



**San Francisco Public Utilities Commission
 Citizens' Advisory Committee
 Wastewater Subcommittee**

MEETING MINUTES

**Tuesday, May 14, 2024
 5:30 p.m. – 7:00 p.m.
 525 Golden Gate Ave., 3rd Floor Tuolumne Conference Room**

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Meeting URL

<https://sfwater.zoom.us/j/82519156441?pwd=ZTRjdVNiK0pTeFhMSEVxY2IBMFNWQT09>

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669.219.2599

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Meeting ID / Passcode

825 1915 6441 / 027158

Mission: The Wastewater Subcommittee shall review sewage and stormwater collection, treatment, and disposal system replacement, recycling, and other relevant plans, programs, and policies ([Admin. Code Article XV, Sections 5.140 - 5.142](#)).

Members

Amy Nagengast, Chair (D8)	Maika Pinkston (M-Enviro. Org)	Michelle Pierce (B-Enviro. Justice)*
Douglas Jacuzzi (D4)	Moisés García (D9)	Andrea Baker (B-Small Business)
Steven Lee (D10)		

D = District Supervisor appointed, M = Mayoral appointed, B = Board President appointed

Staff Liaisons: Lexus Moncrease and Sharon Liu-Bettencourt
 Staff Email for Public Comment: cac@sfwater.org

ORDER OF BUSINESS

1. Call to order and roll call

*Michelle Pierce is no longer a member of the Wastewater Subcommittee

Members present at roll call: (4) Nagengast, Jacuzzi, García and Baker

Members Absent: (2) Lee and Pinkston

London N. Breed
 Mayor

Tim Paulson
 President

Anthony Rivera
 Vice President

Newsha K. Ajami
 Commissioner

Sophie Maxwell
 Commissioner

Kate H. Stacy
 Commissioner

Dennis J. Herrera
 General Manager

OUR MISSION: To provide our customers with high-quality, efficient, and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.



2. Approve [January 9, 2024 Minutes](#)

Motion was made (García) and seconded (Jacuzzi) to approve the October 24, 2023, Minutes.

AYES: (4) Nagengast, Jacuzzi, García and Baker

NOES: (0)

ABSENT: (2) Lee and Pinkston

Public Comment: None

3. Report from the Chair

- Welcome members, staff, and the public

Public Comment: None

4. Public Comment: Members of the public may address the Committee on matters that are within the Committee's jurisdiction and are not on today's agenda (*2 minutes per speaker*)

Public Comment: None

5. Presentation and Discussion: [Draft Revised Sea Level Rise Guidance from the State of California: Review and CCSF Comments](#), David Behar, Climate Program Director

a. Resources:

- [Sea Level Rise Guidance Public Comment](#)
- [Sea Level Rise Guidance Public Comment - SFPUC](#)

Presentation

CCSF Sea Level Rise Projections and State of California Guidance (2024 Draft)

SLR Capital Planning Guidance – 2014

SLR Capital Planning Guidance – 2015 Revision

Sea Level Rise Vulnerability and Consequences Assessment – 2020

The Case of High End

NOAA led: 2013, 2017, 2022

First ever global survey of coastal adaptation practitioners reveals chaotic science translation

Lipscomb, Behar et al 2024 (in review)

Best Available Science (IPCC AR6 2021) vs. 2024 OPC Draft SLR Guidance

Emissions Trajectories as of COP 25

Author: "The Uninhabitable Earth"

ClimateSF Comments on Draft OPC Guidance 2024

Fireboat Pier: Rising with the tides

Waterfront Resilience Program: Adaptive Management and Adaptive Capacity

Adaptation Costs (San Francisco Bay Shoreline)

What's Next?

Discussion:

- **Member Jacuzzi** asked Staff Behar if he is a statistician.

Staff Behar responded that he is not a statistician nor a scientist but has had to learn a lot about both roles.

- **Member Jacuzzi** commented that sea level rise will likely be around 30 inches or above in 75 years.

Staff Behar responded that it could also be below 30 inches.

Member Jacuzzi commented that while it could be below 30 inches, the numbers that Staff Behar showed didn't look like it would be much lower than 30 inches. He continued that he understands this information is constantly changing.

Staff Behar responded that there is always a range. The range that is most likely for 2100 is between 1.6 and 3.1 feet. He continued that the range depends on what the emission scenario looks like.

Member Jacuzzi asked that if they were translating this range to dollars, would they be looking at between \$38 and \$57 billion for the San Francisco Bay.

Staff Behar responded that is correct using the Hirschfeld methodology. He stated that you would have to study the slide to understand the methodology well. He continued that the 3-meter number is an extrapolation that he and other staff came up with. He commented that another thing the paper cites is that \$110 billion will be needed by 2050 just in the bay. He is unsure where that number comes from but believes it helps show what is at stake.

- **Member Nagengast** asked if Staff Behar is a part of the water enterprise.

Staff Behar responded that he is.

Member Nagengast asked if there is another person like Staff Behar in the power and wastewater enterprise.

Staff Behar responded that Anna Roche used to fill a similar position in the wastewater enterprise. However, she now works with infrastructure, but she still works on wastewater related projects such as being the project manager for the ocean beach project as part of the infrastructure team. This project has a significant wastewater aspect to it. Staff Roche also led the work on extreme precipitation and what it might mean for intensity duration, and frequency curves. It is a very experimental and interesting piece of science that she led through Lawrence Berkely Laboratories and Pathway Climate Science Consultants.

- **Member Nagengast** asked how climate work transcend into the power and wastewater division.

Staff Behar responded that the comments his department made were on behalf of the entire city and included input from the power and wastewater division. Anything that is submitted on behalf of the SFPUC is supposed to be for all divisions.

Member Nagengast asked about how the impact and downstream effects of the revised comments get incorporated into the entirety of the SFPUC when Staff Behar is in the water enterprise and there are two more enterprises.

Staff Behar responded that the last slide shows the silvered projections and silvered vulnerability, and consequences are citywide and used by everyone. The immediate impact is that when the 10-year capital plan is ready for renewal every 2 years, everyone with a project in the capital plan completes the checklist that was developed in the original plan in order to understand the degree to which their project is vulnerable to possible sea level rise projections plus the 1% storm. Though those numbers will change in the guidance as the port moves forward. Other projects in water, wastewater and power would than use the revised sea-level rise projections that are adopted. However, power has very little assets in the sea level rise vulnerability zone. Wastewater has the most assets.

Public Comment: None

6. **Presentation and Discussion:** [Biosolids Program Update](#), Ryan Batjiaka, SFPUC Resource Recovery Specialist
 - a. **Resources:**
 - i. [May 2023 SFPUC CAC Biosolids Update](#)

Presentation

Biosolids Program Update

Agenda

Moving to resource recovery

Soil Fertility – The Reason We Ate Yesterday

Benefit of SFPUC Biosolids as a Fertilizer

Benefit of Biosolids as a Fertilizer

How were biosolids used in 2022?

Continuing to transition away from landfill

Regulatory updates

Fertilizer use updates

Oceanside TPAD

Class A Biosolids at Southeast via THP

Biosolids do amazing things

Thank you

Discussion:

- **Staff Batjiaka** presented on the difference in sections of a field that used biosolids as a fertilizer versus another section that did not use biosolids as a fertilizer.

Member Nagengast asked if they have gone back to check on the fields, since it has now been a couple years. Does the field now go up to their head?

Staff Batjiaka responded that he will present some pictures later where the field goes all the way to his head.

- **Staff Batjiaka** talked about how a company in Fairfield turns most of our biosolids into a pathogen free, liquid fertilizer. Another 17% of our biosolids is stored across the bay during the winter and then sent to Sacramento County wetlands. Another 9% went to a compost facility in Merced County and finally 15% went to a ranchland in Solano to use as fertilizer.

Member Nagengast asked what the prices are on that. How much does the SFPUC pay?

Staff Batjiaka said that we pay quite a large amount. The price per wet ton at Lystek is \$110 per wet ton. The price per wet ton at Solano County is around \$41 per wet ton.

Member Nagengast asked if that included trucking costs.

Staff Batjiaka responded that the trucking to the Lystek facilities and Solano County is separate. It costs about \$30 per wet ton to truck out to both locations.

Member Nagengast commented that it costs about \$140 per wet ton of biosolids that goes to Lystek and that 59% of the SFPUC's biosolids goes to Lystek.

Staff Batjiaka responded that is correct. It is a very large budget.

Member Nagengast commented that it would be good to include the budget in the future. This way it would be clear how budget is impacted year to year.

Staff Batjiaka responded that he can get a little bit into how the budget was affected this year. He comments in his slide "Continuing to transition away from landfills" that yellow is the amount of biosolids going to landfills, blue is the amount that becomes fertilizer, dark green is the amount that goes directly to ranchers and light green is the amount that goes into storage first before going to ranchers. In this chart you can see that in 2022 46% of the SFPUC's biosolids went to ranchers whereas in 2023 only 15% went to ranchers. This year there 0% going to ranchers because the California Forever project bought all the farmland in Solano County. However, there is a large price difference between sending biosolids directly to ranchers versus sending it to be made into fertilizer.

- **Staff Batjiaka** presented that the biosolids have added water as well. He commented that the SFPUC's biosolids are about 20%-25% total solids but that they are attempting to get that percentage down to 13% total solids.

Member Nagengast commented that she will be going a bit off topic. She comments that as she is listening to the past two presentations she is thinking about sea-level rise and emissions profile scenarios, and she is wondering how trucking might affect green-house gas emissions.

Staff Batjiaka responded that his group did a green-house gas emissions assessment on their biosolids program but that he did not include it in the presentation. He commented that they found that when using biosolids as a fertilizer, they can sequester carbon which is helpful. The trucking however is bad for green house gas emission. However, the greatest impact is that they use biosolids as a soil amendment instead of sending it to the landfill. The second greatest impact is in how they use the biogas that results from using biosolids. They are currently not using the biogas very well. He commented that in their Oceanside treatment plant, they are installing new Cogen engines and those engines will essentially be generators that run off of cleaned up biogas. However, this project will not be completed for at least another year. In their Southeast treatment plant, they finally got their Cogen engine running for the first time in 3 years this past winter. He showed the members a video of the Cogen engine running and commented that it turns out about 1.5 megawatts of electricity. He commented that a house uses about 2 kilowatts of electricity.

Member Nagengast commented that SFO is 42 megawatts. She continued that she would love to see the green-house gas emissions piece layered into the calculus for biosolids.

Staff Batjiaka responded that he could send the committee the emissions assessments. He said that it is up on the Bay Area Biosolids Collation website.

- **Member Jacuzzi** asked if the trucks are SFPUC owned or contracted trucks.

Staff Batjiaka responded that they are contract trucks. He commented that the SFPUC fleets are going electric or zero emission. He commented that when they asked for bids in the past, they gave bonus points in the bid evaluation for companies with alternative fuel vehicles. They did not put this in the last call for bids but would like to look into it for the next call for bids which will be sometime in 2026.

- **Member Nagengast** asked what the goal of the biosolids program is from a green-house gas perspective.

Staff Batjiaka responded that the biosolids programs is skewed to all the eggs being in one basket. They want to make sure they are doing something beneficial with their biosolids and that they can continue doing something beneficial even if something happens to their ability to turn biosolids into fertilizer.

Member Baker asked what the risk management plan is for that issue.

Staff Batjiaka responded that they put out an RFI for alternative management technology for biosolids. He commented that their RFI was a bit disappointing in that there is new technology, but it is not quite ready for mass use. He commented that there is a classification pyrolysis process that could potentially get more energy out of biosolids in exchange for having a less solid product. He commented that there is also another process in the work called super critical water oxidation that is being piloted in Orange County, but it is unsure if it will

work yet. The concept is that biosolids might be soluble in water at a high enough temperature and that you might be able to put biosolids in extremely hot water and end up with just salt at the end of the process.

Member Baker asked what this process is called again.

Staff Batjiaka responded that it is called super critical water oxidation. He said that there is a company called 374 Water that is running the pilot program.

- **Member Baker** asked about the two different temperatures between the ocean and the further in, the 95-degrees F versus the 13- degrees F and if the difference between that is just geographic location.

Staff Batjiaka responded that the EPA has federal requirements for biosolids. He commented that there are two tiers, the class B standard for pathogen reduction is a significant reduction but not a complete reduction and requires temperatures of 95-degree F. On the other hand, 24 hours at 131-degree F reduction is a complete pathogen reduction which is one way to obtain a class A standard for pathogen reduction.

Member Baker asked why we need both class A and class B standards for pathogen reduction and if they are used differently.

Staff Batjiaka responded that class A takes more energy to achieve but that the Southeast Treatment Plant is moving towards class A standard by using the digestive facility project because high steam, high pressure pretreatment that breaks apart all the cell walls creates more biogas. He comments that this biogas goes into the PG&E pipeline and creates 100% biogas usage from class A standard pathogen reduction. He further comments that this is a very reliable way to make sure biogas gets into the power grid.

- **Member Baker** asked if human poop or manure is better.

Staff Batjiaka responded that humans eat significantly better food than we feed cows and chickens as a result there are more desirable macro nutrients in human poop such as nitrogen, phosphorus and potassium. He commented that cow manure is around 1% nitrogen by weight whereas biosolids is around 5% nitrogen by weight.

- **Member Nagengast** asked to confirm that diversification is a goal of the biosolids program.

Staff Batjiaka confirmed that is correct.

- **Member Nagengast** asked if there is a greenhouse gas goal for the biosolids program.

Staff Batjiaka responded that the program wants better biogas utilization and that there are infrastructure programs happening right now in order to achieve better biogas utilization. He further responded that there are not a lot of bids from companies to manage biosolids for the SFPUC, as a result they are happy with any amount of diversification. He further comments that trucking biosolids is expensive and they take that into their bid evaluation because otherwise management companies that are further away are penalized for the high trucking costs.

Member Nagengast asked if farmers paid into management groups that work with big agencies to bring fertilizer to their land. She wondered how the fertilizer got to farmers on a functional level.

Staff Batjiaka responded that there are two companies (Synagro and Denali) that act as the go between for farmers and the class B biosolids that we have available for fertilizer use. These companies take care of all the management that make the use of class B biosolids as fertilizer possible such as permitting fees, groundwater testing for nitrates, making sure there is not impacts to waterways and making sure the biosolids are spread on the field in a reasonable time. He commented that these companies are paid to manage the logistics while the farmer gets the fertilizer for free which is great for non-irrigated pastures in Solano County that are not super high value as using biosolids is very low margins for the farmers.

Member Jacuzzi asked if there are regulations for the disking process, such as how long can the biosolids sit out before it is applied.

Staff Batjiaka responded that the biosolids are supposed to be applied the same day as there is still pathogen contents in class B biosolids so the type of crops that can be grown using this type of biosolids as fertilizer is limited. He further commented class B biosolids are used for non-irrigated pastureland or feed crops while class A biosolids could be used for things like golf courses and lawns.

Public Comment: None

7. [Future Agenda Items and Resolutions](#)

- a. Adopted Resolutions for Follow Up
 - Resolution in Support of SFPUC Class A Biosolids Local Distribution Program [adopted August 21, 2018](#)
 - Resolution in Support of Cityworks Interns Recommendations [adopted on November 21, 2017](#)
 - Resolution in Support of Equitable Green Infrastructure Implementation throughout the Southeast Sector of San Francisco and throughout the City [adopted on June 20, 2017](#)
 - Resolution Urging SFPUC Commission to Initiate Planning and Environmental Review for Building a New Community Center at Third and Evans and to Direct Staff to Develop an Interim Greenhouse Environmental and Workforce Development Program [adopted on October 18, 2016](#)
 - Resolution Supporting the SFPUC to Conduct Robust Community Engagement to Determine the Community's Preference for Remodeling Southeast Community Facility at 1800 Oakdale or Building a New Community Center at 1550 Evans [adopted on January 19, 2016](#)

Public Comment: None

8. **Announcements/Comments** Visit www.sfpuc.org/cac for final confirmation of the next meeting date.

Public Comment: None

9. **Adjournment at 7:03pm.**

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