BOARD OF DIRECTORS
EAST BAY MUNICIPAL UTILITY DISTRICT

375 - 11th Street, Oakland, CA 94607 Office of the Secretary: (510) 287-0440

Notice of Location Change

PLANNING COMMITTEE MEETING
Tuesday, January 12, 2021
9:15 a.m.
Virtual

Notice is hereby given that due to COVID-19 and in accordance with the most recent Alameda County Health Order, and with the Governor's Executive Order N-29-20 which suspends portions of the Brown Act, the Planning Committee meeting scheduled for January 12, 2021 at 9:15 a.m. **will be conducted via webinar or teleconference only**. In compliance with said orders, a physical location will not be provided for this meeting. These measures will only apply during the period in which state or local public health officials have imposed or recommended social distancing.

Dated: January 7, 2021

Rischa S. Cole

Rischa S. Cole
Secretary of the District

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BOARD OF DIRECTORS
EAST BAY MUNICIPAL UTILITY DISTRICT

375 – 11th Street, Oakland, CA 94607 Office of the Secretary: (510) 287-0440

AGENDA
Planning Committee
Tuesday, January 12, 2021
9:15 a.m.
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Location

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Committee Members Doug Linney {Chair}, Lesa R. McIntosh and Frank Mellon will participate by webinar or teleconference

*** Please see appendix for public participation instructions***

ROLL CALL:

PUBLIC COMMENT: The Board of Directors is limited by State law to providing a brief response, asking questions for clarification, or referring a matter to staff when responding to items that are not listed on the agenda.

DETERMINATION AND DISCUSSION:

1. Wet Weather Consent Decree Implementation Update (White)
2. Richmond Salmon Net Pen Proposal (Tognolini)
3. California Water Futures Market (Tognolini)

ADJOURNMENT:

Disability Notice

If you require a disability-related modification or accommodation to participate in an EBMUD public meeting please call the Office of the Secretary (510) 287-0404. We will make reasonable arrangements to ensure accessibility. Some special equipment arrangements may require 48 hours advance notice.

Document Availability

Materials related to an item on this agenda that have been submitted to the EBMUD Board of Directors within 72 hours prior to this meeting are available for public inspection in EBMUD's Office of the Secretary at 375 11th Street, Oakland, California, during normal business hours, and can be viewed on our website at www.ebmud.com.

APPENDIX

Planning Committee Meeting
Tuesday, January 12, 2021
9:15 a.m.

EBMUD public Board meetings will be conducted via Zoom.
Board committee meetings are recorded, and live-streamed on the District's website.

Please visit this page beforehand to familiarize yourself with Zoom.
https://support.zoom.us/hc/en-us/articles/201362193-Joining-a-Meeting

Online
https://zoom.us/j/94916745220?pwd=QzBicElzMVVMUER6eDNlc0Fqc2ZHQT09
Webinar ID: 949 1674 5220
Passcode: 529482

By Phone
Telephone: 1 669 900 6833
Webinar ID: 949 1674 5220
Passcode: 529482
International numbers available: https://zoom.us/u/arPYyB14P

Providing public comment
The EBMUD Board of Directors is limited by State law to providing a brief response, asking questions for clarification, or referring a matter to staff when responding to items that are not listed on the agenda.

If you wish to provide public comment please:

- Use the raise hand feature in Zoom to indicate you wish to make a public comment https://support.zoom.us/hc/en-us/articles/205566129-Raising-your-hand-in-a-webinar
    - If you participate by phone, press *9 to raise your hand
- When prompted by the Secretary, please state your name, affiliation if applicable, and topic
- The Secretary will call each speaker in the order received
- Comments on **non-agenda items** will be heard at the beginning of the meeting
- Comments on **agenda items** will be heard when the item is up for consideration
- Each speaker is allotted 3 minutes to speak; the Committee Chair has the discretion to amend this time based on the number of speakers
- The Secretary will keep track of time and inform each speaker when his/her allotted time has concluded

To *observe* the Planning Committee Meeting,
please visit: https://www.ebmud.com/about-us/board-directors/board-meetings/

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: January 7, 2021

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Eileen M. White, Director of Wastewater EMW

SUBJECT: Wet Weather Consent Decree Implementation Update

SUMMARY

This memorandum summarizes the Wet Weather Consent Decree (Consent Decree) compliance activities between January through December 2020. Specific details are contained in the attachment. This item will be presented at the January 12, 2021 Planning Committee meeting.

DISCUSSION

District compliance with the Consent Decree is determined through comparison of the three-year average output ratios against benchmarks established in the Consent Decree. The Consent Decree has three prescribed compliance check-ins; the first in September 2022, the second in 2030, and the final in 2036. All three wet weather facilities (WWFs) are at risk of noncompliance in 2022 since the average output ratio for FY20 at each WWF is greater than the FY20 target values. However, the Consent Decree allows for a 20 percent exceedance factor at the 2022 check-in.

- Point Isabel WWF is projected to be out of compliance at the 2022 check-in.
- Oakport WWF may be in compliance at the 2022 check-in, and if not, is likely to be within the exceedance factor.
- San Antonio Creek WWF may be in compliance at the 2022 check-in, and if not, is likely to be within the exceedance factor.

If a WWF does not meet the established benchmarks, the Consent Decree requires supplemental data gathering to determine steps needed to achieve compliance.

Consent Decree Required Actions

The Consent Decree also requires the District to complete two capital improvement projects and to implement both a Regional Technical Support Program (RTSP) and the Regional Private Sewer Lateral (PSL) Program.

- Both capital projects have been constructed and are operational.
- The RTSP identified sources of inflow and infiltration (I&I) which were not addressed by rehabilitation performed by the Satellites or private property owners via the PSL programs. To date, over 335 sources have been identified, which contribute over 21 million gallons per day during peak flows.
- The Regional PSL Program continues to assist in the removal of I&I from private property. With the adoption of the updated PSL Ordinance on May 24, 2019, the overall compliance rate, which was greater than 90 percent, is expected to increase with the introduction of follow-up fees to noncompliant property owners.

NEXT STEPS

The District will continue implementing the RTSP and the Regional PSL Program, and will monitor WWF output ratios in preparation for the 2022 check-in. Staff will keep the Board informed of progress in meeting Consent Decree requirements.

CCC:EMW

Attachment

WET WEATHER CONSENT DECREE IMPLEMENTATION UPDATE
Activities January 2020 through December 2020

WET WEATHER CONSENT DECREE IMPLEMENTATION

Since September 2014, the District and its seven wastewater satellite agencies (Satellites) have been implementing inflow and infiltration (I&I) reduction efforts under the Consent Decree with the United States Environmental Protection Agency. The Consent Decree requires the elimination of most discharges from the District's three wet weather facilities (WWFs) by 2036 through a number of requirements designed to reduce I&I.

The objectives of the Consent Decree are achieved through an asset management-based approach which requires the parties directly responsible for aged infrastructure to implement corrective measures. Private property owners are responsible for private sewer laterals (PSLs), the Satellites are responsible for their publicly-owned sewer systems, and the District is responsible for its interceptor system.

District compliance with the Consent Decree is determined through use of a hydrologic and hydraulic flow model of the District's interceptor system. Annual updates and calibration of the flow model are performed to assess progress in removing I&I and to determine the reduction in volume discharged from each of the WWFs. Key metrics on Consent Decree performance are calculated and reported to the regulators annually. Additionally, these metrics are utilized at three prescribed check-ins to determine compliance; the first in September 2022, the second in 2030, and the final in 2036. The Consent Decree also requires the District to implement a regional inflow investigation program called the Regional Technical Support Program (RTSP) and the Regional PSL Program, and to complete two capital improvement projects.

Hydrologic and Hydraulic Flow Model Output Ratio Results

The output ratio is the ratio between discharge volumes from a WWF for a fiscal year (FY) versus discharge volumes that occurred during the baseline year (FY11) under a prescribed storm event. The Consent Decree established benchmarks for each WWF to assess compliance at the prescribed check-ins. Those benchmarks are compared against the average of the preceding three output ratios for each WWF. As benchmarks are only established at the prescribed check-ins, FY target values were developed through a straight-line interpolation between benchmarks to assess progress towards meeting the Consent Decree objectives. A WWF meets expectations when the calculated three-year average output ratio is less than the interpolated annual target, and is at risk of noncompliance when the calculated three-year average output ratio is greater than the interpolated annual target. At the time of a check-in, if a WWF is not meeting the established benchmarks, the Consent Decree requires supplemental data gathering to determine steps needed to achieve compliance.

The FY20 three-year average output ratio for each WWF was calculated using the output ratios from FY18, FY19, and FY20. While FY18 and FY19 received near average precipitation, FY20 received significantly lower than average rainfall. Due to low precipitation in FY20, the rate of I&I entering the collection system likely resulted in a reduction of the output ratios inconsistent with the amount of rehabilitation performed. Table 1 presents the calculated output ratios for each WWF from FY18 through FY20, the three-year-average, and the interpolated targets for FY20. Table 1 also presents the benchmark output ratios for 2022, 2030, and final compliance as defined in the Consent Decree.

Table 1 – Wet Weather Facility Output Ratios from Flow Model Results

	Output Ratios				Consent Decree Benchmarks			
WWF	**FY18**	**FY19**	**FY20**	**Three-Year Average**	**FY20 Target***	**2022**	**2030**	**Final Compliance**
Point Isabel	97%	96%	48%	81%	62%	53%	18%	0% by 2034
Oakport	77%	75%	66%	73%	71%	65%	31%	0% by 2036
San Antonio Creek	82%	74%	39%	65%	53%	43%	--	0% by 2028

**Interpolated target*

The 2022 Consent Decree benchmarks will be compared against the FY22 three-year average output ratios, which will be computed from FY20, FY21, and FY22 output ratios. Therefore, the determined output ratios for FY20, which are lower than previous years, will be included in the 2022 check-in. Projections for meeting the 2022 Consent Decree benchmark are analyzed through the review of the previous six output ratios as well as three-year average values.

All three WWFs are at risk of noncompliance in 2022 since the three-year average output ratio for FY20 at each WWF is greater than the FY20 target values. However, the Consent Decree allows for a 20 percent exceedance factor at the 2022 check-in. Projections for 2022 compliance for each WWF are:

- Point Isabel is projected to be out of compliance at the 2022 check-in. The FY20 output ratio for Point Isabel, which incorporates the benefits of the Pump Station Q Force Main/Gravity Interceptor Reverse Flow project and exceptionally dry conditions, is significantly lower than previously determined output ratios. Depending on the upcoming FY21 output ratio, Point Isabel WWF may be within the exceedance factor at the 2022 check-in.
- Oakport may be in compliance at the 2022 check-in, and if not, is likely to be within the exceedance factor. Oakport has been tracking closely to the interpolated target line for the last three years and is currently within 20 percent of the 2022 benchmark.
- San Antonio Creek may be in compliance at the 2022 check-in, and if not, is likely to be within the exceedance factor. San Antonio Creek discharges significantly less volume than the other WWFs. Therefore, minor reductions in discharge volume result in significant reductions in its output ratio.

As system-wide reductions in I&I are influenced by climatological conditions, staff performed additional analysis by comparing the discharge volumes from the calibrated model in FY20

against the same model reverted to the baseline FY11 groundwater conditions. Table 2 shows the calculated system-wide discharge volume ratios including discharges from the WWFs and the Main Wastewater Treatment Plant (MWWTP). This analysis offers an enhanced understanding of the I&I reduction trends. The analysis period includes one of the driest and one of the wettest seasons on record, which caused significant variations in calculated I&I reductions. Groundwater levels, based on multiple years of climatological conditions, also have a significant impact on discharge volumes and achieving Consent Decree compliance. FY20 provides additional data on I&I reductions and trends since FY15. System-wide reductions in I&I volumes are 20 percent through FY20, which is slightly better than the 18 percent determined for the groundwater normalized ratio.

Table 2 – Climatological Impacts on System-Wide Volume Ratios

Year	System-wide Volume Discharged with FY Groundwater Conditions	System-wide Volume Discharged with FY11 Groundwater Conditions
FY15	86%	100%
FY16	92%	97%
FY17	95%	95%
FY18	92%	90%
FY19	92%	91%
FY20	80%	82%

RTSP

The objective of the RTSP is to identify sources of I&I which are not addressed by rehabilitation performed by the Satellites or private property owners via the PSL programs. The sources of I&I identified by this District-led program are reported to the regulators and the Satellites, followed by appropriate repair or rehabilitation by the responsible party. The Consent Decree requires the District to implement this program for the duration of the Consent Decree.

Staff has identified a number of significant I&I sources within the regional collection systems using an array of investigative tools, such as flow monitoring, smoke testing, dye testing, visual inspections, closed-circuit television inspections, digital imaging of sewer mains, and three-dimensional manhole inspections. Identified sources include cross-connections with the stormwater systems, connections with abandoned pipes, connections from privately-owned area drains collecting stormwater, and offset joints allowing groundwater into the sewer system. To date, over 335 sources have been identified, which contribute over 21 million gallons per day during peak flows.

Regional PSL Program

Since 2011, the District has operated the Regional PSL Program which includes all Satellites except for the City of Berkeley, which implements its own standalone program. Through the end of 2020, 40,711 compliance certificates have been issued to property owners who demonstrate that their PSL was free of leaks. Those certificates represent 626 miles of pipe length and 31 percent of the PSLs within the program area. The initial projections for certifications were based

on a 30-year review of property transactions at the onset of the program. As the predominant trigger for certification is at point-of-sale, the slowing real estate market conditions directly impact the program's ability to meet projections and the program continues to trail initial projections. Overall compliance for those properties required to demonstrate that they are in a leak-free condition remains greater than 90 percent.

Consent Decree Capital Projects

The District has completed the construction of and is currently operating two Consent Decree-required capital projects. The Urban Runoff Diversion Project (URDP), which consists of a small pump and force main, conveys flows from a stormwater facility during dry weather conditions to the MWWTP for treatment. The URDP removes pollutants from captured waters in the stormwater system which would otherwise have been discharged to San Francisco Bay without treatment. The URDP has conveyed over 380 million gallons of dry weather urban runoff since its inception in 2017. The second capital project, Pump Station Q Force Main/Gravity Interceptor Reverse Flow project, was completed in December 2019, nine months ahead of the Consent Decree deadline of September 2020. This project provides additional conveyance capacity to deliver flows to the MWWTP resulting in reduced discharge volumes from Point Isabel WWF. This project provides for the largest single reduction in discharge volumes for all work required under the Consent Decree.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: January 7, 2021

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Michael T. Tognolini, Director of Water and Natural Resources MTT

SUBJECT: Richmond Salmon Net Pen Proposal

SUMMARY

The Golden State Salmon Association (GSSA) is seeking the District's support to add a salmon acclimation net pen release location in or near the Richmond Harbor. Staff is recommending the District support this acclimation project, which would hold juvenile salmon from the Mokelumne River Fish Hatchery (MRFH) for a short period (three to ten days), providing time to imprint and help some adults return to the release area. This item will be presented at the January 12, 2021 Planning Committee meeting.

DISCUSSION

The MRFH raises Chinook salmon for mitigation and enhancement programs. The mitigation program compensates for the loss of habitat as the result of constructing Camanche Dam, while enhancement programs provide opportunities for commercial and recreational salmon harvest. Enhancement fish are typically released in bay or ocean locations since the program is specifically designed to contribute to the ocean fishery. Acclimation net pen programs are an extension of the enhancement program and are designed to improve adult salmon returns to the release locations and provide near shore fishing opportunities in areas that have sufficient public access. While the mitigation program is funded by the District, a significant portion of the enhancement program is funded by the State through Salmon Stamp Funds collected from commercial licensees.

Similar acclimation release programs are run at Pillar Point Harbor in Half Moon Bay and Santa Cruz Harbor. GSSA views the proposal as an opportunity to provide access to salmon fishing to individuals who cannot afford ocean charters. Additionally, there is an educational component, and GSSA hopes to work with local schools to integrate the program into the classroom science curriculum. GSSA is working with the California Department of Fish and Wildlife (CDFW) to gain approval and has reached out to various community leaders and elected officials for support.

GSSA is working on a proposal to include Richmond Harbor as an additional release location because of the following benefits: (1) the area has a significant amount of public access shoreline to allow individuals to fish for salmon without having to invest in sport fishing charters, which typically cost around $200 per person; and (2) it would be located near economically disadvantaged communities that would have a chance to harvest fresh salmon for the cost of a license (no license is

required for those under 16 years of age). This program can also be part of the teaching curricula in local schools and the community as a whole.

NEXT STEPS

GSSA continues to work with CDFW to move the proposal forward. Staff has been engaged in an advisory capacity regarding logistics and science. GSSA is actively engaged with community leaders and the District to gather support.

CCC:MTT:sjc

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: January 7, 2021

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Michael T. Tognolini, Director of Water and Natural Resources MTT

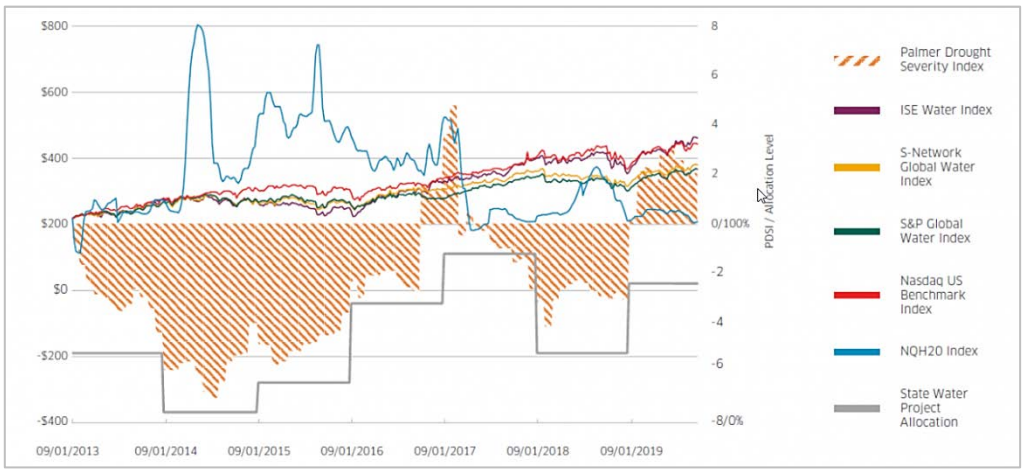
SUBJECT: California Water Futures Market

SUMMARY

On December 7, 2020, the futures on the NASDAQ Veles California Water Index (ticker symbol: NQH20) were available for trading through the CME Group (Chicago Mercantile Exchange, Chicago Board of Trade, New York Mercantile Exchange, The Commodity Exchange). The NQH20 futures are a new tool to provide agricultural, commercial, and municipal water users with the ability to hedge and transfer the risk of a future price increase of water. This memo provides background information and a discussion of the potential impacts to the District. This item will be presented at the January 12, 2021 Planning Committee meeting.

DISCUSSION

On October 31, 2018, the NASDAQ exchange launched the NASDAQ Veles California Water Index (ticker symbol: NQH2O). The index sets a weekly benchmark spot price of water rights in California, based on the volume-weighted average of the transaction prices in California's five largest and most actively traded water markets. The index is comprised of prices from the surface water market and four adjudicated groundwater basins – the Central Basin, the Chino Basin, the Main San Gabriel Basin, and the Mojave Basin (Alto Subarea). NASDAQ developed the NQH2O Index in partnership with Veles Water Limited, a firm specializing in the development of financial products for water markets. The data utilized in the calculation of the index is provided by WestWater Research, an economic consulting firm focused on pricing, valuation, and transaction advisory services for water rights and water resource development. NQH20 is valued in U.S. dollars per acre foot ($/AF). The following chart represents the historical pricing of the water index along with other water price indices. (*Source: NASDAQ.com, Westwater Waterlitix™*).



On December 7, 2020, the CME Group, a derivatives marketplace, launched a futures contract tied to the NQH2O. The derivatives market is the market for financial instruments like futures contracts or options, which are derived from other forms of assets. Each contract represents ten acre-feet of water or about 3.26 million gallons. While water has officially joined gold, oil, and other commodities being traded on the CME futures market, the contracts will be settled financially. This means that buyers of contracts who hold on through expiration will not receive a delivery of millions of gallons of water like they would for other commodity-based futures like gold, oil, and grain. Instead, delivery will take place in the form of a cash settlement. During the first week of trading, 36 contracts were secured, and NQH2O water prices were just under $500/AF.

The water futures market may provide a means for farmers, businesses, and agencies to hedge against the financial impacts of future price swings of water in California. A potential water purchaser can buy into the market at one price, and if the price goes up, sell the contract and use the proceeds to purchase real, higher-priced water. If the price goes down, the loss would be made up by the lower cost of real water. The current understanding is that the futures market is not intended to privatize real water supplies. Additionally, the NQH2O price is calculated based on the market pricing of water from five sources in California, so the price of water should determine the price of the NQH2O and not the other way around like some other commodities.

Potential Impact to the District

It is too early to determine the full operational or financial impacts of the new futures on the District or California's water market. Since the current understanding is that water futures are financially settled and do not require delivery of the underlying commodity, this new market by itself should not directly impact either the supply or the demand for water. Additionally, as most of the District's sources are secured by long-term water right entitlements and contracts, this new water market is currently not expected to have a significant impact on the District's current or potential future sources of supplemental supply. However, the District should monitor and evaluate the futures market closely to better understand and determine any potential impacts and recommended actions.

Since the District does not usually purchase water under market-based pricing on an annual basis, it is unlikely the District would benefit from participating in this market by hedging against future potential water price increases. The water futures market is not developed sufficiently with adequate liquidity and volume for the District to participate even on a short-term basis (i.e., trading volume is too low). If the water futures market grows, it has the potential to allow the District to participate and hedge against the financial impacts of future price swings of short-term water transfer supplemental supply (i.e., less than a year).

NEXT STEPS

The District will track the futures market to understand the long-term impacts. Staff will monitor the price of the futures, effectiveness of the pricing to represent real water pricing in the open market, acceptance of the pricing amongst California water buyers and sellers, make-up of the customer base of the futures market, and how the participants are using the market.

CCC:MTT:acr

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