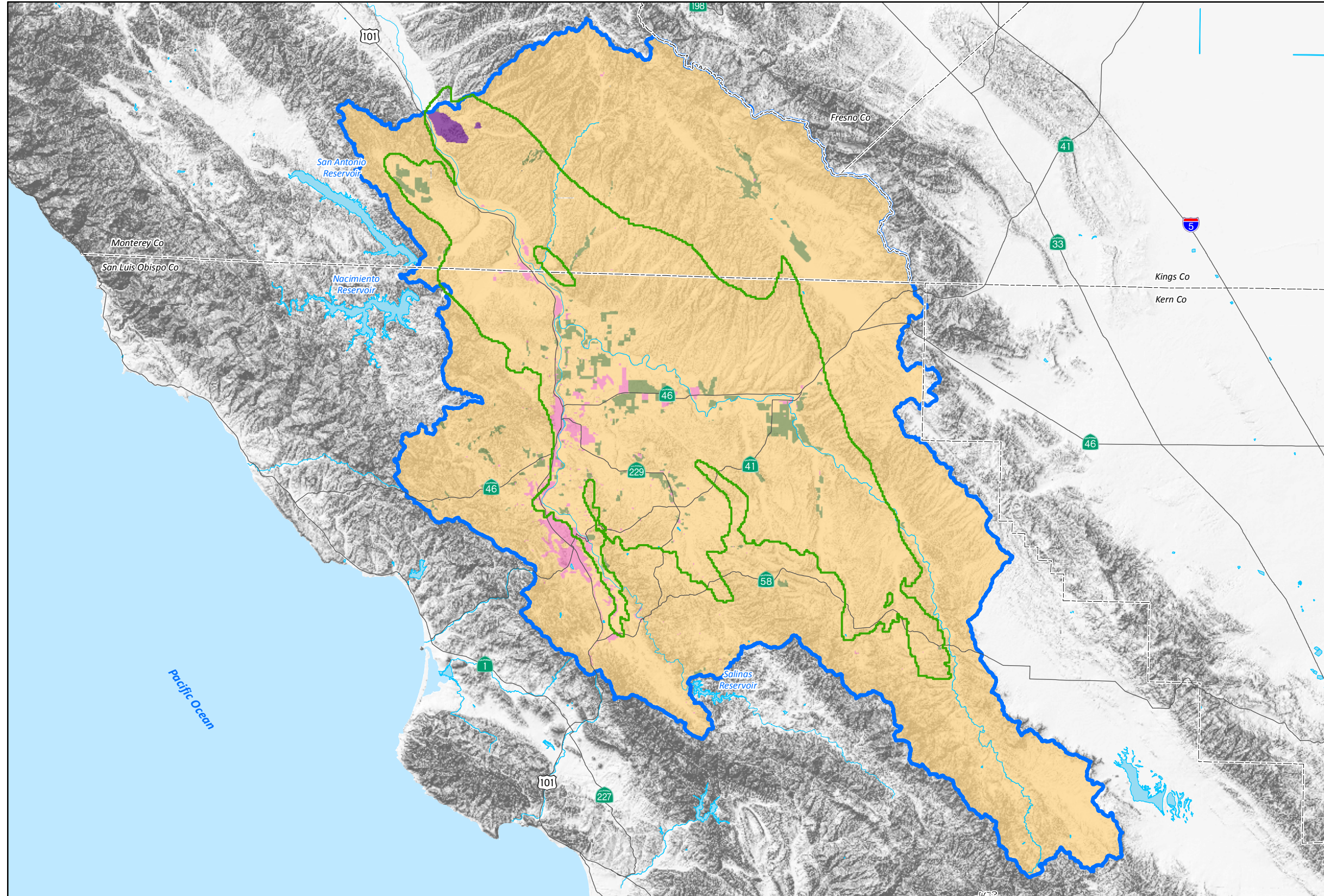


**1997 LAND USE  
CONDITIONS IN THE  
PASO ROBLES AREA  
WATERSHED**



**EXPLANATION**

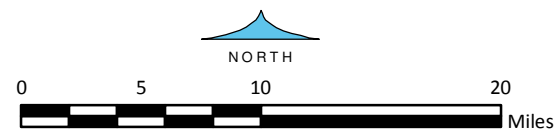
1997 Land Use Classification  
(Source: DWR 1997 Monterey and  
1996 San Luis Obispo.)

- Agriculture / Park /  
Golf Course
- Commercial / Industrial /  
Public Facility
- Low Density Residential
- Open Space /  
Dry Agriculture /  
Water Body
  
- Paso Robles Groundwater  
Basin Model Active Area  
(Source: Fugro,  
ETIC Engineers and  
Cleath, 2005)
- Paso Robles Area  
Watershed Boundary
- County Boundary

19-Dec-14

Prepared by: DWB. Map Projection: State Plane 1983, Zone V.

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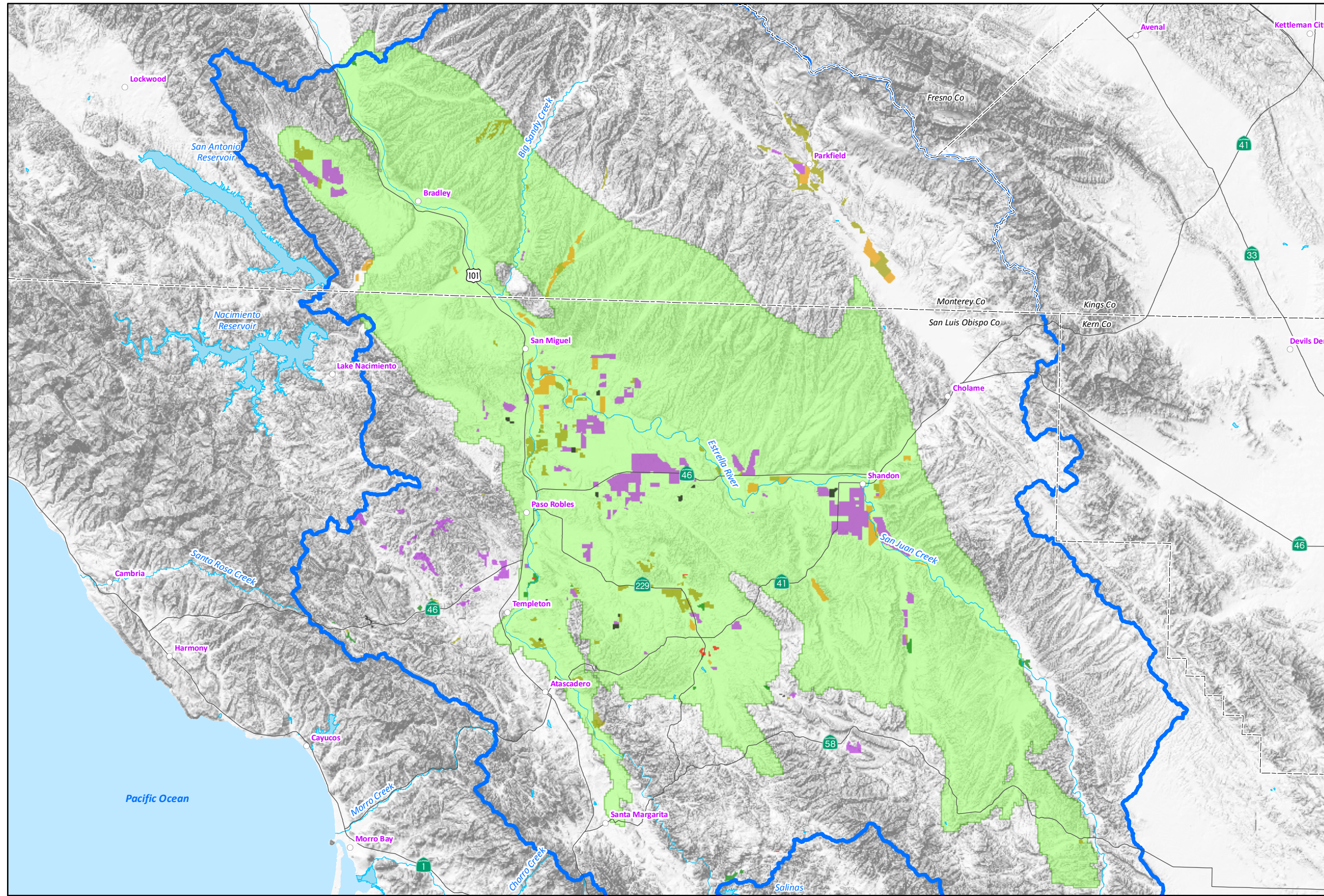


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**Figure 32a**

**1997 IRRIGATED AGRICULTURAL TYPES IN THE PASO ROBLES AREA WATERSHED**



**EXPLANATION**

1997 Land Use Irrigated Agricultural Types  
(Source: DWR 1997 Monterey and 1996 San Luis Obispo.)

- Alfalfa
- Deciduous
- Nursery
- Pasture
- Truck
- Vineyard

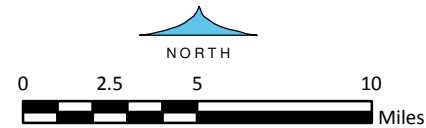
Paso Robles Groundwater Basin Model Active Area  
(Source: Fugro, ETIC Engineers and Cleath, 2005)

- Paso Robles Area Watershed Boundary
- County Boundary

19-Dec-14

Prepared by: DWB. Map Projection: State Plane 1983, Zone V.

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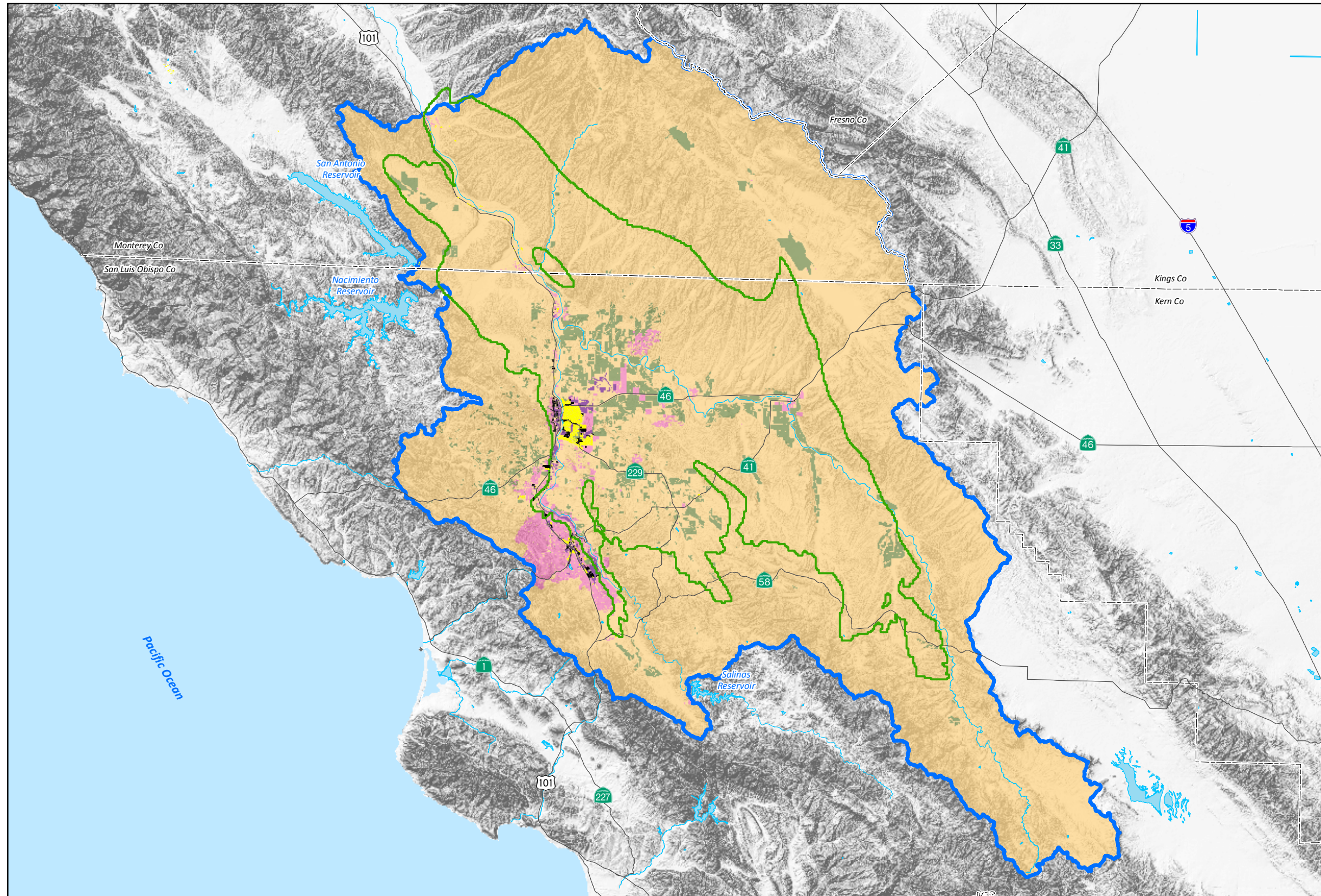


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**Figure 32b**

GIS\_proj/co\_slo\_paso\_robles\_model/6\_Fig\_32b\_1997\_Ag\_areas\_12-14.mxd



**2011 LAND USE  
CONDITIONS IN THE  
PASO ROBLES AREA  
WATERSHED**

**EXPLANATION**

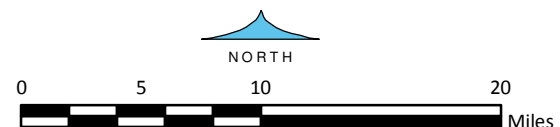
2011 Land Use Classification  
(Source: City of Atascadero,  
City of Paso Robles,  
County of San Luis Obispo  
Agricultural Commissioner  
Monterey County Agricultural  
Commissioner.  
USDA GeoDataGateway  
\* Includes modifications  
made by GEOSCIENCE and  
Todd Groundwater, 2012)

- Agriculture / Park / Golf Course
- Commercial / Industrial / Public Facility
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Open Space / Dry Agriculture / Water Body
- Paso Robles Groundwater Basin Model Active Area (Source: Fugro, ETIC Engineers and Cleath, 2005)
- Paso Robles Area Watershed Boundary
- County Boundary

19-Dec-14

Prepared by: DWB. Map Projection: State Plane 1983, Zone V.

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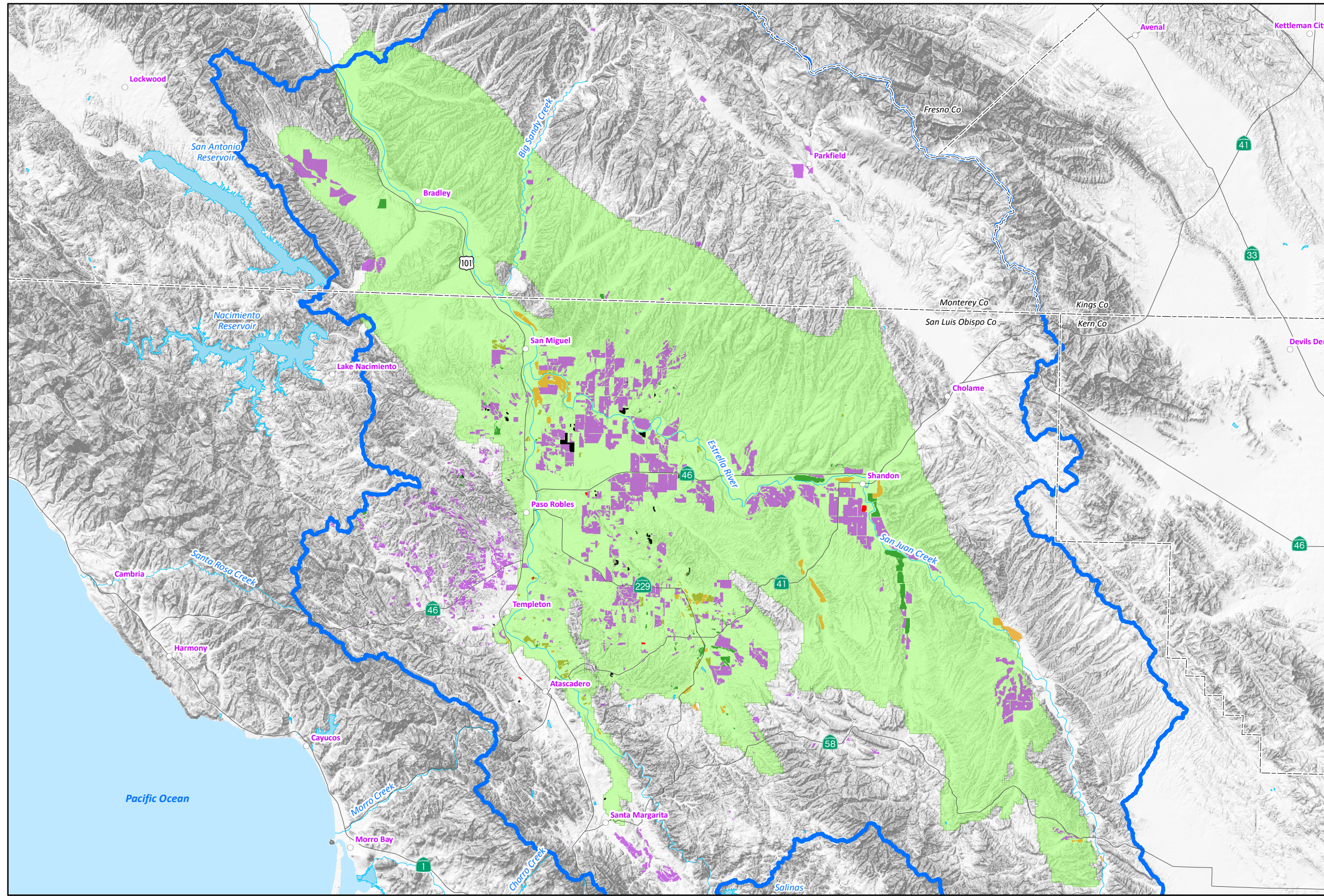


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**Figure 33a**

**2011 IRRIGATED AGRICULTURAL TYPES IN THE PASO ROBLES AREA WATERSHED**



**EXPLANATION**

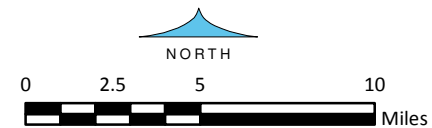
2011 Land Use Irrigated Agricultural Types  
 (Source: City of Atascadero, City of Paso Robles, County of San Luis Obispo Agricultural Commissioner, Monterey County Agricultural Commissioner, USDA GeoDataGateway \* Includes modifications made by GEOSCIENCE and Todd Groundwater, 2012)

- Alfalfa
- Deciduous
- Nursery
- Pasture
- Truck
- Vineyard
  
- Paso Robles Groundwater Basin Model Active Area (Source: Fugro, ETIC Engineers and Cleath, 2005)
- Paso Robles Area Watershed Boundary
- County Boundary

19-Dec-14

Prepared by: DWB. Map Projection: State Plane 1983, Zone V.

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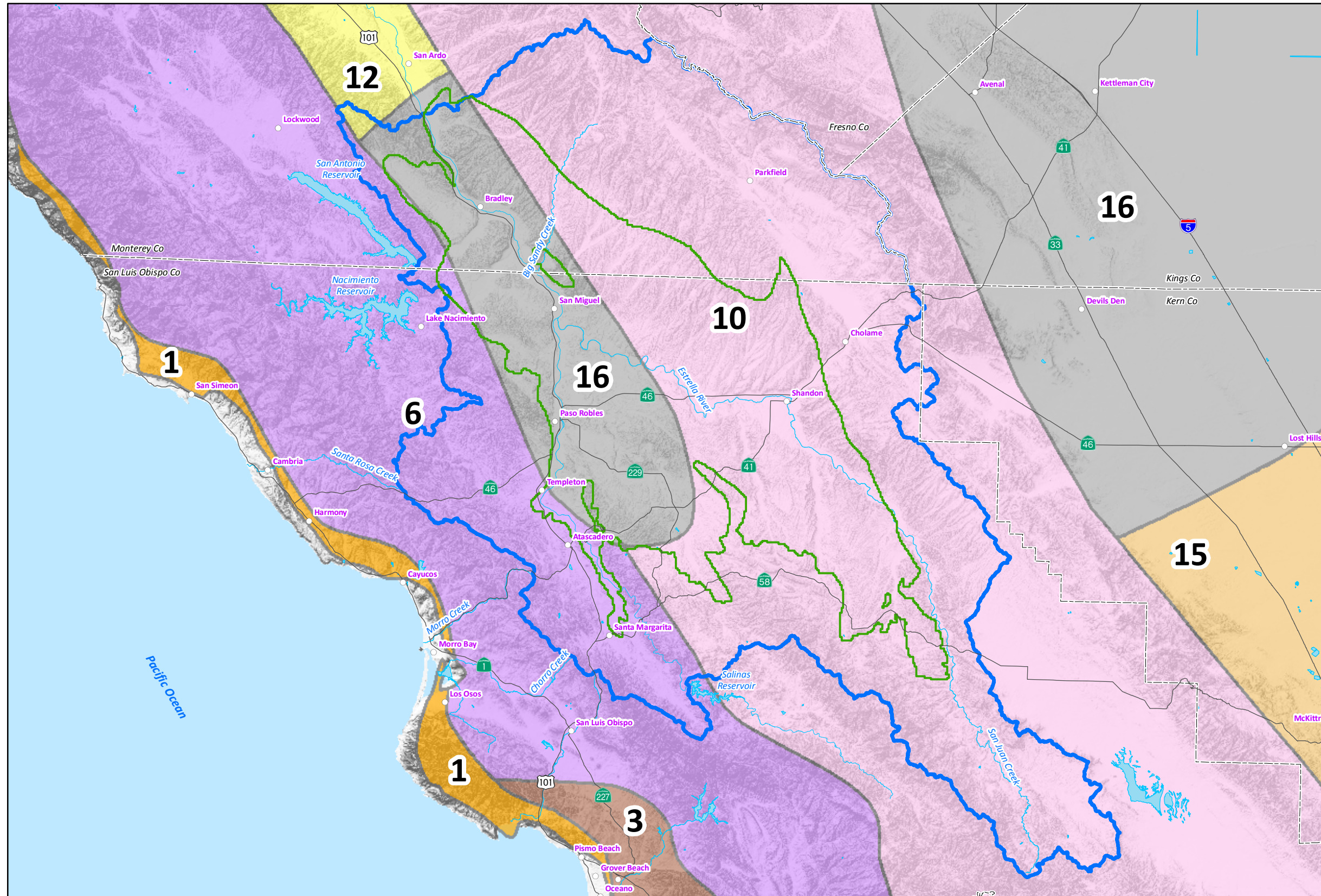


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**Figure 33b**





**REFERENCE  
EVAPOTRANSPIRATION  
(ETo) ZONES**

**EXPLANATION**

Evapotranspiration (ETo) Zones  
(Source: CIMIS, 2013)

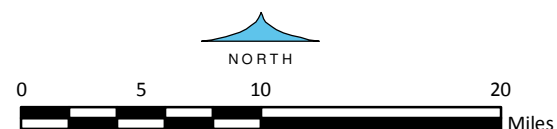
- 1** Coastal Plains Heavy Fog Belt
  - 3** Coastal Valleys and Plains and North Coast Mountains
  - 6** Upland Central Coast and Los Angeles Basin
  - 10** North Central Plateau & Central Coast Range
  - 12** East Side Sacramento-San Joaquin Valley
  - 15** Northern & Southern San Joaquin Valley
  - 16** Westside San Joaquin Valley & Mountains East & West of Imperial Valley
- Paso Robles Groundwater Basin Model Active Area (Source: Fugro, ETIC Engineers and Cleath, 2005)
  - Paso Robles Area Watershed Boundary
  - County Boundary

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GIS\_proj/co\_slo\_paso\_robles\_model/6\_Fig\_35\_ET\_zones\_12-14.mxd



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**Figure 35**

### Hydrograph of Measured and Model-Simulated Monthly Streamflow at the Salinas River near Bradley Gaging Station (11150500) - Water Years 1981 - 2011

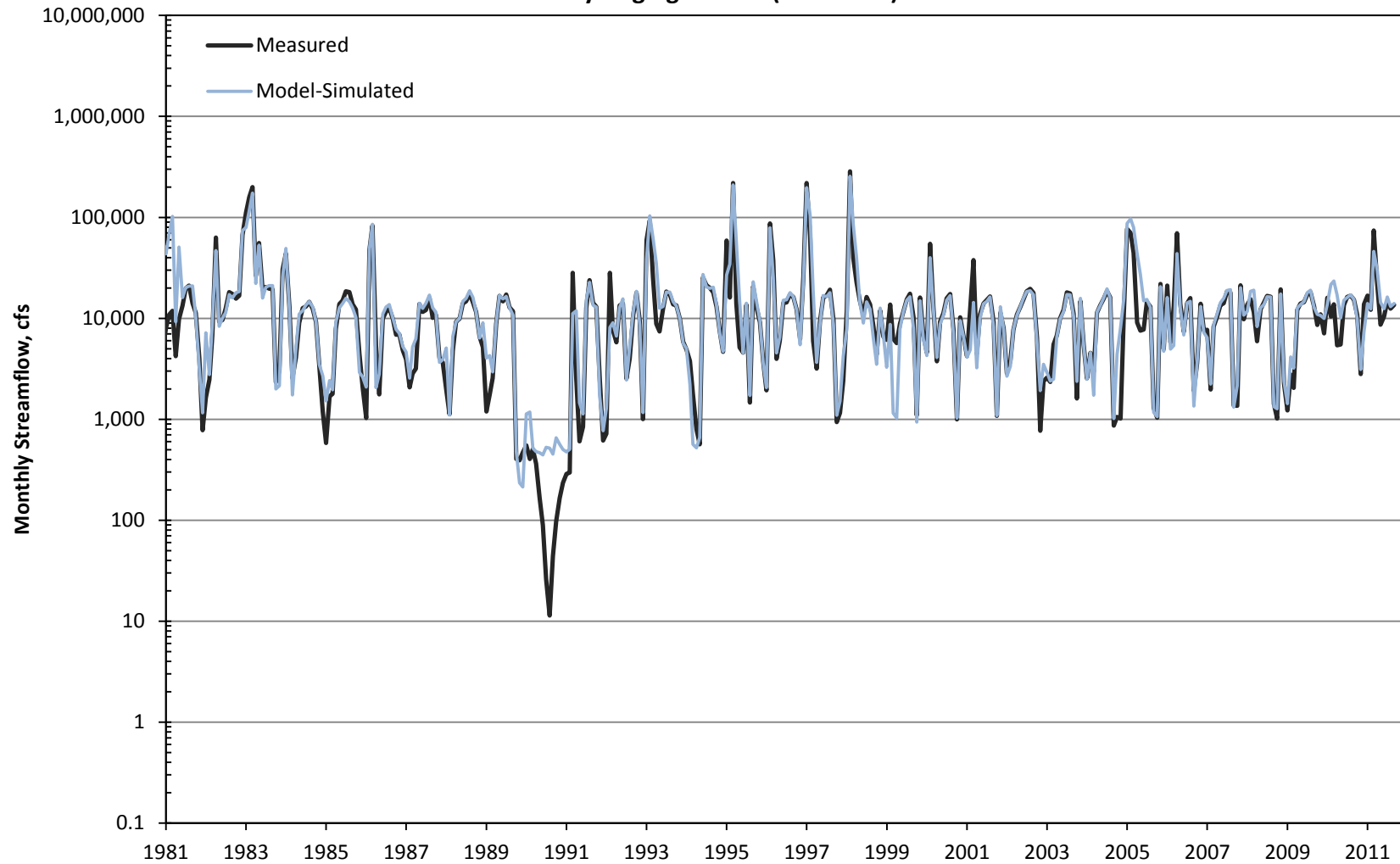


Figure 36

### Hydrograph of Measured and Model-Simulated Monthly Streamflow at the Salinas River above Paso Robles Gaging Station (11147500) - Water Years 1981 - 2011

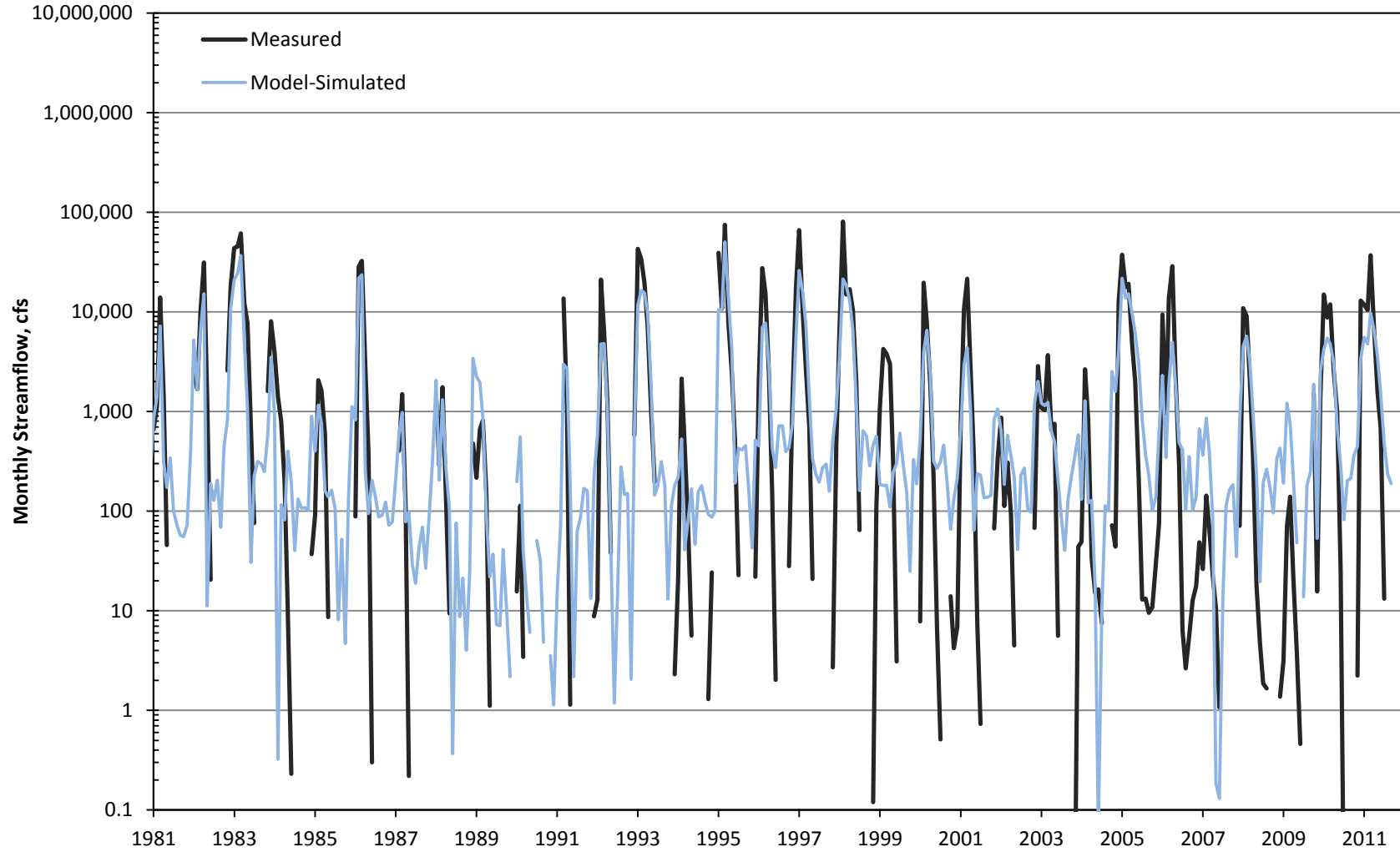


Figure 37



### Hydrograph of Measured and Model-Simulated Monthly Streamflow at the Estrella River near Estrella Gaging Station (11148500) - Water Years 1981 - 2011

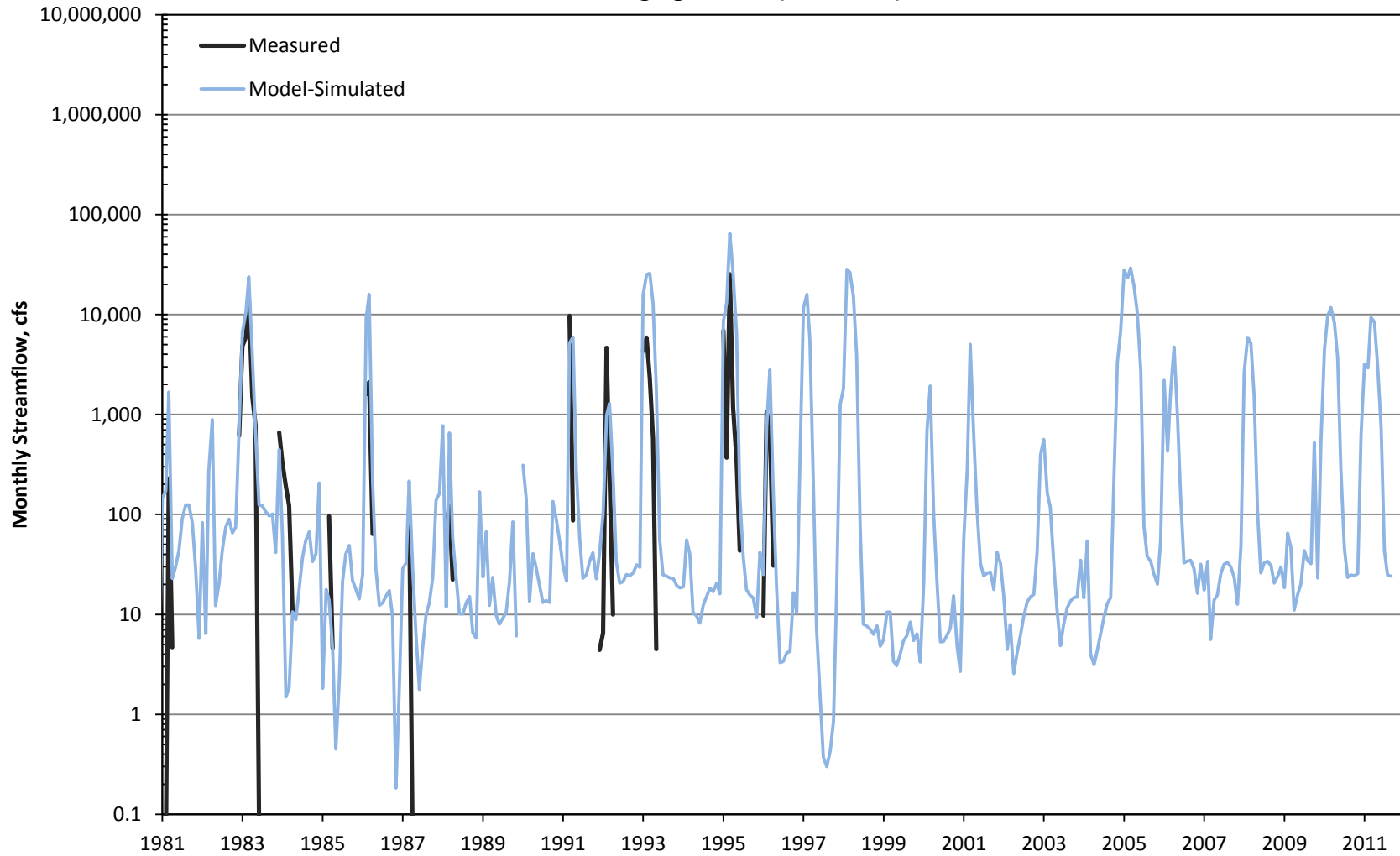


Figure 38

### Hydrograph of Measured and Model-Simulated Monthly Streamflow at the Santa Margarita Creek near Santa Margarita Gaging Station (No. 15) - Water Years 1981 - 2011

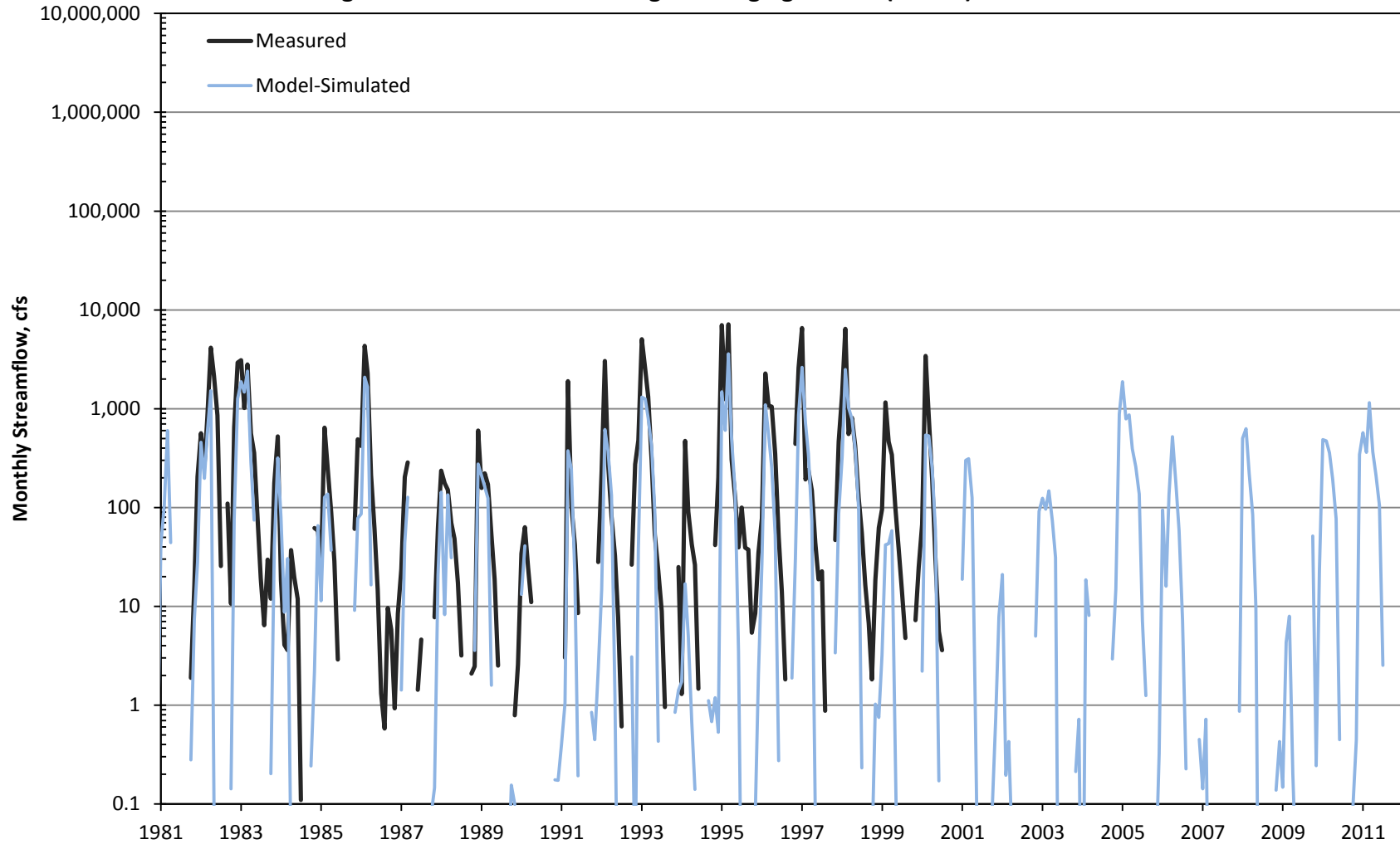


Figure 39

### Scatterplot of Measured and Model-Simulated Monthly Streamflow at the Salinas River near Bradley Gaging Station (11150500) - Water Years 1981 to 2011

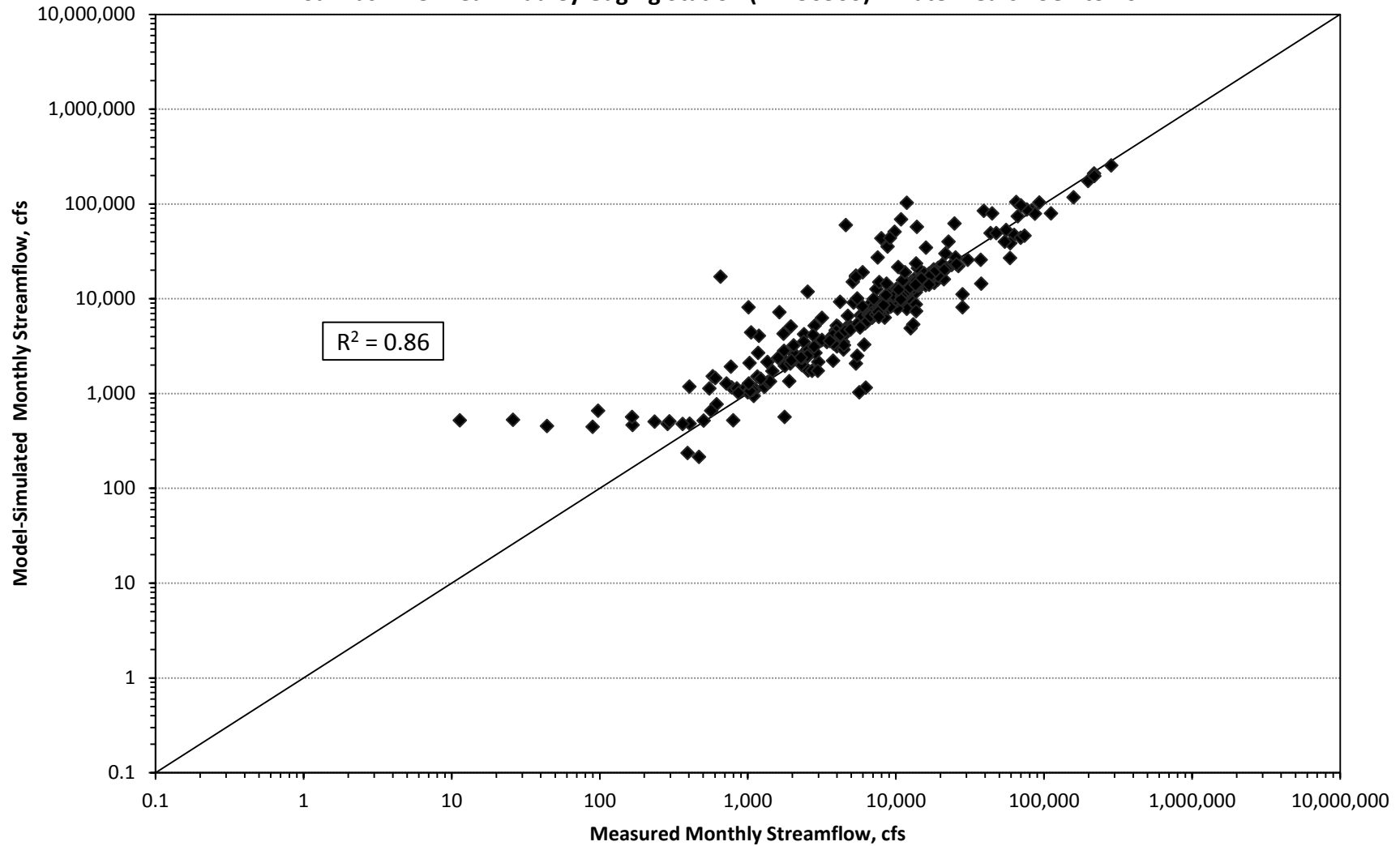


Figure 40

Scatterplot of Measured and Model-Simulated Monthly Streamflow at the  
Salinas River above Paso Robles Gaging Station (11147500) - Water Years 1981 to 2011

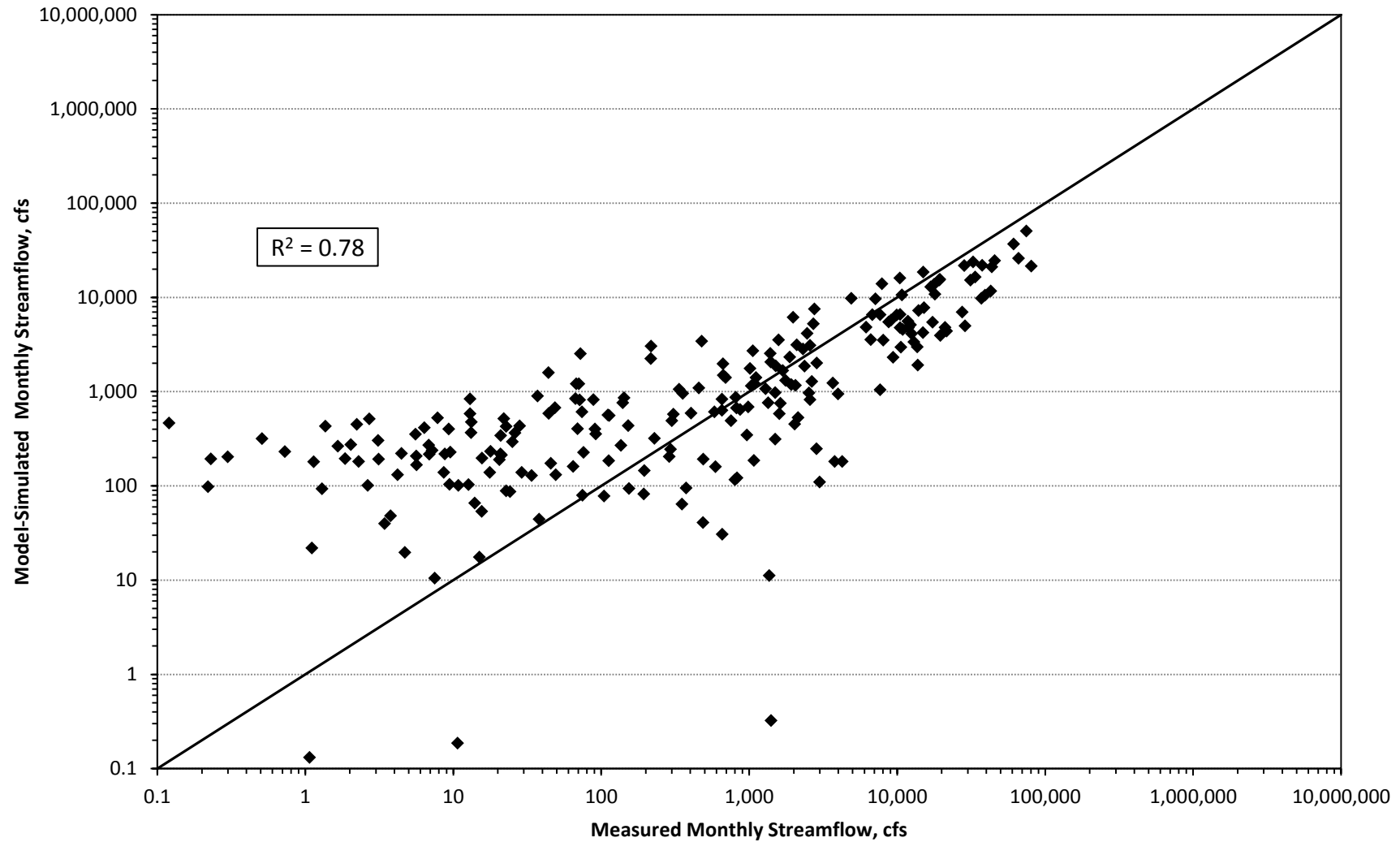


Figure 41

### Scatterplot of Measured and Model-Simulated Monthly Streamflow at the Estrella River near Estrella Gaging Station (11148500) - Water Years 1981 to 2011

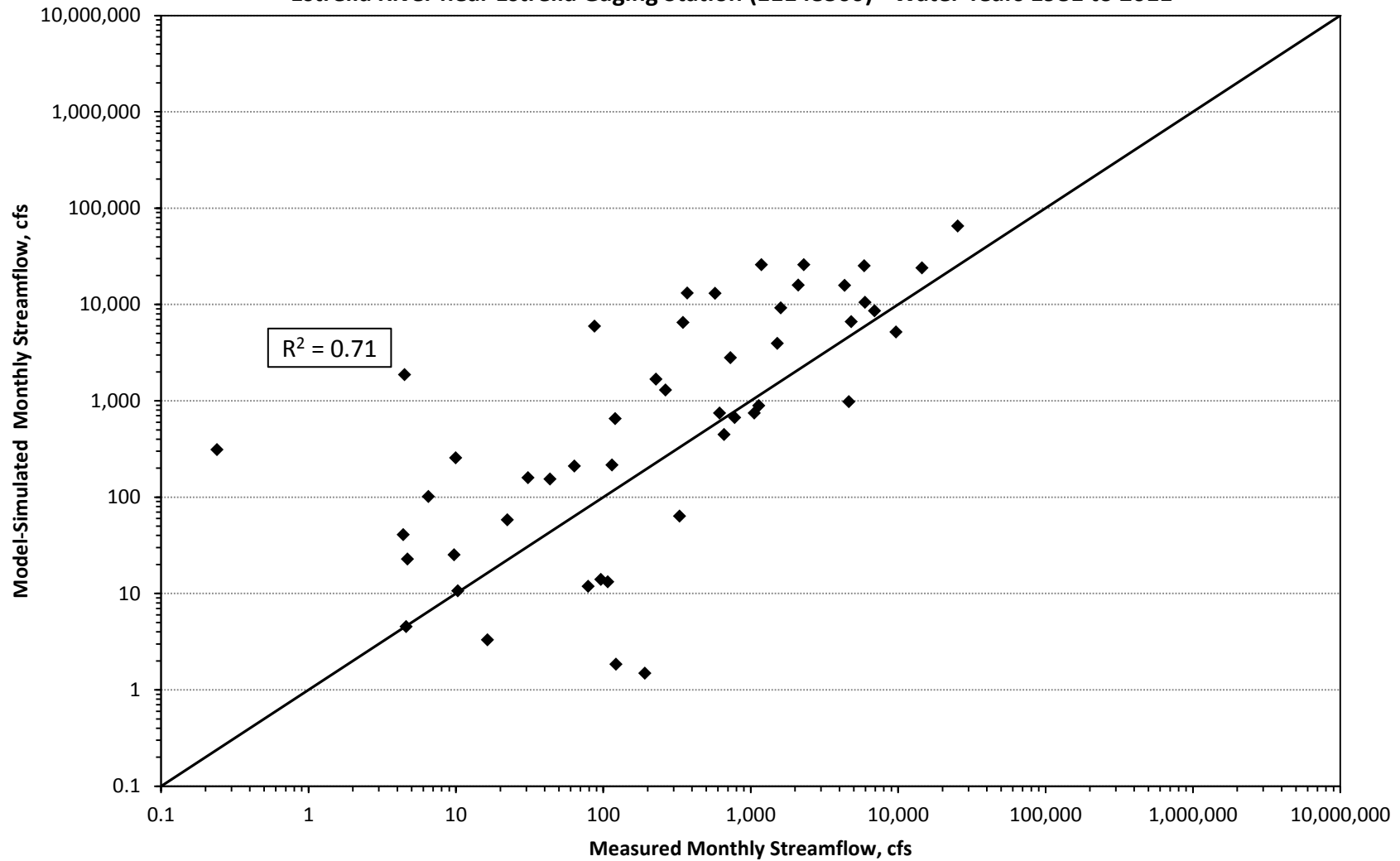


Figure 42

### Scatterplot of Measured and Model-Simulated Monthly Streamflow at the Santa Margarita Creek near Santa Margarita Gaging Station (No. 15) - Water Years 1981 to 2011

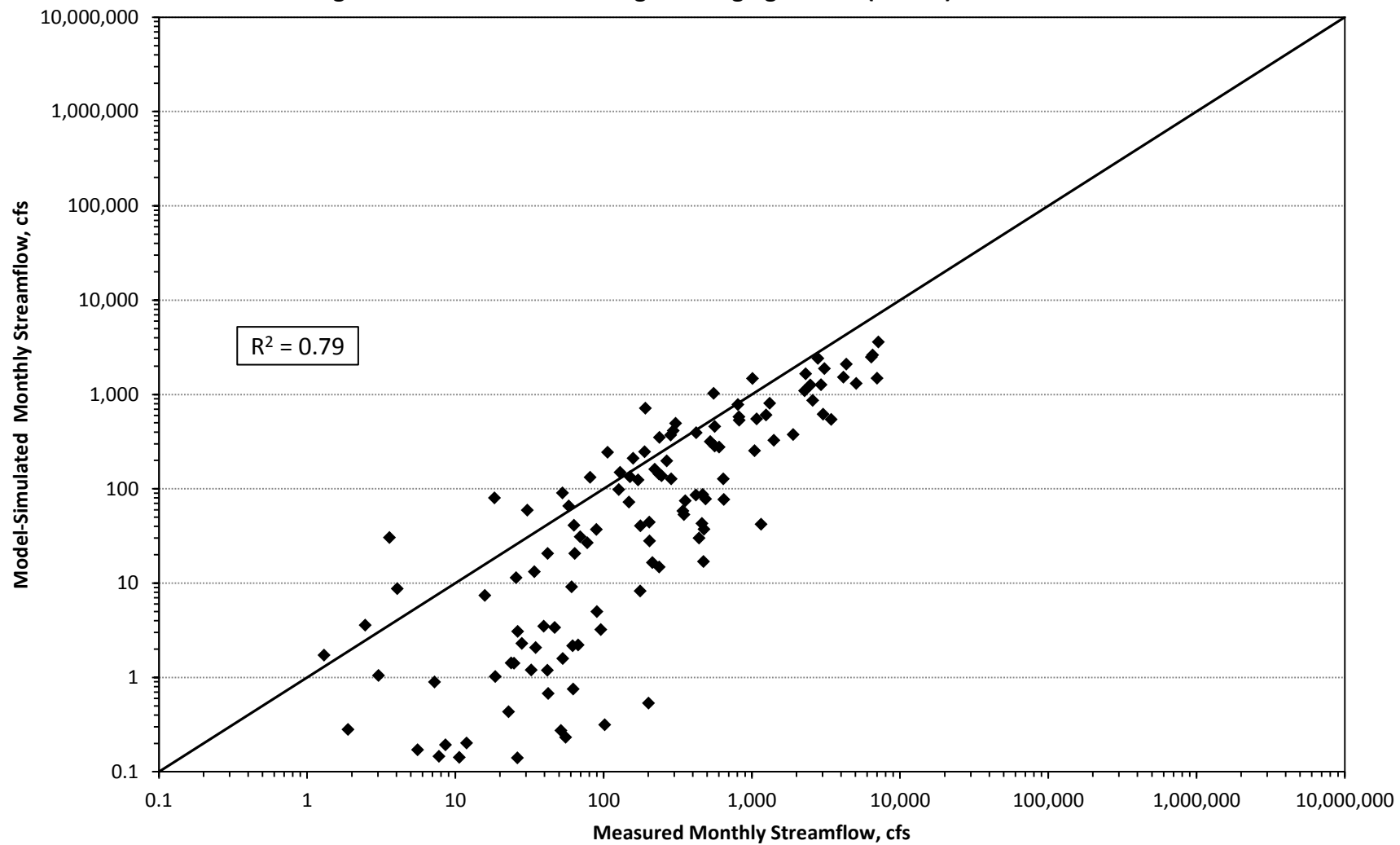


Figure 43

### Annual Recharge from Deep from Deep Percolation of Discharged Treated Wastewater Effluent Water Years 1981-2011

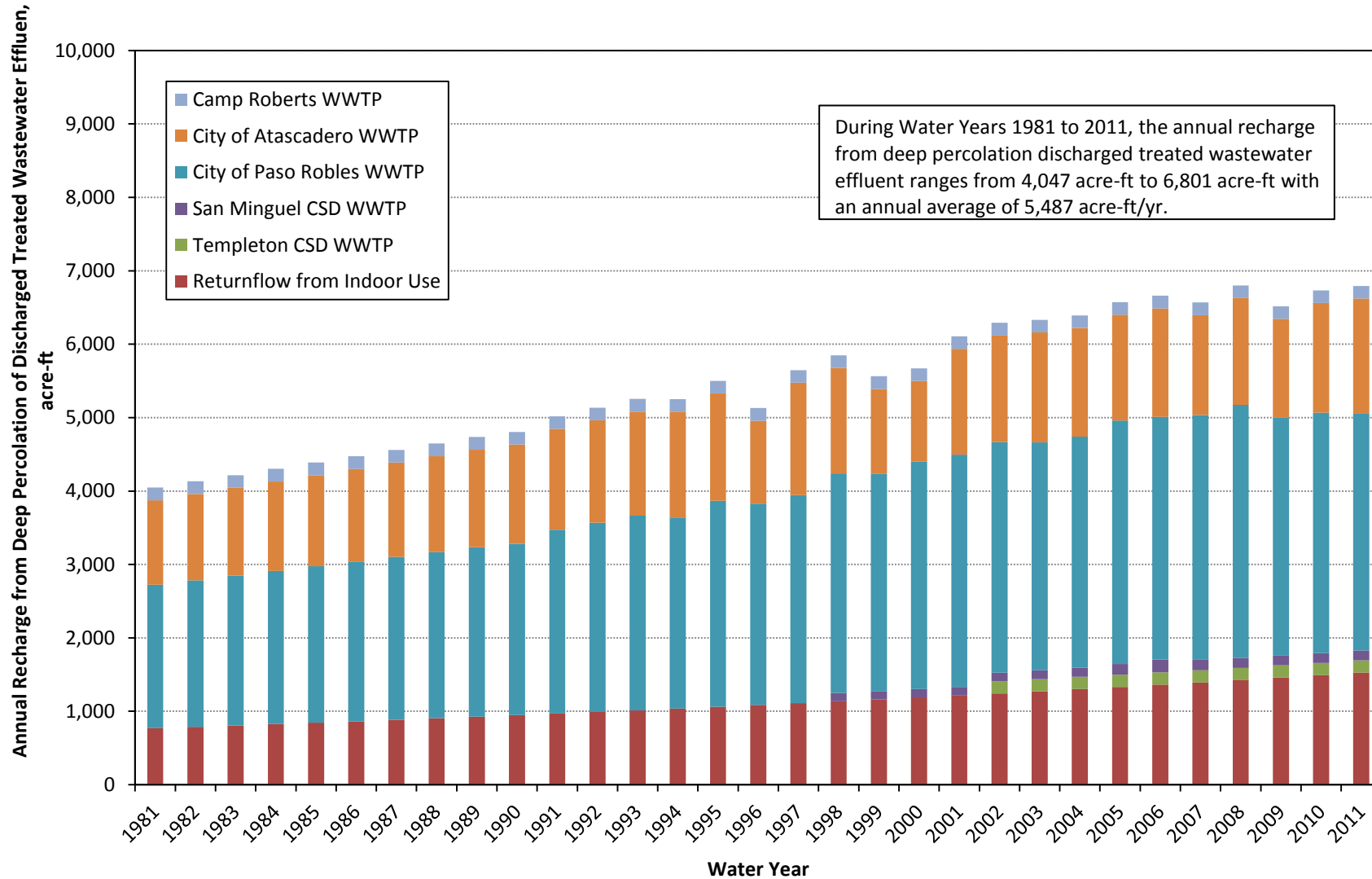


Figure 44

### Annual Recharge from Deep Percolation of Urban Water and Sewer Pipe Leakage Water Years 1981-2011

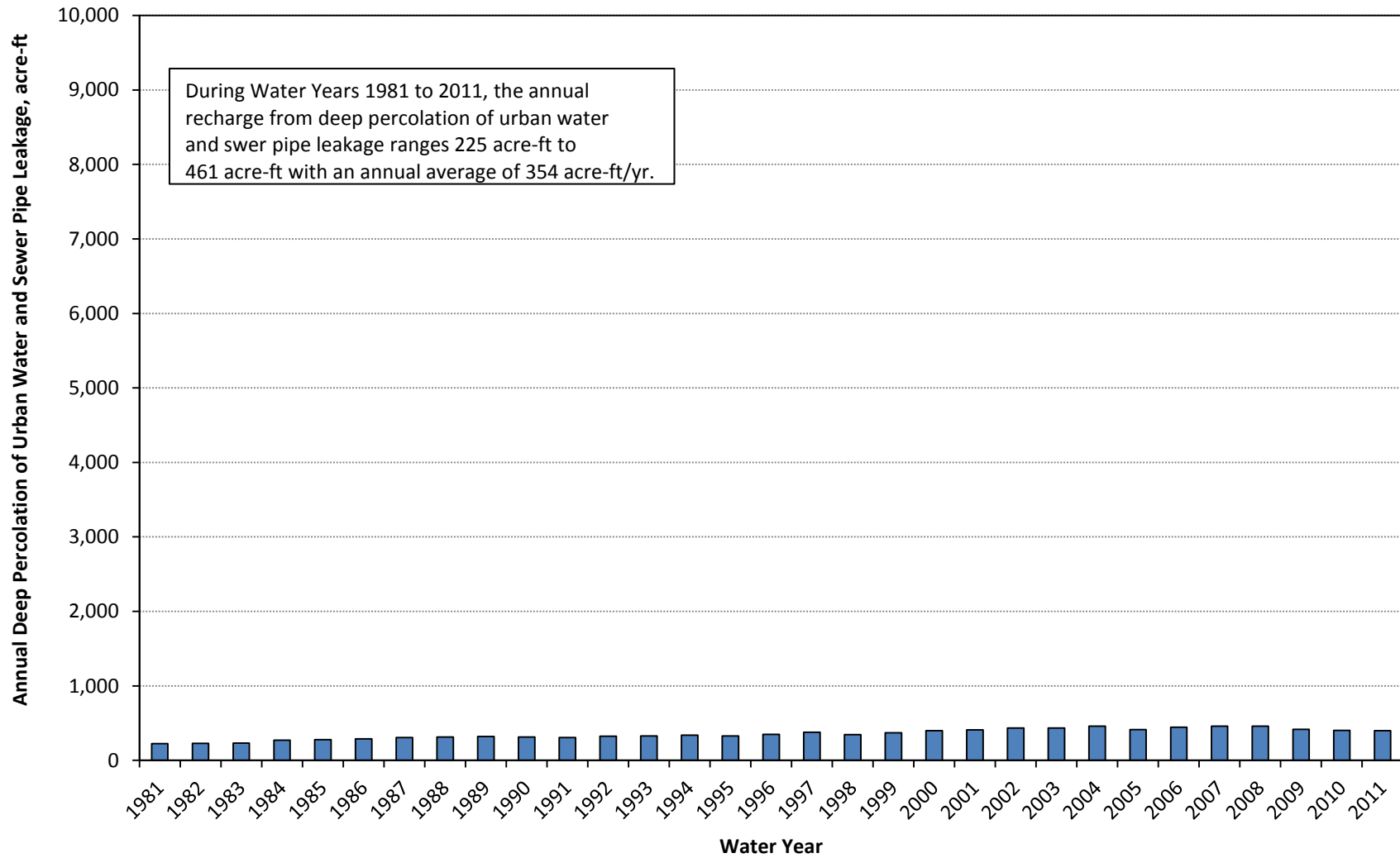
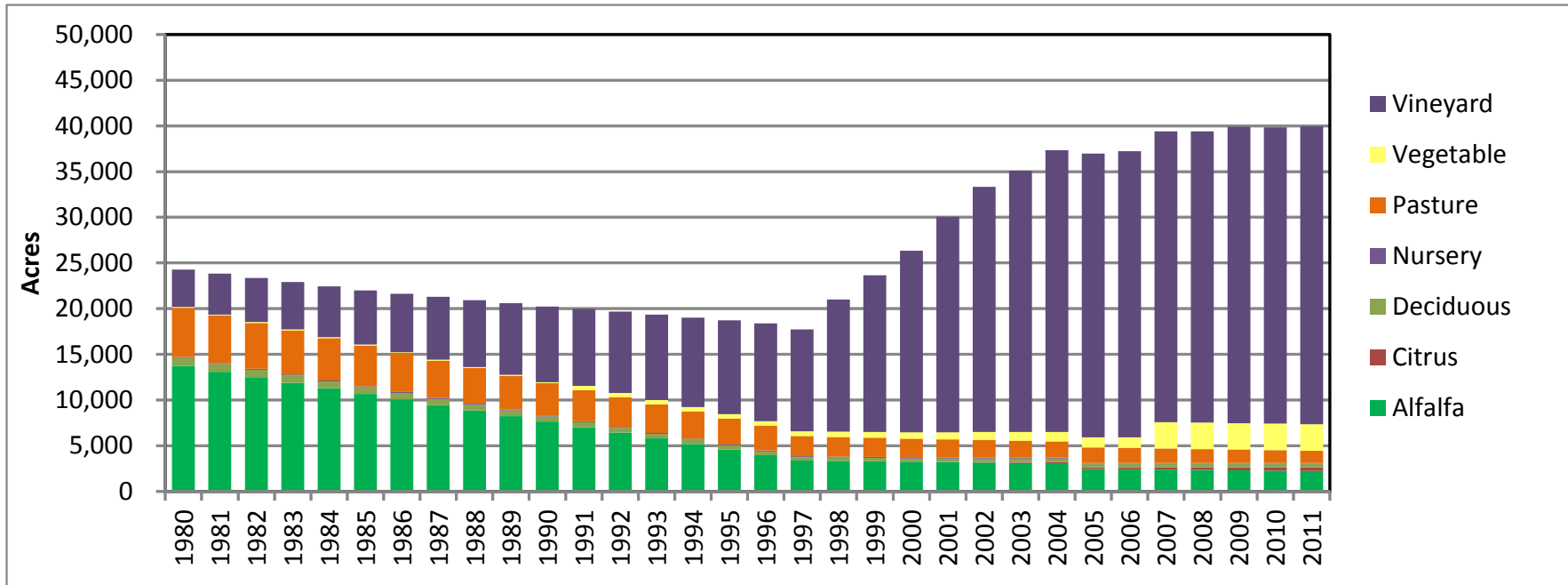


Figure 45

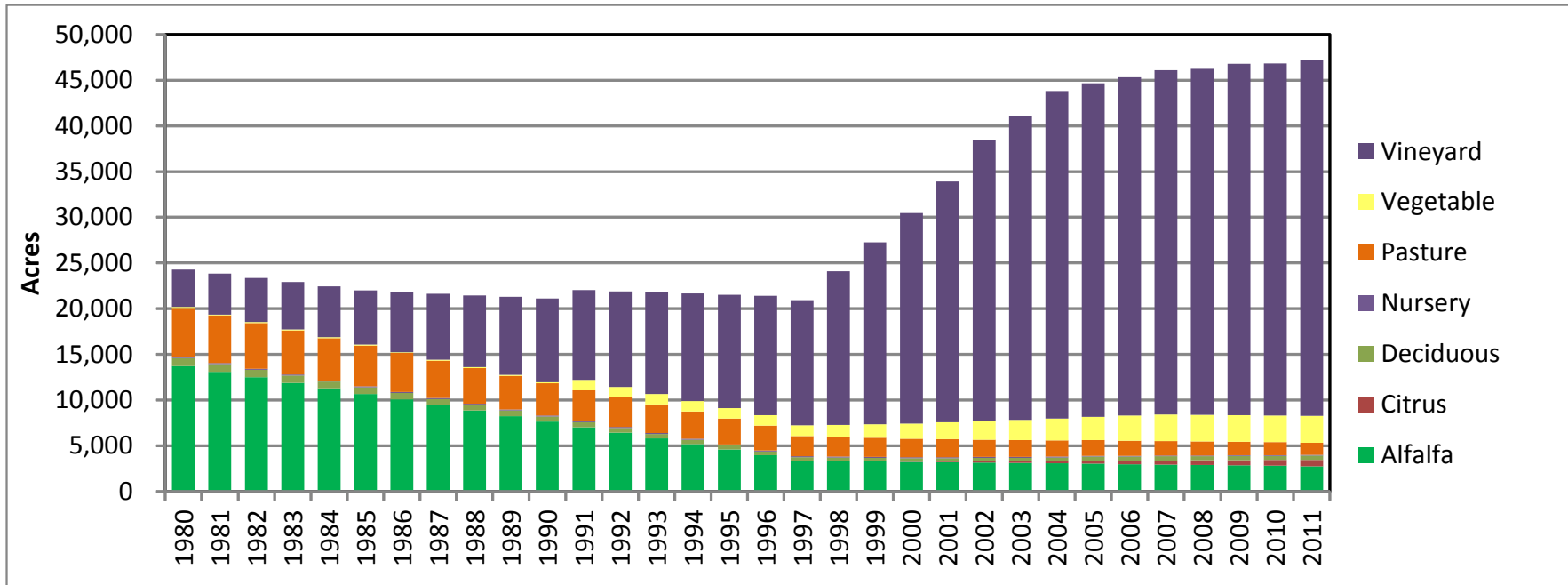




19-Dec-14



**Figure 46**  
**Annual Irrigated**  
**Crop Acreages in**  
**Groundwater Basin**



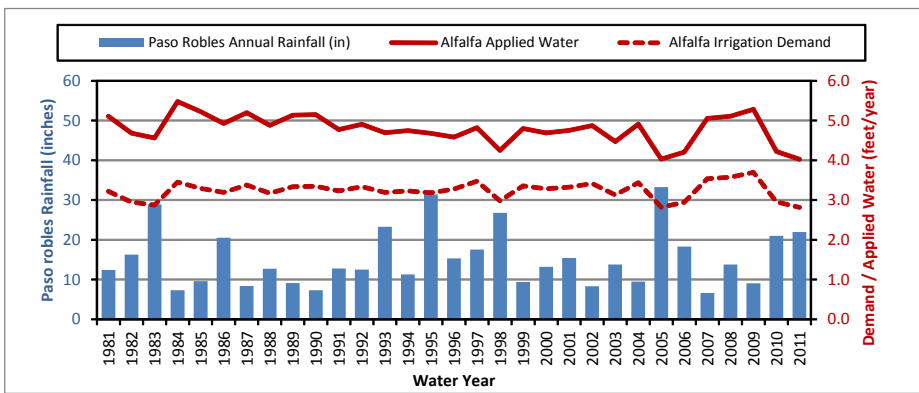
19-Dec-14



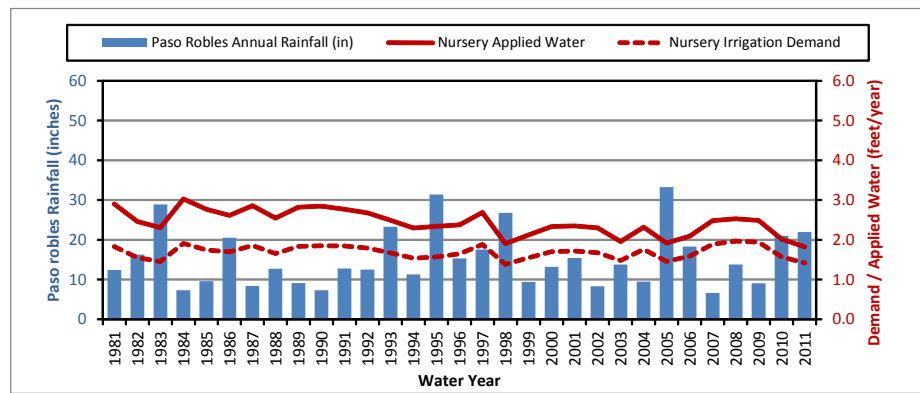
**Figure 47**  
**Annual Irrigated**  
**Crop Acreages in**  
**Watershed**



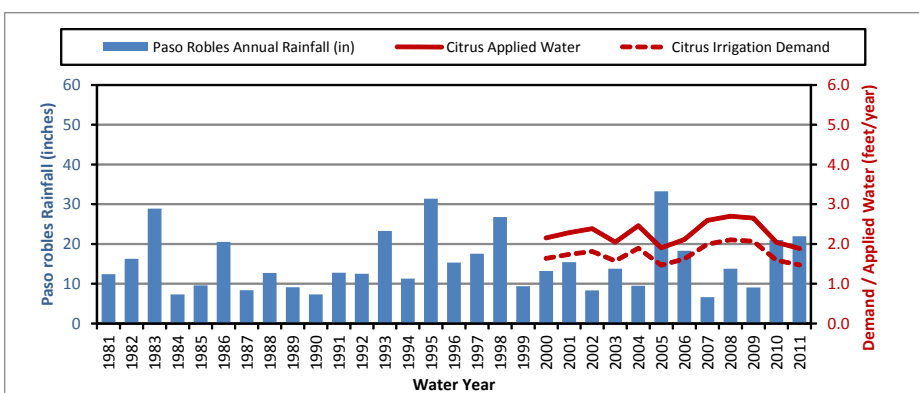
## Alfalfa



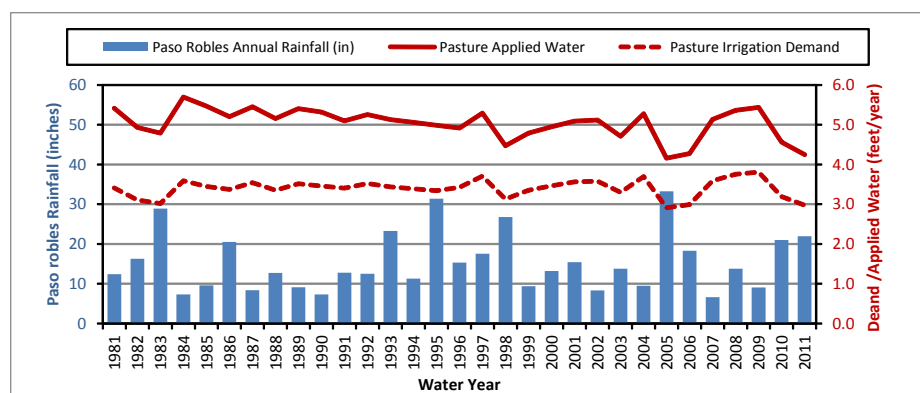
## Nursery



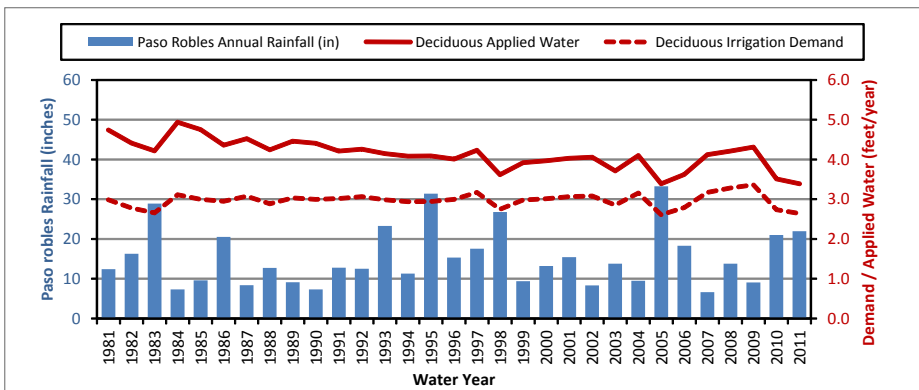
## Citrus



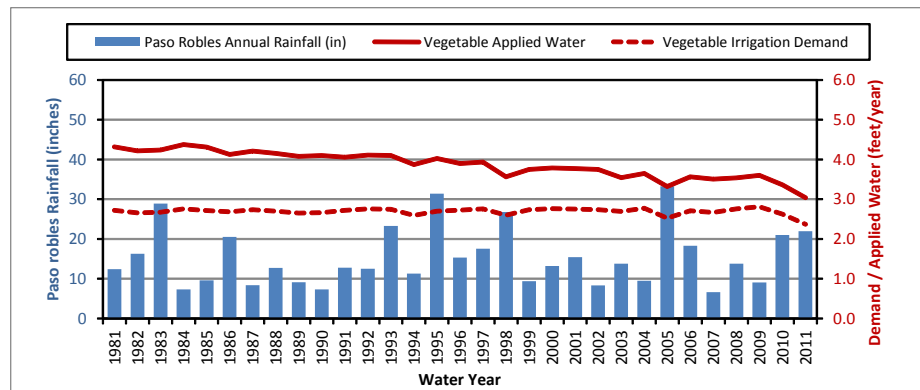
## Pasture



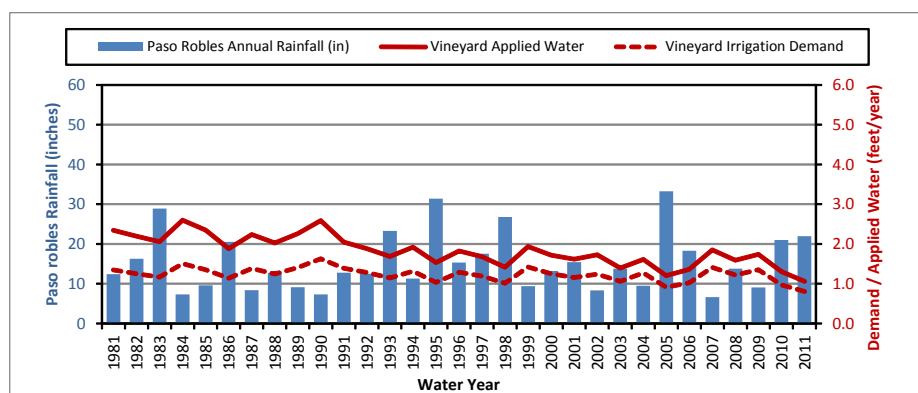
## Deciduous



## Vegetable



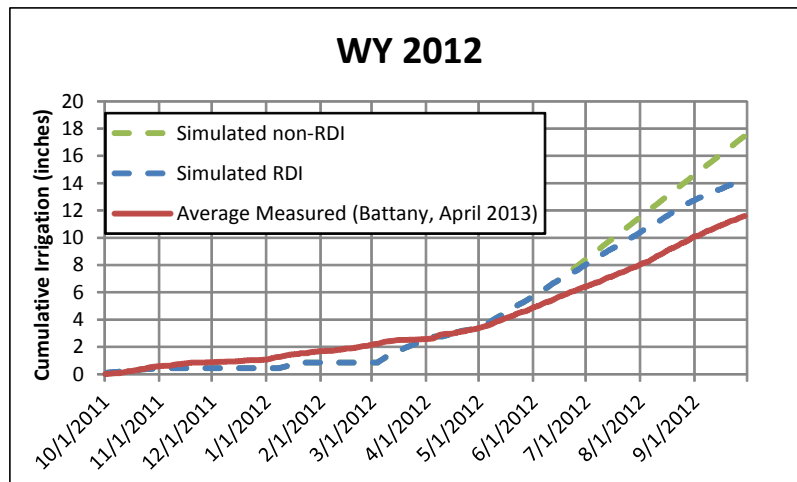
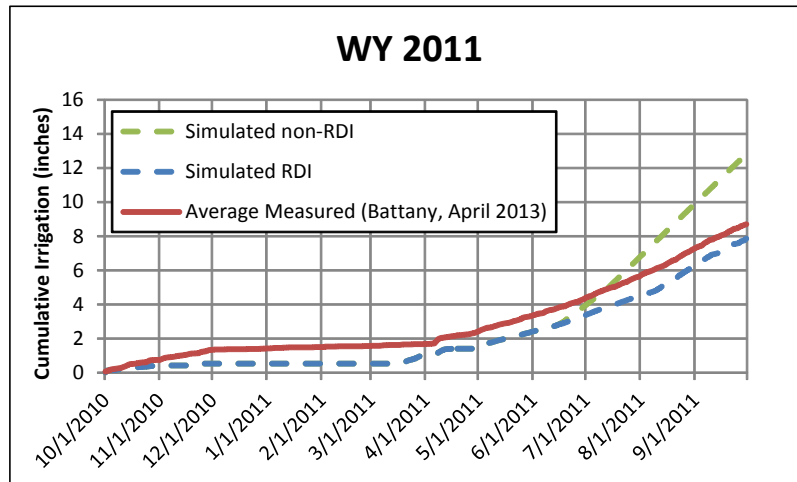
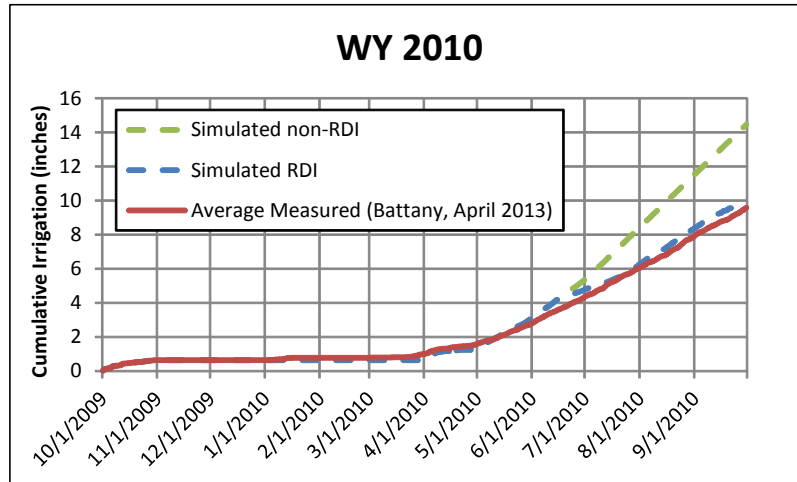
## Vineyard

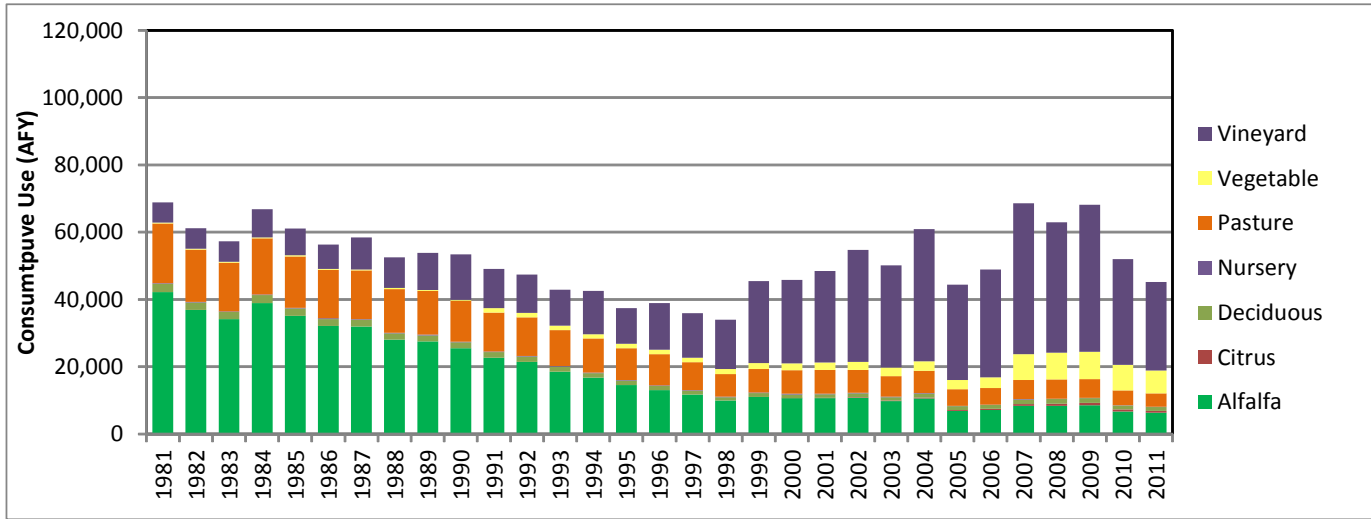


19-Dec-14

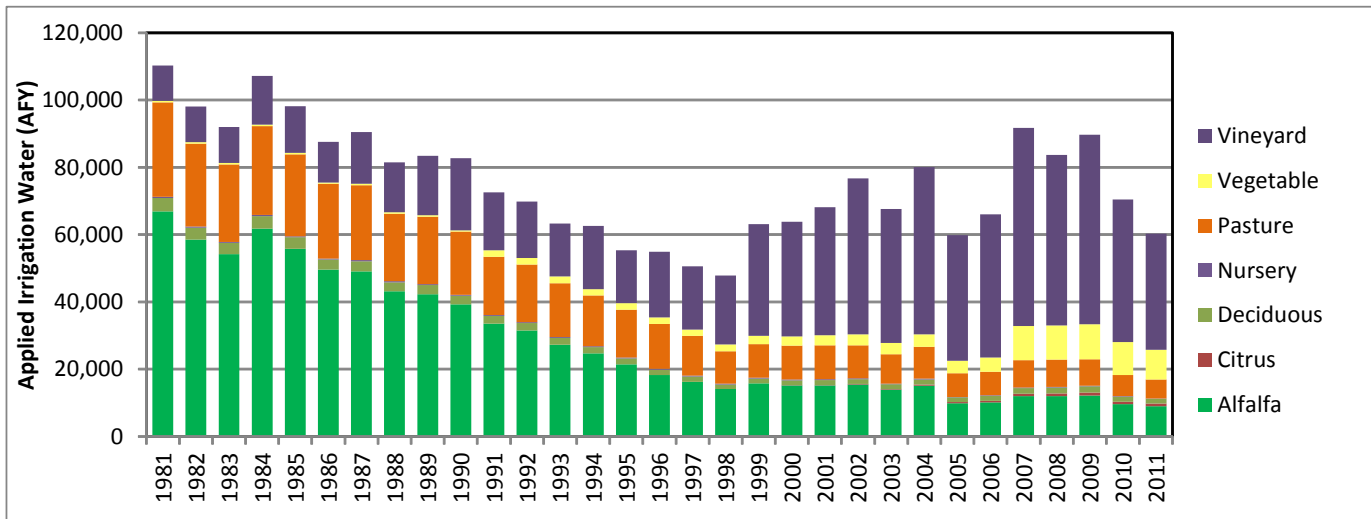
**TODD**  
GROUNDWATER

**Figure 49**  
**Agricultural Irrigation**  
**Demand and Applied**  
**Water Rates**

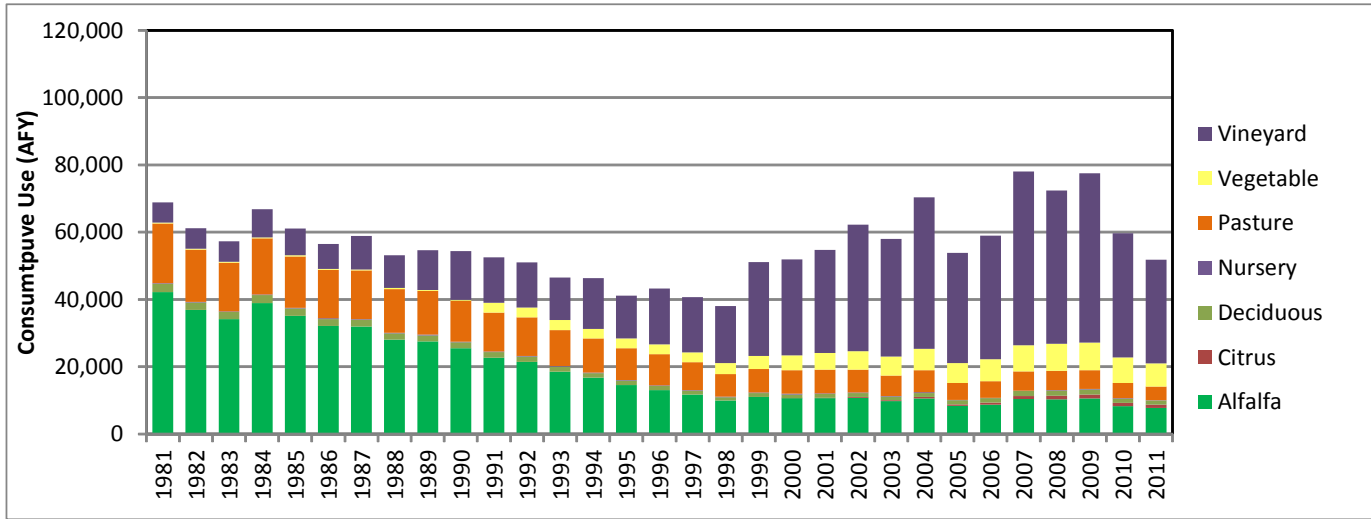




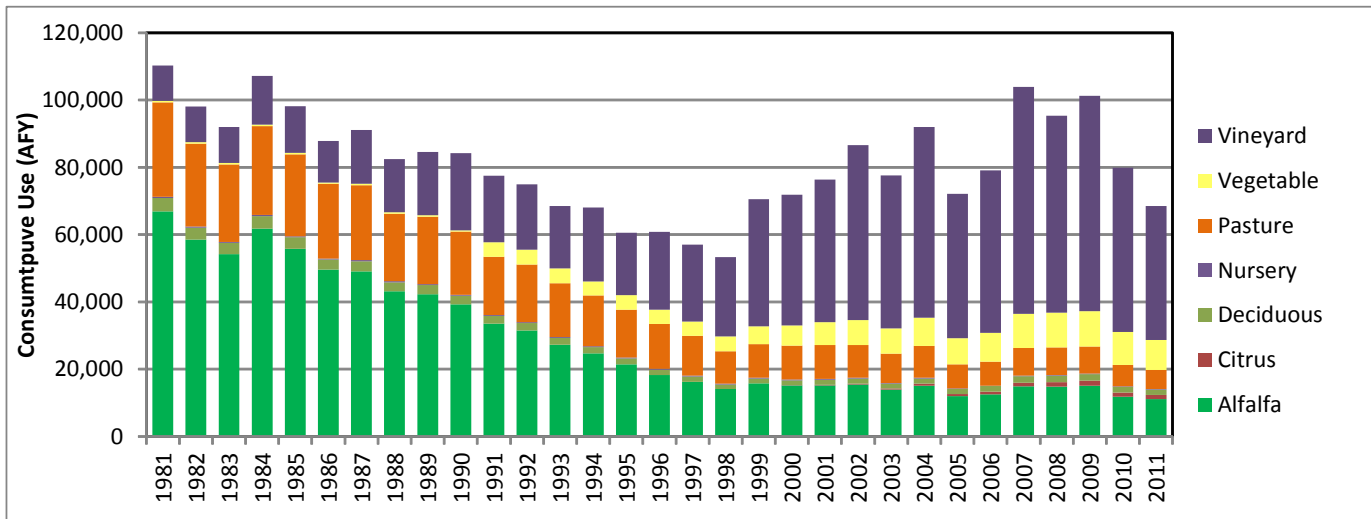
Irrigation Demand (Groundwater Basin)



Applied Water (Groundwater Basin)



Irrigation Demand (Watershed)

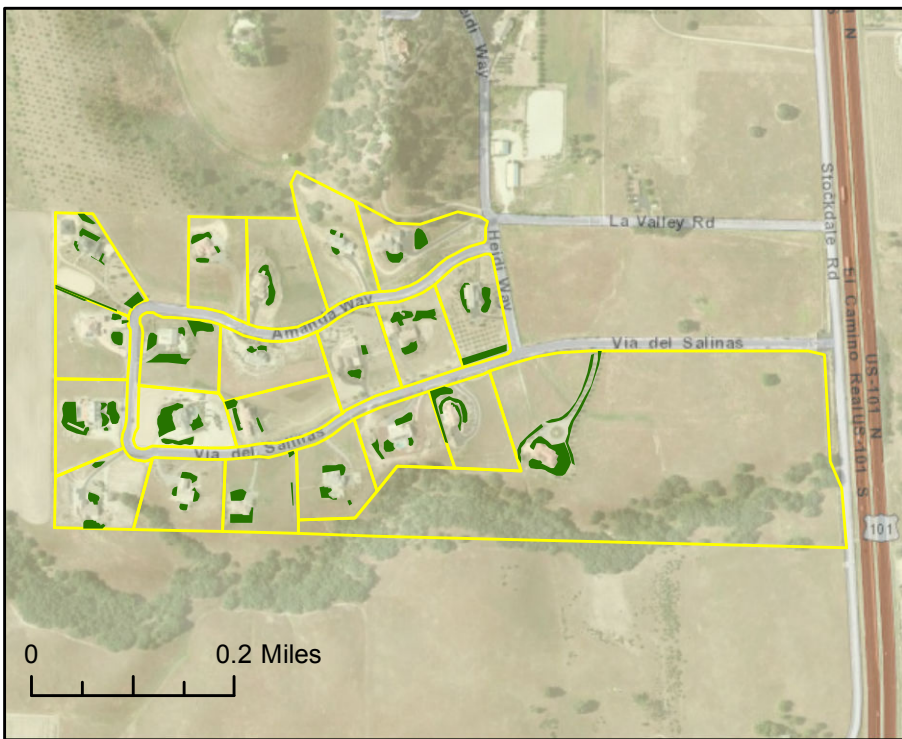


Applied Water (Watershed)

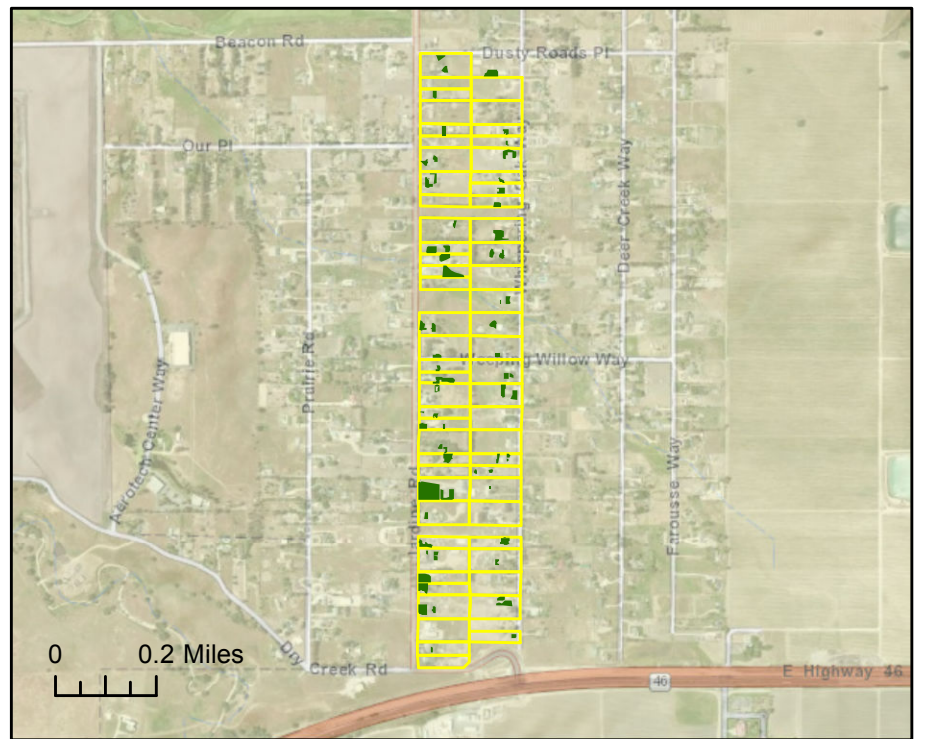
19-Dec-14



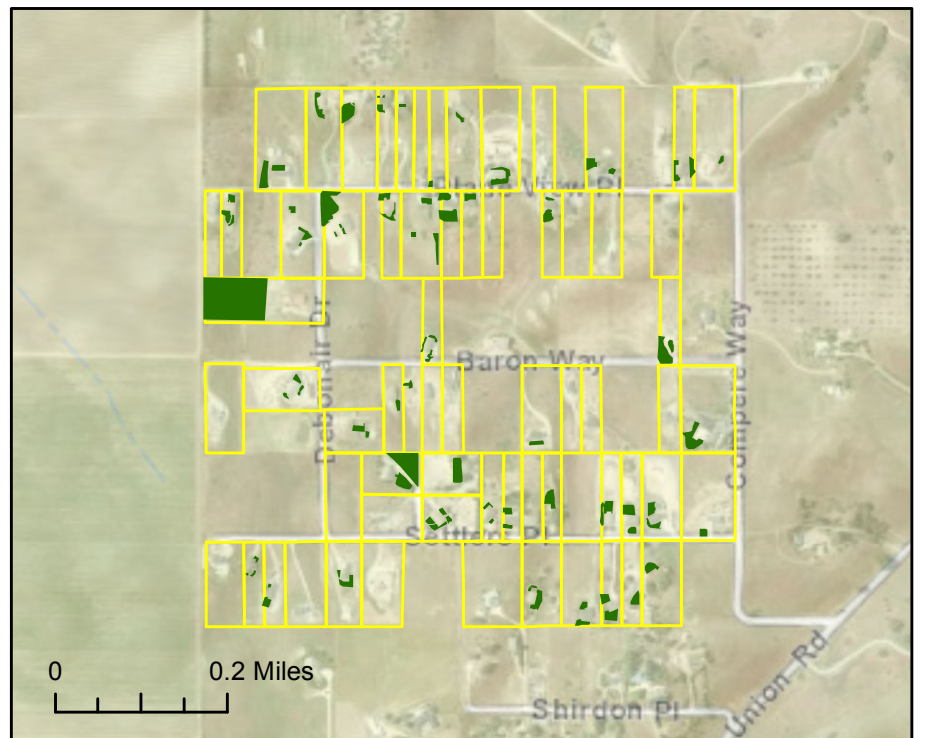
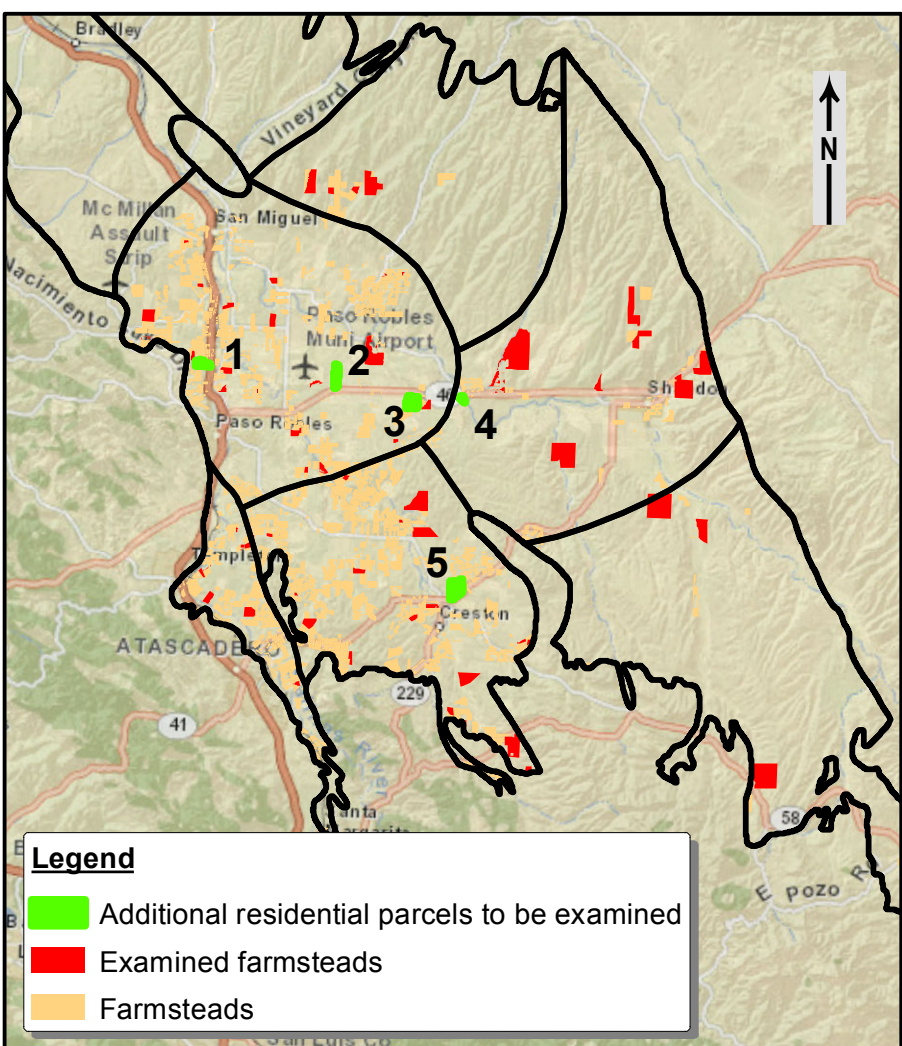
**Figure 52**  
**Agricultural Irrigation Demand**  
**and Applied Water Volume by**  
**Crop in Watershed**



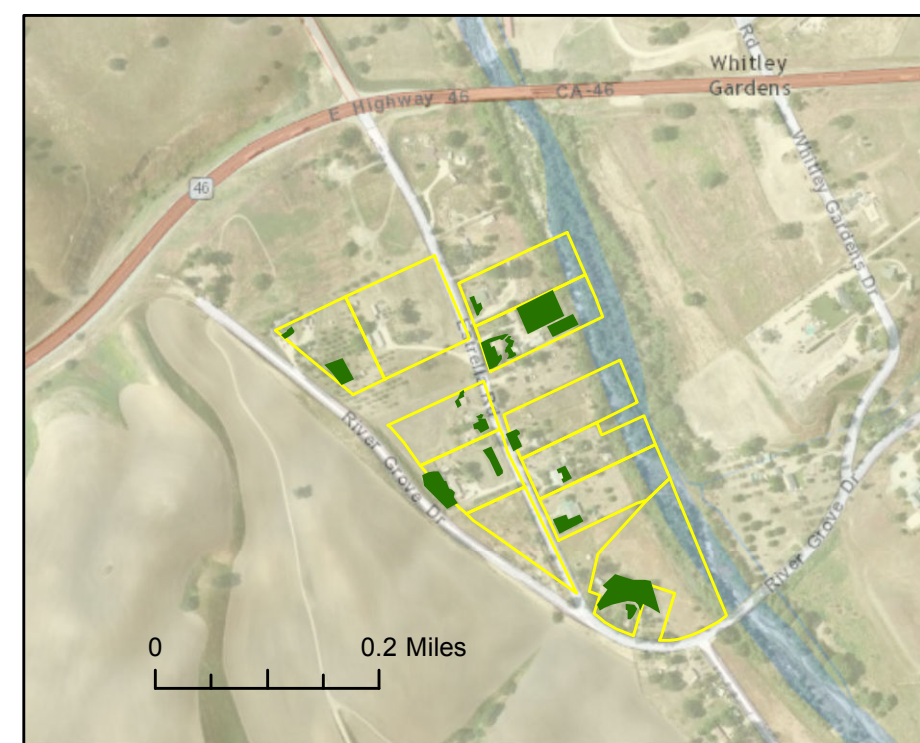
1. Via Del Salinas Area



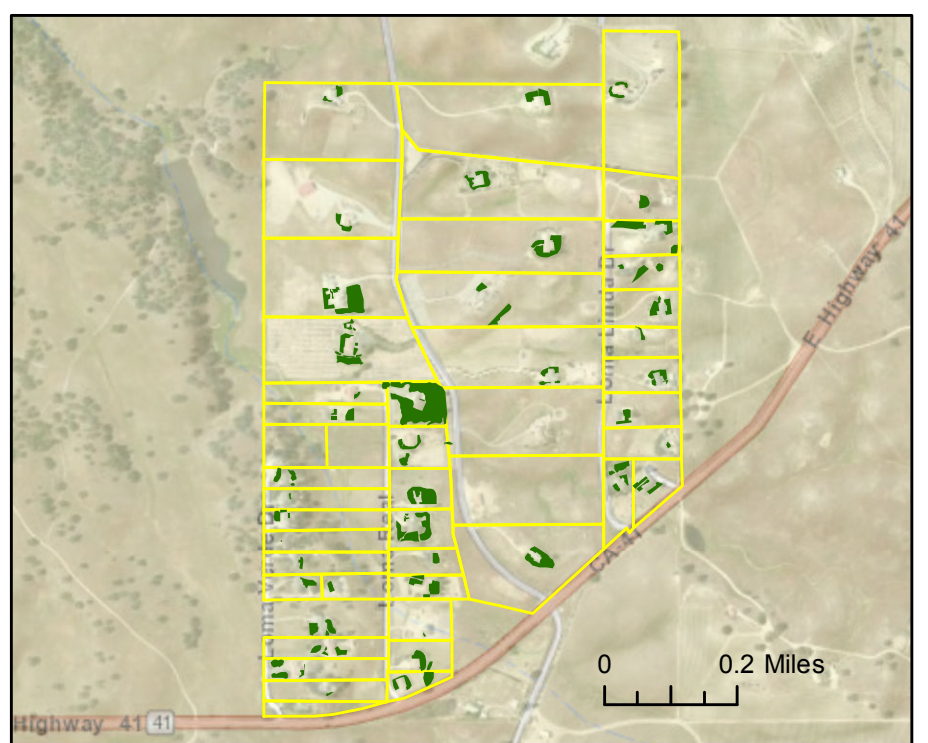
2. Jardine Area



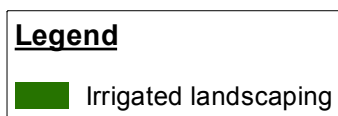
3. Compere Way Area



4. Green River Area

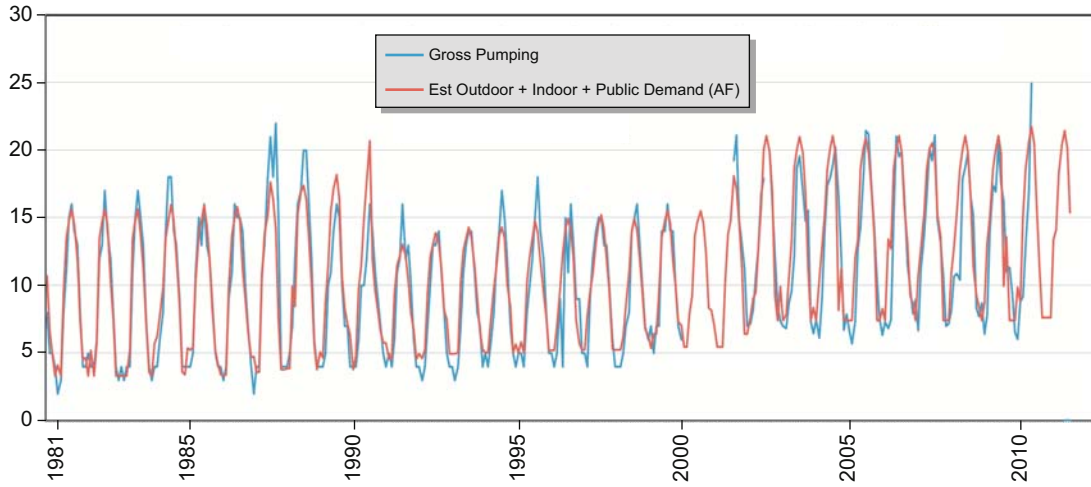


5. Rancho Loma Linda Area

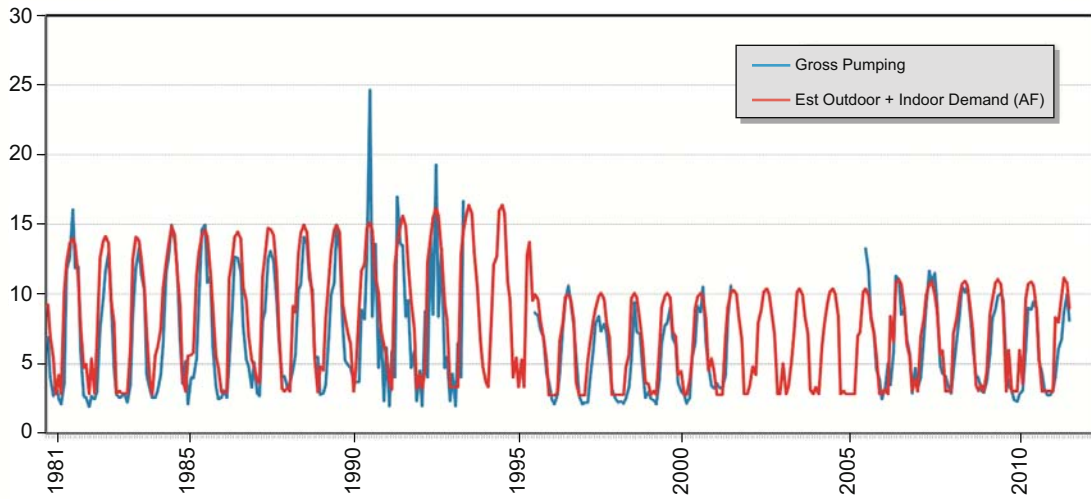




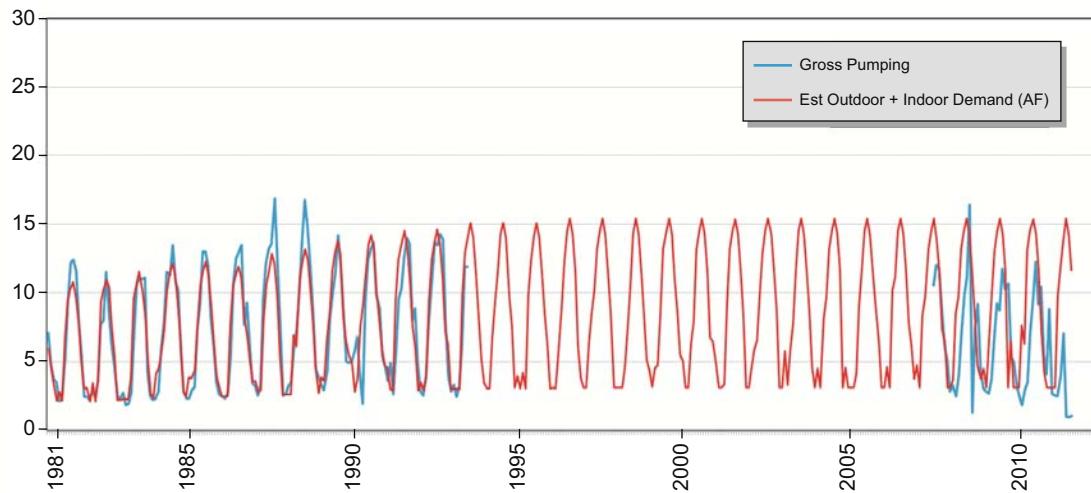
**Shandon Gross Pumping and Estimated Indoor and Outdoor Demands, AF**



**Garden Farms Gross Pumping and Estimated Indoor and Outdoor Demands, AF**



**Green River Gross Pumping and Estimated Indoor and Outdoor Demands, AF**



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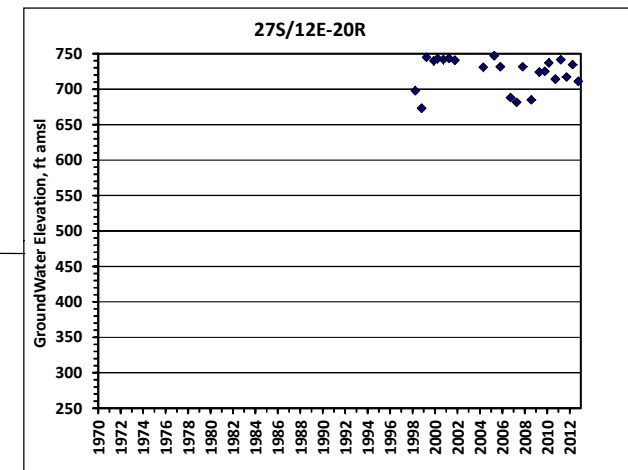
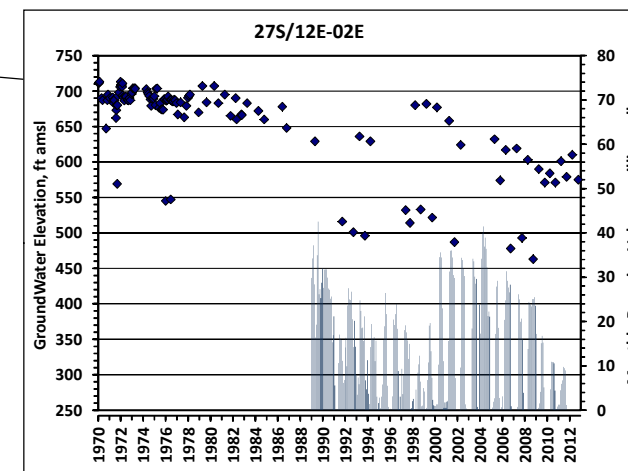
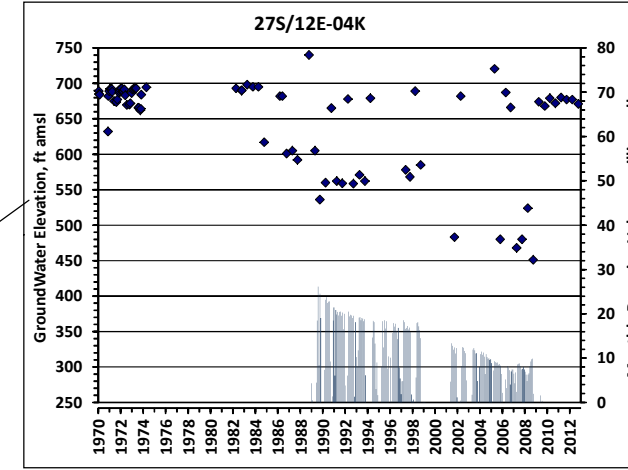
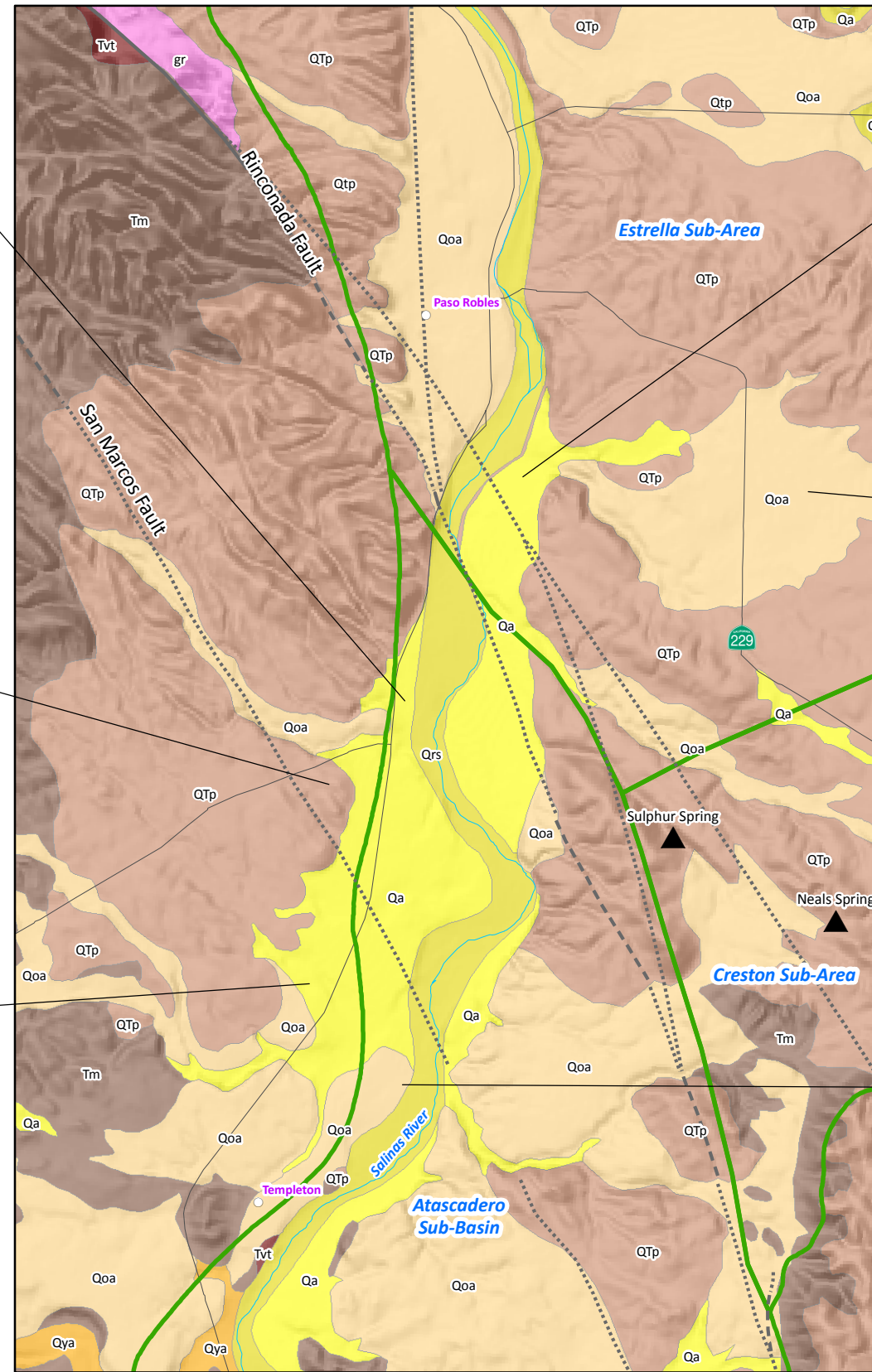
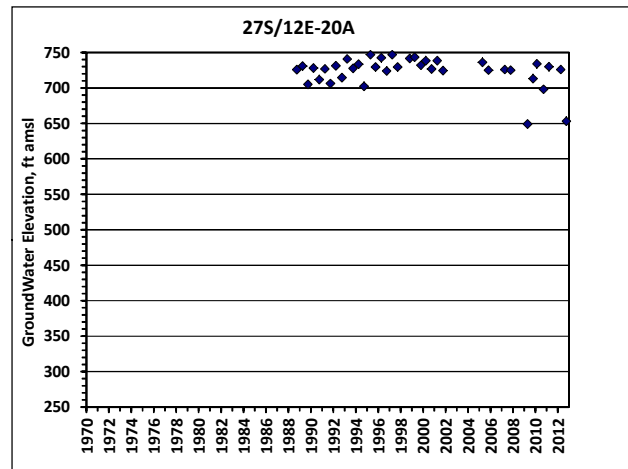
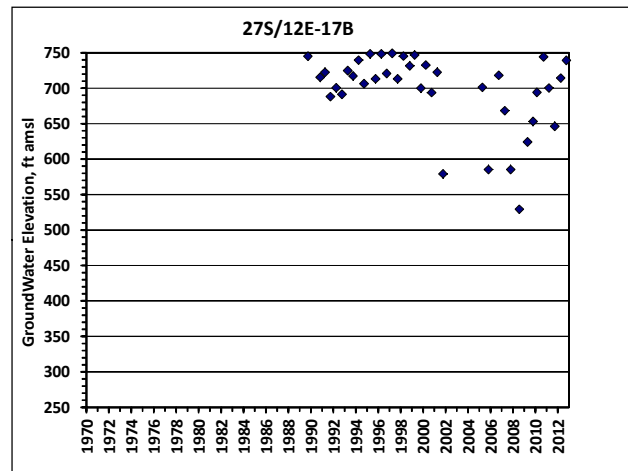
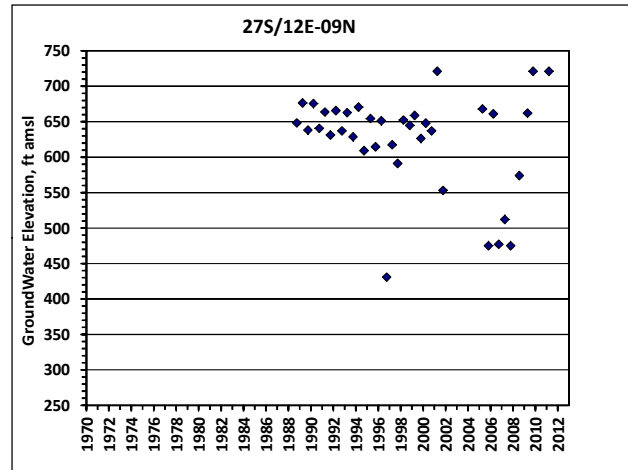


Figure 54  
Evaluation  
of  
Rural Water Demand

SAN LUIS OBISPO COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

PASO ROBLES GROUNDWATER BASIN MODEL UPDATE

AQUIFER SYSTEM  
CONCEPTUALIZATION  
EVALUATION



- EXPLANATION**
- Paso Robles Groundwater Basin Boundary with Sub-Areas (Source: Fugro and Cleath, 2002)
  - Spring Location
  - Fault (solid where known, dashed where inferred, dotted where concealed)

Reproduced with permission, Division of Mines and Geology, CD-ROM 2000-006 (2000), Digital database of faults from the Fault Activity Map of California and Adjacent Areas.

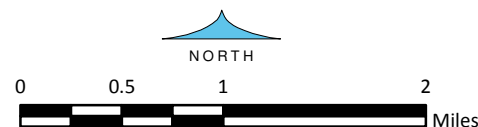
Geologic Formations (Source: San Luis Obispo County Planning & Building Department, 2007)

- Qrs Recent Channel Alluvium
- Qa Recent Alluvium (undifferentiated)
- Qya Younger Alluvium
- Qoa Older Alluvium
- QTp Paso Robles Formation
- Tm Monterey Formation
- Tvt Vaqueros Formation
- gr Quartz Diorite or Granodiorite

19-Dec-14

Prepared by: DWB. Map Projection: State Plane 1983, Zone V.

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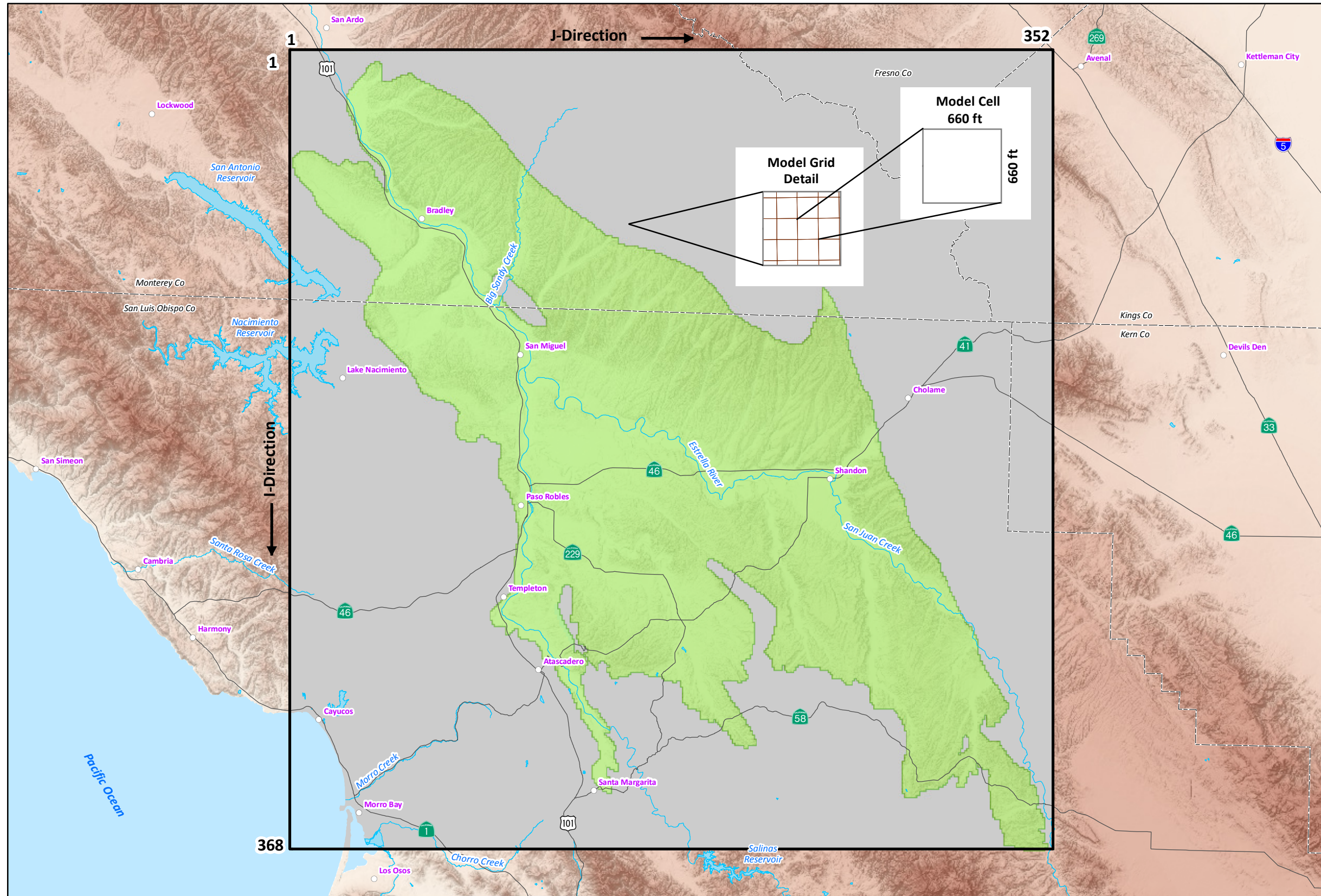


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Figure 55

**PASO ROBLES  
GROUNDWATER BASIN  
MODEL GRID AND BOUNDARY**



**EXPLANATION**

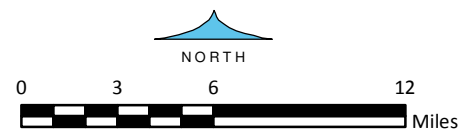
-  Paso Robles Groundwater Basin Model Domain
  -  Paso Robles Groundwater Basin Model Active Area
  -  Paso Robles Groundwater Basin Model Inactive Area
  -  County Boundary
- (Source: Fugro, ETIC Engineers and Cleath, 2005)

19-Dec-14

Prepared by: DWB. Map Projection: State Plane 1983, Zone V.

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GIS\_proj/co\_slo\_paso\_robles\_model/6\_Fig\_56\_model\_grid\_12-14.mxd

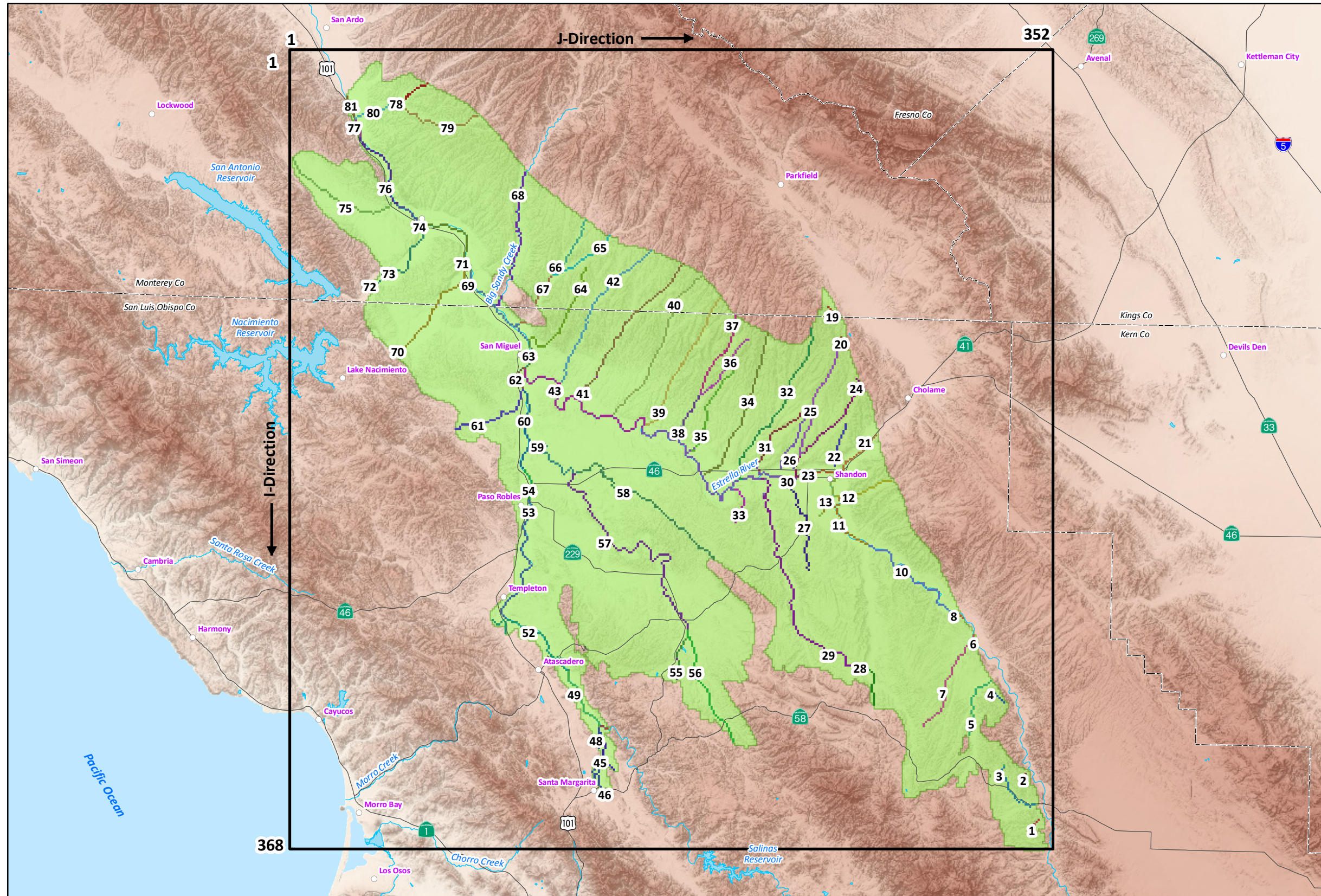





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**Figure 56**

LOCATION OF RECHARGE FROM DEEP PERCOLATION OF STREAMBED SEEPAGE



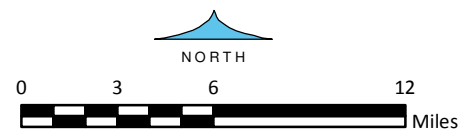
- EXPLANATION**
-  Stream Segment Number (same as sub-watershed number)
  -  Paso Robles Groundwater Basin Model Domain
  -  Paso Robles Groundwater Basin Model Active Area
  -  Paso Robles Groundwater Basin Model Inactive Area
  -  County Boundary
- (Source: Fugro, ETIC Engineers and Cleath, 2005)

19-Dec-14

Prepared by: DWB. Map Projection: State Plane 1983, Zone V.

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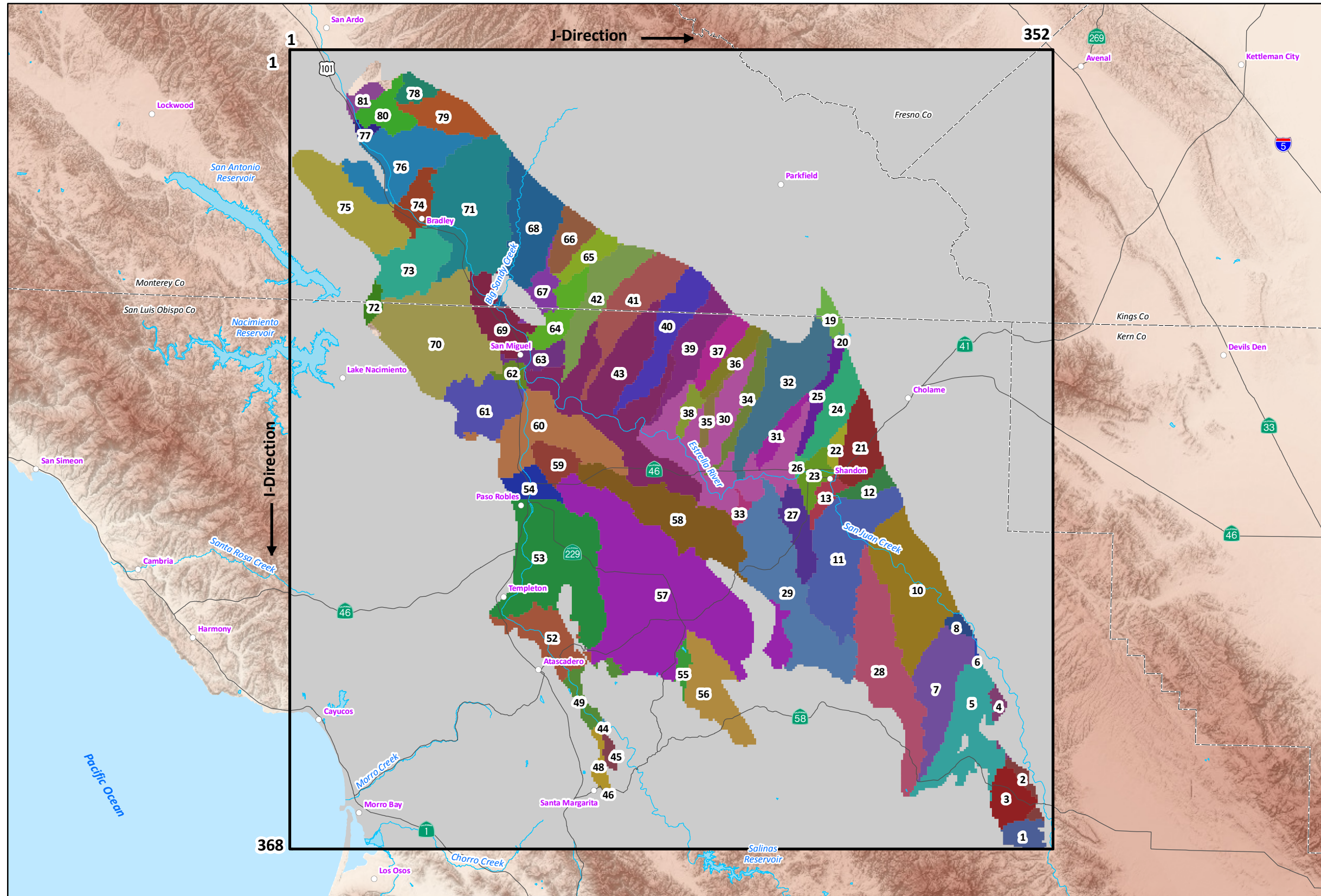
GIS\_proj/co\_slo\_paso\_robles\_model/6\_Fig\_57\_rech\_deep\_perc\_12-14.mxd



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Figure 57



**LOCATION OF RECHARGE FROM DEEP PERCOLATION OF DIRECT PRECIPITATION AND RETURN FLOW FROM APPLIED WATER**

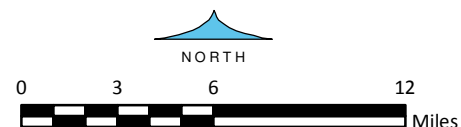
**EXPLANATION**

- Location of Recharge from Deep Percolation of Direct Precipitation and Return Flow from Applied Water
- various colors*
- 34** Deep Percolation Zone Number (same as sub-watershed number)
- Paso Robles Groundwater Basin Model Domain
- Paso Robles Groundwater Basin Model Inactive Area
- (Source: Fugro, ETIC Engineers and Cleath, 2005)
- County Boundary

19-Dec-14

Prepared by: DWB. Map Projection: State Plane 1983, Zone V.

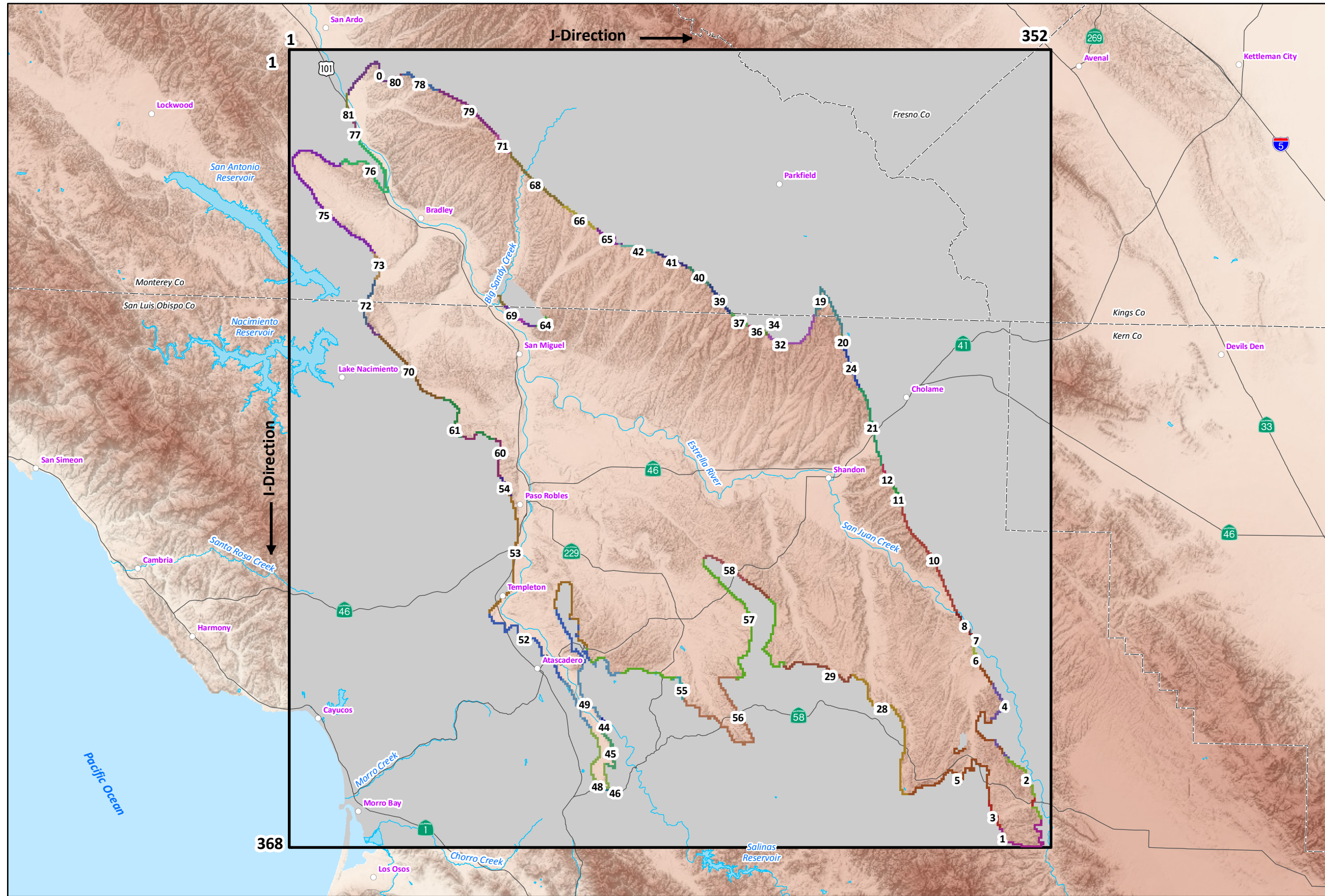
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**Figure 58**



**LOCATION OF RECHARGE FROM SUBSURFACE INFLOW THROUGH THE BASIN BOUNDARY**

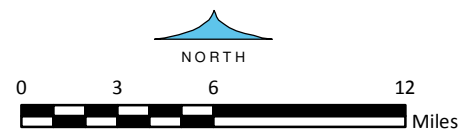
**EXPLANATION**

- Location of Recharge from Subsurface Inflow through the Basin Boundary
- various colors*
- 34** Subsurface Inflow Zone Number (same as sub-watershed number)
- Paso Robles Groundwater Basin Model Domain
- Paso Robles Groundwater Basin Model Inactive Area
- (Source: Fugro, ETIC Engineers and Cleath, 2005)
- County Boundary

19-Dec-14

Prepared by: DWB. Map Projection: State Plane 1983, Zone V.

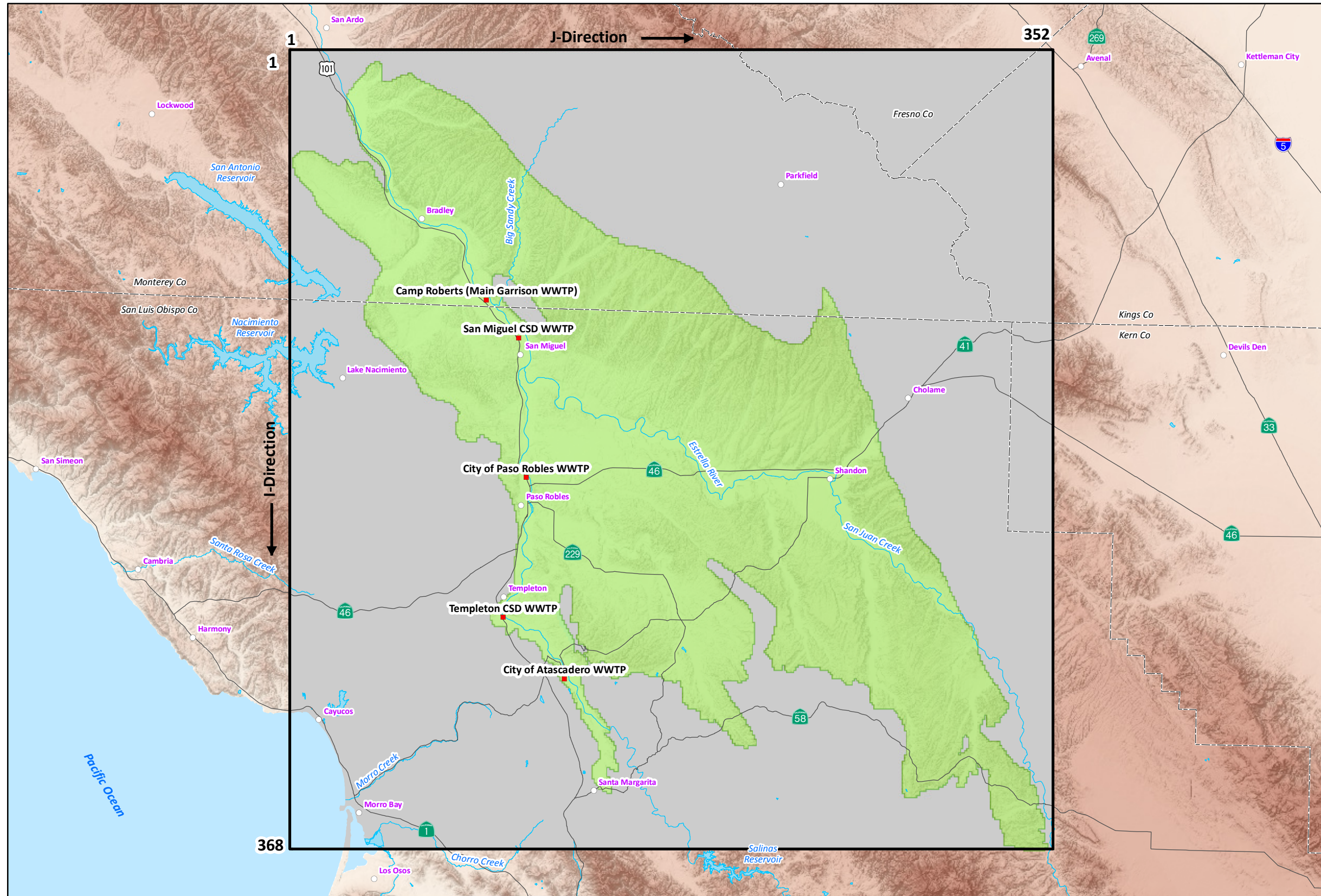
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**Figure 59**



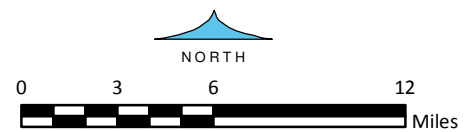
**LOCATION OF RECHARGE FROM DEEP PERCOLATION OF DISCHARGED TREATED WASTEWATER EFFLUENT**

- EXPLANATION**
- Wastewater Treatment Pond Cell
  - Paso Robles Groundwater Basin Model Domain
  - Paso Robles Groundwater Basin Model Active Area
  - Paso Robles Groundwater Basin Model Inactive Area
- (Source: Fugro, ETIC Engineers and Cleath, 2005)
- County Boundary

19-Dec-14

Prepared by: DWB. Map Projection: State Plane 1983, Zone V.

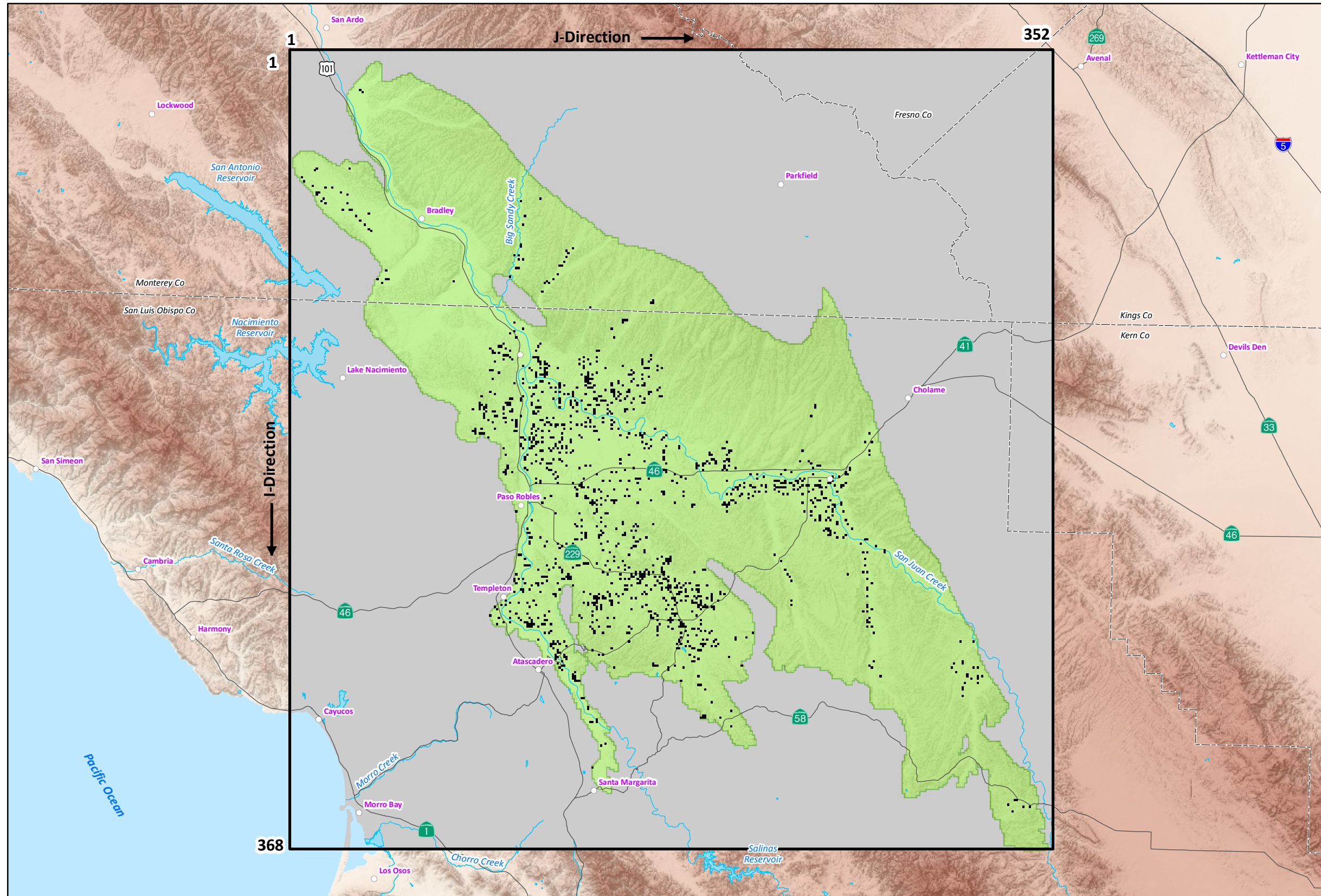
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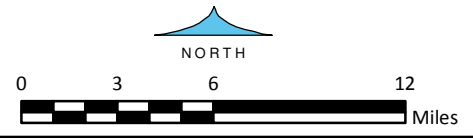
**Figure 60**



**LOCATION OF AGRICULTURAL GROUNDWATER PUMPING**

- EXPLANATION**
- Agricultural Groundwater Pumping Cell
  - Paso Robles Groundwater Basin Model Domain
  - Paso Robles Groundwater Basin Model Active Area
  - Paso Robles Groundwater Basin Model Inactive Area
- (Source: Fugro, ETIC Engineers and Cleath, 2005)
- County Boundary

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**Figure 61**

GIS\_proj/co\_slo\_paso\_robles\_model/6\_Fig\_61\_ag\_gw\_pumping\_12-14.mxd