



## MEMORANDUM

FC 14 (01-02-07)

**TO:** Board of Directors

**FROM:** Water Conservation and  
Demand Management  
Committee

**SUBJECT:** Water Conservation and Demand  
Management Committee Meeting Summary  
for September 17, 2019

**DATE:** October 8, 2019

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This memorandum summarizes agenda items from the meeting of the Water Conservation and Demand Management Committee held on September 17, 2019.

**Attendees:**

Board Members in attendance were: Director Nai Hsueh-District 5, Director Linda J. LeZotte-District 4, and Director Richard P. Santos-District 3.

Staff members in attendance were: Bradly Arnold, Glenna Brambill, Domingo Candelas, Jerry De La Piedra, Vanessa De La Piedra, Samantha Greene and Karen Koppett.

Guests in attendance were: Kurt Elvert, Anthony Eulo, Doug Muirhead, Esther Nigenda, William Sherman, Bill Tuttle and Rita Vrhel.

## 2A. SAN DIEGO CITY AMI IMPLEMENTATION:

Mr. William (Bill) Sherman reported on the following:

HANDOUT: AGENDA ITEM 2A

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### Potential AMI Implementation Issues - an Alert

(1) Smart Water Meter Implementation Inadequacies - NBC 7 Responds Consumer Investigative Unit - July 11, 2019  
<https://www.abc5sandiego.com/news/local/Auditor-Finds-Major-Inadequacies-in-City-Push-to-Move-to-Smart-Water-Meters-512611591.html>

(2) City to Hire Third Party to Take Over Smart Water Meter Program -NBC 7 Responds Consumer Investigative Unit - Jul 12, 2019  
<https://www.abc5sandiego.com/news/local/City-To-Hire-Third-Party-to-Take-Over-Smart-Water-Meter-Program-512655791.html>

(3) Installation of San Diego's Advanced Water Metering Infrastructure Beseet with Problems - California Water News Daily - July 17, 2019

<http://californiawaternewsdaily.com/infrastructure/installation-of-san-diegos-advanced-water-metering-infrastructure-beseet-with-problems/>

### Summary

- AMI is wireless technology designed to reduce human error in manual meter readings; rapidly detect leaks; and, monitor real time customer consumption to assist in water conservation.
- San Diego's Water Department failed to "plan, budget, or manage" \$76 million dollar rollout of conversion to wireless water meters, says [new report from the City Auditor](#).
- July 11 audit comes after Public Utilities Department restructuring due to \$8.3 million of citywide water bill refunds since 2015 due to water bill irregularities.
- Two year investigation of the city's largest department shows retrofitted water meters incapable of recording accurate water usage, and unreported meter defects.
- Significant management deficiencies, staffing shortages, implementation of a new work order tracking system, inadequate technician pay, and poor productivity contributed to implementation presently being \$16 million dollars over budget.
- 280,000 water customers were scheduled to have a working wireless smart meter conversion completed by December 2017. Today only six percent have them.
- The audit found managers failed to place controls to track and monitor data entry errors, resulting in some customers receiving either no or multiple water bills at once.
- The AMI Pilot Program initiated in 2012 was supposed to lead to starting the remaining installations in 2015 and completing in 2017.
- The results of the AMI audit have resulted in the city's plan to hire a third-party company to take charge and complete the city's conversion to smart water meters.
- The audit specifically identified that the project lacked a designated executive sponsor, a project manager with sufficient authority and an executive steering committee; a deployment plan; and a project plan, budget, and timeline that used realistic assumptions.

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Extensive management changes have occurred since then.

- PUD lacked a policy or directive outlining appropriate project management practices for major projects that PUD conducts in-house. PUD created and issued this directive in June 2019.

(4) This link will take you to the actual 99 page two year audit by the City of San Diego:  
<https://drive.google.com/file/d/1USV37Oe9L62klOFFzWkvCU3Ssexyauw/view>

Of special interest:

- On page 40, it states that before implementation, utilities should calculate costs and savings (cost/benefits). *There should be enough information developed and presented during the pilot program to develop a realistic project plan before approval of the implementation phase and budget.*
- Finding 4 on pages 62-75 points out numerous deficiencies in the data control system that will not be controlled through lower priority Recommendations 11 through 13 for another year. This will perpetuate a lack of credibility that could have serious consequences for the utility.
- The Conclusion on page 76, and 13 Recommendations on pages 78 through 81 are especially important to read and understand. Pages 87 - 94 present Management's response to all 13 recommendations, which they support.

**All information in the audit can aid in pointing out areas that need to be understood and addressed by everyone responsible for the future AMI implementation. That is the only way to avoid the mostly preventable issues that San Diego faced, and to achieve a successful, cost effective implementation of this technology.**

### Personal Concerns about Planned Valley AMI Implementation

- (a). Advice Letter 503 initiated a \$475,000 AMI Pilot Program on 1/23/2017. Resulting information was planned for availability in January, 2018 to lead to subsequent criteria for estimating the net benefits of full implementation. ?????
- (b). I attended a customer presentation and demonstration by SJWC in Campbell on May 22. At that session, I asked the SJWC representative manning the booth, describing their AMI project, numerous questions. Three answers raised my concern about how effectively plans were progressing:
- (1) They were planning to approach the CPUC sometime in the fall with an advice letter to start the implementation of this \$50- \$100 million project. I have seen no indication that they would be ready based on the points made in the San Diego Audit.
  - (2) I understood that they were considering requiring customers to pay for their new meter installation. This would not work.
  - (3) I was told that they planned to implement the system at the time of routine meter replacement, presently a 20 year cycle. This compares to an optimum schedule for a well thought out project of this size and complexity of around 4 years.

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Director Richard P. Santos, Mr. Jerry De La Piedra and Mr. Bill Tuttle thanked Bill for the great presentation sharing the new technology, what other agencies are doing and the lessons learned. San Jose Water is hoping to roll it out in 3-4 years.

## ACTION ITEMS

### 4.1 SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA) UPDATE

Ms. Vanessa De La Piedra reviewed the following:

#### Agenda Memo Summary:

SGMA requires that local agencies managing basins ranked as medium- or high-priority develop groundwater sustainability plans (GSPs) or submit an alternative to a GSP by the applicable statutory deadline. Alternatives can be an existing groundwater management plan, groundwater management pursuant to an adjudication, or an analysis of basin conditions that demonstrates the basin has operated within its sustainable yield for at least ten years.

The Santa Clara Valley Water District (Valley Water) submitted the 2016 Groundwater Management Plan for the Santa Clara and Llagas Subbasins to the Department of Water Resources (DWR) as an alternative in December 2016. In July 2019, DWR released the assessment of the fifteen alternatives submitted by water agencies. The Santa Clara and the Llagas Subbasins are now among the nine basins in California with approved SGMA alternatives.

DWR provided separate approval for the Santa Clara Subbasin (Attachment 1) and the Llagas Subbasin (Attachment 2). This approval confirms Valley Water's alternative satisfies SGMA objectives for sustainable groundwater management. In the Assessment Summary (Attachment 3), DWR notes that "the alternative demonstrated a long history of meeting the requirements of the SCVWD Act, and that SCVWD has sustainably managed groundwater resources to meet the demands of the beneficial uses and users."

The DWR staff report for each basin includes recommended actions to facilitate DWR evaluation and improve the alternative for the next five-year update due in January 2022. These recommended actions are described in detail in Attachments 1 and 2 and are summarized below:

1. Identify groundwater dependent ecosystems.
2. Incorporate climate change and expected population growth into the water budget over the 50-year planning and implementation horizon.
3. Create separate outcome measures for water quality in the Santa Clara and Llagas subbasins.
4. Develop specific seawater intrusion outcome measures in the Santa Clara Subbasin.
5. Clarify how meeting outcome measures relates to the avoidance of undesirable results and provide additional clarification and metrics, if needed, to determine what effects represent undesirable results.

Staff will incorporate these recommended actions into the next five-year update to Valley Water's alternative in coordination with basin stakeholders. Valley Water will continue implementing its Groundwater Management Plan, provide annual SGMA reports by April 1, and submit the five-year progress update by January 2022.

With ninety years of groundwater management history, Valley Water has established effective goals, strategies, and activities to ensure sustainable groundwater supplies. DWR approval of Valley Water's alternative is a testament to the organization's ongoing commitment to groundwater sustainability.

The Water Conservation and Demand Management Committee discussed the following issues: thanked everyone past and present that worked on the GSP, Valley Water recognized during the drought and keeping the Board apprised of comments and data collected.

Ms. Esther Nigenda, Ms. Rita Vrhel, Mr. Anthony Eulo and Mr. Doug Muirhead spoke on dewatering, sustainable plan, recharge, metering construction sites (Palo Alto has in place), state's request in defining negative consequences, subsidence, climate change, enforcement mechanisms, legal challenges, shallow groundwater and the Model Ordinance.

The Water Conservation and Demand Management Committee took no action.

## **4.2 COLLABORATION WITH UC WATER**

Ms. Samantha Greene and Ms. Vanessa De La Piedra reviewed the following:

### **Agenda Memo Summary:**

The Santa Clara Valley Water District (Valley Water) is exploring a collaborative program with researchers from the University of California Water Security and Sustainability Research Initiative (UC Water). UC Water is a group of self-selected researchers that focuses on strategic research to support water resources management and decision-making.

Valley Water and UC Water initially met in February 2019 to discuss the focus and interests of each entity and potential knowledge gaps where collaboration would be beneficial. While many interesting topics were discussed, Valley Water staff identified two key areas of most mutual benefit: investigating the feasibility of Flood-Managed Aquifer Recharge (Flood-MAR) and furthering the understanding of groundwater/surface water interaction, with both issues primarily focused on the unique conditions in Santa Clara County.

Building on the initial meeting, Water Utility and Watersheds staff have had several follow up discussions with UC Water researchers. These have helped narrow the scope of collaboration by clarifying interests, priorities, potential deliverables, and timing. Both Flood-MAR and groundwater-surface water interaction have a nexus to the Water Conservation and Demand Committee (Committee).

Flood-MAR, or the potential to use agricultural or other open lands for stormwater recharge, is being investigated as part of Valley Water's Water Supply Master Plan and has been discussed in several Committee meetings. UC Water Researchers have direct experience with the planning and implementation of similar projects and are interested in piloting other projects to demonstrate efficacy, understand and remove bottlenecks to wider use, and identify technical and policy needs. Valley Water and UC Water are developing a multi-year scope of work that will help evaluate technical, legal, and institutional issues and advance a local pilot project.

Groundwater-surface water interaction is another key area where Valley Water is looking to advance our understanding, particularly in light of related Sustainable Groundwater Management Act (SGMA) requirements. In previous Committee items related to shallow groundwater dewatering, Valley Water has committed to further exploring the interaction of shallow groundwater with deeper, principal aquifers and with interconnected surface water. A multi-year collaboration to further explore these complex interactions will benefit both Valley Water and UC Water.

Valley Water and UC Water staff are planning to complete an initial proposed scope of work by November 2019 to support consideration for funding and implementation in 2020. Due to the nexus of both the Flood-MAR and groundwater-surface water interaction themes to the Committee, staff will continue to provide updates on the potential collaboration as this work progresses.

Mr. Doug Muirhead and Mr. Bill Tuttle spoke on UC water being a conduit for Ag Water lands for recharge, why is UC water needed, Flood-MAR is a great effort, recharge ponds and OSA partners.

The Water Conservation and Demand Management Committee took no action.

If you have any questions or concerns, you may contact me at, [gbrambill@valleywater.org](mailto:gbrambill@valleywater.org) or 1.408.630.2408.

Thank you!

Glenna Brambill, Management Analyst II,  
Board Committee Liaison  
Office of the Clerk of the Board