Mid-County Groundwater Stakeholder Advisory Committee

First Meeting
May 13, 2014

Overview of First Meeting

- General Purpose of Meetings
- Ground Rules
- Background on Basin Issues
  - Need for short term and long term management
- Basin Management Activities
  - Central and Soquel Water Districts
  - County
  - New State Legislation
  - Actions private pumpers can take
  - Possible Long term actions being considered
- Future Meeting Schedule and Topics
- Open Discussion, Questions and Comments

Purpose of Groundwater Stakeholder Meetings

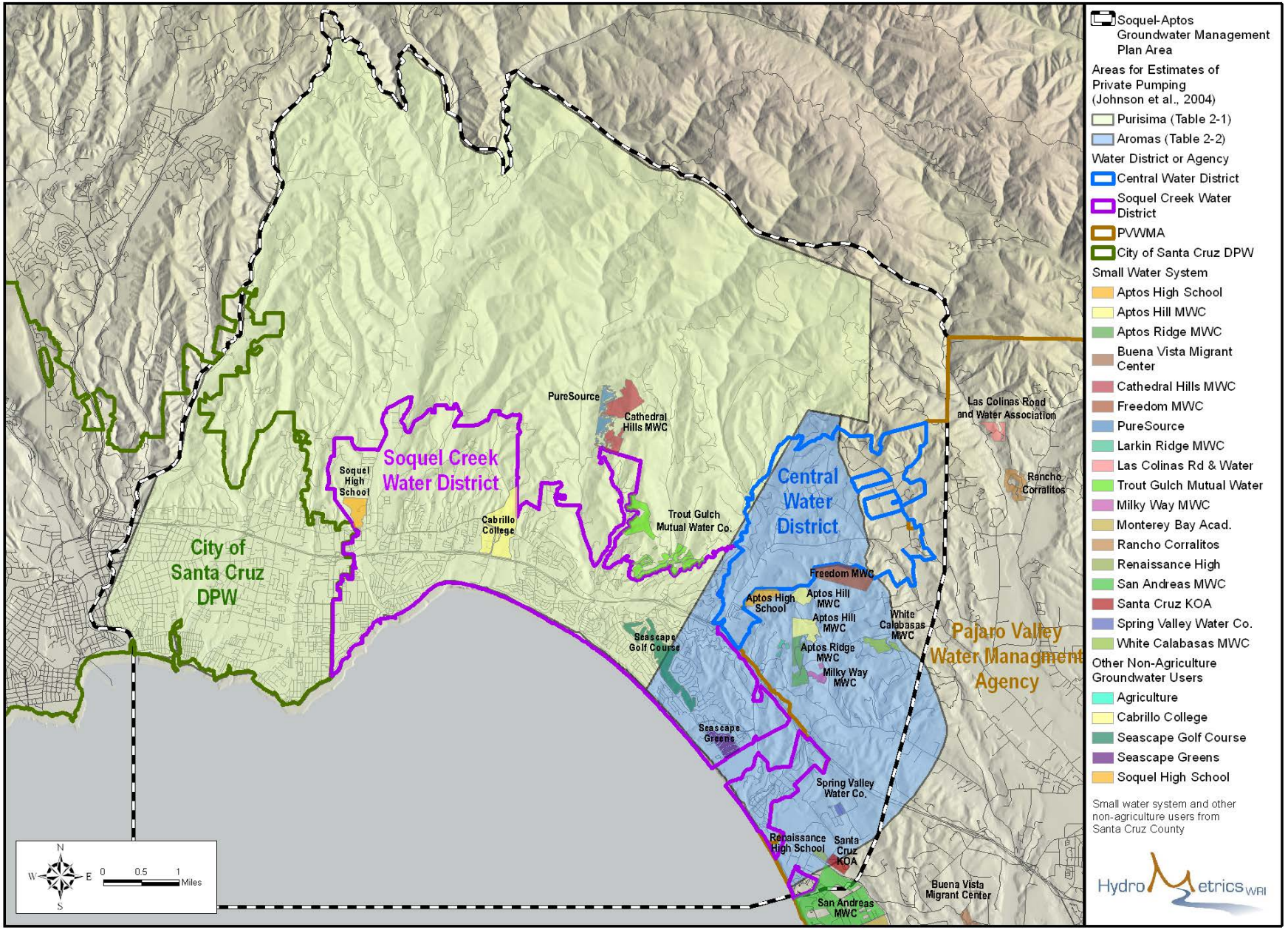
- Convene Mid-County groundwater basin users in a series of discussions.
- Share information about groundwater hydrology, groundwater rights, water use efficiency and basin sustainability.
- Develop common understanding of issues.
- Develop recommendations for basin protection and management strategies.
- Address the role and responsibilities of non-agency groundwater pumpers.

Meeting Ground Rules

- Promote exchange of information and discussion of ideas.
- Do not accuse or blame, or dwell on past actions.
- Staff will be developing recommendations to Boards based on ideas presented and discussions at meetings.
- Committee members are encouraged to provide input directly to Boards during their deliberation.
- Ultimately decisions on basin management will be made by the Boards, with potential opportunities for votes as prescribed by law (Water Code, Prop 218)
- Generally will have opportunity for discussion and questions on topics at hand throughout the meeting.

Basin Hydrology and Issues

- All of our water is local, coming from rain and recharge in the basin.
- Current total pumping exceeds the rate of recharge
- Groundwater level declines
- Reduced streamflow
- Current and worsening threat of seawater intrusion


Soquel-Aptos Groundwater Management Plan Area
Areas for Estimates of Private Pumping (Johnson et al., 2004)
Purisima (Table 2-1)
Aromas (Table 2-2)
Water District or Agency
Central Water District
Soquel Creek Water District
PVWMA
City of Santa Cruz DPW
Small Water System
Aptos High School
Aptos Hill MWC
Aptos Ridge MWC
Buena Vista Migrant Center
Cathedral Hills MWC
Freedom MWC
PureSource
Larkin Ridge MWC
Las Colinas Rd & Water
Trout Gulch Mutual Water
Milky Way MWC
Monterey Bay Acad.
Rancho Corralitos
Renaissance High
San Andreas MWC
Santa Cruz KOA
Spring Valley Water Co.
White Calabasas MWC
Other Non-Agriculture Groundwater Users
Agriculture
Cabrillo College
Seascape Golf Course
Seascape Greens
Soquel High School
Small water system and other non-agriculture users from Santa Cruz County
HydroMetrics WRI
Soquel Creek Water District
Central Water District
City of Santa Cruz DPW
Pajaro Valley Water Managment Agency
PureSource
Cathedral Hills MWC
Las Colinas Road and Water Association
Rancho Corralitos
Soquel High School
Cabrillo College
Trout Gulch Mutual Water Co.
Freedom MWC
Aptos High School
Aptos Hill MWC
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Renaissance High School
Santa Cruz KOA
Buena Vista Migrant Center
San Andreas MWC
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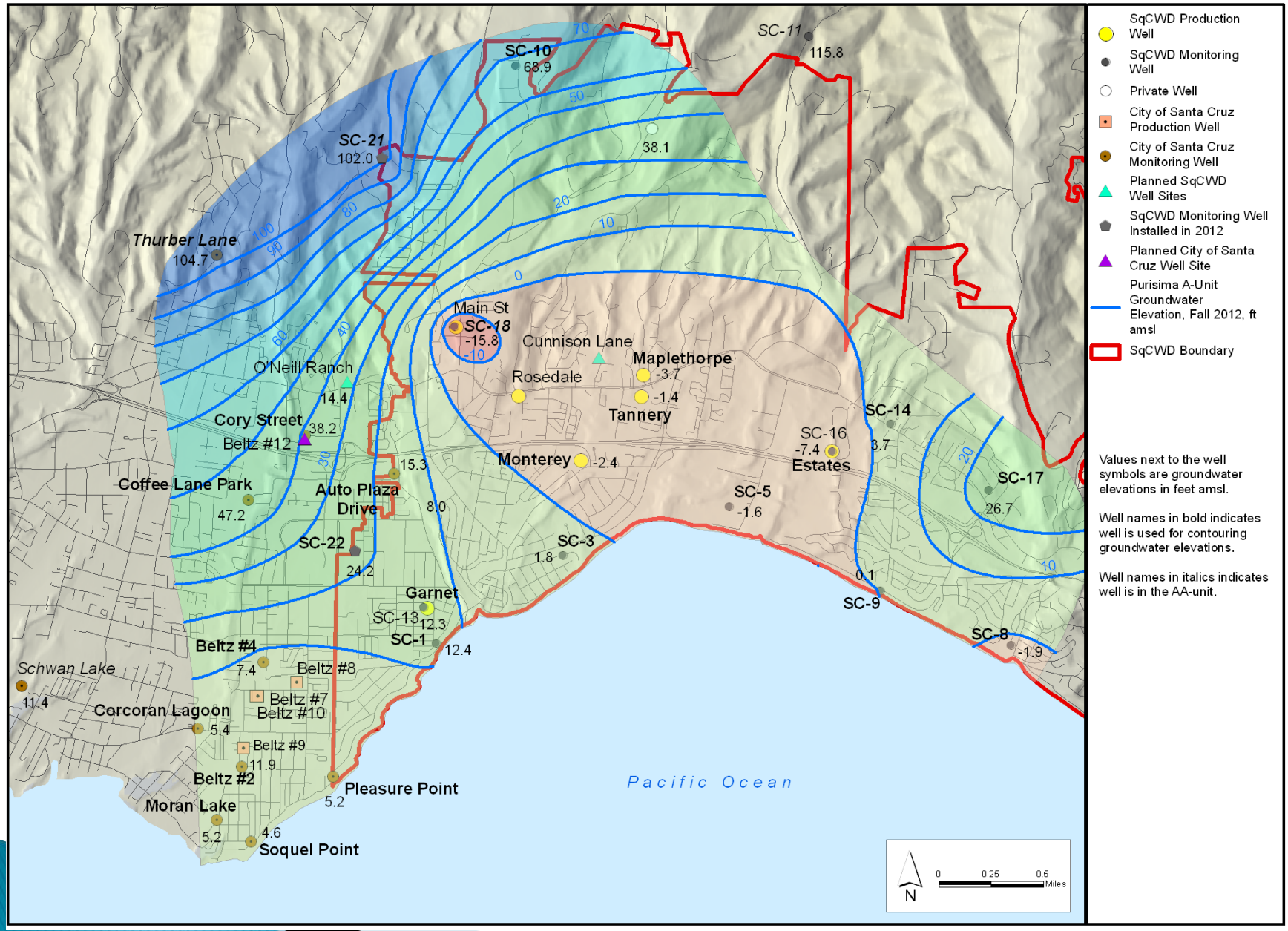
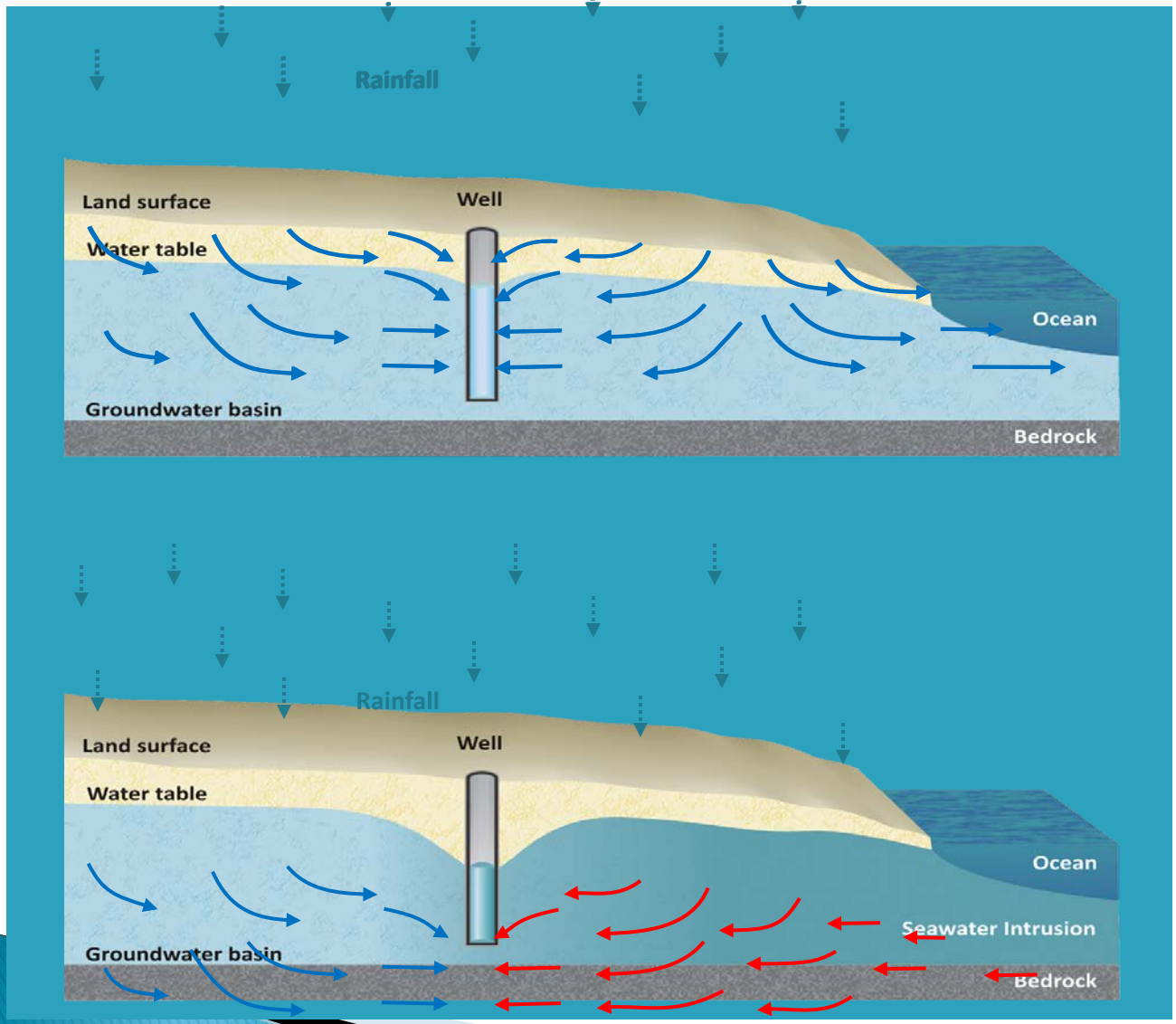
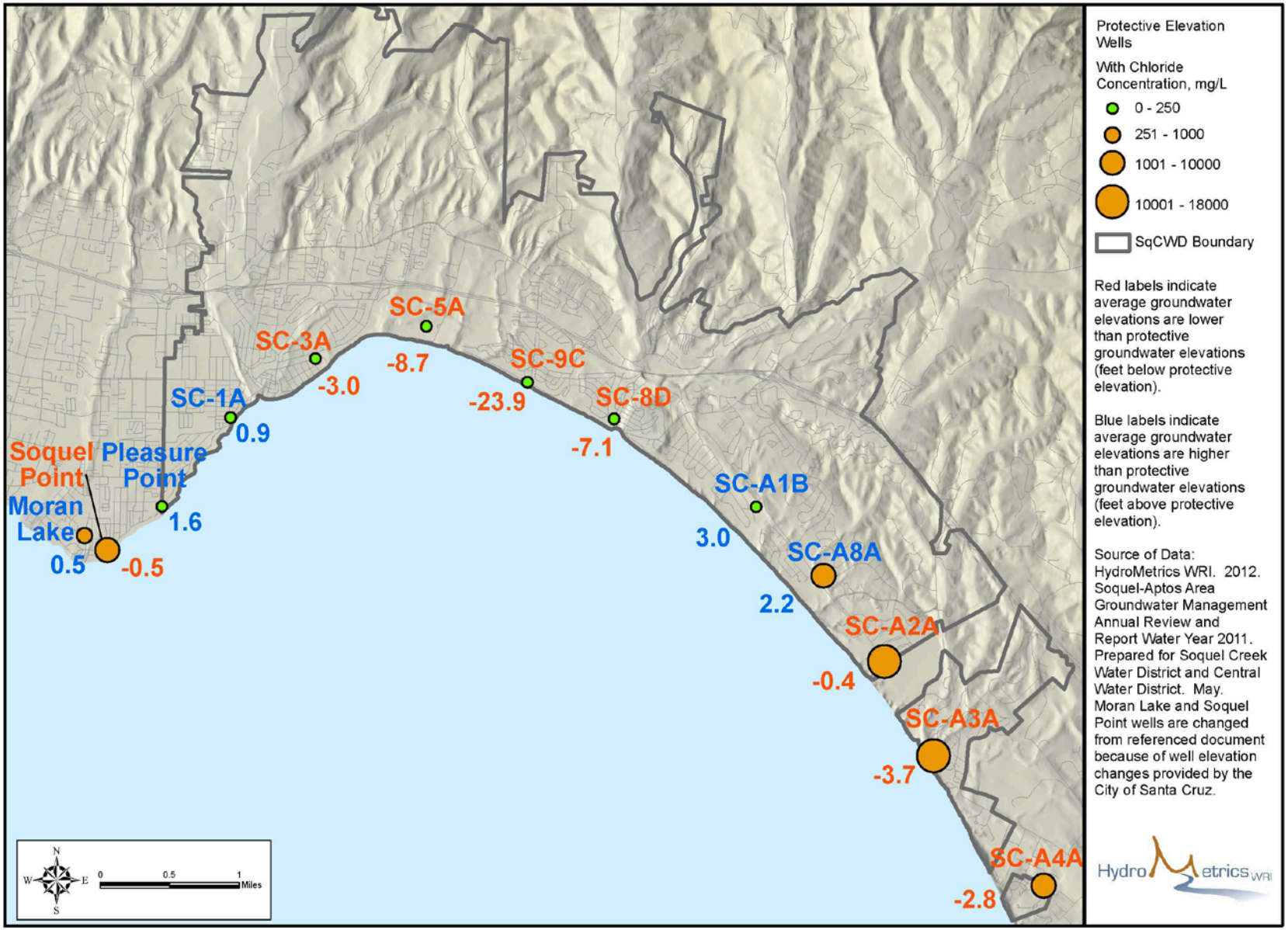
Fall 2012 Groundwater Levels in Western Purisima A



Seawater Intrusion



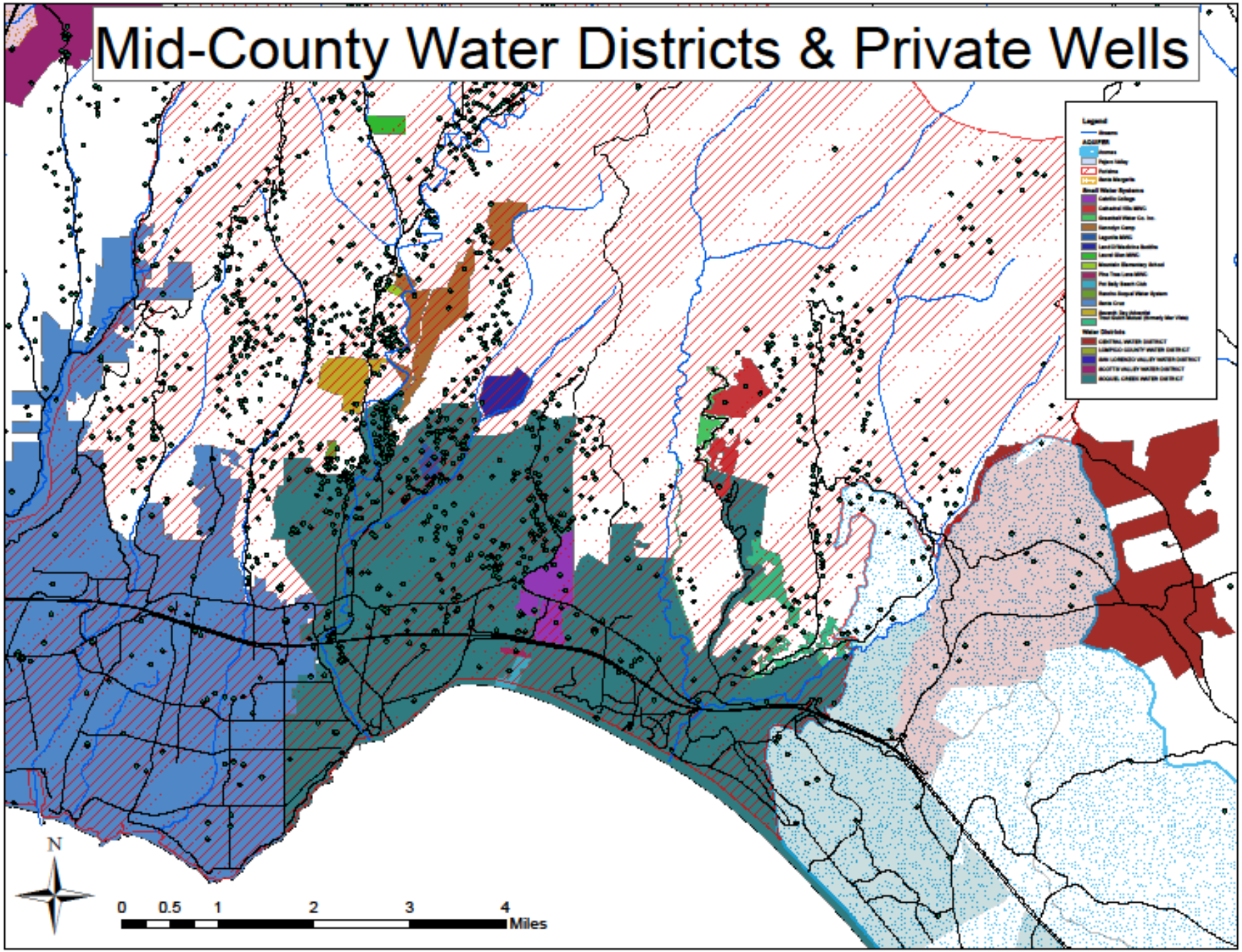
Average Water Year 2011 Groundwater Elevations
Relative to Protective Elevations and Chloride Concentrations



Significance of Non-Municipal Pumping

- 85% of pumping in Pajaro Valley
- 30% of water use in rest of County
- 38% of pumping from Soquel-Aptos Purisima basin (1000 wells), 30% from Aromas
- 15% of coastal/urban Purisima Basin (200 wells)
- Local impacts and impacts on streamflow
- In rural areas, impact is mitigated by:
  - Septic System recharge
  - Shallow wells and complex geology
  - Low density
- Probably need a groundwater model to better evaluate impact.

Mid-County Water Districts & Private Wells



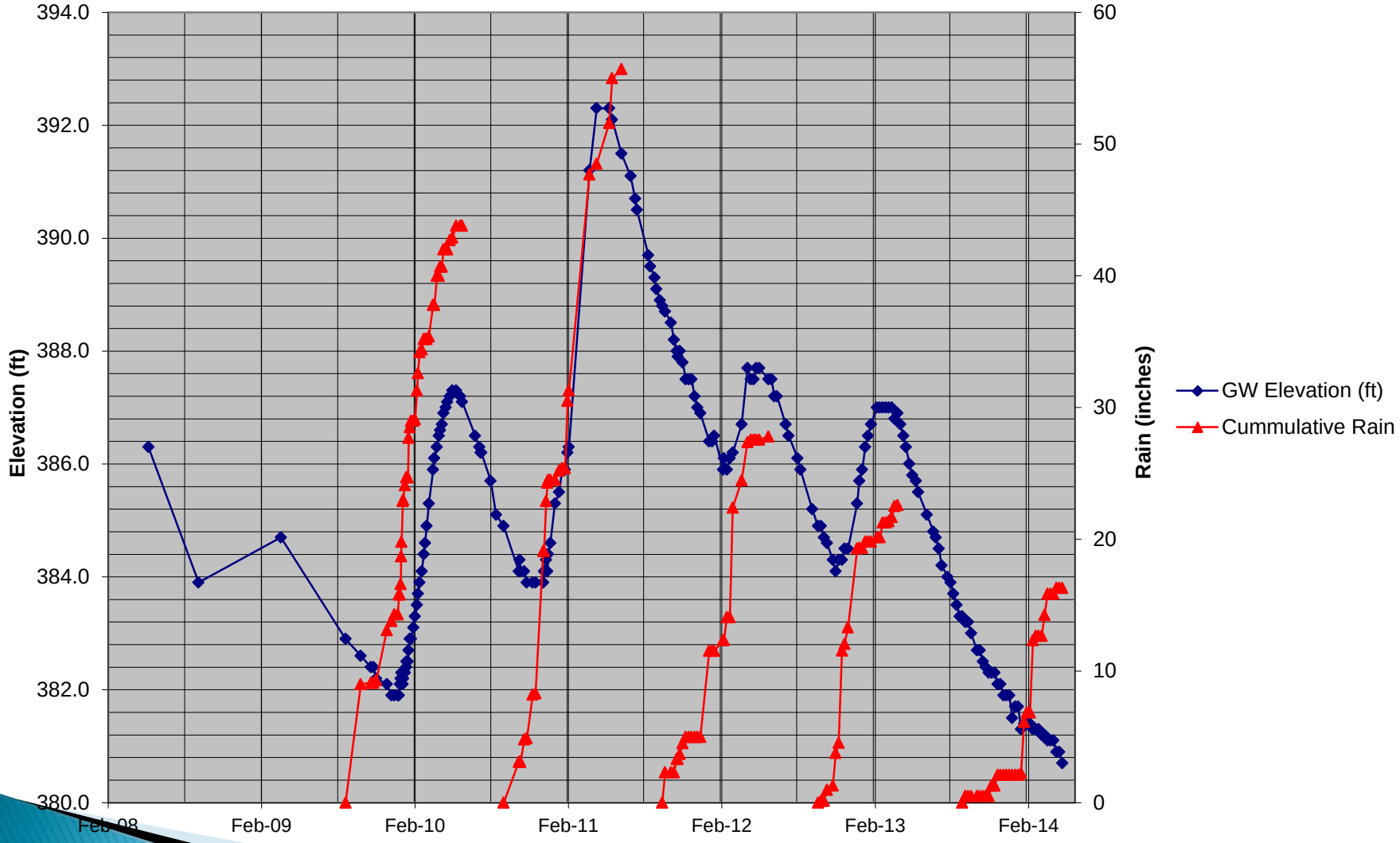
How do we estimate how much water is pumped?

- Numbers of developed parcels
- Average water use of rural residential properties:
  - 0.6 af/yr in Central Water Dist.
  - 0.2 af/yr for mountain wooded parcels
  - 1.1 af/yr Soquel horse property
  - Average of 0.44 af/yr in Purisima
- Typical water use factors for other uses
- Aerial photo analysis of agricultural usage
- Meters?

Proportion of Pumping from the Purisima Aquifer

	Urban	Total
Agricultual Wells	2%	3%
Other Individual Private Wells	9%	29%
Other Small Water Systems:	4%	7%
TOTAL Non-Municipal Pumping	15%	38%
CITY OF SANTA CRUZ	14%	10%
SOQUEL CREEK WATER DISTRICT	71%	51%
TOTAL :	73%	100%

Groundwater Levels Laurel Glen, Soquel



District Management Activities

- AB 3030 Groundwater Management Plan
- Basin Implementation Group
- Hydrologic Studies and Monitoring
- Management Objectives, Pumping Goals
- Shifting pumping away from coast
- Water use reduction through demand offset, rebates, user restrictions
- Development of Supplemental Supply

County Activities

- Oversight of Small Public Water Systems (5-199 connections, 130 in County)
- Permitting of new wells
- Water level monitoring
- Water supply requirements for new development, adequate service, CEQA review of larger uses
- Prohibition of new non-ag wells in SqCWD service area (7.70.120)
- Enforcement of Soquel Creek Adjudication
- Water conservation requirements
- Groundwater recharge projects
- Integrated Regional Water Management

Potential Actions by Private Pumpers

- All basin users have some impact on groundwater levels and/or streamflow
- Install water conservation devices and use water as efficiently as possible
- Reduce outdoor irrigation
  - Reduce irrigated areas
  - Irrigate efficiently and effectively
  - Don't over irrigate, monitor soil moisture
  - Use rainwater and greywater
  - Get advice from RCD or NRCS
- Promote groundwater recharge
- Consider installing a meter to track water use

Possible Future Considerations

- Potential State legislation for increased groundwater management authority
- Groundwater replenishment fees?
- Increased monitoring of water levels and water use
- Development of groundwater model
- Possible availability of rebates for water conservation measures
- More stringent water conservation requirements, time of irrigation, etc.

Future Meetings – Tentative topics

- July 8: More detail on current basin conditions and management activities
- September 9: State and local groundwater law and new approaches to management
- November 25: Examples of stakeholders and agencies working together: Pajaro Valley and Community Water Dialog
- January 13: Develop recommendations for improved mid-county basin management
- What would you like to hear more about or discuss?