

C/CAG

CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

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Agenda

Resource Management and Climate Protection Committee (RMCP)

Date: Wednesday, May 18, 2016

Time: 2:00 to 4:00 p.m.

Location: 155 Bovet Rd – Ground Floor Conference Room
San Mateo, CA 94402

1. Introductions
2. Public Comment
3. Approval of Minutes from April 20, 2016 meeting
(Kim Springer – Committee Staff) Action
4. Bay Area Water Supply and Conservation Agency update on current water supply and recent State actions
(Adrienne Carr – BAWSCA) Information, Discussion
5. Presentation on City of San Bruno Advanced Metering Infrastructure for water
(Jim Burch, City of San Bruno) Information, Discussion
6. Discussion on Israel - California Green-Tech Partnership, water technologies, and next steps
(Kim Springer – Staff) Discussion, Action
7. Presentation on Clean Coalition, California Energy Commission EPIC Grant scope, Peninsula Advanced Energy Community
(Craig Lewis, Clean Coalition) Information, Discussion
8. Committee Member Updates
9. Next Regular Meeting Date: June 22, 2016

3. Approval of Minutes from March 16, 2016 meeting

The minutes from the March 16, 2016 meeting were approved. (Gupta/Pine)

The order of the agenda was modified by the Chair in order to meet the needs of the presenters. The following items were presented in the following order: Item 5, Item 6, then Item 4.

4. Update on Current Water Supply and Drought Conditions

Adrienne Carr delivered an update on both precipitation and water conservation outcomes, and snowpack in the Sierras. The SF system will almost fill this year, so the Hetch Hetchy system is sending water out of the system so there is room for the snowmelt in the reservoirs.

Almost every district met the conservation goals and SMC was a shining star in the State of CA.

5. Presentation on Israel water conservation and reuse, and the Israel – California Green-Tech Partnership

Ashleigh Talberth delivered a presentation on the Israel – CA Partnership. She introduced Mark Doing. Ashleigh and Mark are founders of the Israel – CA Cleantech Partnership. March 5, 2014 Governor Brown and Prime Minister Nentanyahu signed an accord on five key areas: the main one of discussion for the Committee is Cleantech development in energy and water.

Since the signing of the accord, there have been a number of events: at Google Tel Aviv, Southern California, Stanford, and the Whitehouse.

About Israel: very little rainfall, severe drought, and in a desert. The country has to create technologies to innovate their way out of the water shortage and have become exporters of water, generating 20% more water than they consume. Desalination is a source of water, but it would not be enough without all the water conservation and recycling being accomplished.

The goal is for what's being done in Israel to become a model for how CA can address its drought and water issues. The book by Seth Siegel: Let There be Water, is a good source of information on Israel's effort and CA's predicament. It covers both policy and technologies. Israel recycles nearly 90% of its water. CA is not even close, in fact the waste water is cleaned in CA, but then set out to sea, instead of being used. Leak detection is another area where Israel excels, as well as desalination.

Gordon: This book is a great resource on policy and governance on water.

Israel has a top down approach that requires every stage of water use to be responsible for maximizing its use. In Israel, water is considered a national imperative, a matter of national security.

Papan: An Israeli person came to speak to our group as well Dianne Feinstein came to talk about the cultural reduction, reuse and desalination.

Gordon: There is a need to approach changes in water policy from a pilot perspective, since our

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San Mateo County Transit District Office, 1250 San Carlos Ave., San Carlos, CA.

governance of water is very different.

Ashleigh Talberth continued the discussion, giving her story of how she ended up in the Cleantech world in Israel: that Israel is a leader in innovation, especially in water, at the same time that she was hearing about the drought in CA.

She introduced Aaron Tartakofsky and explained the way in which the Cleantech partnership was launched in Sacramento. Though, because of the governance issues on water in CA, many of the Israeli high tech water companies are interested in other parts of the world, there are some events that could be held in the Bay Area as a way to showcase these water technologies. She also mentioned the BIRD grant, a \$1M binational industrial research and development foundation.

Ashleigh also discussed a few companies that have new technologies that are in the proving process: Emefcy, and others. One of the foundational savings has to do with reducing piping networks by processing (recycling) water locally, a distributed system. The other advantage is a great reduction of system management staff hours to run the system, accomplished by

Horsley: Would this kind of a system be allowed to be installed in CA.

Talberth: this is one of the issues that she is working on in order to see these types of system through to installation. This is part of the reason why a lot of technology companies do not want to work to get imbedded in CA. However, there is a lot of political interest, and State Assemblymember Gordon is working on these issues.

Gordon: San Mateo County would be a big opportunity to solve these issues because of the interest and challenges with the many water districts in San Mateo County.

Horsley: I'm interested in something like this because we have a community with a failing wastewater infrastructure and that needs to be able to recharge the groundwater, which is their main source of potable water.

Gupta: So far we have an idea of the technology, what are the costs of water per gallon, what goes in and what comes out.

Talberth: explained the flow of water through the system and some of the projected costs and that the influent is blackwater, and the effluent is nonpotable water.

Chiang: what percentage of the power in Israel is nuclear. PG&E has an existing desalination plant that is used to cool that plant, which is managed by GE.

Aaron Tartakofsky explained how his firm, CB Engineers, is working through issues with the solids in the blackwater treatment systems being used in high rise multifamily complexes. SF has 1000 miles of sewer line, much of which is failing, is not earthquake safe and was built well over 100 years ago. There are also issues with odor, more odor issues are prevalent because of the lower flush fixtures, which do not convey the solids to the treatment plant well.

The solution is onsite sludge handling, which is based on science developed by Pauli Cleantech, and which uses Potassium Permanganate. There is an Israeli pet waste cleanup tool call Ashpooie, which uses the same technology. The system they are using in buildings uses the same technology just on a bigger scale.

Springer: where does Potassium Permanganate come from, what is the supply?

It's mined in Illinois and other parts of the world.

Gupta: How much nonpotable water can be reused in the building?

At this point all but about 40% of the water is being used in the building. The rest is pushed down the central treatment system.

Gordon: What is the smallest size of the system you're using?

It takes up about one parking space, but with the treatment system as well, it's about 10 parking spaces. The ROI of the system is about 3-4 years.

Ashleigh closed the item by explaining that there are so many possibilities with these technologies, especially in places that have completely run out of water, and properties that cannot be developed due to lack of water supply.

Gordon: We should be looking to lead on these technologies here in San Mateo County.

6. Presentation on Nexus Water residential grey water system

Bob Hitchner delivered a presentation on onsite water reuse for the residential sector, home water recycling. Began with the various approaches to reducing the use of precious potable water sources and options at the municipal water system level.

Onsite water reuse is the best way to drastically reduce water use in the home that engages local citizens in the water challenge. Local leadership has a big role to play in the speed of adoption of onsite residential water reuse.

The history of legislation or policy has a short history, about 25 years, with a lot of undocumented use until about 2010, when there was language added to the national plumbing code. CPC Chapter 16 added how indoor plumbing sources can be used. In 2013, greywater was included into the code. CA code requires that installed equipment meet NSF350 as a quality standard for water reuse. The 2016 code will likely expand the opportunity for reuse of this kind of water.

Untreated water has to be distributed to the landscape through a subterranean watering system and cannot be stored. Treated greywater can be stored and used in the home for flushing toilets.

He then described the Nexus eWater solution, showed the components and how they are installed. He also described the filtration and cleaning process for the water.

Gordon: What happens if there is more supply of cleaned grey water than is being used in the home? Where does it flow?

There is an overflow into the regular sanitary sewer system.

7. Committee Member Updates

8. Next Regular Meeting Date: May 18, 2016

Presentations from the meeting are posted on the C/CAG RMCP website.

C/CAG AGENDA REPORT

Date: May 18, 2016
To: Resource Management and Climate Protection Committee
From: Adrienne Carr, BAWSCA, RMCP Committee Member
Subject: Bay Area Water Supply and Conservation Agency update on current water supply and recent State actions

(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive an update on current water supply and recent State actions.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

California's historic drought has not ended, so the Bay Area Water Supply and Conservation Agency (BAWSCA), which represents the 26 wholesale customers of the San Francisco Regional Water System, has been working with its member agencies to track water use, ongoing drought conditions, and progress towards mandatory water use reduction goals. On Monday, May 9, Governor Brown issued an Executive Order that address short and long-term water conservation policy. The Governor's Order directs the California Department of Water Resources, State Water Resources Control Board, and the California Public Utilities Commission to perform specific actions.

BAWSCA staff has been providing short updates of water supply conditions, monthly, to the RMCP Committee. The most recent update was at the April 20, 2016 meeting. Adrienne Carr, Senior Water Resources Specialist, will provide an update again at this meeting on the current water supply outlook, conservation performance, and implications of the recent State actions.

ATTACHMENTS

None

C/CAG AGENDA REPORT

Date: May 18, 2016
To: Resource Management and Climate Protection Committee
From: Jim Burch, City of San Bruno
Subject: Presentation on City of San Bruno Advanced Metering Infrastructure for water

(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive a presentation on City of San Bruno Advanced Metering Infrastructure (AMI) for water.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

With the State of California facing a severe drought, the desire to provide better resource management, and an aging collection of water meters, the City of San Bruno decided to implement a Sensus smart water network to provide real-time data tied to all residential water meters.

The project began in earnest in July 2015 with the installation of four base station/antennas, at which time meter replacements began, installed by Golden State Flow Measurement. The system can track water use in real time and provide this information to customers. The system has led to better customer service, water conservation and resource management.

Jim Burch, Deputy Director of Public Works for the City of San Bruno, will provide a presentation and demonstration of the system for the RMCP Committee.

ATTACHMENTS

None

C/CAG AGENDA REPORT

Date: May 18, 2016
To: Resource Management and Climate Protection Committee
From: Kim Springer, Staff RMCP Committee
Subject: Discussion on Israel - California Green-Tech Partnership, water technologies, and next steps

(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Review the Israel - California Green-Tech Partnership and water technologies presented at the April 20, 2016 meeting and discuss next steps.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

The April 20, 2016 meeting of the RMCP Committee included a number of presentations on both the Israel – California Clean-Tech Partnership and various water reuse and treatment technologies, residential and commercial scale.

During the presentation, there were comments from committee members related to how we might move these technologies forward in San Mateo County and leverage opportunities presented by the speakers and others who attended the meeting. Some of the comments related to establishing pilots, holding technology demonstration events, and/or coordinating of water policy development.

Staff would like to re-open the conversation and further discuss opportunities to expand local treatment and reuse of water in San Mateo County.

ATTACHMENTS

None

C/CAG AGENDA REPORT

Date: May 18, 2016
To: Resource Management and Climate Protection Committee
From: Heyward Robinson, Programs Director, Clean Coalition
Subject: Presentation on Clean Coalition, California Energy Commission EPIC Grant scope, Peninsula Advanced Energy Community

(For further information contact Kim Springer at 650-599-1412)

RECOMMENDATION

Receive a presentation on the Clean Coalition's, California Energy Commission EPIC Grant scope for a Peninsula Advanced Energy Community.

FISCAL IMPACT

None

BACKGROUND/DISCUSSION

On November 24, 2015, the California Energy Commission (CEC) released a competitive solicitation titled "The EPIC Challenge: Accelerating the Deployment of Advanced Energy Communities" under the Electric Program Investment Charge (EPIC) Program.

The purpose of the solicitation was to fund a competition that will challenge project teams comprised (potential) of building developers, local governments, technology developers, researchers, utilities, and other project partners to develop innovative and replicable approaches for accelerating the deployment of Advanced Energy Communities.

The CEC defines an Advanced Energy Community as one that: minimizes the need for new energy infrastructure costs, such as transmission and distribution upgrades, supports grid reliability and resiliency by incorporating technologies such as energy storage and microgrids, can be replicated and scaled-up to further drive down costs, and provides affordable access to renewable energy generation.

Clean Coalition, a nonprofit located in Menlo Park, partnered with local governments, PG&E, consultants, and other partners to submit a proposal for the grant, and was selected to receive funding. The proposal is titled Peninsula Advance Energy Community (PAEC). The PAEC region, with a core region comprising the southern end of San Mateo County and a broader region incorporating all of San Mateo County and the City of Palo Alto is experiencing enormous commercial and residential growth pressure and is representative of similar areas throughout California, ensuring that the PAEC's success can be replicated statewide.

Specific components of the project include:

- Streamlining permits, codes, and ordinances

- Financial and business models for Advanced Energy Communities
- Streamlining the connection of AECs to the grid
- Electric vehicle charging infrastructure master plan
- Atherton Civic Center sustainability features
- Solar Siting Survey
- Solar Emergency Microgrids

Heyward Robinson, Programs Director with Clean Coalition, will deliver a presentation on the PAEC project, with additional details on the specific components listed above.

ATTACHMENTS

None