

# C/CAG

## CITY/COUNTY ASSOCIATION OF GOVERNMENTS OF SAN MATEO COUNTY

*Atherton • Belmont • Brisbane • Burlingame • Colma • Daly City • East Palo Alto • Foster City • Half Moon Bay • Hillsborough • Menlo Park  
Millbrae • Pacifica • Portola Valley • Redwood City • San Bruno • San Carlos • San Mateo • San Mateo County • South San Francisco • Woodside*

## Agenda

### Resource Management and Climate Protection Committee (RMCP)

**Date:** Wednesday, February 19, 2020

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

**Location:** 155 Bovet Rd. – Ground Floor Conference Room, San Mateo

1. Introductions
2. Public Comment
3. Approval of Minutes from January 15, 2019 RMCP Committee meeting  
(Kim Springer – Committee Staff)                      Action
4. Presentation by Bioforcetech on conversion of wastewater biosolids to energy and biochar  
(Valentino Villa - Bioforcetech)                      Information/ Discussion
5. Presentation by Fluence on application of MABR wastewater treatment technology  
(Ronan Barkan – Fluence Corporation)                      Information/ Discussion
6. Presentation by West Bay Sanitary District on water recycling for Sharon Heights Golf Course  
(Phil Scott – West Bay Sanitary District)                      Information/ Discussion
7. Committee Member Updates
8. Next Scheduled Meeting Date: March 18, 2020

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Center, 5th Floor, Redwood City, CA 94063, for the purpose of making public records available for inspection. Such public records are also available on C/CAG's website at: <http://www.ccag.ca.gov>.

**PUBLIC PARTICIPATION:** Public comment is limited to two minutes per speaker. Persons with disabilities who require auxiliary aids or services in attending and participating in this meeting should contact Mima Guilles at (650) 599-1406, five working days prior to the meeting date.

*If you have any questions about this agenda, please contact C/CAG staff:*

*Executive Director: Sandy Wong (650) 599-1409*

*RMCP Committee Staff: Kim Springer (650) 599-1412*

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### Minutes

#### Resource Management and Climate Protection Committee (RMCP)

**Date:** Wednesday, January 15, 2020

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

**Location:** 455 County Center – 2<sup>nd</sup> Floor, 201 Conference Room (across from Elevator)

#### Attendance:

Maryann Moise Derwin\*  
Doug Silverstein\*  
Christine Zaugg\*  
Rick DeGolia\*  
Donna Colson\*  
Diane Papan\*  
Janet Borgens\*  
Adam Zelezen  
Adrienne Etherton  
Kim Springer  
Sandy Wong  
John Allan

#### Not in attendance:

Don Horsley\*  
Ortensia Lopez\*  
Drew Combs\*  
Bill Chiang\*

1. Introductions
2. Public Comment  
None
3. Approval of Minutes from August 21, 2019, October 16, 2019, and November 20, 2019  
RMCP Committee meetings  
August - Papan motion to approve, Colson 2nd  
October – Colson motion to approve, DeGolia 2nd  
November – Papan motion to approve, DeGolia 2nd
4. Review and approval of RMCP Committee meeting dates for calendar year 2020  
Meeting Date - Papan motion to approve, Zaugg 2nd

## 5. Update on RICAPS 2030 template document and San Mateo County Energy Strategy 2025

John Allan presented a brief update on the current status of the Energy & Water Strategy. Updates included next steps for 2020 and describing how additional feedback will be received.

- Rick DeGolia would like a hard copy. Strategy will be distributed to elected officials through the Clerk.

Kim Springer provided an update on the CAP template. Specific details planned for the update include an outreach component, integration of equity and opportunity and a connection to adaptation. Consumption based inventories were considered but ultimately excluded from the template based on feedback from stakeholders and technical feasibility.

The update will finish draft in Feb 2020 and will go through copy edit in March 2020 with a final version ready for late spring 2020.

- DeGolia - What is the general process for a CAP update? How often?
  - Springer - Most jurisdictions are looking to 2030 for their next update which somewhat aligns with state goals. Includes baseline, inventory, goals and actions.
- Donna Colson– How we can use this if we just recently updated our CAP?
  - Springer - If you current CAP is to 2030, you probably wouldn't use it now.
- Diane Papan– Should we look at per capita emissions?
  - You could.
- Doug Silverstein– Do we know where all the jurisdictions are in the CAP update process?
  - Springer - We surveyed the cities and have a record of some 13 cities that are interested in CAP updates to 2030 at future dates.
- 40% below 1990 is the goal – are there incentives to go beyond that? 40% is not aggressive enough.
  - Colson - We need to make sure that our goals are attainable. The state should lead this.
  - DeGolia – PCE and others are in a better position to provide incentives or spur action on this front
  - Adrienne Etherton– As a city, we looked at our measures realistically and made sure that we chose to include was achievable.

## 6. Presentation on City of Brisbane Building Energy Program and ordinance

Adrienne Etherton provided an update on the Brisbane Building Efficiency Program. The presentations discussed the benefits of energy efficiency and how benchmarking fits into the picture and drives energy efficiency projects through awareness and access to additional data. Etherton described the concepts of benchmarking, auditing and retro commissioning in the context of energy efficiency.

This program was made possible by the passage of AB802 which requires building owners to benchmark and report their building efficiency. Other jurisdictions are already doing this including San Francisco, Berkeley and San Jose.

Etherton provided an explanation of why the commercial sector was targeted and how significant the impact of the program can be. This included an analysis of how they

selected a threshold of 10K square feet and specific types of buildings. Stakeholder engagement was key and included several workshops, webinars, 1 on 1 meetings with private sector, and committee presentations.

The presentation (which will be posted on the C/CAG RMCP website) included an explanation of the compliance pathways and timeline of when benchmarking is reported and how additional efficiency requirements are met. Next steps include implementation of requirements, monitoring and process improvement and sharing best practices and a toolkit with other cities.

7. Presentation on Stanford University - Codiga Resource Recover Center testing of Fluence sanitary sewer wastewater treatment system, results and potential applications in San Mateo County

Ronan Barkan with Fluence Corporation provided background on Fluence and their product offerings which focuses on water treatment and has approx. 350 employees working on over 7,000 installations in over 70 countries. This presentation focuses on MABR technology (Membrane Arrayed Biofilm Reactor) which treats raw wastewater. This process generates clean effluent and biosolid sludge. 80% of treatment cost comes from the biological process and Fluence focuses on making this process more efficient. The MABR technology uses less than 6% of the energy required for surface aerators and 14% of energy used in today's fine bubble diffusers. The technology uses a material that is semipermeable membrane sandwiching round a structure to add volume. The material is wound onto rolls that make up a "module" which is inserted into wastewater where it begins the oxygenation process.

Barkan described the test lab at the Stanford University Codiga Resource Recovery Center and how Fluence was able to test their technology and successfully achieve Title 22 Turbidity Standards despite the particularly concentrated influent present at Stanford.

Barken went into detail on the technology but ran out of time to discuss applications. He will be invited back to a future meeting to discuss.

8. Committee Member Updates  
None

9. Next Scheduled Meeting Date: February 19, 2020

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*RMCP Committee Staff: Kim Springer (650) 599-1412*

# C/CAG AGENDA REPORT

**Date:** February 19, 2020  
**To:** Resource Management and Climate Protection Committee  
**From:** Valentino Villa, Bioforcetech  
**Subject:** Presentation by Bioforcetech on conversion of wastewater biosolids to energy and biochar

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

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## **RECOMMENDATION**

Receive a presentation by Bioforcetech on conversion of wastewater biosolids to energy and biochar.

## **FISCAL IMPACT**

None

## **BACKGROUND/DISCUSSION**

Bioforcetech is an Italian start up that began in 2009 in Italy. Their process can convert wastewater biosolids to an agricultural product called biochar. Because the technology that they developed was not permissible in Italy, the company relocated to the Bay Area in 2013, to locate a site and build and permit an operational facility. They are currently located near Silicon Valley Clean Water in Redwood City and the facility is built.

The conversion process consists of both drying and pyrolysis (heating). It generates energy and heat, which go back into the process, making it nearly zero net energy. The process also produces a minimum of greenhouse gas emissions. The minimal energy input and reduced emissions increase the value of the process, and the resulting product is being sold to the public and the agricultural industry.

Valentino Villa, Chief Financial Office of Bioforcetech, will present the need and solution that the company has developed for the wastewater treatment industry. The attachment provided with this staff report is a link to the Bioforcetech website.

## **ATTACHMENTS**

Link to Bioforcetech website: <http://www.bioforcetech.com/index.html>

# C/CAG AGENDA REPORT

**Date:** February 19, 2020  
**To:** Resource Management and Climate Protection Committee  
**From:** Ronan Barkan, Fluence Corporation  
**Subject:** Presentation by Fluence on potential applications of MABR wastewater treatment technology

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

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## **RECOMMENDATION**

Receive a presentation by Fluence on potential application of MABR wastewater treatment technology.

## **FISCAL IMPACT**

None

## **BACKGROUND/DISCUSSION**

Fluence Corporation, previously Emefcy Bioenergy Systems, has a wastewater treatment system based on a technology called a Membrane Aerated Biofilm Reactor (MABR). The company came to the attention of staff and the RMCP Committee in early 2016. Emefcy first presented to the Committee on April 20, 2016 as part of a report about a California – Israel Clean Tech Partnership, which developed as a result of collaborative technology-sharing memorandum, signed by Governor Jerry Brown and Prime Minister of Israel, Benjamin Netanyahu in late 2014. After the introduction, staff has been following developments in the testing of Fluence’s MABR technology.

In January 2018, a Fluence MABR treatment system was shipped to the Bay Area and installed at Stanford’s Codiga Resource Recovery Center (CR2C), a testing facility for water treatment systems. The goal for Fluence was to prove the stated performance of their system, and how it can meet non-potable water use standards set by the State of California. An executive summary about the system and testing, with additional (and more technical) information, was provided in the Fluence MABR Executive Summary attached in the January 15, 2020 RCMP Committee packet. The result of the testing was presented at the January 15, 2020 RMCP Committee meeting. Ronan Barkan, US Sales Manager for Fluence, is back this month to speak to potential applications of the Fluence treatment system within a city.

## **ATTACHMENTS**

None

# C/CAG AGENDA REPORT

**Date:** February 19, 2020  
**To:** Resource Management and Climate Protection Committee  
**From:** Phil Scott, Waste Bay Sanitary District  
**Subject:** Presentation by West Bay Sanitary District on water recycling for Sharon Heights Golf Course

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

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## **RECOMMENDATION**

Receive a presentation by West Bay Sanitary District on water recycling for Sharon Heights Golf Course.

## **FISCAL IMPACT**

None

## **BACKGROUND/DISCUSSION**

West Bay Sanitary District provides wastewater services to the City of Menlo Park, Atherton, Portola Valley, and areas of East Palo Alto, Woodside, and unincorporated San Mateo and Santa Clara counties. The District's system carries raw wastewater to Silicon Valley Clean Water (SVCW), in Redwood City, for treatment and discharge to the San Francisco Bay.

The District is nearing the completion of a three-year project, the "Recycled Water Project – Sharon Heights". The project has two phases. The first involves the construction of a satellite treatment facility designed to treat a maximum daily flow of 0.5 Million Gallons a Day (MGD). It also includes a wastewater pump station to divert flow to the treatment facility and to discharge remaining water and solids to an existing sewer connection. The new system will initially serve the Sharon Heights Golf Course. The second phase intends to provide recycled water distribution lines to Stanford Linear Accelerator Center.

Combined, the Project would deliver an estimated 80 MGD of recycled water, including 52 MGD to Sharon Heights through the year and, in the second phase, approximately 28 MGD to SLAC for irrigation and other uses. The system is scheduled to come "online" later this Spring. The link provided as an attachment to this staff report has more information about the project and a time lapse video of the construction.

Phil Scott, District Manager of the West Bay Sanitary District, will present more details on the development of this project and what it means to the multiple stakeholders who will benefit.

## **ATTACHMENTS**

<https://westbaysanitary.org/services/recycled-water/>