



# SANTA MARGARITA GROUNDWATER BASIN ADVISORY COMMITTEE MEETING

**Wednesday, May 14, 2014 – 4:00 p.m.  
Scotts Valley Water District Board Room  
Two Civic Center Drive, Scotts Valley, California**

## Meeting Report

The Santa Margarita Groundwater Basin Advisory Committee consists of members from the Scotts Valley City Council, Scotts Valley Water District (SVWD) Board of Directors, San Lorenzo Valley Water District (SLVWD) Board of Directors, County of Santa Cruz Board of Supervisors and/or Water Advisory Commission, and Lompico County Water District.

### 1. Convene Meeting

Scotts Valley Water District Director C. Perri called the meeting to order at 4:01 p.m.

Present: Director C. Perri, Scotts Valley Water District; Director J. Rapoza, San Lorenzo Valley Water District; Director L. Henry, Lompico Water District; Councilmember D. Lind, City of Scotts Valley; and S. Reed, representing Supervisor B. McPherson, County of Santa Cruz

### 2. [November 13, 2013 Meeting Report](#)

No action was taken on this item.

### 3. Oral Communications

Oral communications were made by R. Janecka, B. Holloway and J. Fasolas.

### 4. Discussion Items

#### 4.1. Drought Update and Impact to Local Groundwater Basins

County Water Resources Manager Ricker reported that surface flows are critically low; San Lorenzo Valley Water District has implemented Stage 2 (20%) mandatory restrictions effective May 1, 2014; well permit requests are up 35% this year.

#### 4.2. [Emergency Drought Mitigation Funding](#)

T. Carson, Regional Water Management Foundation (RWMF) presented information on its efforts to secure Proposition 84 Integrated Water Resources Management (IRWM) - Emergency Drought Mitigation Funds for regional projects in Santa Cruz County. The presentation is appended.

#### 4.3. [Santa Margarita Groundwater Model Update, Prop 84](#)

M. Maley, Kennedy Jenks Consultants presented an update and timeline for the Santa Margarita Groundwater Model Update Project. The presentation is appended.

Oral Comments were made by L. Henry and B. Holloway.

#### 4.4. Updated Pollutant Migration Information (O'Brien)

Assistant General Manager/Operations Manager W. O'Brien reported that the district hosted a meeting between Central Coast Regional Water Quality

Control Board (RWQCB), City of Scotts Valley, County of Santa Cruz, San Lorenzo Valley Water District and Property Development Centers (Town Center) to gather information/data on local wells in the area and modeling of the groundwater due to concerns regarding tetrachloroethene PCE migrations from the former Scotts Valley Dry Cleaners site. New monitoring wells drilled for the former Watkins Johnson site have found high concentrations of (PCE). This is a concern for the District because this area has been identified as a key site for recharge.

#### 4.5 Update on San Lorenzo Valley Water District Projects

- SLVWD Regional Water System Intertie No. 6 update  
General Manager (GM) Mueller reported that the construction contract has been let for Intertie #6 and work is scheduled to begin the first week of June. Work continues on the construction plans and specifications for Interties #2, 3, and 4 and notification has been received from the US Fish and Wildlife Service (USFWS) that an incidental take permit is necessary which will require the preparation of a low level Habitat Conservation Plan.
- SLVWD/Lompico Water Emergency Intertie update  
GM Mueller reported that Lompico Water District received emergency funding from the State for this project. The intertie has passed all inspection/tests and is operational at 65 gallons per minute.

#### 4.6. Update on Scotts Valley Water District Projects

- Storm Water Infiltration (Prop 84)  
GM Harmon reported that the District is working on several IRWM grant funded groundwater projects that will capture rain water to replenish the groundwater basin.
- Pasatiempo Recycled Water Exchange  
GM Harmon reported a short-term emergency component has been added due to the drought conditions. The golf course is requesting a permit amendment that will allow the use of secondary treated water directly from the City of Scotts Valley's wastewater treatment plant.
- Hanson Quarry  
GM Harmon reported that the quarry owners have approached SVWD and SLVWD regarding the site. It is under consideration as a potential recharge project that could inject excess recycled water to replenish the groundwater basin.

#### 4.7. Roundtable

County Water Resources Manager Ricker reported that the draft report for the Water Exchange Study is expected in June/July. The drought has highlighted the City of Santa Cruz's need to get more water in return.

#### 5. Future Agenda Items

No new future agenda items were identified.

#### 6. Adjournment

The meeting adjourned at 5:21 p.m. The next meeting is scheduled for November 12, 2014 at 4:00 p.m.

# Santa Margarita Basin Groundwater Model

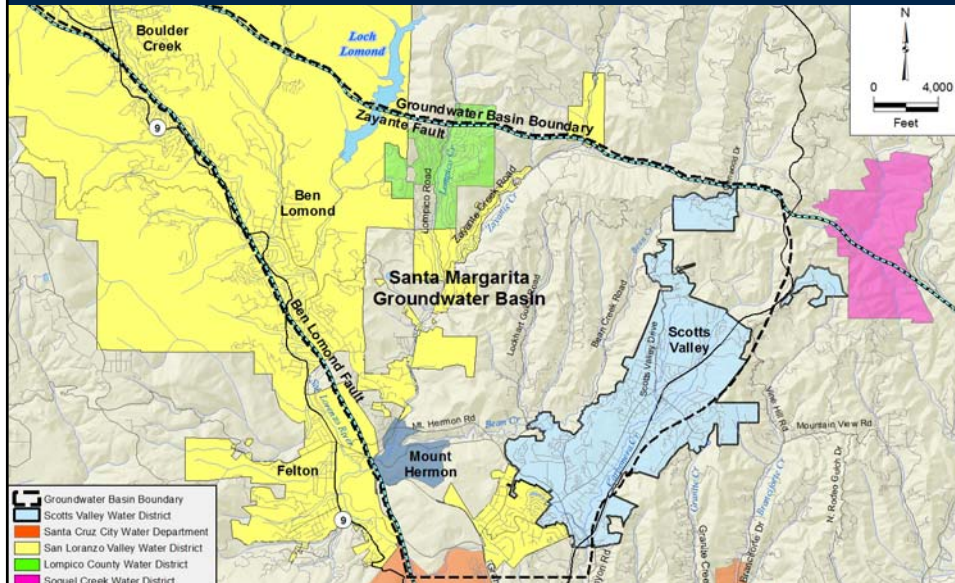
## Santa Margarita Groundwater Basin Advisory Committee Meeting

Mike Maley

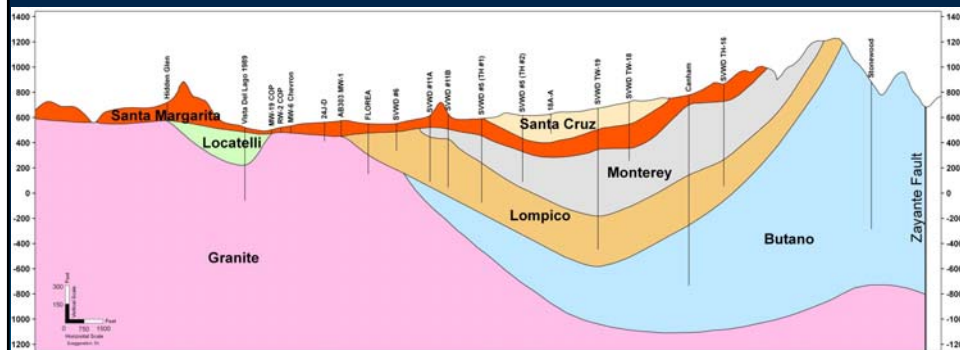
May 14, 2014

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# Santa Margarita Groundwater Basin



## Santa Margarita Basin is Geologically Complex



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## Project Objectives

- Update, calibrate, and improve the existing Santa Margarita Groundwater Basin Model
- Verify consistency with other work done in the Basin
- Improve model documentation to provide more detailed discussion of model setup and results
- Provide foundation for future hydrogeologic studies

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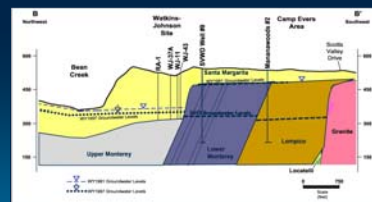
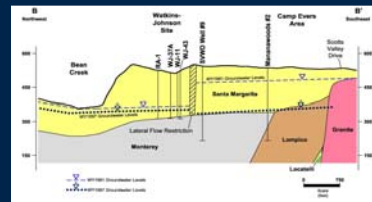
## Project Status

- Development of primary Model input parameters is complete
- Working to finalize model calibration
- After calibration, will run initial Model Scenarios
  - Baseline
  - Projected future pumping
- Concurrently working on Project Report to document model setup, calibration and application

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## Updated Basin Geology With New Data and Interpretations

- **Santa Margarita**
  - Thinner in the Camp Evers area
  - Eliminated fault boundaries
  - Fixed problem with Santa Cruz contact
- **Monterey**
  - Reinterpret SVWD #9 as Monterey
  - Define Upper and Lower Monterey for cross-screened wells
- **Lompico**
  - Extended into Blackburn Gulch
- **Butano**
  - New Butano geology and recharge data
  - Define Upper and Lower Butano to get appropriate distribution of recharge



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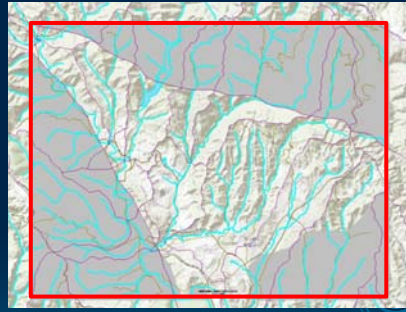
## Updated Method for Calculating Recharge and Streamflow

### ➤ Calculated Recharge and Streamflow

- Infiltration and runoff calculated for each watershed using geology and land use to derive coefficients
- Calculated using Rational Method

### ➤ Streams

- Flow based on precipitation rather than correlation to Soquel Creek gauge
- Elevations updated using County LiDar Data
- Updated streambed with geology



Calculated streamflow for all major Streams in the basin

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## Model Domain Expanded to Cover Blackburn Gulch

### ➤ Extended Model Domain to East

- Eliminate boundary issue in Lompico and Butano

### ➤ Aquifer Properties

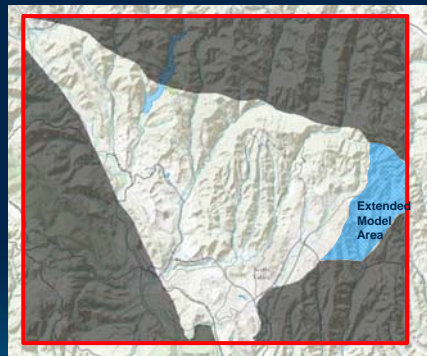
- Verify with published data
- Incorporate new pumping test
- Redefine vertical flow properties especially for new layers

### ➤ Topography

- Updated with County LiDar Data

### ➤ Evapotranspiration

- Updated with new land use and vegetation data
- Updated with County LiDar Data



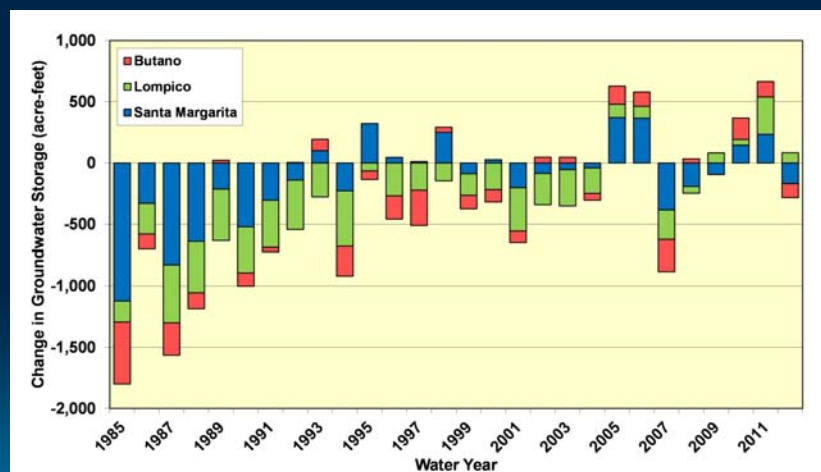
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## Working on Calibration

- **Focused on remaining problem areas**
  - Working on getting the vertical flow resolved with the new geologic interpretation at SVWD #9 area
  - Working on getting the pumping distributions, vertical flow and recharge for Butano
- **Some areas are well calibrated**
  - Santa Margarita at Quail Hollow
  - Lompico in Pasatiempo and SVWD #10A area
- **Water Balance**
  - Still focused on groundwater level calibration
  - Verify stream baseflow and water balance with reported data

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## Model will be Used to Update Assessment of Change in Groundwater Storage



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## Project Timeline

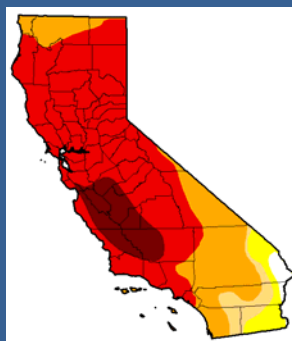
- Anticipate 3 weeks to finish calibration, QA/QC of model setup and initial scenarios
- Plan for next TAC Meeting in early June to review calibration and initial scenarios
- Complete scenarios and report
  - Draft report submitted for review by early July
  - Review and comment of report in July and August
  - Final Report in September

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## Questions

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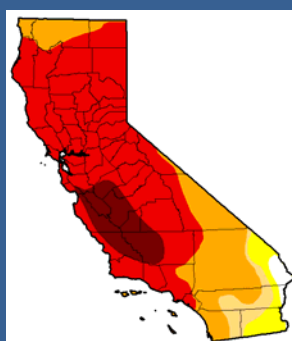




## Santa Cruz Integrated Regional Water Management

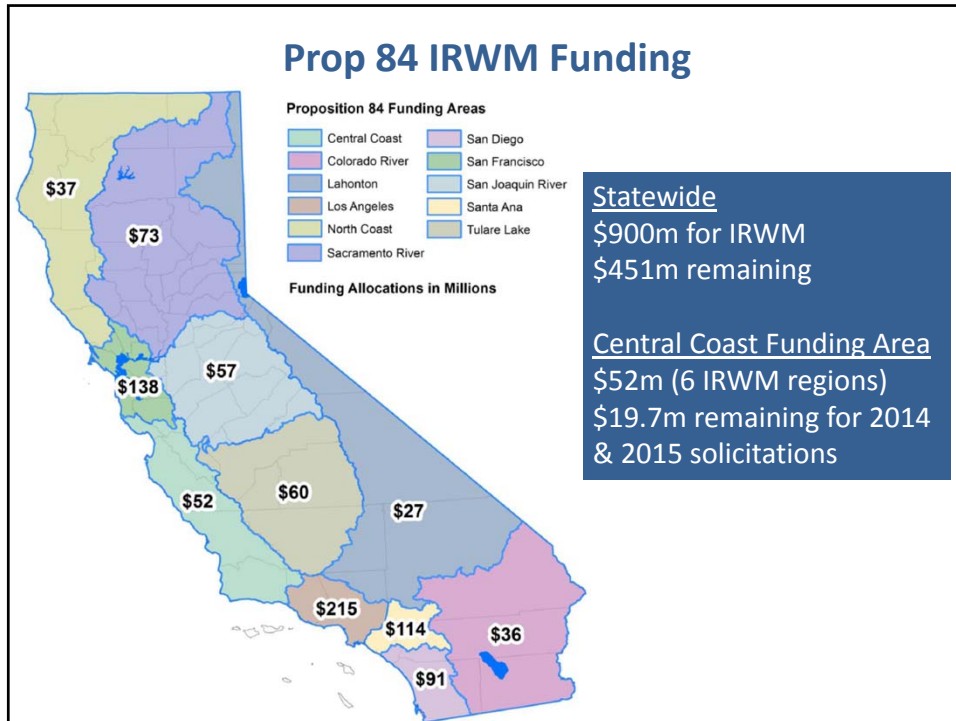
*2014 Drought Solicitation Meeting*

*May 14, 2014*



## AGENDA

- Overview of IRWM Funding for 2014
- Drought Relief Projects from Santa Cruz Region
- Application Process



### IRWM Implementation Grant Timeline

DWR Activity	Schedule
Release Final Program 2014 Guidelines and PSP	June __, 2014
Applicant workshops	June __, 2014
Grant applications due	July __, 2014
DWR announces conditional grant awards	September 2014

Santa Cruz IRWM Activity	Schedule
Evaluate and Rank Drought Projects	April
Confirm Proponent Intent, Readiness, Match	April
Finalize Project List; Intent to Proceed	May
Contract with consultant to prepare application	May
Application preparation	May - July

### **Eligible Project Types (2014 Drought)**

- Projects and programs that provide immediate regional drought preparedness
- Increase local water supply reliability and the delivery of safe drinking water
- Assist water suppliers and regions to implement conservation programs and measures that are not locally cost-effective
- Reduce water quality conflicts or ecosystem conflicts created by the drought

### **Drought Preparedness\***

Address long-term drought preparedness by contributing to sustainable water supply and reliability during water shortages.

- Promote water conservation, conjunctive use, reuse and recycling
- Improve landscape and agricultural irrigation efficiencies
- Achieve long term reduction of water use
- Efficient groundwater basin management
- Establish system inerties
- *Does not include drought emergency response actions*

## Santa Cruz Drought Project Evaluation Criteria

### Pass / Fail Criteria

- Project is eligible for drought funding
- Project implementation ready by April 2015
- Project supports at least one multiple benefit

### Regional Considerations (0 - 20 pts)

- Degree to which project alleviates drought impacts through development of new water or conservation
- Physical benefits can be defined and quantified
- Project proposes to use known or proven technology to achieve physical benefits
- Feasibility or other studies support project as the preferred alternative
- Degree to which targets, tools and methods to monitor project effectiveness can be implemented
- Suitability with IRWM Drought PSP & Guidelines Criteria

Proj. #	Project Title	Lead Agency	Cost
43	Scotts Valley Water District - Santa Cruz Water Department Regional Water Supply Intertie Project	Scotts Valley Water District	\$5,000,000
46	<b>City of Santa Cruz: Tait Well 1 &amp; 4 Replacement</b>	<b>City of Santa Cruz Water Department</b>	<b>\$600,000</b>
82	<b>City of Santa Cruz Drought Mitigation to Improve Potable Water Quality, Implement Conservation Program for Agriculture, and Reduction of Ecosystem Conflicts with Habitat Conservation</b>	<b>City of Santa Cruz</b>	<b>\$696,264</b>
13	Redwood Water Tank Replacement Project	Lompico County Water District	\$1,470,000
79	Davenport New Town Toilets and Showerheads Retrofit	Davenport County Sanitation District	\$100,000
65	Scotts Valley Water District Water Use Efficiency (WUE)/Recharge Optimization Plan and Outdoor WUE/Recharge Implementation Pilot Project	Scotts Valley Water District	\$1,100,000
56	<b>Scotts Valley Water District Regional Groundwater Conjunctive Use Planning and Implementation Project</b>	<b>Scotts Valley Water District</b>	<b>\$1,850,000</b>
16	Cox Well / Water Treatment Plant to Treat for Iron and Manganese	CWD	\$2,700,000
76	Groundwater Protection: Achieving water demand reduction and LID BMP implementation through expanded incentive programs	Ecology Action (formerly led by SCCRCD)	\$1,500,000
52	Drought response: LID Bioretention and Rainwater Catchment Projects Implementation following Prop 84 Planning	Ecology Action	\$1,108,420
44	Scotts Valley Water District Regional Automatic Meter Read Program	Scotts Valley Water District	\$12,200,000
64	Scotts Valley Water District Low Impact Development Retrofits for Stormwater Treatment and Groundwater Recharge	Scotts Valley Water District	\$4,300,000
53	Drought Response: Implementation of LID, IPM, and Water Conservation at Santa Cruz County School Sites	Ecology Action	\$350,000
47	Drought Responses: Water Wise Monterey Bay Friendly Ecological Landscaping Public Education and Incentives Program	Ecology Action	\$400,000
73	Residential and commercial water resources and environmental management program	Resource Conservation District of Santa Cruz County	\$700,000
55	Soquel Aptos Groundwater Basin Stakeholder-driven Management Plan Development and Incentive Pilot	Ecology Action	\$495,000

## Next Steps

- Finalize Project List, Confirm Intent to Proceed
- RWMF to contract with consultant for application development
- Application preparation begins
- IRWM Plan Update completed; adopted by Partners

For more information or to sign up for email updates visit:

[www.SantaCruzIRWMP.org](http://www.SantaCruzIRWMP.org)