



**Desalination Task Force
Regular Meeting
7:00 p.m. – Wednesday, April 18, 2012**

**Santa Cruz Police Community Room
155 Center Street Santa Cruz CA 95060**

Agenda

The Desalination Task Force consists of two members of the Soquel Creek Water District Board and two members of the City of Santa Cruz City Council.

Call to Order

Roll Call

Presentation *Organized groups may make presentations to the Desalination Task Force. Presentations that require more than three minutes should be scheduled in advance with staff from the City of Santa Cruz Water Department or the Soquel Creek Water District.*

Statements of Disqualification *Section 607 of the City Charter states that "...All members present at any meeting must vote unless disqualified, in which case the disqualification shall be publicly declared and a record thereof made."*

Oral Communications

Announcements *No action shall be taken on this item.*

The Chair may announce and set time limits at the beginning of each agenda item.

Approval of Minutes (Pages 4-7)

Recommendation: *Motion to approve the minutes of the March 21, 2012 meeting.*

Information Items (Pages 8-9) *No action will be taken on this item.*

1. Award by American Academy of Environmental Engineers (AAEE): “Communicating Perspectives on Water Supply and Desalination Energy Use” ☆ (Pages 8-9)

General Business (Pages 10-47)

Any document related to an agenda item for the General Business portion of this meeting distributed to the Desalination Task Force less than 72 hours before this meeting is available for inspection at the City of Santa Cruz Water Administration Office, 212 Locust Street, Suite A, Santa Cruz, California. These documents will also be available for review at the meeting.

1. **scwd**² Desalination Task Force Outstanding Work Items ☆ (Pages 10-12)

Recommendation: That the **scwd**² Desalination Task Force accept information and direct staff on any of the five work items discussed below, including any specific direction on the timing or sequencing of when any of the items should be brought before the Task Force.

2. Public Outreach Update for Desalination Program ☆ (Pages 13-15)

Recommendation: That the **scwd**² Desalination Task Force receive quarterly information updating public outreach efforts.

3. **scwd**² Digital Community Outreach- Presentation of iPad Tool ☆ (Pages 16-47)

Recommendation: That the **scwd**² Desalination Task Force receive information and presentation by Civinomics and staff on the outreach pilot program utilizing an iPad tool to advance public outreach effort and/or goals.

Program Managers’ Report

- A. Work Schedule
- B. Upcoming Tasks
- C. Additional or Amended Tasks
- D. Contacts with Regulatory Agencies/Requests from Regulatory Agencies
- E. Contracts
- F. Public Outreach Program
- G. Budget
- H. Report of Findings

Media Articles ☆ (Pages 48-57)

1. News Article – Santa Cruz Sentinel (03-21-12) ☆ (Page 48)
2. News Article – Capitola Soquel Times (03-23-12) ☆ (Pages 49-50)
3. News Article – Santa Cruz Sentinel (04-01-12) ☆ (Pages 51-52)

4. News Article – Santa Cruz Sentinel (04-02-12) ☆ (Page 53)
5. News Article – Santa Cruz Sentinel (04-04-12) ☆ (Pages 54-55)
6. News Article – Santa Cruz Sentinel (04-07-12) ☆ (Pages 56-57)

Items Initiated by Members for Future Agendas

Adjournment

The next regular meeting of the Desalination Task Force is tentatively scheduled for Wednesday, May 16, 2012 at 7:00 p.m. in the Soquel Creek Water District Board Room, 5180 Soquel Drive, Soquel, California

☆ indicates materials included in packet

All information furnished to the scwd2 Desalination Task Force with this agenda is available at <http://www.cityofsantacruz.com/index.aspx?page=1604> or http://scwd2desal.org/Page-Public_Meetings.php#agendas.

Please observe the following procedures for addressing the Task Force during oral communications or agenda items. The Task Force Chair will indicate the opportunity for public comment on each item. All those wishing to speak on an item should form a queue at the public microphone. Each speaker will be limited to a single presentation of up to three minutes per agenda item (time limits may be increased or decreased at the Chair's discretion). After all speakers have addressed the task force, the task force will deliberate and take action. Additional public comment will not be allowed during the deliberation unless the Chair specifically calls on someone in the audience.

Organized groups wishing to make a presentation are asked to contact the Task Force Secretary prior to the task force meeting.

Disability Access – the meeting room is wheelchair accessible. Please contact Donna Paul (831)420- 5200, if you need assistance in order to participate in a public meeting or if you need the agenda and public documents modified.



**Desalination Task Force
Regular Meeting
7:00 p.m. - Wednesday, March 21, 2012
Soquel Creek Water District Board Room
5180 Soquel Drive Soquel, CA 95073**

Draft Minutes

The Desalination Task Force consists of two members of the Soquel Creek Water District Board and two members of the City of Santa Cruz City Council.

Call to Order Mayor D. Lane (Chair) called the meeting to order at 7:00 p.m.

Roll Call

Present: B. Jaffe, D. Kriege, D. Lane (Chair), and D. Terrazas.

Staff: Water Director B. Kocher, Desalination Program Coordinator H. Luckenbach,
Assistant Engineer S. O'Hara and Public Outreach Coordinator M. Schumacher.

Other: Eleven members of the public.

Presentation There were no presentations.

Statements of Disqualification There were no statements of disqualification.

Oral Communications

Written comments were provided by R. Persoff.

Announcements There were no announcements.

Approval of Minutes

Councilmember D. Terrazas moved approval of the February 15, 2012 Desalination Task Force meeting as submitted. Director D. Kriege seconded.

VOICE VOTE MOTION CARRIED

AYES: B. Jaffe, D. Kriege, D. Lane and D. Terrazas.

NOES: None.

Information Items No action was taken on this item.

1. Environmental Impact Report – Modified Schedule

General Business

1. scwd² Desalination Task Force – Work Plan and Schedule.

Director Kocher provided the staff report and responded to Task Force questions.

Public Comment

Public comments were made by A. Schiffrin.

Task Force Comments

It is important to provide public information on the project and how the agencies will operate the plant.

Projects selected as a result of the Energy Minimization and Greenhouse Gas Reduction Study should be provided to the public as soon as available.

Councilmember D. Terrazas moved to request that staff provide a proposal and timeline for the next phase of tasks for the scwd² Desalination Program along with an outline of tasks to be done independently by each agency. Director D. Kriege seconded.

VOICE VOTE MOTION CARRIED

AYES: B. Jaffe, D. Kriege, D. Lane and D. Terrazas.

NOES: None.

2. Energy Study Status Report, No. 9

Assistant Engineer S. O'Hara provided the staff report and responded to the task force questions. A copy of the PowerPoint presentation will be included in the original papers.

Public Comments

Public Comments were made by R. Searle and A. Schiffrin.

Director D. Kriege moved that the scwd² Desalination Task Force approve the ninth Energy Study status report and support the staff recommendation that the project be designed and operated with no net increase with regards to indirect greenhouse gases. Councilmember D. Terrazas seconded.

VOICE VOTE MOTION CARRIED

AYES: B. Jaffe, D. Kriege, D. Lane and D. Terrazas.

NOES: None.

3. scwd² Desalination Program Annual Budget

Desalination Project Coordinator Luckenbach provided the staff report and answered task force questions.

Councilmember D. Terrazas moved that the scwd² Desalination Task Force recommend approval of the 2013 Fiscal Year Budget Estimate. Director B. Jaffe seconded.

VOICE VOTE MOTION CARRIED

AYES: B. Jaffe, D. Kriege, D. Lane and D. Terrazas.

NOES: None.

4. Election of Officers

Mayor D. Lane opened the floor for nominations for Chair and Vice-chair for 2012.

Director B. Jaffe by motion nominated Director D. Kriege as Chair. Councilmember D. Terrazas seconded.

VOICE VOTE MOTION CARRIED

AYES: B. Jaffe, D. Kriege, D. Lane and D. Terrazas.

NOES: None.

Director D. Kriege by motion nominated Councilmember D. Terrazas as Vice-Chair. Mayor Lane seconded.

VOICE VOTE MOTION CARRIED

AYES: B. Jaffe, D. Kriege, D. Lane and D. Terrazas.

NOES: None.

5. scwd² Digital Community Outreach – Scope of Work/Fee Schedule – Civinomics (formerly Greenocracy Inc.)

Public Outreach Coordinator M. Schumacher provided the staff report and responded to task force questions. She reported that the results and a demonstration of the iPad interviews will be presented to the Task Force as soon as they are complete.

Public Comments

Public comments were made by K. Minkowski, K. Cook, S. Pleich, C. Gunderson and R. Searle.

Councilmember D. Terrazas moved that the scwd² Desalination Task Force ratify the scope of work and fee schedule with Civinomics (formerly Greenocracy Inc.) in the amount of \$5,000 for the scwd² Digital Community Outreach project, thereby approving the 50/50 cost split identified in the Memorandum of Agreement. Director D. Kriege seconded.

VOICE VOTE MOTION CARRIED

AYES: B. Jaffe, D. Kriege, D. Lane and D. Terrazas.

NOES: None.

Program Managers' Report

Desalination Program Coordinator Luckenbach reported that the Preliminary Design Report and the Intertie Analysis Report will be presented to the task force at a future meeting.

Media Articles No action was taken on this item.


1. News Article – Santa Cruz Sentinel 02/12/12
2. News Article – Santa Cruz Sentinel 02/15/12
3. News Article – Santa Cruz Sentinel 02/19/12
4. News Article – Santa Cruz Weekly 02/21/12
5. News Article – Santa Cruz Sentinel 02/21/12
6. News Article – KION Channel 46 02/22/12
7. News Article – Santa Cruz Sentinel 02/26/12
8. News Article – Santa Cruz Sentinel 02/26/12
9. News Article – Santa Cruz Sentinel 02/27/12
10. News Article – Good Times SC 02/28/12
11. News Article – Santa Cruz Weekly 02/28/12
12. News Article – Santa Cruz Weekly 02/28/12
13. News Article – Santa Cruz Sentinel 02/28/12
14. News Article – Santa Cruz Sentinel 02/28/12
15. News Article – Santa Cruz Sentinel 03/02/12
16. News Article – Capitola Soquel Times 03/05/12
17. News Article – Santa Cruz Sentinel 03/06/12
18. News Article – Santa Cruz Sentinel 03/07/12
19. News Article – Santa Cruz Sentinel 03/12/12
20. News Article – Santa Cruz Sentinel 03/13/12

Items Initiated by Members for Future Agendas No items were initiated.

Adjournment

The meeting was adjourned at 8:24 p.m. until the next regular meeting of the Desalination Task Force scheduled for Wednesday, April 18, 2012 at 7:00 p.m. in the Santa Cruz Police Department Community Room, 155 Center Street, Santa Cruz, California

Respectfully submitted,



Staff



INFORMATION REPORT

TO: DESALINATION TASK FORCE

FROM: PROGRAM MANAGERS

SUBJECT: AWARD BY AMERICAN ACADEMY OF ENVIRONMENTAL ENGINEERS (AAEE): “COMMUNICATING PERSPECTIVES ON WATER SUPPLY AND DESALINATION ENERGY USE”

DATE: APRIL 18, 2012

BACKGROUND: As **scwd**² was undertaking the technical Energy Study, an outreach and communications plan was specifically developed to present an objective description of the energy and greenhouse gas emissions related to desalination that could be put in perspective with other energy uses within the community. This effort was to help the community better understand the actual amount of energy that would be needed for this project.

DISCUSSION: The communications plan outlined below was recently awarded the Grand Prize for Environmental Communications from the American Academy of Environmental Engineers (AAEE), a national organization dedicated to excellence in the practice of environmental engineering to ensure the public health, safety, and welfare to enable humankind to co-exist in harmony with nature. This Award was designed to recognize environmental communication efforts by various entities including municipal, state and federal governments, consulting firms and industry which have made concerted efforts to convey important environmental messages to their constituencies and other interested parties.

The audience for the outreach and communications plan was a variety of community stakeholders including opponents and supporters of the proposed desalination project, ratepayers, elected officials and members of local business and environmental groups. The energy-specific communications plan lasted from approximately January 2011 through December of 2011 and staff continues to share this information at public events, through the website, and community group presentations.

A robust plan was established that blended traditional outreach methods with new and innovative methods of engaging the public to enhance the community dialogue and increase the general understanding of the energy requirements of the project. The communications plan utilized a series of methods, including handouts, direct-mail pieces, community meetings, web pages, email broadcasts, social media, innovative community interviews using iPads, and development of a white paper on water supply and energy use. The methods that **scwd**² found most effective are further described below.

iPad Interviews: Community members were interviewed using an iPad application that provided a five-minute interactive, educational exchange in which visual graphics were used to provide information and receive feedback in real-time.

Social Media: In an effort to reach a wider demographic, a project page was established on Facebook, and hyperlinks were developed to direct facebook users to the **scwd²** project website to learn more about the project and associated energy and GHG facts.

White Paper: A white paper entitled “Perspectives on Water Supply Energy Use” was designed as a lay person’s document that included both charts and creative graphics to convey relative energy consumptions, as well as a narrative description and calculations. The paper also provided comparative energy requirements of household appliances (i.e. computers and light bulbs) and estimated how much more energy would be required for desalination.

Community Meeting: **scwd²** held an informational meeting focusing solely on energy use and GHGs related to desalination. Meeting materials included:

- A handout explaining how energy requirements and GHGs were calculated and the process under way to reduce the carbon footprint of the project.
- A PowerPoint presentation that provided the community with information about the energy study and the project goals to reduce GHGs.
- Displayboards that used graphics comparing energy use in the community with the energy required for the conceptual desalination plant operation.
- The meeting was videotaped by community television. The video was played repeatedly on local cable and is available on the **scwd²** website.

The **scwd²** Desalination Program, Kennedy/Jenks, technical advisor for **scwd²**, and Data Instincts our public outreach consultant will be recognized at the Awards Luncheon that will be held on April 26, 2012 at the National Press Club in Washington, DC.



DESALINATION TASK FORCE MEMORANDUM

TO: DESALINATION TASK FORCE
FROM: PROGRAM MANAGERS
SUBJECT: OUTSTANDING TASK FORCE WORK ITEMS
DATE: APRIL 18, 2012

RECOMMENDATION: Accept information and direct staff on any of the five work items discussed below, including any specific direction on the timing or sequencing of when any of the items should be brought before the Task Force.

BACKGROUND: In September, 2007, both the Soquel Creek Board of Directors and the City of Santa Cruz City Council approved a “Memorandum of Agreement [MOA] to create a Joint Task Force to Pursue the Feasibility of Construction and Operation of a Seawater Desalination Facility.” Among the provisions and recitals included in the MOA, this agreement states the Purpose, the General Authority, Specific Authority, and Limitations of the Task Force.

In the most general terms, the MOA called for a cooperative agreement to complete the investigative phase of a desalination project, including all required studies, design, environmental review, and permitting in sufficient detail to allow an informed decision on whether each of the two agencies wanted to approve a project to construct a desalination facility. Finally, the Task Force was charged with recommending to each of the governing boards of the two agencies the contractual relationship between the two agencies should a decision be made to proceed with construction of a full-scale plant and what the governance structure should be regarding its ongoing future operation.

DISCUSSION: As the Task Force has discussed in previous meetings, most of the investigative studies that inform the environmental review process are now either complete or very close to being so. At its March 21, 2012 meeting, the Task Force asked staff to return with a summary of the outstanding issues about which the Task Force is expected to direct the remaining work.

Staff has identified at least five remaining work items about which it needs the direction of the Task Force.

1. Amend the MOA to provide better direction regarding certification of the Environmental Impact Report (EIR).
2. Develop a recommendation for ongoing governance should the decision be made to proceed to construction of a desalination facility.
3. Provide direction on the matter of projects and programs associated with the Energy Minimization and Greenhouse Gas Reduction Study.

4. Review the recommendations of the consultant who performed the intertie analysis and provide direction on the intertie facilities given different amounts of deliveries to Soquel Creek Water District (District).
 5. Review and provide direction either to staff or recommendations to the respective governing bodies regarding cost/value of various design considerations.
1. Amending the MOA: As the EIR preparation has proceeded, the Task Force has suggested a specific procedure be developed for the process by which each of the two Lead Agencies might consider the certification of the EIR. Additionally, legal counsel has recommended language regarding the certification process as it is complicated by the co-lead agency status. Staff intends to place this item on the May 16, 2012 Task Force agenda for consideration.
 2. Ongoing Governance: The Task Force is not considered to be the successor agency for the governance of an operating desalination plant. However, the District Board and City Council have charged the Task Force with making a recommendation on how that governance should be accomplished if it is decided to proceed with the construction of a full-scale plant. While the project EIR is currently being written and could be certified in 2013, the City Council has adopted an ordinance that would not provide for a public vote on desalination until at least the spring of 2014. Therefore, the earliest the Task Force should consider this item would be following certification of the EIR.
 3. Energy Offsets/GHG: The Task Force and each of the two agencies have voted to support a desalination plant that is net-carbon-neutral. The Energy Technical Working Group (ETWG) recommended various projects and programs that could achieve that carbon neutrality. These projects and programs generally fall into three categories: 1) those that would directly benefit the District; 2) those that would directly benefit the City and/or City Water Department; 3) those that would benefit some other entity, e.g. the City Wastewater Plant, but could provide GHG credits to both the City and the District if we chose to share in such projects.

The Task Force indicated an interest in further discussing the ETWG projects prior to either agency beginning to implement any of them. The stated intent of the discussion is to consider whether both agencies should have equal access to the benefits that any of them provides, i.e. if the District decides to install solar on its administrative offices, should both the City and the District be allowed to buy into the GHG credits that project might offer.

Another discussion that staff is recommending the Task Force engage in is the fact that it remains unknown at this time whether permitting agencies, e.g. California Coastal Commission, will recognize GHG credits sometime in the future that were constructed even before a Final EIR or project approval. While we will not have an answer to that question likely until we actually file an application for a permit, it would be helpful if the Task Force at least discussed the risk involved in moving forward with such GHG credits now.

4. Intertie Analysis and Cost Implications: With the completion of the system modeling that shows required infrastructure to deliver 2.5 million gallons per day of desalinated water from the City system to the District, staff recommends the Task Force consider the matter of whether or not delivery of that amount of water under all conditions is still desirable.

5. Design Considerations: As we continue to move further with the design of the Seawater Reverse Osmosis treatment plant, we will likely uncover design features that tend to provide more or less benefit to one agency or the other, or are required by one agency more than the other. One example of this might be treatment components that will allow the plant to handle a red tide event that was originally stated as required for 100% production reliability. Or the inclusion of meeting space, lay out to accommodate public tours, architectural features, LEED certification, etc. More detailed engineering will reveal the design features that one or the other agency considers necessary or important and the costs associated with these features. There is currently no process by which we would resolve any such differences.

FISCAL IMPACT: At this time it is difficult, if not impossible to state fiscal impact, though certainly items 3, 4 and 5 will have fiscal implications.



DESALINATION TASK FORCE MEMORANDUM

TO: DESALINATION TASK FORCE

FROM: PROGRAM MANAGERS

SUBJECT: PUBLIC OUTREACH UPDATE FOR DESALINATION PROGRAM

DATE: APRIL 18, 2012

RECOMENDATION: That the **scwd**² Desalination Task Force receive quarterly information updating public outreach efforts.

BACKGROUND: This information report serves as the third quarterly status report on the Public Outreach Program requested by the Task Force in July 2011. Information provided below includes a summary of the outreach and education activities from January-March 2012, a summary of the evolution of the outreach efforts over the last five years, and the proposed goals of the outreach plan for 2012-2014.

DISCUSSION: Effective communication and transparency continues to be a driving force for the outreach efforts related to the **scwd**² Desalination Program.

Summary of January - March 2012 Activities and Metrics of Outreach Efforts

Primary methods used for communicating with the public included continuance of our monthly email updates, maintaining our project website, participating in local community events, and one-on-one interviews. Information and statistics on these key components include:

- Monthly email updates
 - Email Updates were sent out on January 4th, February 1st, and March 7th. The distribution list now is approximately 960 email addresses of which over 150 new people have been added after taking the iPad interview.
- Project Website Statistics
 - Approximately 1,300 unique viewers visited the project website between January-March.
 - Access to the project website was primarily through direct links from the monthly email update, bookmarks/favorites, and simply entering in the scwd2desal.org to a web browser (~85%); through the use of an internet search engine (~12%); or through external referenced links such as Facebook, the City/District website, the Sentinel, etc. (~3%).
 - Approximately half who visit the project website last quarter added it to their favorites; e.g., in March, 908 out of the 1,589 visitors added the website to their “favorites” bookmark bar.

- Presentations were given to several groups/organizations.
 - January 26, 2012: SC County Farm Bureau Retreat- approximately 20 people
 - February 1, 2012: U.S. Green Building Council- Northern California Chapter (Monterey Bay)- approximately 40 people.
 - February 22, 2012: Santa Cruz Neighbors Meeting – approximately 60 people.
 - February 28, 2012: AWWA/AMTA Membrane Technology Conference– approximately 75 people.
 - March 26, 2012: WateReuse Conference, California Chapter- approximately 50 people.
 - March 28-29, 2012: WateReuse Research Project Participation: Approximately 65 people from water agencies and resource agencies around the world discussed the various issues surrounding seawater desalination.

- Tabling at Community Events
 - February 23rd: Capitola-Soquel Chamber of Commerce’s Business Showcase at Capitola Mall.
 - March 14th: Santa Cruz Business Showcase at Coconut Grove.

- One-on-one interviews
 - Completed pilot project using iPad application that included ~1,500+ interviews to gauge project knowledge and awareness, and to educate the community about why desalination is currently being evaluated. A separate item for the April 2012 Task Force meeting will discuss this further.

Upcoming Public Outreach Efforts

- **scwd²** will be hosting an information booth at Cabrillo College on April 19, 2012. The event will be from 11AM-2PM.
- **scwd²** will be hosting an information booth at Earth Day Santa Cruz on April 21, 2012. The event will be from 11AM-5PM at San Lorenzo Park Highlands. A fact sheet providing an overview of the proposed project will be distributed.
- Planning efforts will begin on the layout and content of the Community Guide that will accompany the release of the draft EIR.

Over the last five years

The communications plan has evolved to compliment and meet communication needs of the various stages of the **scwd²** Desalination Program. In early 2007-2009, the primary focus was on the technical aspects of the water treatment process and the seawater reverse osmosis (SWRO) pilot plant project conducted at UCSC’s Long Marine Lab. In 2009 and 2010, a broader effort with informational community meetings was a priority to educate the community on local water issues related to water supply planning, conservation, recycled water opportunities and limitations, and environmental issues with desalination. Last year, we prioritized addressing misinformation about the proposed project and sharing information about the current energy and greenhouse gas study being conducted. The next phase of the project evaluation involves: release of the draft environmental impact report (dEIR), receiving public comment on the dEIR, the possibility of a ballot measure this November, and the City’s Ordinance for a 2014 vote. The

following goals have been identified for maintaining and achieving a successful public outreach and education effort during the next two years.

Proposed Goals for the scwd² Outreach and Education Plan for 2012-2014:

- To educate the community about the purpose, needs, challenges, opportunities and objectives of the proposed scwd² Regional Desalination Project.
- To enhance public trust and confidence in the City of Santa Cruz and Soquel Creek Water District as being fiscally responsible with ratepayer funds and as competent administrators of their respective water systems with a focus on environmental stewardship.
- To provide factual, clear and up-to-date information to a broad range of audiences to increase public awareness and knowledge of the scwd² Regional Desalination Project and other water related issues facing the City of Santa Cruz and Soquel Creek Water District such as the City's Habitat Conservation Plan, overdraft of the groundwater basin, seawater intrusion, and conservation.
- To describe the total value from a sustainability perspective that the Project would provide contrasted to alternatives, including a no supply project alternative.
- To assure the community that the project is a necessary part of the City of Santa Cruz's strategy and capability to respond to new NOAA regulations with regards to surface water requirements to protect threatened and endangered species.
- To inform the community that the project is part of Soquel Creek Water District's objectives and goals to protect the overdrafted groundwater basin by (1) reducing pumping for at least 20 years to allow for natural recovery/restoration to occur and (2) to meet future water demands after basin recovery and groundwater withdrawals are increased to safe-yield extractions.
- To assure the community that the environmental impacts associated with the proposed project are being thoroughly and transparently evaluated and the draft environmental impact report will be released 2012 for their review and comment.
- To communicate information about project costs, funding and rate impacts as it is available.
- To clearly communicate to the public about the City's Ordinance to hold an election in 2014 and how that differs from the currently proposed ballot initiative.

FISCAL IMPACT: There is no fiscal impact associated with this item.



DESALINATION TASK FORCE MEMORANDUM

TO: DESALINATION TASK FORCE

FROM: PROGRAM MANAGERS

SUBJECT: SCWD² DIGITAL COMMUNITY OUTREACH- PRESENTATION OF iPad TOOL

DATE: APRIL 18, 2012

RECOMENDATION: That the scwd² Desalination Task Force receive information and a presentation by Civinomics and staff on the outreach pilot program utilizing an iPad tool to advance the public outreach effort.

BACKGROUND: At its March 21, 2012 meeting, the Task Force received some preliminary information on the work conducted by Civinomics, a local company that has developed a one-on-one interactive application utilizing an Apple iPad Tablet. Civinomics approached staff from the Soquel Creek Water District in the hopes that they could use the scwd² Desalination Program to pilot test its application with a real project. They were retained in August 2011 to assist us with our education and outreach efforts. Civinomics has recently completed this pilot work, having conducted 1,500 interviews throughout areas served by the City of Santa Cruz and the District. The Task Force was informed that more information would be provided to them with respect to the iPad tool including the slides and questions developed a summary of information gathered, and feedback received once the pilot test was complete.

DISCUSSION: The interviews were conducted from September 2011– early April 2012. These interviews featured a five minute presentation aimed to: (1) provide information about both agencies related to the water supply shortage needs and desalination as a proposed solution and (2) gather input from citizen interviewees to better understand their perceptions related to conservation, desalination, and other local water related issues. scwd² staff collaborated with Civinomics during the development of the iPad presentation and intend to use the gathered information to help gauge the effectiveness of current outreach and education efforts and guide future efforts.

Manu Kroenig and Robert Singleton from Civinomics will present the iPad application and provide a summary of the information gathered from the one-on-one interviews, and staff will elaborate on how these findings have benefited the scwd² outreach and education efforts.

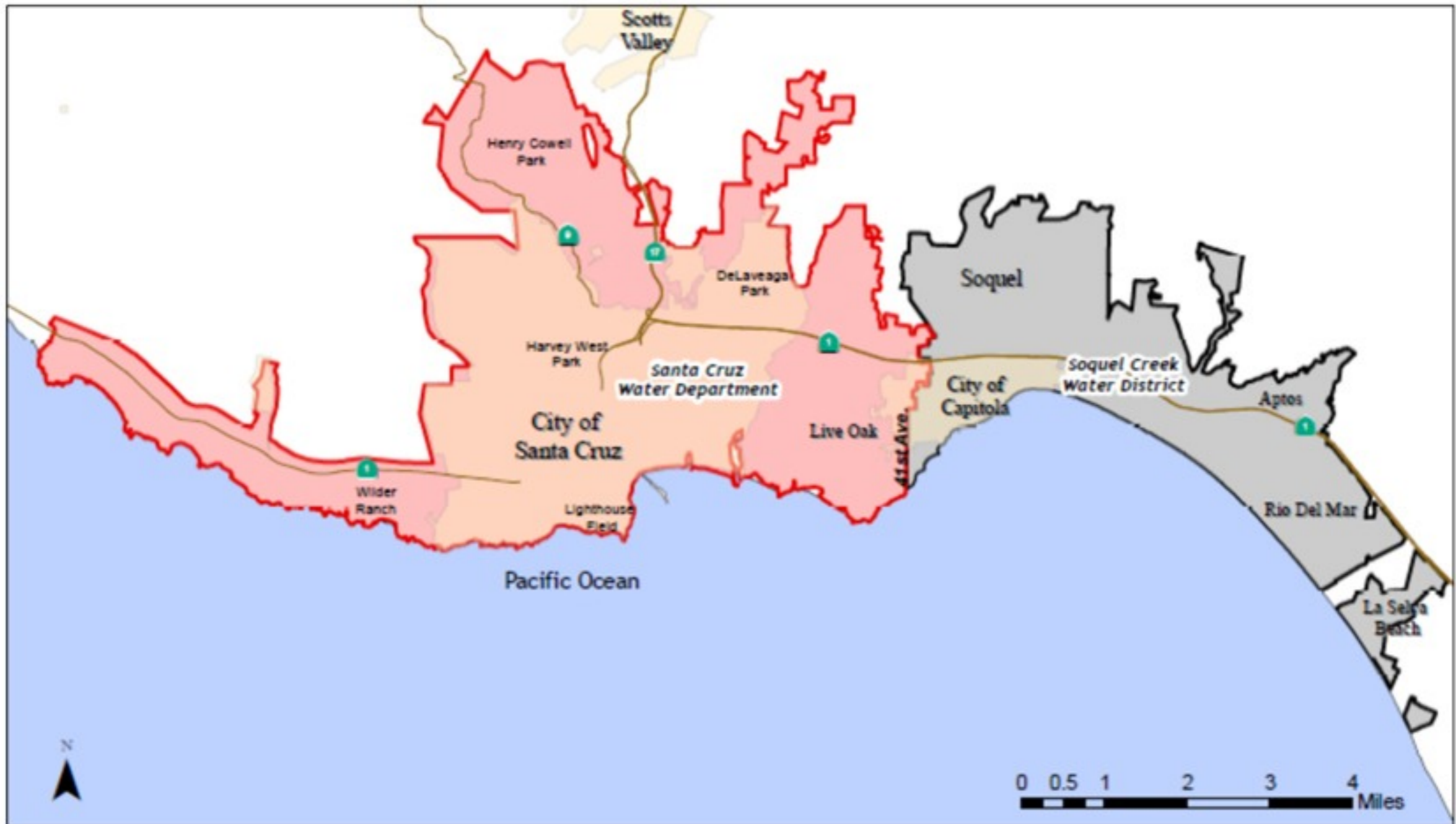
FISCAL IMPACT: There is no fiscal impact associated with this item.

Attachment: iPad Slides

Santa Cruz and Soquel Water Planning



Do you live in the service area?



I get my water from a private well.

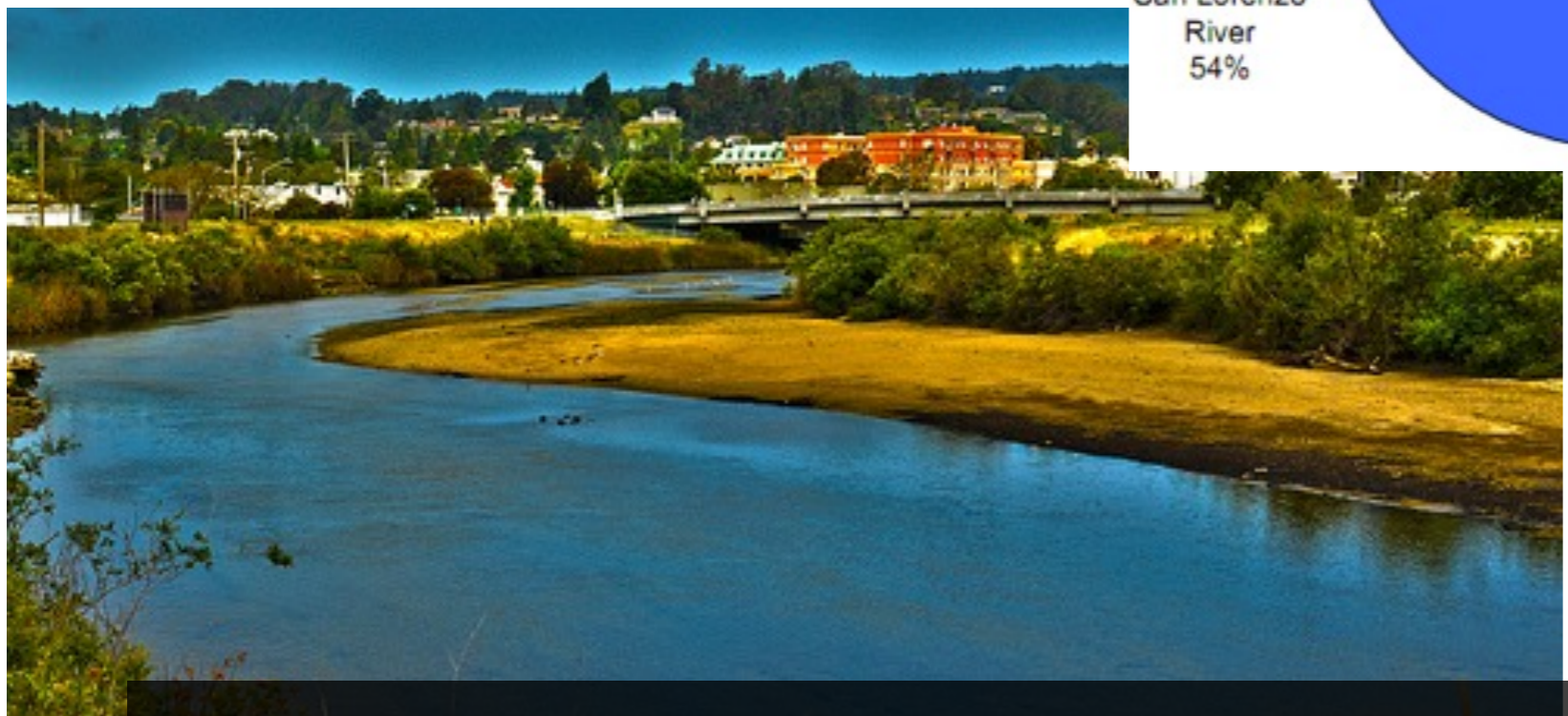
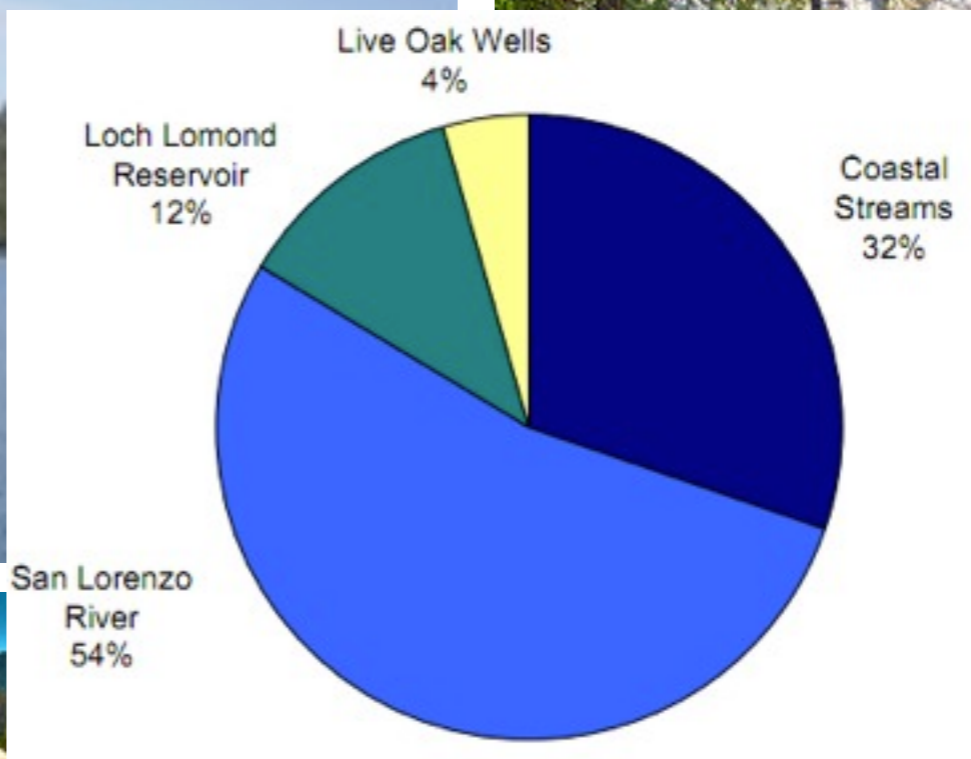
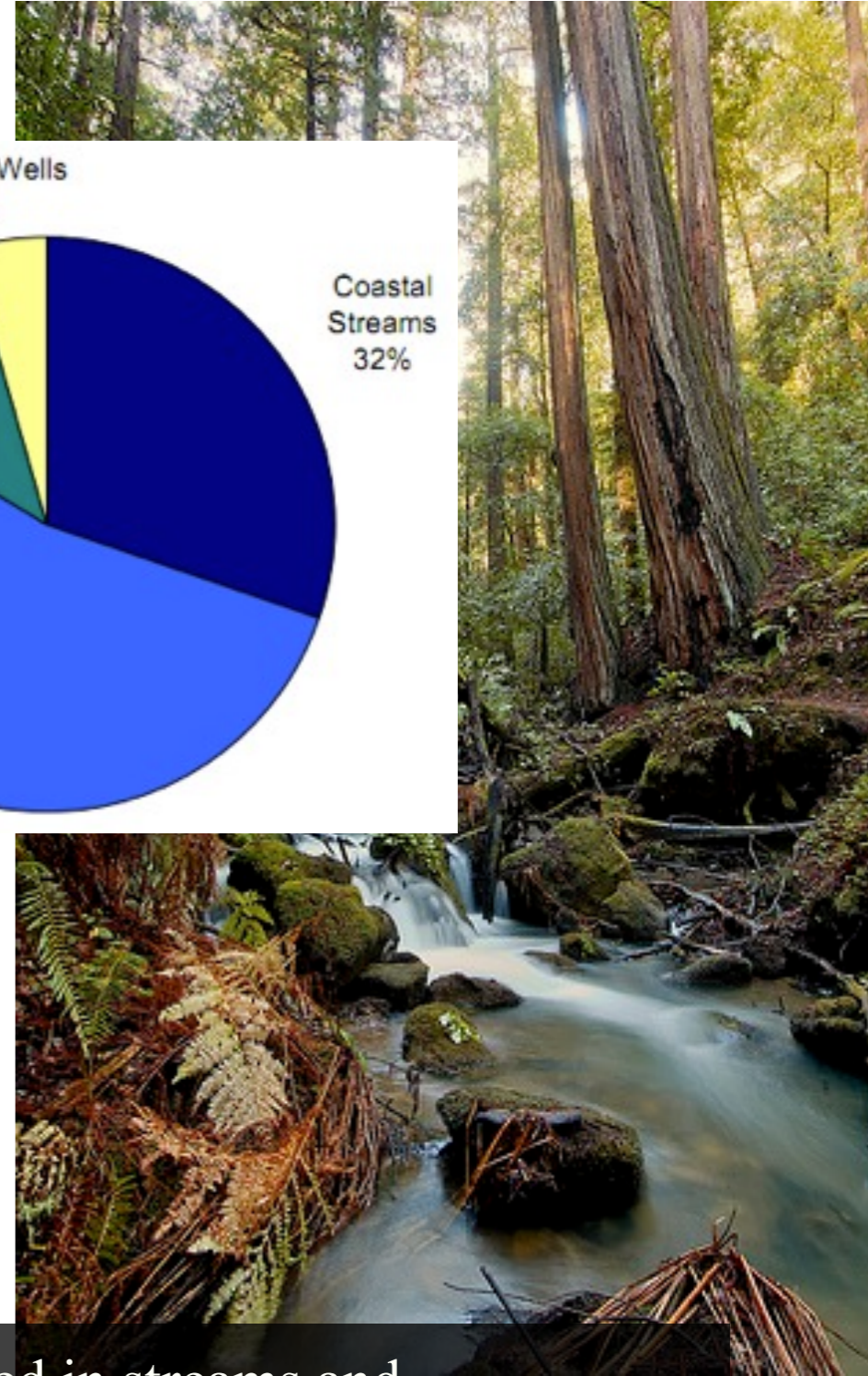
How much do you know about your water supply?

Nothing

Some

A lot

Submit



95% of Santa Cruz's water comes from rainwater captured in streams and reservoirs. The remaining 5% comes from a small groundwater system in the Live Oak Area.

Ground Wells
100%

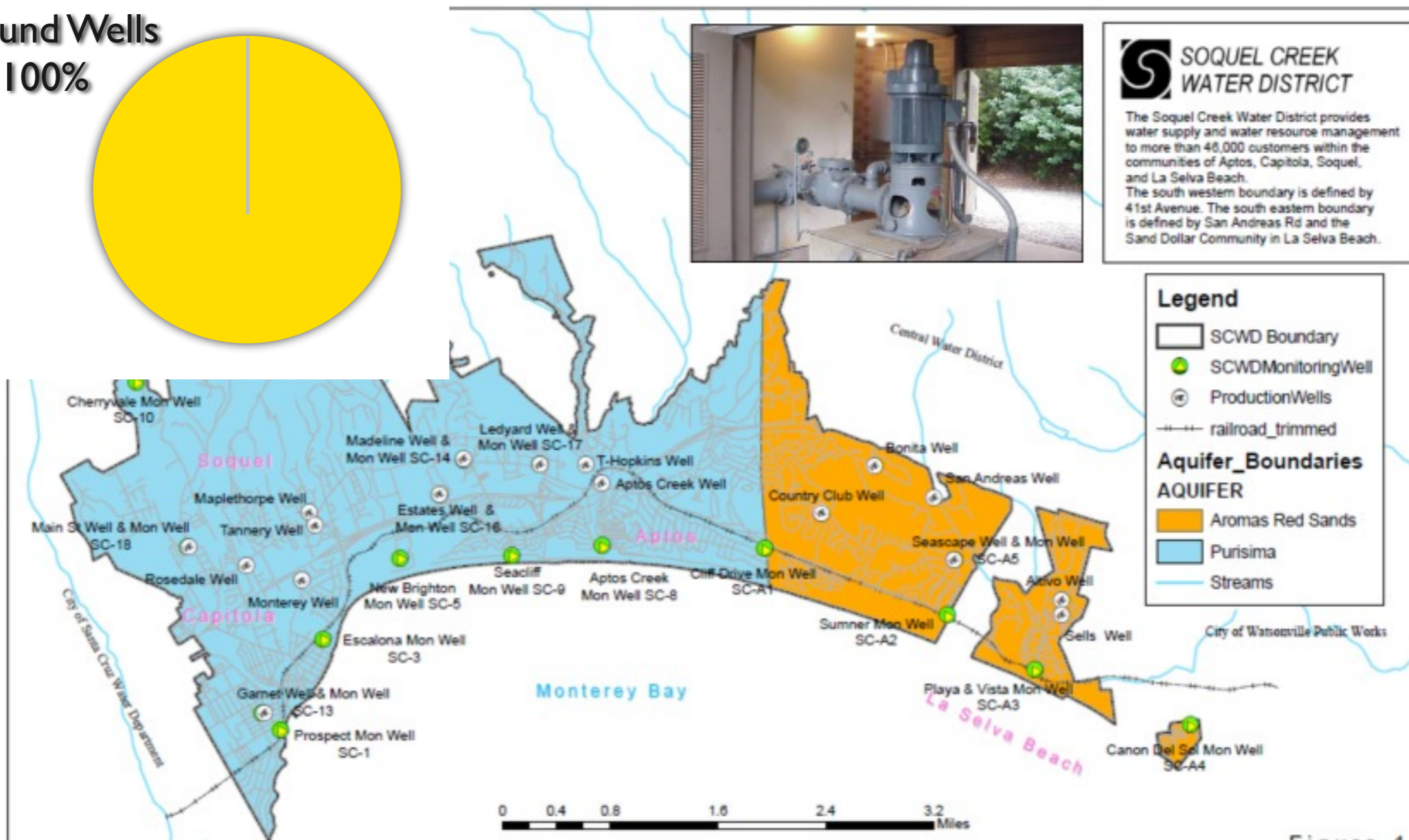
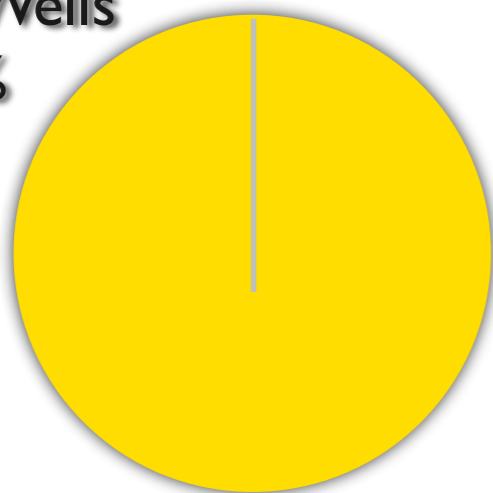


FIGURE 4

Soquel Creek Water District gets 100% of its water from ground wells located throughout the service area.

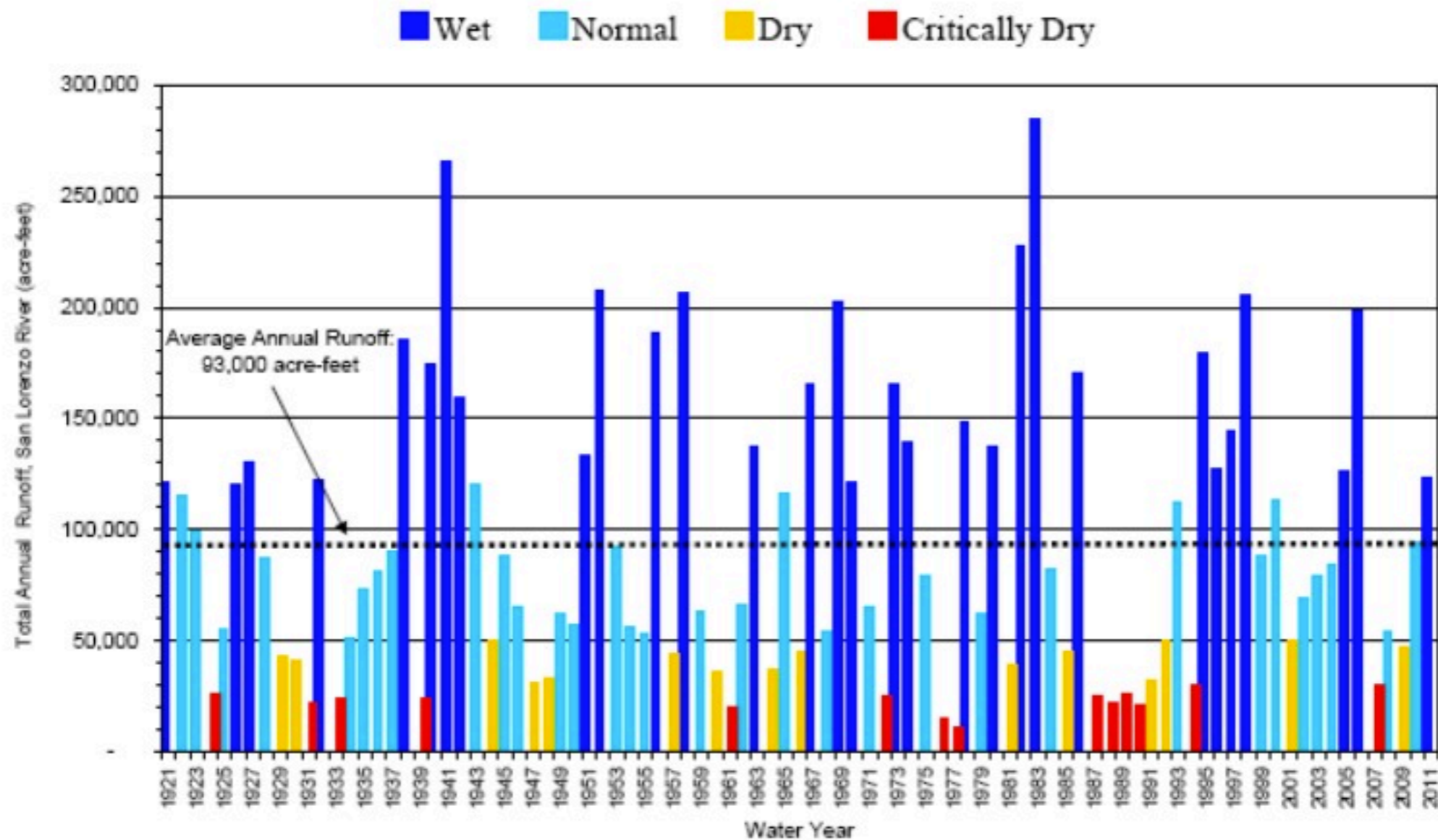
Are you aware of the water shortage issues facing Santa Cruz and Soquel Creek Water District?

Yes

No

Submit

Figure 5-1. Total Annual Stream Discharge from the San Lorenzo River (ac-ft)



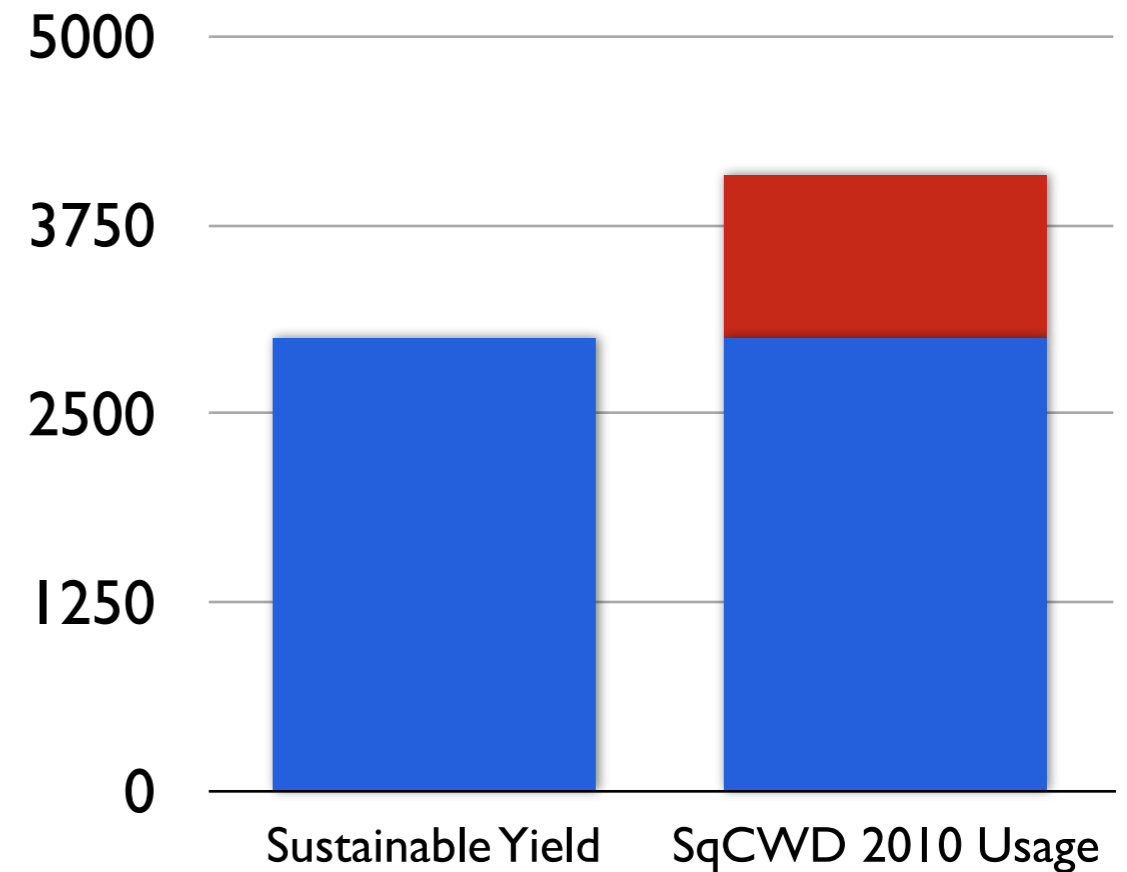
Santa Cruz’s water supply is not enough to protect it against severe drought such as the one experienced in 1976-77. Rationing and mandatory curtailment could be as steep as 40%.



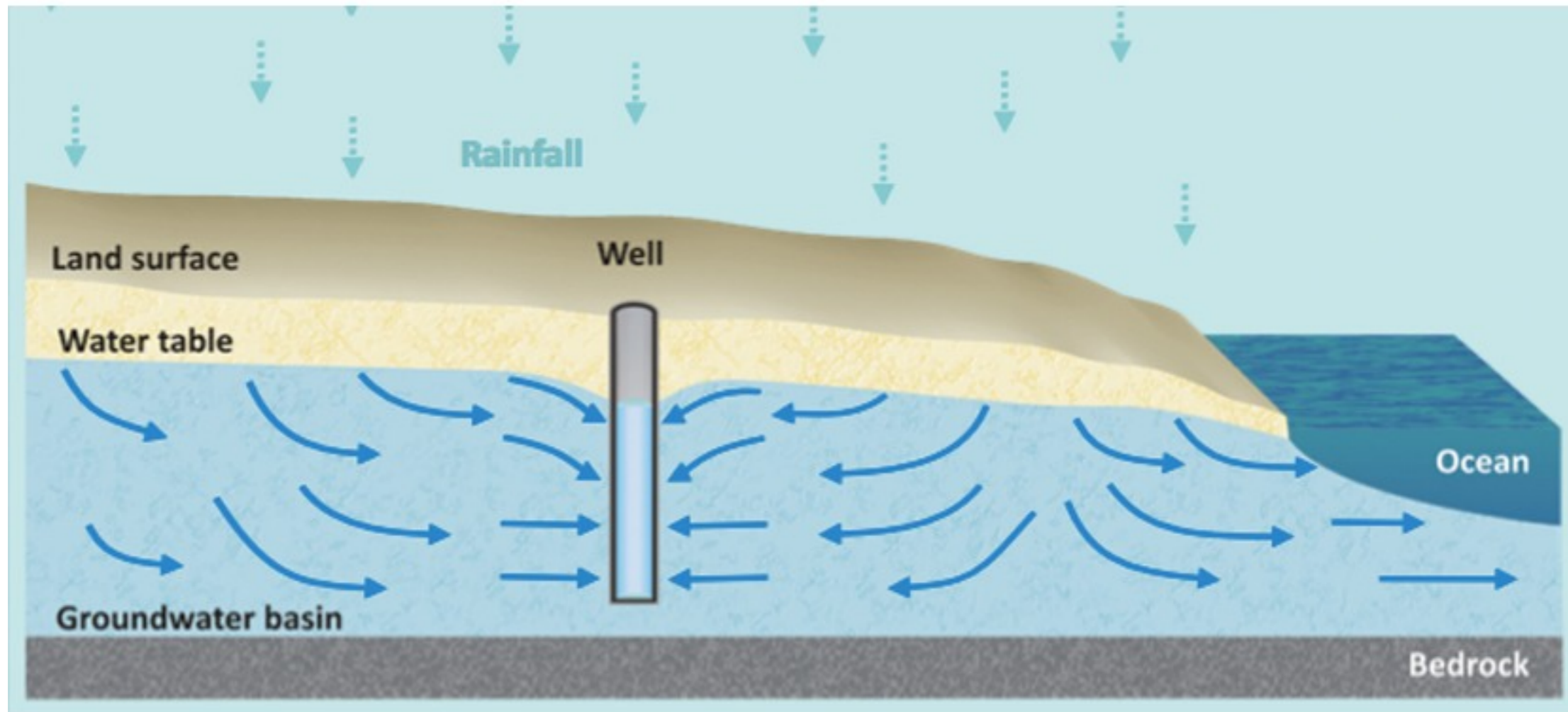
Santa Cruz must reduce intake from streams and rivers to preserve COHO Salmon and Steelhead Trout habitat. The federal government may heavily fine the city if it doesn't comply.



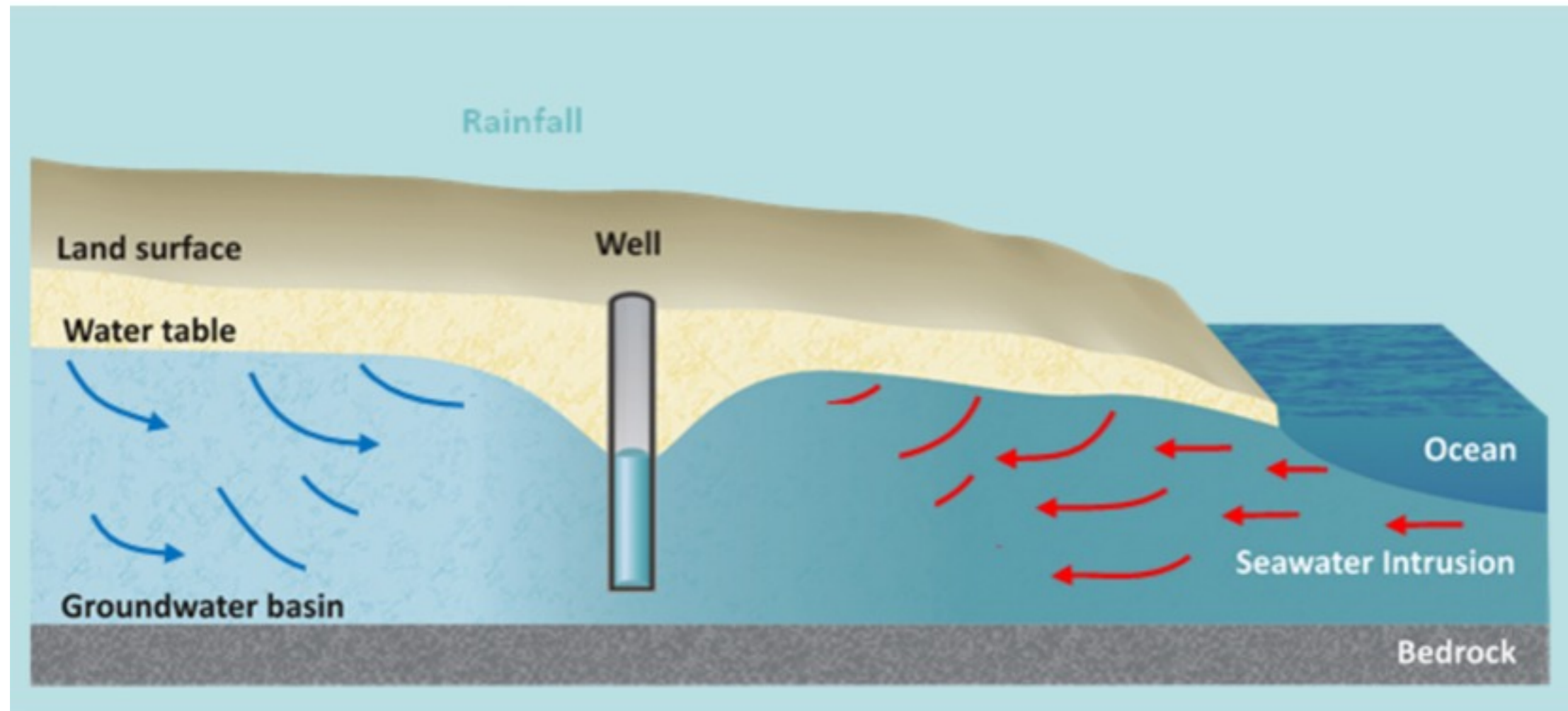
Soquel Creek Water District Current Overdraft (afy)



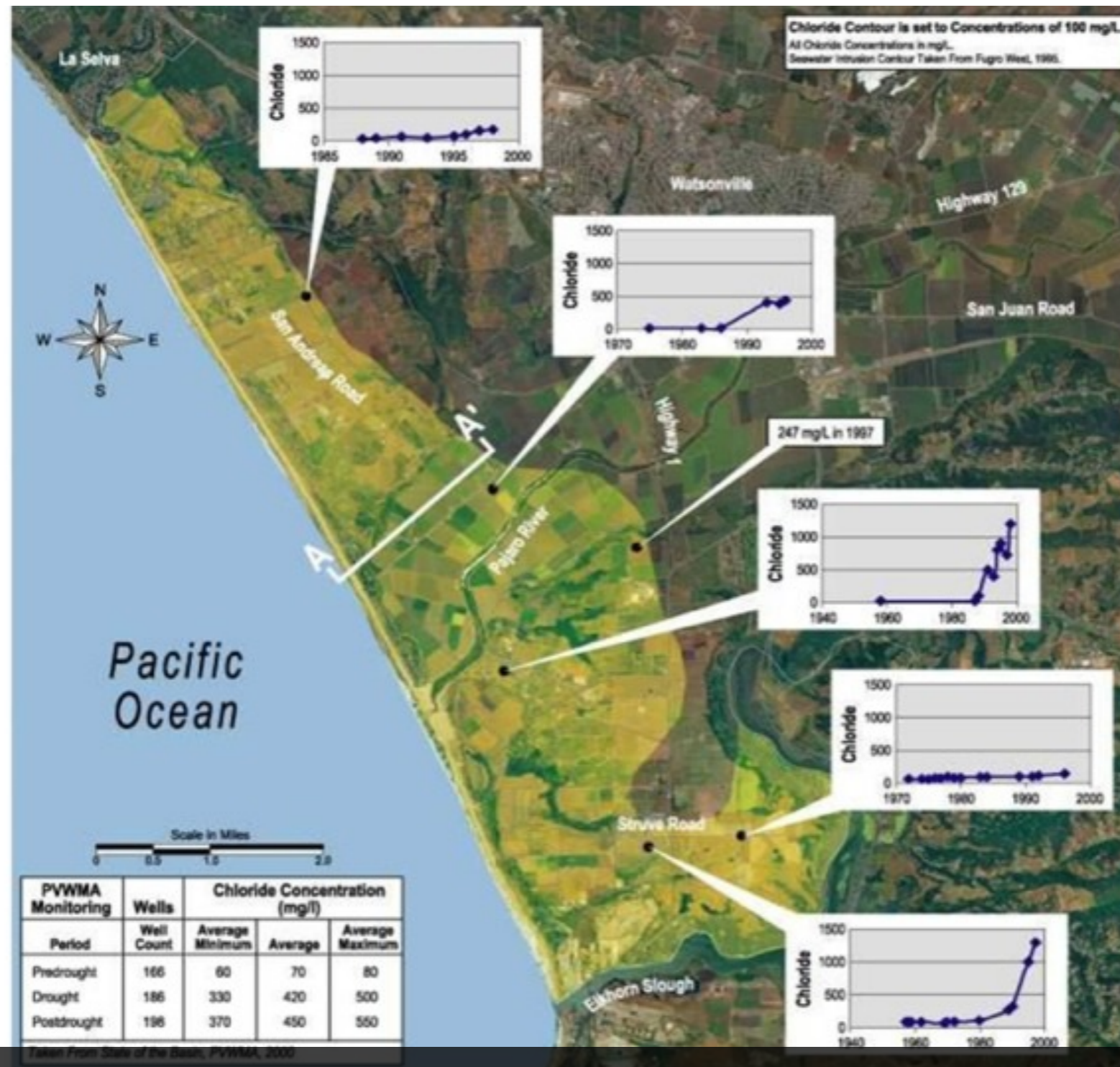
The Soquel-Aptos Region is currently overdrafting its groundwater basin, which can ultimately lead to seawater intrusion



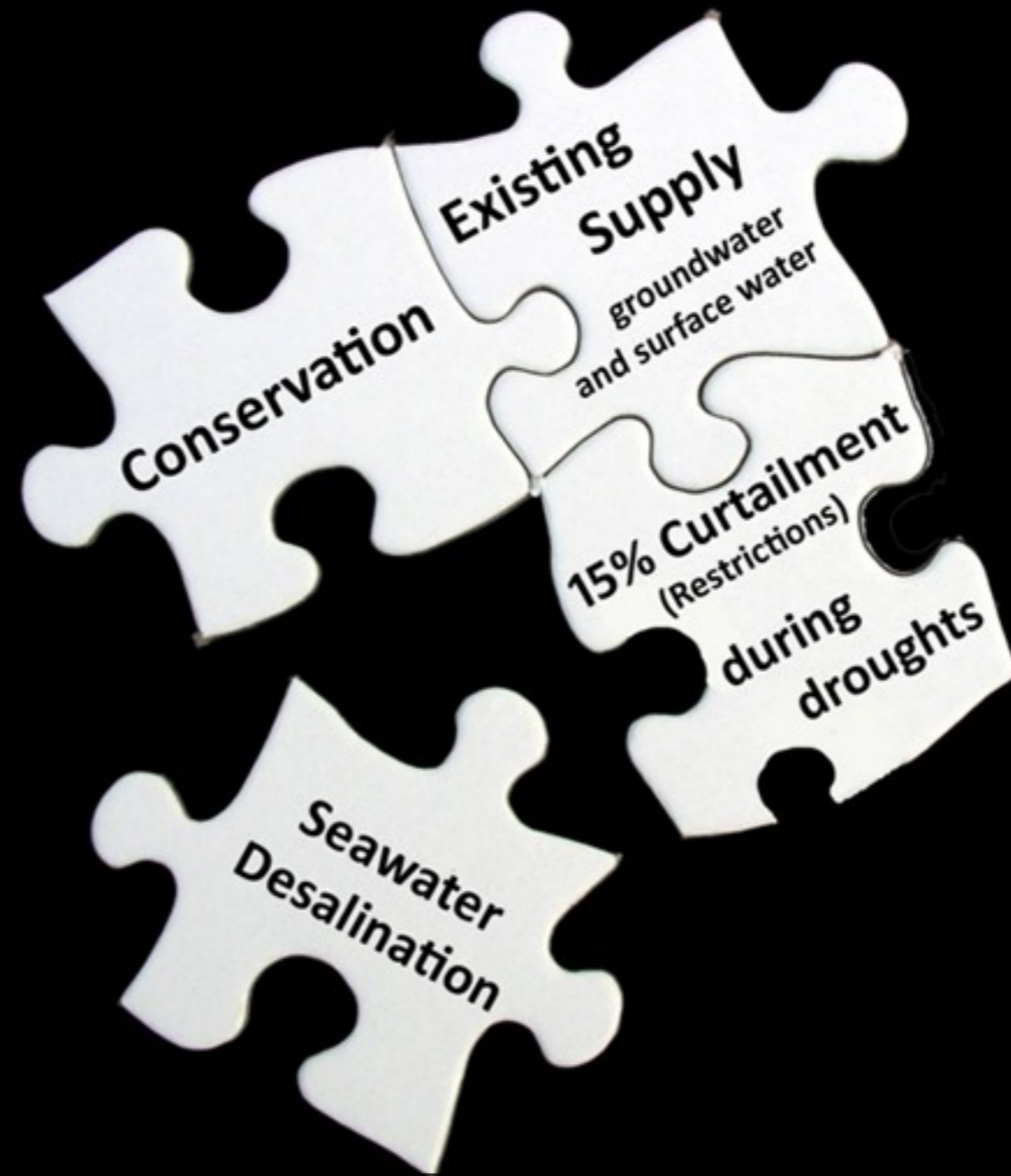
Under normal conditions rainfall percolates into the ground and also flows out to the ocean.



In an overdrafted condition, more water is extracted than can be naturally recharged by rainfall - this condition pulls ocean water inward and can ultimately lead to saltwater intrusion.



A number of wells all along the Coast of California have already shown significant increases in salinity, rendering them unusable.



Both agencies are pursuing a multi-faceted integrated water plan consisting of conservation, rationing, and potential seawater desalination that could augment supplies to meet the demands of customers.

How much water do you think you conserve?

nothing

some

a lot

Submit

Water Use Comparisons (residential, gallons per person per day)



California
(Average, 2005)

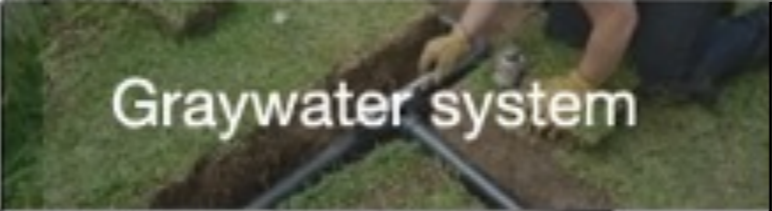
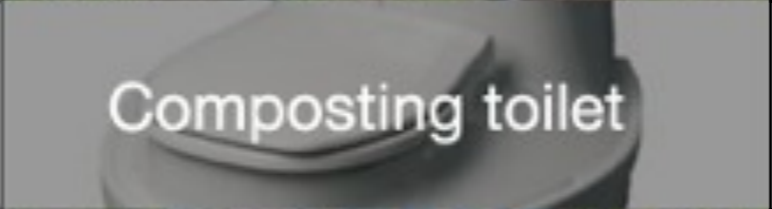
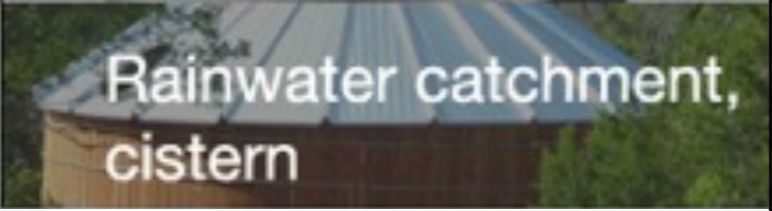
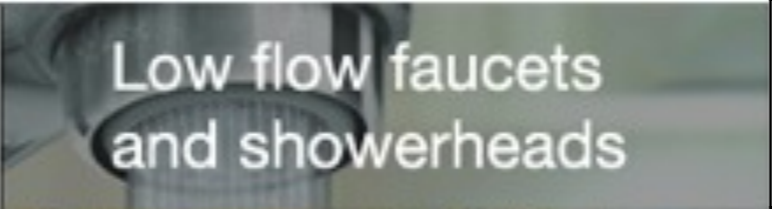
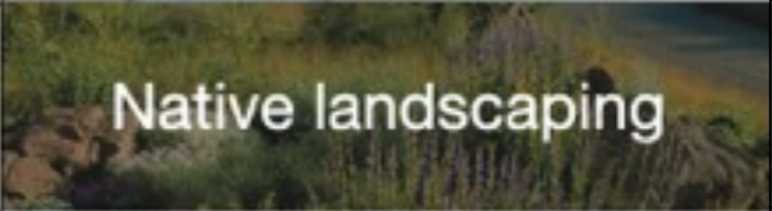
50 %
DIFFERENCE



Santa Cruz (2010)

Santa Cruz uses half as much water as other cities in California.

“I could do this
in my home”

<input checked="" type="checkbox"/>	 <p>Graywater system</p>	<input type="checkbox"/>
<input type="checkbox"/>	 <p>Composting toilet</p>	<input type="checkbox"/>
<input type="checkbox"/>	 <p>Rainwater catchment, cistern</p>	<input type="checkbox"/>
<input type="checkbox"/>	 <p>Low flow faucets and showerheads</p>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	 <p>Native landscaping</p>	<input type="checkbox"/>
<input type="checkbox"/>	<p>None of the above</p>	<input type="checkbox"/>

“I do this already”

Submit

Would you like a free water survey?

Water experts can measure your home's efficiency, provide free installations, and share landscaping tips.



Yes

No

Submit



WATER ALERT
Reduce Water Use
by **15%**
May - October
See water waste?
SCOGUE CREEK WATER DISTRICT **475-8500**



15% rationing during droughts is currently part of both agencies contingency planning. Without a supplemental supply, rationing could be as steep as **40%**.

Did you know that the City of Santa Cruz and Soquel Creek Water District are evaluating desalination as a potential supply?

Yes

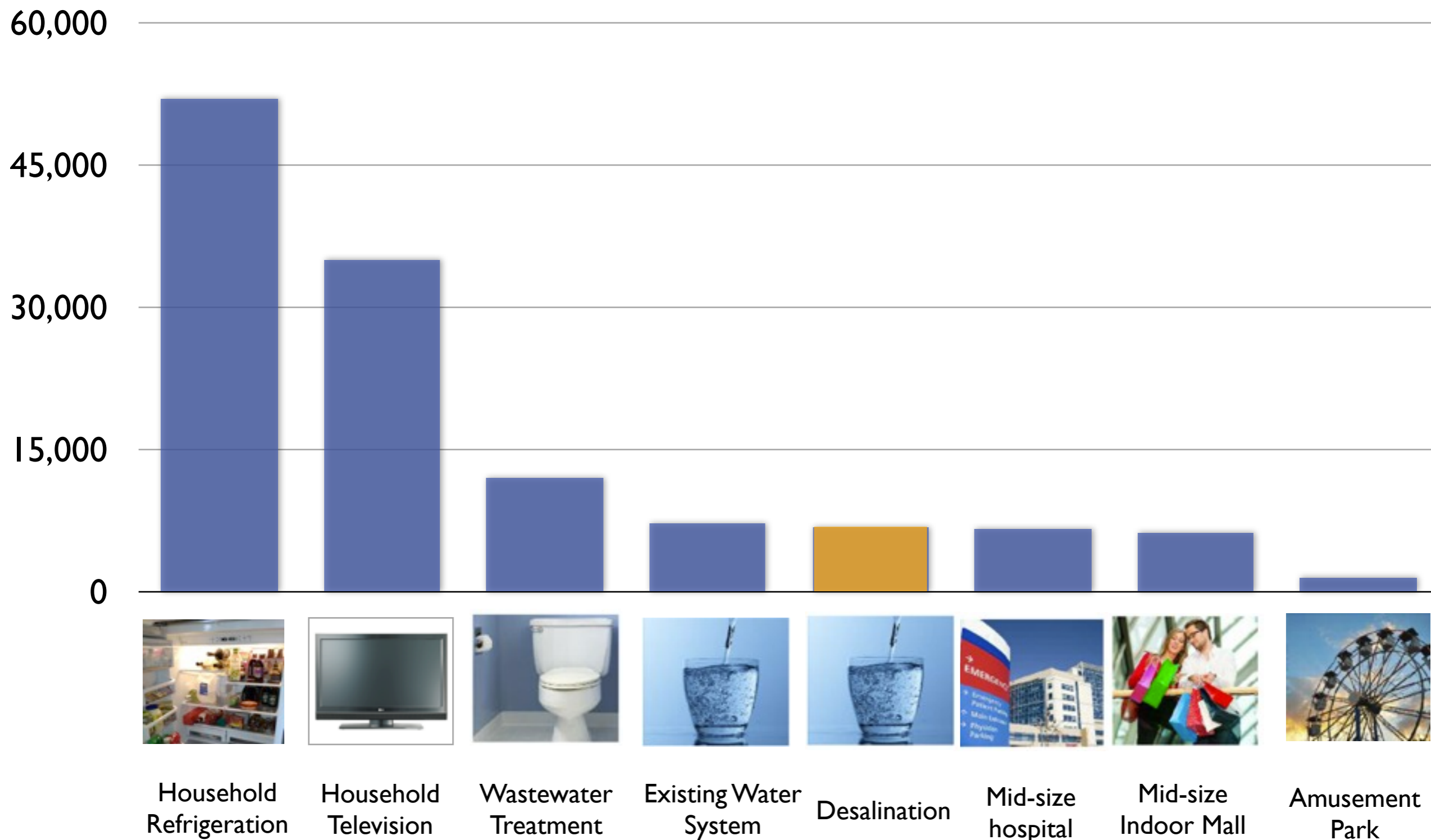
No

Submit



The proposed small-scale desalination plant would resemble this facility from Pleasanton CA (top) not the large-scale facility from the Arab Emirates (below).

Avg annual energy use (MWhr/ yr)





Current studies show that the impact on marine life would be minimal thanks to technology for taking in seawater and releasing brine.

Should we continue to study the environmental impact of desalination to meet our future water needs?

strongly disagree

strongly agree

Submit

SANTA CRUZ AND SOQUEL WATER PLANNING



AT-A-GLANCE

Government Sphere:



Goals:

Ensure a sustainable water supply for Santa Cruz and Soquel Creek Water District. Stabilize the regions groundwater basin, implement improved conservation, and plan for the future.

Time Remaining: **98 days 7:34.19**

Solution Fund: **\$106,189.05**

\$

Contribute

Participants: 5,832



Invite

- Issue Home
- Background
- Discussion**
- Leaderboard

NEWS

add photo, article or video **+**

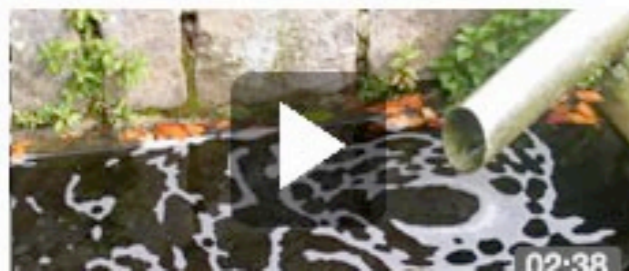
Water transfers not feasible



City water director Bill Kocher explained to the council on Tuesday why water... more

posted by [Jamie Treadwell](#) 18 minutes ago

VIDEO: Installing a home rainwater cistern



SUGGESTIONS

add a suggestion **+**

More conservation rebates

Author: Robert Singleton

We should all be conserving way more than we do. Lets make it much easier for everyone to accomplish this by improving our system of conservation rebates and having neighborhood work crews that will help each other get it done.

Rate this suggestion ★★★★★☆

Posted on August 18, 2011 | 9 comments | [Leave a comment](#)

Build a recycled water plant

Author: Manu Koenig 42

The city and climate action program can talk all they want about

SPONSORS



STANDINGS

people

- 1. [Manu Koenig](#) 893 m
- 2. [Robert Singleton](#) 755 m
- 3. [Edolfo Garza Licudine](#) 444 m
- 4. [Monty Suwannukul](#) 218 m

suggestions

- 1. [Cistern Mandates](#)

SANTA CRUZ AND SOQUEL WATER PLANNING

AT-A-GLANCE

Government Sphere:



... supply for Santa
... Water District. Stabilize
... basin, implement
... d plan for the future.

98 days 7:34.19

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Contribute



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suggestions

- 1. [Cistern Mandates](#)

ADD A SUGGESTION

close X

Title:

Description:

Submit



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NEWS

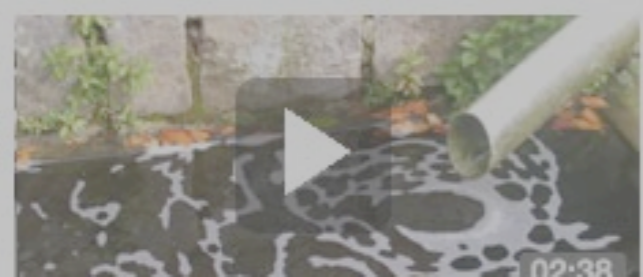
Water transf



City wa
explained to the council on
Tuesday why water... more

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Posted on August 18, 2011 | 9 comments | [Leave a comment](#)

Build a recycled water plant

Author: [Manu Koenig](#) 43

The city and climate action program can talk all they want about

ADD A SUGGESTION

close X

Title:

Description:

Submit

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.?123

space

return

send me updates from the water
department

send me an invite to greenocracy.org

Susan Sample

94115

susan@gmail.com



send me updates from the water department



send me an invite to greenocracy.org

Submit

THANK YOU!

Desalination task force reviews \$2 million in spending for coming year; critics take issue with iPad interview

By J.M. BROWN - Santa Cruz Sentinel

Posted: 03/21/2012 09:13:23 PM PDT

SOQUEL - A task force overseeing preparations for a proposed desalination plant reviewed nearly \$2 million in anticipated expenses for the next 15 months as design work and environmental analysis on the controversial facility continues.

The four-member task force did not need to grant approval for the \$1.9 million in spending expected in the 2012-2013 fiscal year because the funds have already been authorized through existing contracts covering the environmental study, design, water delivery system and permitting.

In the past, opponents of the plant have urged the city of Santa Cruz and its desal partner, Soquel Creek Water District, to pull back on some spending when the two agencies and regulators haven't yet approved building the plant. However, none spoke against the ongoing spending plan Wednesday.

The greatest majority of spending for the coming year will be for the highly anticipated, state-required environmental impact report, the findings of which will explain the effects on the ocean, local waterways and energy use. The contract with URS Corp. of America, which is due this summer, is \$1.7 million, \$650,000 of which has been spent so far.

The report will identify a number of offsets designed to make the plant carbon neutral. The task force reviewed those projects Wednesday, including efficiency improvements on the Soquel Creek Water District's pumps and the city's waste water treatment plant, as well as solar water heater and high-efficiency washing machine incentives.

The groups will decide later how the two agencies will split up projects, which may include some outside the area.

"As the community and the state are trying to meet (the state mandate of greenhouse gas reductions), there are a lot of projects coming available," said Heidi Luckenbach, desalination program coordinator.

An anti-desalination group is gathering signatures to place a measure on November's ballot that would change the city's charter to require a future vote on the plant, which is estimated to cost \$115 million. The city has also passed an ordinance requiring such a vote.

Also Wednesday, desal critics took issue with recent interviews conducted with ratepayers door-to-door and at community events, saying the questions about conservation and water supply lead people to believe desal is the only solution. The iPad-based survey ends with a puzzle in which the missing piece is labeled "seawater desalination."

"The image shows this is the only thing that fits," said Karen Minkowski of Santa Cruz. "That's why it's not education, it's propaganda."

"We have an obligation for education of this project," said Soquel Creek Water District board member Dan Kriege, who was named chairman of the task force Wednesday. "We recognize there is a fine line between education and propaganda, and I think we recognized that."

Results of the interviews conducted with 1,600 people will be released in April or May.

Capitola Soquel Times: March 2012

Published on Friday, 23 March 2012 22:12

Written by Noel Smith

Water Wars — Part 2

The Economics of Desalination for Santa Cruz County



In part one of Water Wars —The ‘Why’ of Desalination for Santa Cruz County — a summary of the reasons for considering desalination in order to provide a sustainable and reliable water supply for our area — even under drought conditions — was presented. (find it at www.tpgonlinedaily.com/index.php/82-news/our-town/112-capitola-soquel-times-march-2012)

However, it isn’t enough to just find rational justification for a public project; two other hurdles must be cleared, cost and the effect on the environment. Cost of the scwd2 desalination project includes both the cost to build, and the cost to operate.

Cost of Construction

As the proposed start of the actual construction of the project is eight to ten years in the future, final figures have to wait until the go ahead is given and construction bids are received. Here are the current estimates:

\$2M: Permits (city, county, state and federal)

\$60M: Cost of the 2.5 million gallon-per-day seawater desalination plant

\$22M Cost of the seawater intake

\$12M: Cost of Infrastructure (Includes the connecting pipeline between the Santa Cruz Water Department and the Soquel Creek Water District – The seawater pipeline from ocean intake to desal plant – Desal plant’s brine disposal pipeline to the municipal wastewater treatment plant)

\$4M: (Rough estimate) Other costs include property acquisition, staff/project management, environmental support, legal support, etc.)

Estimated Total = \$100 Million.

Because this is the first major municipal desalination project on the West Coast in 20 years, the total cost may rise by another 20 to 30 percent due to regulatory requirements at all levels of government.

A current estimate used by scwd2 for planning purposes of the total project cost is approximately \$115 million.

Paying for Construction

The \$115M cost of the project's construction will be shared between the Santa Cruz Water Department, which will be responsible for 59 percent (\$68M) and the Soquel Creek Water District responsible for 41 percent (\$47M).

Both the Santa Cruz Water Department and the Soquel Creek are looking at financial mechanisms and models to independently fund their portion of the desal project.

According to Piret Harmon, Administration and Finance Manager, Santa Cruz Water Department, the department has two capital project/contingency funds. One of approximately \$30M collected from its rate fees and \$7M collected from its connection fees. A portion of both funds would be available for building the desalination project. Harmon estimates that the two funds could provide the Santa Cruz Water Department's portion of the construction costs.

Soquel Creek Water District has similar contingency (\$14.9M) and capital improvement (\$12.4M) funds, portions of which would be available to help fund construction.

There may also be government grants available at the time of construction to help pay for the project. However, this will probably depend on the state of the economy at that time.

General Manager of the Soquel Creek Water District, Laura Brown, said that part of the funding of the project for the Soquel Creek Water District could be either through the selling of revenue bonds, or through low-cost State Revolving Fund (SRF) loans both of which will be paid back through the revenues collected from rate payers.

Cost of Operation

The cost of operating the desalination plant, according to Harmon, is estimated at \$3M per year, which will be allocated depending on which entity is using the water. The Soquel Creek Water District will be paying for the plant's operation during the wet winter months while the Santa Cruz Water Department will be covering the cost of operation during the dry portions of the year when they have first priority and are using the water.

Initial estimates provided by Harmon show that the average split for operating the plant over a 6-year period between the two water providers is \$500,000 per year for the Santa Cruz Water Department and \$2.5M per year for the Soquel Creek Water District.

Because the Santa Cruz Water Department has first priority on the water produced by the desalination plant, they are providing 59 percent of the cost of construction. However, because they only will be using this water on an as-needed basis, i.e. dry periods, they will be paying an estimated one-sixth of cost to operate the plant. The Soquel Creek Water District will be using most of the plant's output so will be paying an estimated average of five-sixths of the operating cost.

Cost to Consumer

According to a presentation made by Harmon to the Santa Cruz Neighbors on February 21, the estimated increase in water costs contributed to desal in a single-family residential water bill from the Santa Cruz Water Department will be about \$5 per month. This will include both its portion of the capital cost to build and the cost of operating the plant.

At the April 3 board meeting, the Soquel Creek Water District staff will be presenting to its Board of Directors a financial analysis of the additional cost added to its customer's water bill for the District's portion of the cost of construction and operation of the proposed desalination plant. The meeting will start at 7 p.m. at the District Office, 5180 Soquel Drive, Soquel, California. For a copy of the April 3 agenda and Board Packet visit the district's website at www.soquelcreekwater.org.

*Coming soon, **Water Wars – Part 2a: Cost to Soquel Creek Water District Customers***

Water Wars – Part 3: Effect on the Environment • Energy and Water Conservation

Mike Rotkin: No desal vote until environmental study complete

-

Posted: 04/01/2012 01:30:20 AM PDT

Mike Rotkin

Well, one thing is clear: There will be a popular vote on whether or not the city of Santa Cruz will pursue a desalination project. Whether or not Desal Alternatives succeeds in its attempt to gather sufficient signatures to waste about \$80,000 of public money to put the matter on the ballot, the City Council has already voted to require a vote before constructing a desal plant.

Meanwhile, the real issue before us is the merit of pursuing a desalination plant. Currently, the city and Soquel Creek Water District are completing the administrative draft of an environmental impact report that will be completed sometime this summer. A final draft that responds to comments from the public and public agencies will be prepared -- probably by the end of 2012. No vote should take place before the EIR is completed, so voters have complete and factual scientific information in front of them before voting on a desalination plant.

Opponents continue to argue that the city and Soquel Creek should stop or slow down their pursuit of the desalination plant and investigate alternatives to it. Unfortunately, they have offered less-than-compelling evidence that there are any feasible alternatives that could address the very real water shortage we face.

There is little question that in the event of a two-year drought like the one we had here in 1976-77, we would be woefully short of water. Estimates are that we would be about 37 percent short. That amount could only be saved if we stopped all outdoor watering [not just reduced to twice-a-week watering, like last summer]. And we would still need to find something like an additional 20 percent of savings indoors. We can't put bricks in the toilet as we did in 1977, since most homes now have low-flow toilets, shower heads, washing machines and dishwashers.

Santa Cruz and Soquel Creek are already among the lowest water users in the state at about half the state per capita average. We should continue to find new ways to conserve additional water, but there is now a diminishing return on new conservation programs and they become increasingly expensive to implement. Even the opponents now understand that conservation alone cannot provide the additional water we would need in the event of a very likely serious drought. Ironically, some of their literature argues that we need to reduce our demand on the San Lorenzo and North Coast streams even more than the city's 37 percent estimate. Long ago, the Soquel Creek Water District realized that conservation alone, even its extensive and model program, cannot reduce demand to a level that would halt the serious saltwater intrusion problem Soquel Creek faces because of the overdrafting of its wells.

So, now the opposition has focused most of its energy [other than gathering signatures for an unnecessary ballot measure!] into defending a proposal for a water transfer between Santa Cruz and Soquel Creek. Although this transfer has some merit and has been studied

extensively by both districts in the past, it was determined that there is not enough surplus water from either source to meet the needs of the other agency in a severe drought.

This is what has led the two agencies into a commitment to study the feasibility of a desalination plant. Based on the numerous studies conducted over the past decade, both agencies believe that desalination provides the best hope for a small but critically important supplement to existing sources. The EIR will study all of the potential environmental impacts and determine if there is yet some unknown barrier to adopting this alternative, but at this point it is clear that desalination remains our best hope for a solution to a very real water shortage in our two communities.

Mike Rotkin is a former five-time mayor of the city of Santa Cruz and a co-founder of the Sustainable Water Coalition, a group supporting an integrated plan of increased conservation, curtailment of use in droughts and the investigation of desalination as a back up for serious droughts.

Coast Lines 04-02-12

SANTA CRUZ

Walk to support a vote on desal

Five former city of Santa Cruz mayors will join residents for a walking tour in support of the right to vote on the desalination ballot initiative on Saturday. Former mayors Jane Weed, Chris Krohn, Tim Fitzmaurice, Celia Scott and Bruce Van Allen will assemble on the Mitchell's Cove bluff at 3 p.m. to speak about the proposed initiative. There will then be a walking tour along the route of the ocean intake and brine discharge pipelines to the two proposed sites for the seawater desalination plant on Delaware Avenue.

Volunteer petition gatherers are canvassing the nearby neighborhoods in advance of the high-visibility event. The ballot measure would amend the city's charter to guarantee the citizens' right to make the final decision on a desal plant. A charter amendment can only be approved by voters and can't be reversed by the City Council without a further vote of the electorate.

For more information on the planned walk, contact Paul Gratz at 419-6441 or by email, righttovoteondesal@gmail.com. Information can also be found at righttovoteondesal.org or rtvod.org.

Santa Cruz officials seek summer water cutbacks: March rain helped offset dry winter, but not enough

By J.M. BROWN - Santa Cruz Sentinel

Posted: 04/02/2012 06:36:20 PM PDT

SANTA CRUZ - The city's Water Commission approved a request Monday to recommend the City Council pass daytime irrigation restrictions to help recover from a dry winter and reduced river and stream diversions.

March's rainfall was nearly a third higher than average, allowing water managers to improve the season's status from "critically dry" to "dry," according to the city's final Water Supply Outlook released last week. But the 6.11 inches that fell in March was not enough to help the city bounce back from the unusually dry months of December, January and February, when only 4.75 inches fell compared to a 30-year average of 18.2 inches during that period.

Rainfall for the season in Santa Cruz is just 61 percent of normal for the season to date. More importantly, runoff from the San Lorenzo River, the city's largest water supply, remains just 40 percent of normal.

"What saved us this year was last year," Bill Kocher, the city's water director, said, referring to heavy rain in late 2010 and early 2011 that filled the Loch Lomond Reservoir and strengthened river and stream flow.

The March precipitation is having a similar effect statewide.

"An unusually wet March improved conditions, but did not make up for the previous dry months," Mark Cowin, director of the state Department of Water Resources, said in a statement Monday. "The take-home message is that we've had a dry winter and although good reservoir storage will lessen impacts this summer, we need to be prepared for a potentially dry 2013."

Local water managers will ask the City Council on April 24 to implement a 5 percent curtailment beginning May 1, expecting the city will need help offsetting reduced diversions on the river and streams in a manner that relies less on drawing on the Loch Lomond Reservoir.

Since January, the city has been releasing more water from the river and North Coast streams to protect endangered and threatened fish habitat while negotiations with federal and state regulators continue over what the city's formal diversion limits will be in the future. The trial release - higher in the winter and lower in the summer when demand is higher - is designed to see what impact various reduction levels have on the city's supply.

City officials don't expect, however, the Water Department will be able to release as much water as regulators would like. Even though the reservoir spilled over March 17 after a healthy rain, they don't want to use it too much to backfill the release in case of another dry winter.

Water Director Bill Kocher said managers will strive for reducing river diversions by 25 percent beginning in June when summer tourism and irrigation season increases demand. However, during the high-demand months of August and September, it's expected that flow from the river could be 35-44 percent lower than the level the city is authorized to divert.

"While we are going to release more than we ever have, we're not going to release as much as the agencies want," Kocher said.

A 5 percent curtailment means the city's 92,000 water customers from Davenport to Live Oak will be prohibited from irrigating lawns or gardens from 10 a.m. to 5 p.m., and run off cannot hit the sidewalk or street. Enforcement can include fines beginning at \$100.

If the council approves the Stage 1 Water Shortage Alert, there also will be recommended restrictions on filling pools, providing drinking water in restaurants and washing linens and towels at lodging establishments.

The cutbacks will certainly shape the debate this summer over a proposed seawater desalination plant that would boost supply during drought periods. Desal opponents are collecting signatures to put a city charter change amendment on November's ballot, one that would ask voters if they want to have a future say on the plant.

The city also has passed an ordinance saying voters will have a say as early as June 2014 on the Westside facility. The city would have to pay for both ballot measures.

Opposition to Santa Cruz desalination plant lobbies for signatures

[By Shanna McCord - Santa Cruz Sentinel](#)

Posted: 04/07/2012 07:01:34 PM PDT



Ron Pomerantz prepares maps for the rally Saturday on West Cliff Drive. (BILL LOVEJOY/SENTINEL)

SANTA CRUZ - Opponents of the \$115 million desalination plant proposed in Santa Cruz gathered on West Cliff Drive on Saturday to gather signatures to place a measure on the ballot that would change the city's charter to require a future vote on the plant.

The group needs to collect the signatures of 5,000 people registered to vote in Santa Cruz to get on the November ballot.

Organizers say they're about halfway there.

The City Council passed an ordinance requiring such a vote in March.

"Four council seats are up in November," said Rick Longinotti. "We want to make sure the right to vote can't be revoked with future city councils."

City officials have been planning to team with the Soquel Creek Water District to build a desalination plant in Santa Cruz since 2004.

They've since spent several million dollars on studies, designs and the running of a pilot plant.

Water Department officials say the permanent plant would be used to supplement the water supply during drought years. In nondrought years, Soquel Creek would have access to the desalinated water as an alternative to its underground aquifer supply.

Saturday's gathering included five former mayors and former county Supervisor Gary Patton.

The anti-desalination group of more than 50 folks took a walk through the Westside streets where the proposed desalination pipelines would run.

Their rally took place on the bluff above Mitchell's Cove. The spot was chosen because that's where the brine-filled wastewater would be returned to the ocean.

Former Mayor Tim Fitzmaurice, who was on the council when the idea was initiated in 2004, said protecting the environment from possible damage by the plant would be his foremost concern when deciding how to vote.

"I know our problems with droughts and the things we need to deal with," Fitzmaurice said. "I think the people of Santa Cruz are smart enough to weigh the costs and benefits.

"I was ready to listen then, and I'm ready to listen now if they can prove this is not going to be a \$100 million boondoggle."

Bruce Van Allen, who served as mayor 1982, criticized desalination as an expensive, energy intensive process.

"A desalination plant could have immense environmental impacts," Van Allen said. "And the people have the right to vote on it."

Sunset Avenue resident Marion Shonick, who opposes the plant, said she didn't hesitate to sign the petition.

"I'm absolutely against it," Shonick said. "It's just not right."