

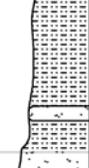
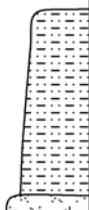
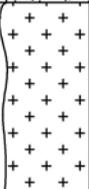
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**Conjunctive Use Project Study Area**

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 February 2011  
**Figure 1A-1**



ERA	PERIOD	SERIES	FORMATION	LITHOLOGY	THICKNESS (feet)	DESCRIPTION	
CENOZOIC	QUARTERNARY	PLEISTOCENE-HOLOCENE	Terrace Alluvium		<50	Terrace deposits are weakly consolidated, poorly sorted sandy gravel to medium sands. Alluvium consists of unconsolidated, moderately sorted silt, sand and gravel along respective streams	
			Purisma Formation		500+	Very thick bedded yellowish-gray tuffaceous and diatomaceous siltstone with thick interbeds of bluish-gray semifriable andesitic sandstone	
	TERTIARY	MIOCENE	<i>Unconformity</i>	Santa Cruz Mudstone		0-200	Medium- to thick-bedded and faintly laminated pale yellowish-brown siliceous mudstone with scattered spheroidal dolomite concretions; locally grades to sandy siltstone
			Santa Margarita Sandstone		0-450	Very thick bedded and thickly crossbedded yellowish-gray to white friable arkosic sandstone	
			<i>Unconformity</i>	Monterey Formation		0-2,000	Medium- to thick-bedded and laminated olive-gray subsiliceous organic mudstone and sandy siltstone with few thick dolomite interbeds
			Lompico Sandstone		200-300	Thick-bedded to massive yellowish-gray arkosic sandstone	
			<i>Unconformity</i>	Butano Sandstone	Upper Sandstone Member		3,000
	Middle Sandstone Mem.		250-750		Thin- to medium-bedded nodular olive-gray pyritic siltstone		
	Lower Sandstone Member		1,500		Very thick bedded to massive yellowish-gray arkosic sandstone with thick to very thick interbeds of sandy pebble conglomerate in lower part		
				<i>Not in contact within area</i>			
		PALEOCENE	Locatelli Formation		800	Nodular olive-gray to pale-yellowish-brown micaceous siltstone; massive arkosic sandstone locally at base	
MESOZOIC	CRETACEOUS		Crystalline Basement			Primary quartz diorite, light gray, medium gravel, plagioclase, and quartz with lesser amounts of feldspar, biotite, and hornblende	

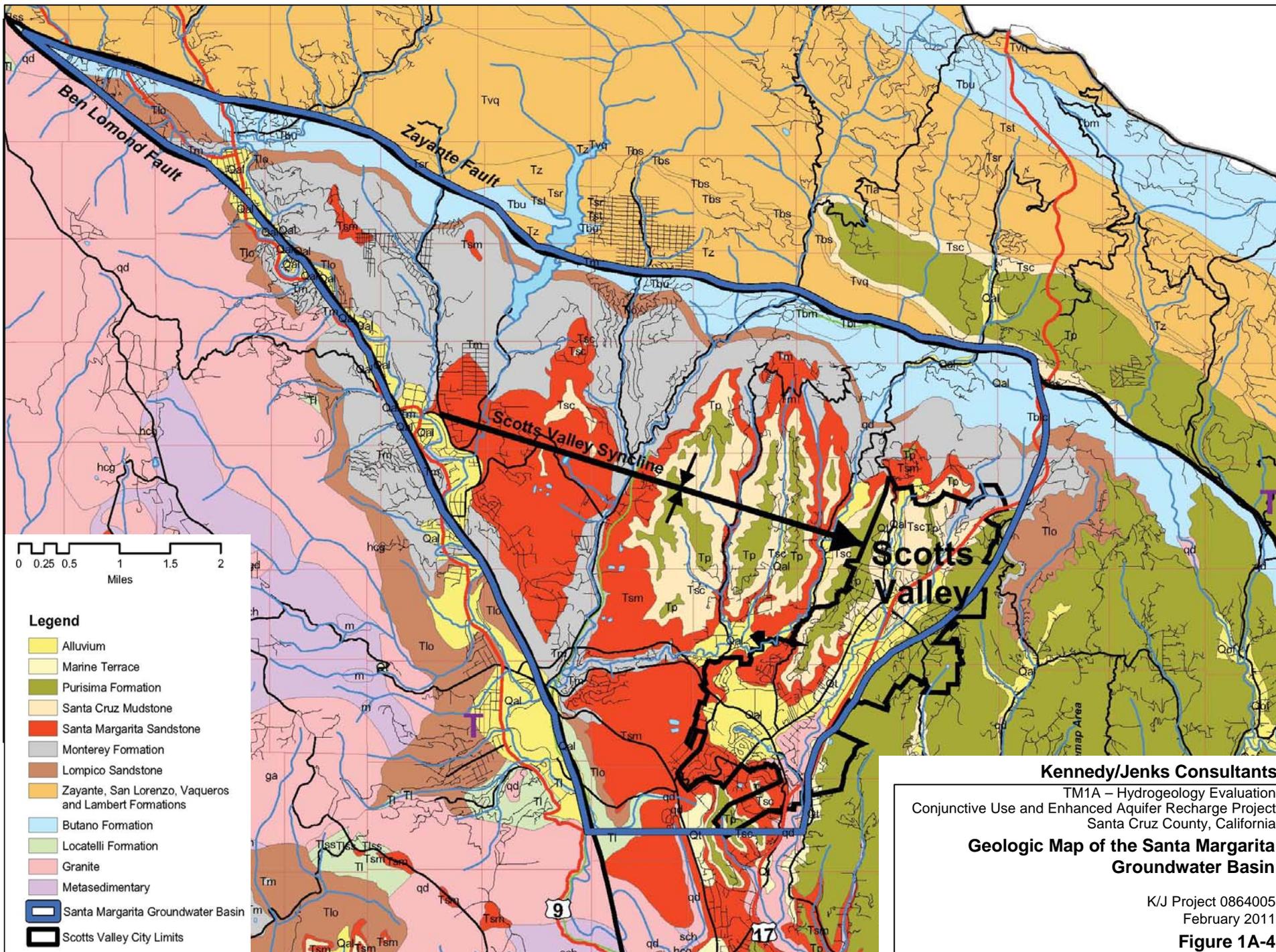
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**Stratigraphic Column for the Santa Margarita Groundwater Basin**

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**Figure 1A-3**



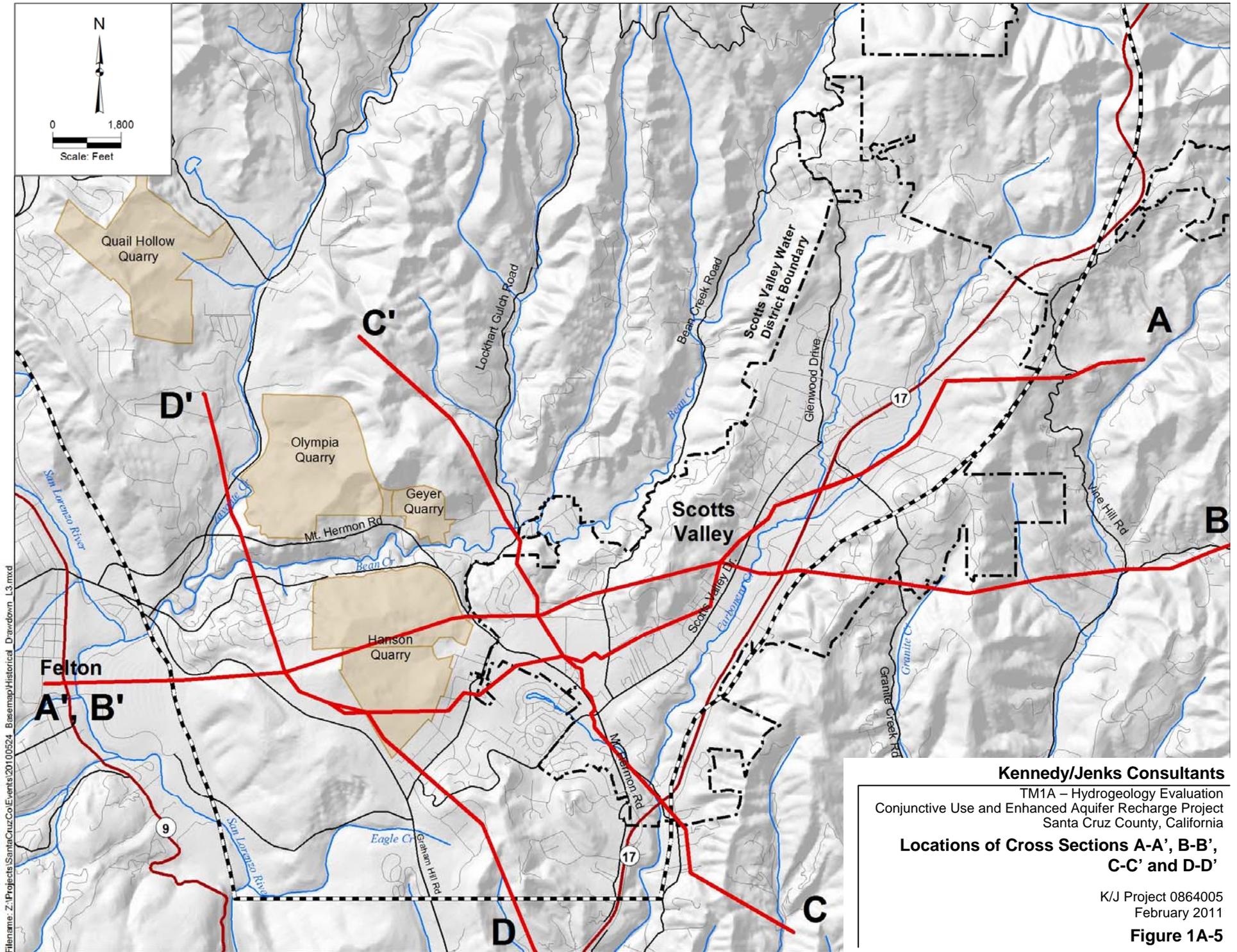
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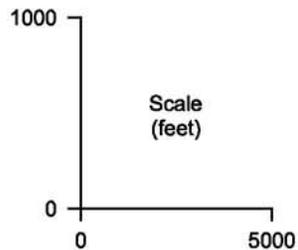
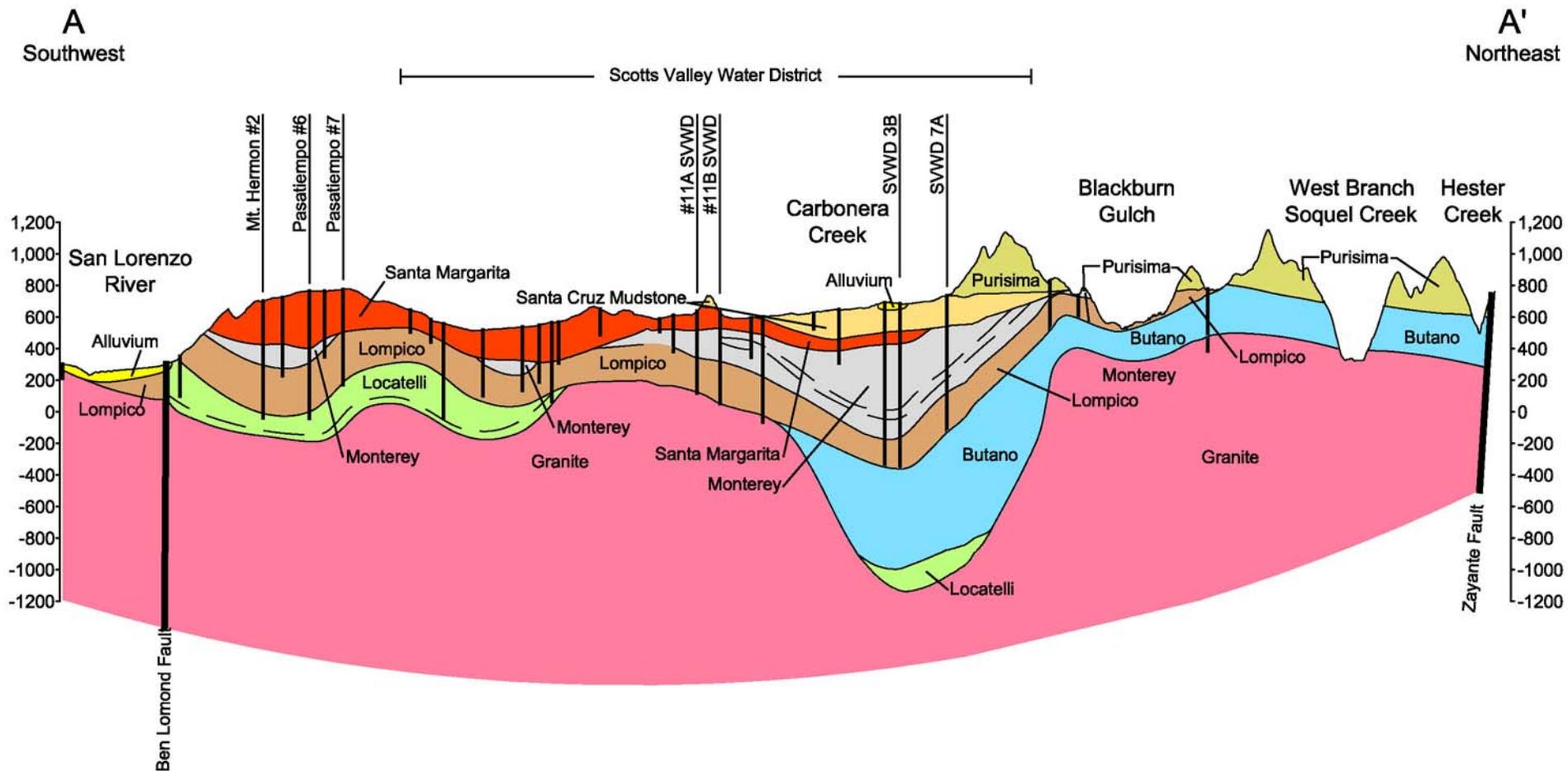
**Geologic Map of the Santa Margarita  
 Groundwater Basin**

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**Figure 1A-4**



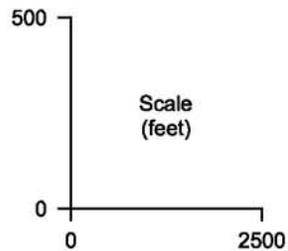
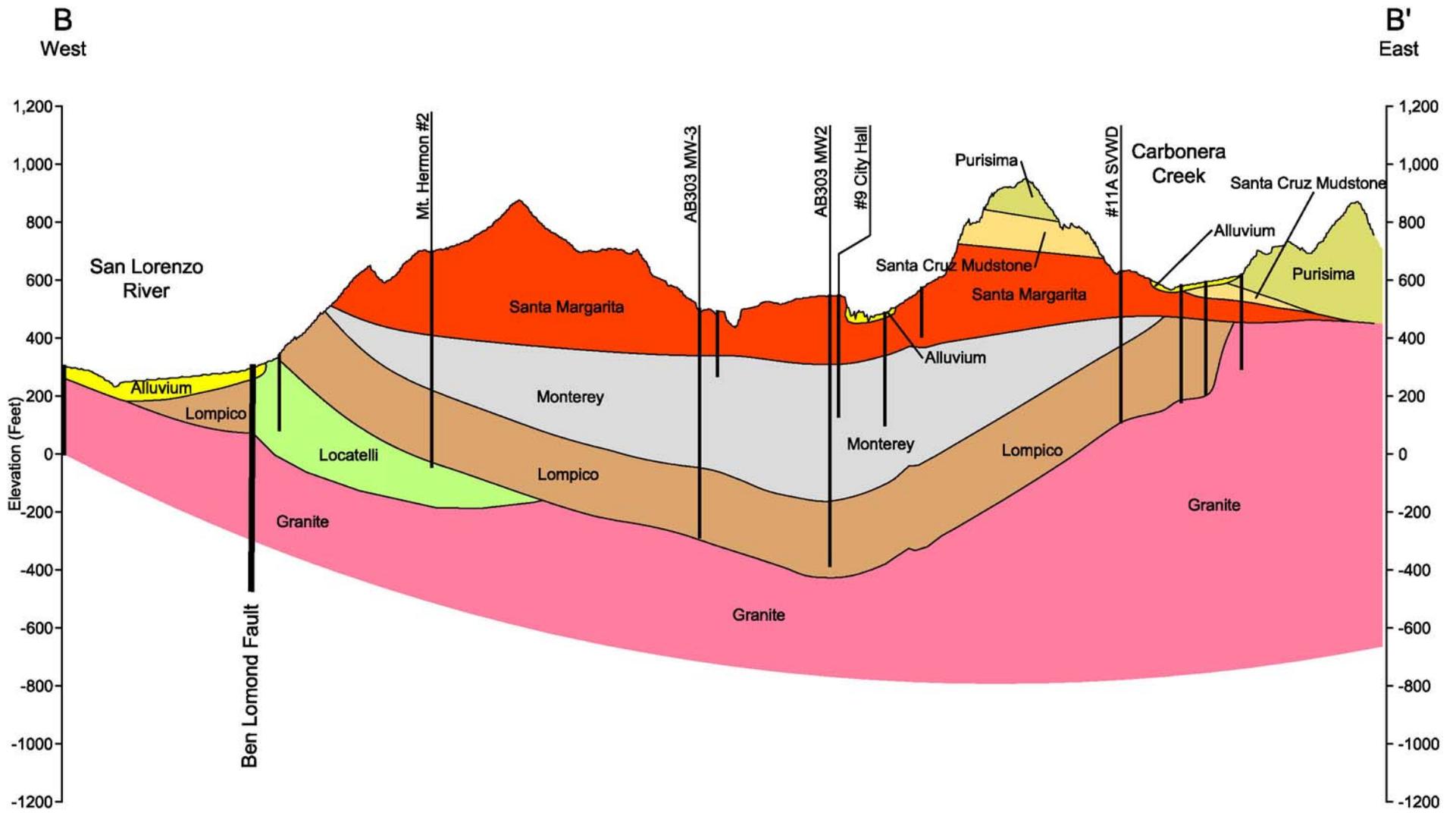
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**Geologic Cross Section A-A'**

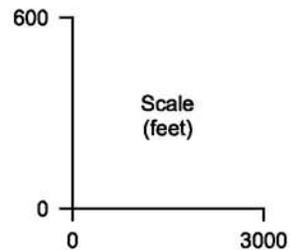
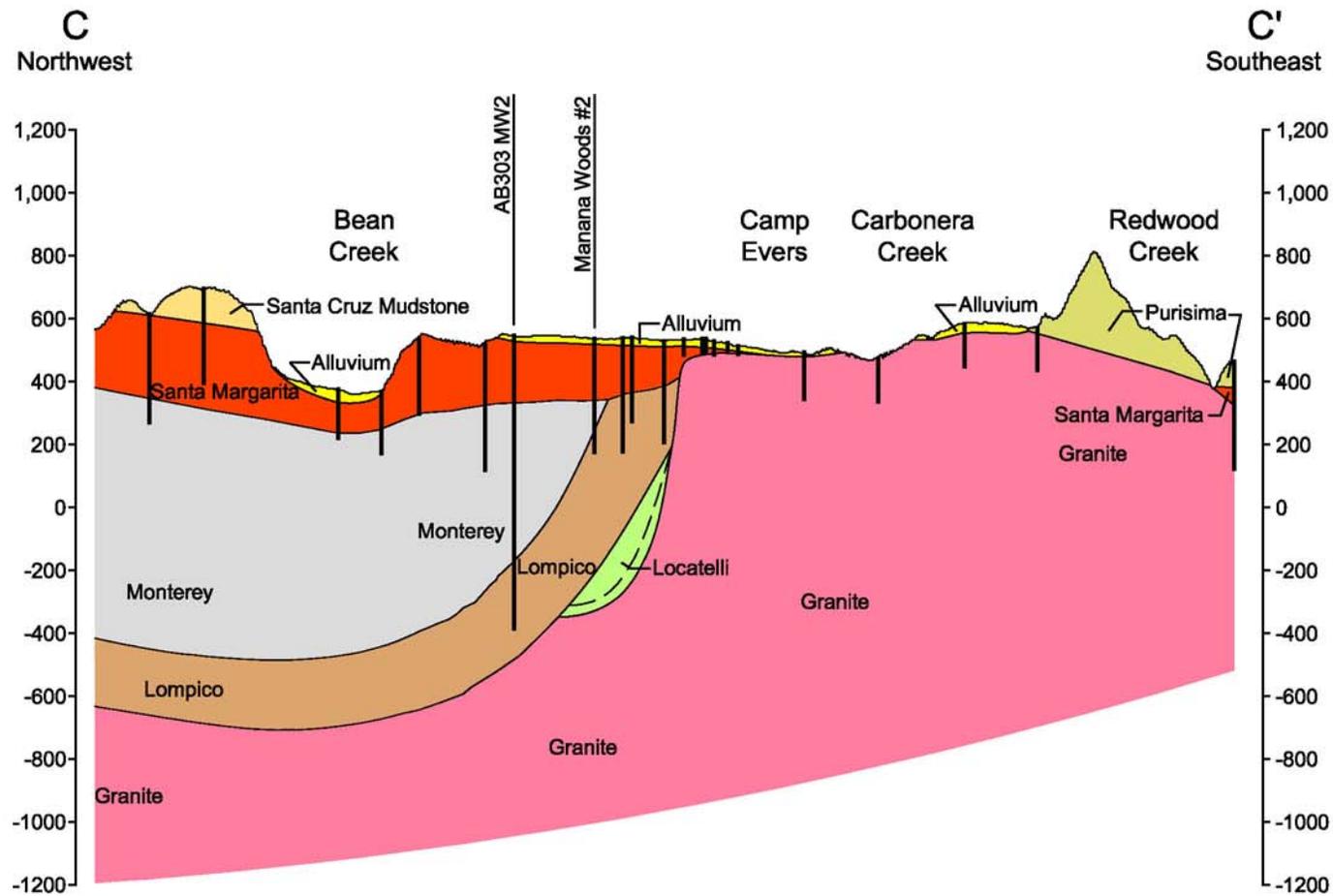
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**Figure 1A-6**



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**Geologic Cross Section B-B'**

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**Figure 1A-7**



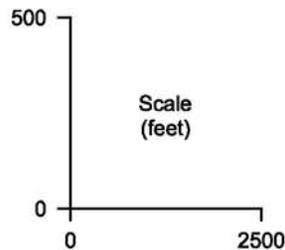
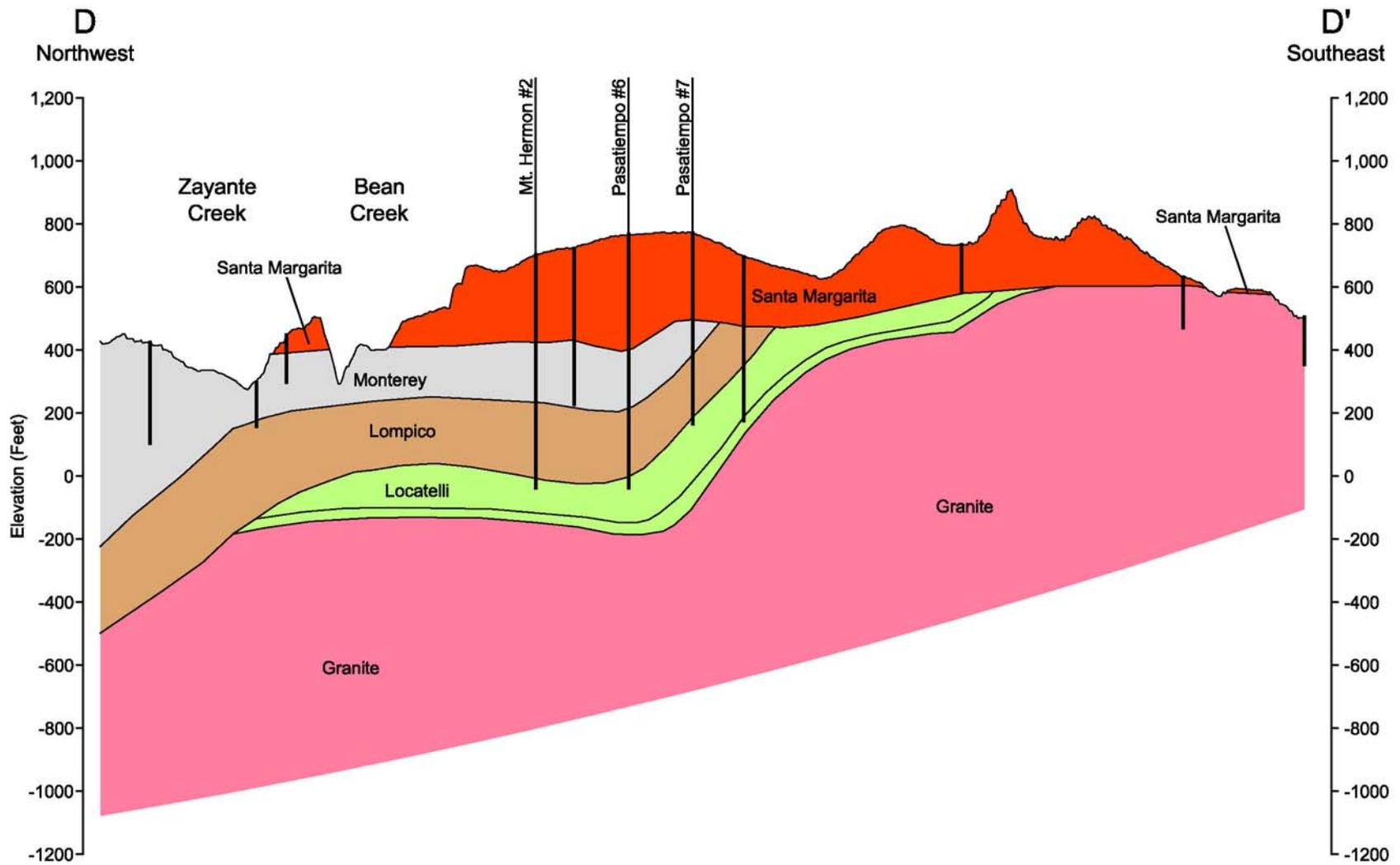
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**Geologic Cross Section C-C'**

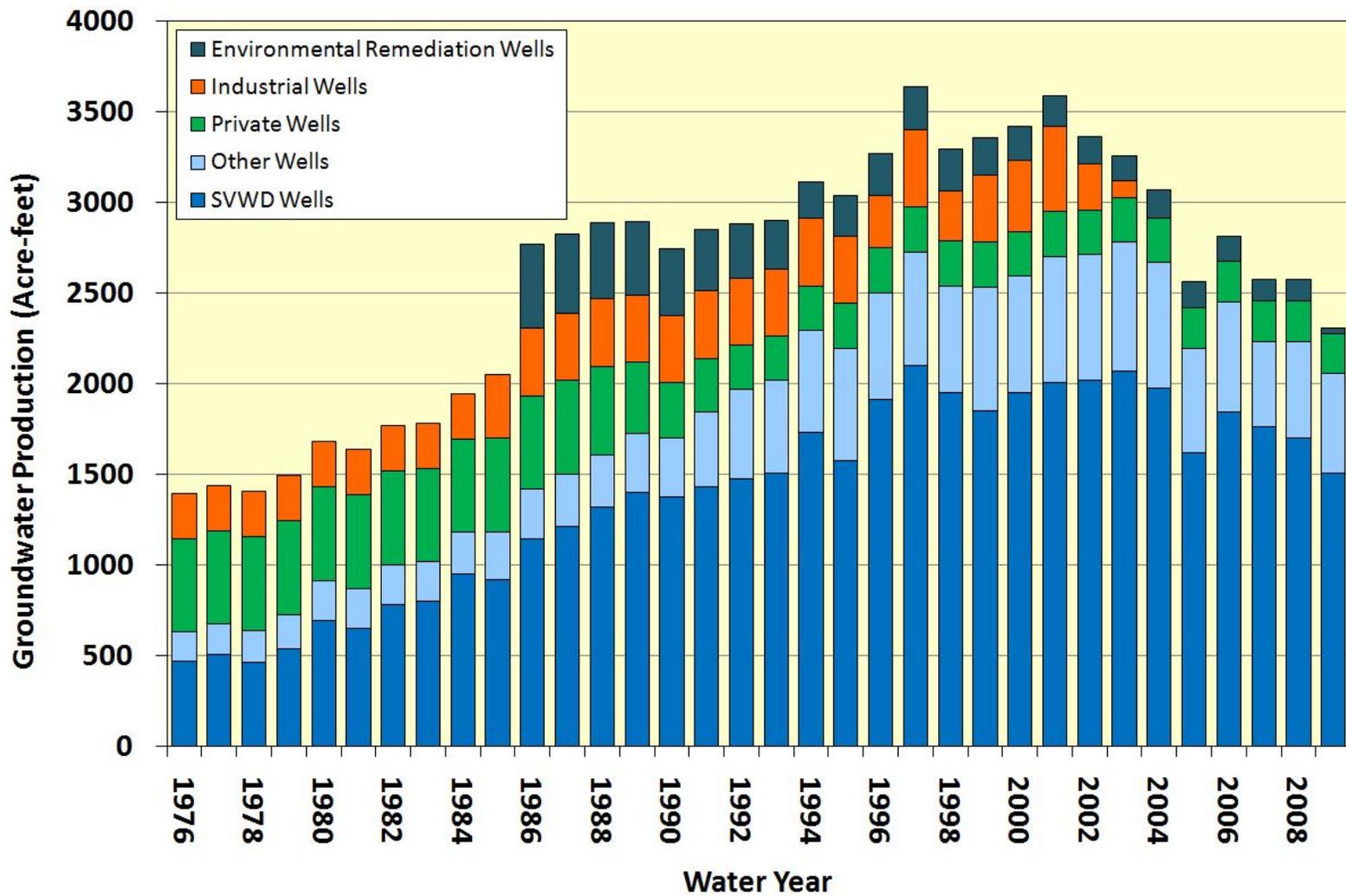
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**Figure 1A-8**



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**Geologic Cross Section D-D'**

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**Figure 1A-9**



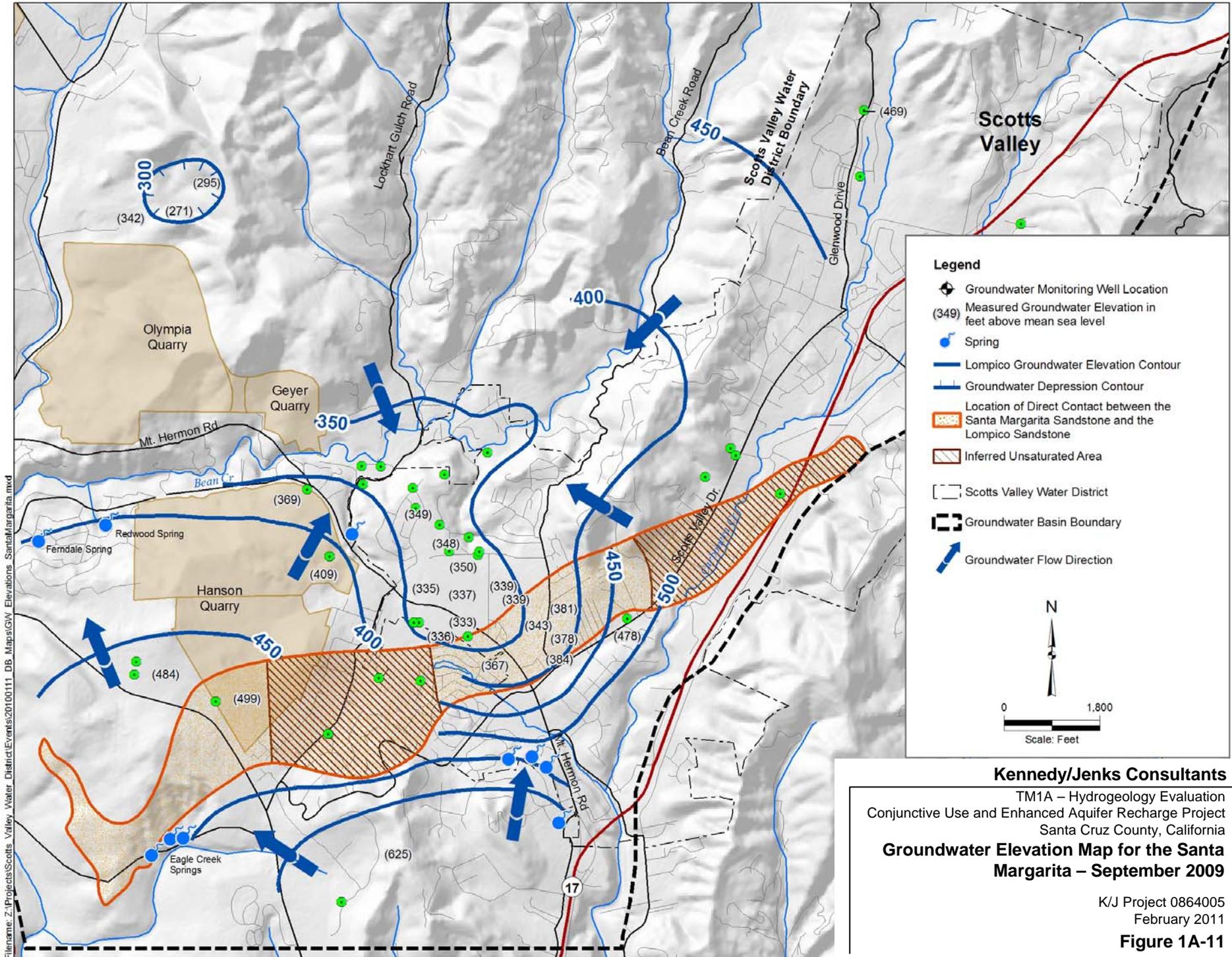
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 Santa Cruz County, California

**Historical Annual Groundwater Production  
 from the Scotts Valley Area by User Type**

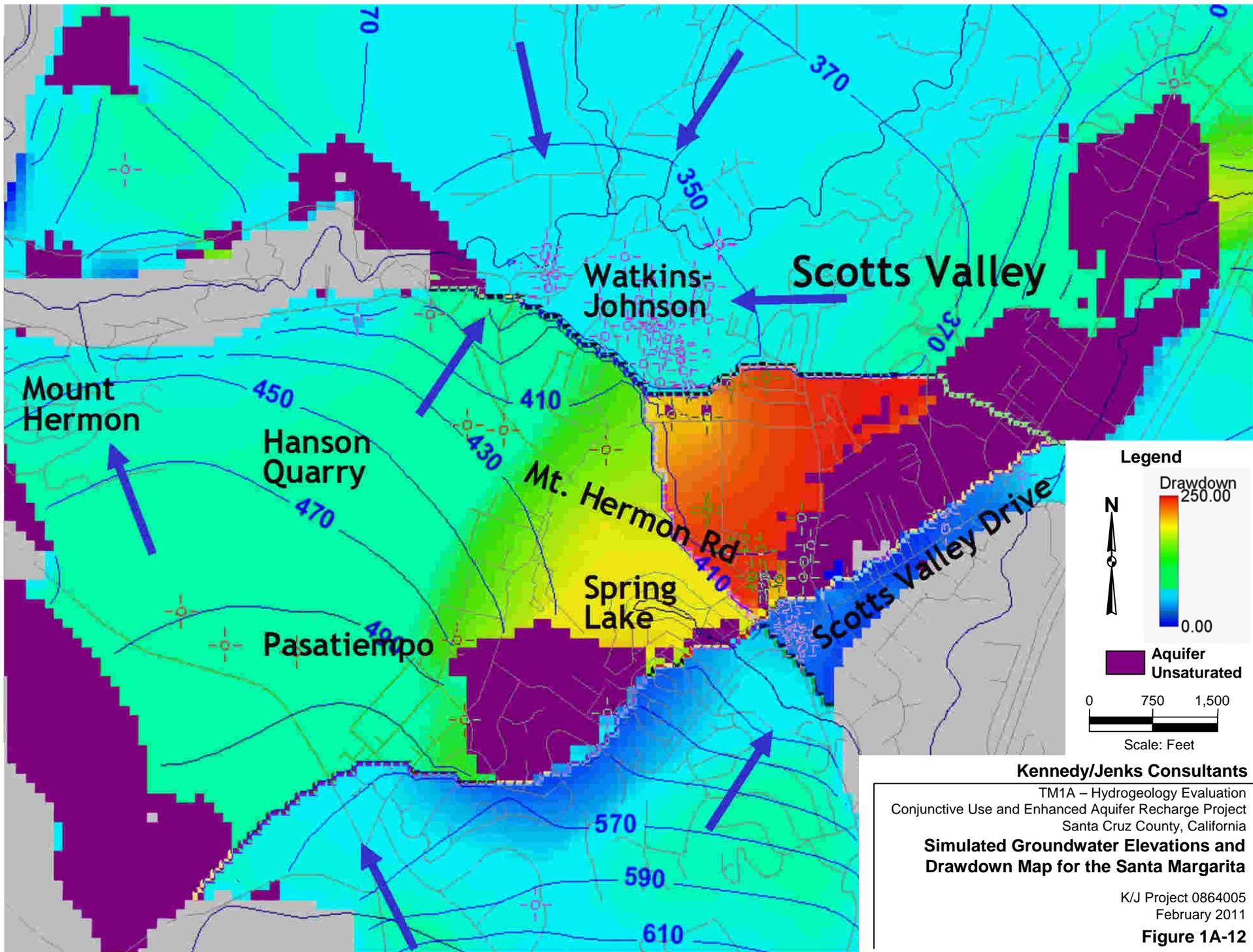
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**Figure 1A-10**

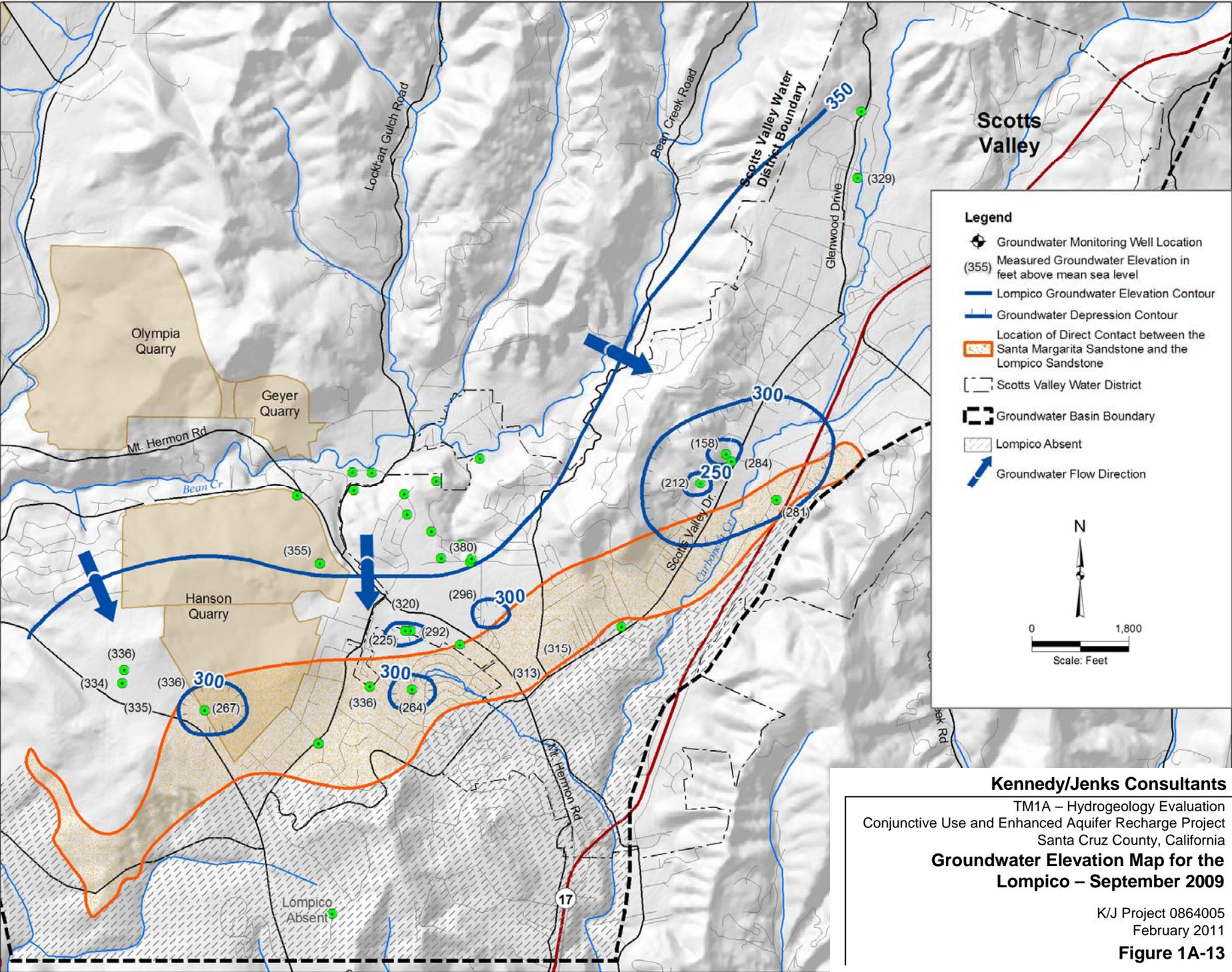


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 Santa Cruz County, California  
**Groundwater Elevation Map for the Santa Margarita – September 2009**  
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**Figure 1A-11**



Filename: Z:\Projects\Scotts Valley Water District\Events\20100111\_DB\_Maps\GW\_Elevations\_Lompico.mxd

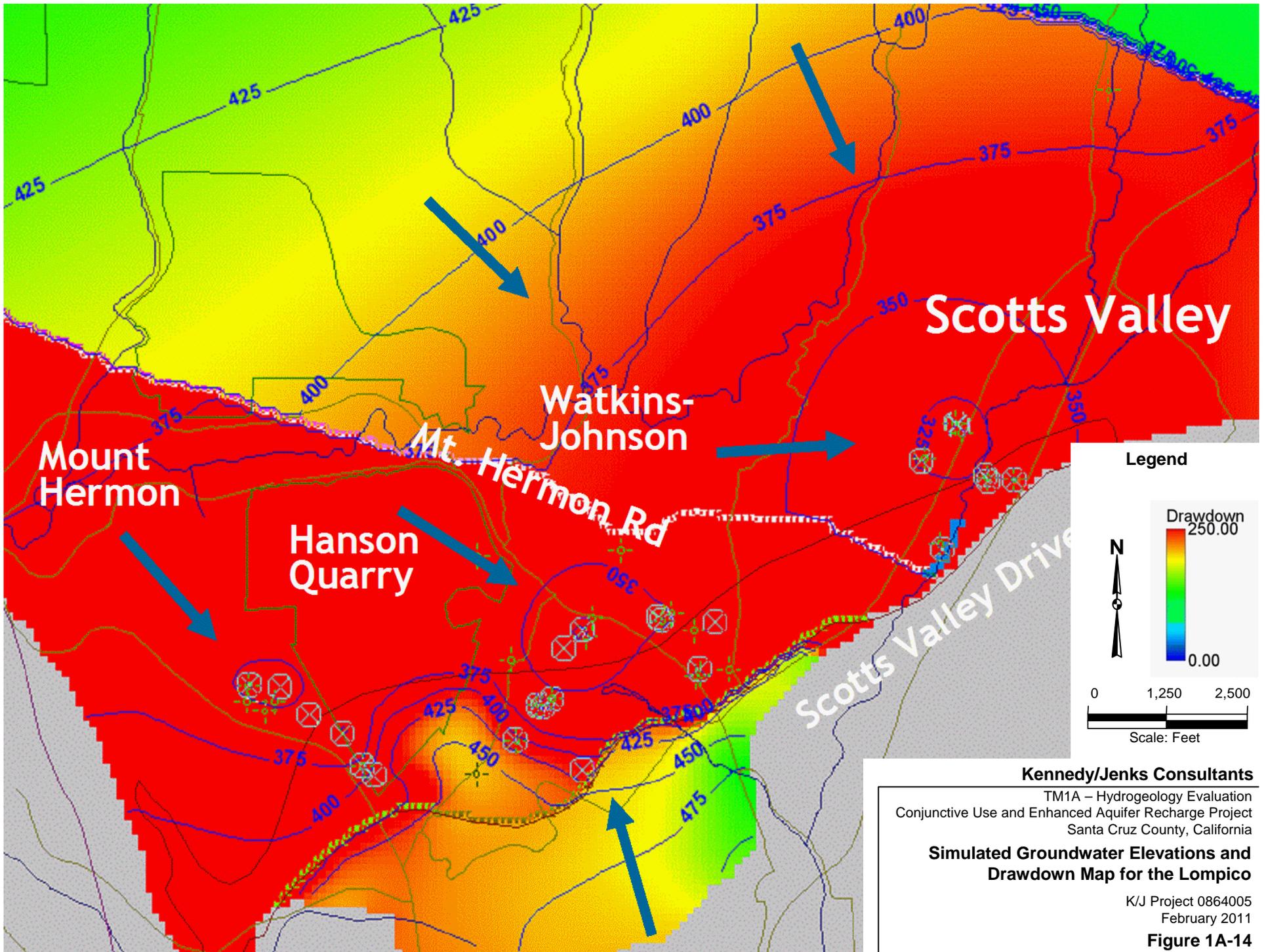


**Legend**

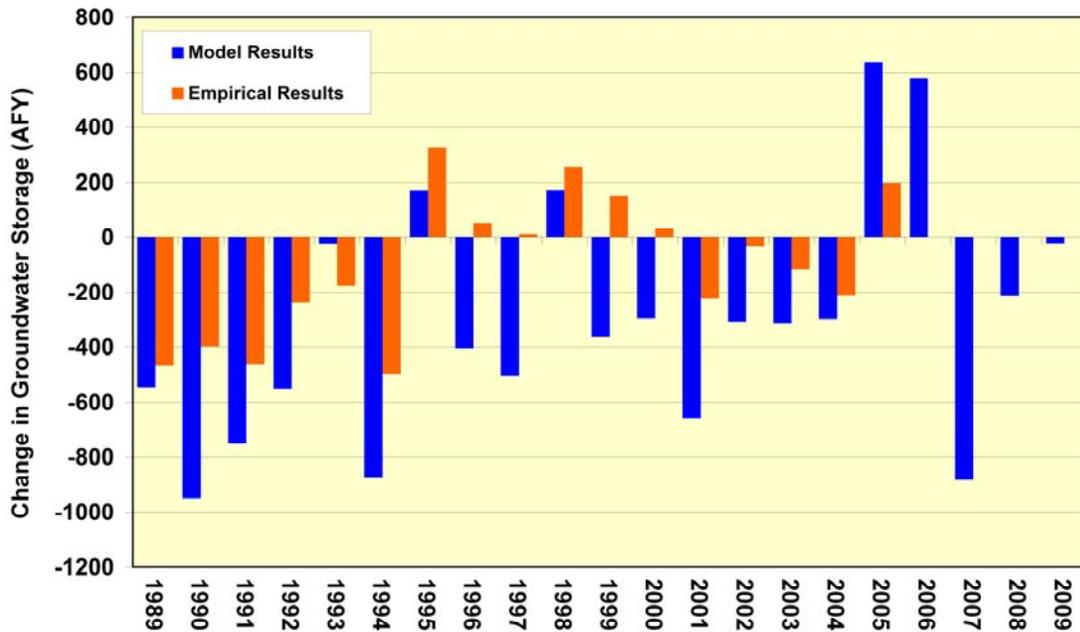
- Groundwater Monitoring Well Location  
(355) Measured Groundwater Elevation in feet above mean sea level
- Lompico Groundwater Elevation Contour
- Groundwater Depression Contour
- Location of Direct Contact between the Santa Margarita Sandstone and the Lompico Sandstone
- Scotts Valley Water District
- Groundwater Basin Boundary
- Lompico Absent
- Groundwater Flow Direction

Scale: Feet  
0 1,800

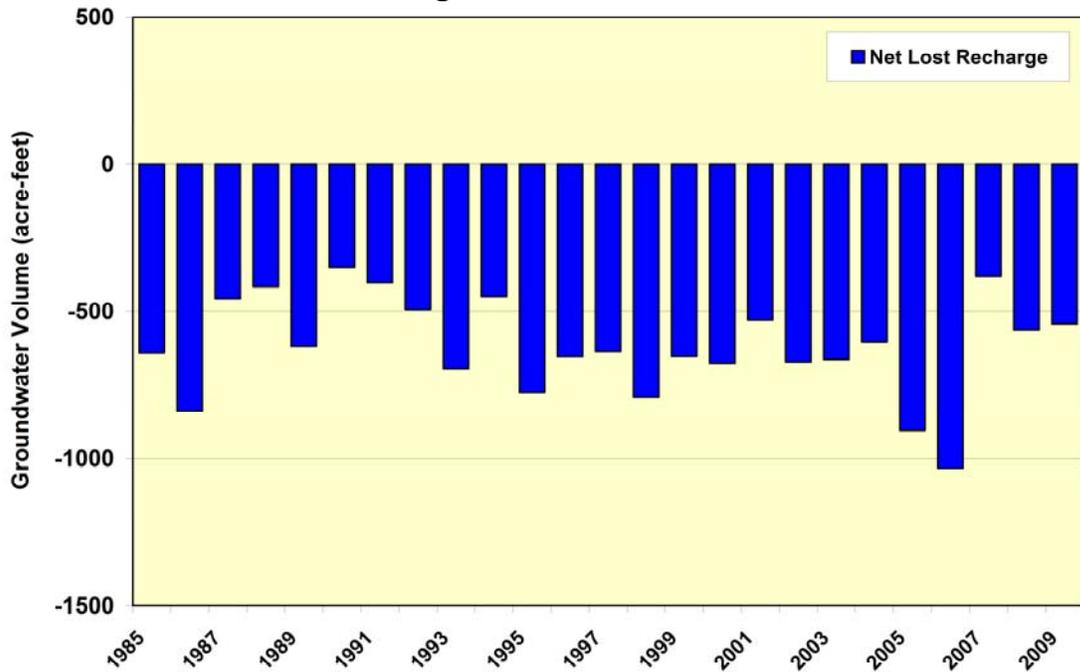
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 Santa Cruz County, California  
**Groundwater Elevation Map for the Lompico – September 2009**  
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**Figure 1A-13**



### Comparison of Modeled and Empirical Methods for Estimating Change in Groundwater Storage



### Estimated Loss of Groundwater Recharge as a Result of Urbanization



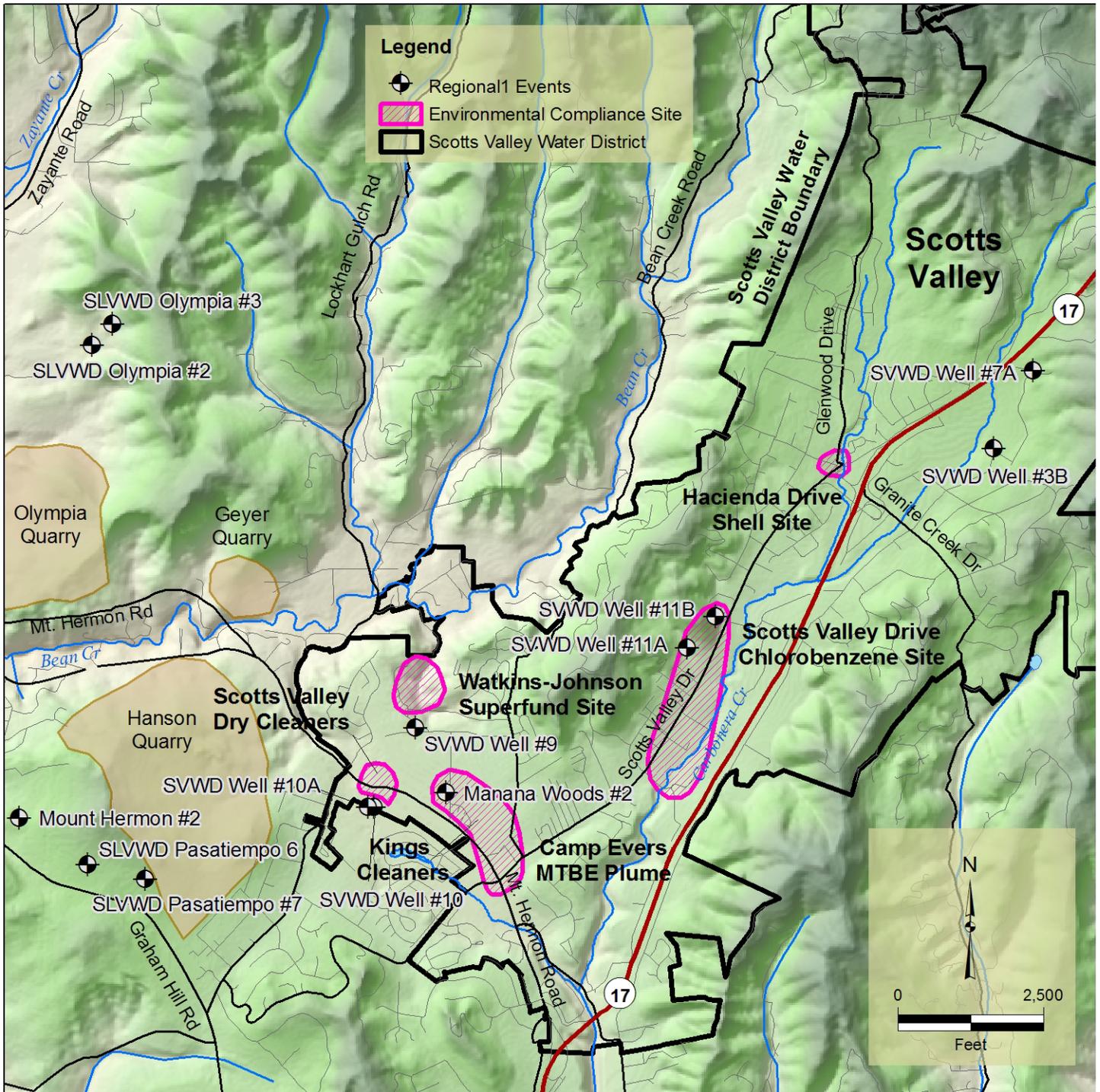
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**Graphs for Change in Groundwater Storage over Time and Loss of Groundwater Storage due to Urbanization**

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**Figure 1A-15**



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**Locations of Known Environmental  
 Regulatory Sites in Scotts Valley Area**

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**Figure 1A-16**