

**California Department of Conservation
FARMLAND MAPPING AND MONITORING PROGRAM**

2010 FIELD REPORT

COUNTY: Sutter

FIELD MAPPER(S): Patrick Hennessy

IMAGE DATA USED:

Source	National Agriculture Imagery Program (NAIP)
Acquisition date	Summer 2009 & 2010
Data description	1 meter resolution, true color mosaic
Coverage gaps	None
Additional imagery used	Google Maps

WRITTEN, DIGITAL & ORAL INFORMATION SOURCES:

The following entities and individuals provided information used to conduct 2010 mapping.

Local Review Comments

(submitted by cities, counties, & others on 2008 maps)

None.

Personal Contacts

None.

Websites Used for Reference

Crop Profile for Wheat in California (UC Davis)

<http://www.ipmcenters.org/cropprofiles/docs/cawheat.html>

Small Grain Production Manual Part 1 – Importance of Small Grain Crops in California Agriculture (UC Davis)

<http://ucanr.org/freepubs/docs/8164.pdf>

Small Grain Production Manual Part 5 – Irrigation and Water Relations (UC Davis)

<http://anrcatalog.ucdavis.edu/pdf/8168.pdf>

Irrigation Statistics and Crops for Sutter Mutual Water Company

<http://www.pumpefficiency.org/casestudies/Sutter%20Mutual%20Water%20Company%20Case%20Study%20D3%20112204.pdf>

Natomas Basin Conservancy

<http://www.natomasbasin.org/>

Natomas Basin Conservancy Mitigation Lands

<http://www.natomasbasin.org/images/stories/pdf/TNBC110110BaseMap2011w-fills.pdf>

<http://www.natomasbasin.org/images/stories/pdf/NBC110215landsat2010.pdf>

Map of Lake Minden land uses.

http://www.thousandtrails.com/maps_pdf/lake_minden.pdf

GIS Data Used for Reference

None.

2008-2010 CHANGE SUMMARY:

Changes made during the map update are summarized by type and location. Particular attention is paid to large or unusual changes and their estimated acreages. Please note that land use type, size of land use unit, soil quality, and Farmland of Local Importance definition (if any) determines the final Important Farmland (IFL) category. [See definitions](#) at bottom of table.

Conversions to Urban Land	
Irrigated Farmland to Urban Land	20 changes
These changes were primarily small additions to existing Urban land. The largest change is only 13 acres of large homes set among orchards south of Yuba City. At the Minden Lake Resort 12 acres of sports fields were changed to Urban using the map on the website above as a guide. Across the Sacramento River from Knights Landing, 7 acres of solar panels were field checked near the agricultural co-op facility. Various other changes include Browns Elementary School, a small cemetery and the Meridian Elementary School.	
Nonirrigated Land Uses and Other Land to Urban Land	18 changes
These changes were due to a variety of land uses, including homes, freeway ramps, cemeteries, and athletic fields. The two largest changes are 50 & 40 acres and the rest are less than 20 acres each. The 50 acre change is the Eager Road interchange with State Highway 99. Adjacent to the interchange is a large religious compound with several buildings and athletic fields.	
Conversions from Irrigated Farmland aside from urbanization	
Irrigated Farmland to Nonirrigated Land Uses	88 changes
The vast majority of these changes were due to irrigated farmland going fallow for three or more update cycles. Every effort was made to field check the sites if possible. The largest is just over 100 acres near Pleasant Grove Road and Fifield Road in the southern part of the county. The former rice field was not accessible, but displayed very fallow characteristics in the aerial photos. Only 10 more changes are larger than 50 acres. All of the changes were dispersed throughout the county, with some concentration of the largest occurring south of Catlett Road and east of State Highway 99/70.	
Irrigated Farmland to Other Land	97 changes
This change is the most significant in terms of quantity and acreage. The five largest are all over 300 acres and primarily due to farmsteads, wetlands, riparian areas and irrigated farmland less than 10 acres going fallow next to Other Land.	
The three largest changes are 425, 390, and 320 acres respectively. The 425 acre change is in the Butte Sink area along North Butte Road. The land appeared to be a former rice field that is still seasonally flooded, similar to the conditions in the Butte Sink. The 390 acre change is in the southern part of Sutter County, west of Highway 99/70 and adjacent to the	

large Cross Canal. This area didn't have a public road nearby, but internet research revealed that the land was acquired by the Natomas Basin Conservancy. According to the map of Mitigation Lands on their website, this change is the combination of the Frazer and Lucich North acquisitions tracked together. Although the Conservancy has several land holdings, these areas were turned into reconstructed wetlands. Lastly, the 320 acre change is next to Butte Slough, near Pass Road and Butte Road. This site was not accessible but the aerial photo shows shallow flooding consistent with land conditions in nearby Butte Sink to the north.

A significant portion of the changes are due to improvements along the western county line that follows the Sacramento River. Along some stretches of the county boundary, the river channel was classified as irrigated farmland due to narrowness of the actual water portion within Sutter County (half the river's width is in the adjacent county). Improved imagery and a desire for a more accurate representation of the river and agricultural land motivated these changes. They accounted for approximately 1,375 acres converted to Other Land.

Conversions to Irrigated Farmland

Nonirrigated Land Uses and Other Land to Irrigated Farmland | 43 changes

New rice fields and orchards accounted for the majority of new irrigated farmland. There are a couple large new rice fields in the Sutter Bypass, south of River Oaks Golf Club (150 & 75 acres). Along the eastern base of the Sutter Buttes, over 120 acres of new irrigated farmland was added. Although this site wasn't accessible, the 2009 and 2010 photos clearly indicate active irrigation.

Unusual Changes

(Types of change not already described or special circumstances during the 2010 update.)

There were a few small instances where Urban land was changed to something else. Two small areas (5 acres each) of Urban were changed because they had orchards. Across the Sacramento River from Knights Landing, there was a portion of river that was mapped as Urban. This 10 acre area was changed to Other Land during improvements to the western county boundary along the river.

Areas of Concern for Future Updates

(Locations or map categories noted as needing careful checking during 2012 update, and reasons.)

There was a significant amount of land being tracked as non-irrigated grains. Field checks this update revealed that these areas were in fact irrigated wheat fields. While the fields were not being irrigated during the site visits, they are irrigated at the beginning of the planting cycle. This conclusion was derived from the internet research on wheat in California, especially the Small Grain Production Manual published by UC Davis. The website about irrigation statistics and crops for Sutter Mutual Water Company provided another link to irrigation deliveries for wheat. Not surprisingly, the recent increase in the price of wheat correlates nicely with the increase in land planted with it. It should also be noted that irrigated wheat can look dry and non-irrigated in future aerial photos that are captured during the summer months.

Definitions:

Irrigated Farmland includes most irrigated crops grown in California. When combined with soil data, these farmed areas become the Important Farmland (IFL) categories of Prime Farmland, Farmland of Statewide Importance & Unique Farmland. Because of the nature of the IFL definitions, some irrigated uses, such as irrigated pastures or nurseries, may not be eligible for all three IFL categories.

Nonirrigated land uses include grazing areas, land used for dryland crop farming, and formerly irrigated land that has been left idle for three or more update cycles. These uses are frequently incorporated into county Farmland of Local Importance definitions.

Other Land includes a variety of miscellaneous uses, such as low density rural residential development, mining areas, vacant areas and nonagricultural vegetation. Confined animal agriculture facilities are mapped as Other Land unless incorporated into a county Farmland of Local Importance definition.

Urban Land includes residential, industrial, recreational, infrastructure and institutional uses.

For more on map categories, including Farmland of Local Importance definitions, visit the [FMMP web site](#).

LABOR ESTIMATE:

Time estimates for conducting the 2010 update.

Image interpretation, start date	3/17/2011
Image interpretation, number of days	14
Ground truth dates	5/2- 5/3/ 2011
Number of days for post-ground truth clean up	5

Further information on the Farmland Mapping and Monitoring Program can be found at:

<http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>