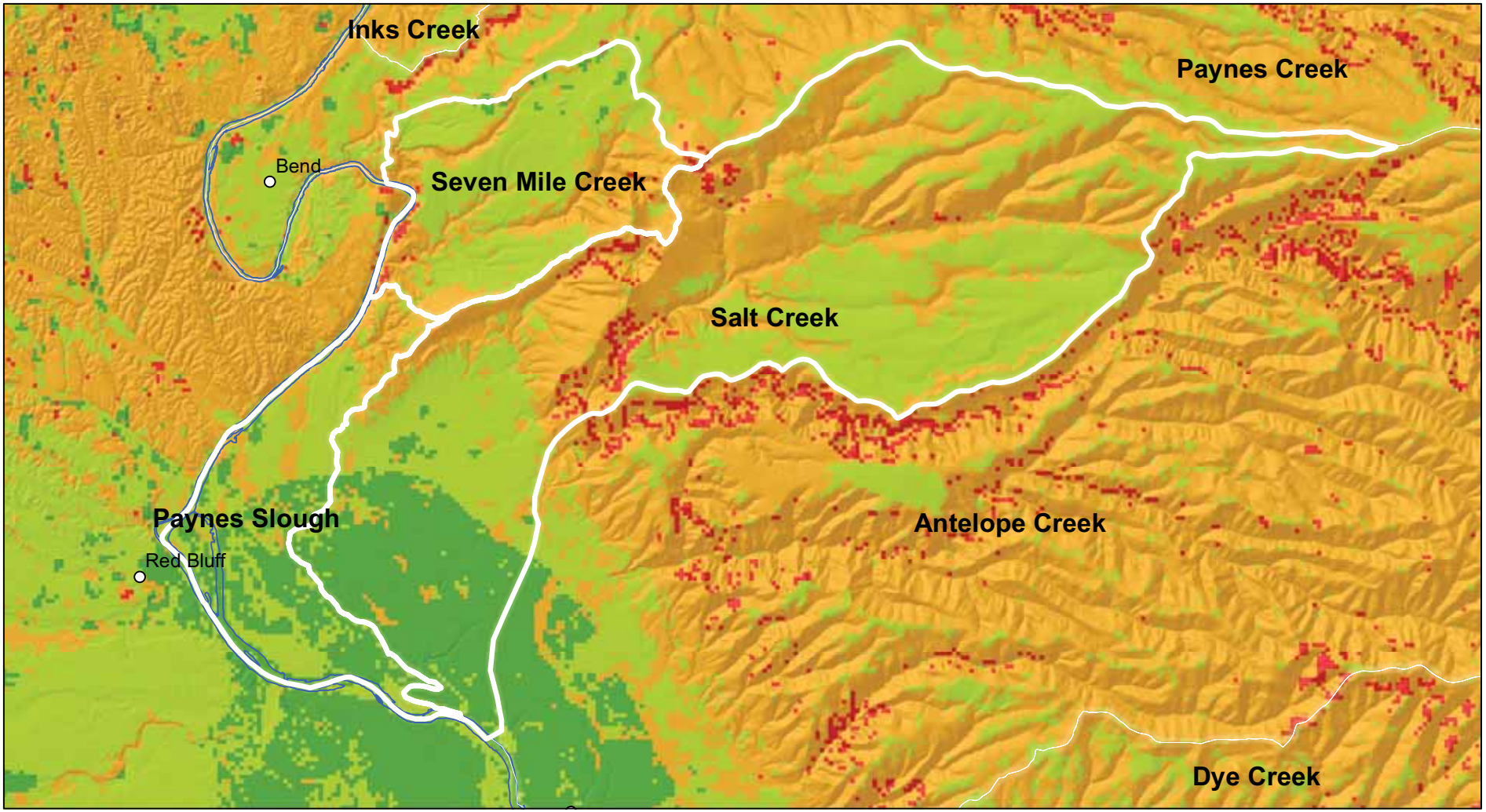
TCRCD

Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10 Miles



Tehama East Watershed Assessment

Fire Regime and Condition Class Fuel Ranking Paynes Slough, Salt, and Seven Mile Creeks

N
W E
S

TCRCD

Tehama County Resource Conservation District
(c) 2010

0 1.25 2.5 5
Miles

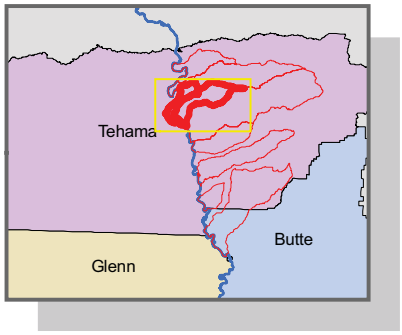
KEY

Fuel Ranking

- -1 - Little or No Hazard
- 1 - Moderate Hazard
- 2 - High Hazard
- 3 - Very High Hazard

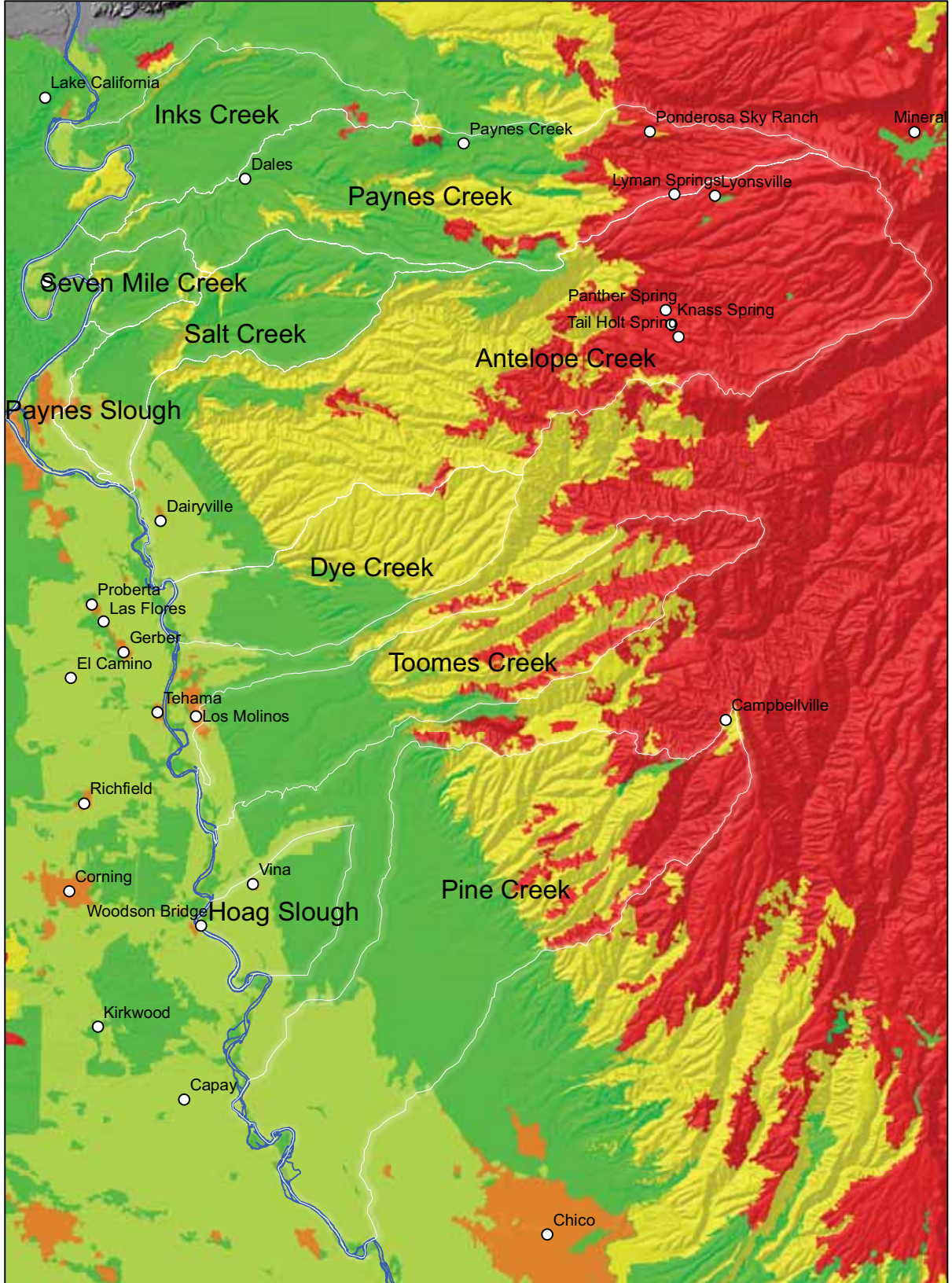
http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary



Maps by Characteristics

Fire: Hazard Severity



Tehama East Watershed Assessment

Fire Hazard Severity Zoning
2007 DRAFT - FRAP
Tehama East Watersheds

"The goal of this mapping effort is to create more accurate fire hazard zone designations such that mitigation strategies are implemented in areas where hazards warrant these investments. The fire hazard zones will provide specific designation for application of defensible space and building standards consistent with known mechanisms of fire risk to people, property, and natural resources.

This specific dataset provides DRAFT zones in ALL jurisdictions, for the purpose of review and comment prior to release of adopted zones in SRA and recommendations for Very High Fire Hazard Severity Zones (VHFHSZ) in LRA areas."

Quoted from:
http://frap.cdf.ca.gov/data/frapgisdata/data%20dictionaries/fhszall06a1.xml

KEY

Hazard Class

- Moderate
- High
- Very High
- Non-Wildland/Non-Urban
- Urban Unzoned

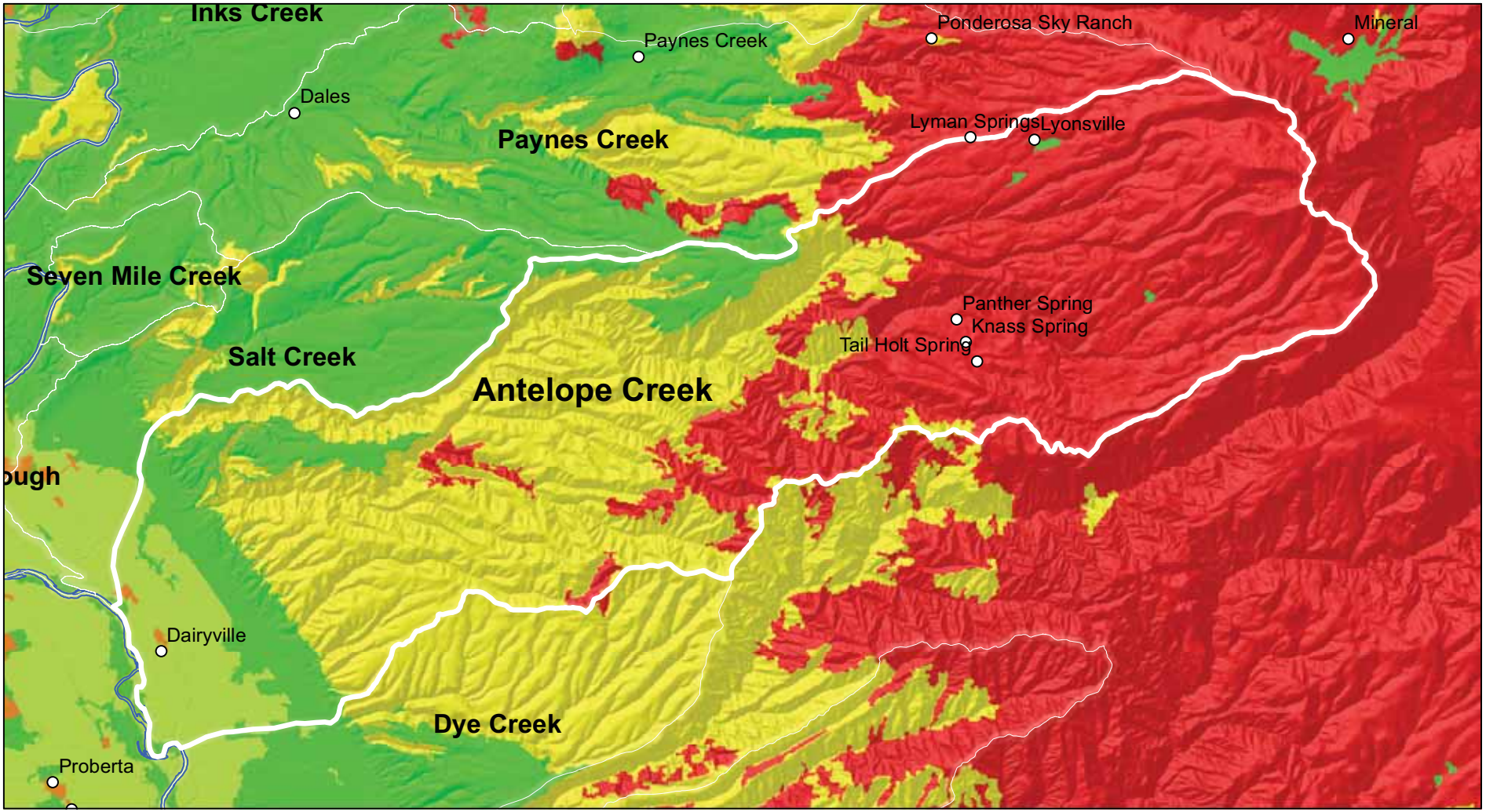
http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=2&rec=fhszall06a1

Watershed Boundary

N
W E
S

Tehama County Resource Conservation District

0 4 8 16
Miles



Tehama East Watershed Assessment

Fire Hazard Severity Zoning
2007 DRAFT - FRAP
Antelope Creek

N
W E
S

Tehama County Resource Conservation District
(c) 2010

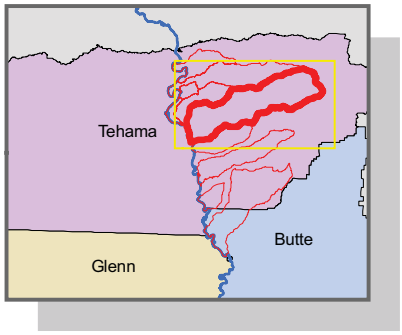
0 2.5 5 10
Miles

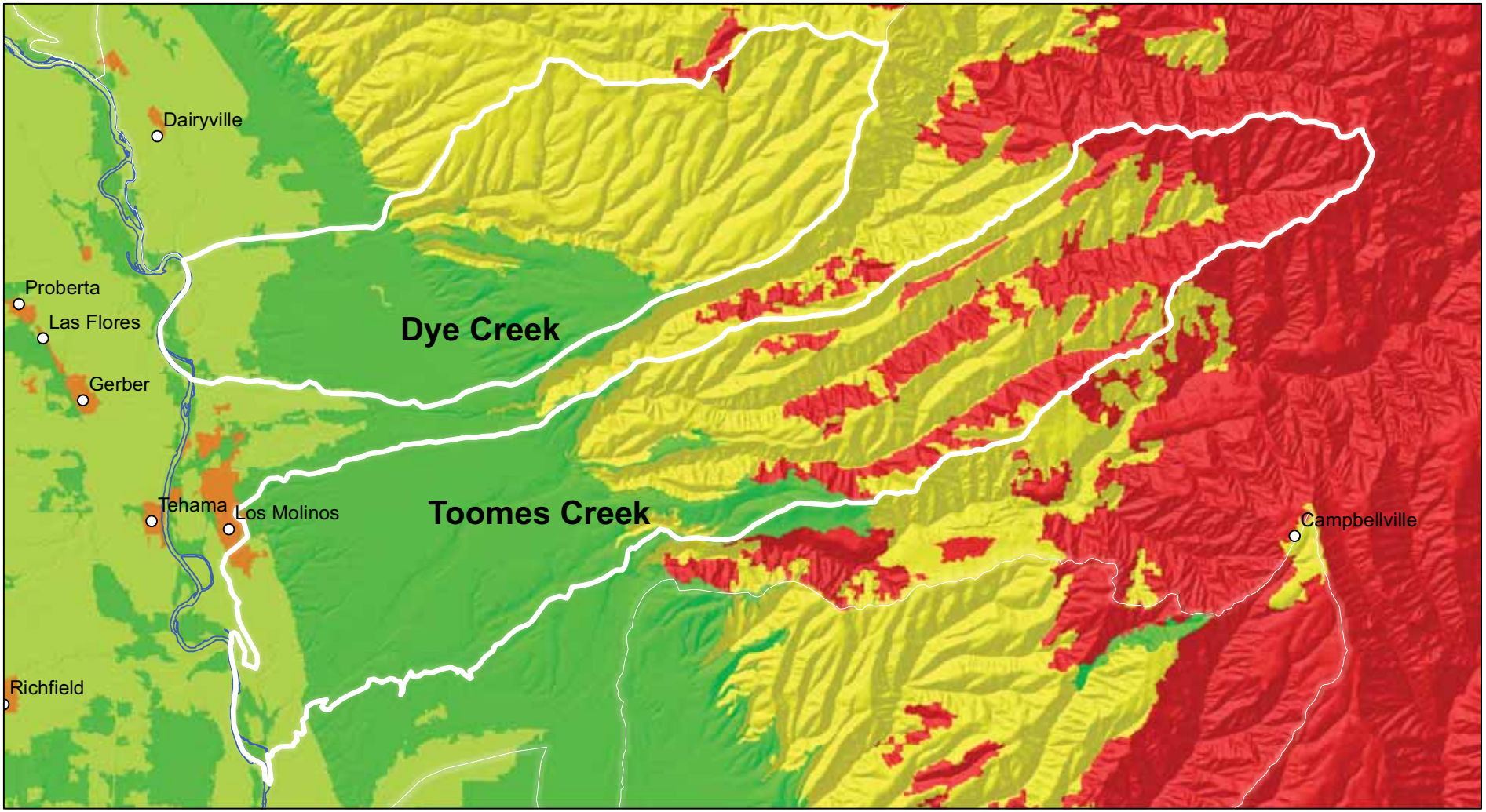
KEY

Hazard Class

- Moderate
- High
- Very High
- Non-Wildland/Non-Urban
- Urban Unzoned

Watershed Boundary





Tehama East Watershed Assessment

Fire Hazard Severity Zoning
2007 DRAFT - FRAP
Dye and Toomes Creeks

N
W E
S

TCRCD

Tehama County Resource Conservation District
(c) 2010

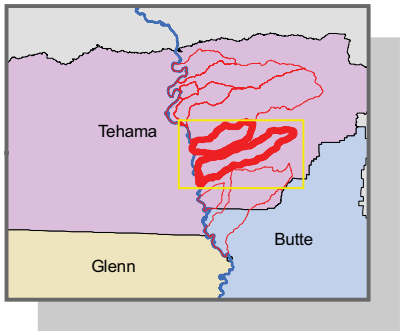
0 2 4 8
Miles

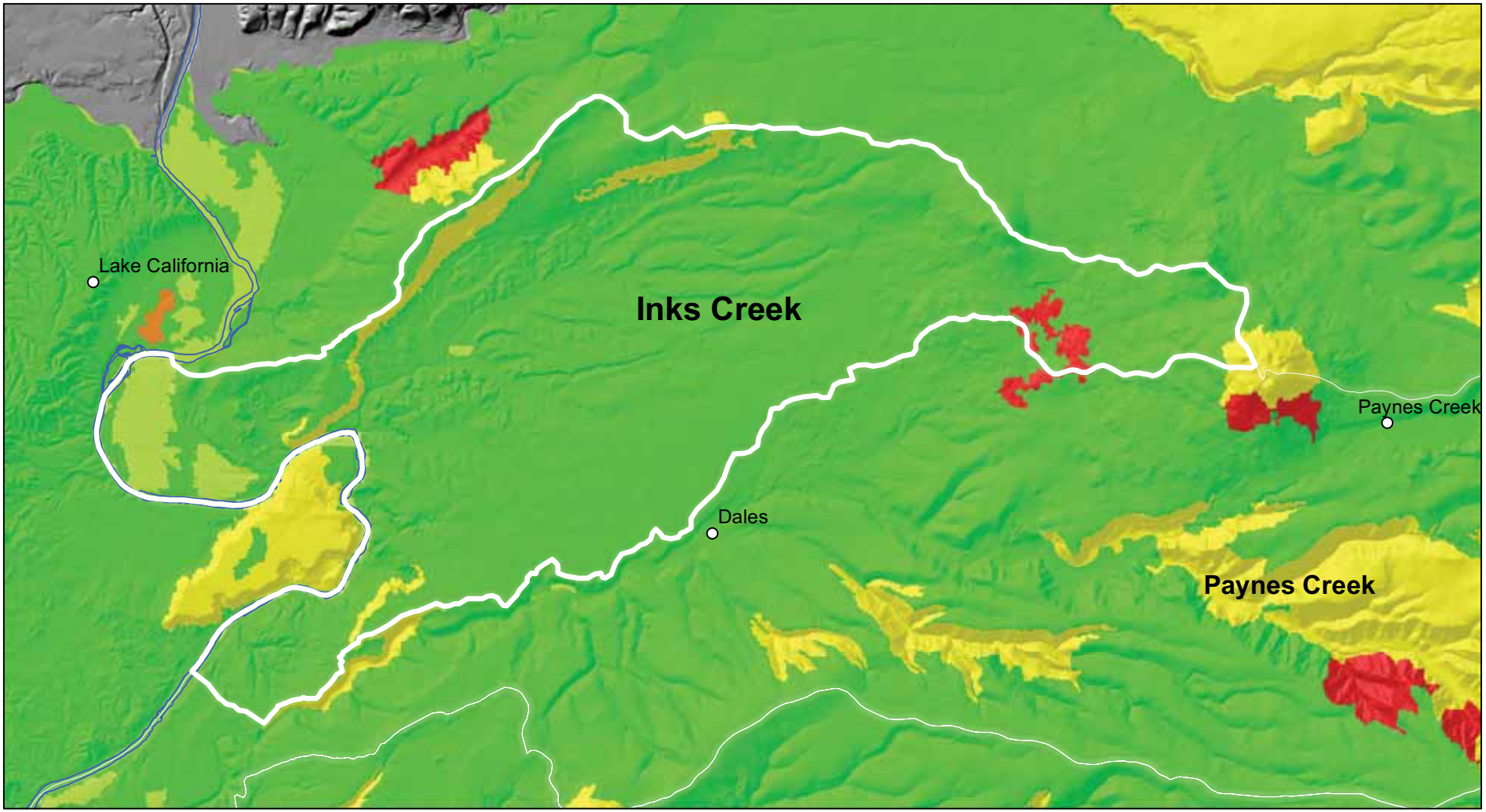
KEY

Hazard Class

- Moderate
- High
- Very High
- Non-Wildland/Non-Urban
- Urban Unzoned

Watershed Boundary





Tehama East Watershed Assessment

Fire Hazard Severity Zoning
2007 DRAFT - FRAP
Inks Creek

N
W E
S

Tehama County Resource Conservation District
(c) 2010

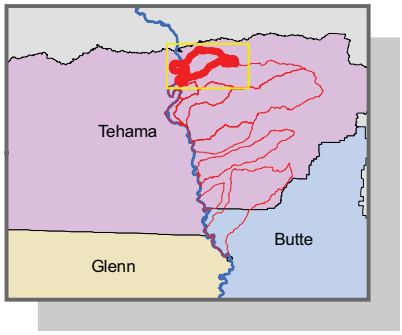
0 1.25 2.5 5
Miles

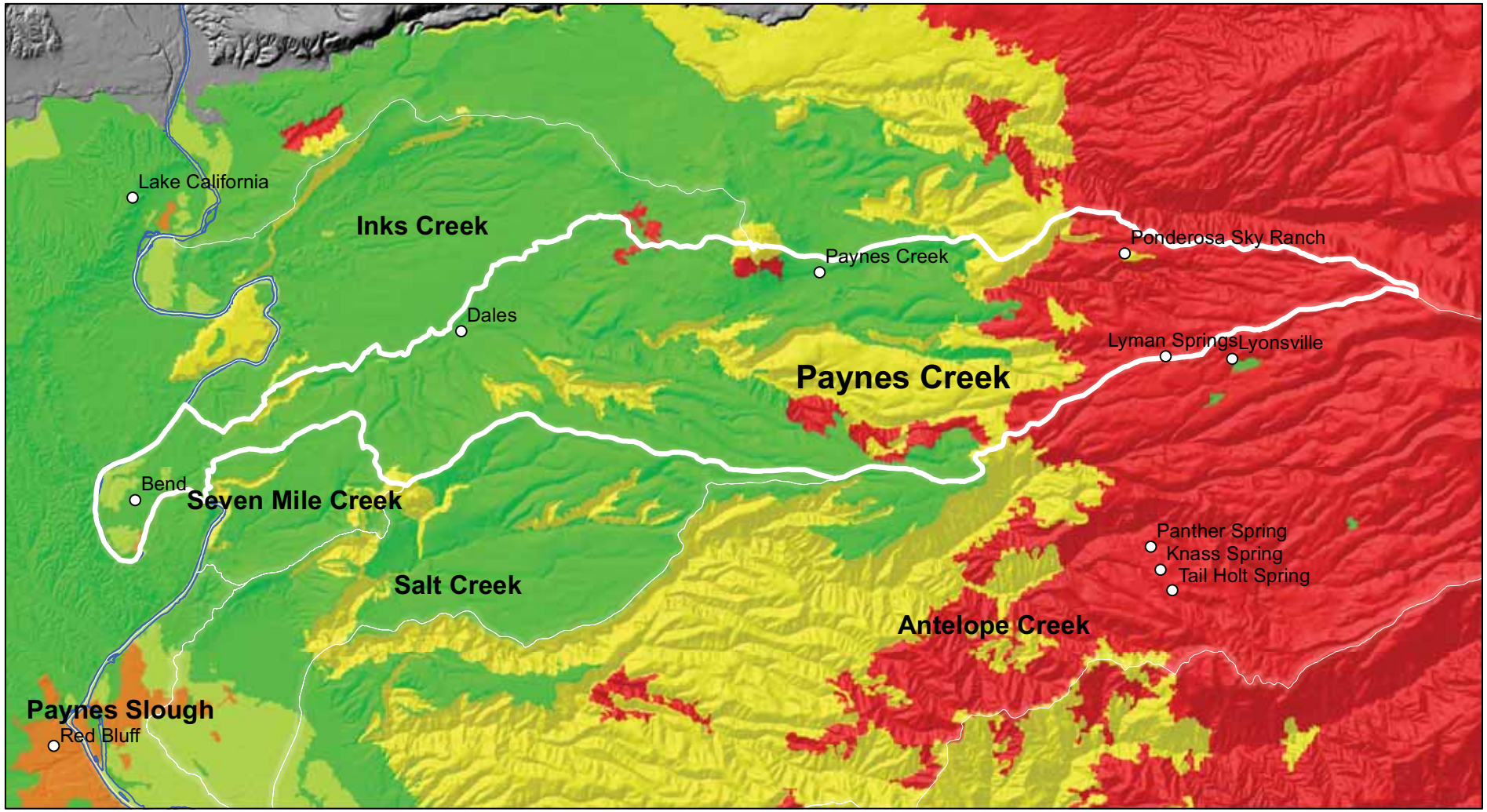
KEY

Hazard Class

- Moderate
- High
- Very High
- Non-Wildland/Non-Urban
- Urban Unzoned

Watershed Boundary





Tehama East Watershed Assessment

Fire Hazard Severity Zoning
2007 DRAFT - FRAP
Paynes Creek

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Tehama County Resource Conservation District
(c) 2010

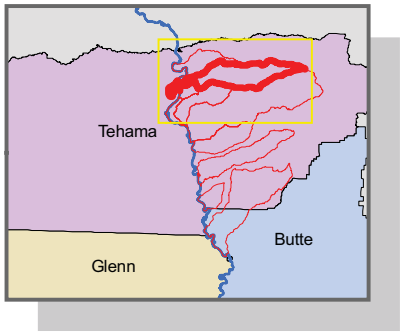
0 2.5 5 10
Miles

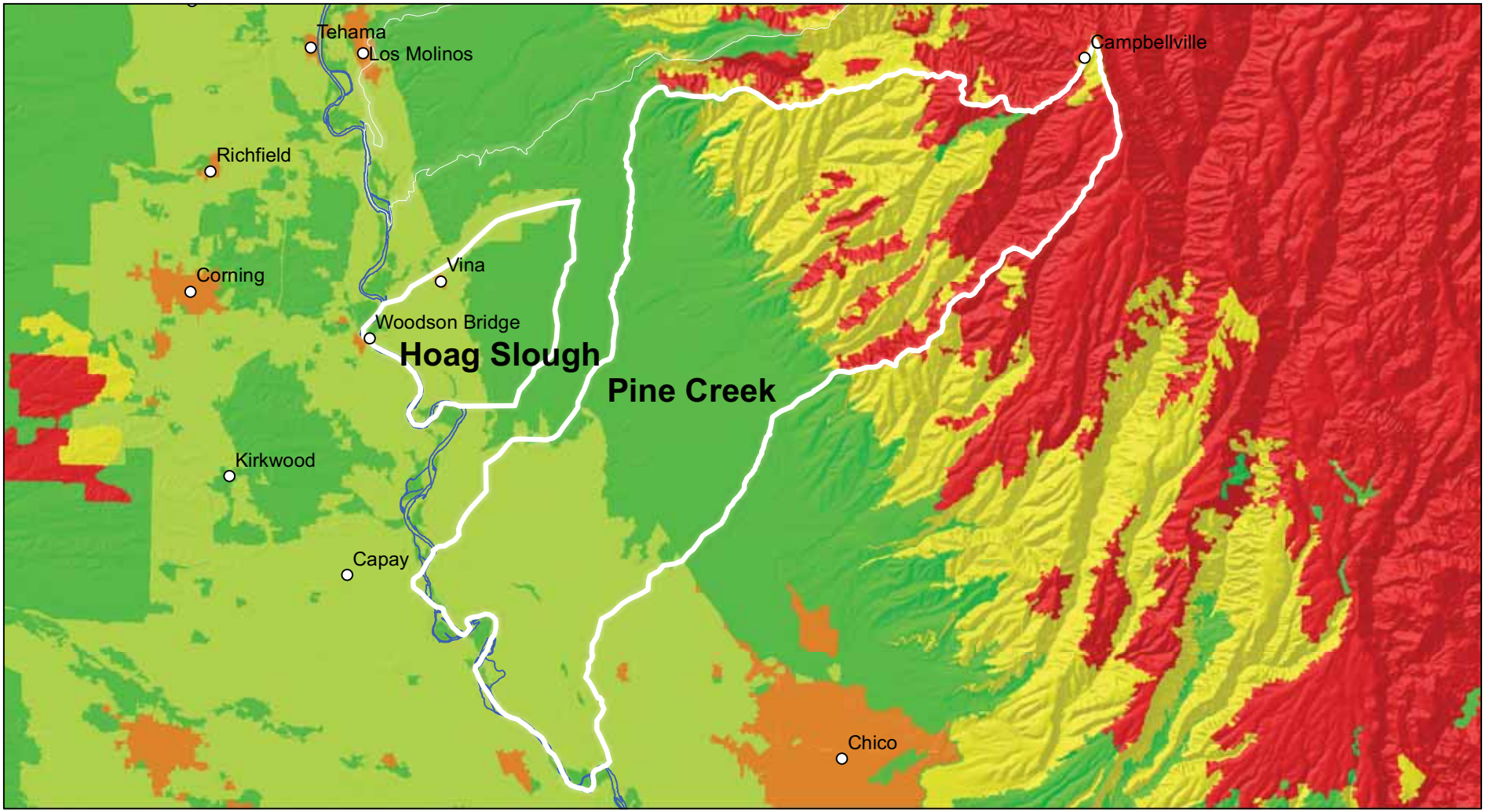
KEY

Hazard Class

- Moderate
- High
- Very High
- Non-Wildland/Non-Urban
- Urban Unzoned

Watershed Boundary





Tehama East Watershed Assessment

Fire Hazard Severity Zoning
2007 DRAFT - FRAP
Hoag Slough and Pine Creek

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Tehama County Resource Conservation District
(c) 2010

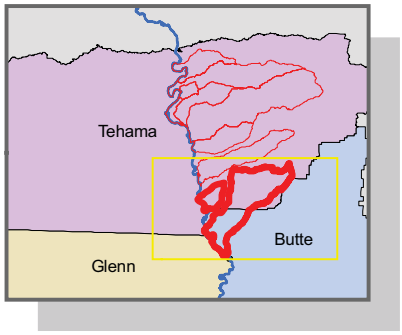
0 3 6 12
Miles

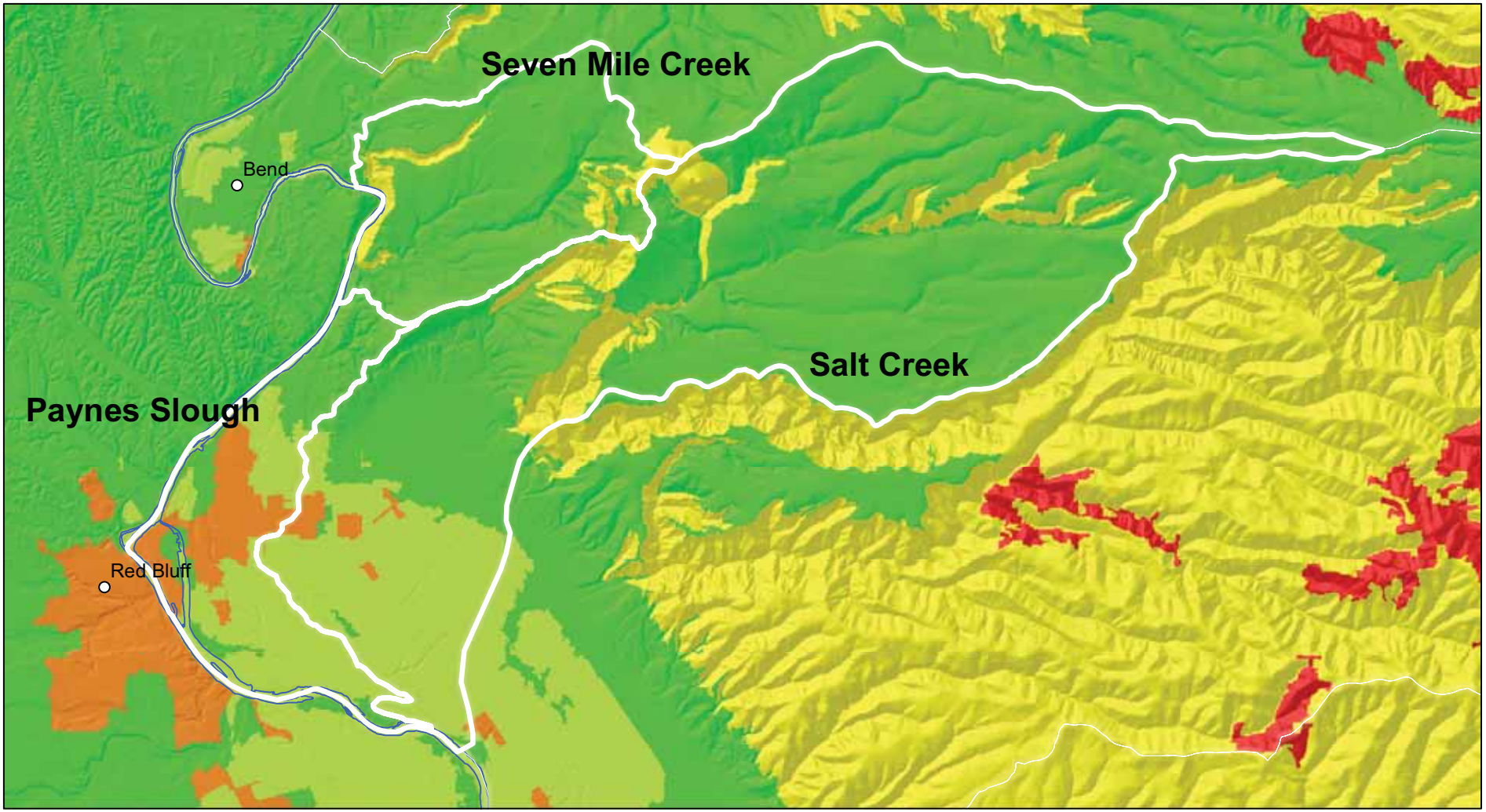
KEY

Hazard Class

- Moderate
- High
- Very High
- Non-Wildland/Non-Urban
- Urban Unzoned

Watershed Boundary





Tehama East Watershed Assessment

Fire Hazard Severity Zoning
2007 DRAFT - FRAP
Paynes Slough,
Salt, and Seven Mile Creeks

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TCRCD

Tehama County Resource Conservation District
(c) 2010

0 1.25 2.5 5
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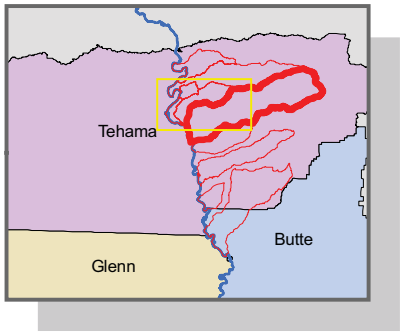
KEY

Hazard Class

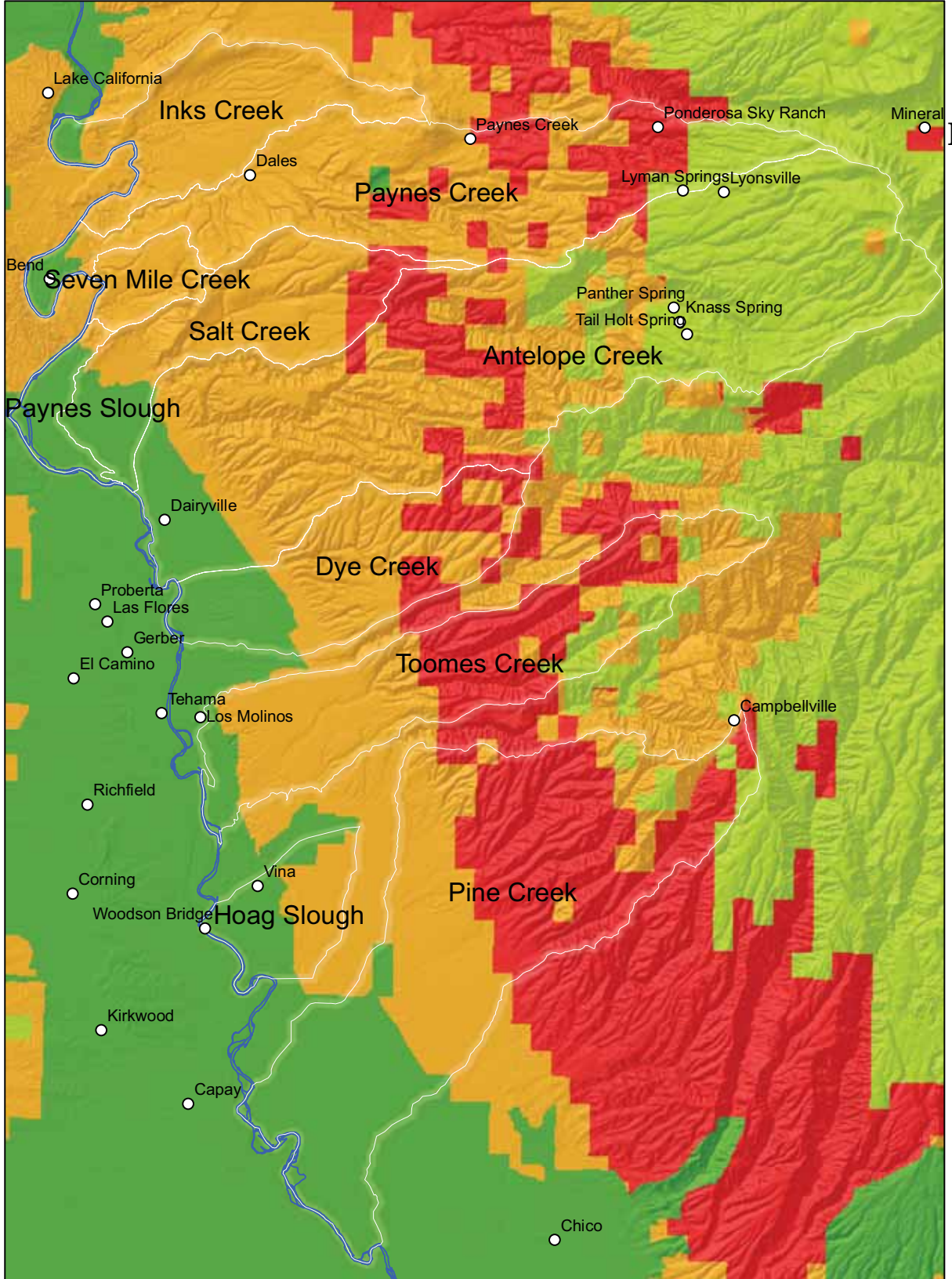
- Moderate
- High
- Very High
- Non-Wildland/Non-Urban
- Urban Unzoned

Watershed Boundary



Tehama East Watershed Assessment

Fire Regime and Condition Class
Fire Rotation Class
Tehama East Watersheds



"Fire rotation class intervals are calculated from fifty years of fire history on land areas grouped into "strata" based on fire environment conditions. These strata are defined by climate, vegetation, and land ownership. The Fire Rotation interval is the number of years it would take for past fires to burn an area equivalent to the area of a given stratum. Fire rotation interval for a given stratum is calculated by dividing the annual number of acres burned into the total area of the stratum. Finally, fire rotation values are grouped into classes.

The larger fire rotation values correspond to less frequent burning. In contrast, the higher the rotation class value is, the more frequent fire is in that strata. In the fire threat analysis, more frequent fire is ranked higher to reflect a greater concern for non-fire tolerant assets such as housing."

Quoted from:
http://frap.cad.ca.gov/data/frapgisdata/output/cafrcc.txt

KEY

Fire Rotation Class

	Description	Number of Years
	0 Undetermined	Undetermined
	1 Moderate	> 300 Years
	2 High	100 - 300 Years
	3 Very High	< 100 Years

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=cafrcc

Watershed Boundary

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Tehama County Resource Conservation District
(c) 2010

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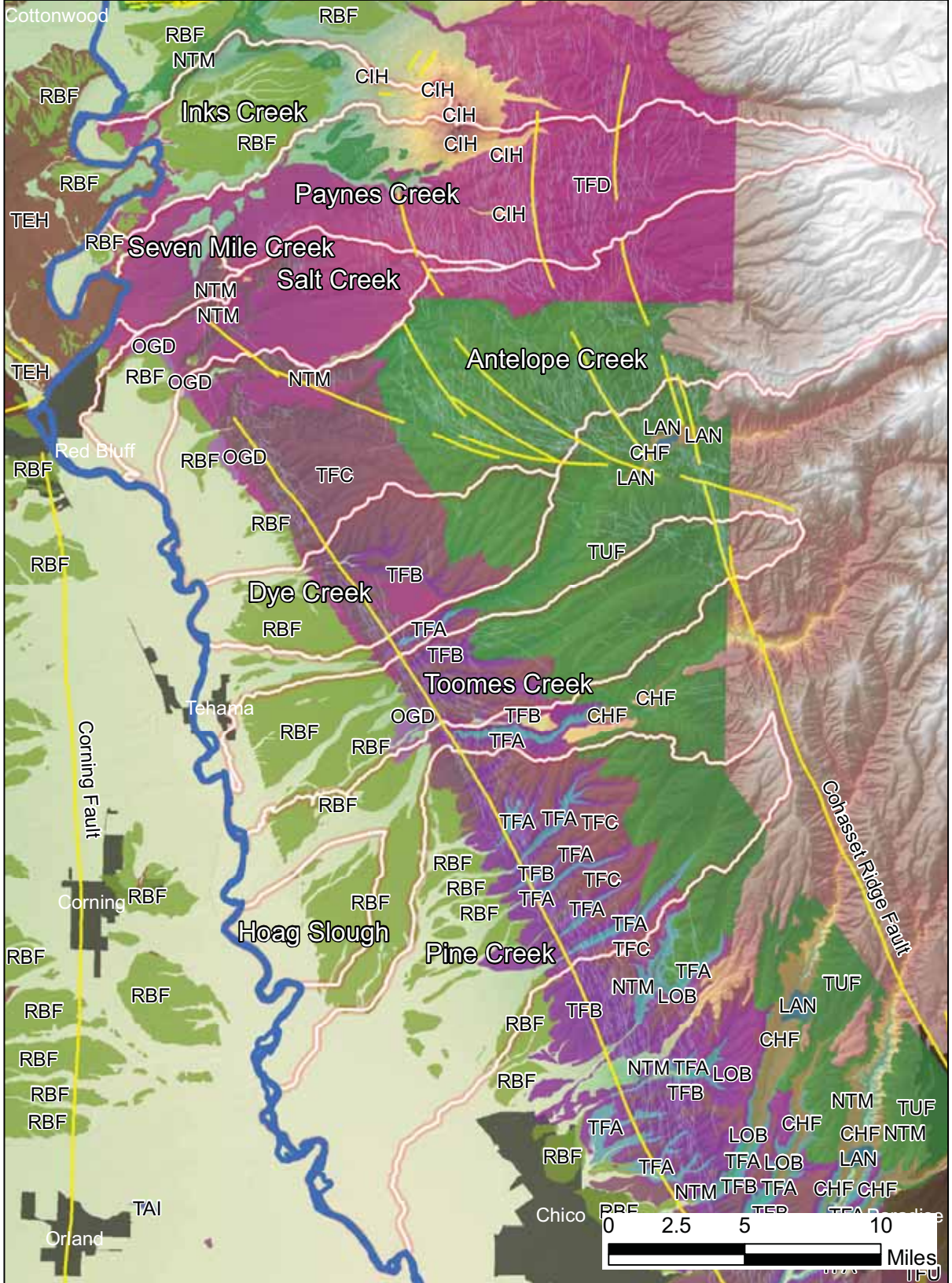
Miles

Maps by Characteristics

Geology

Tehama East Watershed Assessment

Selected Geologic Formations, Fault Lines and Monoclines Tehama East Watersheds



Selected formations were chosen for their relative importance to the surface and ground flow of water, and their importance for other human activities.

KEY

Selected Geology

- CHF — Chico Formation
- CBB — Cinder Cone Deposits, Black Butte
- CDB — Cinder Cone Deposits, Digger Butte
- CIH — Cinder Cone Deposits, Inskipp Hill
- LAN — Landslides
- LOB — Lovejoy Basalt
- NTM — Nomlaki Tuff Member
- OGD — Older Gravel Deposits
- RBF — Red Bluff Formation
- TAI — Tailings
- TEH — Tehama Formation
- TUF — Tuscan Formation
- TFU — Tuscan Formation, Undifferentiated Unit A & B
- TFA — Unit A, Tuscan Formation
- TFB — Unit B, Tuscan Formation
- TFC — Unit C, Tuscan Formation
- TFD — Unit D, Tuscan Formation

Chico Monocline Lineaments

Fault Lines

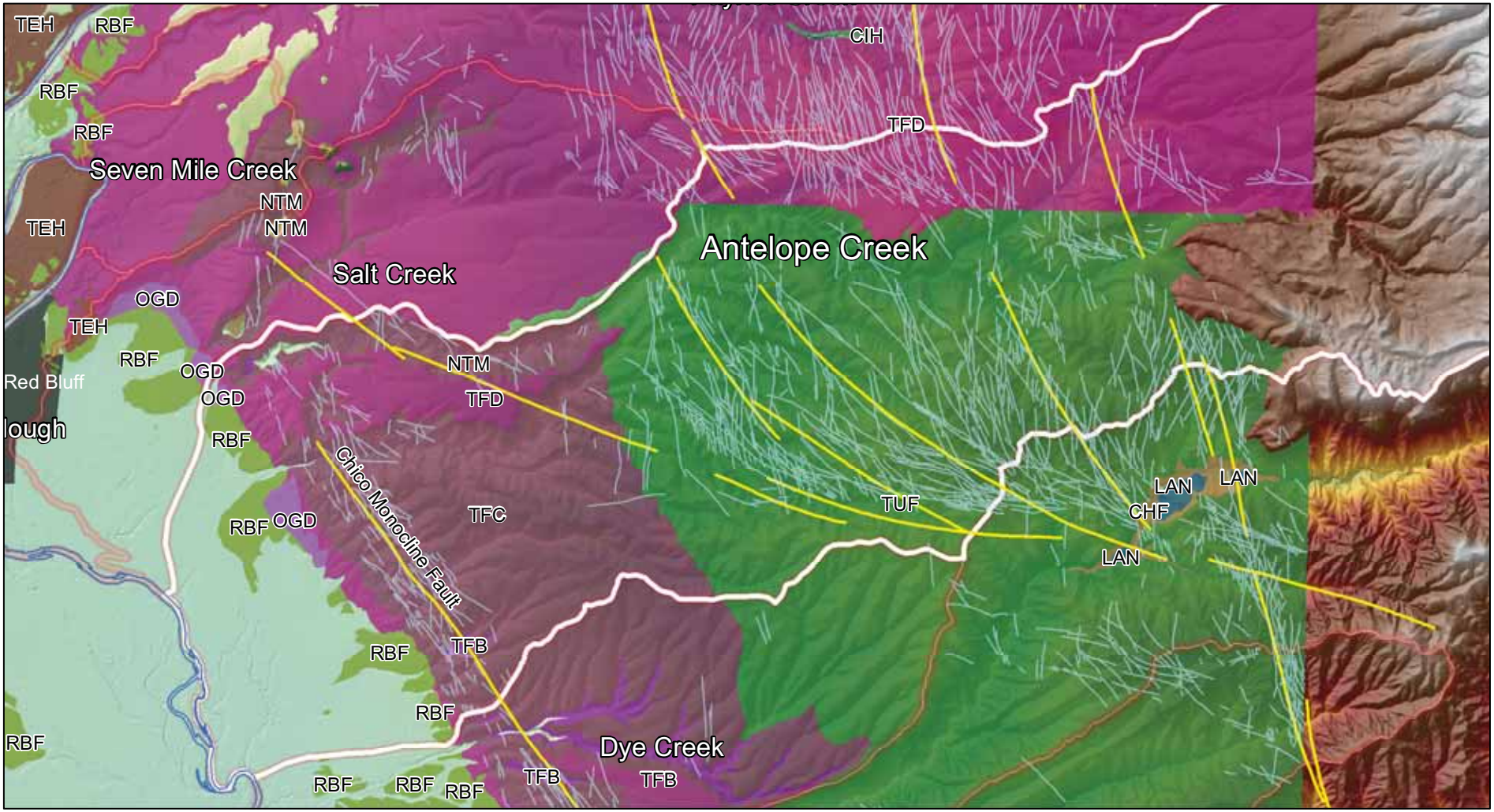
Urban Areas

Watershed Boundary

http://projects.atlas.ca.gov/projects/sacvalleygeol

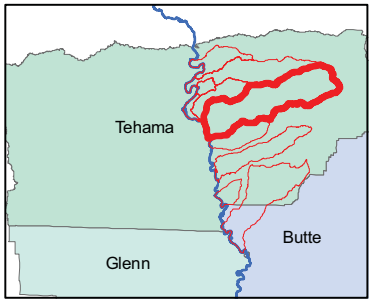
N W E S

Tehama County Resource Conservation District



Tehama East Watershed Assessment

Selected Geological Formations, Fault Lines and Monoclines Antelope Creek



Legend

Selected Geology

- CHF — Chico Formation
- CBB — Cinder Cone Deposits, Black Butte
- CDB — Cinder Cone Deposits, Digger Butte
- CIH — Cinder Cone Deposits, Inskipp Hill
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- TFC — Unit C, Tuscan Formation
- TFD — Unit D, Tuscan Formation

- Chico Monocline Lineaments
- Fault Lines

http://projects.atlas.ca.gov/projects/sacvalleygeol

- Urban Areas
- Watershed Boundary

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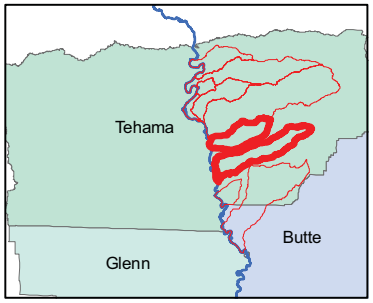
Tehama East Watershed Assessment

Selected Geological Formations, Fault Lines and Monoclines Dye and Toomes Creeks



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Legend

Selected Geology

- CHF — Chico Formation
- CBB — Cinder Cone Deposits, Black Butte
- CDB — Cinder Cone Deposits, Digger Butte
- CIH — Cinder Cone Deposits, Inskipp Hill
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- TFA — Unit A, Tuscan Formation
- TFB — Unit B, Tuscan Formation
- TFC — Unit C, Tuscan Formation
- TFD — Unit D, Tuscan Formation

- Chico Monocline Lineaments
- Fault Lines

http://projects.atlas.ca.gov/projects/sacvalleygeol

- Urban Areas
- Watershed Boundary

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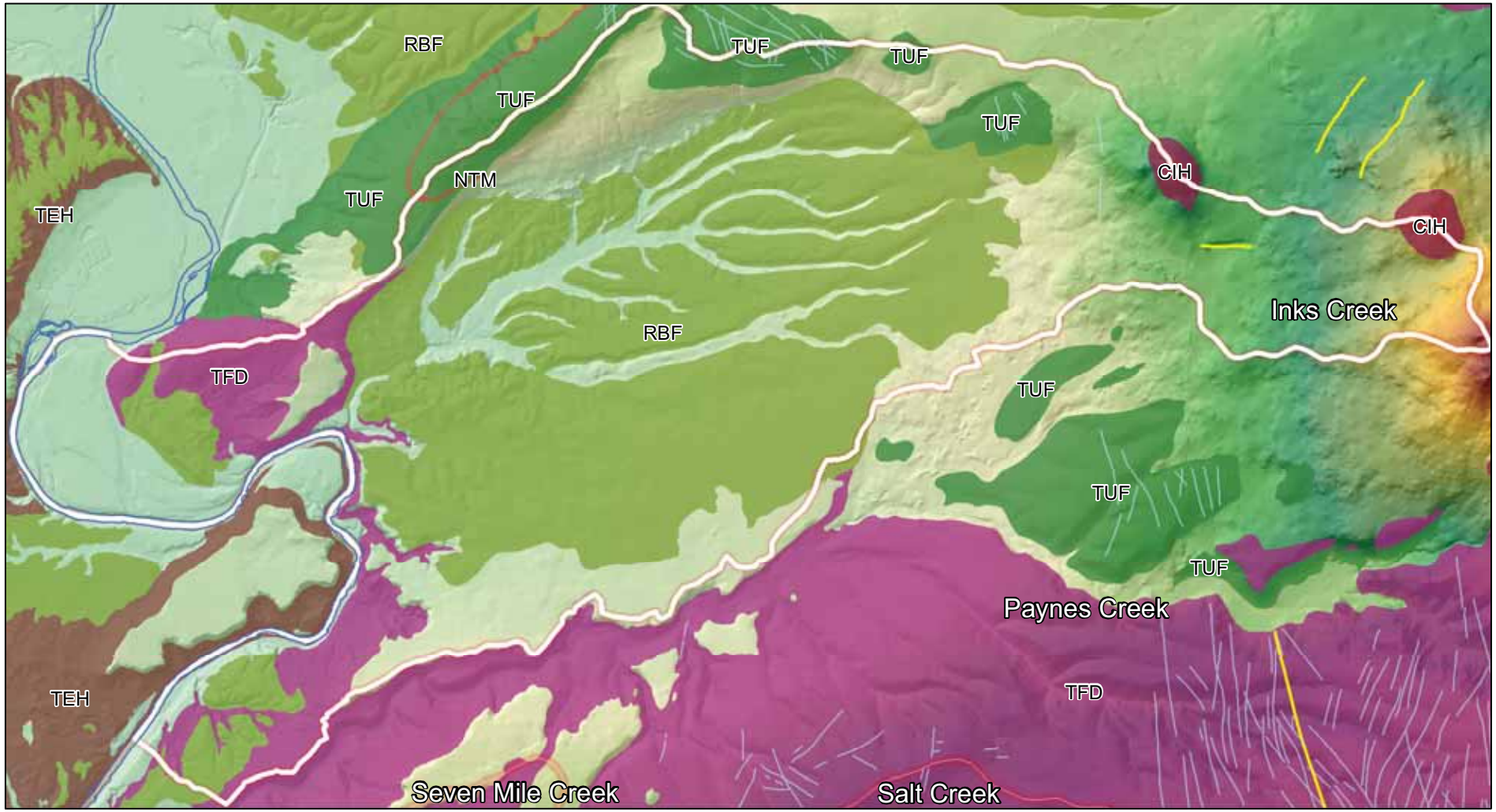

Tehama East Watershed Assessment

Selected Geological Formations, Fault Lines and Monoclines Inks Creek

Legend

Selected Geology

- CHF Chico Formation
- CBB Cinder Cone Deposits, Black Butte
- CDB Cinder Cone Deposits, Digger Butte
- CIH Cinder Cone Deposits, Inskipp Hill
- LAN Landslides
- LOB Lovejoy Basalt
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- TFD Unit D, Tuscan Formation

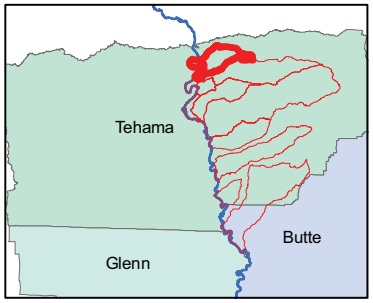
Chico Monocline Lineaments

Fault Lines

http://projects.atlas.ca.gov/projects/sacvalleygeol

Urban Areas

Watershed Boundary



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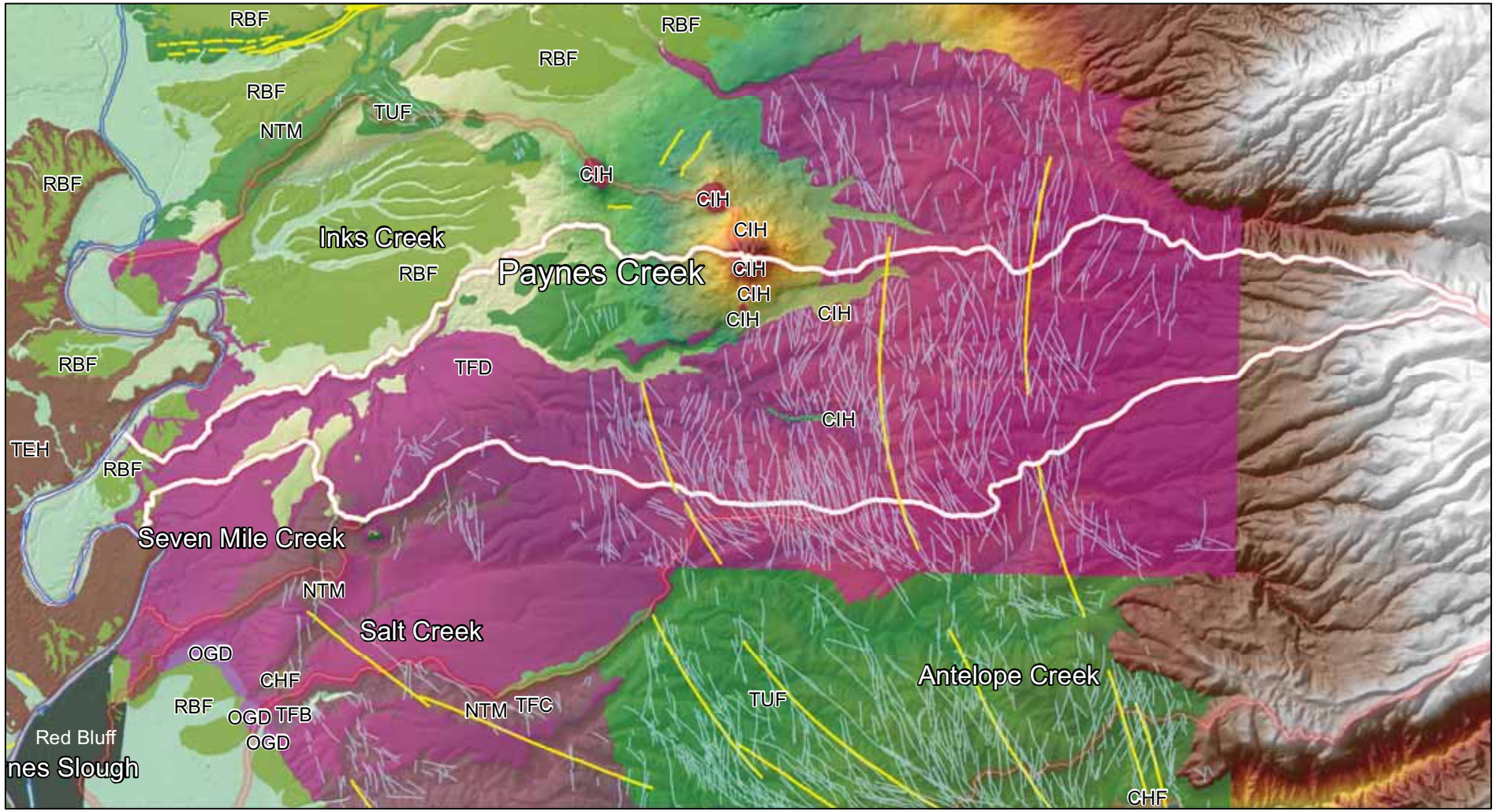

Tehama East Watershed Assessment

Selected Geological Formations, Fault Lines and Monoclines Paynes Creek

Legend

Selected Geology

- CHF — Chico Formation
- CBB — Cinder Cone Deposits, Black Butte
- CDB — Cinder Cone Deposits, Digger Butte
- CIH — Cinder Cone Deposits, Inskipp Hill
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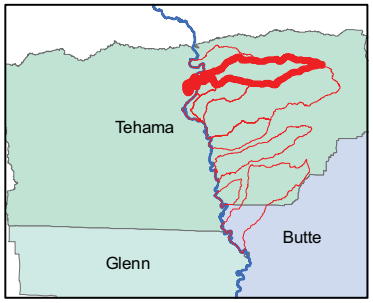
- Chico Monocline Lineaments
- Fault Lines
- http://projects.atlas.ca.gov/projects/sacvalleygeol
- Urban Areas
- Watershed Boundary



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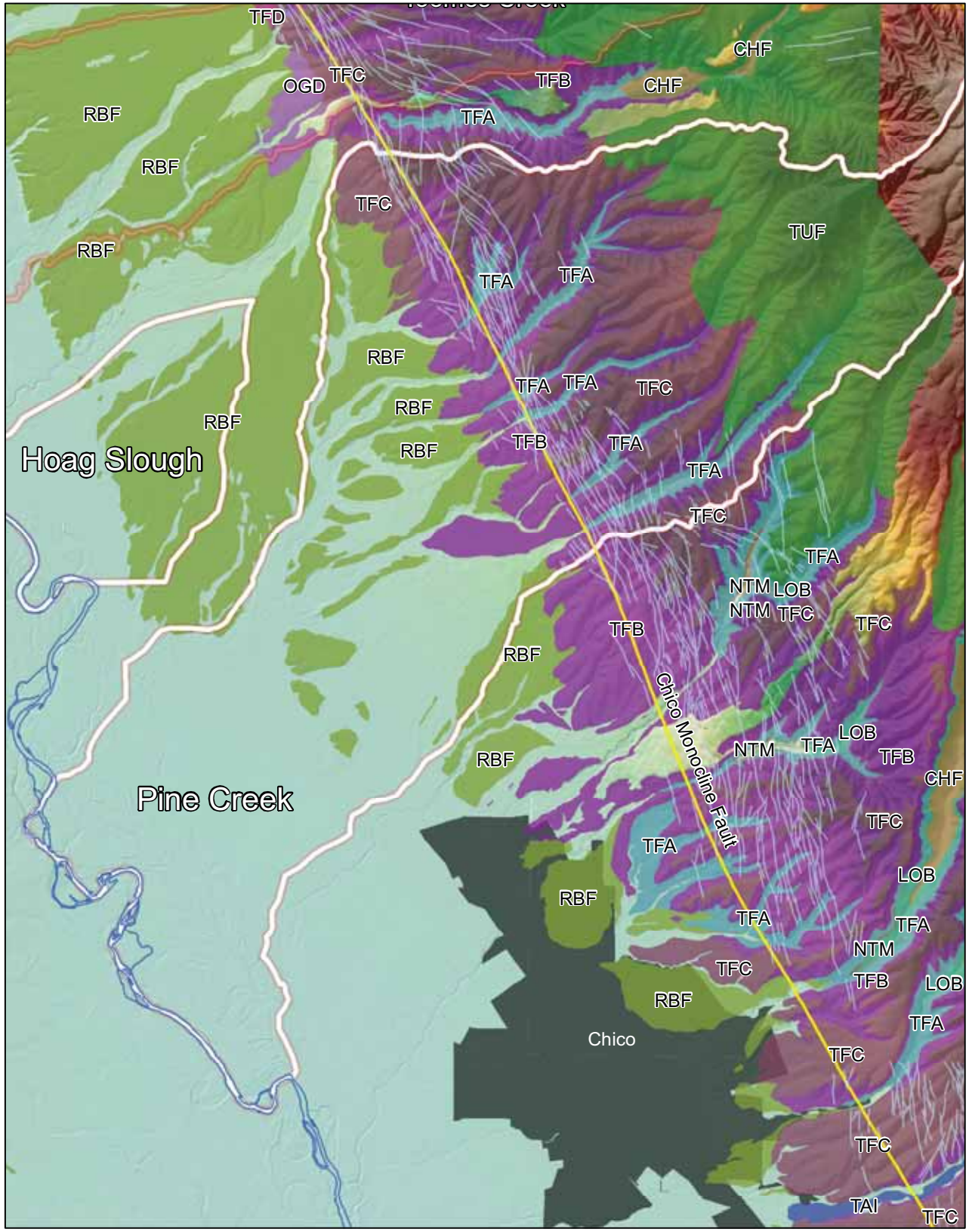

Tehama East Watershed Assessment

Selected Geological Formations, Fault Lines and Monoclines Hoag Slough and Pine Creek

Legend

Selected Geology

- CHF — Chico Formation
- CBB — Cinder Cone Deposits, Black Butte
- CDB — Cinder Cone Deposits, Digger Butte
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- TFD — Unit D, Tuscan Formation

Chico Monocline Lineaments

Fault Lines

http://projects.atlas.ca.gov/projects/sacvalleygeol

Urban Areas

Watershed Boundary

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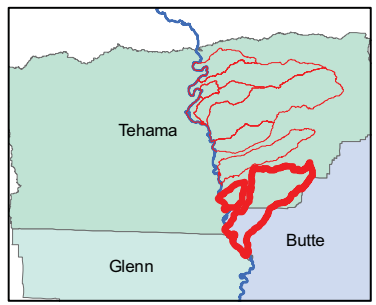

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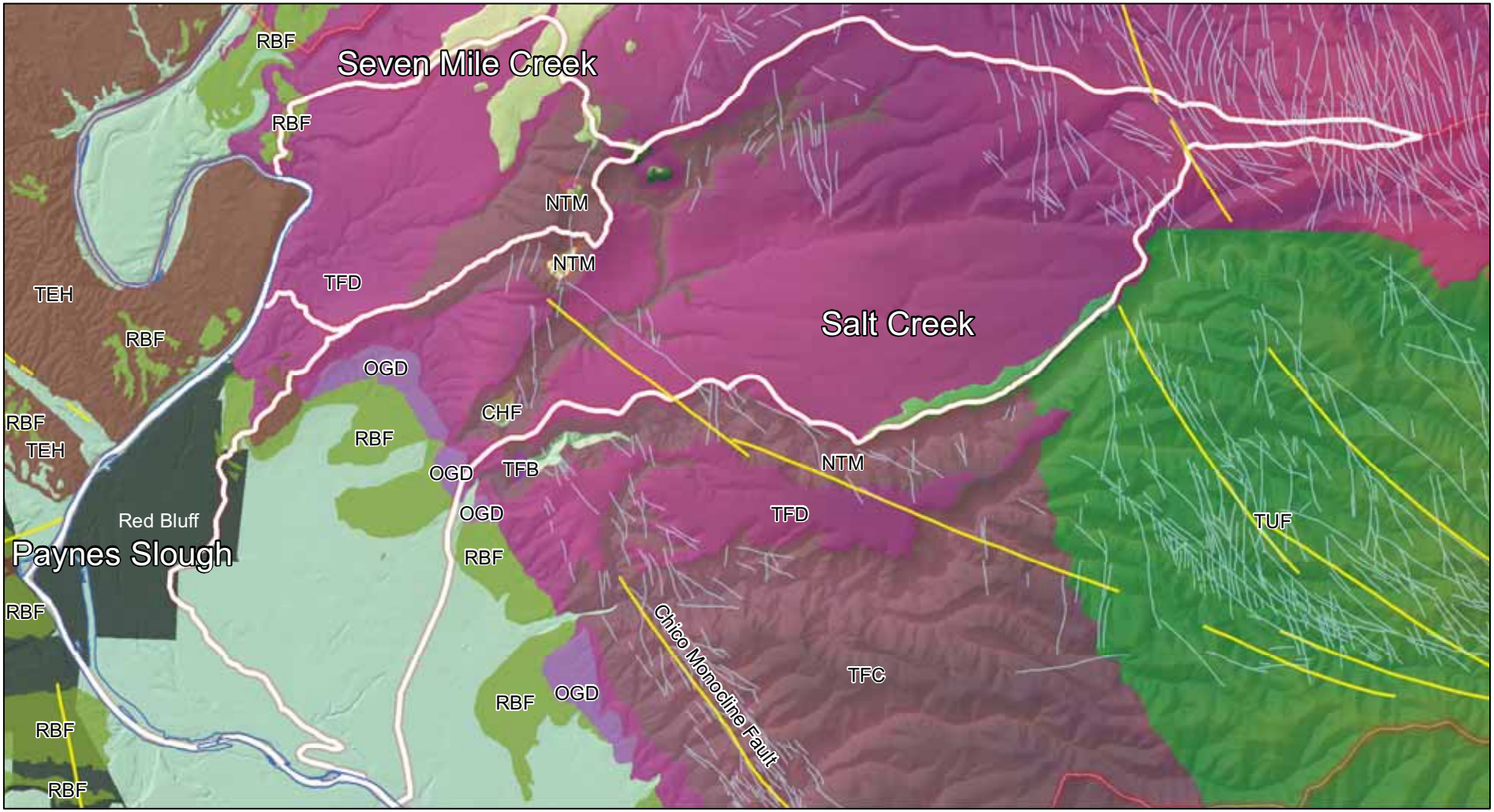

Tehama East Watershed Assessment

Selected Geological Formations, Fault Lines and Monoclines Paynes Slough, Salt and Seven Mile Creeks

Legend

Selected Geology

- CHF — Chico Formation
- CBB — Cinder Cone Deposits, Black Butte
- CDB — Cinder Cone Deposits, Digger Butte
- CIH — Cinder Cone Deposits, Inskipp Hill
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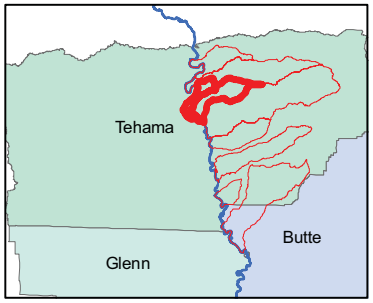
- TFD — Unit D, Tuscan Formation

- Chico Monocline Lineaments
- Fault Lines

http://projects.atlas.ca.gov/projects/sacvalleygeol

- Urban Areas
- Watershed Boundary



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Maps by Characteristics

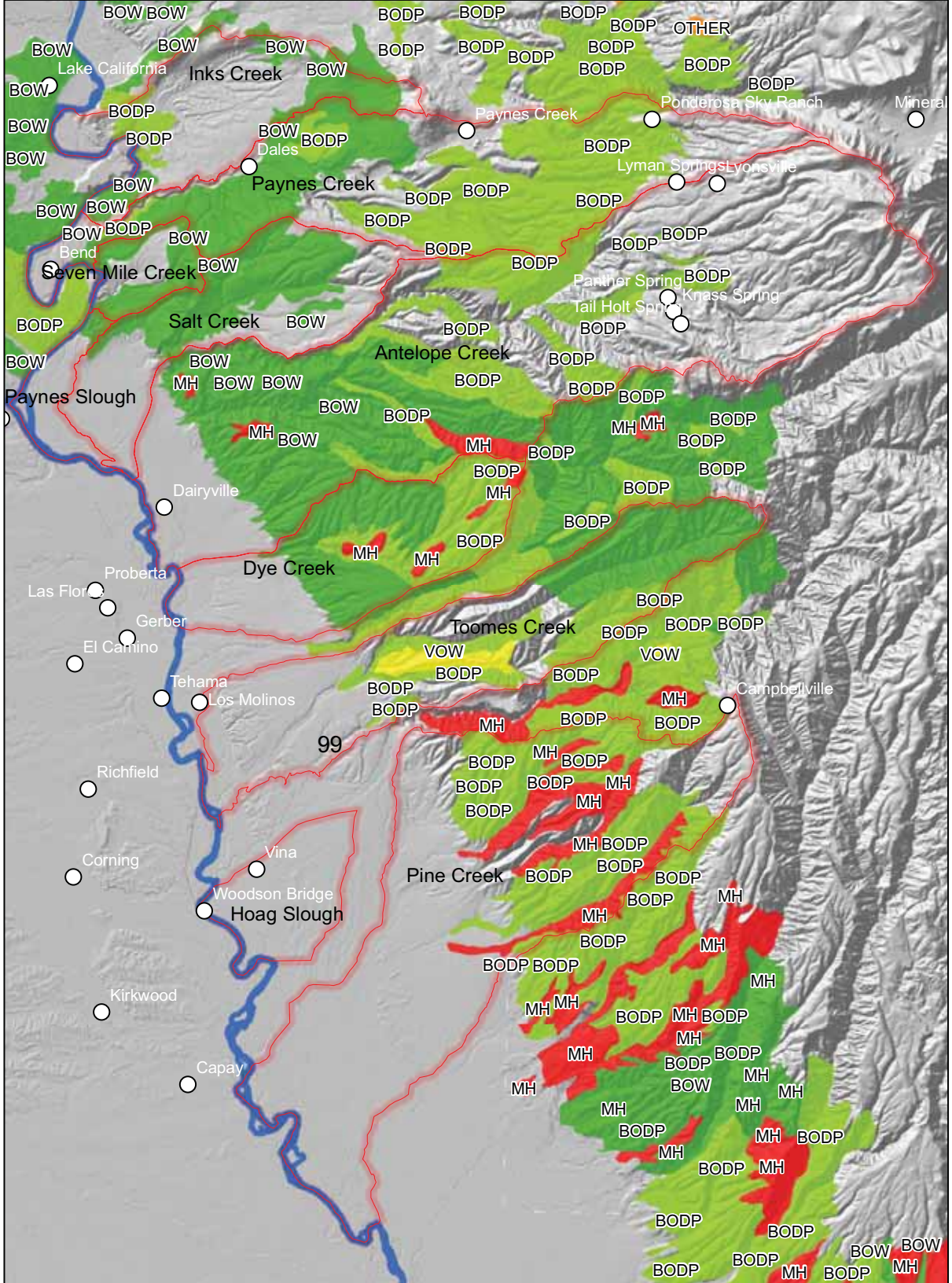
Hardwood Rangeland

Tehama East Watershed Assessment

Hardwood Rangelands
Tehama East Watersheds

"In response to concerns over the extent and condition of California's hardwood rangelands, the Board of Forestry asked the University of California, California Department of Forestry and Fire Protection, and the California Department of Fish and Game have developed a program of research, education, and monitoring designed to conserve hardwood rangelands. The resulting Integrated Hardwood Range Management Program (IHRMP) began in 1986. To analyze the extent and nature of hardwood changes, CDF instituted this project and others as part of a long-term monitoring program of IHRMP."

Quoted from:
http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=hardwoods



KEY

Cover Type

- BODP - Blue Oak \ Foothill Pine
- BOW - Blue Oak Woodland
- MH - Montane Hardwoods
- OTHER - Non-Hardwood
- VOW - Valley Oak Woodland

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=hardwoods

- Watershed Boundary
- Streams/Rivers
- Communities

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Tehama County Resource Conservation District

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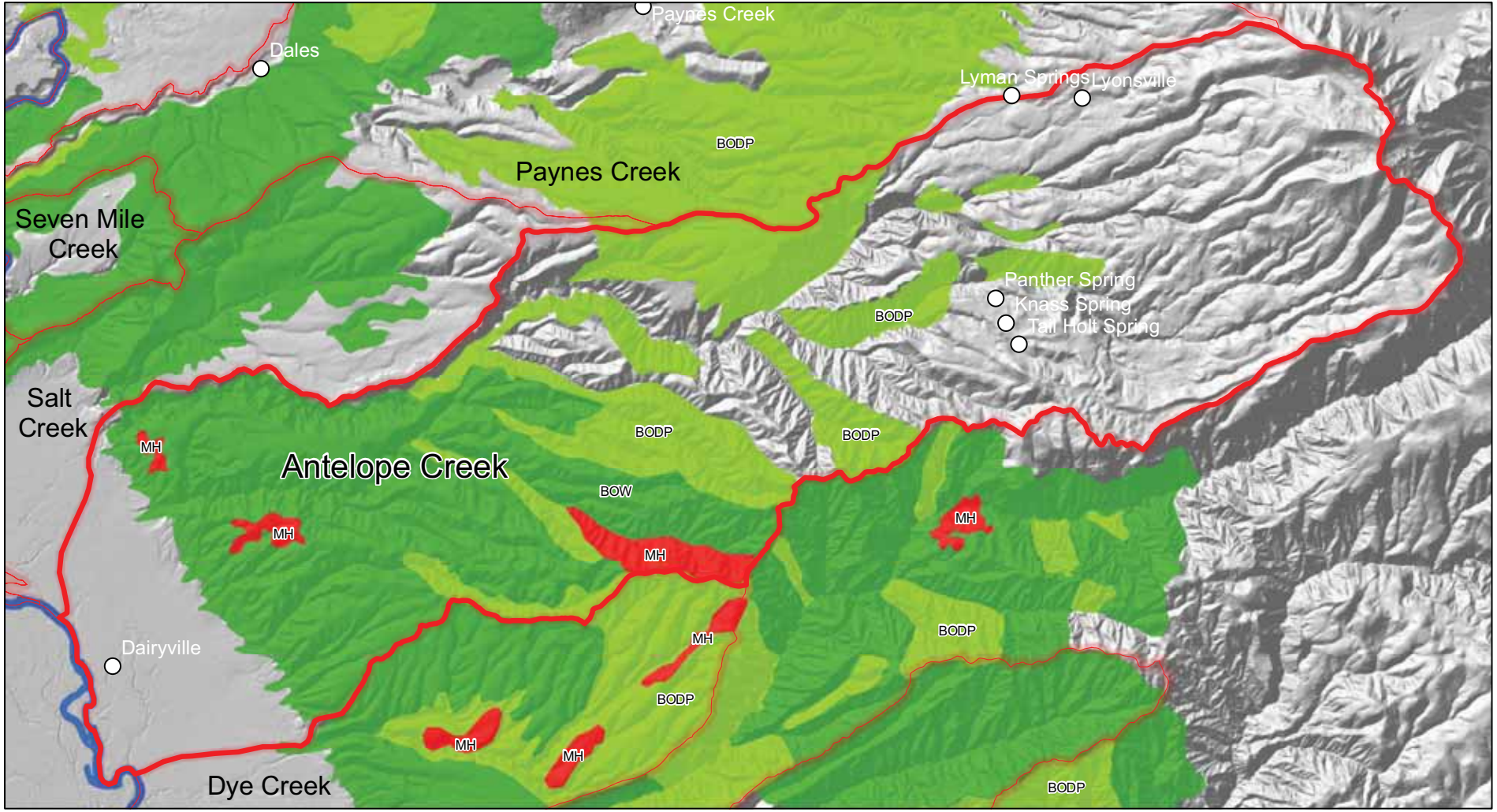


Tehama East Watershed Assessment

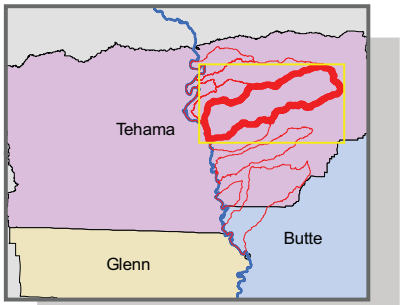
Hardwood Rangelands
Antelope Creek

KEY

Cover Type

- BODP - Blue Oak \ Foothill Pine
- BOW - Blue Oak Woodland
- MH - Montane Hardwoods
- OTHER - Non-Hardwood
- VOW - Valley Oak Woodland

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=hardwoods



Watershed Boundary

Streams/Rivers

Communities

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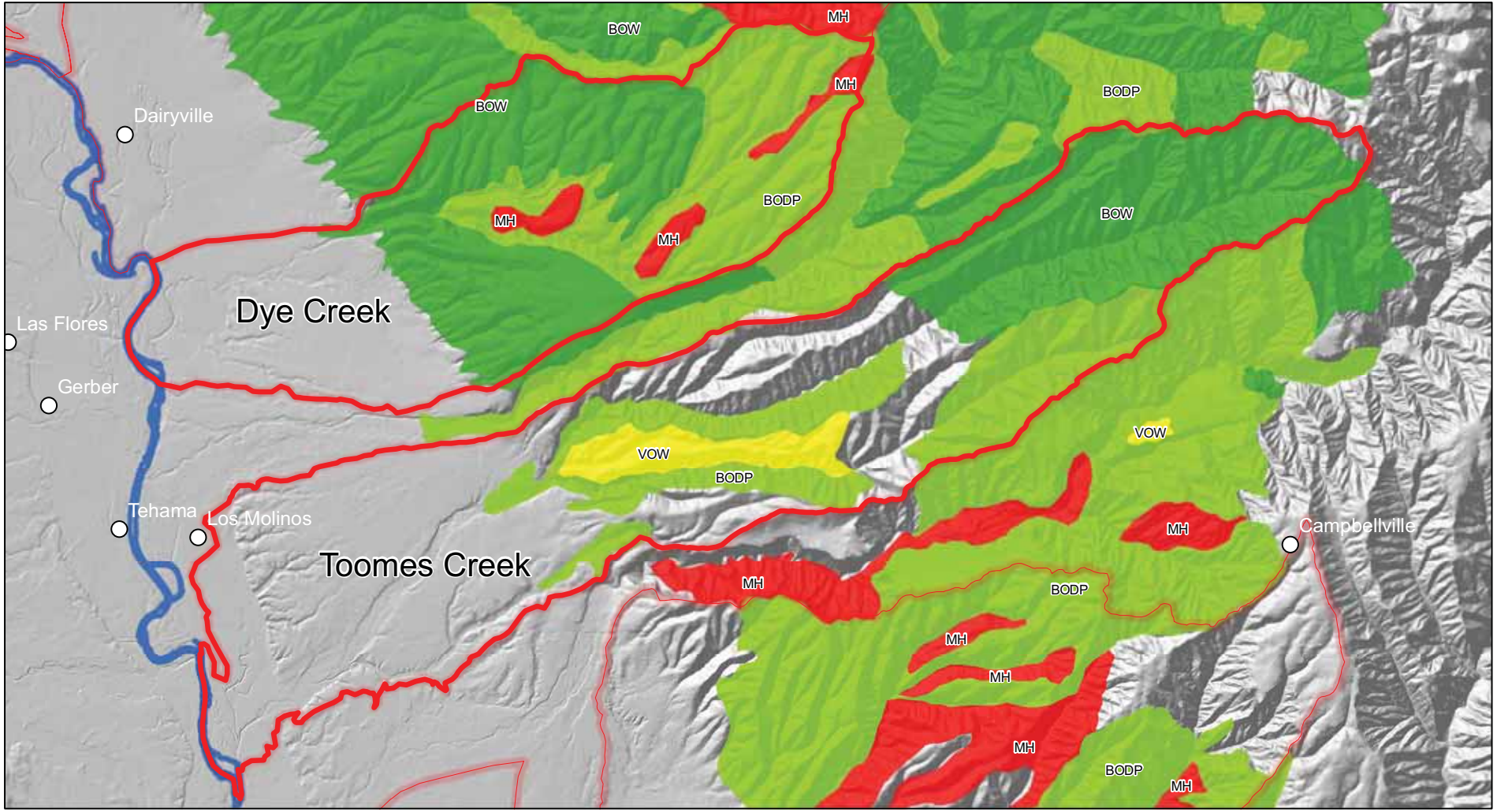
Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10 Miles



Tehama East Watershed Assessment

Hardwood Rangelands
Dye Creek and Toomes Creek

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TCRCD

Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10 Miles

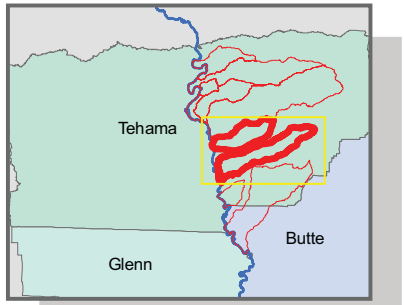
KEY

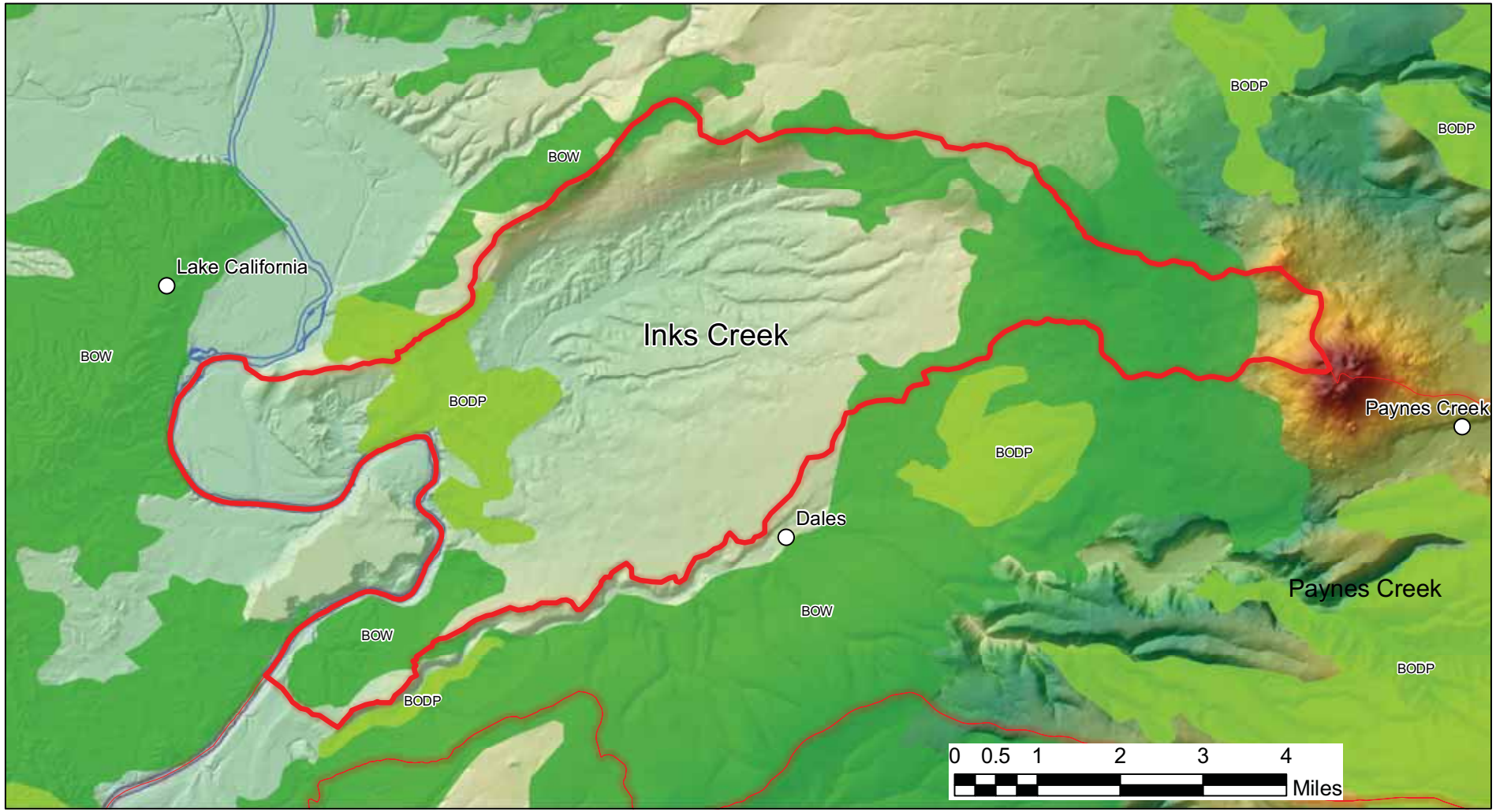
Cover Type

- BODP - Blue Oak \ Foothill Pine
- BOW - Blue Oak Woodland
- MH - Montane Hardwoods
- OTHER - Non-Hardwood
- VOW - Valley Oak Woodland

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=hardwoods

- Watershed Boundary
- Streams/Rivers
- Communities





Tehama East Watershed Assessment

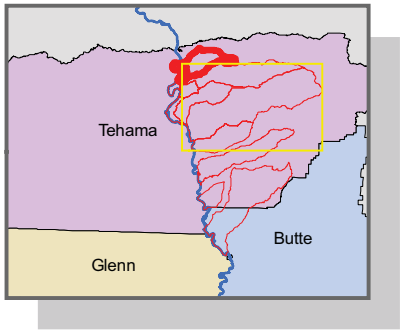
Hardwood Rangelands
Inks Creek

KEY

Cover Type

- BODP - Blue Oak \ Foothill Pine
- BOW - Blue Oak Woodland
- MH - Montane Hardwoods
- OTHER - Non-Hardwood
- VOW - Valley Oak Woodland

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=hardwoods



Watershed Boundary

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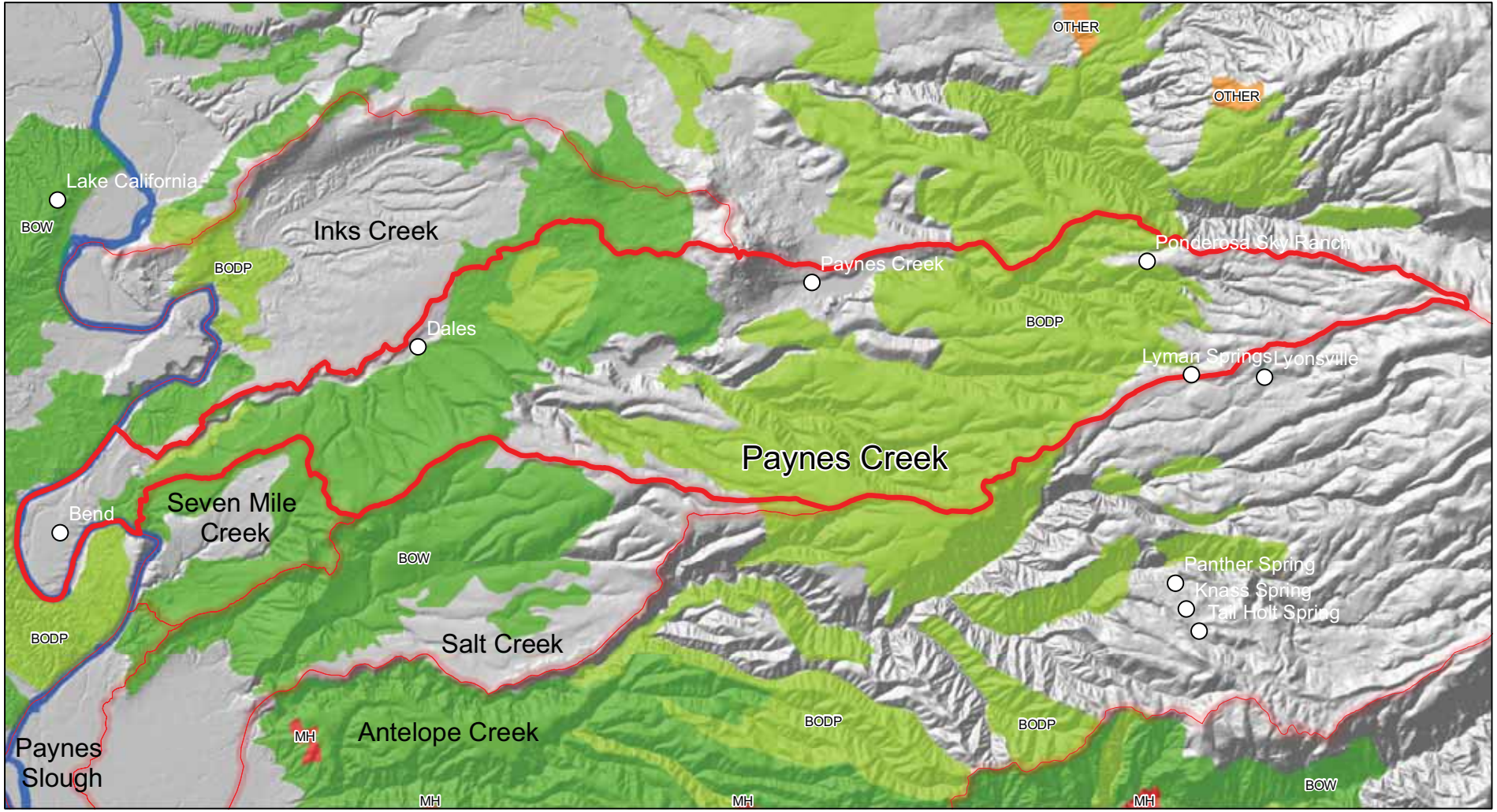
Tehama County Resource Conservation District

4/2010



Tehama East Watershed Assessment

Hardwood Rangelands
Paynes Creek

N
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Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10 Miles

KEY

Cover Type

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- BOW - Blue Oak Woodland
- MH - Montane Hardwoods
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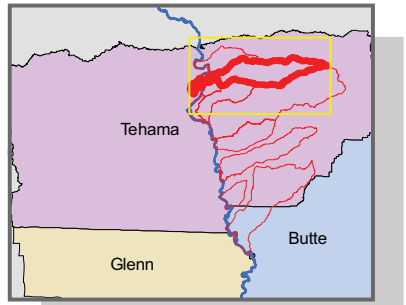
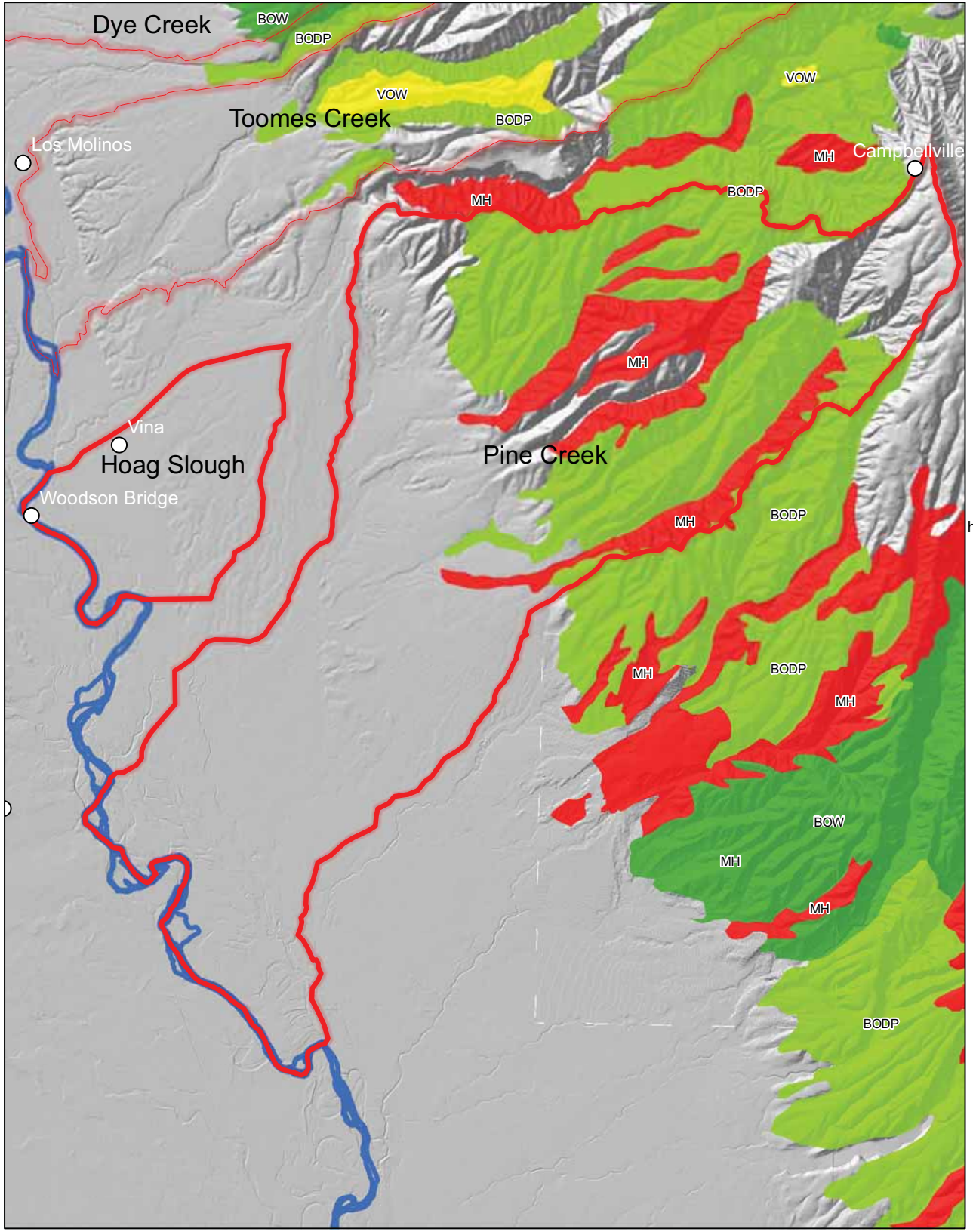
http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=hardwoods

- Watershed Boundary
- Streams/Rivers
- Communities



Tehama East Watershed Assessment

Hardwood Rangelands
Hoag Slough and Pine Creek



KEY

Cover Type

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- MH - Montane Hardwoods
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http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=hardwoods

- Watershed Boundary
- Streams/Rivers
- Communities

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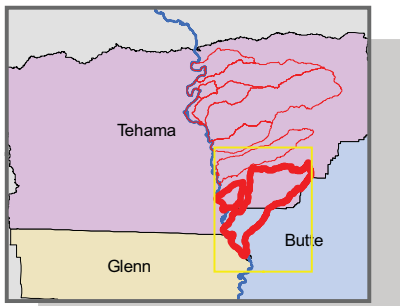
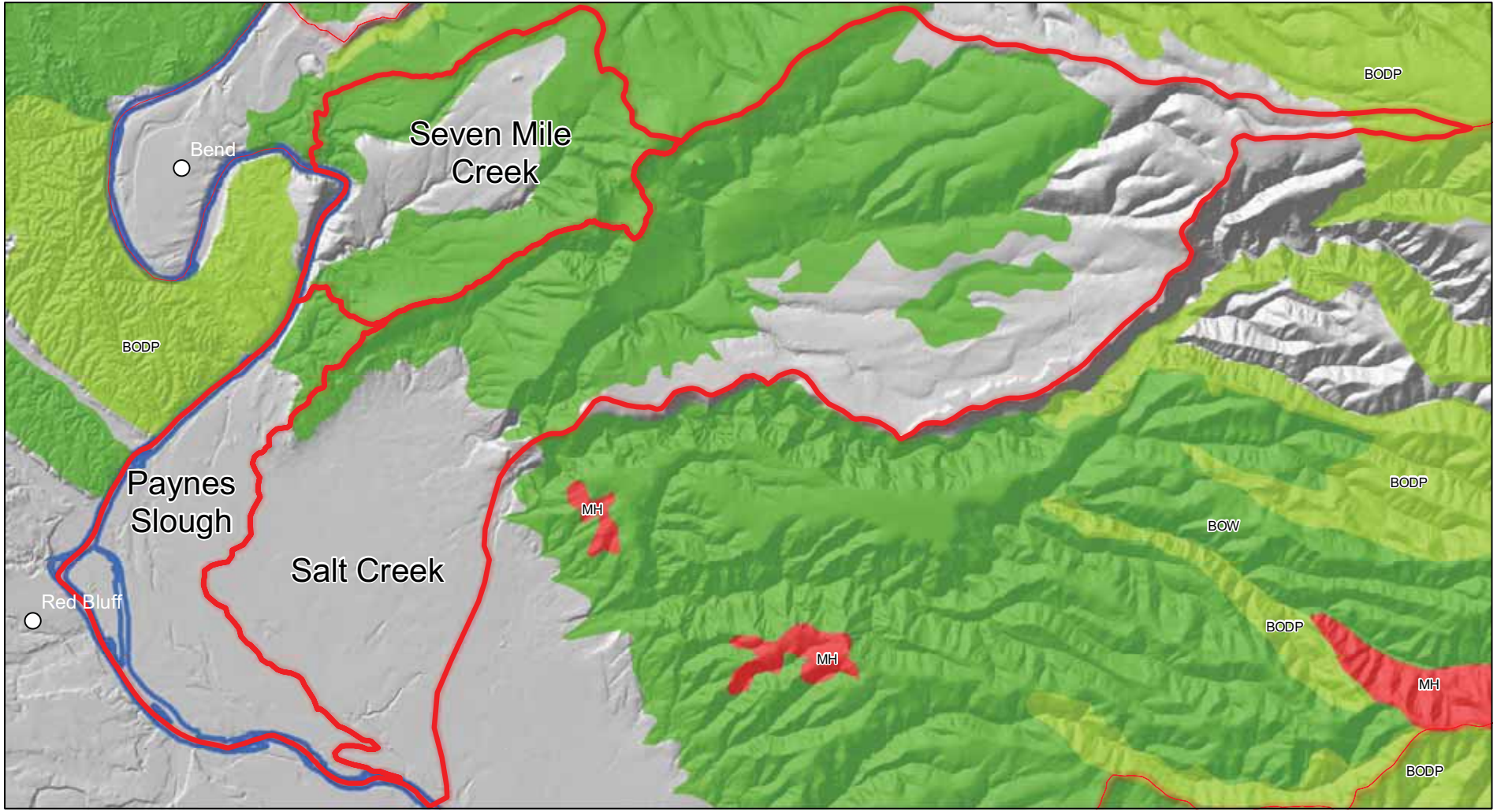
Tehama County Resource Conservation District





Tehama East Watershed Assessment

Hardwood Rangelands
Seven Mile Creek, Paynes Slough, and Salt Creek

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Tehama County Resource Conservation District
(c) 2010

0 1.25 2.5 5
Miles

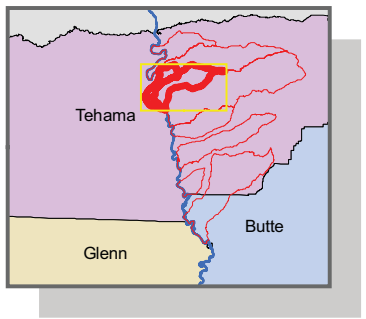
KEY

Cover Type

- BODP - Blue Oak \ Foothill Pine
- BOW - Blue Oak Woodland
- MH - Montane Hardwoods
- OTHER - Non-Hardwood
- VOW - Valley Oak Woodland

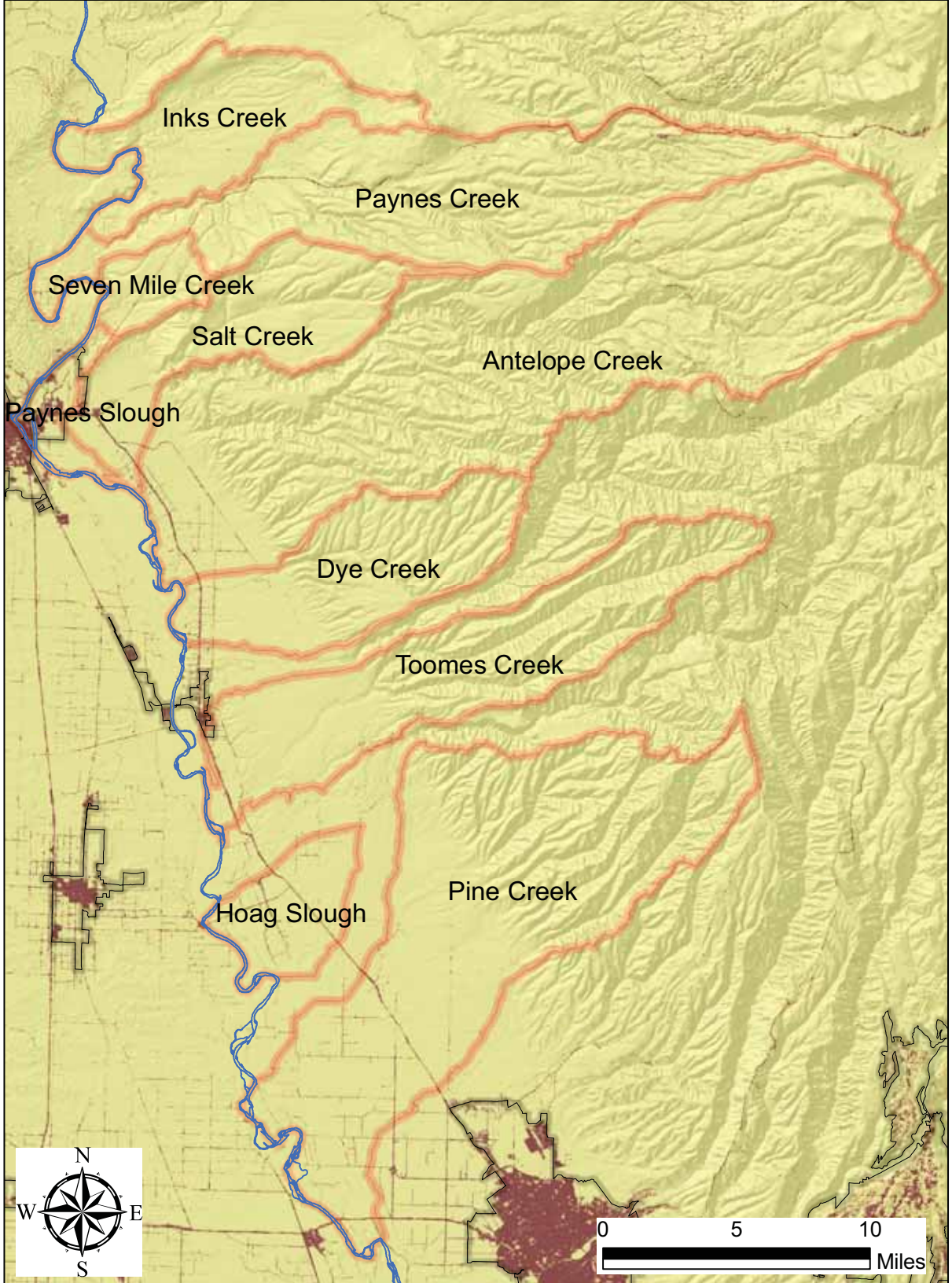
http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=hardwoods

- Watershed Boundary
- Streams/Rivers
- Communities



Maps by Characteristics

Impervious Surfaces



Tehama East Watershed Assessment

Impervious Surfaces
Tehama East Watersheds

Impervious surfaces are identified as an indicator of the impact of human development on water resources. Furthermore, impervious surfaces may have an effect on the inflitration rates of surface water locally and related effects downstream.

"The National Land Cover Database 2001 was produced through a cooperative project conducted by the Multi-Resolution Land Characteristics (MRLC) Consortium. The MRLC Consortium is a partnership of federal agencies (www.mrlc.gov), consisting of the U.S. Geological Survey (USGS), the National Oceanic and Atmospheric Administration (NOAA), the U.S. Environmental Protection Agency (EPA), the U.S. Department of Agriculture (USDA), the U.S. Forest Service (USFS), the National Park Service (NPS), the U.S. Fish and Wildlife Service (FWS), the Bureau of Land Management (BLM), and the USDA Natural Resources Conservation Service (NRCS). One of the primary goals of the project is to generate a current, consistent, seamless, and accurate National Land Cover Database (NLCD) circa 2001 for the United States at medium spatial resolution." Quoted from metadata at: http://www.mrlc.gov/multizone_download.php?zone=2

KEY

Impervious Surface By Percent

High : 100

Low : 0

http://www.mrlc.gov/multizone_download.php?zone=2

Sacramento River

Watershed Boundary

Urban Areas

Tehama East Watershed Assessment

Impervious Surfaces Seven Mile Creek, Paynes Slough, and Salt Creek

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Tehama Couonty Resource Conservation District
(c) 2010

0 1.5 3 6
Miles

KEY

Impervious Surface By Percent

High : 100

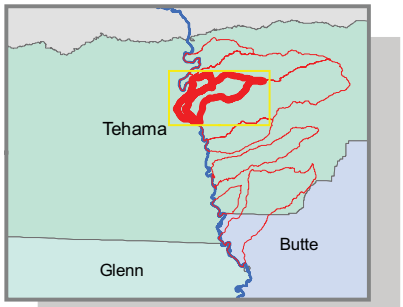
Low : 0

http://www.mrlc.gov/multizone_download.php?zone=2

Sacramento River

Watershed Boundary

Urban Areas

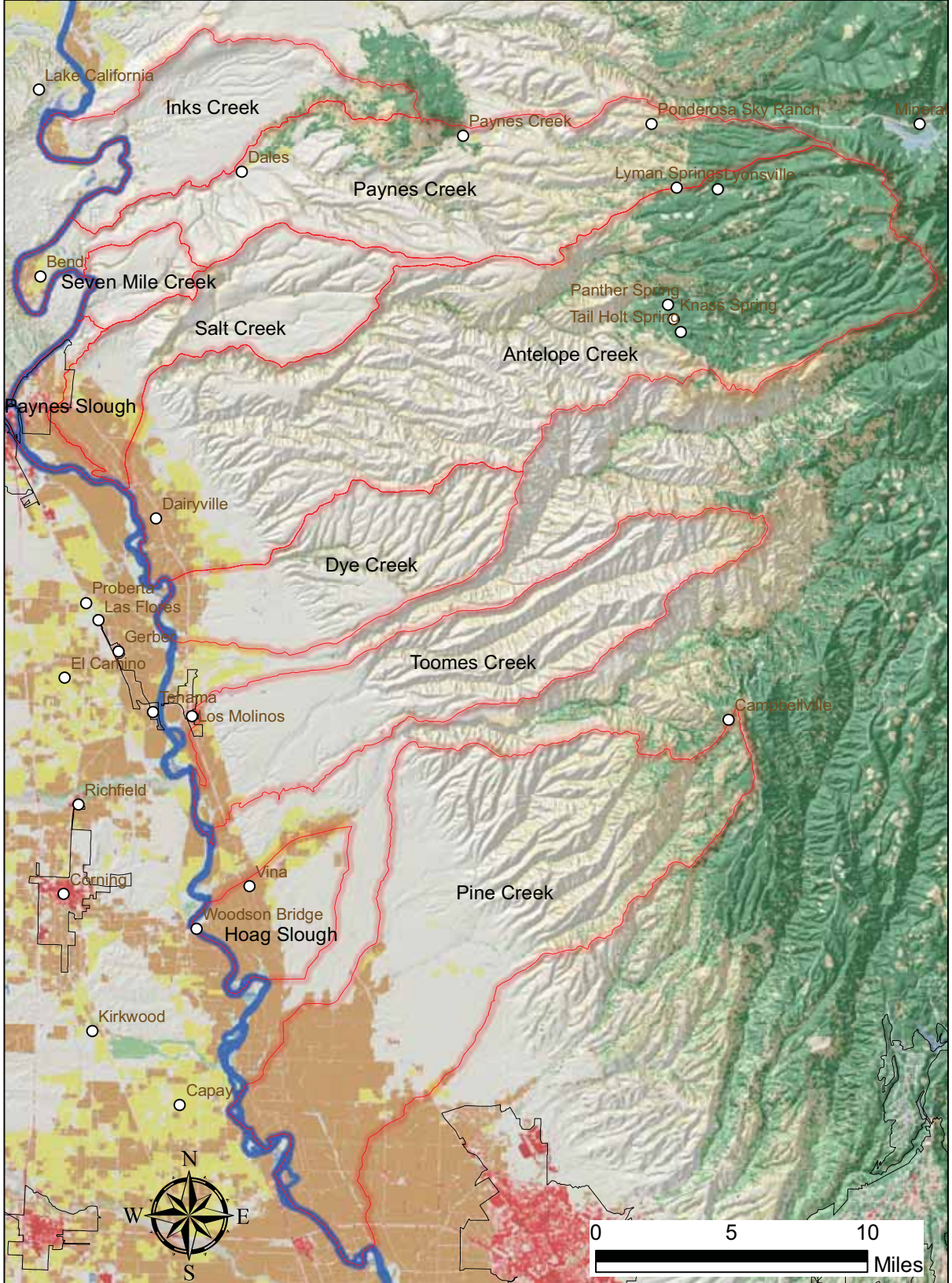


Maps by Characteristics

Land Cover

Tehama East Watershed Assessment

Land Cover
National Land Cover Database
Tehama East Watersheds



"Starting in 1999, new research was undertaken to expand and update NLCD 1992 into a full scale land cover database (with multiple instead of single products), and to produce it across all 50 states and Puerto Rico (Homer et al. 2004). This new database is called the National Land Cover Database 2001 (the 2001 refers to the nominal year from which most of the Landsat 5 and Landsat 7 imagery was acquired) and has been under production for 6 years."

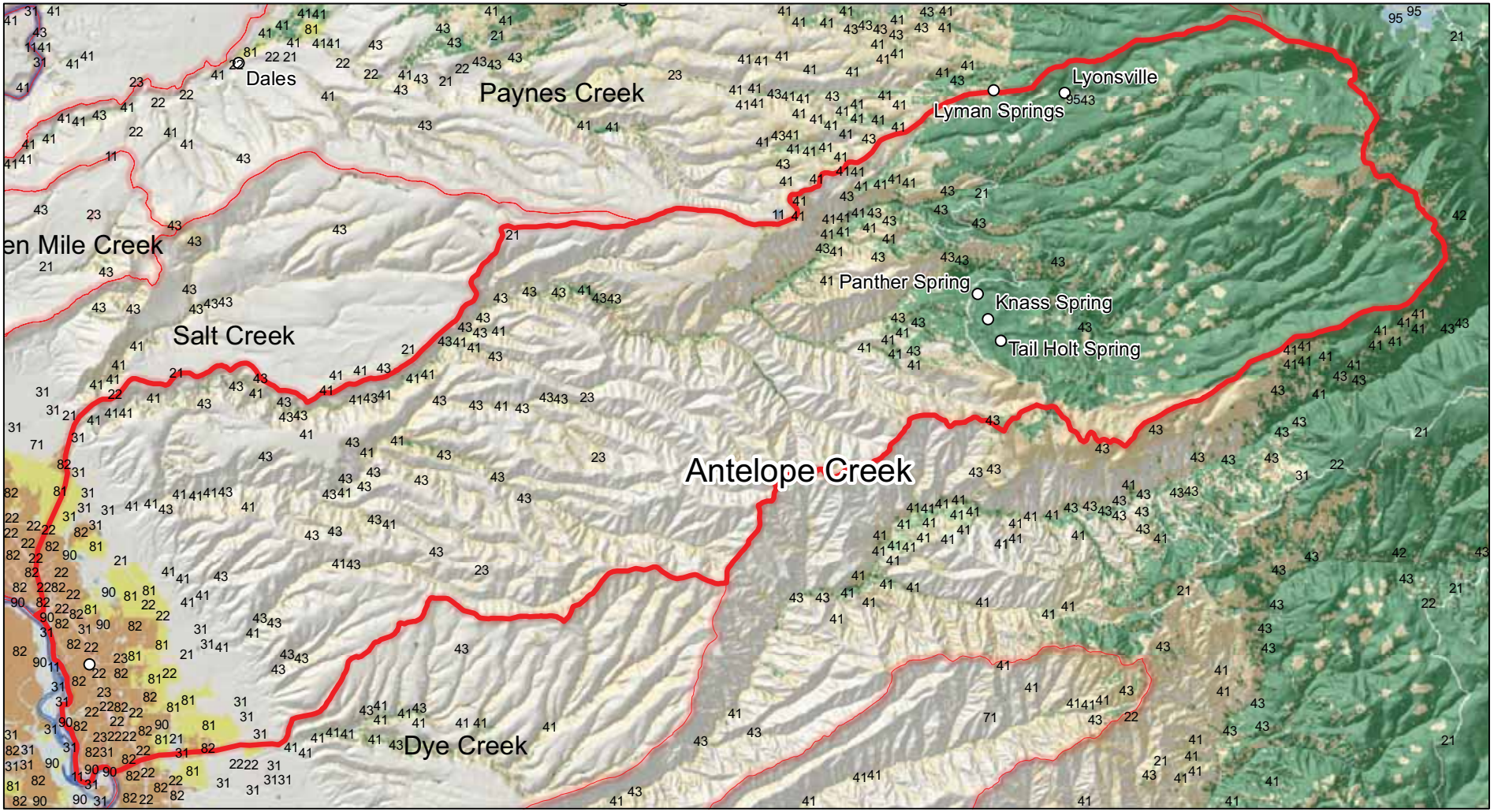
Land Cover
"Sixteen classes of land cover were modeled over the conterminous United States at a 30m cell size with a 1 acre minimum mapping unit. Proportionately *[on anational scale]*, the rarest class was perennial ice/snow at 0.02% of the total area and shrub/scrub the most common class at 21.03% of the total area." Quoted from: http://www.mrlc.gov/pdf/July_PERS.pdf

KEY

- 11 - Open Water
- 21 - Developed, Open Space
- 22 - Developed, Low Intensity
- 23 - Developed, Medium Intensity
- 24 - Developed, High Intensity
- 31 - Bare Rock/Sand/Clay
- 41 - Deciduous Forest
- 42 - Evergreen Forest
- 43 - Mixed Forest
- 52 - Shrub/Scrub
- 71 - Grasslands/Herbaceous
- 81 - Pasture/Hay
- 82 - Cultivated Crops
- 90 - Woody Wetlands
- 95 - Emergent Herbaceous Wetlands

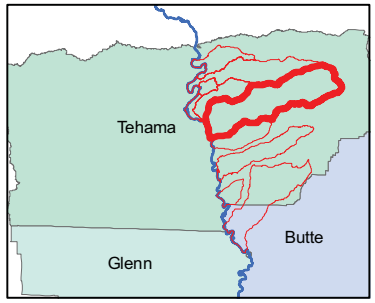
http://www.mrlc.gov/nlcd_multizone_map.php
Homer, C. C. Huang, L. Yang, B. Wylie and M. Coan. 2004. Development of a 2001 National Landcover Database for the United States. Photogrammetric Engineering and Remote Sensing, Vol. 70, No. 7, July 2004, pp. 829-840.

- Urban Areas
- Watershed Boundary



Tehama East Watershed Assessment

Land Cover
National Land Cover Database
Antelope Creek



Legend

- 11 - Open Water
- 21 - Developed, Open Space
- 22 - Developed, Low Intensity
- 23 - Developed, Medium Intensity
- 24 - Developed, High Intensity
- 31 - Bare Rock/Sand/Clay
- 41 - Deciduous Forest
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- 82 - Cultivated Crops
- 90 - Woody Wetlands
- 95 - Emergent Herbaceous Wetlands
- Urban Areas
- Watershed Boundary

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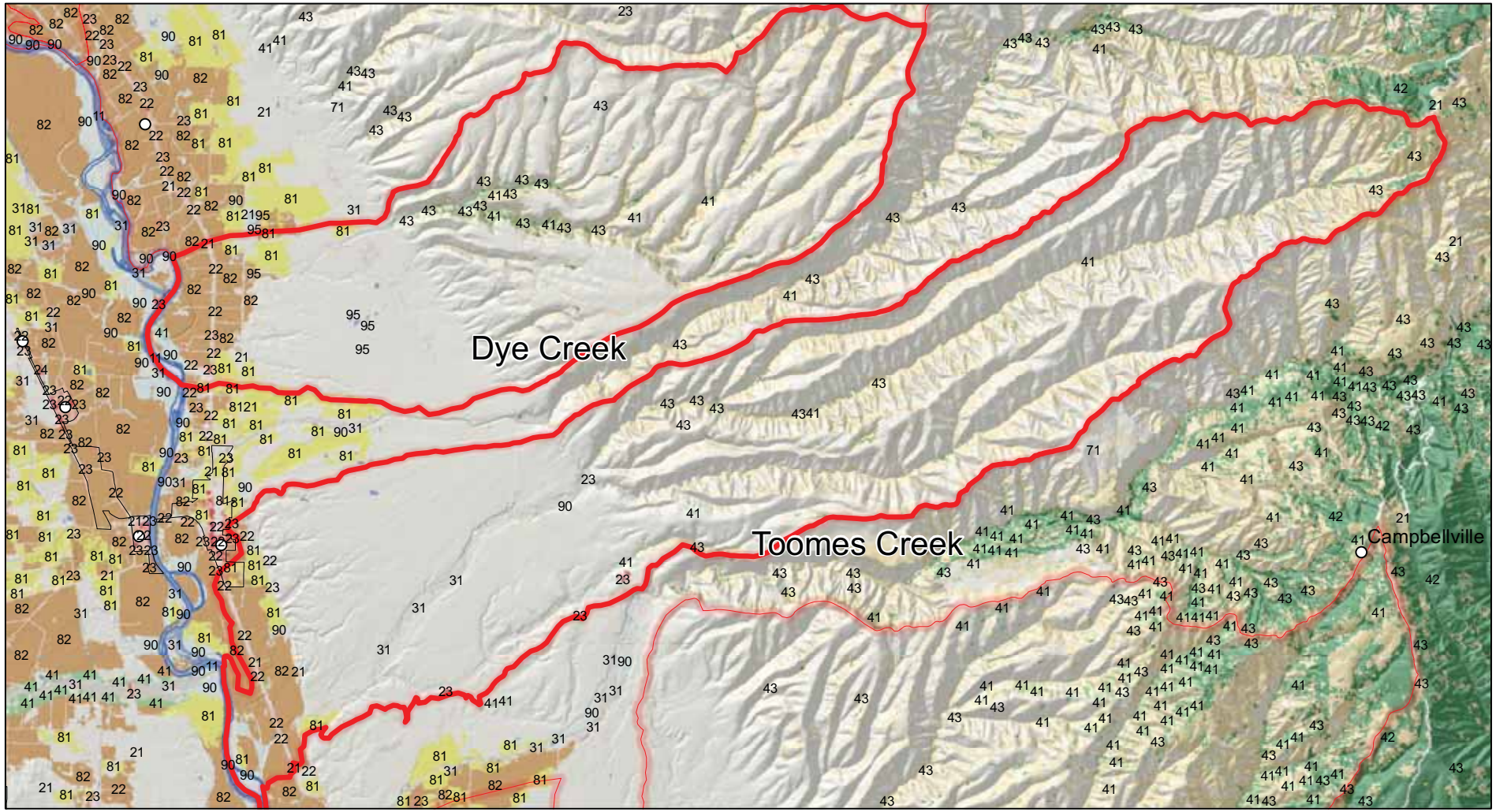
TCRCD

Tehama County Resource Conservation District
(c) 2010

0 1.25 2.5 5 7.5 10
Miles

http://www.mrlc.gov/nlcd_multizone_map.php
Homer, C. C. Huang, L. Yang, B. Wylie and M. Coan. 2004. Development of a 2001 National Landcover Database for the United States. Photogrammetric Engineering and Remote Sensing, Vol. 70, No. 7, July 2004, pp. 829-840.



Tehama East Watershed Assessment

Land Cover
National Land Cover Database
Dye and Toomes Creeks

Legend

- 11 - Open Water
- 21 - Developed, Open Space
- 22 - Developed, Low Intensity
- 23 - Developed, Medium Intensity
- 24 - Developed, High Intensity
- 31 - Bare Rock/Sand/Clay
- 41 - Deciduous Forest
- 42 - Evergreen Forest
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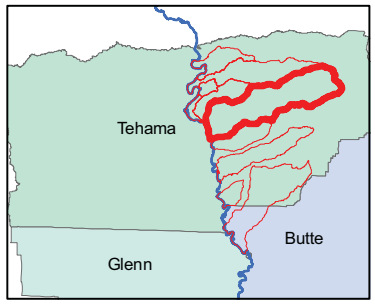
- 52 - Shrub/Scrub
- 71 - Grasslands/Herbaceous
- 81 - Pasture/Hay
- 82 - Cultivated Crops
- 90 - Woody Wetlands
- 95 - Emergent Herbaceous Wetlands
- Urban Areas
- Watershed Boundary



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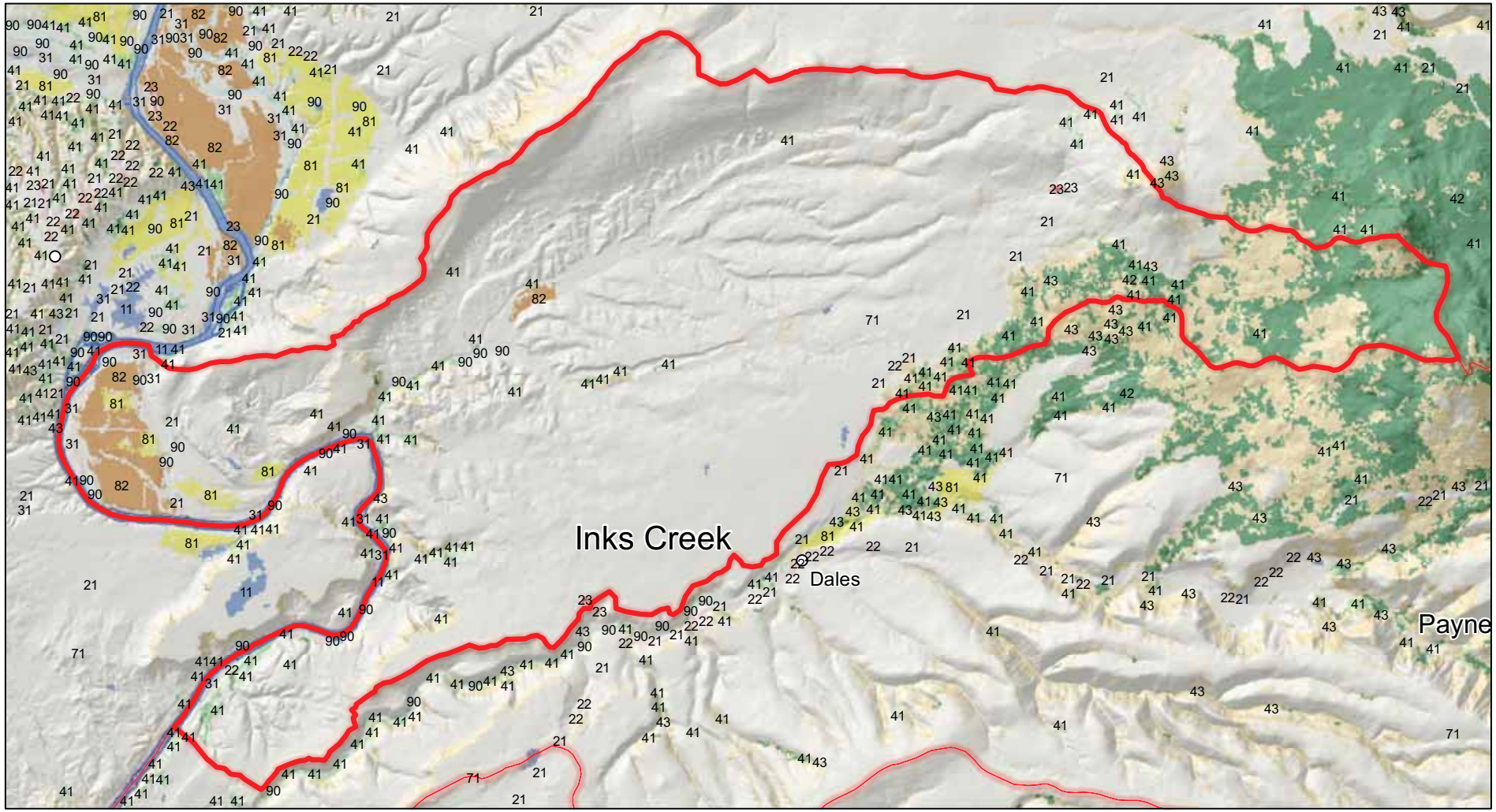
http://www.mrlc.gov/nlcd_multizone_map.php
Homer, C. C. Huang, L. Yang, B. Wylie and M. Coan. 2004. Development of a 2001 National Landcover Database for the United States. Photogrammetric Engineering and Remote Sensing, Vol. 70, No. 7, July 2004, pp. 829-840.

0 1 2 4 6 8 Miles



Tehama East Watershed Assessment

Land Cover
National Land Cover Database
Inks Creek

Legend

- 11 - Open Water
- 21 - Developed, Open Space
- 22 - Developed, Low Intensity
- 23 - Developed, Medium Intensity
- 24 - Developed, High Intensity
- 31 - Bare Rock/Sand/Clay
- 41 - Deciduous Forest
- 42 - Evergreen Forest
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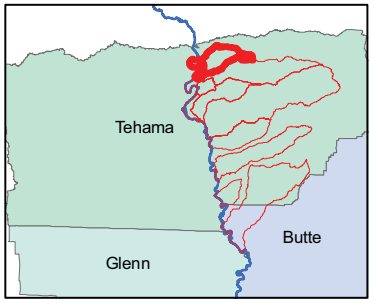
- 71 - Grasslands/Herbaceous
- 81 - Pasture/Hay
- 82 - Cultivated Crops
- 90 - Woody Wetlands
- 95 - Emergent Herbaceous Wetlands
- Urban Areas
- Watershed Boundary



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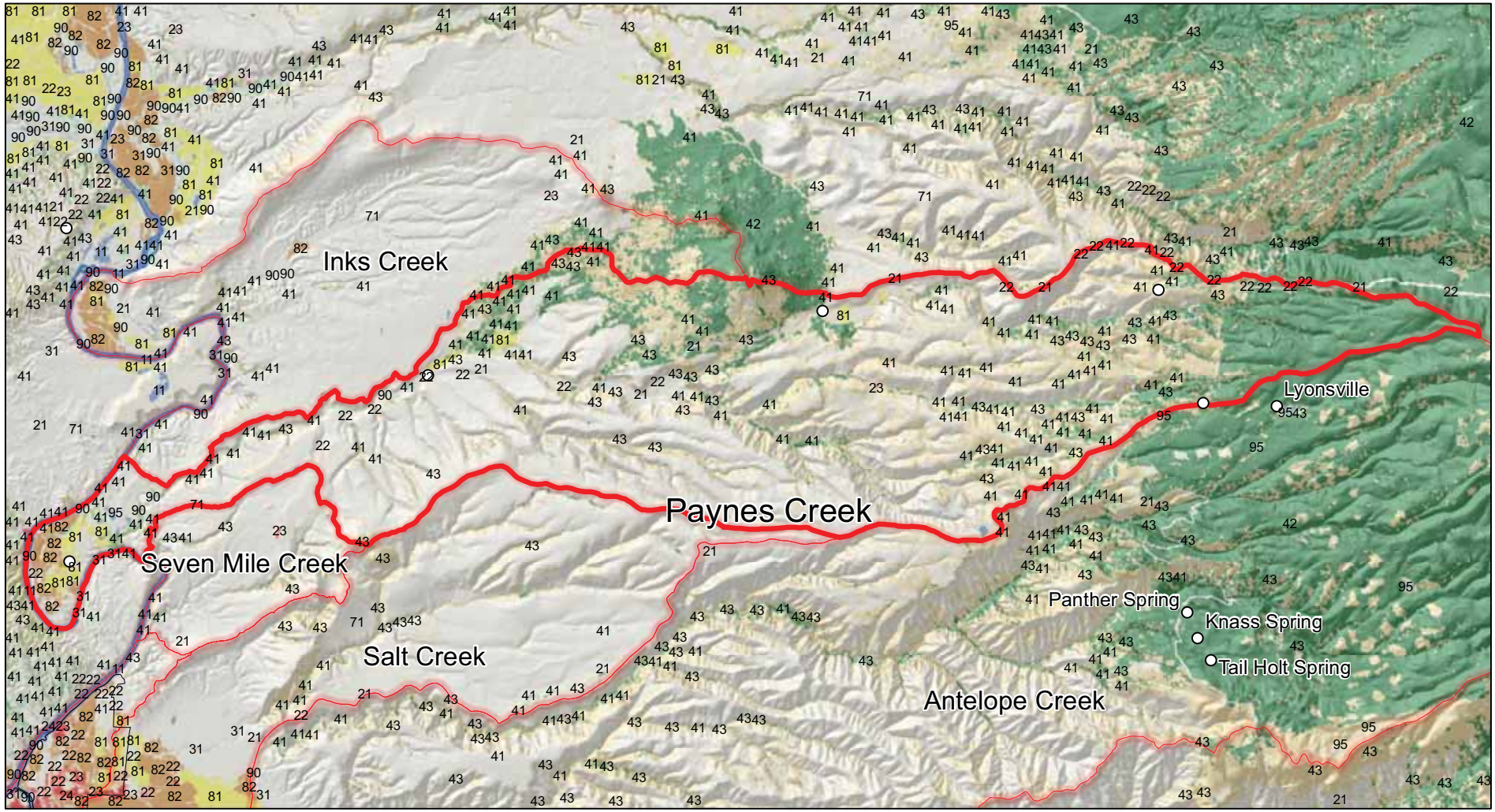
http://www.mrlc.gov/nlcd_multizone_map.php
Homer, C. C. Huang, L. Yang, B. Wylie and M. Coan. 2004. Development of a 2001 National Landcover Database for the United States. Photogrammetric Engineering and Remote Sensing, Vol. 70, No. 7, July 2004, pp. 829-840.

Tehama County Resource Conservation District

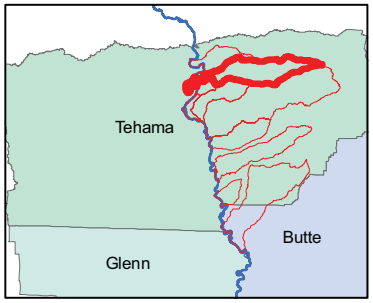


Tehama East Watershed Assessment

Land Cover
National Land Cover Database
Paynes Creek

Legend

- 11 - Open Water
- 21 - Developed, Open Space
- 22 - Developed, Low Intensity
- 23 - Developed, Medium Intensity
- 24 - Developed, High Intensity
- 31 - Bare Rock/Sand/Clay
- 41 - Deciduous Forest
- 42 - Evergreen Forest
- 43 - Mixed Forest
- 52 - Shrub/Scrub
- 71 - Grasslands/Herbaceous
- 81 - Pasture/Hay
- 82 - Cultivated Crops
- 90 - Woody Wetlands
- 95 - Emergent Herbaceous Wetlands
- Urban Areas
- Watershed Boundary



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http://www.mrlc.gov/nlcd_multizone_map.php
Homer, C. C. Huang, L. Yang, B. Wylie and M. Coan. 2004. Development of a 2001 National Landcover Database for the United States. Photogrammetric Engineering and Remote Sensing, Vol. 70, No. 7, July 2004, pp. 829-840.

Tehama County Resource Conservation District

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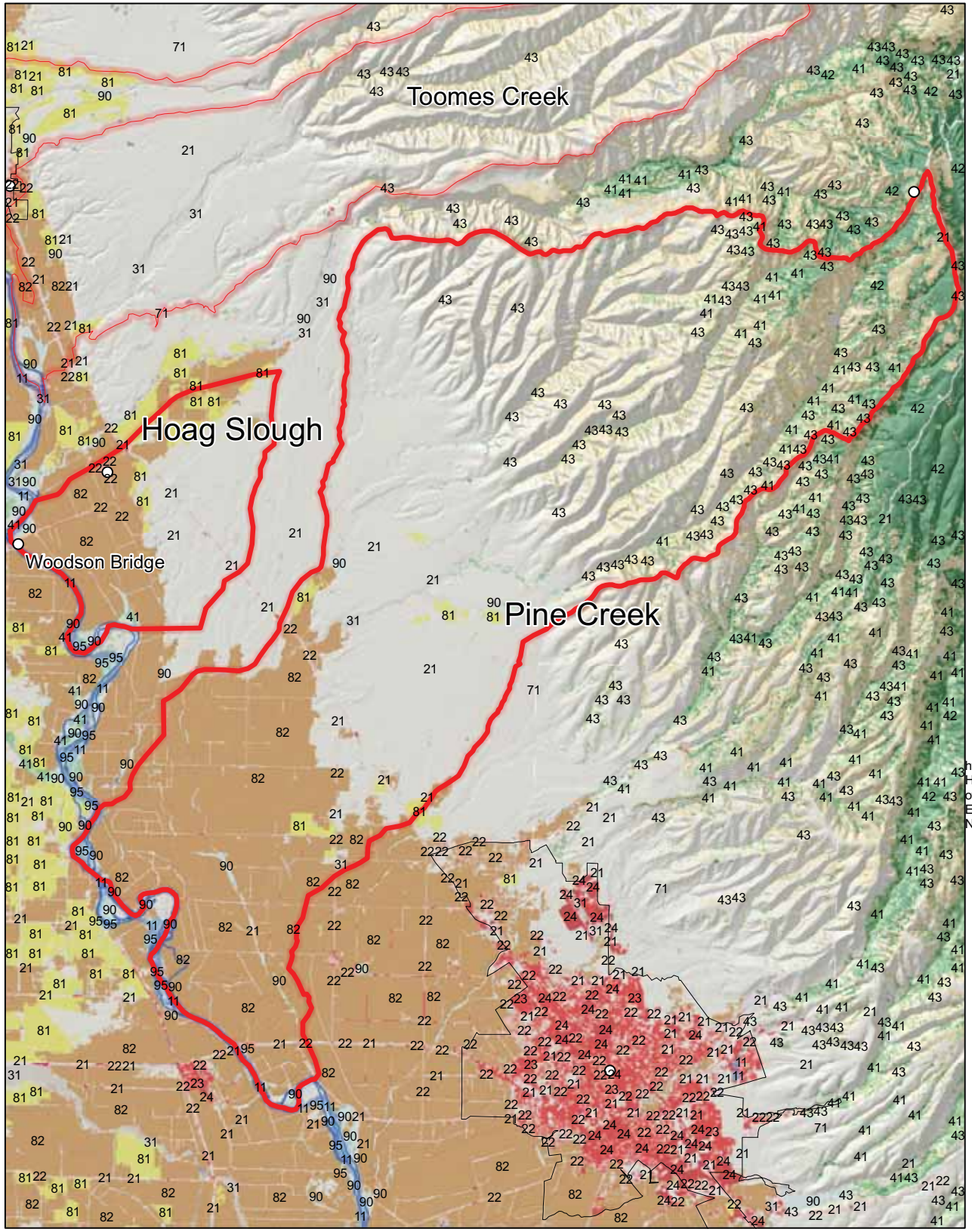
Tehama East Watershed Assessment

Land Cover
National Land Cover Database
Hoag Slough and Pine Creek



Legend

- 11 - Open Water
- 21 - Developed, Open Space
- 22 - Developed, Low Intensity
- 23 - Developed, Medium Intensity
- 24 - Developed, High Intensity
- 31 - Bare Rock/Sand/Clay
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Urban Areas

Watershed Boundary

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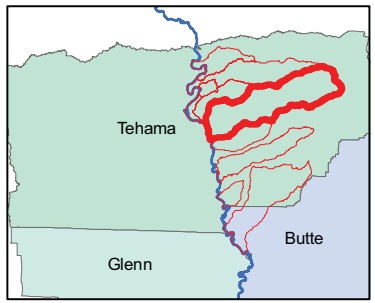

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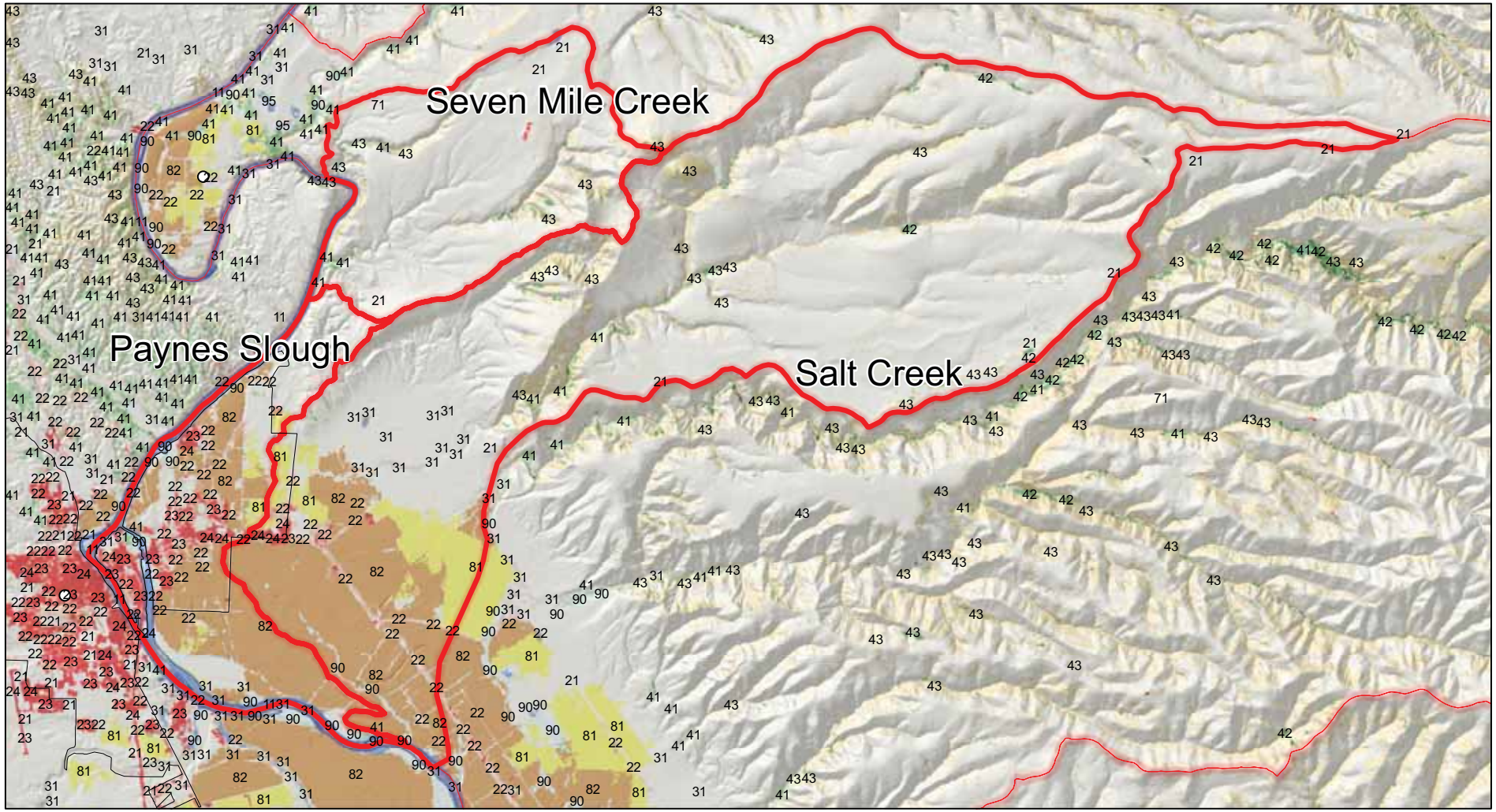

Tehama East Watershed Assessment

Land Cover
National Land Cover Database
Paynes Slough, Salt, and Seven Mile Creeks

Legend

- 11 - Open Water
- 21 - Developed, Open Space
- 22 - Developed, Low Intensity
- 23 - Developed, Medium Intensity
- 24 - Developed, High Intensity
- 31 - Bare Rock/Sand/Clay
- 41 - Deciduous Forest
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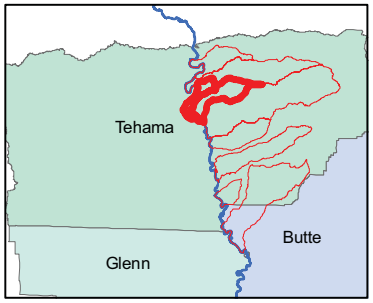
- 90 - Woody Wetlands
- 95 - Emergent Herbaceous Wetlands
- Urban Areas
- Watershed Boundary



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Tehama County Resource Conservation District
(c) 2010

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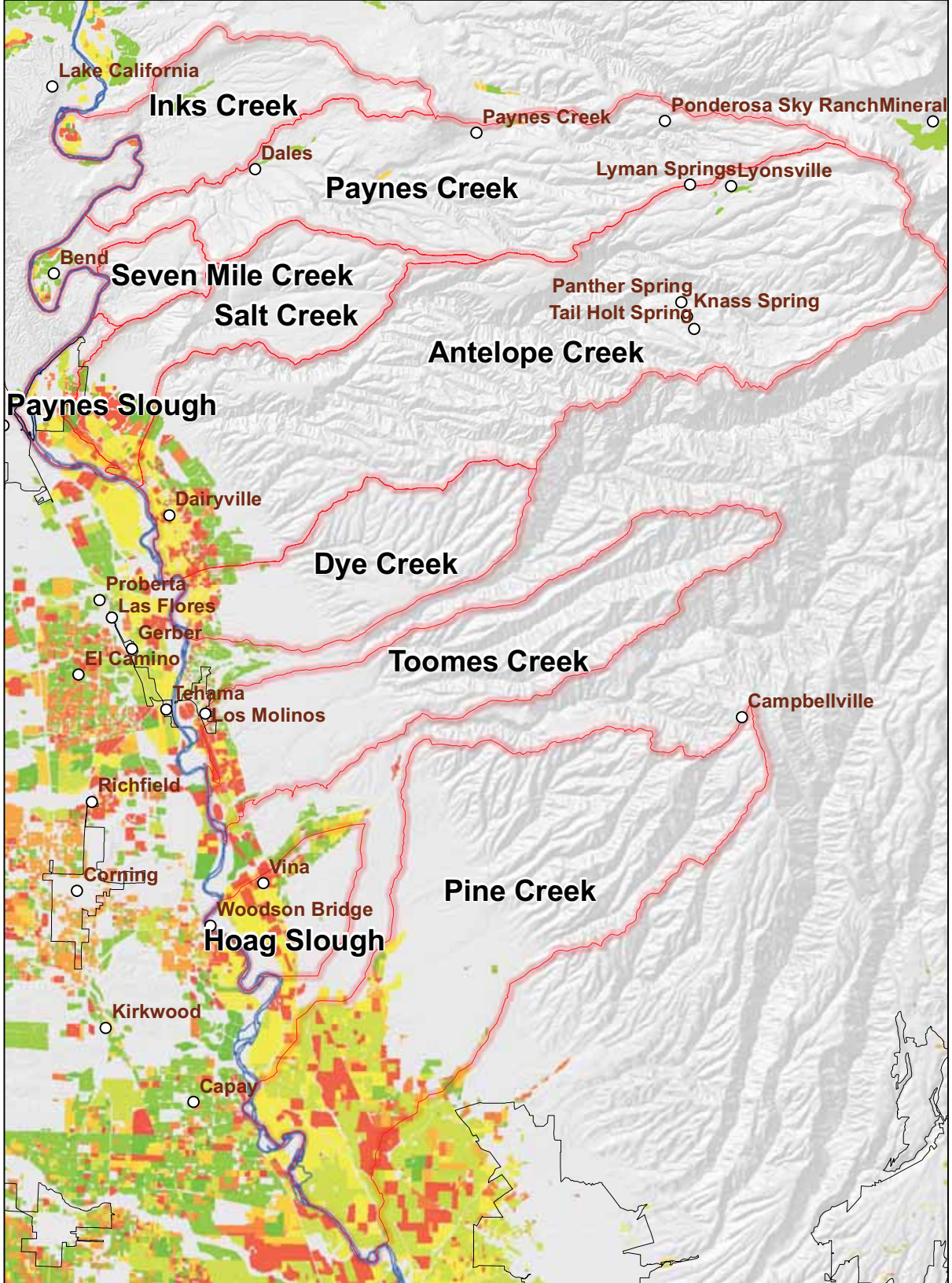
Miles

http://www.mrlc.gov/nlcd_multizone_map.php
Homer, C. C. Huang, L. Yang, B. Wylie and M. Coan. 2004. Development of a 2001 National Landcover Database for the United States. Photogrammetric Engineering and Remote Sensing, Vol. 70, No. 7, July 2004, pp. 829-840.

Maps by Characteristics

Land Use



Tehama East Watershed Assessment

Land Use - Agriculture
Department of Water Resources
Tehama East Watersheds

"The main emphasis of DWR's land use surveys is the mapping of agricultural land. Over 70 different crops or crop categories are included in our surveys. Irrigation methods and water sources have also been mapped in some, but not all surveys. Urban and native vegetation (undeveloped) areas are mapped but not in the detail of agricultural land.

These land use surveys were performed using aerial photos and, more recently, satellite imagery to define field boundaries. For earlier surveys, DWR staff used U.S.G.S. 7.5' quadrangle maps as base maps for delineating field boundaries and recording land uses. As large format printing of aerial photographs became available, plotted aerial photos were used as field sheets for recording land use attributes. Currently, most of the land use survey data is entered directly into a digital map using geographic information system (GIS) software on a laptop computer. Georeferenced, orthorectified imagery is used as a backdrop, and the land use boundaries are visible on top of the imagery. Department staff visit and visually identify land uses on over 95 percent of the developed agricultural areas within each survey area. A GPS unit is incorporated with the computer, so the user can see their current location on-screen.

After the field work has been completed and the maps have been checked for errors, a digital composite map of the survey area is created from the work of individual surveyors. Using GIS software, digital maps of quads, counties, water districts, and the DWR's hydrologic planning units (Detailed Analysis Units) can be overlaid on the land use data to develop acreage summaries of land use by these areas." Quoted from: http://www.water.ca.gov/landwateruse/lusrvymain.cfm

See next page for the symbology Key.

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Tehama County Resource Conservation District

0 2.5 5 10
Miles

KEY

Land Use - Agriculture

- C, 3 - Oranges
- C, 6 - Olives
- C, 7 - Miscellaneous Subtropical Fruit
- C, 8 - Kiwis
- C, 10 - Eucalyptus
- D, 1 - Apples
- D, 2 - Apricots
- D, 3 - Cherries
- D, 5 - Peaches and Nectarines
- D, 6 - Pears
- D, 8 - Prunes
- D, 9 - Figs
- D, 10 - Miscellaneous Deciduous
- D, 12 - Almonds
- D, 13 - Walnuts
- D, 14 - Pistachios
- F - Field Crops
- F, 1 - Cotton
- F, 2 - Safflower
- F, 3 - Flax
- F, 5 - Sugar Beets
- F, 6 - Corn, Field & Sweet
- F, 8 - Sudan
- F - Field Crops **
- F, 10 - Beans, Dry
- F, 11 - Miscellaneous Field
- F, 12 - Sunflowers
- G - Grain & Hay Crops
- G, 1 - Barley
- G, 2 - Wheat
- G, 3 - Oats
- G, 6 - Miscellaneous Grain & Hay
- G - Grain & Hay Crops **
- I, 1 - Land not cropped for the last 3 years
- I, 2 - New lands being prepared for crops
- P, 1 - Alfalfa & alfalfa mixtures
- P, 2 - Clover
- P, 3 - Mixed Pasture
- P, 4 - Native Pasture
- P, 5 - Induced High Water Table Nat. Pas.
- P, 7 - Turf Farms
- P - Pasture **
- R - Rice
- R - Rice **
- T, 2 - Asparagus
- T, 9 - Melons, squash, and cucumbers
- T, 10 - Onions and Garlic
- T, 15 - Tomatoes
- T, 16 - Flowers, Nursery & Tree Farms
- T, 18 - Miscellaneous Truck Farms
- T, 19 - Bush Berries
- T, 20 - Strawberries
- V - Vineyards
- V, 2 - Wine Grapes
- V - Vineyards **

** No specific crop was assigned.

http://www.water.ca.gov/landwateruse/lusrvymain.cfm

- Urban Areas
- Watershed Boundary

Tehama East Watershed Assessment

Land Use - Agriculture
Department of Water Resources
Tehama East Watersheds

"The main emphasis of DWR's land use surveys is the mapping of agricultural land. Over 70 different crops or crop categories are included in our surveys. Irrigation methods and water sources have also been mapped in some, but not all surveys. Urban and native vegetation (undeveloped) areas are mapped but not in the detail of agricultural land.

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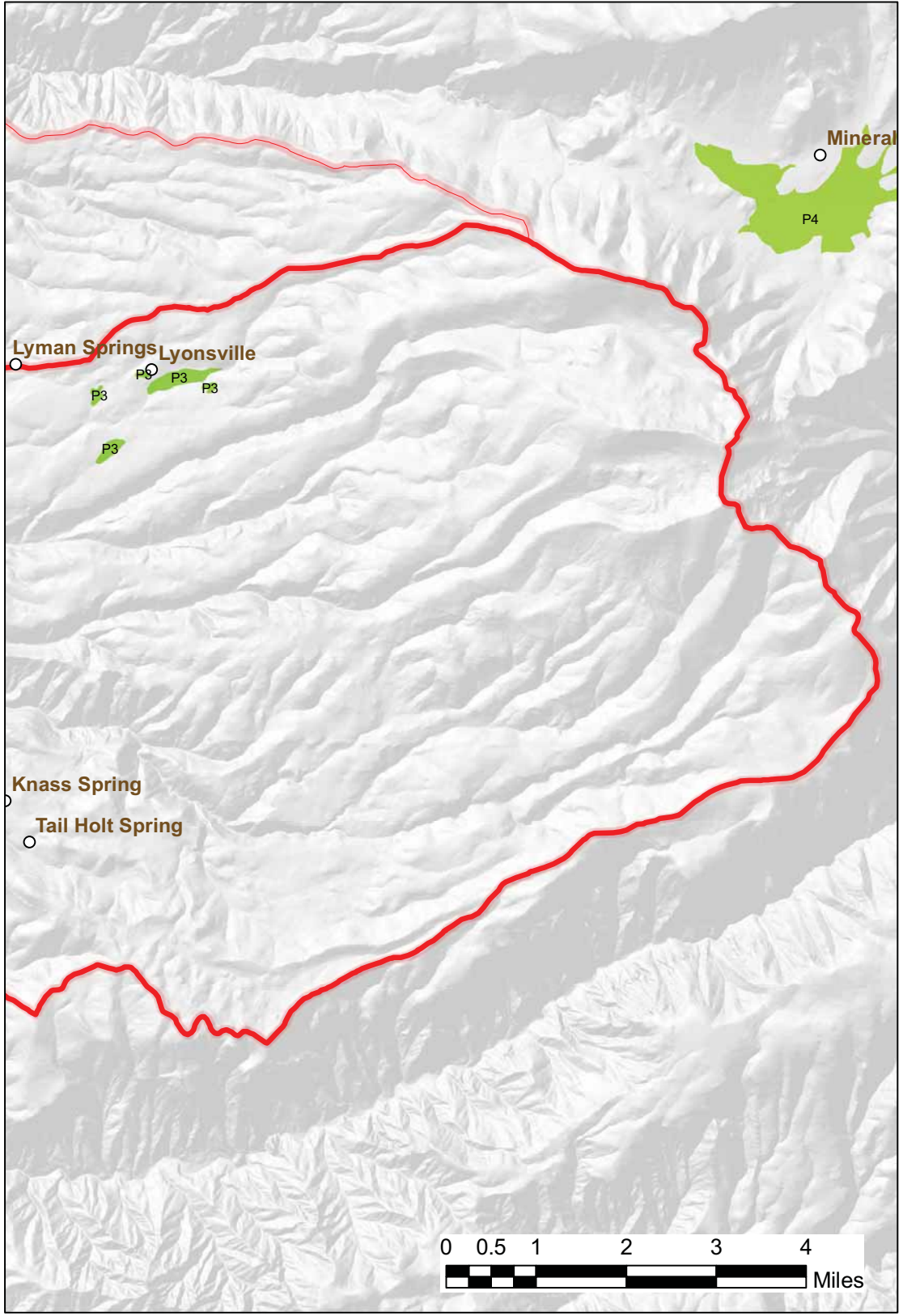
See next page for the symbology Key.

Tehama County Resource Conservation District

Tehama East Watershed Assessment

Land Use - Agriculture
Department of Water Resources
Antelope Creek - East



KEY

Land Use - Agriculture

- C3 - Oranges
- C6 - Olives
- C7 - Miscellaneous Subtropical Fruit
- C8 - Kiwis
- C10 - Eucalyptus
- D1 - Apples
- D2 - Apricots
- D3 - Cherries
- D5 - Peaches and Nectarines
- D6 - Pears
- D8 - Prunes
- D9 - Figs
- D10 - Miscellaneous Deciduous
- D12 - Almonds
- D13 - Walnuts
- D14 - Pistachios
- F - Field Crops
- F1 - Cotton
- F2 - Safflower
- F3 - Flax
- F5 - Sugar Beets
- F6 - Corn, Field & Sweet
- F8 - Sudan
- F - Field Crops **
- F10 - Beans, Dry
- F11 - Miscellaneous Field
- F12 - Sunflowers
- G - Grain & Hay Crops
- G1 - Barley
- G2 - Wheat
- G3 - Oats
- G6 - Miscellaneous Grain & Hay
- G - Grain & Hay Crops **
- I1 - Land not cropped for the last 3 years
- I2 - New lands being prepared for crops
- P1 - Alfalfa & alfalfa mixtures
- P2 - Clover
- P3 - Mixed Pasture
- P4 - Native Pasture
- P5 - Induced High Water Table Nat. Pas.
- P7 - Turf Farms
- P - Pasture **
- R - Rice
- R - Rice **
- T2 - Asparagus
- T9 - Melons, squash, and cucumbers
- T10 - Onions and Garlic
- T15 - Tomatoes
- T16 - Flowers, Nursery & Tree Farms
- T18 - Miscellaneous Truck Farms
- T19 - Bush Berries
- T20 - Strawberries
- V - Vineyards
- V2 - Wine Grapes
- V - Vineyards **

** No specific crop was assigned.

http://www.water.ca.gov/landwateruse/lusrvymain.cfm

Urban Areas

Watershed Boundary

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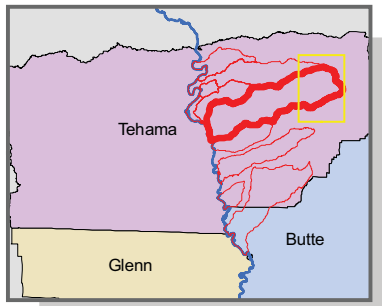

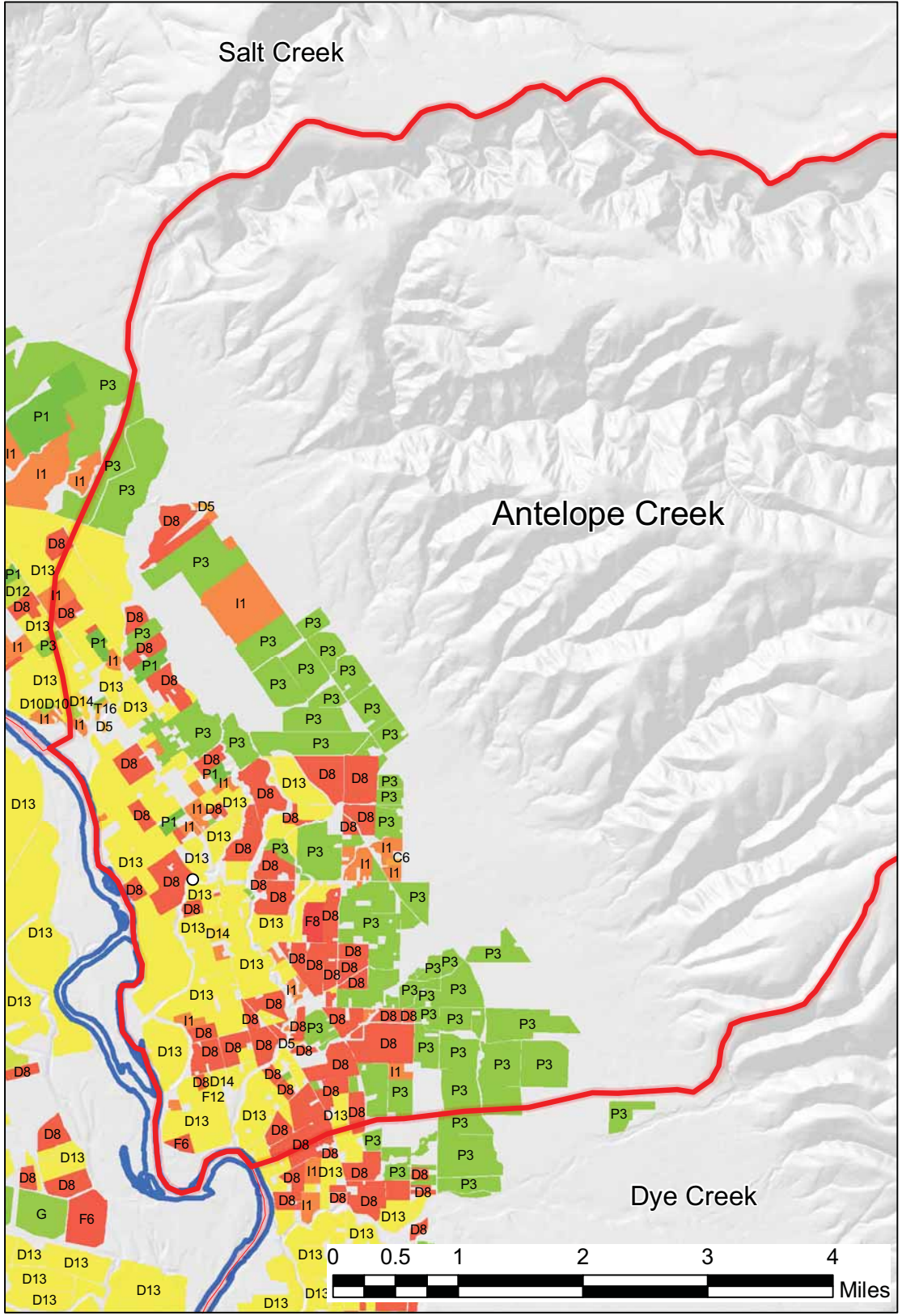

Tehama East Watershed Assessment

Land Use - Agriculture
Department of Water Resources
Antelope Creek - West

KEY

Land Use - Agriculture

- C3 - Oranges
- C6 - Olives
- C7 - Miscellaneous Subtropical Fruit
- C8 - Kiwis
- C10 - Eucalyptus
- D1 - Apples
- D2 - Apricots
- D3 - Cherries
- D5 - Peaches and Nectarines
- D6 - Pears
- D8 - Prunes
- D9 - Figs
- D10 - Miscellaneous Deciduous
- D12 - Almonds
- D13 - Walnuts
- D14 - Pistachios
- F - Field Crops
- F1 - Cotton
- F2 - Safflower
- F3 - Flax
- F5 - Sugar Beets
- F6 - Corn, Field & Sweet
- F8 - Sudan
- F - Field Crops **
- F10 - Beans, Dry
- F11 - Miscellaneous Field
- F12 - Sunflowers
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- G2 - Wheat
- G3 - Oats
- G6 - Miscellaneous Grain & Hay
- G - Grain & Hay Crops **
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- P3 - Mixed Pasture
- P4 - Native Pasture
- P5 - Induced High Water Table Nat. Pas.
- P7 - Turf Farms
- P - Pasture **
- R - Rice
- R - Rice **
- T2 - Asparagus
- T9 - Melons, squash, and cucumbers
- T10 - Onions and Garlic
- T15 - Tomatoes
- T16 - Flowers, Nursery & Tree Farms
- T18 - Miscellaneous Truck Farms
- T19 - Bush Berries
- T20 - Strawberries
- V - Vineyards
- V2 - Wine Grapes
- V - Vineyards **

** No specific crop was assigned.

http://www.water.ca.gov/landwateruse/lusrvymain.cfm

Urban Areas

Watershed Boundary

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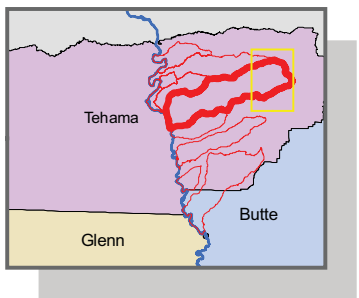

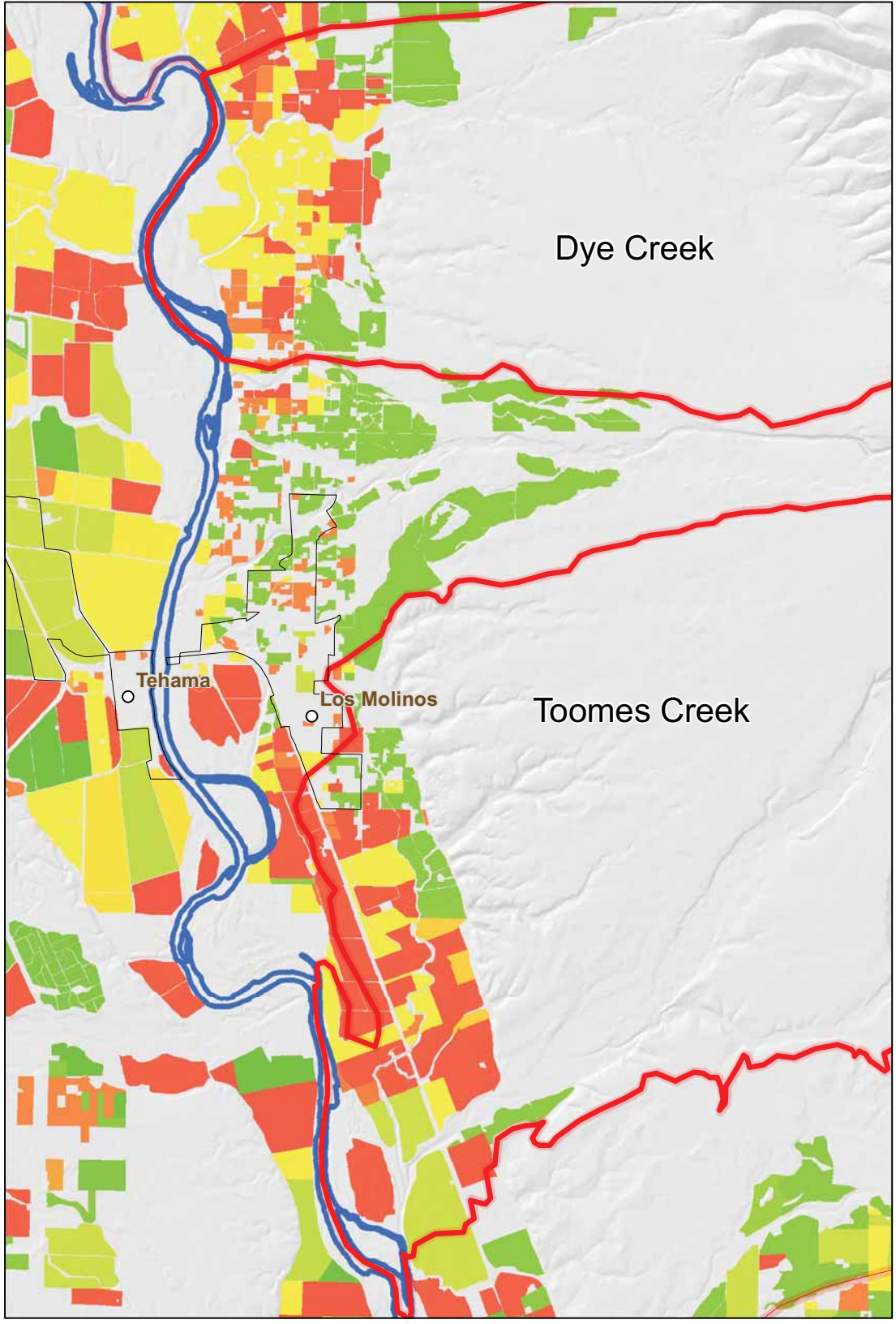

Tehama East Watershed Assessment

Land Use - Agriculture
Department of Water Resources
Dye Creek and Toomes Creek

KEY

Land Use - Agriculture

- C3 - Oranges
- C6 - Olives
- C7 - Miscellaneous Subtropical Fruit
- C8 - Kiwis
- C10 - Eucalyptus
- D1 - Apples
- D2 - Apricots
- D3 - Cherries
- D5 - Peaches and Nectarines
- D6 - Pears
- D8 - Prunes
- D9 - Figs
- D10 - Miscellaneous Deciduous
- D12 - Almonds
- D13 - Walnuts
- D14 - Pistachios
- F - Field Crops
- F1 - Cotton
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- F3 - Flax
- F5 - Sugar Beets
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- P3 - Mixed Pasture
- P4 - Native Pasture
- P5 - Induced High Water Table Nat. Pas.
- P7 - Turf Farms
- P - Pasture **
- R - Rice
- R - Rice **
- T2 - Asparagus
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- T15 - Tomatoes
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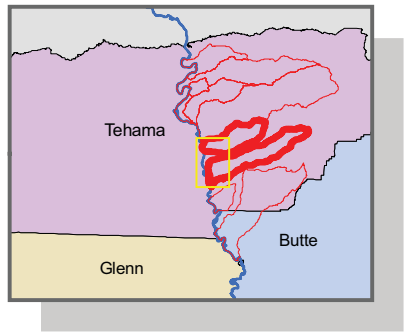
- T18 - Miscellaneous Truck Farms
- T19 - Bush Berries
- T20 - Strawberries
- V - Vineyards
- V2 - Wine Grapes
- V - Vineyards **

** No specific crop was assigned.

http://www.water.ca.gov/landwateruse/lusrvymain.cfm

Urban Areas

Watershed Boundary



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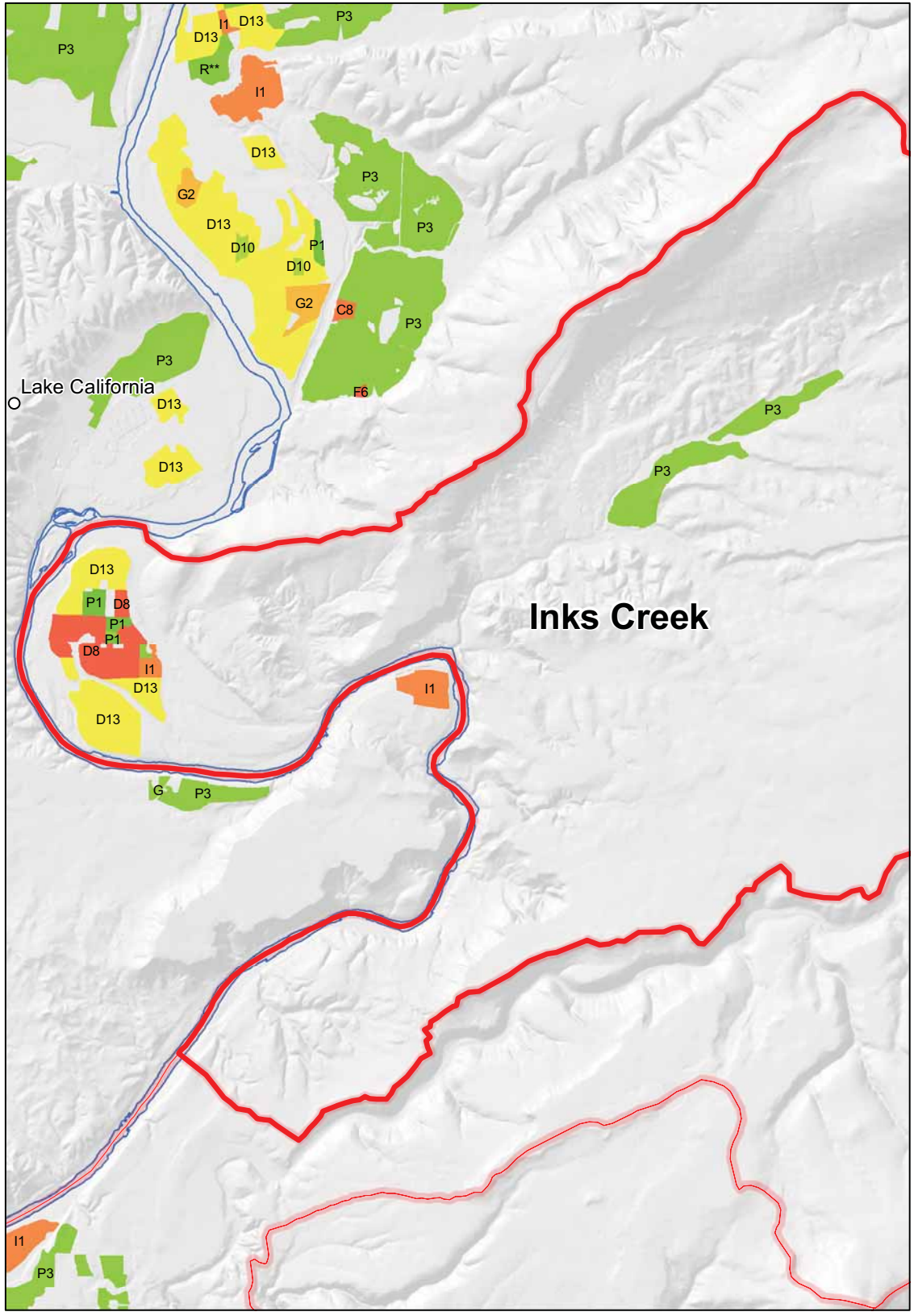
Tehama County Resource Conservation District (c) 2010

Tehama East Watershed Assessment

Land Use - Agriculture

Department of Water Resources

Inks Creek



KEY

Land Use - Agriculture

- C3 - Oranges
- C6 - Olives
- C7 - Miscellaneous Subtropical Fruit
- C8 - Kiwis
- C10 - Eucalyptus
- D1 - Apples
- D2 - Apricots
- D3 - Cherries
- D5 - Peaches and Nectarines
- D6 - Pears
- D8 - Prunes
- D9 - Figs
- D10 - Miscellaneous Deciduous
- D12 - Almonds
- D13 - Walnuts
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- P3 - Mixed Pasture
- P4 - Native Pasture
- P5 - High Water Nat. Pas.
- P7 - Turf Farms
- P - Pasture **
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- T19 - Bush Berries
- T20 - Strawberries
- V - Vineyards
- V2 - Wine Grapes
- V - Vineyards **

** No specific crop was assigned.

http://www.water.ca.gov/landwateruse/lusrvymain.cfm

Urban Areas

Watershed Boundary

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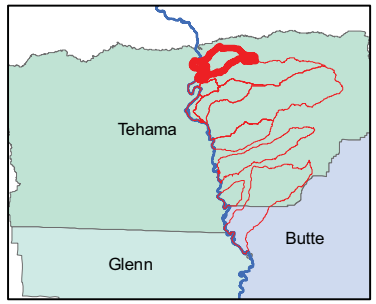

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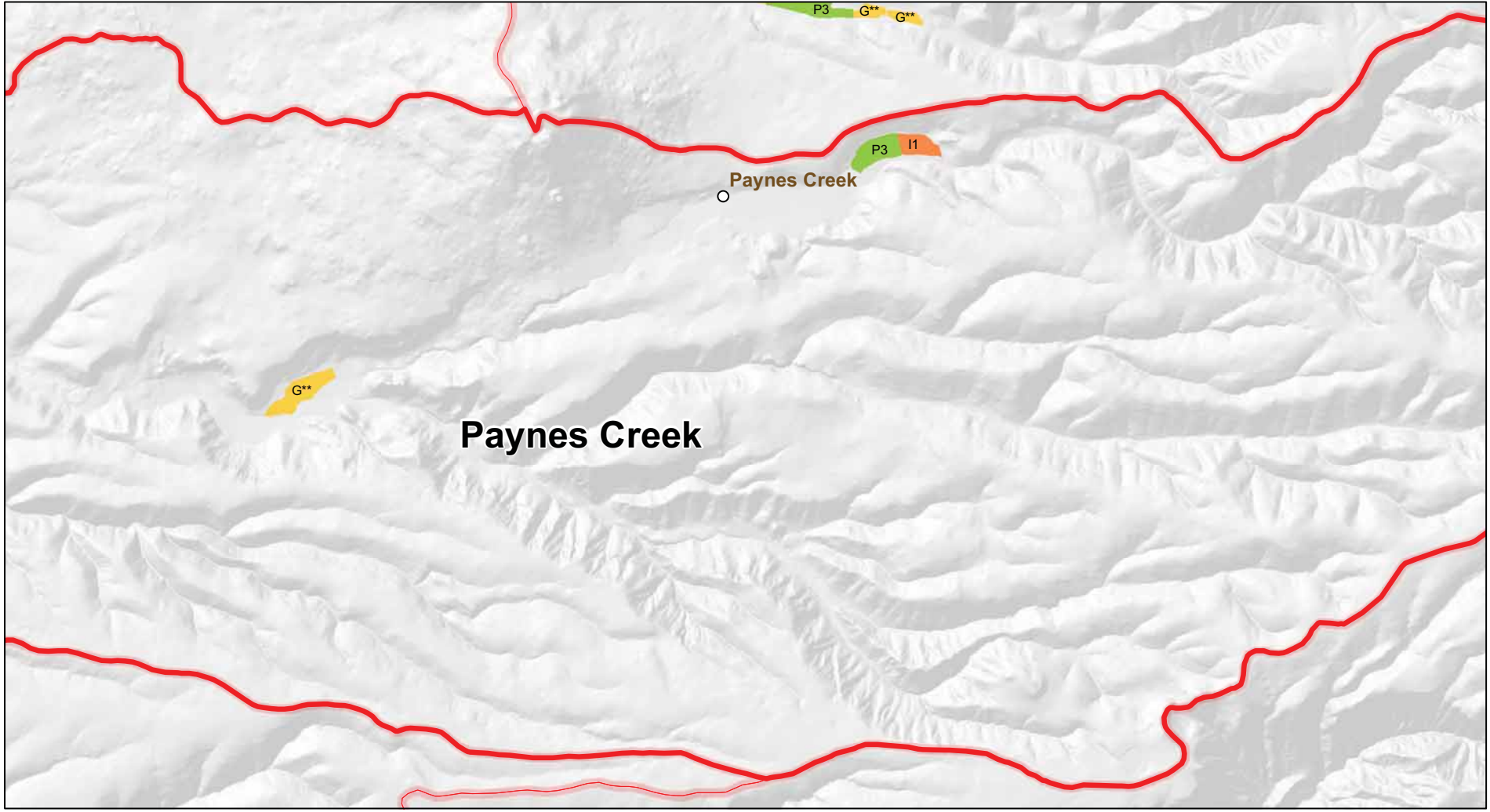

Tehama East Watershed Assessment

Land Use - Agriculture

Department of Water Resources

Paynes Creek - Central

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Tehama County Resource Conservation District (c)2010

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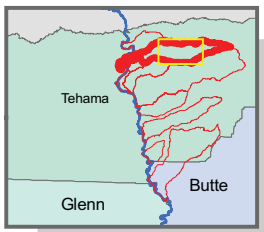

KEY

Land Use - Agriculture

- C3 - Oranges
- C6 - Olives
- C7 - Miscellaneous Subtropical Fruit
- C8 - Kiwis
- C10 - Eucalyptus
- D1 - Apples
- D2 - Apricots
- D3 - Cherries
- D5 - Peaches and Nectarines
- D6 - Pears
- D8 - Prunes
- D9 - Figs
- D10 - Miscellaneous Deciduous
- D12 - Almonds
- D13 - Walnuts
- D14 - Pistachios
- F - Field Crops
- F1 - Cotton
- F2 - Safflower
- F3 - Flax
- F5 - Sugar Beets
- F6 - Corn, Field & Sweet
- F8 - Sudan
- F - Field Crops **
- F10 - Beans, Dry
- F11 - Miscellaneous Field
- F12 - Sunflowers
- G - Grain & Hay Crops
- G1 - Barley
- G2 - Wheat
- G3 - Oats
- G6 - Miscellaneous Grain & Hay
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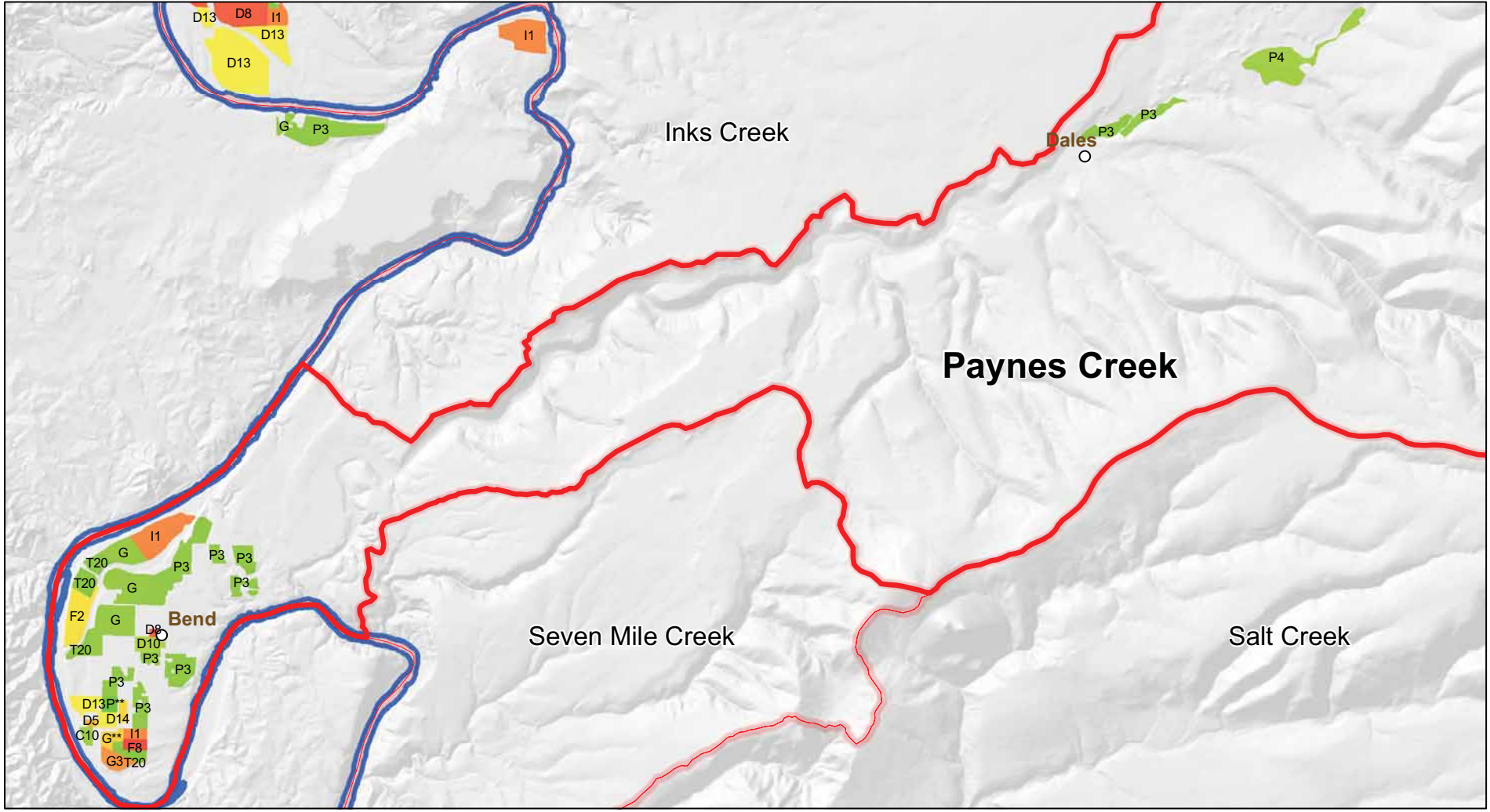
- P1 - Alfalfa & alfalfa mixtures
- P2 - Clover
- P3 - Mixed Pasture
- P4 - Native Pasture
- P5 - Induced High Water Table Nat. Pas.
- P7 - Turf Farms
- P - Pasture **
- R - Rice
- R - Rice **
- T2 - Asparagus
- T9 - Melons, squash, and cucumbers
- T10 - Onions and Garlic
- T15 - Tomatoes
- T16 - Flowers, Nursery & Tree Farms
- T18 - Miscellaneous Truck Farms
- T19 - Bush Berries
- T20 - Strawberries
- V - Vineyards
- V2 - Wine Grapes
- V - Vineyards **

Urban Areas

Watershed Boundary

** No specific crop was assigned.

http://www.water.ca.gov/landwateruse/lusrvymain.cfm



Tehama East Watershed Assessment

Land Use - Agriculture
Department of Water Resources
Paynes Creek - West

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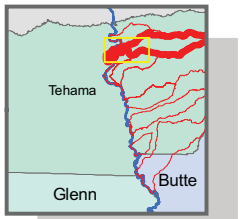
Tehama County Resource Conservation District (c)2010

0 0.5 1 2 Miles



KEY

Land Use - Agriculture

- C3 - Oranges
- C6 - Olives
- C7 - Miscellaneous Subtropical Fruit
- C8 - Kiwis
- C10 - Eucalyptus
- D1 - Apples
- D2 - Apricots
- D3 - Cherries
- D5 - Peaches and Nectarines
- D6 - Pears
- D8 - Prunes
- D9 - Figs
- D10 - Miscellaneous Deciduous
- D12 - Almonds
- D13 - Walnuts
- D14 - Pistachios
- F - Field Crops
- F1 - Cotton
- F2 - Safflower
- F3 - Flax
- F5 - Sugar Beets
- F6 - Corn, Field & Sweet
- F8 - Sudan
- F - Field Crops **
- F10 - Beans, Dry
- F11 - Miscellaneous Field
- F12 - Sunflowers
- Urban Areas
- Watershed Boundary
- G - Grain & Hay Crops
- G1 - Barley
- G2 - Wheat
- G3 - Oats
- G6 - Miscellaneous Grain & Hay
- G - Grain & Hay Crops **
- I1 - Land not cropped for the last 3 years
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- P2 - Clover
- P3 - Mixed Pasture
- P4 - Native Pasture
- P5 - Induced High Water Table Nat. Pas.
- P7 - Turf Farms
- P - Pasture **
- R - Rice
- R - Rice **
- T2 - Asparagus
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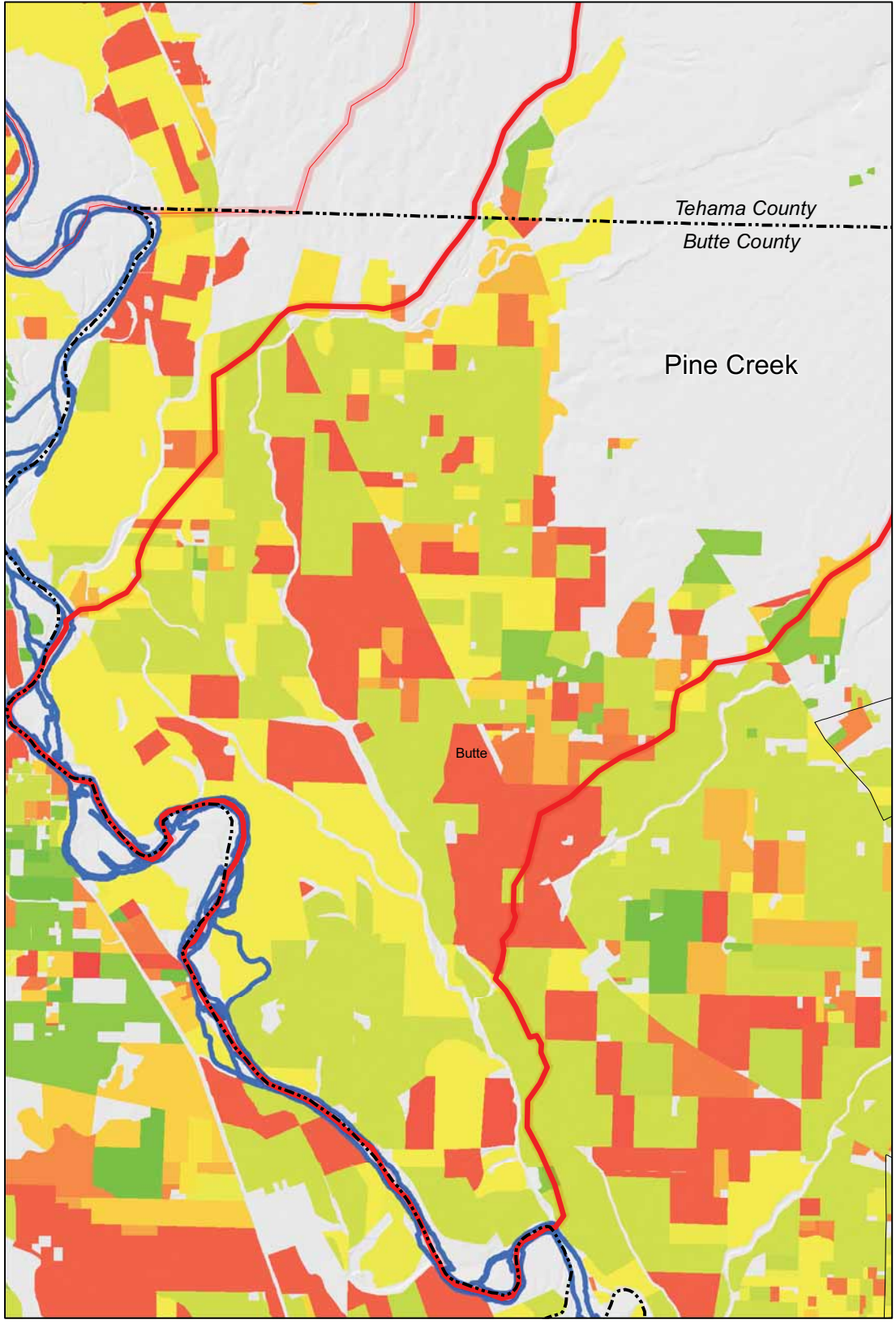
- T10 - Onions and Garlic
- T15 - Tomatoes
- T16 - Flowers, Nursery & Tree Farms
- T18 - Miscellaneous Truck Farms
- T19 - Bush Berries
- T20 - Strawberries
- V - Vineyards
- V2 - Wine Grapes
- V - Vineyards **

** No specific crop was assigned.

http://www.water.ca.gov/landwateruse/lusrvymain.cfm



Tehama East Watershed Assessment

Land Use - Agriculture
Department of Water Resources
Pine Creek

KEY

Land Use - Agriculture

- C3 - Oranges
- C6 - Olives
- C7 - Miscellaneous Subtropical Fruit
- C8 - Kiwis
- C10 - Eucalyptus
- D1 - Apples
- D2 - Apricots
- D3 - Cherries
- D5 - Peaches and Nectarines
- D6 - Pears
- D8 - Prunes
- D9 - Figs
- D10 - Miscellaneous Deciduous
- D12 - Almonds
- D13 - Walnuts
- D14 - Pistachios
- F - Field Crops
- F1 - Cotton
- F2 - Safflower
- F3 - Flax
- F5 - Sugar Beets
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- F8 - Sudan
- F - Field Crops **
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- F12 - Sunflowers
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- G1 - Barley
- G2 - Wheat
- G3 - Oats
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- G - Grain & Hay Crops **
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- P3 - Mixed Pasture
- P4 - Native Pasture
- P5 - High Water Nat. Pas.
- P7 - Turf Farms
- P - Pasture **
- R - Rice
- R - Rice **
- T2 - Asparagus
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- T10 - Onions and Garlic
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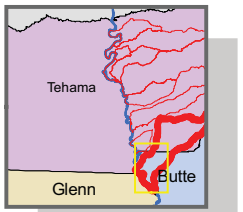
- T16 - Flowers, Nursery & Tree Farms
- T18 - Miscellaneous Truck Farms
- T19 - Bush Berries
- T20 - Strawberries
- V - Vineyards
- V2 - Wine Grapes
- V - Vineyards **

** No specific crop was assigned.

http://www.water.ca.gov/landwateruse/lusrvymain.cfm

Urban Areas

Watershed Boundary



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Tehama County Resource Conservation District
(c) 2010

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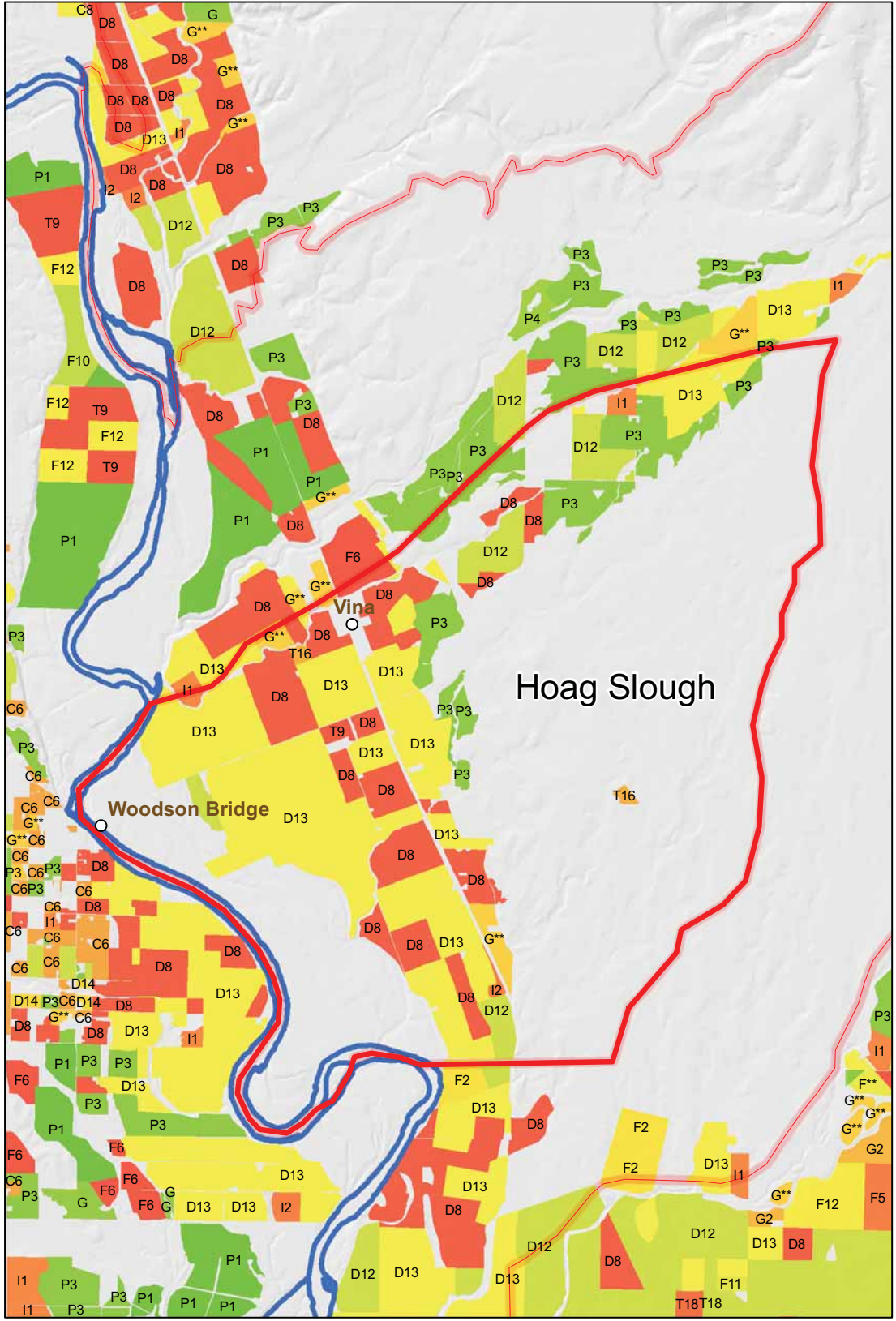
Miles

Tehama East Watershed Assessment

Land Use - Agriculture
Department of Water Resources
Hoag Slough



KEY

Land Use - Agriculture

- C3 - Oranges
- C6 - Olives
- C7 - Miscellaneous Subtropical Fruit
- C8 - Kiwis
- C10 - Eucalyptus
- D1 - Apples
- D2 - Apricots
- D3 - Cherries
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- D9 - Figs
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- D13 - Walnuts
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- F2 - Safflower
- F3 - Flax
- F5 - Sugar Beets
- F6 - Corn, Field & Sweet
- F8 - Sudan
- F - Field Crops **
- F10 - Beans, Dry
- F11 - Miscellaneous Field
- F12 - Sunflowers

** No specific crop was assigned.

http://www.water.ca.gov/landwateruse/lusrvymain.cfm

- G - Grain & Hay Crops
- G1 - Barley
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- G3 - Oats
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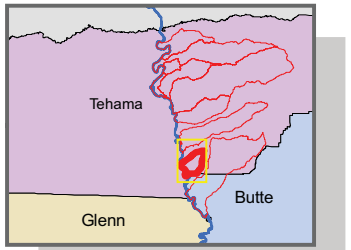
- T19 - Bush Berries
- T20 - Strawberries
- V - Vineyards
- V2 - Wine Grapes
- V - Vineyards **

Urban Areas

Watershed Boundary



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Tehama County Resource Conservation District
(c) 2010

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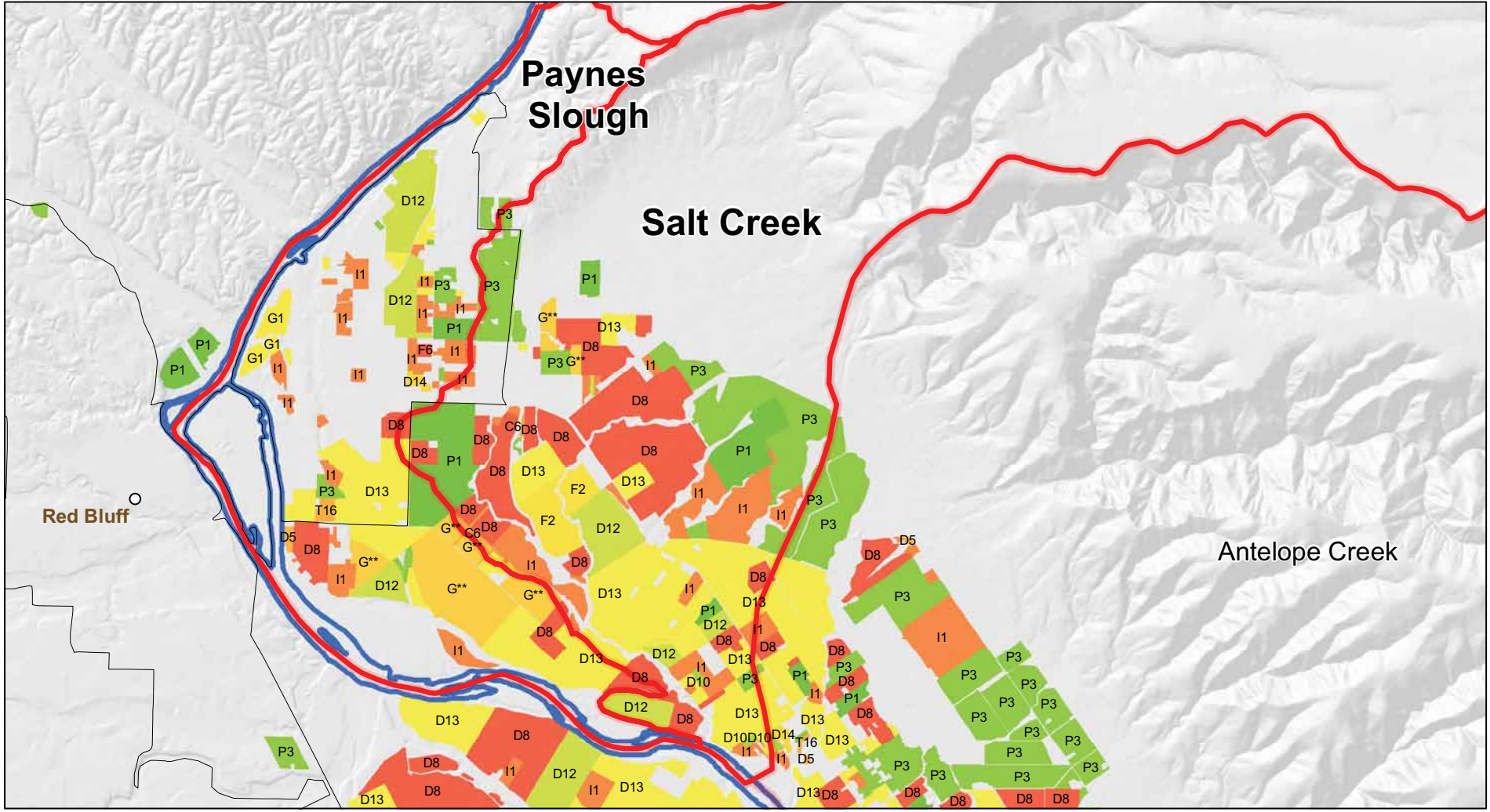

Tehama East Watershed Assessment

Land Use - Agriculture

Department of Water Resources

Paynes Slough

Tehama County Resource Conservation District (c)2010

N W E S

0 0.5 1 2 Miles

Tehama Glenn Butte

KEY

Urban Areas

Watershed Boundary

Land Use - Agriculture

- C3 - Oranges
- C6 - Olives
- C7 - Miscellaneous Subtropical Fruit
- C8 - Kiwis
- C10 - Eucalyptus
- D1 - Apples
- D2 - Apricots
- D3 - Cherries
- D5 - Peaches and Nectarines
- D6 - Pears
- D8 - Prunes
- D9 - Figs
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- D12 - Almonds
- D13 - Walnuts
- D14 - Pistachios
- F - Field Crops
- F1 - Cotton
- F2 - Safflower
- F3 - Flax
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- V - Vineyards
- V2 - Wine Grapes
- V - Vineyards **

** No specific crop was assigned.

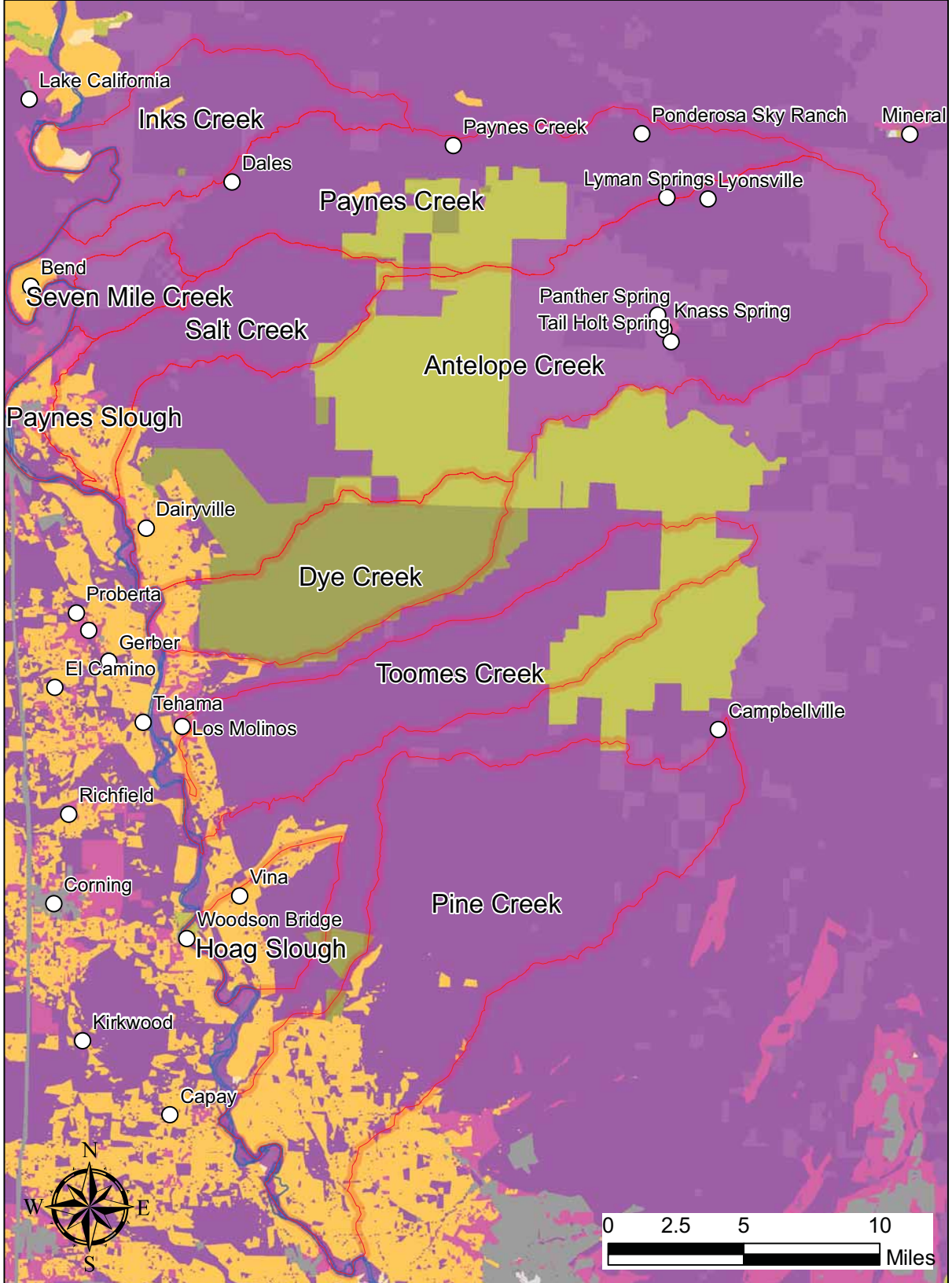
http://www.water.ca.gov/landwateruse/lusrvymain.cfm

Maps by Characteristics

Management Scapes

Tehama East Watershed Assessment

Management Scapes
CalFire - FMMP (2000)
Tehama East Watersheds



This dataset depicts "major land management types in California. These classes reflect the differing land uses, priorities, habitat, and natural resource values that exist in the state and thus the different management environments that they fall under. The Management Landscape classes are based on a combination of 1) Land use: urban, agriculture, reserve, working (managed forest or range); 2) Housing density; 3) Ownership: public, private."

This dataset spatially depicts "urban areas, reserved lands, and the "working landscape," areas currently managed (typically for agriculture, timber or livestock production) that also provide important values such as wildlife habitat and open space. The working landscape is qualified based on housing density, which influences management practices as well as potential for future development." Quoted from: http://frap.cdf.ca/gov/data/frapgisdata/output/mgmtscape.txt

KEY

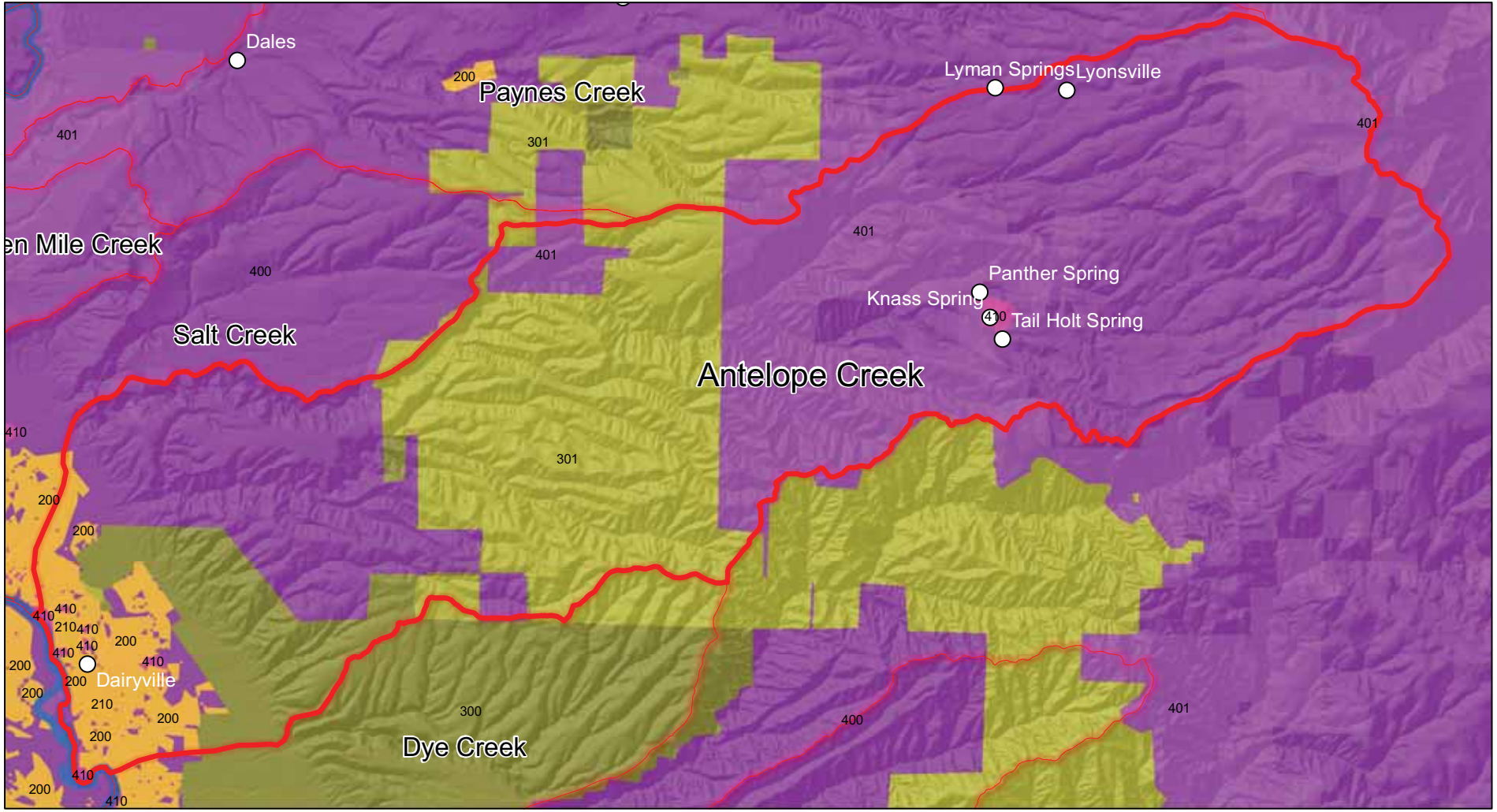
Managementscape Grid Codes

- 110 - URBAN/PRIVATE
- 111 - URBAN/PUBLIC
- 200 - AG/SPARSE RES/PRIVATE
- 201 - AG/SPARSE RES/PUBLIC
- 210 - AG/RURAL RES/PRIVATE
- 300 - RESERVE/SPARSE RES/PRIVATE
- 301 - RESERVE/SPARSE RES/PUBLIC
- 310 - RESERVE/RURAL RES/PRIVATE
- 311 - RESERVE/RURAL RES/PUBLIC
- 400 - WORKING/SPARSE RES/PRIVATE
- 401 - WORKING/SPARSE RES/PUBLIC
- 410 - WORKING/RURAL RES/PRIVATE
- 411 - WORKING/RURAL RES/PUBLIC

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=mgmtscape

Watershed Boundary

Sacramento River



Tehama East Watershed Assessment

Managementscapes
CalFire - FMMP (2000)
Antelope Creek

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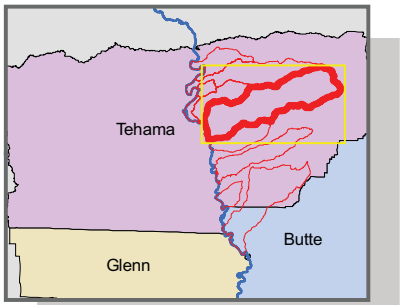
Miles

Tehama County Resource Conservation District
(c) 2010

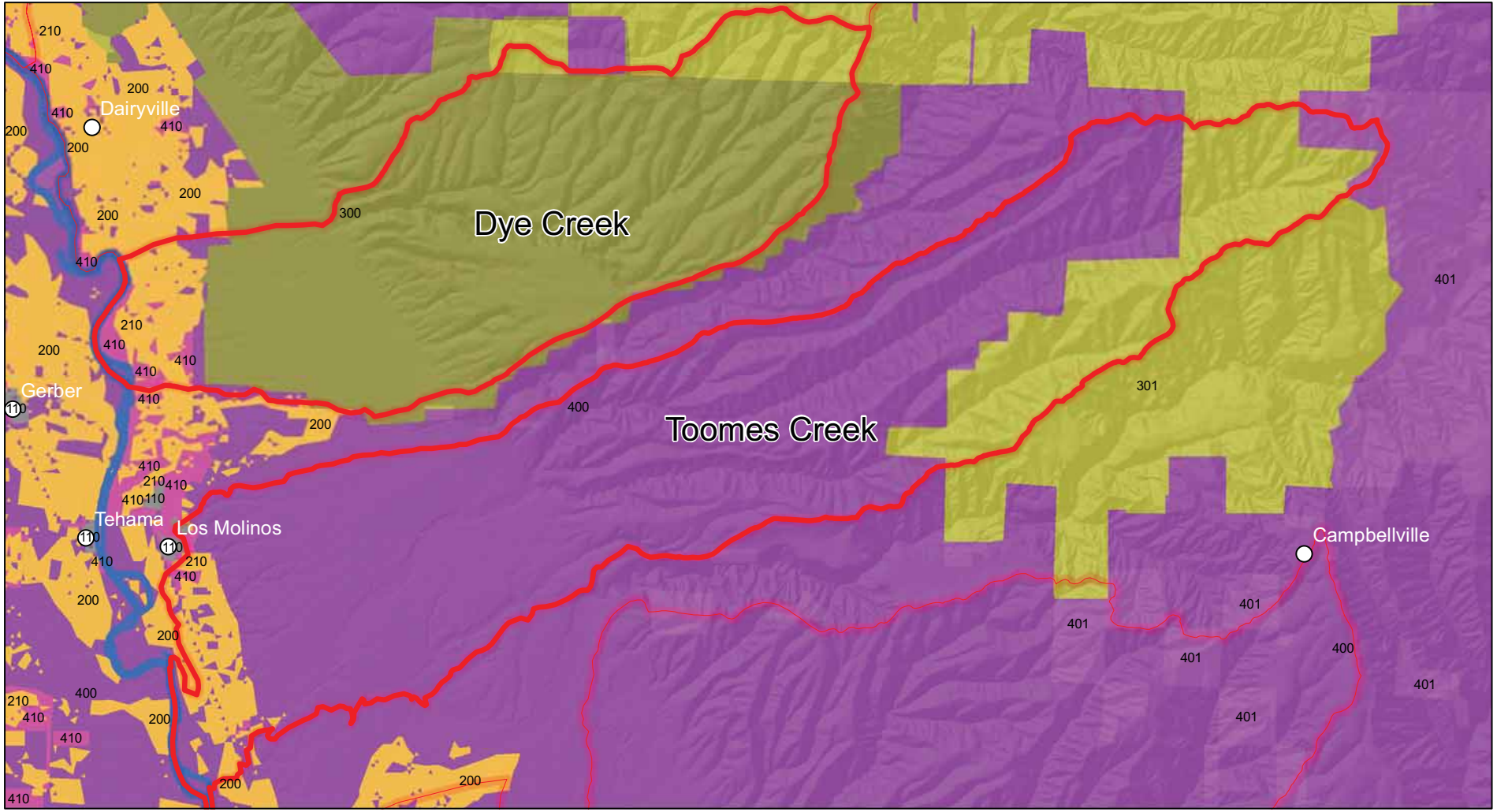
Managementscape Grid Code

- 110 - URBAN/PRIVATE
- 111 - URBAN/PUBLIC
- 200 - AG/SPARSE RES/PRIVATE
- 201 - AG/SPARSE RES/PUBLIC
- 210 - AG/RURAL RES/PRIVATE
- 300 - RESERVE/SPARSE RES/PRIVATE
- 301 - RESERVE/SPARSE RES/PUBLIC
- 310 - RESERVE/RURAL RES/PRIVATE
- 311 - RESERVE/RURAL RES/PUBLIC
- 400 - WORKING/SPARSE RES/PRIVATE
- 401 - WORKING/SPARSE RES/PUBLIC
- 410 - WORKING/RURAL RES/PRIVATE
- 411 - WORKING/RURAL RES/PUBLIC

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=mgmtscape



Watershed Boundary
Sacramento River
Communities



Tehama East Watershed Assessment

Managementscapes
CalFire - FMMP (2000)
Dye Creek and Toomes Creek

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Tehama County Resource Conservation District
(c) 2010

0 2 4 8
Miles

Managementscape Grid Code

- 110 - URBAN/PRIVATE
- 111 - URBAN/PUBLIC
- 200 - AG/SPARSE RES/PRIVATE
- 201 - AG/SPARSE RES/PUBLIC
- 210 - AG/RURAL RES/PRIVATE
- 300 - RESERVE/SPARSE RES/PRIVATE
- 301 - RESERVE/SPARSE RES/PUBLIC
- 310 - RESERVE/RURAL RES/PRIVATE
- 311 - RESERVE/RURAL RES/PUBLIC
- 400 - WORKING/SPARSE RES/PRIVATE
- 401 - WORKING/SPARSE RES/PUBLIC
- 410 - WORKING/RURAL RES/PRIVATE
- 411 - WORKING/RURAL RES/PUBLIC

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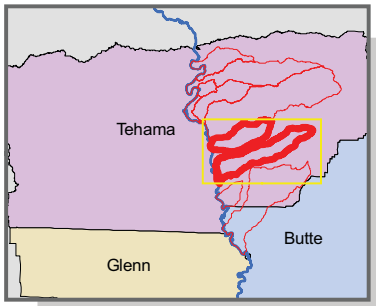
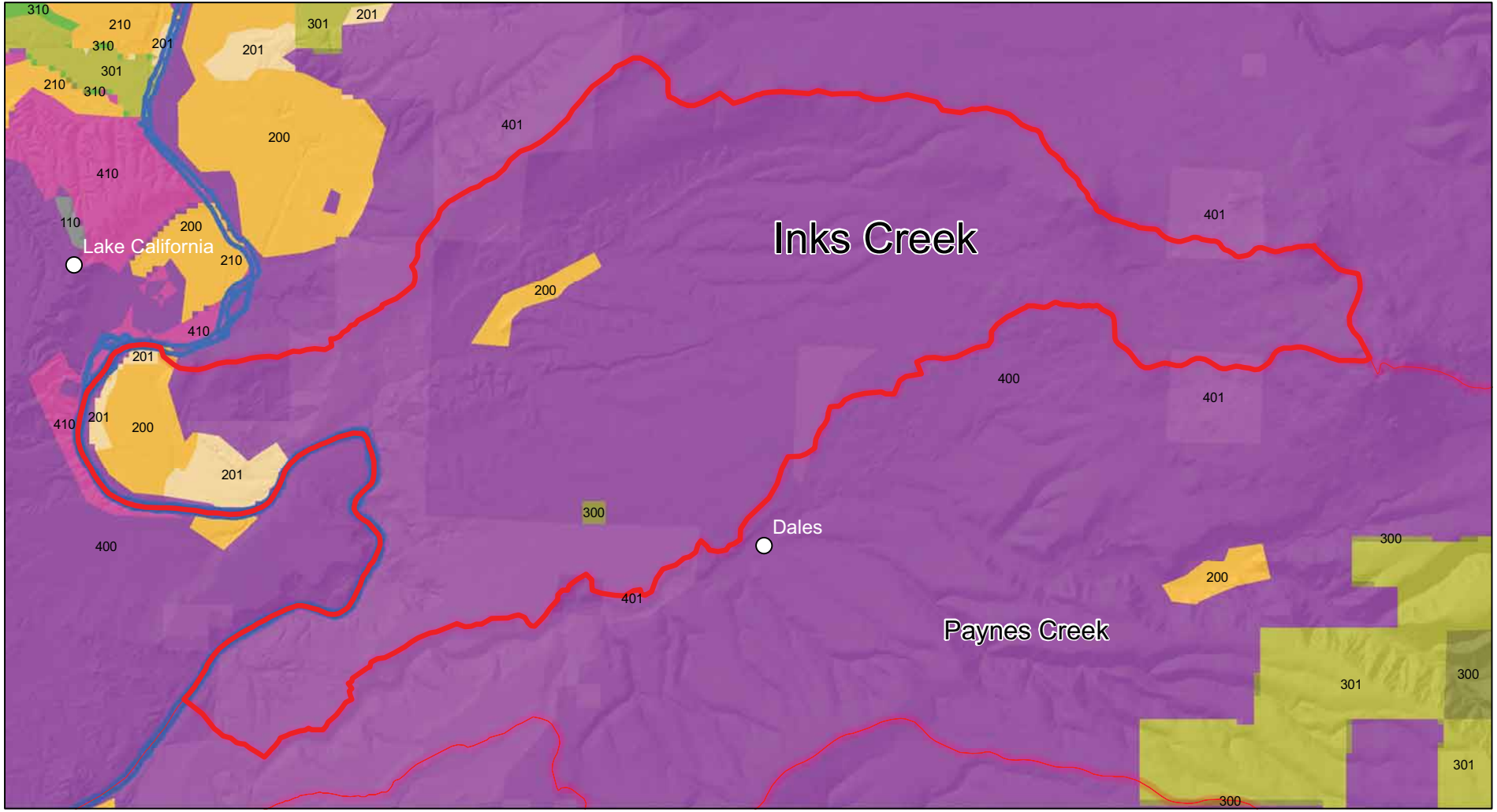


Watershed Boundary
Sacramento River
Communities



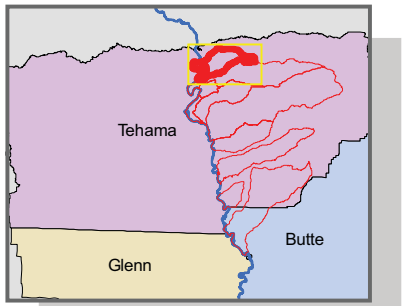
Tehama East Watershed Assessment

Managementscapes
CalFire - FMMP (2000)
Inks Creek

Managementscape Grid Code

- 110 - URBAN/PRIVATE
- 111 - URBAN/PUBLIC
- 200 - AG/SPARSE RES/PRIVATE
- 201 - AG/SPARSE RES/PUBLIC
- 210 - AG/RURAL RES/PRIVATE
- 300 - RESERVE/SPARSE RES/PRIVATE
- 301 - RESERVE/SPARSE RES/PUBLIC
- 310 - RESERVE/RURAL RES/PRIVATE
- 311 - RESERVE/RURAL RES/PUBLIC
- 400 - WORKING/SPARSE RES/PRIVATE
- 401 - WORKING/SPARSE RES/PUBLIC
- 410 - WORKING/RURAL RES/PRIVATE
- 411 - WORKING/RURAL RES/PUBLIC

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=mgmtscape



- Watershed Boundary
- Sacramento River
- Communities

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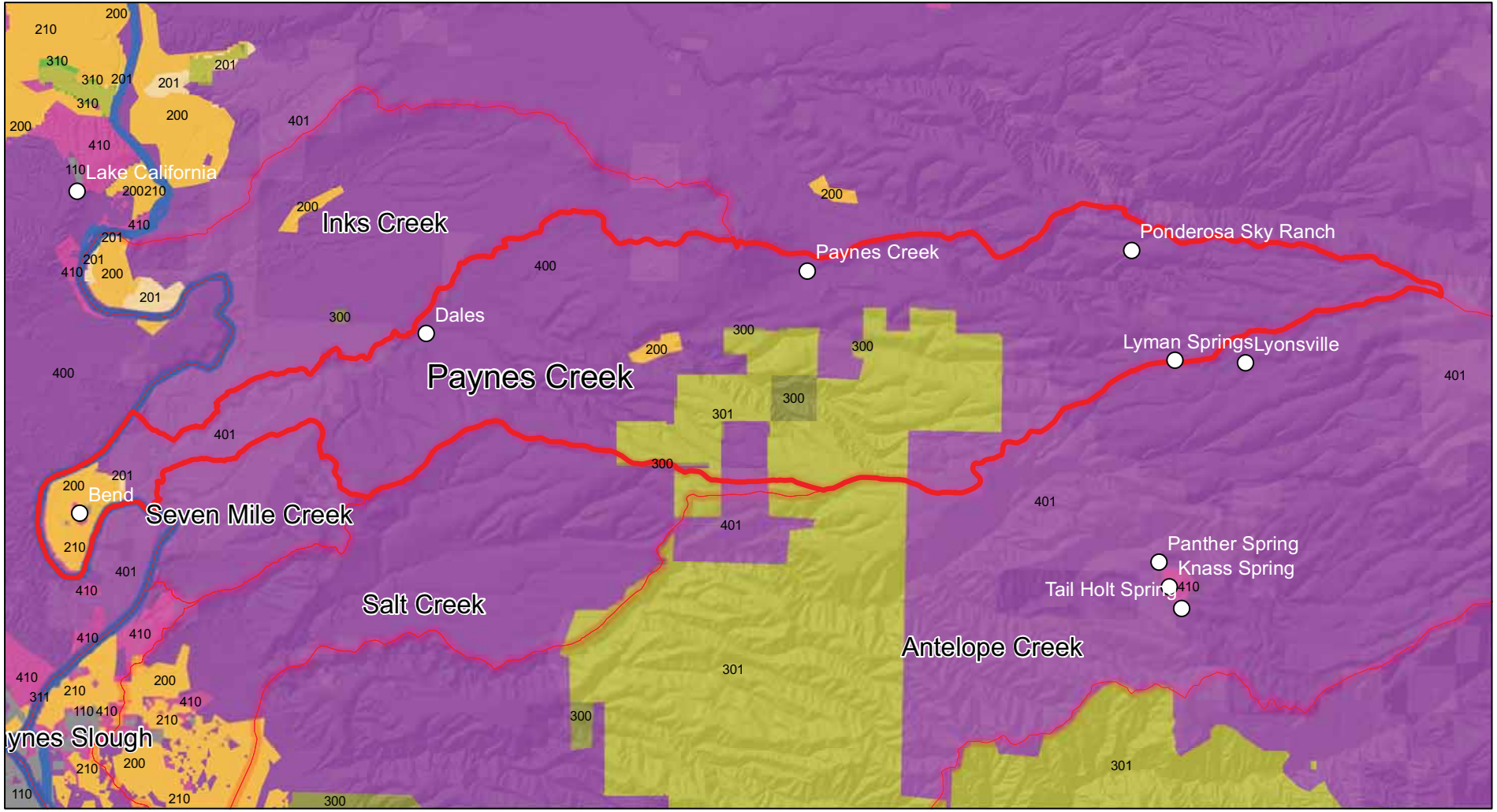
Tehama County Resource Conservation District
(c) 2010

0 1.25 2.5 5 Miles



Tehama East Watershed Assessment

Managementscapes
CalFire - FMMP (2000)
Paynes Creek

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TCRCD

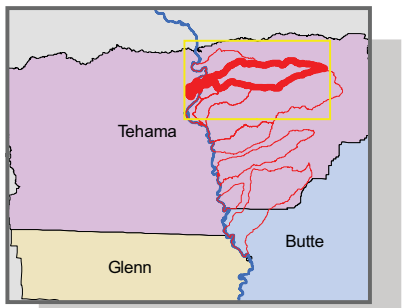
Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10
Miles

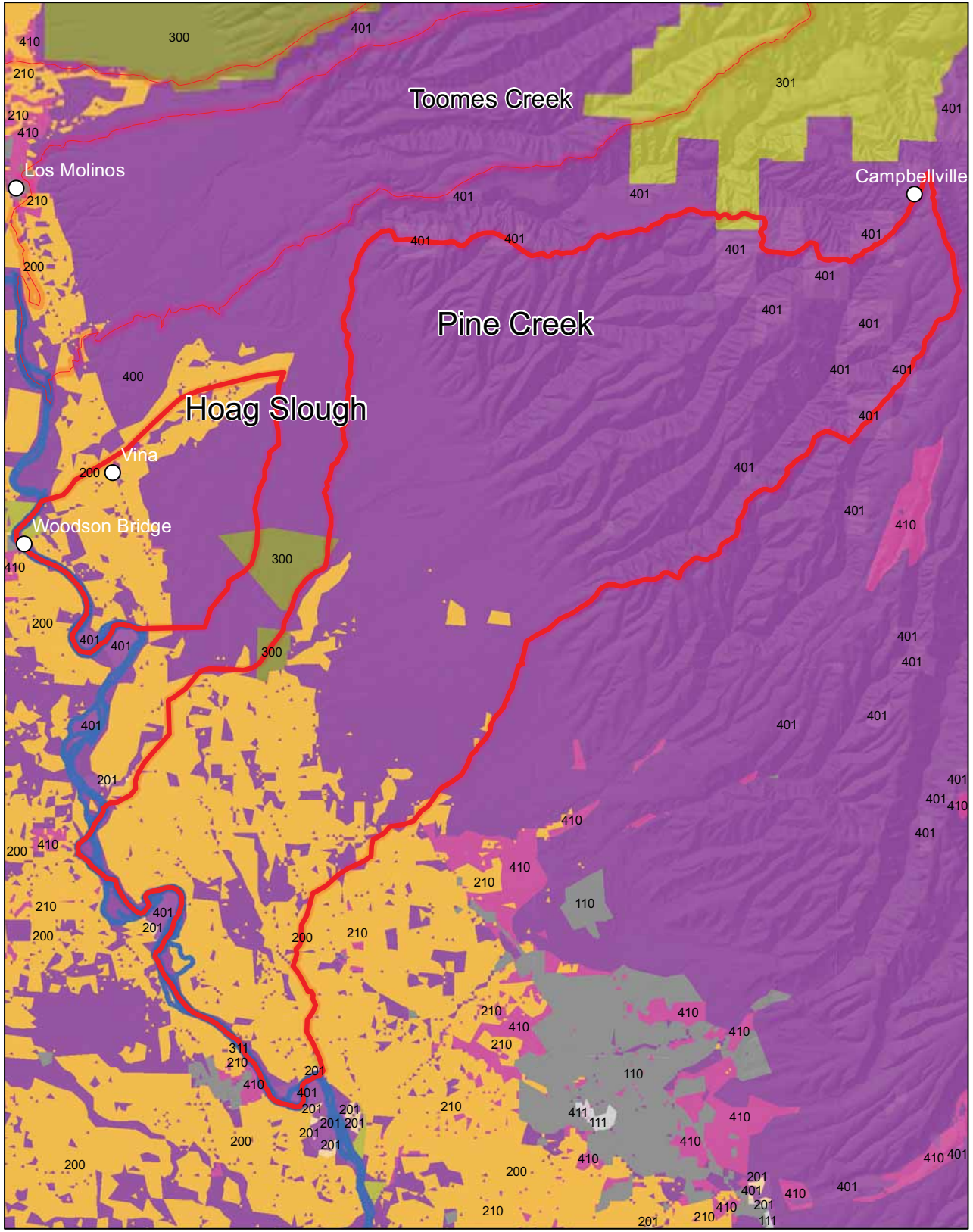
Managementscape Grid Code

- 110 - URBAN/PRIVATE
- 111 - URBAN/PUBLIC
- 200 - AG/SPARSE RES/PRIVATE
- 201 - AG/SPARSE RES/PUBLIC
- 210 - AG/RURAL RES/PRIVATE
- 300 - RESERVE/SPARSE RES/PRIVATE
- 301 - RESERVE/SPARSE RES/PUBLIC
- 310 - RESERVE/RURAL RES/PRIVATE
- 311 - RESERVE/RURAL RES/PUBLIC
- 400 - WORKING/SPARSE RES/PRIVATE
- 401 - WORKING/SPARSE RES/PUBLIC
- 410 - WORKING/RURAL RES/PRIVATE
- 411 - WORKING/RURAL RES/PUBLIC

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=mgmtscape



- Watershed Boundary
- Sacramento River
- Communities



Tehama East Watershed Assessment

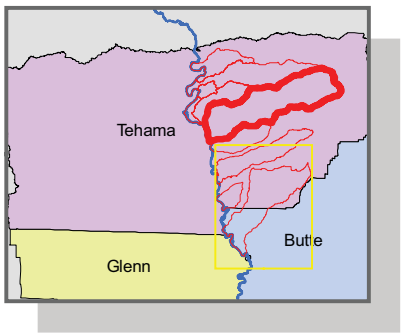
Managementscapes
CalFire - FMMP (2000)
Hoag Slough and Pine Creek

Managementscape Grid Code

- 110 - URBAN/PRIVATE
- 111 - URBAN/PUBLIC
- 200 - AG/SPARSE RES/PRIVATE
- 201 - AG/SPARSE RES/PUBLIC
- 210 - AG/RURAL RES/PRIVATE
- 300 - RESERVE/SPARSE RES/PRIVATE
- 301 - RESERVE/SPARSE RES/PUBLIC
- 310 - RESERVE/RURAL RES/PRIVATE
- 311 - RESERVE/RURAL RES/PUBLIC
- 400 - WORKING/SPARSE RES/PRIVATE
- 401 - WORKING/SPARSE RES/PUBLIC
- 410 - WORKING/RURAL RES/PRIVATE
- 411 - WORKING/RURAL RES/PUBLIC

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=mgmtscape

- Watershed Boundary
- Sacramento River
- Communities



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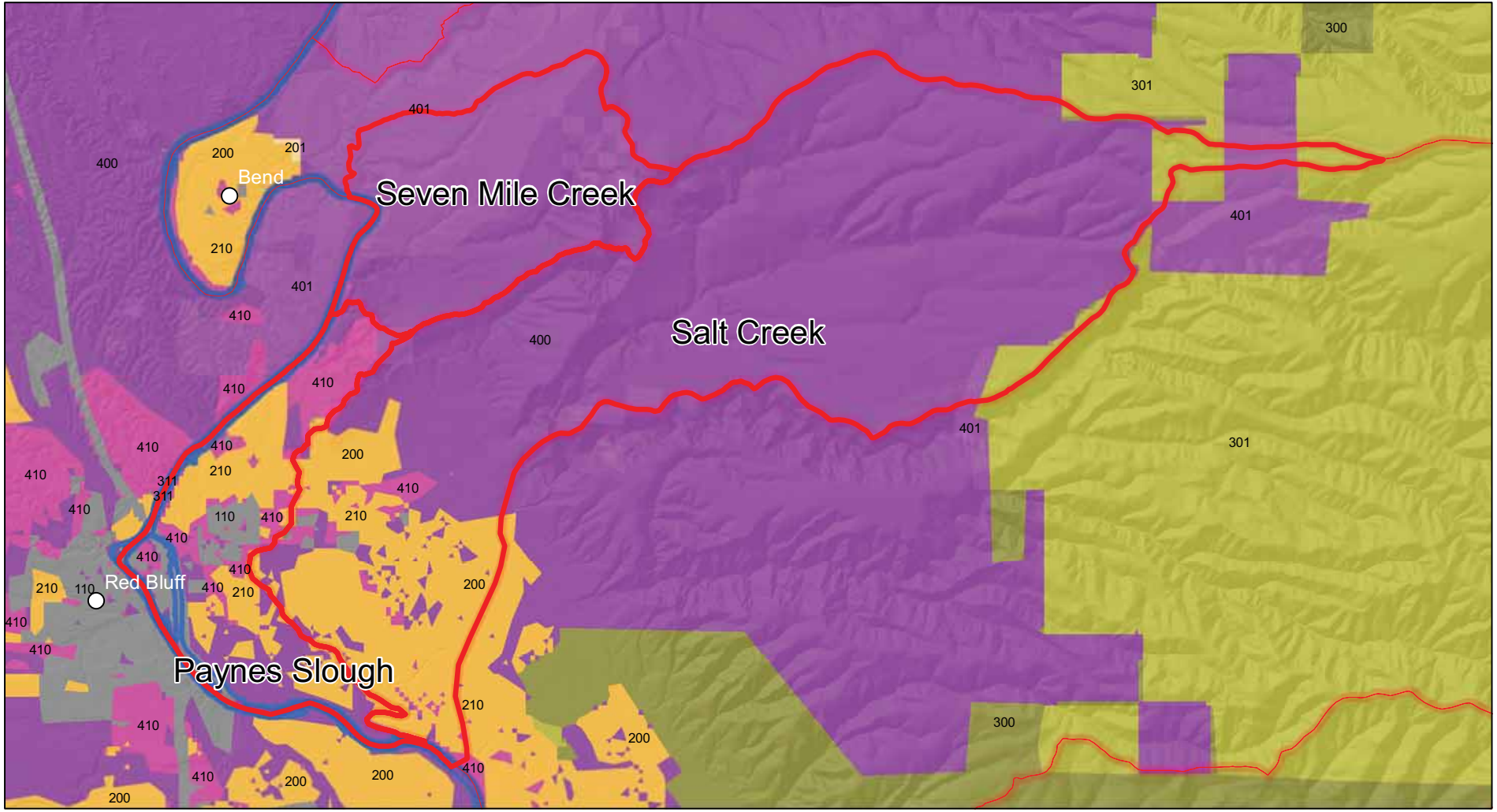
Tehama County Resource Conservation District
(c) 2010



Tehama East Watershed Assessment

Managementscapes
CalFire - FMMP (2000)
Seven Mile Creek, Paynes Slough, and Salt Creek

N
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S

TCRCD

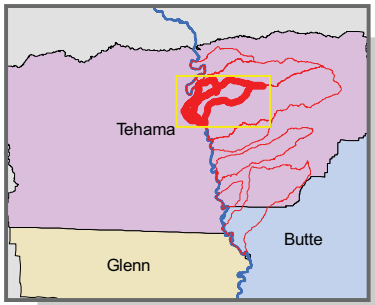
Tehama County Resource Conservation District
(c) 2010

0 1.25 2.5 5
Miles

Managementscape Grid Code

- 110 - URBAN/PRIVATE
- 111 - URBAN/PUBLIC
- 200 - AG/SPARSE RES/PRIVATE
- 201 - AG/SPARSE RES/PUBLIC
- 210 - AG/RURAL RES/PRIVATE
- 300 - RESERVE/SPARSE RES/PRIVATE
- 301 - RESERVE/SPARSE RES/PUBLIC
- 310 - RESERVE/RURAL RES/PRIVATE
- 311 - RESERVE/RURAL RES/PUBLIC
- 400 - WORKING/SPARSE RES/PRIVATE
- 401 - WORKING/SPARSE RES/PUBLIC
- 410 - WORKING/RURAL RES/PRIVATE
- 411 - WORKING/RURAL RES/PUBLIC

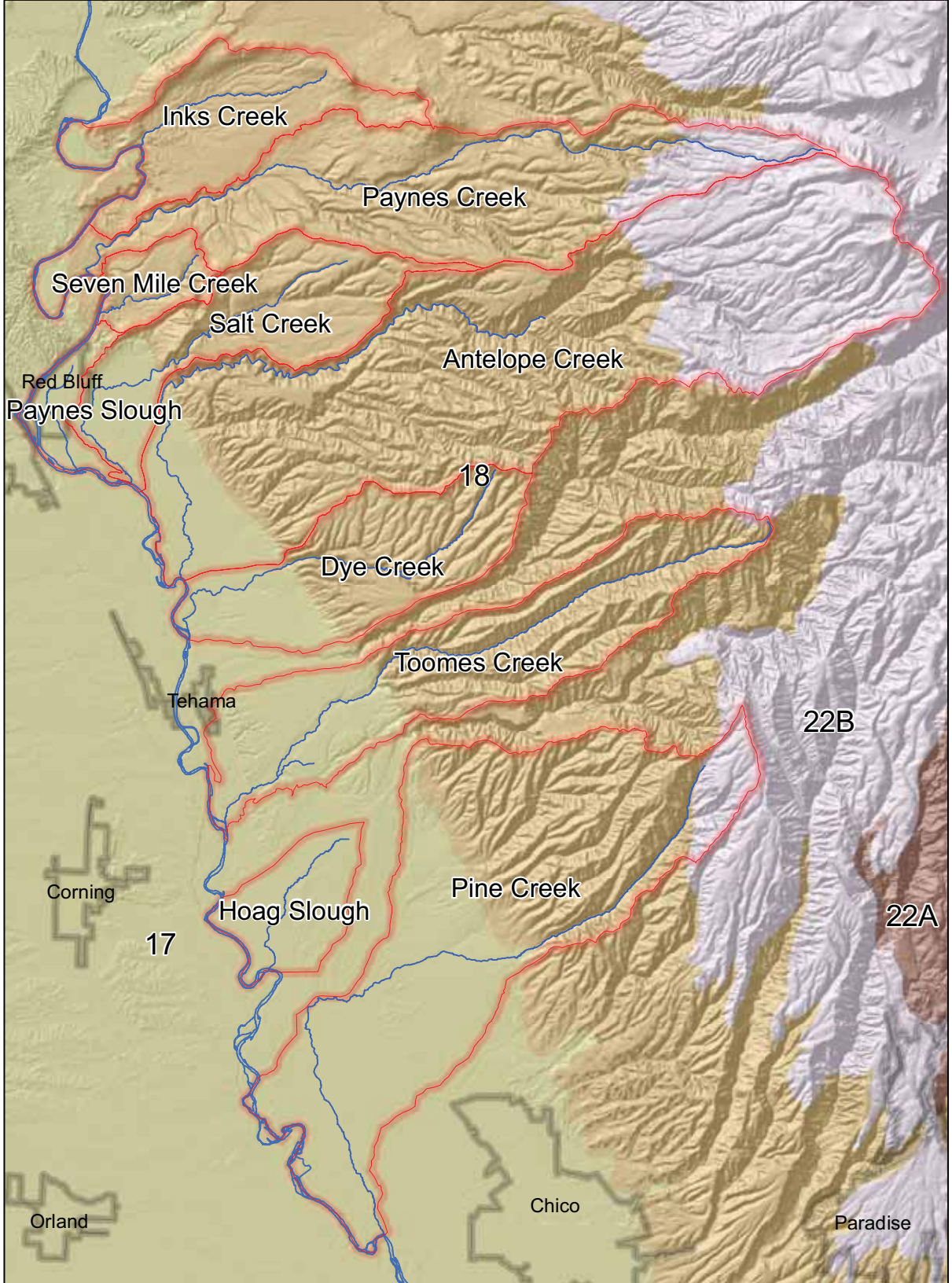
http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=mgmtscape



- Watershed Boundary
- Sacramento River
- Communities

Maps by Characteristics

Miscellaneous Study Area



Tehama East Watershed Assessment

Common Resource Areas
Tehama East Watersheds

"A Common Resource Area (CRA) map delineation is defined as a geographical area where resource concerns, problems, or treatment needs are similar. It is considered a subdivision of an existing Major Land Resource Area (MLRA) map delineation or polygon. Landscape conditions, soil, climate, human considerations, and other natural resource information are used to determine the geographic boundaries of a Common Resource Area."

Quoted from: http://soils.usda.gov/survey/geography/cra.html

KEY

Major Land Resource Areas

- 17 - SACRAMENTO AND SAN JOAQUIN VALLEYS
- 18 - SIERRA NEVADA FOOTHILLS
- 22A - SIERRA NEVADA RANGE, NORTH
- 22B - SIERRA NEVADA RANGE, CENTRAL

http://datagateway.nrcs.usda.gov/

- Streams/Rivers
- Urban Areas
- Watershed Boundary

N
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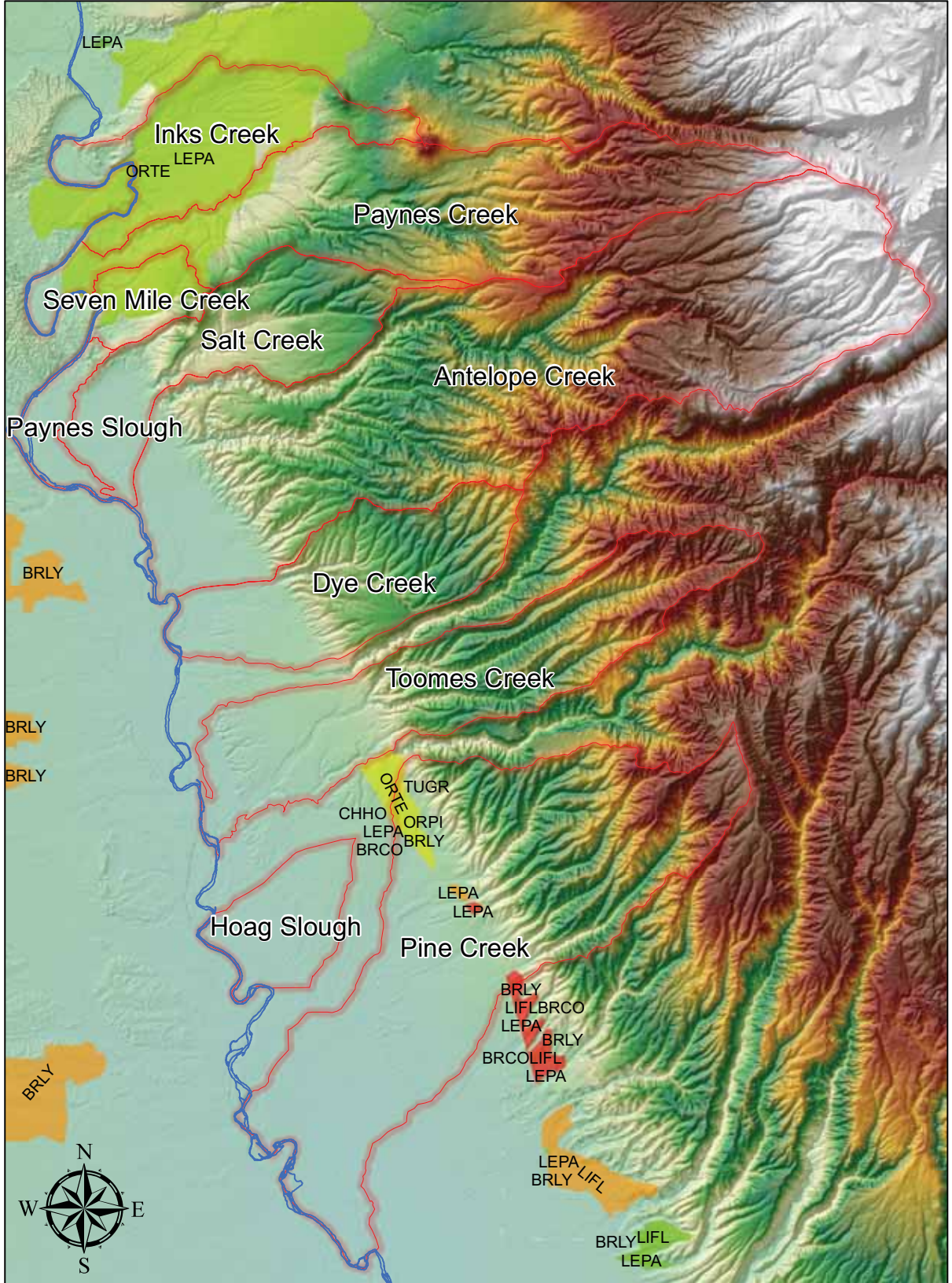
Tehama County Resource Conservation District

0 5 10 Miles



Tehama East Watershed Assessment

Critical Habitat
US Fish and Wildlife Service
Tehama East Watersheds

"Critical habitat is a term defined and used in the Endangered Species Act. It is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. An area is designated as "critical habitat" after publishing a proposed Federal regulation in the Federal Register and then receive and consider public comments on the proposal. The final boundaries of the critical habitat area are also published in the Federal Register."

Quoted from:
http://www.fws.gov/Endangered/factsheets/critical_habitat.pdf

KEY

Critical Habitat Species

- LIFL — Butte County meadowfoam
- BRCO — Conservancy fairy shrimp
- TUGR — Greene's tuctoria
- ORPI — Hairy Orcutt grass
- CHHO — Hoover's spurge
- ORTE — Slender Orcutt grass
- BRLY — Vernal pool fairy shrimp
- LEPA — Vernal pool tadpole shrimp

http://criticalhabitat.fws.gov/

Watershed Boundary

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Tehama County Resource Conservation District
(c) 2010

0 2 4 8 12 16
Miles

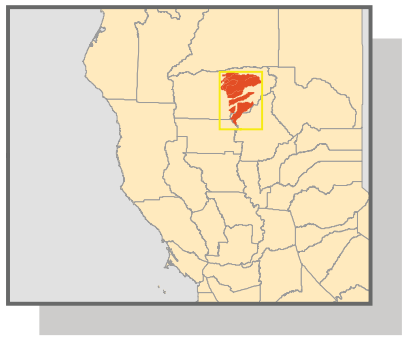
Tehama East Watershed Assessment

Cultural Boundaries
Tehama East Watersheds

Ecological divisions such as watershed boundaries are increasingly being used for land use planning. These natural boundaries are often divided by political and other cultural boundaries applied to the landscape.Problem-solving of ecological and natural resource issues is made more complicated because of these bisecting regions. In addition tothe boundaries shown, the study area is contained within State Senate District #4 and Congressional District #2.

KEY

- State Assembly District #2
- State Assembly District #3
- CalFire Administrative Area - Butte
- CalFire Administrative Area - Butte
- County Boundaries
- Streams/Rivers
- Urban Areas
- Watershed Boundary



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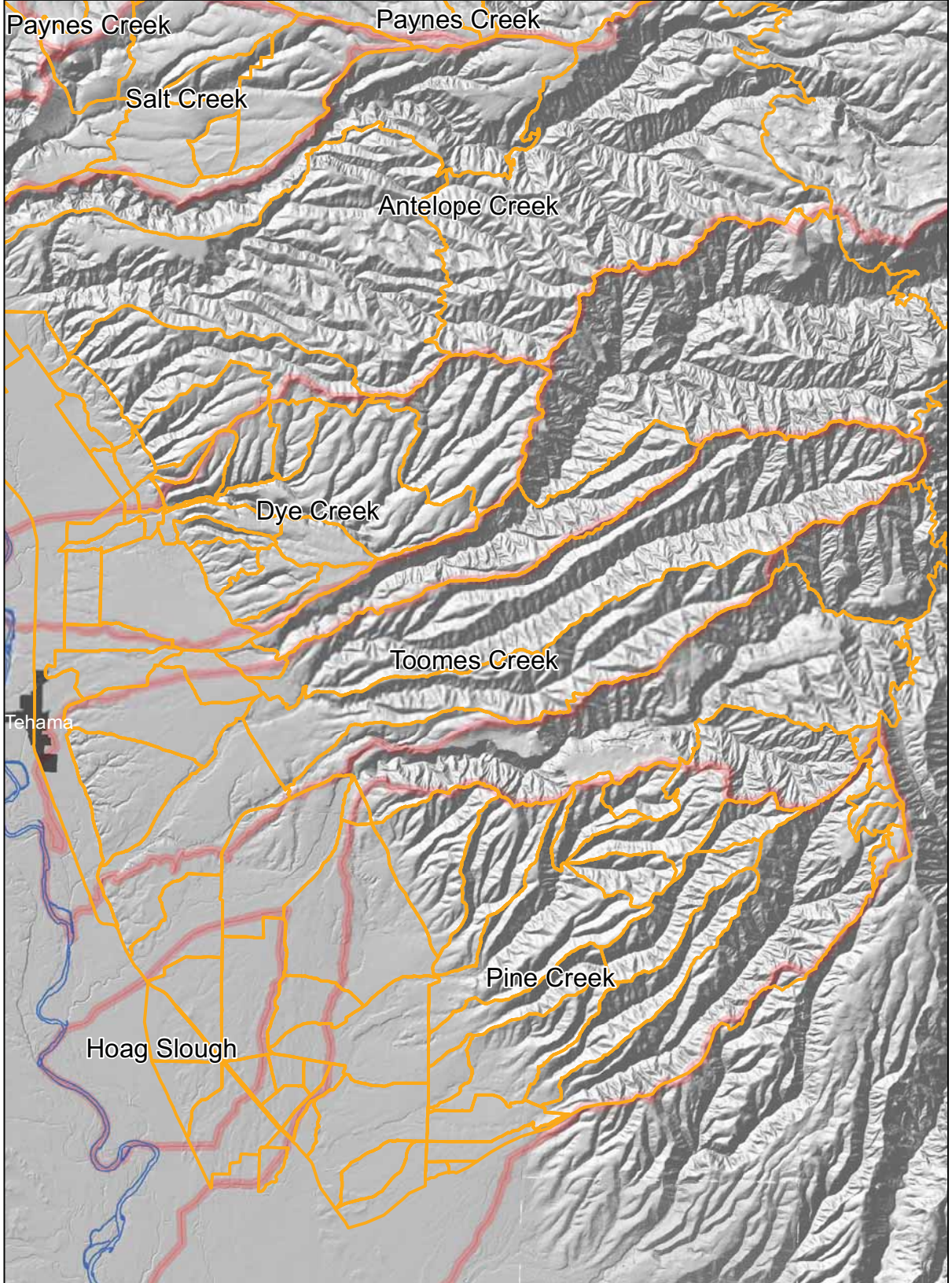
Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10
Miles



Tehama East Watershed Assessment

Defensible Polygons
Tehama East Watersheds

The development of the defensible polygons started with identifing natural and man-made resources in the area, local assets at risk from wildfire, and projects in place to protect these assets. These areas of natural fire containment are based upon topography and existing firelines, including roads, stable rock fences, and water features, such as streams and lakes. These defensible polygons also included boundaries of previously existing Fire Management Units developed by The Nature Conservancy as utilized in their prescribed burning plans for the Dye Creek Preserve, Denny Ranch conservation easement, and the Vina Plains Preserve.

KEY

Defensible Polygon Units
TNC / TCRCD

Urban Areas

Watershed Boundary

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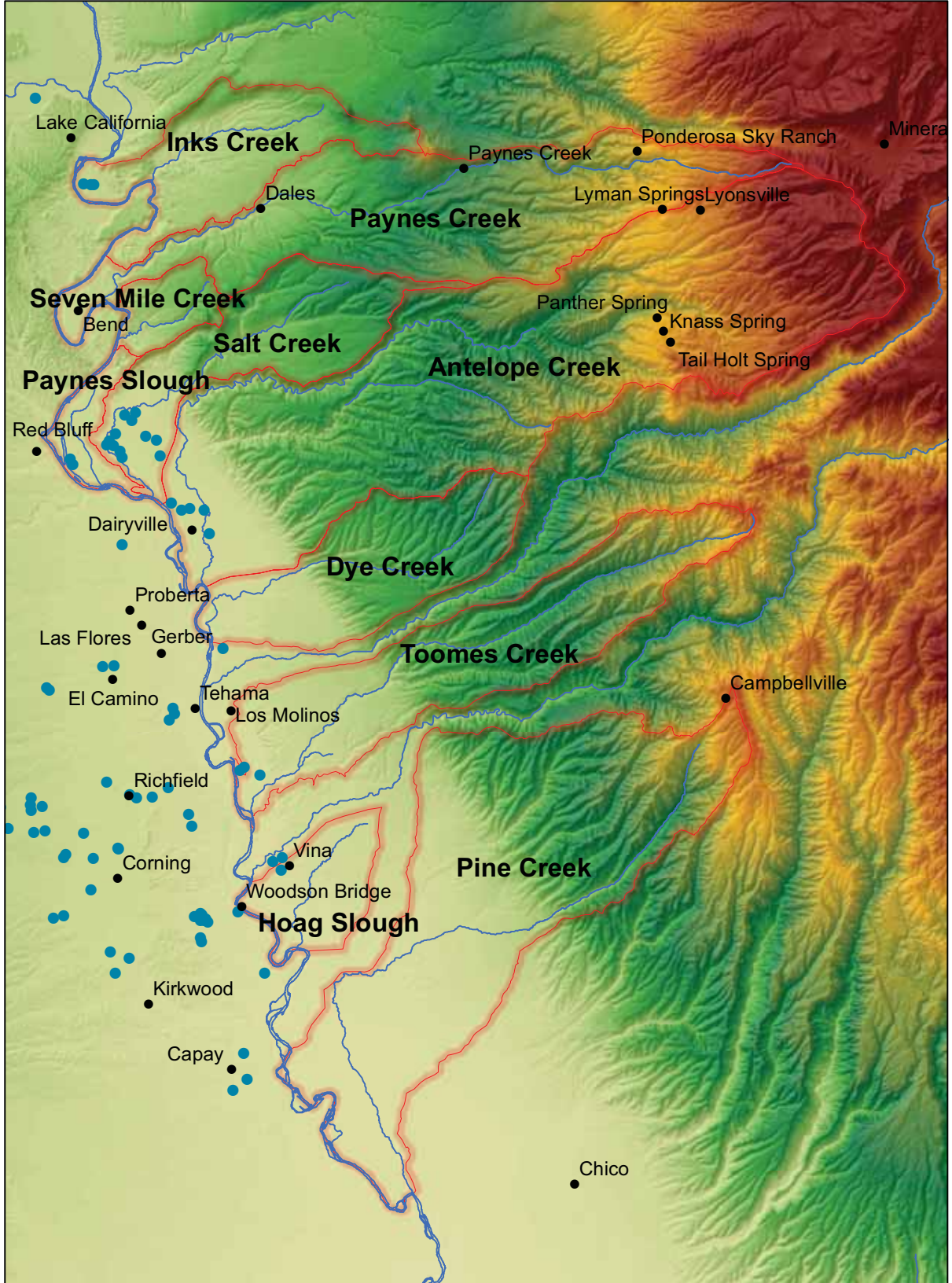
TCRCD

Tehama County Resource Conservation District

3 1.5 0 3
Miles



Tehama East Watershed Assessment

Agricultural Irrigation Evaluations
Northern Sacramento Valley
Mobile Irrigation Lab
Tehama East Watersheds

The Mobile Lab is a service that provides on-site evaluations of individual irrigation systems. Based on these evaluations, a Mobile Lab technician can work with growers to develop irrigation water management plans tailored to their individual needs. The plans include recommendations to improve system performance, such as repairing irrigation heads, developing a maintenance plan, and revising irrigation schedules. Through this service, growers learn to operate their systems more effectively and save water in the process.

Evaluations Performed
By Watershed
Antelope Creek: 5
Dye Creek: 0
Hoag Slough: 1
Inks Creek: 3
Paynes Creek: 0
Paynes Slough: 2
Pine Creek: 0
Salt Creek: 12
Seven Mile Creek: 0
Toomes Creek: 1

KEY

Irrigation Evaluations

Watershed Boundary

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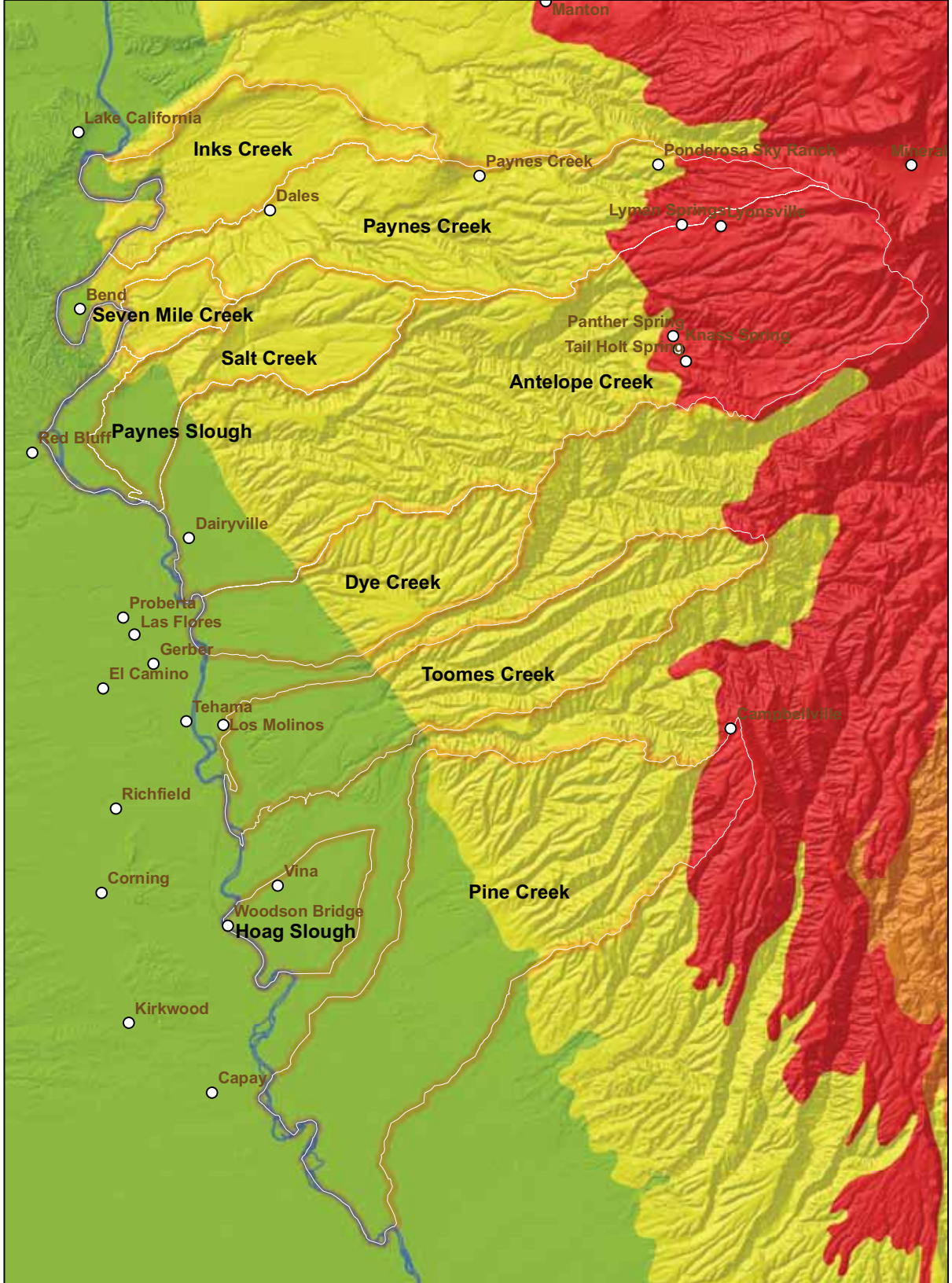
TCRCD

Tehama County Resource Conservation District

0 2.5 5 10
Miles

Tehama East Watershed Assessment

Major Land Resource Areas
Tehama East Watersheds



"Major land resource areas (MLRAs) are geographically associated land resource units (LRUs). Identification of these large areas is important in statewide agricultural planning and has value in interstate, regional, and national planning.

The 278 major land resource areas are designated by Arabic numbers and identified by a descriptive geographic name in Agriculture Handbook 296. For example, MLRA 1 (Northern Pacific Coast Range, Foothills, and Valleys) is on the west coast; MLRA 157 (Arid and Semiarid Low Mountain Slopes) is in Hawaii; MLRA 227 (Copper River Basin) is in Alaska; MLRA 270 (Humid Mountains and Valleys) is in Puerto Rico; and MLRA 190 (Stratovolcanoes of the Mariana Islands) is in the Pacific Basin. Where preexising MLRAs have been revised, an alphabetic suffix is often added to the original Arabic number (e.g., MLRA 102A, MLRA 102B, and MLRA 102C).

The dominant physical characteristics of the major land resource areas are described briefly in Agriculture Handbook 296 The first paragraph lists the extent of each MLRA in each state and the total area. Major cities, highways, and culturally significant Federal- and state-owned lands within each MLRA are also listed. The remaining headings for each MLRA include, physiography, geology, climate, water, soils, biological resources, and land use."

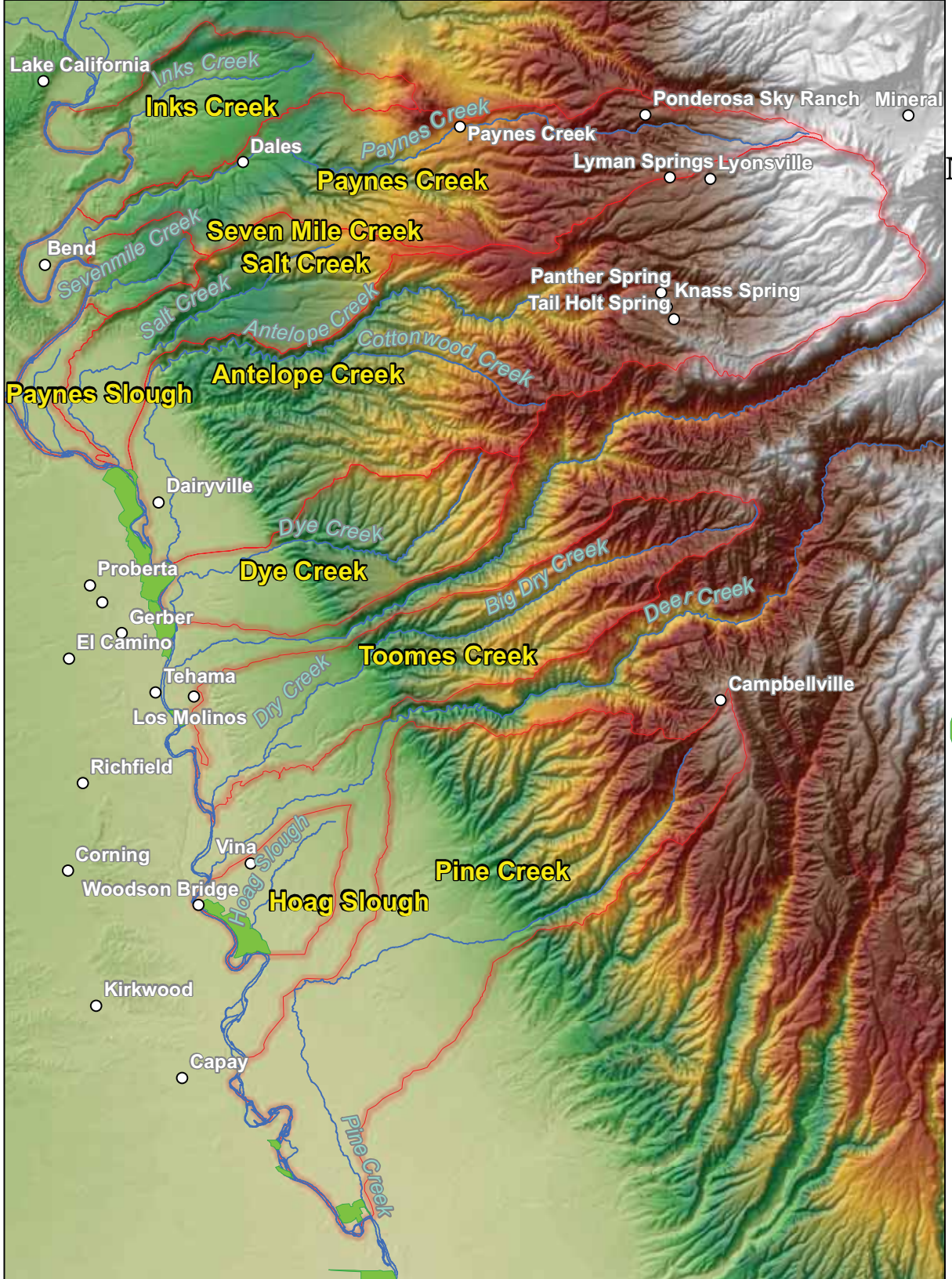
Quoted from:
http://soils.usda.gov/survey/geography/mlra/mlra_definitions.html

KEY
MLRA96

- 17-Sacramento and San Joaquin Valleys
- 18-Sierra Nevada Foothills
- 22A-Sierra Nevada Mountains
- 22B-Southern Cascade Mountains
- Watershed Boundary

0 2.5 5 10 Miles

N W E S



Tehama East Watershed Assessment

Sacramento National Wildlife Refuge Complex US Fish & Wildlife Service Tehama East Watersheds

"The Complex consists of five national wildlife refuges (NWR) and three wildlife management areas (WMA) that comprise over 35,000 acres of wetlands and uplands in the Sacramento Valley of California. In addition, there are over 30,000 acres of conservation easements in the Complex. The Refuges and easements are part of the U.S. Fish and Wildlife Service (Service); they serve as resting and feeding areas for nearly half the migratory birds on the Pacific Flyway."

Quoted from:
http://www.fws.gov/sacramentovalleyrefuges/

Legend

Sacramento National Wildlife Refuge Complex
http://www.fws.gov/GIS/data/regional/R8/index.htm

Watershed Boundary

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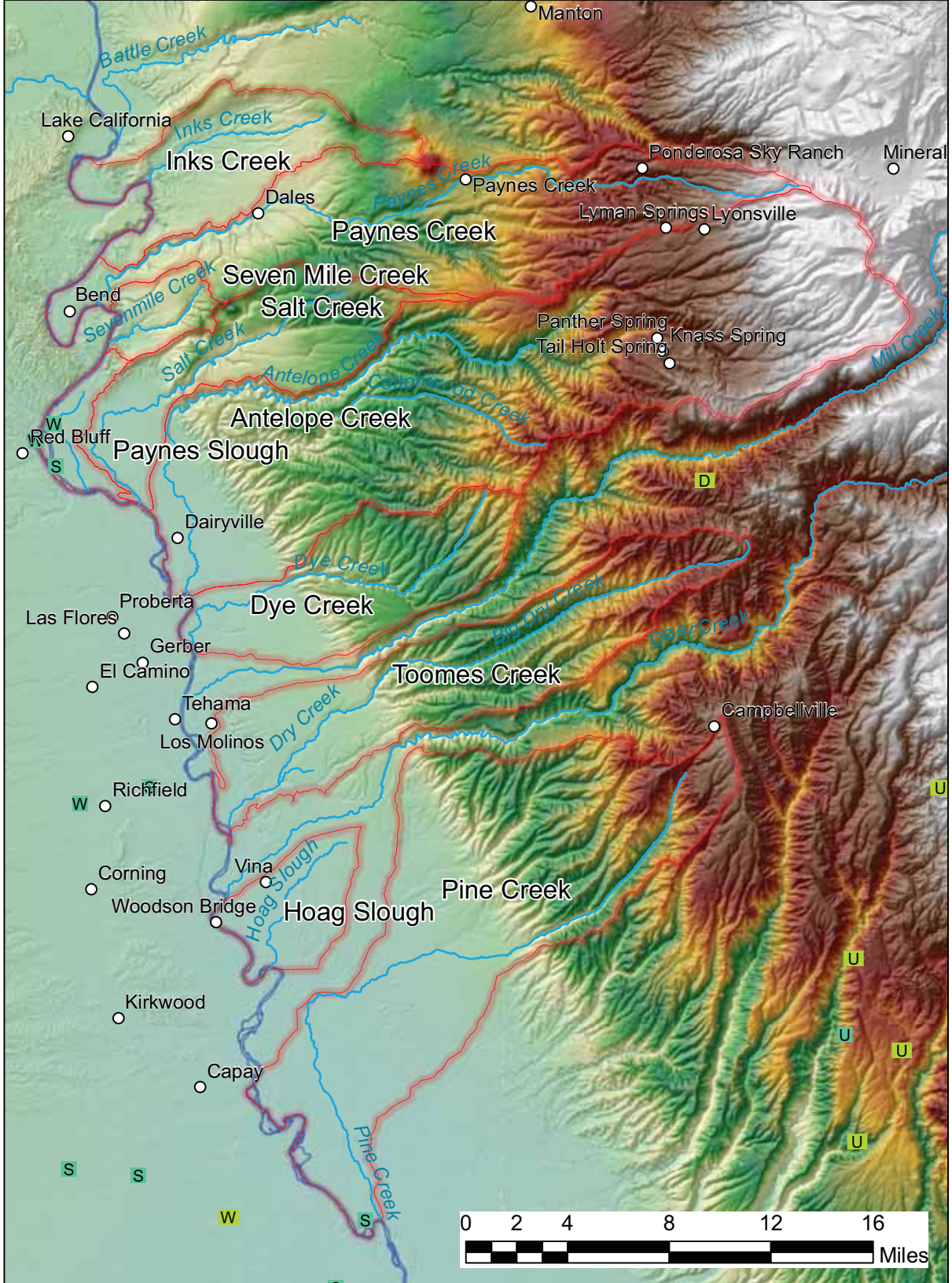
Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10
Miles

Tehama East Watershed Assessment

Principal Areas of Mine Pollution
Tehama East Watersheds



"The PAMP (Principal Areas of Mine Pollution) data set is a compilation of 2,422 mining operations and their potential water-quality problems. This information was originally compiled in 1972 by the Division of Mines and Geology for the State Water Resources Control Board. It was published in a series of volumes of tabular data. The data set includes operations where production exceeded $100,000 or where other factors indicated a high potential for pollution."

Quoted from:
http://ceic.resources.ca.gov/catalog/KernMEARMetadata/StateOfCAPrincipleAreasOfMinePollution.html

Legend

PAMP Sites

- S surface
- S surface tailings
- C surface, crushing, screening
- D surface, dredge
- H surface, hydraulic, pit
- W surface, wash, screen
- W surface, washing
- U underground
- U underground, drift

California Department of Conservation

Watershed Boundary

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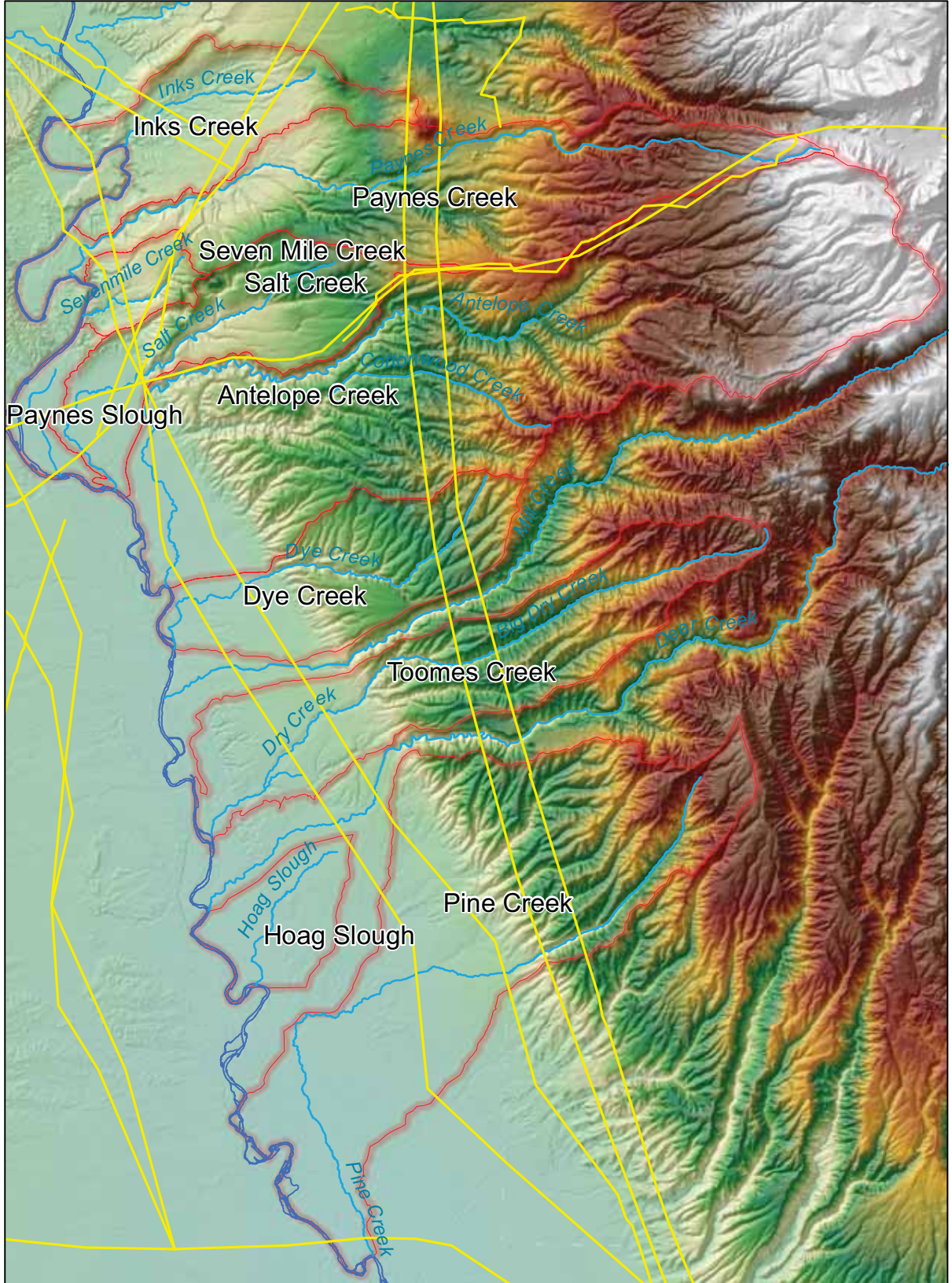

Tehama East Watershed Assessment

High Voltage Powerlines
Tehama East Watersheds

KEY

High Voltage Powerlines

Watershed Boundary

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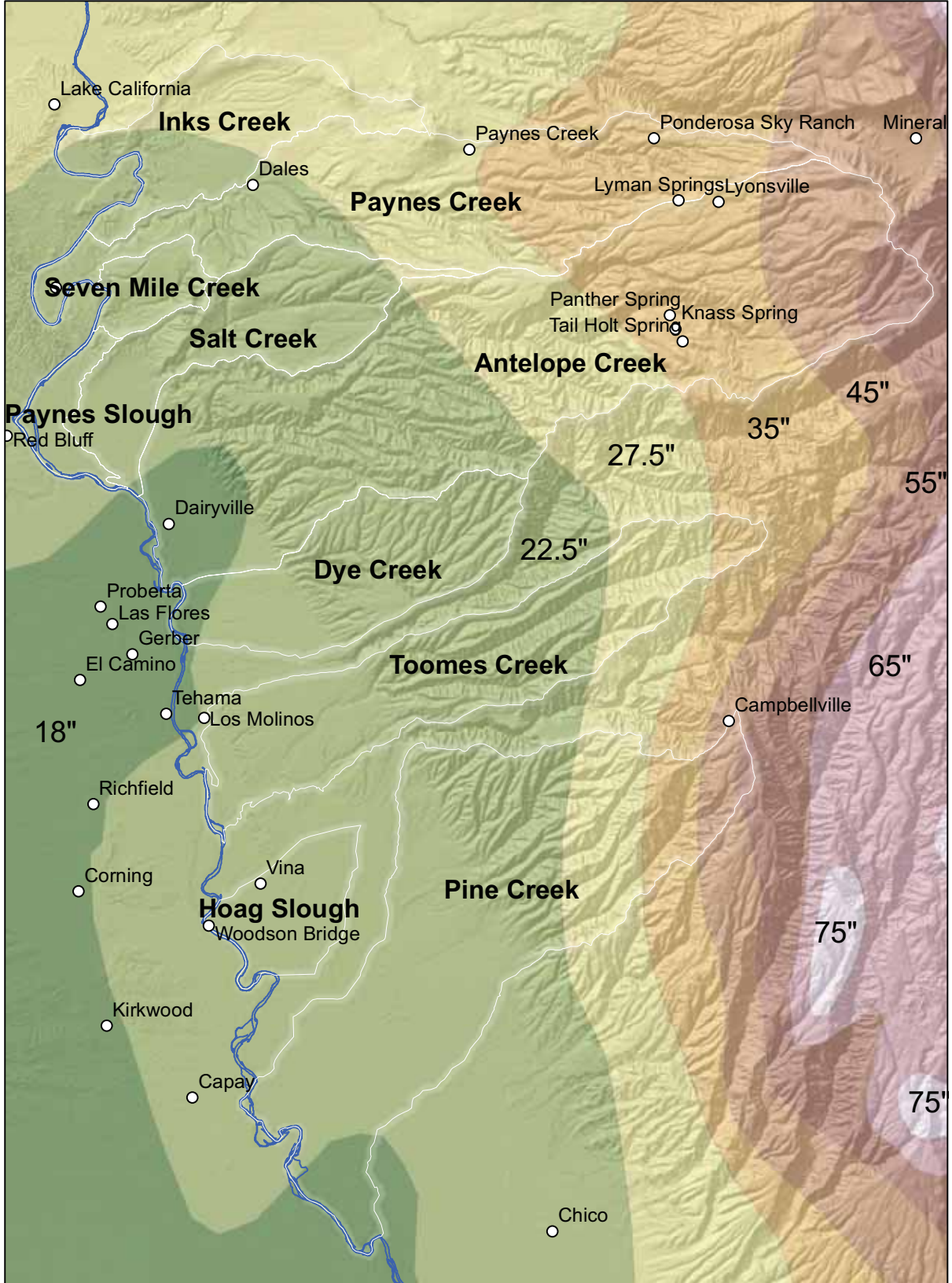
Tehama County Resource Conservation District
(c) 2010

0 2 4 8 12 16
Miles

Tehama East Watershed Assessment

Average Annual Precipitation 1900 - 1960 Tehama East Watersheds



"Isohyetal lines of equal average rainfall were digitized from a 1:1,000,000 source map compiled by S. E. Rantz, U.S. Geological survey, 1969, 1972. The map is based on data covering the period 1900-1960. Average rainfall zones were created by averaging the rainfall for isohyetals bounding each polygon."

Quoted from:
http://frap.cdf.ca.gov/data/frapgisdata/output/rain.txt

KEY

Watershed Boundary

Average Annual Precipitation in Inches

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=rain

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TCRCD

Tehama County Resource Conservation District

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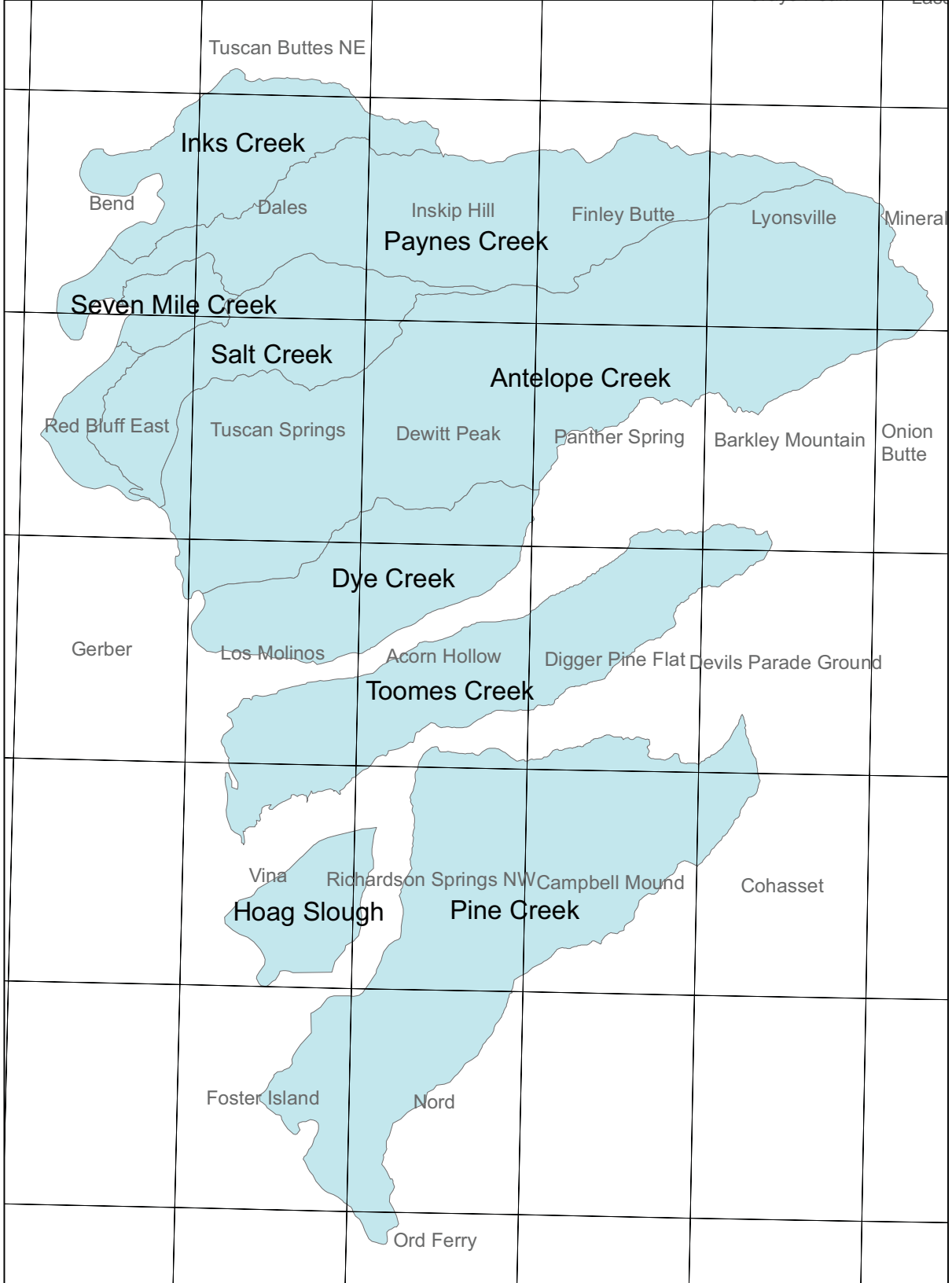
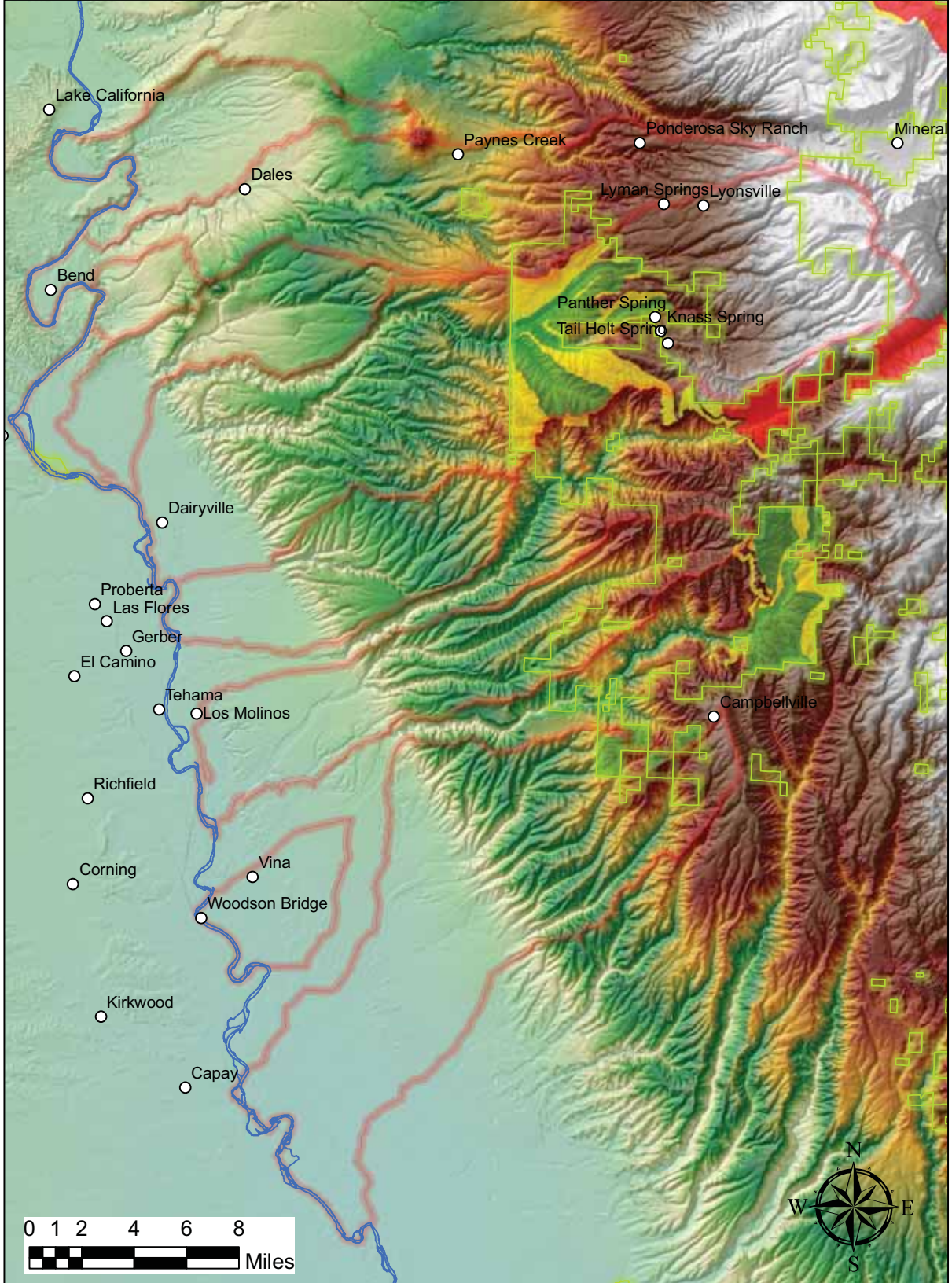
Miles

Tehama East Watershed Assessment

Quad Map
Tehama East Watersheds



0 2 4 8 12 16
Miles



Tehama East Watershed Assessment

Roadless Areas
Federally Owned Lands
Tehama East Watersheds

"This dataset contains National Forest Inventoried Roadless Areas (IRAs) for Region 5 (State of California) and the Toiyabe National Forest. It is a subset of "ira_us_dd", the dataset containing all National Forest Inventoried Roadless Areas (IRAs) for the lower 48 states, including Puerto Rico, to which this metadata document refers.

The IRA data was originally submitted to GSTC by all national forests through their Regional Offices for the Forest Service's Roadless Area Conservation Initiative. The data was consolidated at the GSTC and used in the Draft Environment Impact Statement. Between the draft and final stages of the Environmental Impact Statement, the data was updated by the forests to reflect any corrections to Inventoried Roadless Areas that were based on existing forest plans and administrative record. The data was also supplemented to include Special Designated Area information and to include Inventoried Roadless Areas within Special Designated Areas. The data was resubmitted to the GSTC on July 21, 2000 for consolidation and the completed coverage was used in the Roadless Area Conservation Final Environmental Impact Statement. On October 15, 2002, the Gallatin National Forest submitted a technical correction to the Inventoried Roadless Area GISdatabase. A portion of the original GIS data was corrected to match the 1999 IRA maps that are part of the forest administrative record."

Quoted from:
http://www.fs.fed.us/r5/rsl/projects/gis/data/calcovs/InventoriedRoadlessArea00_1.html

Legend

Roadless Categories

- Other
- Recreation/Wilderness
- Roadless

Agency

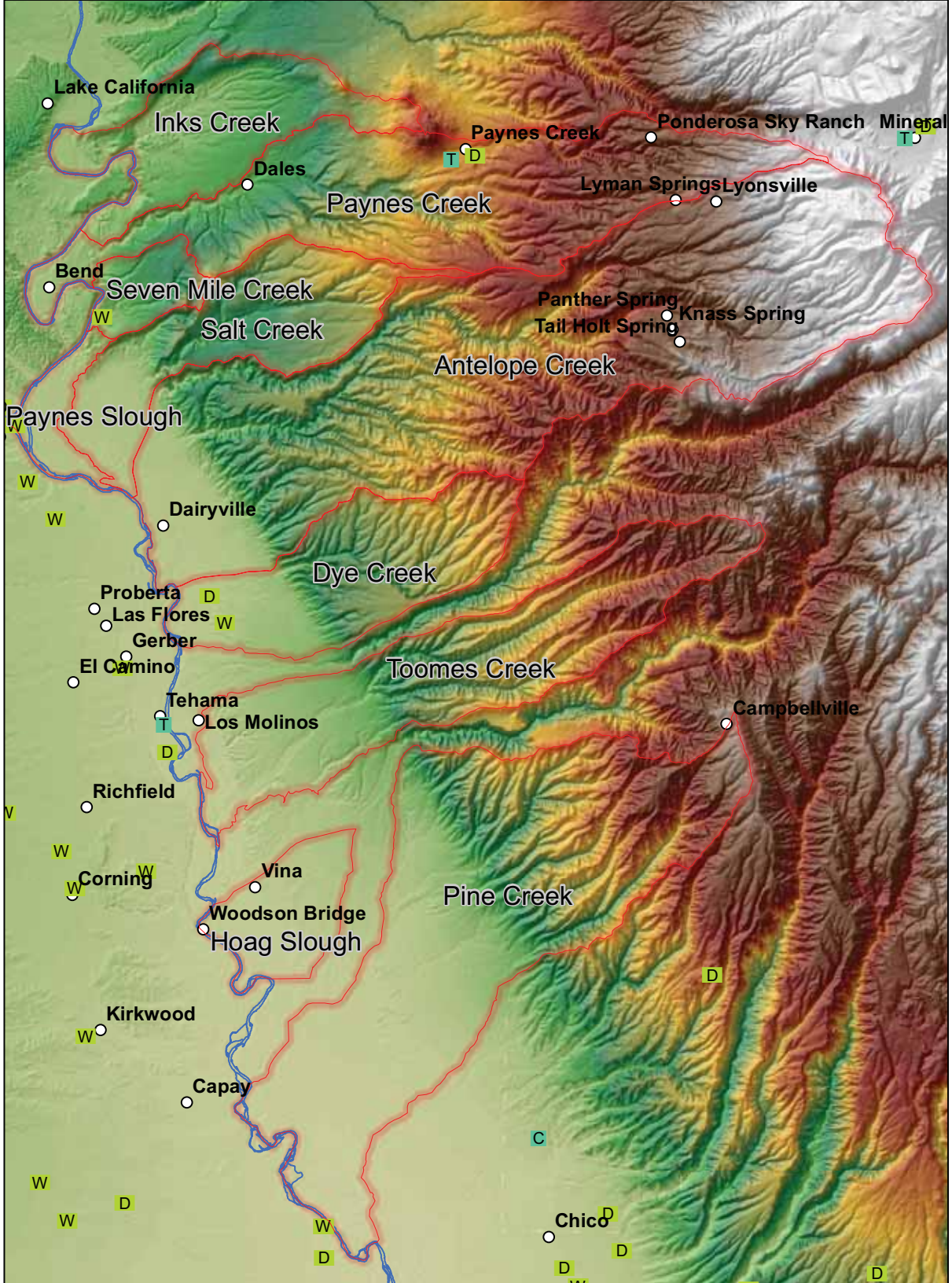
- US Forest Service

http://www.fs.fed.us/r5/rsl/clearinghouse/gis-download.shtml

- Watershed Boundary

Tehama East Watershed Assessment

Solid Waste Disposal Sites
Tehama East Watersheds



The California Integrated Waste Management Board is one of six statewide government organizations that make up the California Environmental Protection Agency (Cal/EPA). The Cal/EPA is charged with protecting the public's health and safety and the environment. The five other Cal/EPA organizations include the Air Resources Board, Office of Environmental Health Hazard Assessment, Department of Pesticide Regulation, Department of Toxic Substances Control, and State Water Resources Control Board.

KEY

Solid Waste Categories

- C Composting
- D Disposal
- T Transfer/Processing
- W Waste Tire Site

California Integrated Waste Management Board

Watershed Boundary

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Tehama County Resource Conservation District
(c) 2010

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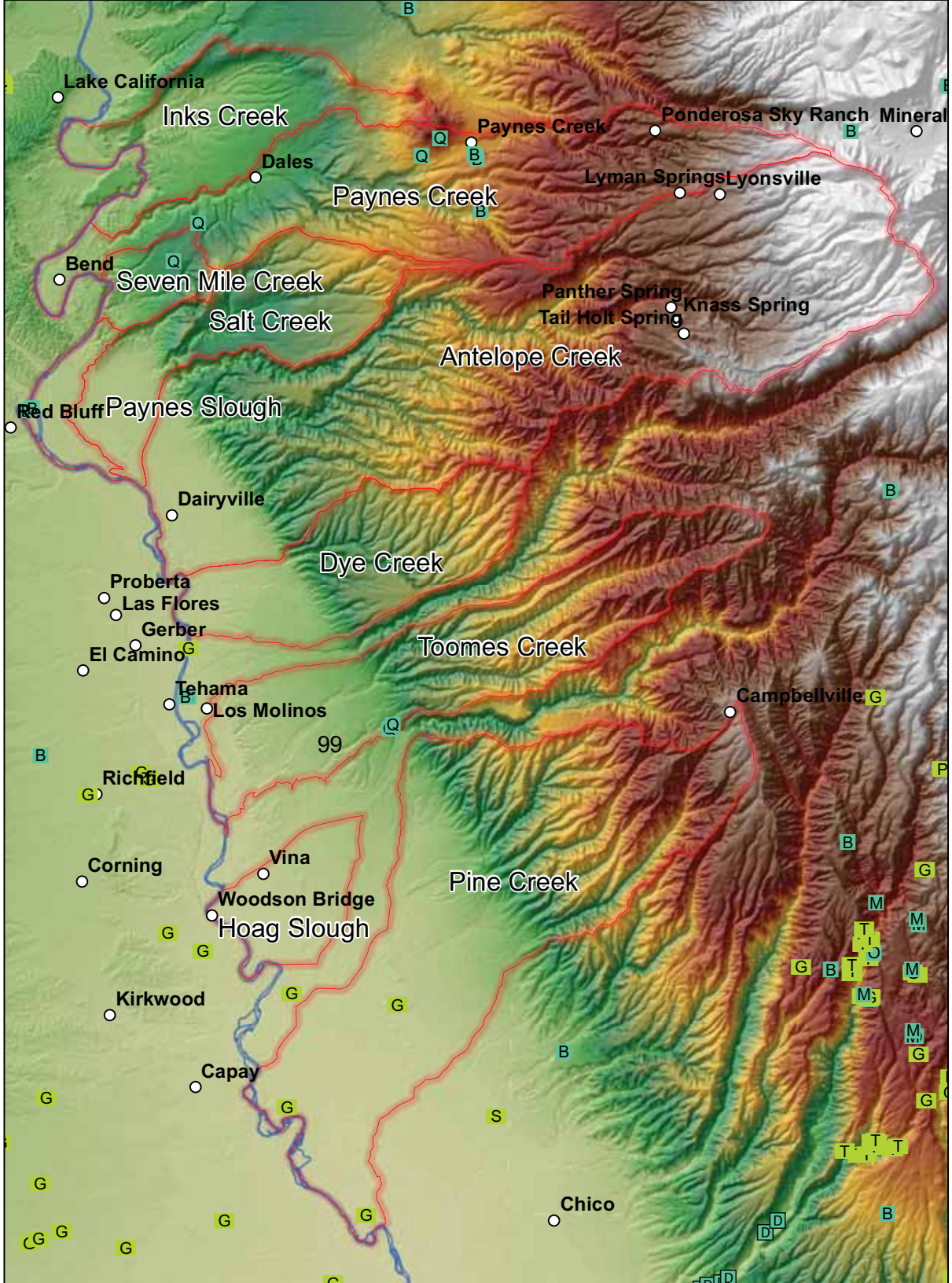
Miles



Tehama East Watershed Assessment

Topographically Occurring Mine Symbols - TOMS Tehama East Watersheds

"In 1998, the Office of Mine Reclamation began inventorying abandoned mined lands as part of a program to produce a report describing the "scope and magnitude" of abandoned mine issues in California. To support this effort, the Office began digitizing mining features from scanned USGS topographic quadrangles. Each of the 7.5-minute USGS topographic quadrangles was examined and all mining features were digitized and annotated with information derived from the map. Positional accuracy was reliant on the accuracy of the original source maps. Human digitization of the mining symbols has likely added slight deviations from the original source map, though no formal method has been undertaken to quantify this additional error."

Quoted from:
http://www.consrv.ca.gov/OMR/abandoned_mine_lands/toms/Pages/index.aspx

KEY

Site Type

- B Borrow Pit
- C Cinder Pit
- D Dredger Tailings
- G Gravel Pit
- M Mine Shaft
- T Mine Tunnel
- O Other
- P Prospect
- Q Quarry
- S Sand Pit
- T Tailings

http://www.consrv.ca.gov/OMR/abandoned_mine_lands/toms/Pages/index.aspx

Watershed Boundary

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Tehama County Resource Conservation District
(c) 2010

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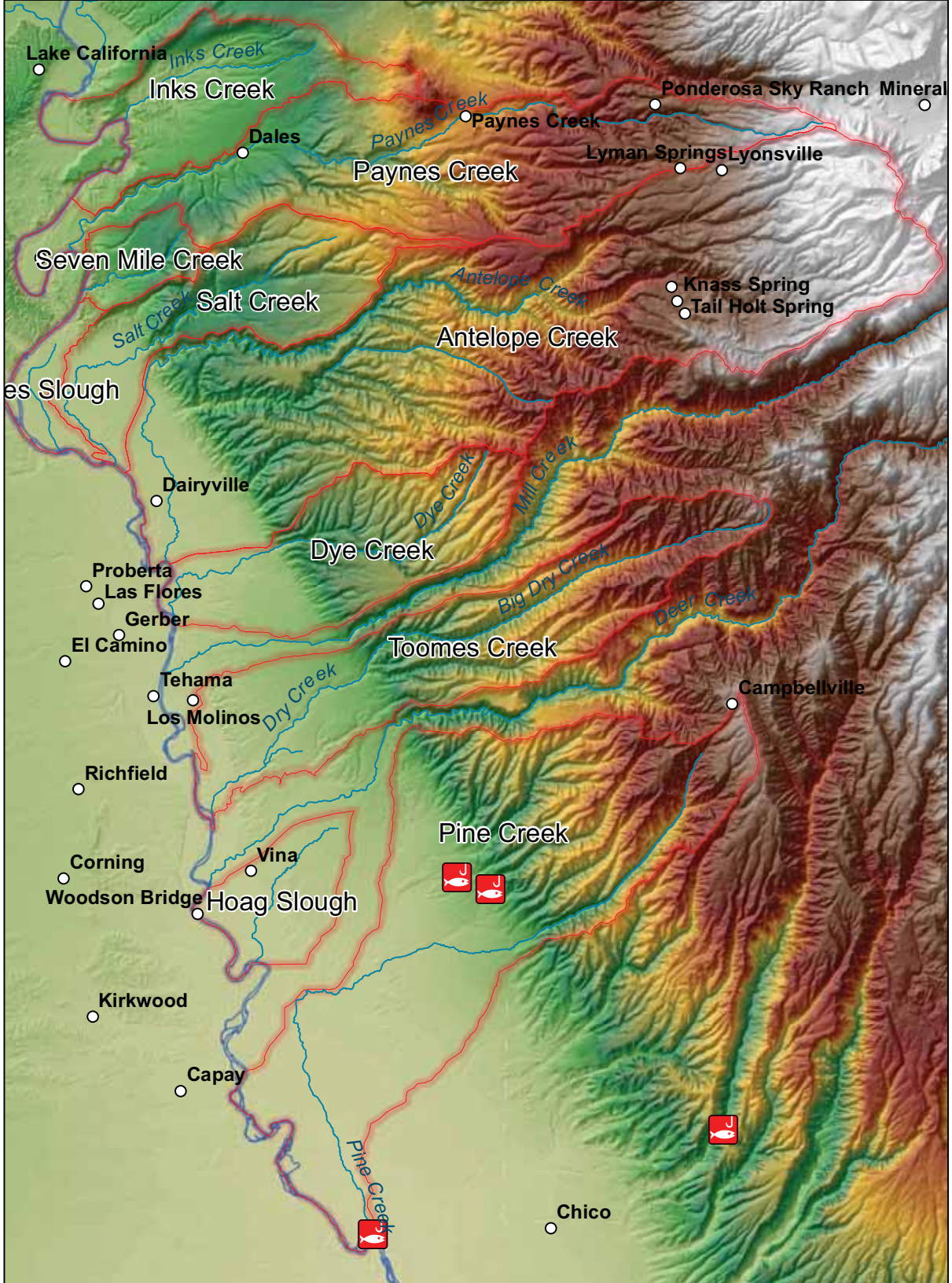
Miles

Tehama East Watershed Assessment

Toxic Substances Monitoring Program Tehama East Watersheds

The TSMP was initiated in 1976 by the California State Water Resources Control Board (SWRCB). The TSMP was organized to provide a uniform statewide approach to the detection and evaluation of the occurrence of toxic substances in fresh, estuarine, and marine waters of the State through the analysis of fish and other aquatic life. The TSMP primarily targets water bodies with known or suspected impaired water quality and is not intended to give an overall water quality assessment. The California Department of Fish and Game (DFG) carries out the statewide TSMP for the SWRCB by collecting and analyzing samples. The SWRCB provides funding for the program under an ongoing interagency agreement with the DFG. Sampling stations are selected primarily by the nine Regional Water Quality Control Boards.

Quoted from:
atlas.ca.gov/ceic/xml/LegacyProjectDataCollection/ToxicSubstancesMonitoringPrgLipids



KEY

Study Site

http://casil.ucdavis.edu/casil/uncategorized/legacy.ca.gov/

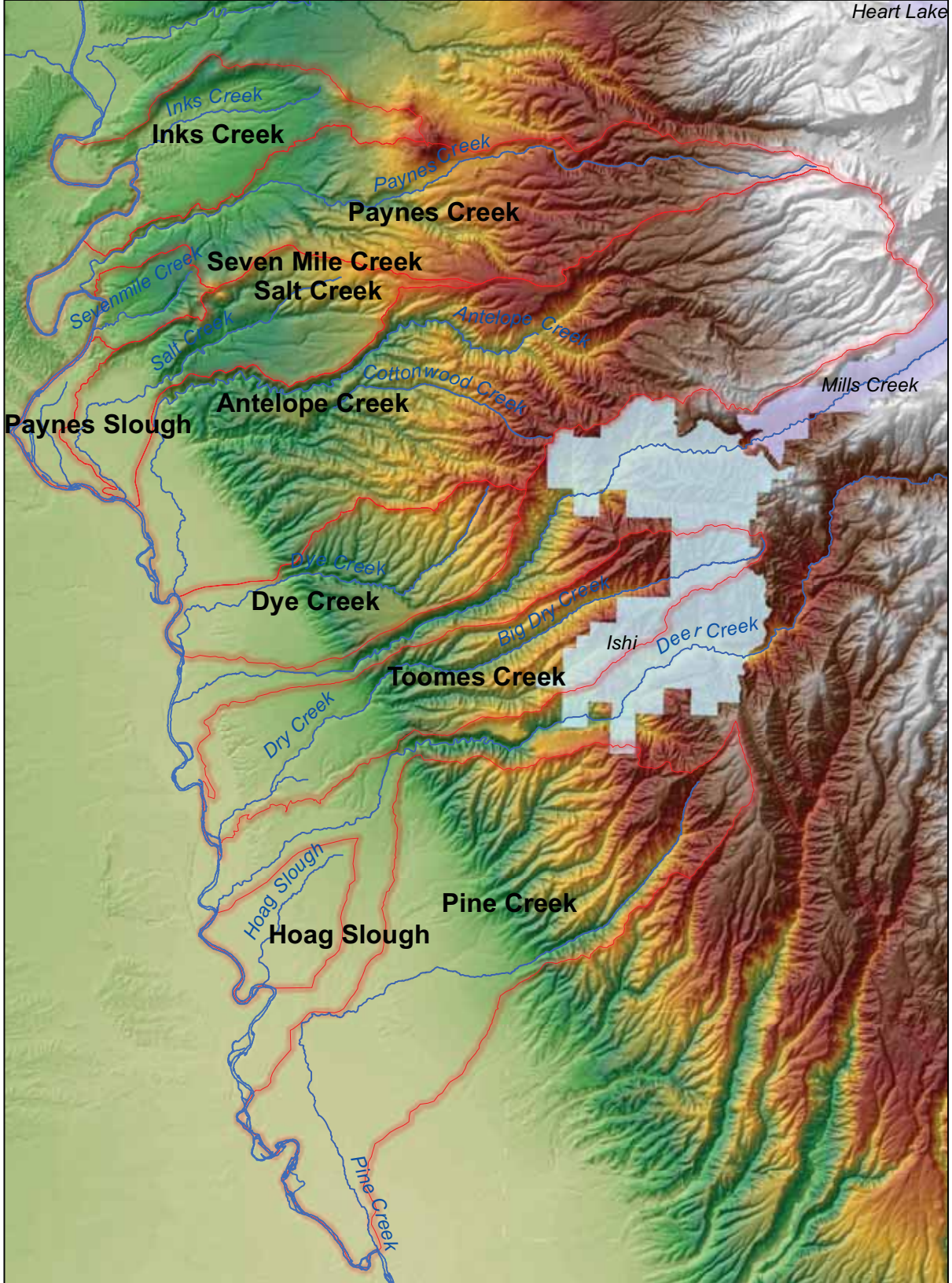
Watershed Boundary

N
W E
S

TCRCD

Tehama County Resource Conservation District
(c) 2010

0 2.5 5 10
Miles



Tehama East Watershed Assessment

Wilderness Areas Esisting and Proposed Tehama East Watersheds

Wilderness Existing and Recommended
Used for National Forest planning and assessment and other natural resource applications

KEY

Wilderness Areas - Recommended

Wilderness Areas - Existing

http://www.fs.fed.us/r5/rsl/clearinghouse/gis-download.shtml

Watershed Boundary

N
W E
S

Tehama County Resource Conservation District
(c) 2010

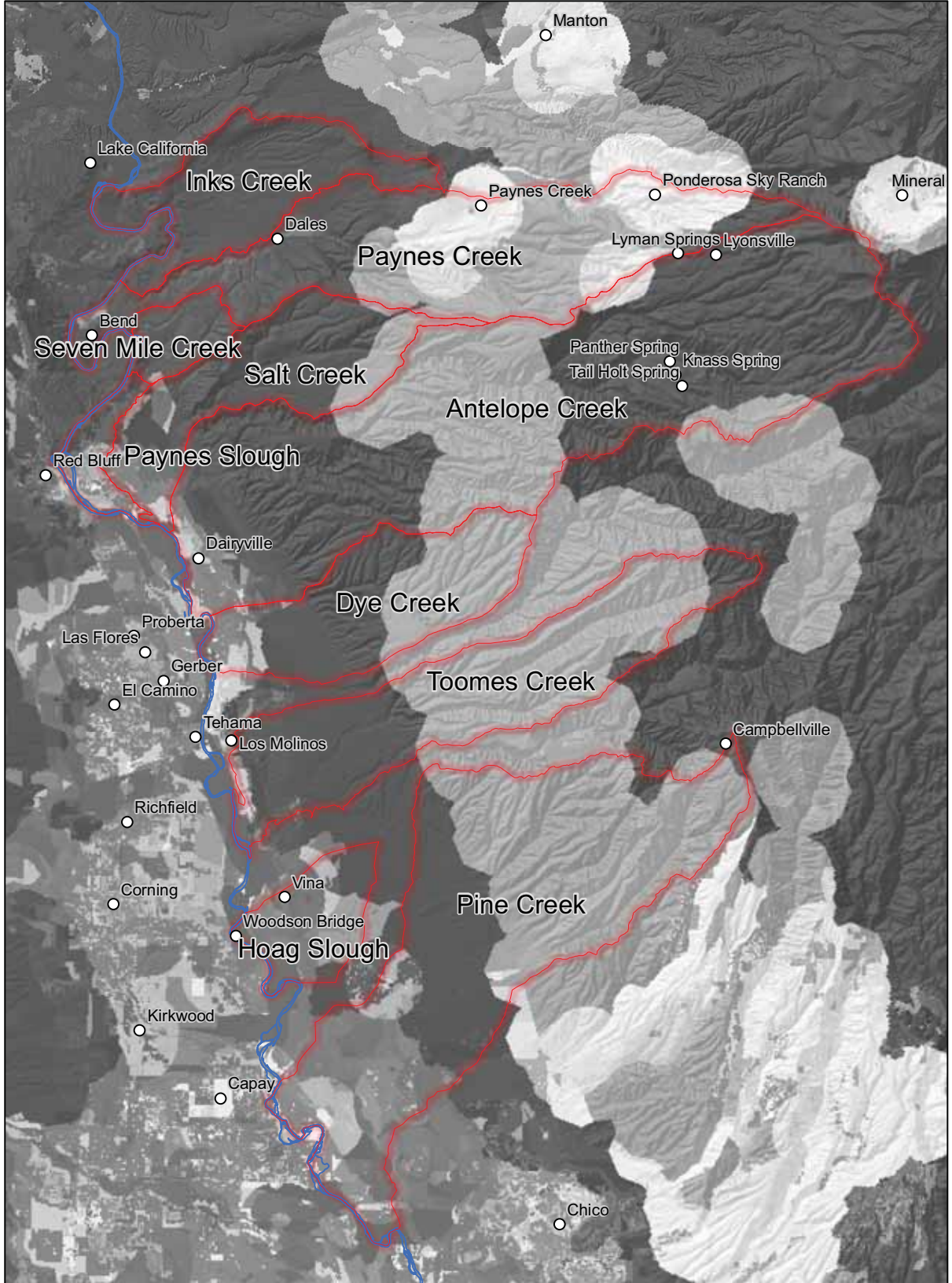
0 3.75 7.5 15
Miles

Tehama East Watershed Assessment

Wildland-Urban Interface Tehama East Watersheds

"The Wildland-Urban Interface (WUI) is the area where houses meet or intermingle with undeveloped wildland vegetation. This makes the WUI a focal area for human-environment conflicts such as wildland fires, habitat fragmentation, invasive species, and biodiversity decline. Using geographic information systems (GIS), we integrated U.S. Census and USGS National Land Cover Data, to map the Federal Register definition of WUI (Federal Register 66:751, 2001). These data are useful within a GIS for mapping and analysis at national, state, and local levels."

Quoted from:
http://silvis.forest.wisc.edu/library/WUI_Metadata_example.html



KEY

WUI Potential

High

Low

http://www.fs.fed.us/r5/rsl/clearinghouse/gis-download.shtml

Watershed Boundary

N
W E
S

Tehama County Resource Conservation District
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0 4.5 9 18
Miles