

*California*

Department of Water Resources  
Division of Engineering

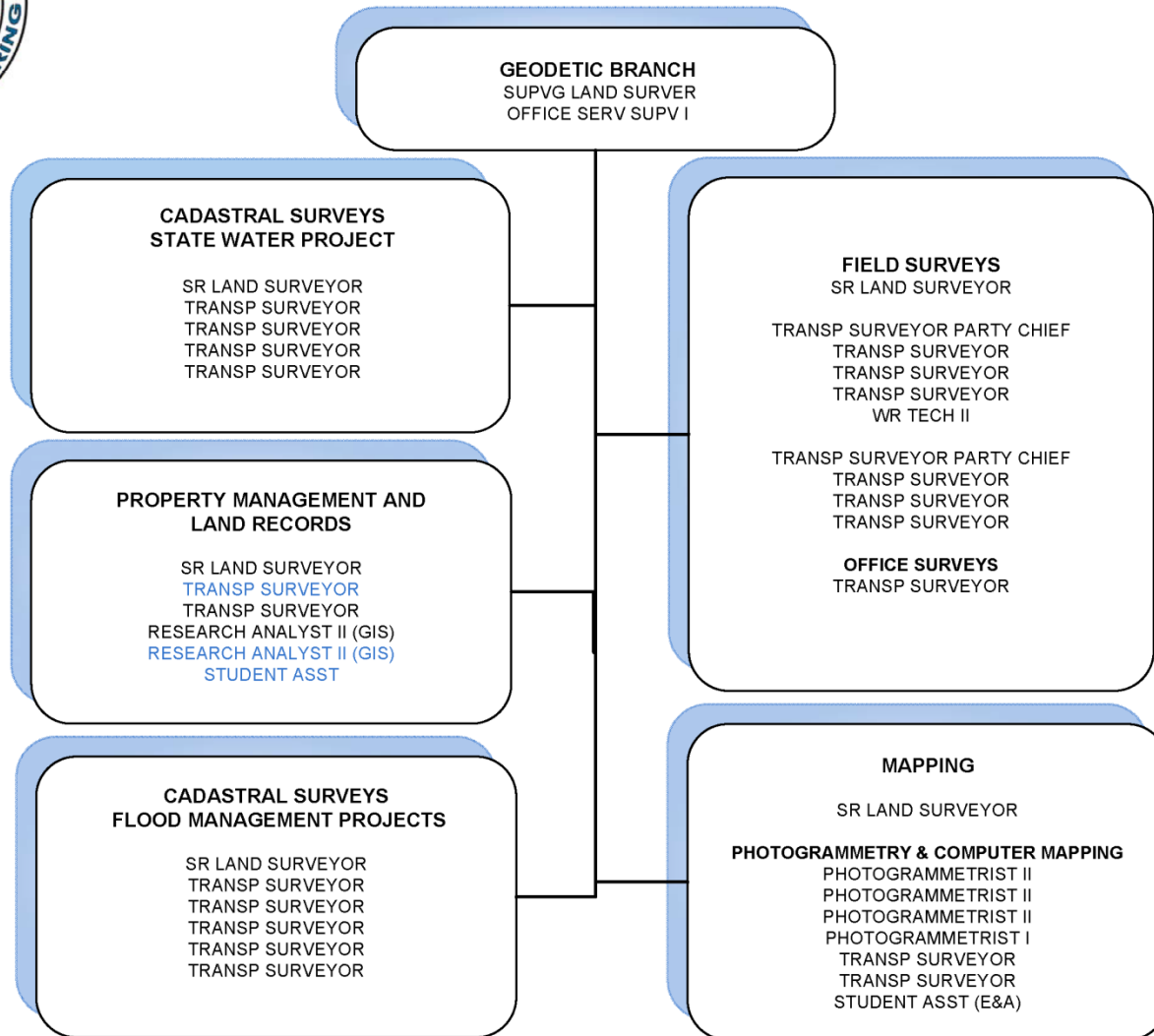
Geodetic Branch

Central Valley Flood Protection Board Meeting  
10-24-14





July 1, 2014





# Field Surveys

- Topographic/Bathymetric surveys for engineering design and site evaluation
- Geodetic Control Surveys
- Construction related surveys
- Boundary Surveys for Acquisitions and Property Mgmt.

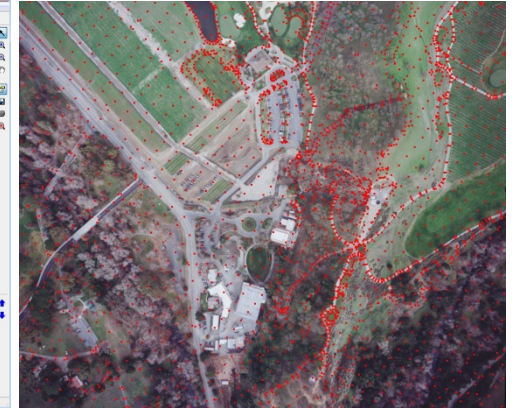
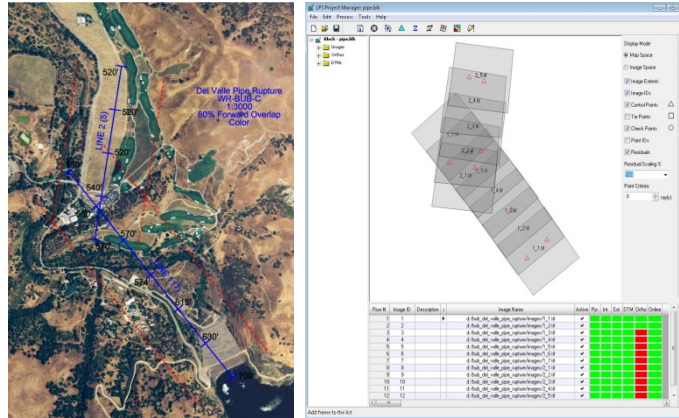


- Bay Delta Office
- Division of Engineering
- Division of Flood Management
- Division of Environmental Services
- Division of Integrated Regional Water Management
- Division of Operations and Maintenance
- FloodSAFE

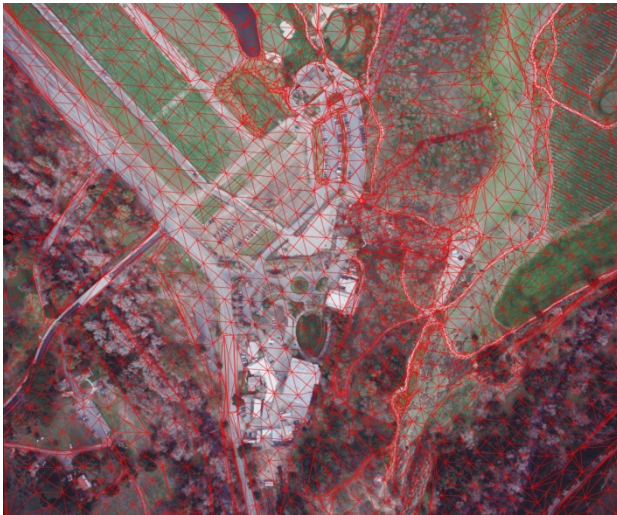


# Photogrammetry & Mapping

- Topographic Mapping
- Flight Planning
- Film Scanning
- AT/DTM/Planimetrics/Contour Maps
- Manage Photogrammetry Archive
- Special Exhibits
- GIS Database Development
- Aerial Photo Index
- Enterprise Image Server & Atlas



## Wente Brothers Winery



## Client List

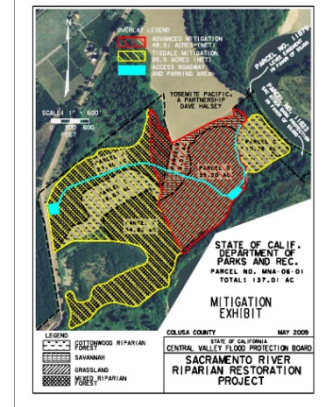
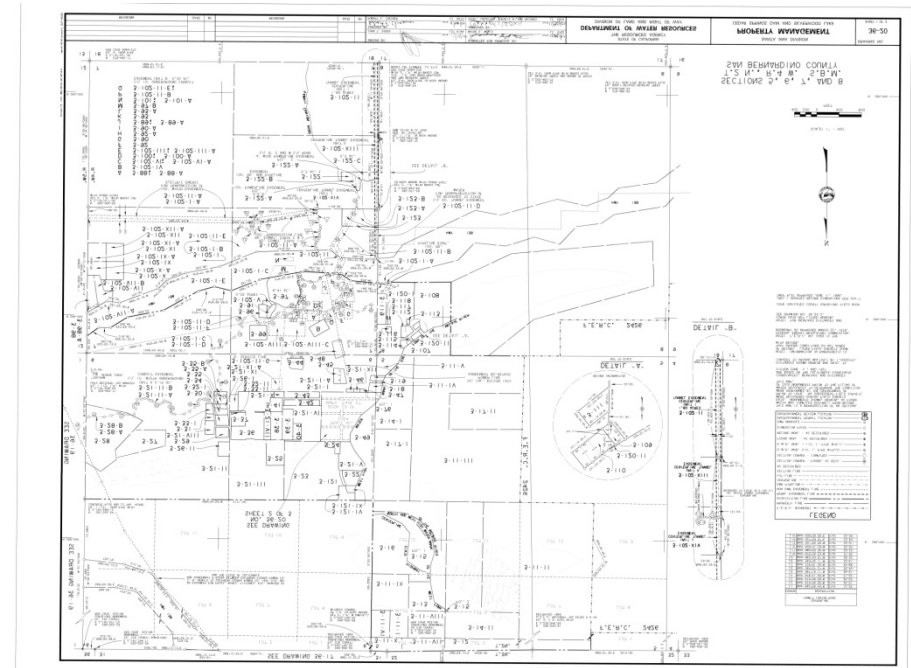
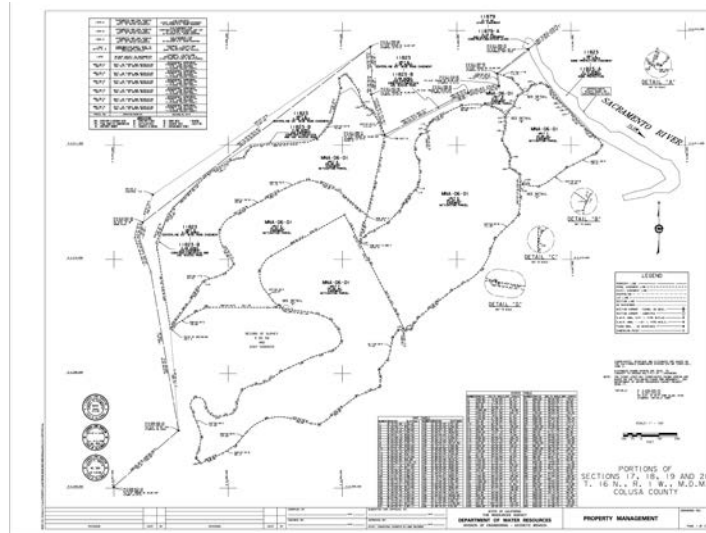
DOE Engineering  
Operations & Maintenance  
Div. of Flood Management  
Bay Delta Office  
Dept. of Fish & Wildlife  
Dept. of Parks & Recreation  
General Public



# Cadastral

## Land Acquisition Services

- Property Title Research & Review
- Title Analysis
- Property Descriptions
- Right of Entry Maps
- Appraisal Maps
- ROW Exhibit Drawings
- Parcel Sketches
- Surplus Property Sales Maps
- FERC Relicensing Maps
- Utility Relocation Maps
- Property Management Maps
- Encroachment Permit Maps



## Client List

- State Water Project
- State Flood Control System
- Central Valley Flood Protection Board
- DOE Engineering
- DOE Real Estate Branch

# EIP Cadastral Update

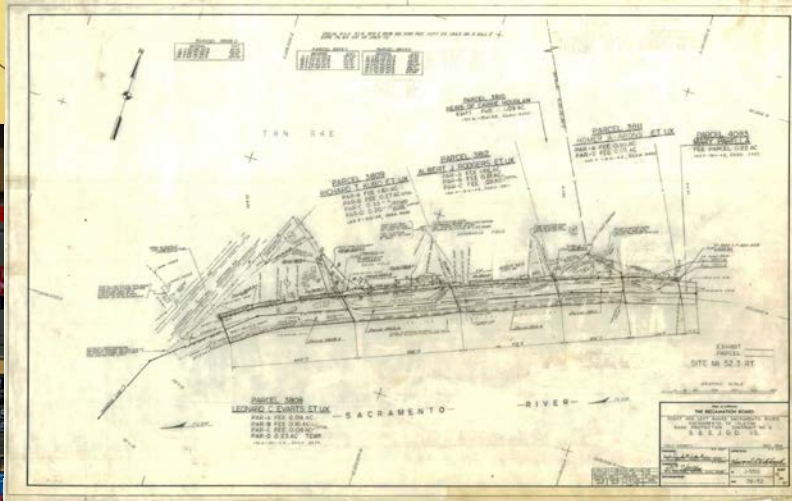
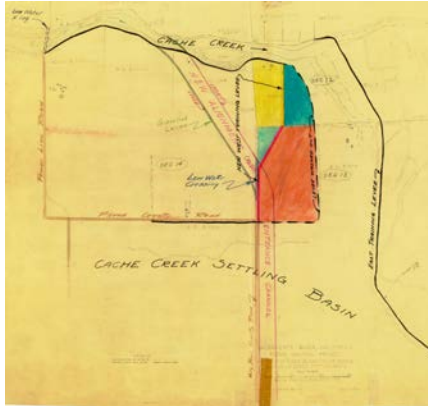
Early Implementation Program 7/23/14 to 10/24/14





# Property Management & Land Records

From This...



# To This...



## Property Management & Land Records



## Cadastral/Real Estate Geodatabase



# Outstanding Proposals for Central Valley Flood Protection Board Work

- **5450 Clarksburg Road Encroachment**
  - 2 Options \$12,000 for map and \$5,300 for monuments
- **Rio Vista Levee Repair Mapping**
  - Add on work to the mapping for the Rio Vista Flood Fight Materials Staging Area, \$10,000
- **Yolo Bypass Real Estate Database Update**
  - Quality Verification and Records update for 265 Parcels \$54,000 (about 1.5 hours per parcel)



# Boundary Survey Protocol



## Encroachment Potential Recognized

### Request for Survey Proposal (10 hours +/-)

- Preliminary Research
- Develop Scope of Work
- Calculate Costs for Field and Office Work

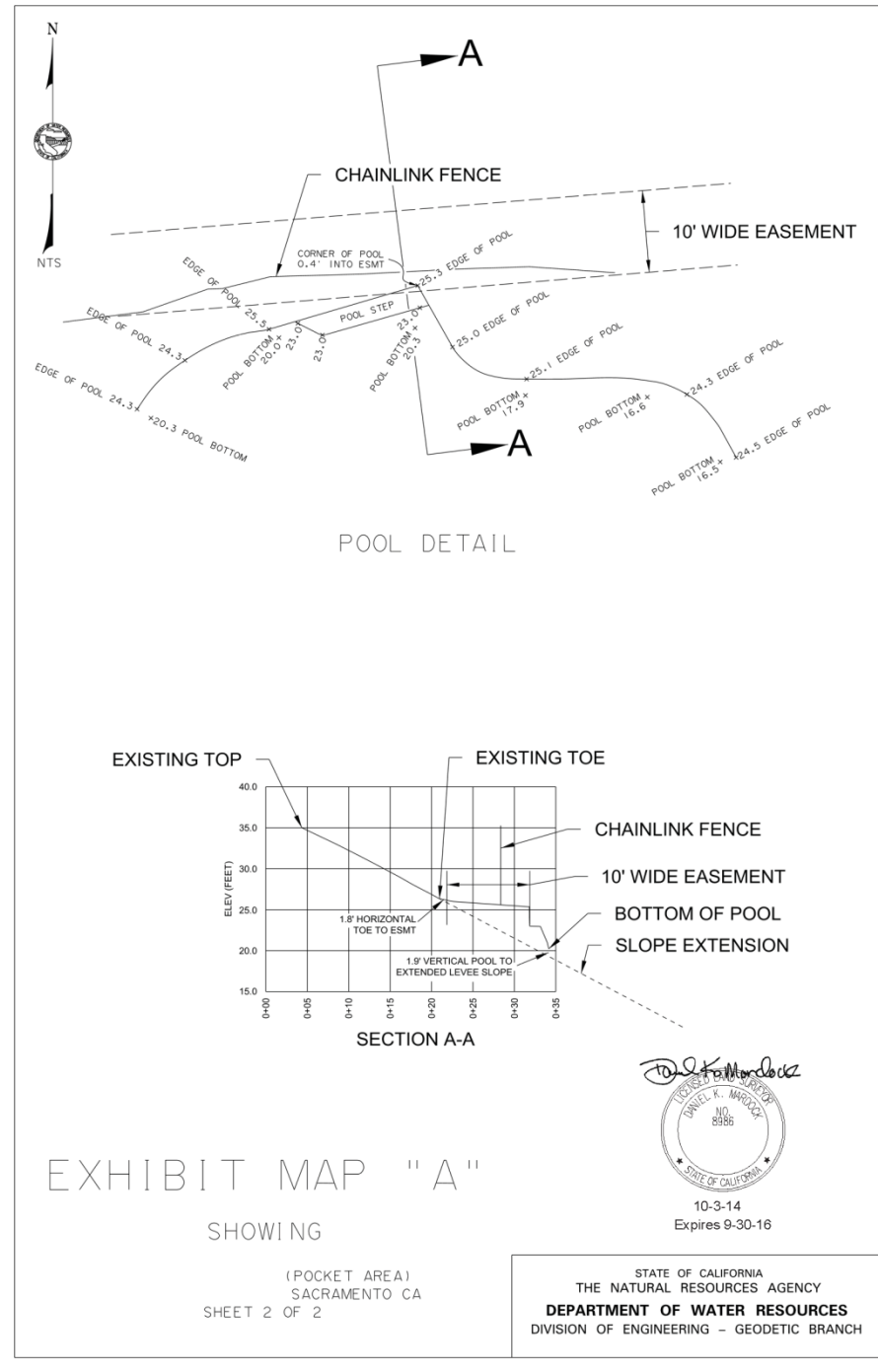
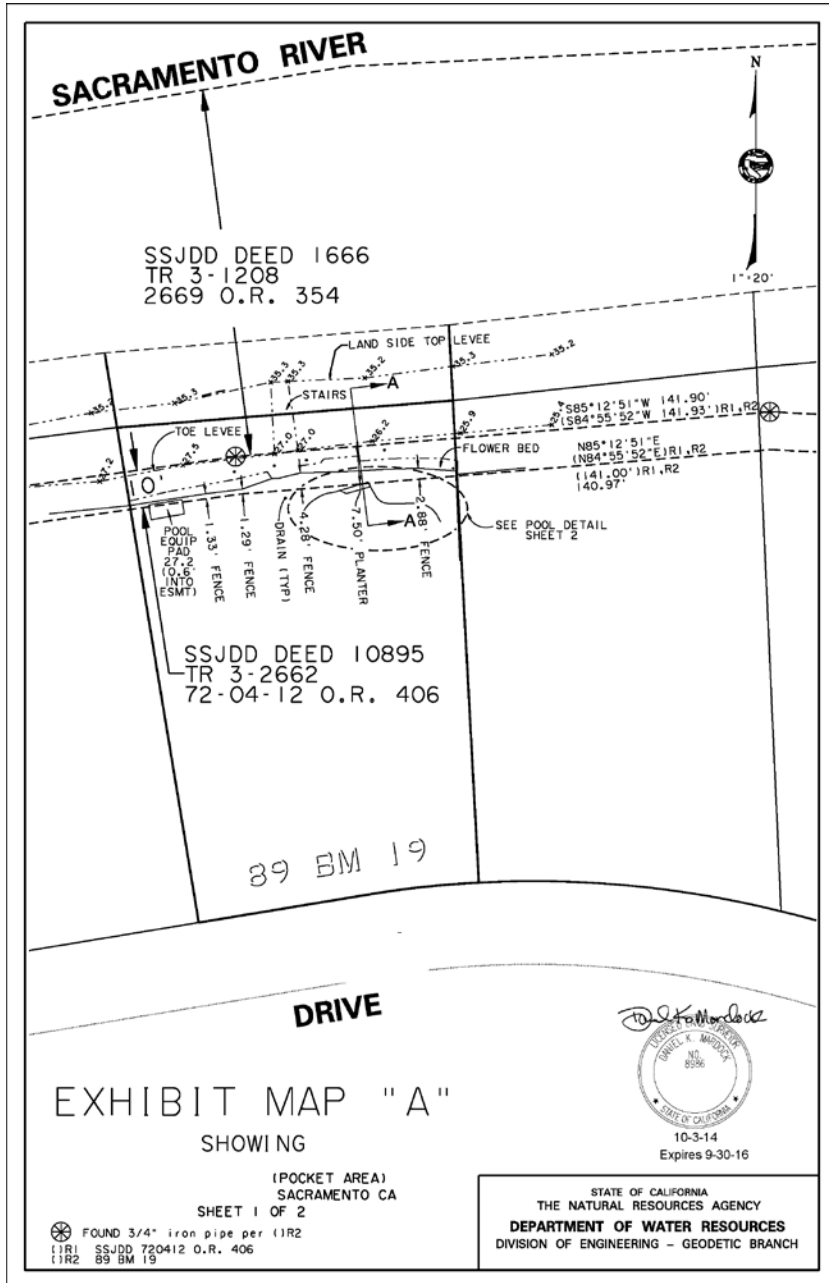
### Notice To Proceed

- Detailed Research DWR, County, CalTrans, State Archives, Local Surveyors
- Analyze Records and Create Field Package
  - Record Surveys
  - Search Calculations
- Field Survey
  - Landowner notification
  - Geodetic Control
  - Boundary Control
  - Site Details, Fences, Encroaching Features
- Office Analysis
  - Boundary Analysis
  - Map Creation
  - Exhibit Preparation
- Next Steps

Resolve the Incredibly Complex Puzzle

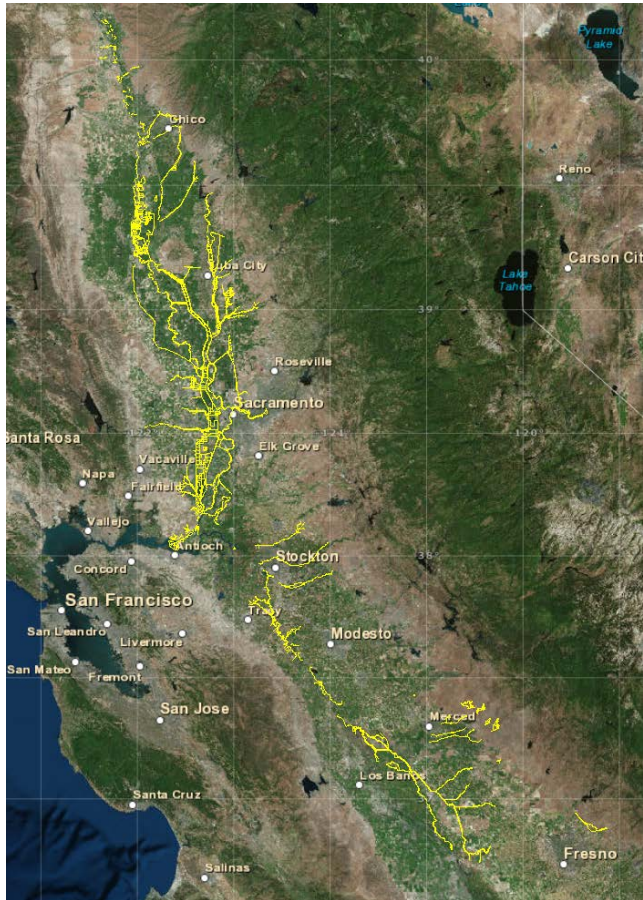


# Pool Encroachment

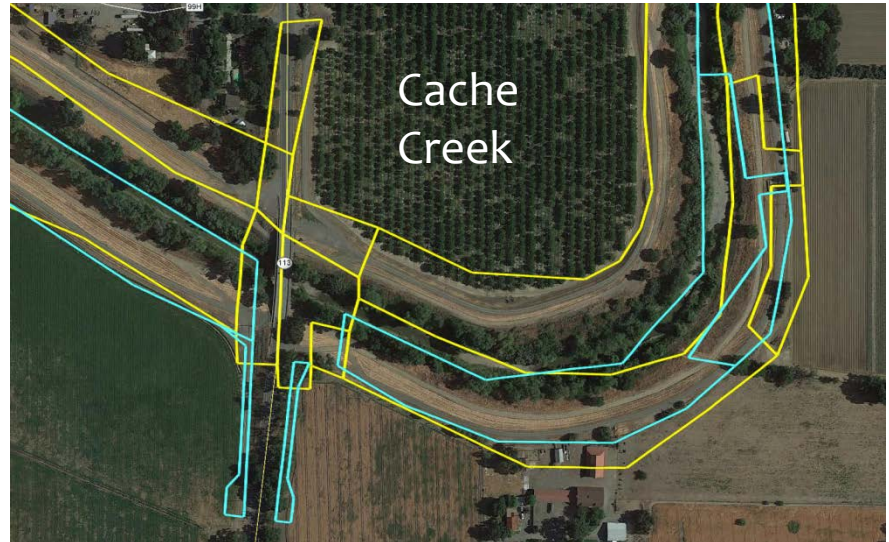




# Benefits of Encroachment Surveys



Current CVFPB Database





# MA-9 Map Production

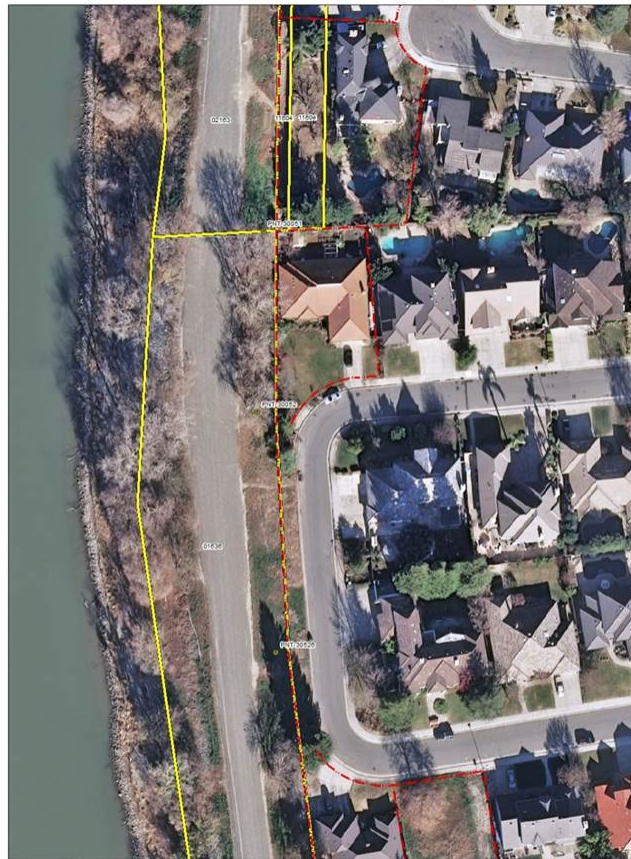


Maintenance Area



Created by The State of California, Department of Water Resources, Geodetic Branch, Cadastral Surveys & Land Records, USACE as part of the American River Common Features Project. Coordinates are based on the California Coordinate System, Zone 2, using Geoid 09, NAD83 (2011) Epoch 2. Map Series represents SSJDD Easements and Lots in the Sacramento Maintenance Area 9, located along the East side of the Sacramento River in the Pocket Area.

Maintenance Area 9 Flood Management Area



Created by The State of California, Department of Water Resources, Div. of Engineering, Geodetic Branch, Cadastral Surveys & Land Records. This map was produced from land surveys and boundary analysis. The imagery is from USACE as part of the American River Common Features Project. Coordinates are based on the California Coordinate System, Zone 2, using Geoid 09, NAD83 (2011) Epoch 2. Map Series represents SSJDD Easements and Lots in the Sacramento Maintenance Area 9, located along the East side of the Sacramento River in the Pocket Area.

MA-9 Map Series 1  
Map 36P of 90 Maps

Printed on March 14, 2014  
by Robyn Starr for DWR



Set Monuments  
Lot Lines  
SSJDD LandRights\_20f2  
SSJDD LandRights\_10f2  
01234 = SSJDD Easement Deed ID Format  
PNT-30001 = Set Point in Field ID Format

Area



Created by The State of California, Department of Water Resources, Division of Engineering, Geodetic Branch, Cadastral Surveys & Land Records. This map was produced from land surveys and boundary analysis.

Map Series represents SSJDD Easements and Lots in the Sacramento Maintenance Area 9, located along the East side of the Sacramento River in the Pocket Area.

Coordinates are based on the California Coordinate System, Zone 2, NAD 1983 epoch 2010

## Map Legend

- Set Monuments
- Lot Lines
- SSJDD LandRights\_20f2
- SSJDD LandRights\_10f2

01234 six digit ID is the Easement Deed  
PNT-30001 = Monument Set in Field ID



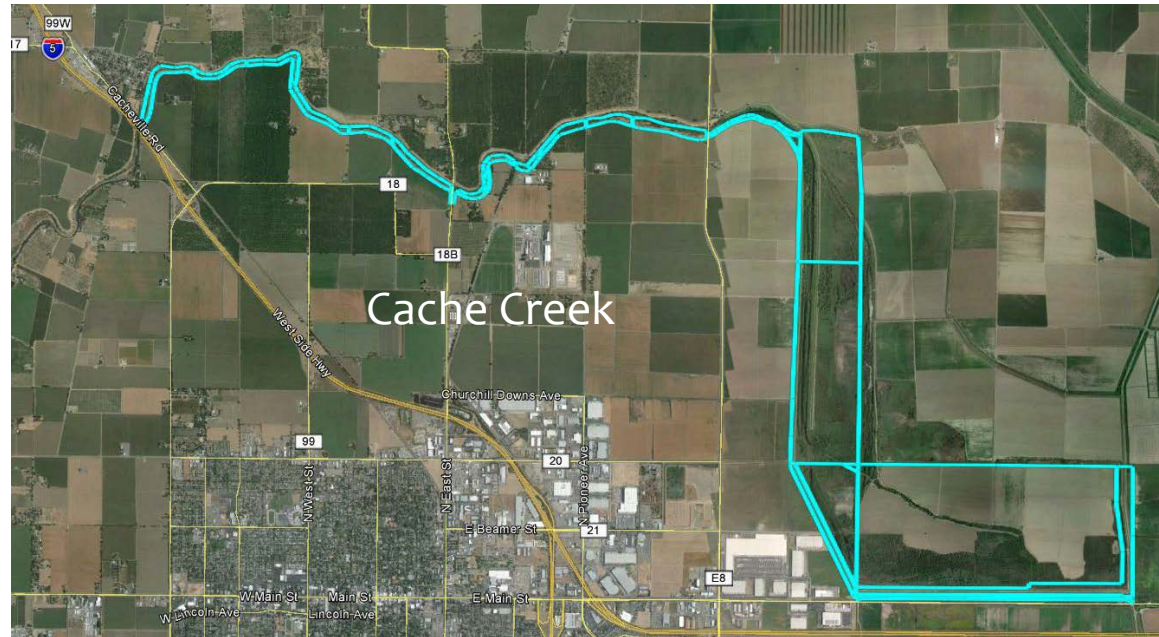
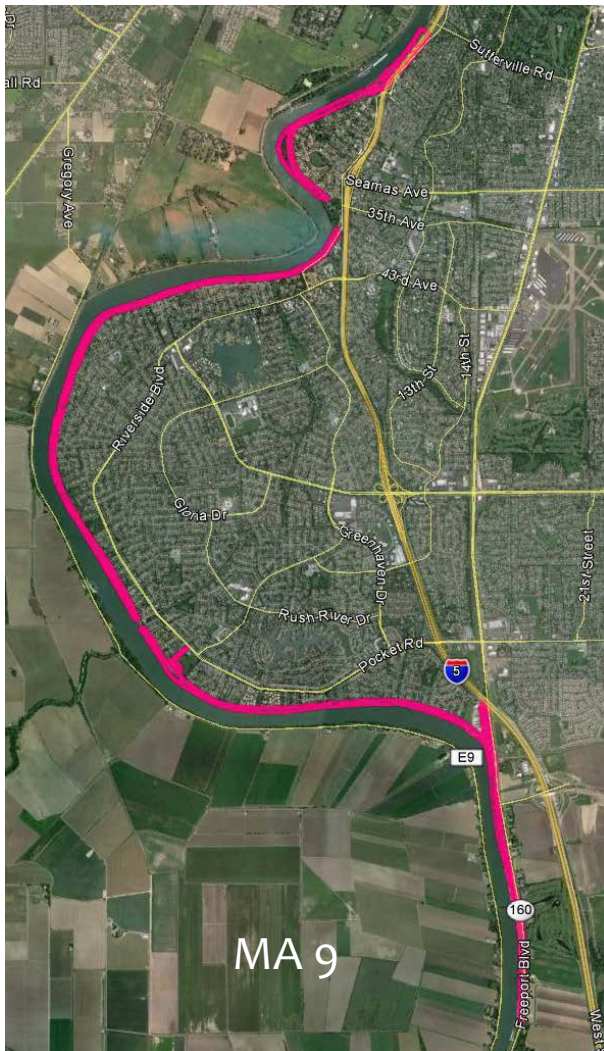
1 in = 50 ft

MA-9 Map Series 1  
Map 26 of 90 Maps

Printed on March 14, 2014  
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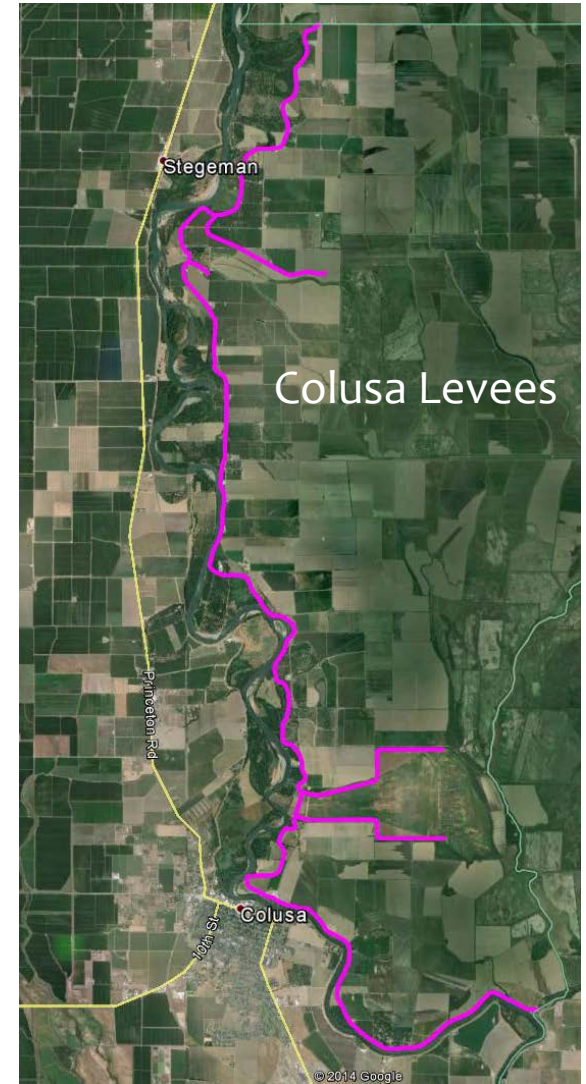
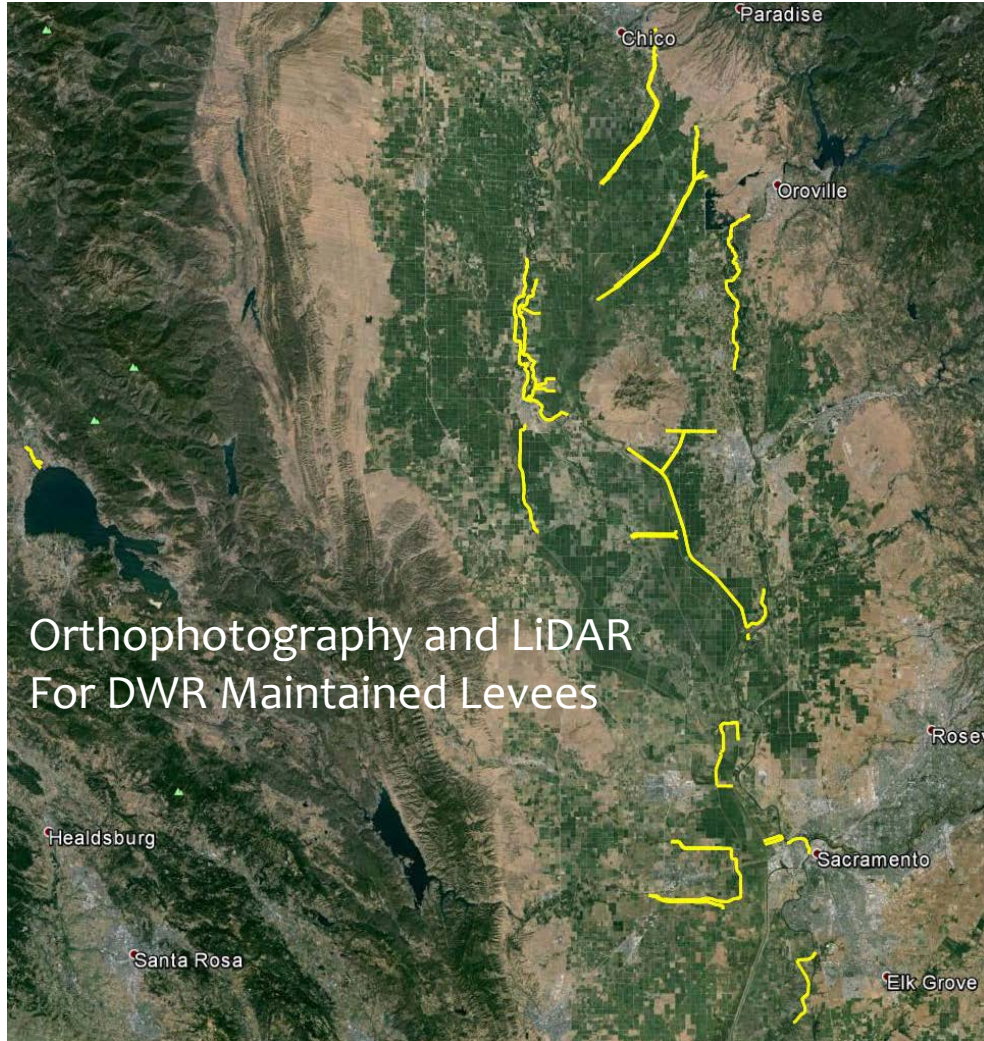
# Current Projects for Flood Maintenance Office







# Future Projects for Flood Maintenance Office





# GIS is a Discussion About Information:

## Land Records Information.

Currently a Land Records Information Query Costs \$135 to \$2,000

It Should Cost Less Than \$100

Actually, You Should Be Able to Look it Up Yourself!

- Current CAD and records system updated with deferred work
- Converted to GIS and developed into property parcel layers
- Land acquisition records scanned and linked to parcels
- GIS land information available to via intranet map services
- CVFPB Cost is projected to be approximately \$7.5M
- Savings of about \$1.8M a year in saved labor costs
- Dedicated to cleaning up deferred work and new projects
- Estimated savings from direct access to the information (Priceless)
- Project will take 5 to 7 years to complete from date of funding