

RECLAMATION

Managing Water in the West

2015 Annual Compliance Report for the Bureau of Reclamation's Central Valley Project Long-term Water Transfers (2015- 2024)



**U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region
Sacramento, California**

January 2016

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Introduction

On June 4, 2015, the U.S. Fish and Wildlife Service (Service) issued the biological opinion; *Reinitiation of Programmatic Formal Consultation for Bureau of Reclamation's Proposed Central Valley Project Long Term Water Transfers (2015-2024) with Potential Effects on the Giant Garter Snake within Sacramento Valley, California (2015 BO)* (Service reference #08ESMF00-2015-F-0116). The 2015 BO was the culmination of formal consultation with Reclamation under section 7 of the Endangered Species Act of 1973 (as amended) regarding the Central Valley Project Long Term Water Transfers (2014-2024) (2015 Transfers). This report is submitted to meet the annual reporting requirements contained in Term and Condition 4 as proposed by Reclamation and documented in the 2015 BO. Term and Condition 4 is:

“At the end of each water transfer year, Reclamation will submit to the Service a monitoring report that contains the following: (i) maps and GIS shape files of all cropland idling or cropland shifting actions that occurred within the range of potential transfer activities affected under this program; (ii) results of current scientific research and monitoring pertinent to water transfer actions; (iii) a discussion of conservation measure effectiveness; (iv) maps and GIS shape files indicating where rice was grown; (v) results of annual snake monitoring; (vi) snake detections; (vii) a cumulative history of the location and extent of crop idling/crop shifting; and (viii) report on water districts/sellers participation in voluntary best management practices. GIS shape files of the parcels that were fallowed will be in projected coordinate system NAD 1983 Zone 10 N. The report will be submitted to the Service no later than January 31 following each transfer year. Reclamation and the Service will establish annual meetings no later than February 28 of each year to discuss the contents and findings of the annual report and develop additional conservation measures if necessary.”

The following report provides information on each element contained in Term and Condition 4.

I. Acreage and Location of Parcels Idled Under the 2015 Transfers

Spreadsheets with field ID, acreage of field, and total district acreage idled as part of the 2015 Transfers are included in the attached CD as part of this report. Table 1 summarizes the totals of crop land idled for the 2015 Transfers. Due to time constraint for submitting the *60-Day Compliance Report for the Bureau of Reclamation's Central Valley Project Long-term Water Transfers 2015*, the transfer amounts reported were based upon preliminary information regarding transfer proposals. The crop idling totals proposed for 2015 was 45,365 acres to be idled (USBR 2015a). The 2015 Transfers resulted in 41,891 acres (Table 1) being idled. In comparison of all finalized proposals and final transfer amounts for 2015, there were three sellers that deviated from the cropping plans. The deviation resulted in transferring less acre-feet (AF) of water than was proposed for transfer (Table 2). However, only the Glen-Colusa Irrigation District actually decreased the amount of water made available, the other quantity differences between what was proposed and was actually transferred were due to administrative errors.

The 2015 BO stated that a maximum of 60,693 acres of crops could be idled for transfers annually. Of this total, no more than 49,924 acres idled would be rice acres within the Sacramento Region. All croplands participating in the 2015 Transfers were within the

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Sacramento Region of the CVP. The total rice cropland idled was 40,490 acres and did not exceed the 49,924 acre limit.

Table 1. Transfer Totals for 2015 (rounded to whole number)

Seller	Total Acreage	Rice Acreage
Conaway Preservation Group	5,649	5,649
Glen-Colusa Irrigation District	17,734	17,131
Pelger Road 1700	201	201
Pleasant Grove-Verona	2,828	2,585
Reclamation District 108	9,201	8,824
Reclamation District 1004	2,750	2,750
River Garden Farms	2,036	2,036
Sycamore Family Trust	1,493	1,315
Total	41,891	40,490

Table 2. 2015 Sellers with transfer amounts differing from what was proposed.

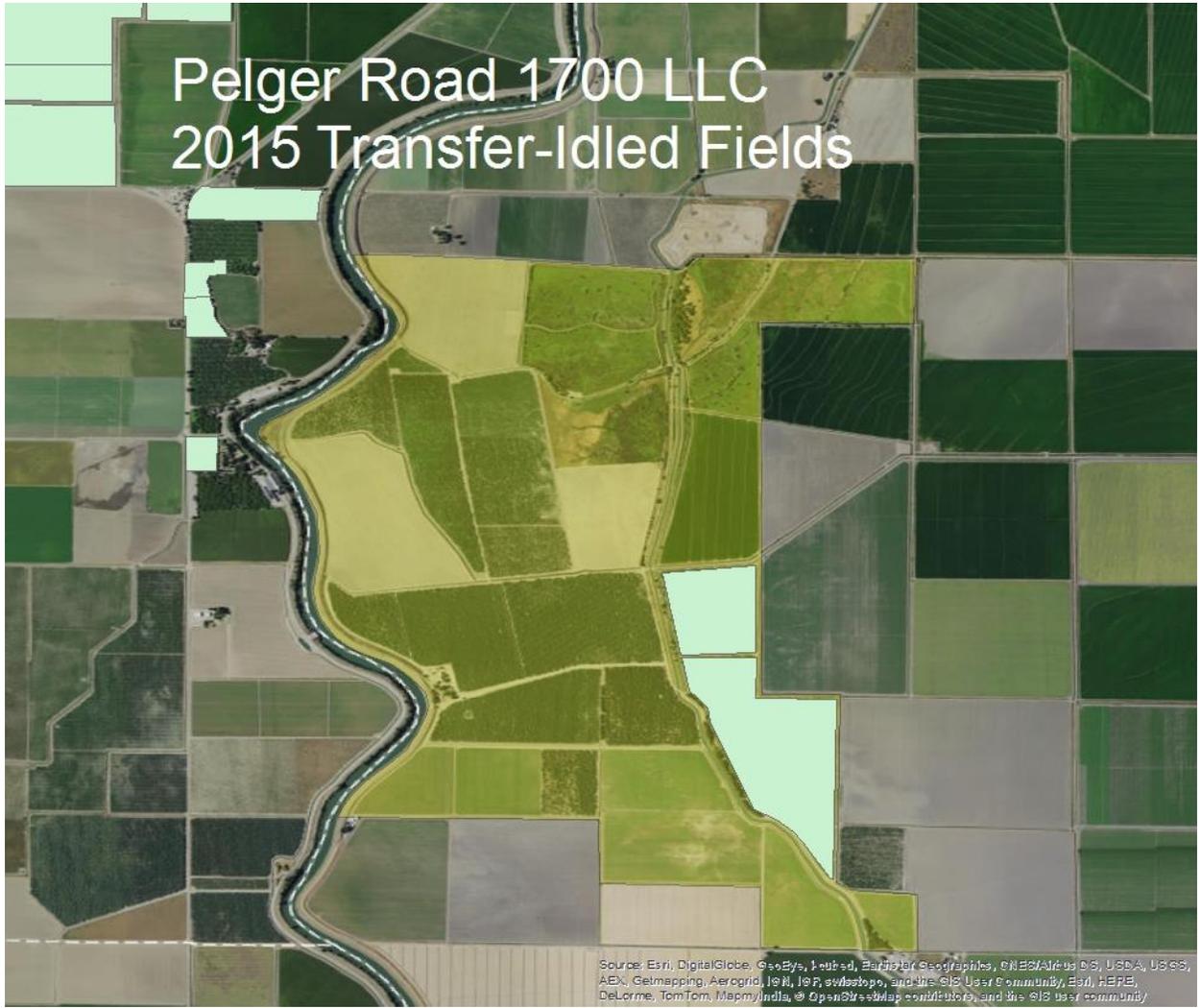
Seller	Amount Proposed (AF)	Amount Transferred (AF)	Difference	Notes
Pleasant Grove-Verona	8,505	8,451	-54	This change was from a calculation error in the initial proposal. Revised to 8,451 AF as soon as error was discovered. Crop plan never changed.*
Glen-Colusa Irrigation District	58,280	58,019	-261	--
Sycamore Family Trust	4,978	4,454	-524	One parcel that was never intended to be idled was inadvertently included in the original proposal.*

* Angela Bezzone 2015, pers. Comm.

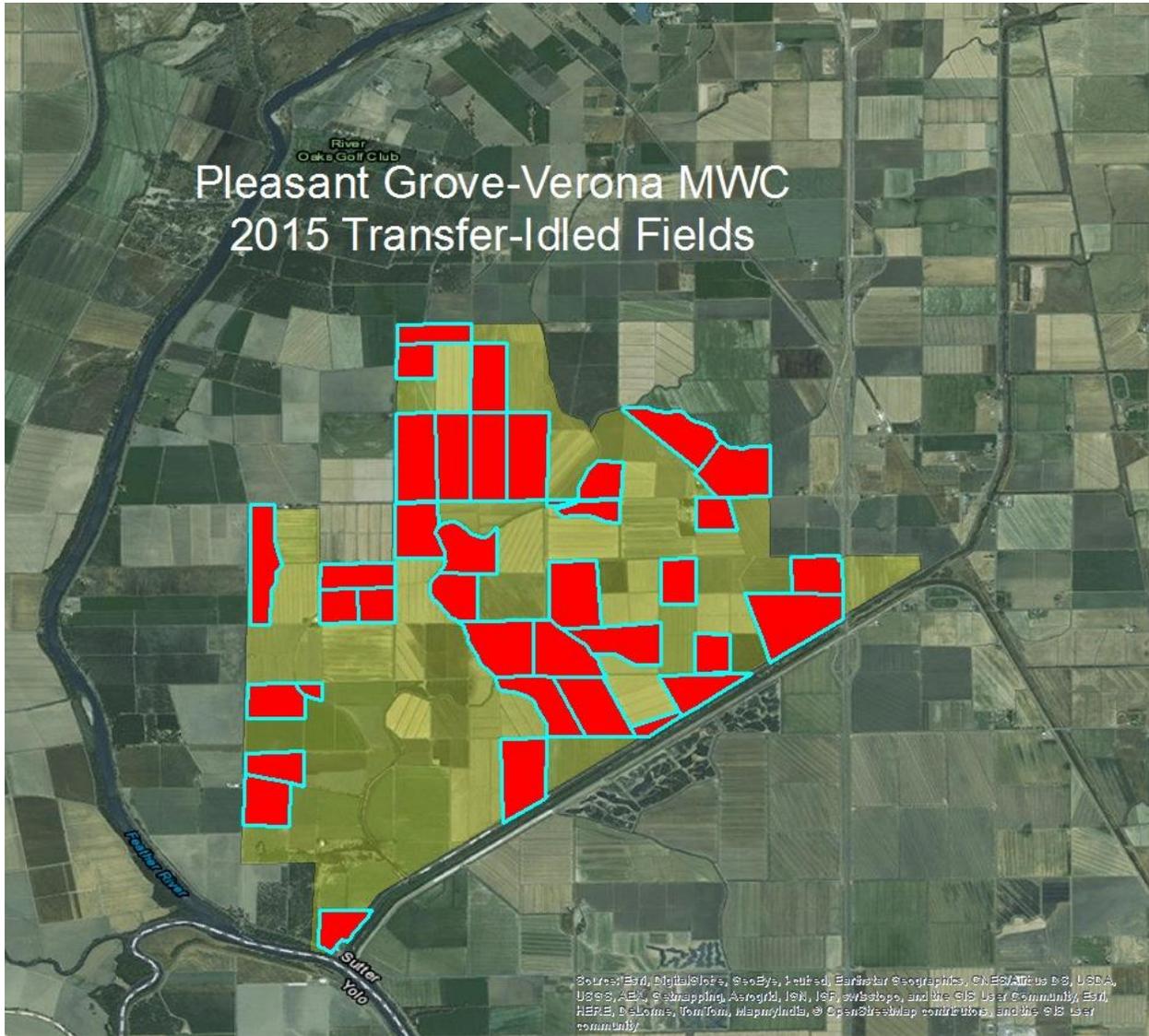
Ib. Parcel Maps

The following pages include maps of parcels, by seller, which were included in the 2015 Transfers. PDF versions of the maps below and GIS shape files for the participating sellers are provided in the attached CD.

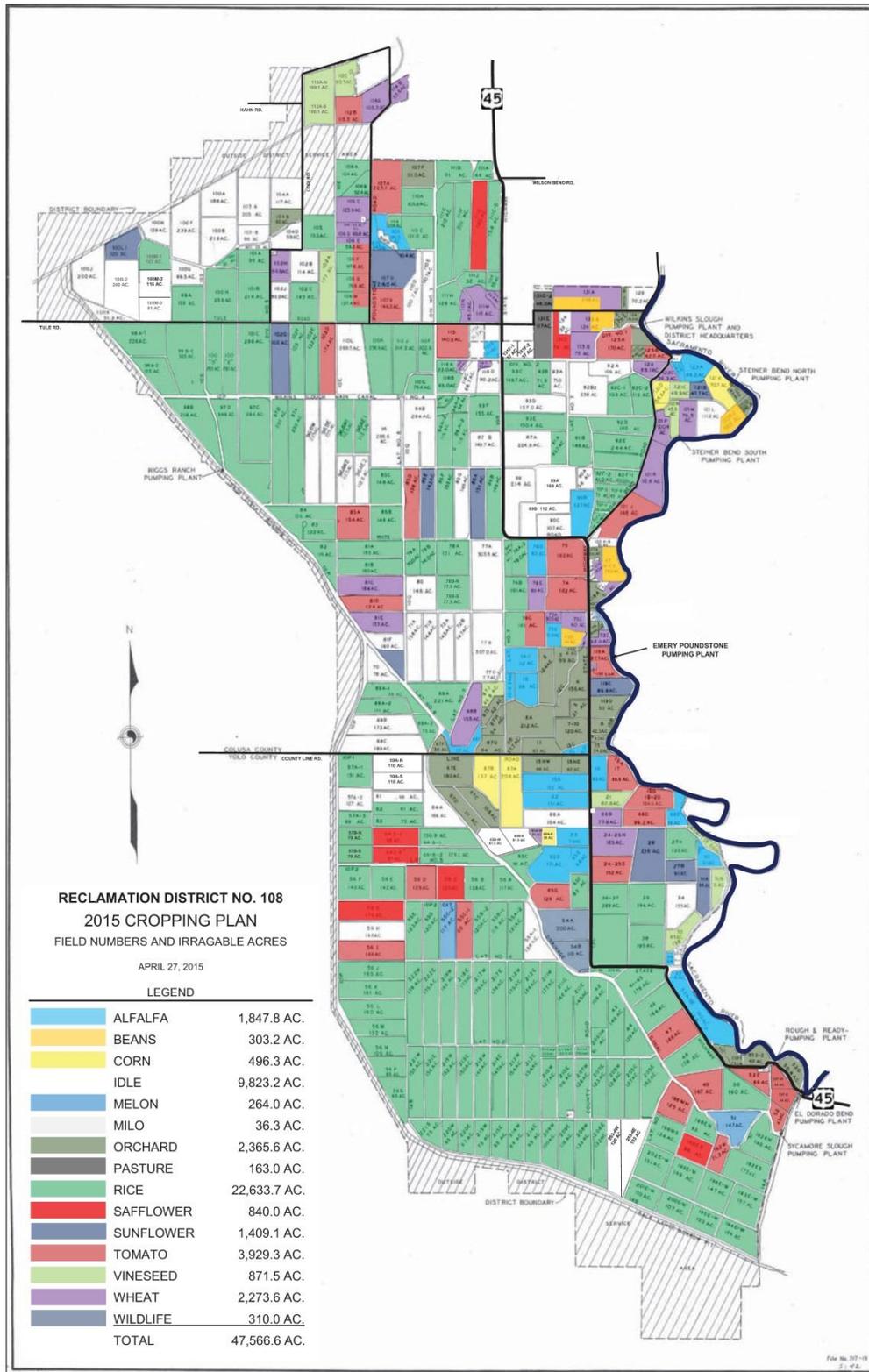
Pelger Road 1700 LLC 2015 Transfer-Idled Fields

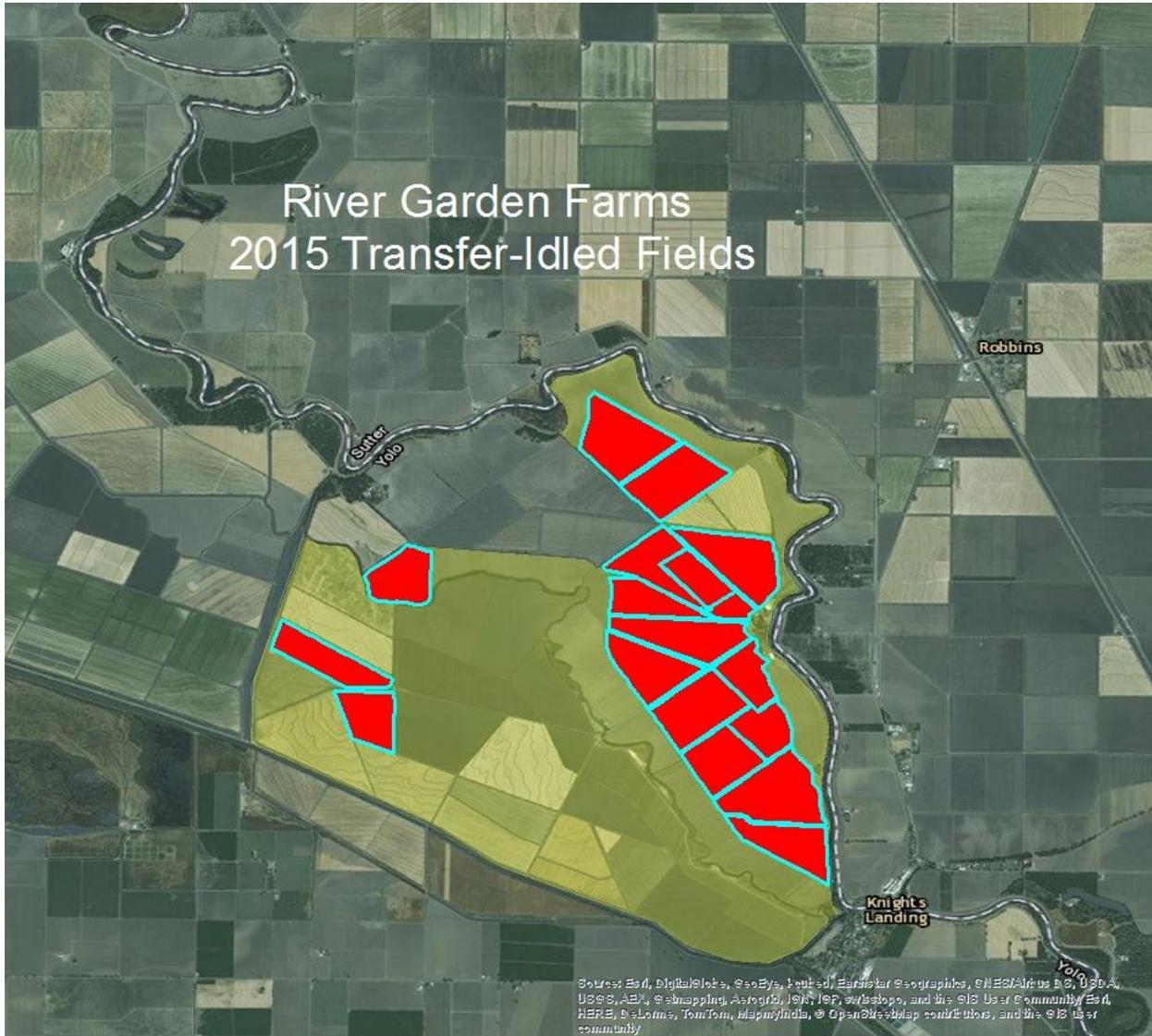


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroX, Geomapping, AeroGRID, IGN, IPR, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, TomTom, Mapbox, and the GIS User Community

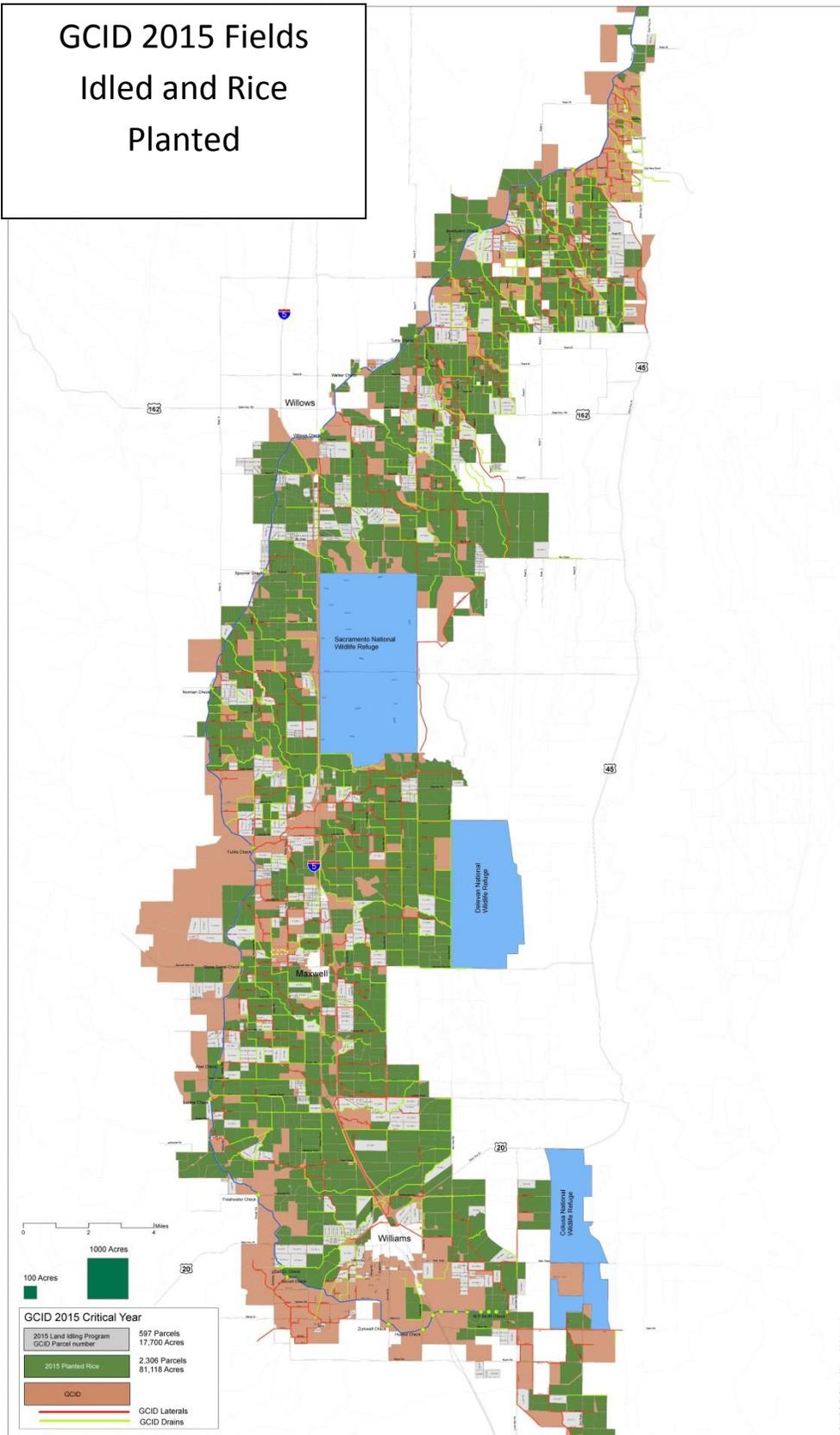


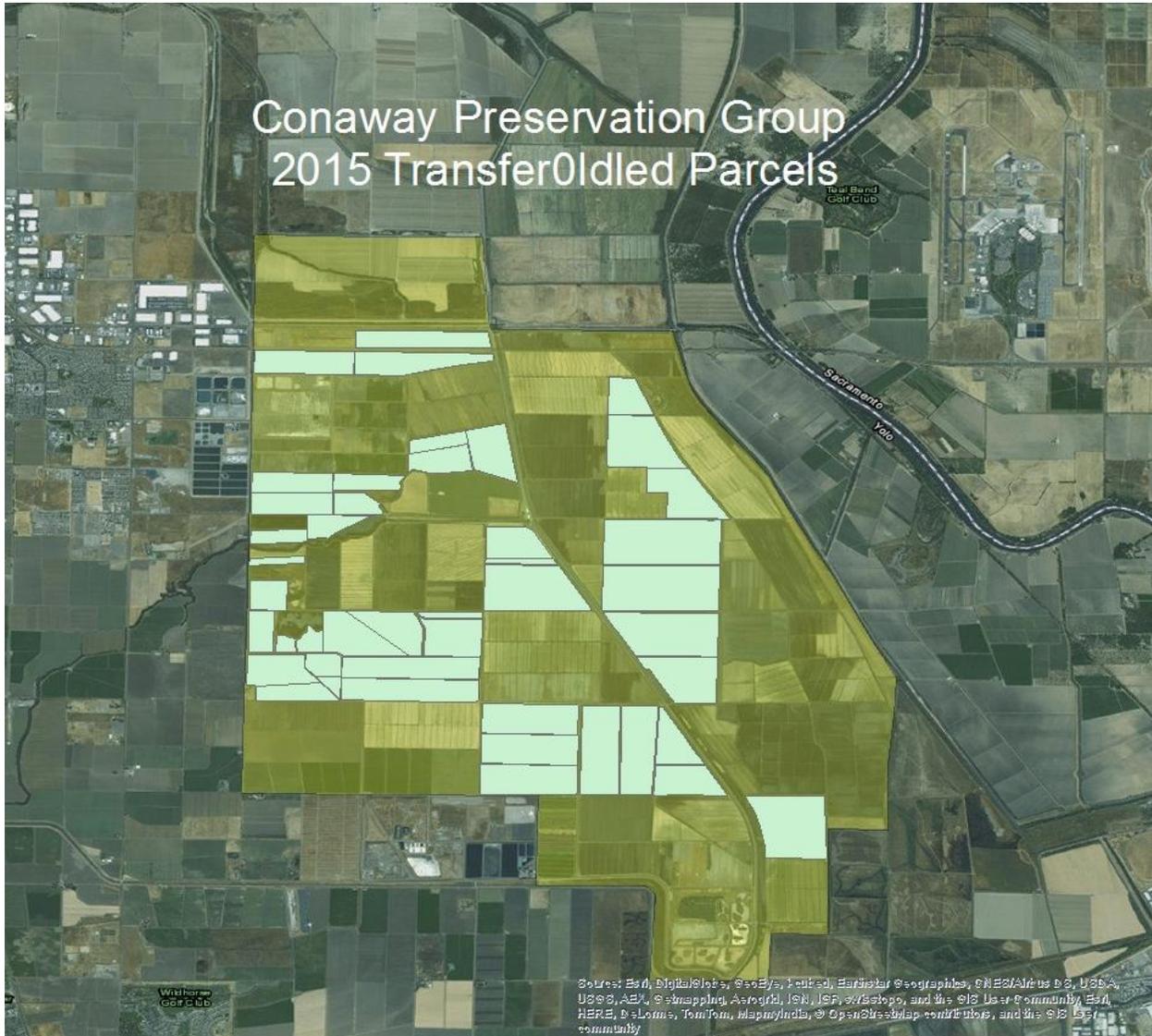
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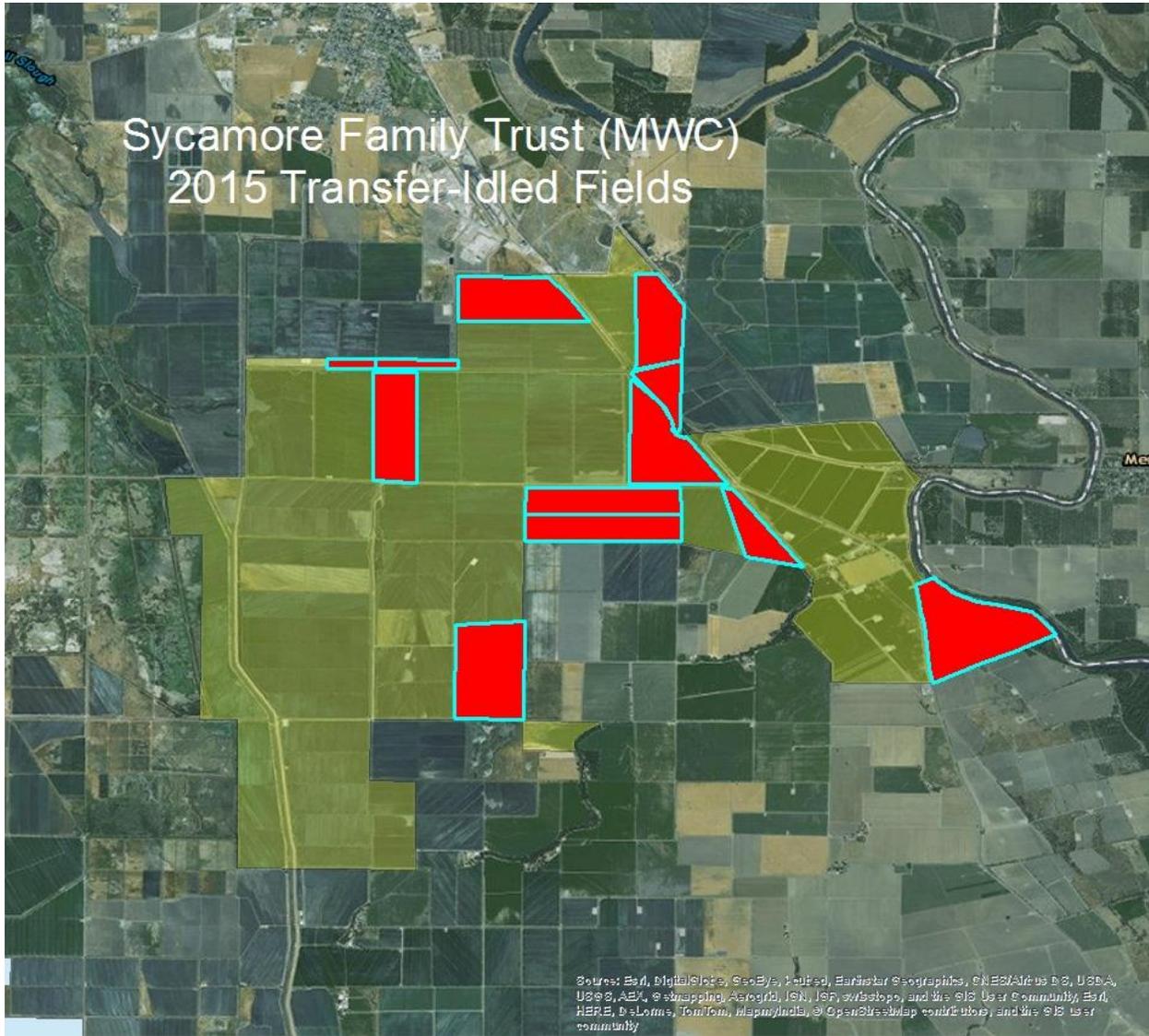


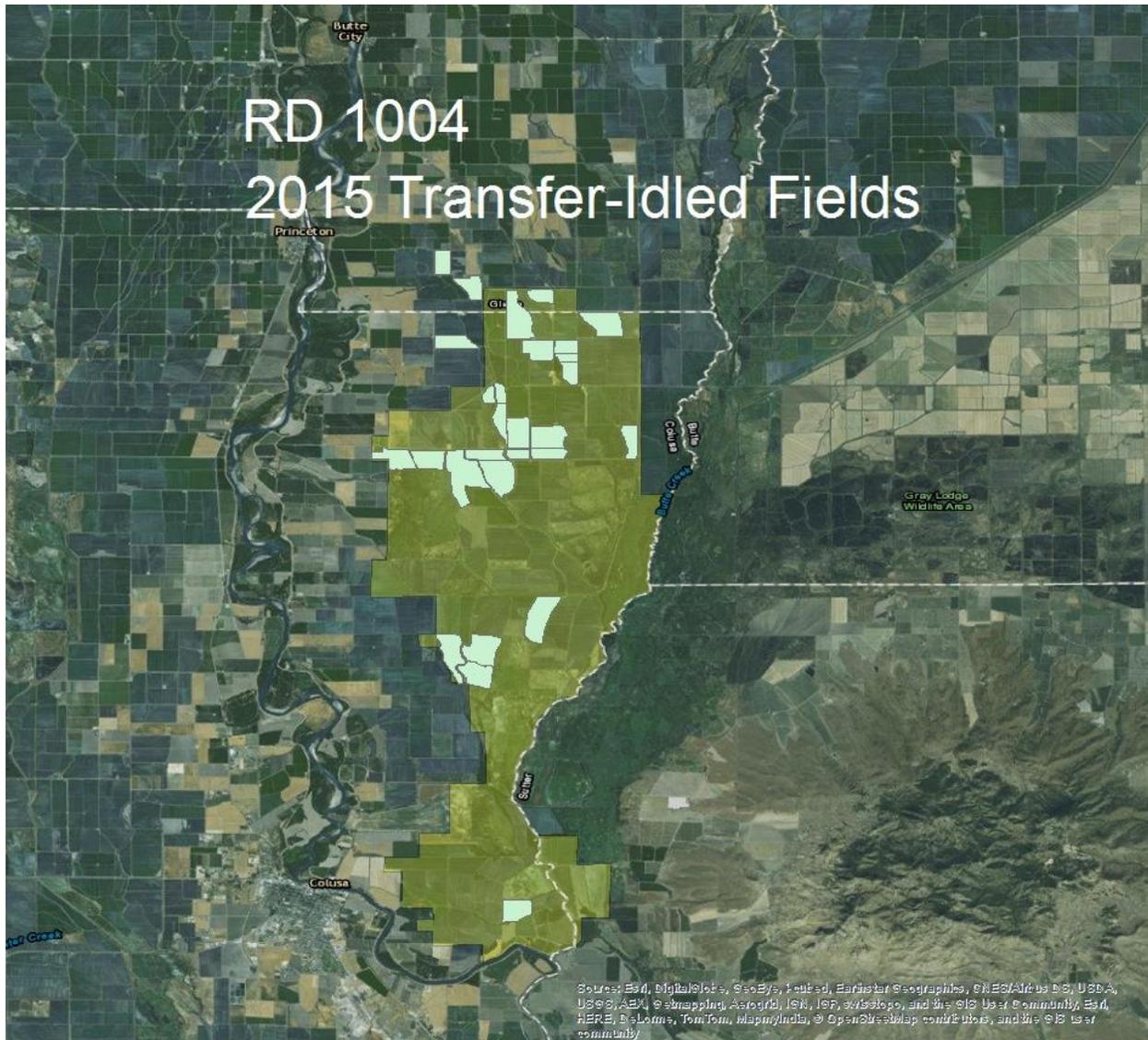


GCID 2015 Fields Idled and Rice Planted









II. Conservation Measures

The 2015 transfer year started out under the guidance of the April 30, 2015 *Programmatic Formal Consultation for Bureau of Reclamation's Proposed Central Valley Project Long Term Water Transfers (2015-2024) with Potential Effects on the Giant Garter Snake within Sacramento Valley, California* (April BO). The April BO was issued with errors in the project description. However, because it was issued on April 30 and water districts were finalizing their cropping plans, Reclamation moved forward with the 2015 transfers while, at the same time, requesting reinitiation of consultation with the Service to correct the language within the Conservation Measures of the April BO. The main issue with the April BO was rephrasing within the project description section which identified additional areas in which sellers could not participate in the transfer program unless they requested and received a case-by-case evaluation by Reclamation which determined the transfer would not negatively affect GGS habitat. During implementation of the 2015 Transfers under the April BO, and in response to cropping plans

submitted by water districts, Reclamation notified several districts that they would need to request exemptions from the restrictions on idling in the areas covered under the April BO. Reclamation worked directly with sellers and some seller's representative, MBK Engineering, to identify areas of concern and options for reducing potential effects on GGS habitat. As a result, several cropping plans were altered and Reclamation determined that the final cropping plans were compliant with the April 2015 BO, and would not have additional effects on the GGS that were not considered in the biological opinion.

Reclamation, in compliance with Term and Condition #2 of the 2015 BO, submitted a "Supplement to the Conservation Measures" on December 30, 2015. The "Supplement to the Conservation Measures" was prepared by the U.S. Geological Survey (USGS) in the form of a *Scope of Work, Effects of Rice Idling on Occupancy Dynamics of Giant Gartersnakes (Thamnophis gigas) in the Sacramento Valley of California*. While the scope of work meets the requirements of the BO, the scope may be refined as Reclamation meets with transferring entities to discuss the scope and funding of the plan. Reclamation is in the process of approaching water districts participating in cropland idling water transfers to discuss options for funding studies to meet the monitoring requirements.

As 2015 is the first year of transfers occurring within the 10 year duration of the 2015-2024 Transfers, there has been no project specific scientific analysis of the effectiveness of the conservation measures detailed in the 2015 BO. However, compliance monitoring verified that water conveyance features required to remain wet, per the 2015 BO, had adequate water levels (USBR 2015a).

As of the date of this report, no incidental take of GGS, related to the 2015 Transfers, has been reported to Reclamation.

One indication that the conservation measures are working as expected was the confirmed location of a GGS during a September 15, 2015 site visit. During the site visit USGS technicians located, via radio telemetry, a GGS that was in a waterway adjacent to a field that was idled for transfer. The GGS had moved over ¼ mile (visual estimate as the data hasn't been made available yet) from its capture and release site just a few days earlier.

No new data on GGS occurrences during 2015 are currently available; however, research conducted under various programs should be published in the upcoming months. At the time this report is being submitted, the most recent data available would be the current California Natural Diversity Database information on GGS.

III. Monitoring and New Research

Reclamation has located and reviewed five new literature sources related to GGS. They are:

1. Literature Review of Giant Gartersnake (*Thamnophis gigas*) Biology and Conservation. Halstead, B.J., Wylie, G.D., and Casazza, M.L. 2015: U.S. Geological Survey Open-File Report 2015–1150, 38 p., <http://dx.doi.org/10.3133/ofr20151150>.
2. Terrestrial Ecology of Semi-Aquatic Giant Gartersnakes (*Thamnophis gigas*). Halstead, B.J., Skalos, S.M. Wylie, G.D., and Casazza, M.L.: Herpetological Conservation and Biology 10(2):633–644. August 2015.
3. Defining population structure and genetic signatures of decline in the giant gartersnake (*Thamnophis gigas*): implications for conserving threatened species within highly altered landscapes. Wood, D.A., Halstead, B.J., Casazza, M.L., Hansen, E.C., Wylie, G.D., Vandergast, A.G. 2015. Conservation Genetics 16(5):1025-1039. DOI:10.1007/s10592-015-0720-6
4. Realized Detection and Capture Probabilities for Giant Gartersnakes (*Thamnophis gigas*) Using Modified Floating Aquatic Funnel Traps. Halstead, B.J., Skalos, S.M., Casazza, M.L., and Wylie, G.D.: U.S. Geological Survey Open-File Report 2015-1200, 36 p., <http://dx.doi.org/10.3133/ofr20151200>.
5. A Preliminary Investigation of the Variables Affecting the Distribution of Giant Gartersnakes (*Thamnophis gigas*) in the Sacramento Valley, California. Halstead, B.J., Skalos, S.M., Casazza, M.L., and Wylie, G.D. 2015: U.S. Geological Survey Open-File Report 2015-1178, 34 p., <http://dx.doi.org/10.3133/ofr20151178>.

In review of the above literature, Reclamation did not identify any new information that would add to or change the environmental baseline, status of the species, or conservation measures associated with the 2015 Transfers.

VI. GGS Detections within the Action Area

No reports of inadvertent GGS detections have been reported to Reclamation by the sellers transferring during 2015. No research or monitoring reports from 2015 are available at the time of this report submission.

VII. Cumulative History of Crop Idling under June 4, 2015 BO

Because this is the first year of transfers covered under the June 4, 2015 BO, Reclamation has included some additional information for previous transfers to provide some context for amounts of acreage being idled from year to year. Crop idling for transfers occurred in 2009, 2014, and 2015. During 2014 23,120.3 acres of cropland were idled (USBR 2015b). Of the total cropland idled, 15,694 acres of rice was fallowed for transfer during 2014. Table 3 summarizes the amount of water made available for transfer and the amount of rice fallowed between 2009 and present.

Table 3 Water Transfer Quantities 2009 to 2015 (AF) and Acreage of Rice Fallowed

Water Year	Crop Idling, Water Made Available (AF)	Groundwater Substitution, Water Made Available (AF)	Acreage of Rice Fallowed
2009	21,045	58,881	5,946
2010	0	0	0
2011	0	0	0
2012	No Reclamation Water Transfers Proposed	No Reclamation Water Transfers Proposed	No Reclamation Water Transfers Proposed
2013	0	31,406	0
2014	40,650	10,289	15,694
2015	134,190	85,853	40,490

VIII. Voluntary Best Management Practices (BMP) Implementation

Reclamation is in the process of working with water districts participating in idling transfers to determine the best path forward for reporting implementation of BMPs. Water districts have reported that they strive to follow the BMPs detailed in the attached “Draft Operation and Maintenance Guidelines for Sacramento Valley Water Agencies with Verified GGS Populations” (provided on CD). There are general maintenance practices that water districts conduct that are consistent with BMPs. One such practice is maintenance of water conveyance canals or ditches. One district reports that the canals or ditches are cleared of sediment and vegetation with an excavator only on the bottom to prevent weakening the sides and creating more potential for erosion. The work is done during the snake’s inactive season because it coincides with the time when water is not being moved for irrigation. The excavated material is then deposited on the roadway surface and graded for its maintenance. These maintenance activities are conducted on a continual rotation and it may be five years between treatments in a specific canal or ditch.

IX. References

U.S. Bureau of Reclamation. 2015a. 60-Day Compliance Report for the Bureau of Reclamation's Central Valley Project Long-term Water Transfers 2015. 10 pages plus appendices.

U.S. Bureau of Reclamation. 2015b. Compliance Report; 2014 Water Transfers – Biological Opinion 08ESMF00-2014-F-0359. 15 pages.

Personal Communications

Bezzone, Angela. 2015. P.E., MBK Engineers, Sacramento California.