

Soquel-Aptos Water

Let's get to the right questions ...



Posing the Key Questions

- How the groundwater cycle works
- Understand user profiles – who & how much
- Who influences or controls usage
- What is coming over the horizon
- Consequences of our various solution sets

Let's use a simple model...

- At the Dec 18 meeting, we started to generate good questions. We will continue this at Jan 27 mtg.
- There were many questions about the GSA, and ability to influence it for various interest groups (types of users.)
- There were a lot of questions about the water model, and how we know the right data for it
- Emphasis on more communication:
 - Social media
 - FaceBook groups (make our own?)
 - More email
 - Get pump companies to post: (Capitola Pump, Halstead, etc)
 - KSBW
- We need to drill further into different groups, their amt of use, and a way to balance their needs and use.

Dec 18 Group Questions

Water

- How much is pumped by each stakeholder group?
- How much to maintain outflows to ocean; and for recharging streams?
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- How to better calc rural use (recharge)?
- How accurate are our measurements (rainfall, outflows, sustainable amt)?
- Are we managing the basin as an ENTIRE watershed? What about Pajaro?
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- What is Enough water for fish?
- Enough for stream flow?

Who Gets to Use It (when scarce)

- How will we allocate our limited resources?
- Do we study further, or do we implement?
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- What is fair/equitable? And who decides this?

Solutions

- Reduce run off to ocean
 - Permeable pavements
 - use storm drain flow for recharge
 - Store run off (quarries, ponds)
- Manage recharge efficiently across watershed
 - how do we know if mngmt is working?
- Mandate water saving devices
- Recycle waste water
 - install purple pipe now: ahead of treatment capacity
 - Create recycle plant(s)

Control

- Are district wells located in optimal places? (away from ocean)
- Can we measure groundwater levels?
- What will the GSA look like?
 - How will PVMA work w local GSA?
 - How will priv well owners have a seat at table w GSA?
 - How will priv property rights be protected / balanced?

Environment

- Where is the salt water interface; what is travel time (incursion)
- 40% rainfall reduction projected?
- How do we know about recharge
- What are population impacts

On the Horizon

- What has worked elsewhere?
 - Both well and not so well?
- Satellite measure of aquifers?

Groundwater in Soquel and Aptos: All we've got

Water

- How much is there?
 - 10,800 AFy w normal rainfall
 - 7400 available per hydrology
 - 7600 pumped – 6400 w rechg
 - Deficit: 25+ yrs of overpumping
 - Current use
 - 78% SqCWD + SCzWD + CWD
 - 11 % Rural Residences
 - 11% Ag, Golf, Cabrillo
 - How much recharged yrly?
 - 10% of rainfall > 15"
 - change in rainfall projections?
- = Aquifers
- Purisima 66%. Stratified
 - Aromas 33%. Porous
- = Water Model?

Who Gets to Use It (when scarce)

- Land owners
 - Residential
 - Agricultural
 - Institutional
 - Nature (regulators)
 - Water districts
 - Schools, parks
- Reasonable +
Beneficial

Solutions

- Conserve
 - we're top tier on this already
 - manage the run-off
- Transfer
 - Excess S Lorenzo winter flow
 - regulatory & ownership issues
- Re-Cycle
 - SqCWD is moving on this
 - Difficulties in injecting into Puris
- Buy
 - ??
 - transport costs
- Make
 - Deep DeSal
 - transport costs

Control

- State
- County
- Community
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- Muni Water Dists
- Basin Sustain Agency
- PVWMA

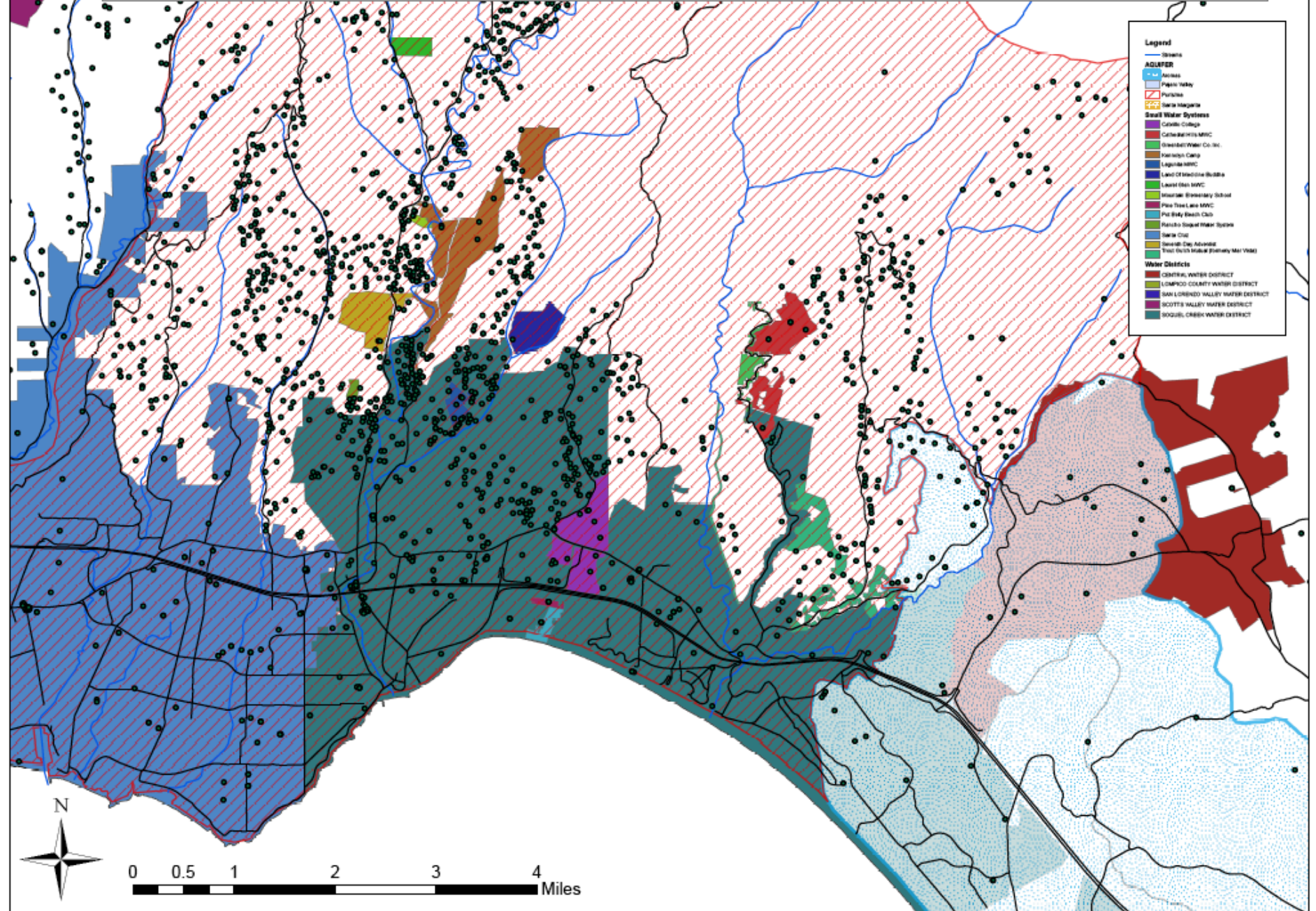
Environment

- Drought
- Planned development?
- Salt interface?
- Climate change
- Sea level rise

On the Horizon

- How will SCz & PVWMA affect Mid Co?
- How and who will pay for new supply?
- What has worked elsewhere?
- Change in projected rainfall?
- Fracking?

Mid-County Water Districts & Private Wells



Groundwater in Soquel and Aptos: All we've got

Water

- How much is there?
- Where does it come from?
- How much gets recharged each year?
- What is current use?
- Who uses it?
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- Detailed Water Model?

Who Gets to Use It (when scarce)

- Land owners?
- Water districts?
- Schools?
- Agriculture?

- Reasonable + Beneficial
- How do we decide?

Solutions

- Conserve

- Transfer

- Re-Cycle

- Make

- Buy

Control

- State
- County
- Community

- Muni Water Dists
- Basin Impl Group
- New Sustainability Agency

Environment

- Drought
- Planned development
- Salt interface
- Climate change
- Sea level rise

On the Horizon

- How and who will pay for new supply?
- What has worked elsewhere?
- Change in projected rainfall?

Mid County Overpumping History

