



**BOARD OF DIRECTORS  
EAST BAY MUNICIPAL UTILITY DISTRICT**

375 – 11<sup>th</sup> Street, Oakland, CA 94607

Office of the Secretary: (510) 287-0440

## **AGENDA**

### **Sustainability/Energy Committee**

**Tuesday, February 24, 2015**

**9:15 a.m.**

**Training Resource Center**

**(Committee Members: Directors Katz {Chair}, Linney, and Young)**

#### **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. Food Waste Update (Horenstein)
2. 2014 Mokelumne Fall-Run Chinook Salmon Returns (Sykes)
3. 2014 California Groundwater Legislation (Sykes)

#### **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.*



## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: February 19, 2015

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *ARC*

FROM: Bennett K. Horenstein, Director of Wastewater *BH*

SUBJECT: Food Waste Update

### SUMMARY

In pursuit of local sustainable organic feedstock for anaerobic digestion and renewable energy generation at the Main Wastewater Treatment Plant (MWWTP), the District has been seeking sources of commercial food waste for the past several years. This memorandum provides an update on the District's efforts to secure the City of Oakland's (City) commercial food scraps, as well as to procure a private sector partner for food waste preprocessing on the MWWTP site. Staff will present these updates to the Sustainability/Energy Committee on February 24, 2015.

### DISCUSSION

#### City of Oakland Commercial Food Scraps

The City awarded its Mixed Materials and Organics (MMO) franchise to Waste Management (WM) in September 2014, and directed that WM contract with EBMUD for commercial organics processing. The District has made very limited progress in developing a subcontract due to repeated unsuccessful attempts to discuss issues with City staff, and to WM's failure to provide a response to our contract proposal.

Many of the terms of the WM-District contract are driven by the MMO agreement between WM and the City. On February 10, following a meeting with District staff requested by the policy staff of Council President Lynette McElhaney Gibson and Council Member Dan Kalb, the District was provided excerpts of the MMO containing key language affecting the District. Staff provided comments on the language to Council, Public Works, and City Attorney staff and requested that the City Administrator not sign the MMO until District issues have been resolved. A letter to the City Administrator, which was also provided to the Mayor and Council, was provided to the Board under separate cover. District staff continues to try to work with City staff to resolve the outstanding issues.

### Food Waste Preprocessing and Program Expansion

In 2011, the District signed a lease and organics processing agreement with Recology for development of a food waste preprocessing facility at the MWWTP. The agreement was predicated on Recology bringing commercial organic waste from San Francisco to the District for preprocessing and digestion. That waste stream has not materialized, and the facility was not constructed as contemplated by the District's agreement with Recology.

At the same time, the District now requires a preprocessing facility to be built at the MWWTP on an aggressive timeline to preprocess the commercial food scraps that the City of Oakland is directing to the MWWTP. While the City and WM have conceptually agreed to a startup phase (July 1, 2015 – July 1, 2016) during which material could be sent to compost, the City expects the District to have a fully operational preprocessing facility at the MWWTP by July 1, 2016.

In light of the changed circumstances from the 2011 agreement with Recology, the District gave notice of termination to Recology on December 26, 2014. A variety of potential service providers will be invited to propose on a new RFP issued by the District for Food Scraps Preprocessing and Organics Program Development, which staff plans to release this month. Through this RFP, the District seeks to procure a partner to provide food waste preprocessing services on the MWWTP site, with capacity to preprocess Oakland food scraps by July 1, 2016. Additionally, the District will invite the companies to propose additional sources of food waste for the facility. The RFP also will provide the option for companies to propose additional added value services consistent with the District's overall vision for the organics program. Examples include dedicated digestion and dewatering to isolate operational impacts of food waste contamination and create a higher value digestate product, and development of additional renewable energy recovery to utilize biogas generated through digestion of the food waste. Energy recovery may include additional electricity generation or conversion of biogas to compressed natural gas for transportation fuel.

### Project Risks

The nature of this project, with the District leading industry innovation on conversion of food waste to energy, gives rise to an unusual set of challenges for the District. While the District has been piloting digestion of commercial food waste and accepting a relatively small material from Central Contra Costa Solid Waste Authority, there are uncertainties associated with scaling up the program. For example, preprocessing technology continues to evolve, and the long-term operational impacts of contamination in food scraps are not fully known. In addition, the West Oakland community remains concerned about the degree to which this project will increase the

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MWWTP's odor profile. In development of the WM subcontract and preprocessing agreement, staff intends to mitigate and manage risks to the extent possible and communicate outstanding residual risks to the Board.

#### **NEXT STEPS**

Staff is continuing to work with the City and Waste Management to negotiate terms of the subcontract for District organics processing. The subcontract will ultimately be brought to the Board for approval.

Staff will also be reviewing responses to the District's RFP for Food Scraps Preprocessing and Organics Program Development and will bring a proposed contract to the Board for approval.

BKH:JTK



## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: February 19, 2015

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *ARC*

FROM: Richard G. Sykes, Director of Water and Natural Resources *RGS*

SUBJECT: 2014 Mokelumne Fall-Run Chinook Salmon Returns

### INTRODUCTION

The 2014 fall-run Chinook salmon returns to the Mokelumne River were an estimated 12,118 fish, including 3,302 fish that spawned in the river and 8,816 that were collected at the hatchery for egg production. The 2014 return is about 262 percent of the long-term average (4,627), the fourth consecutive year of over 12,000 fish returning, and the fifth largest return since 1940. One indicator EBMUD uses to assess the health of the Mokelumne fishery is the running 9-year average escapement, which represents three complete 3-year salmon life cycles. With the addition of the 2014 return that figure is 8,022 fish or 173 percent of the long-term average. This memo provides a brief review of the 2014 return and the key factors affecting salmon escapement to the Mokelumne River. A presentation on this information is scheduled for the February 24, 2015 Sustainability/Energy Committee meeting.

### DISCUSSION

The extended drought was a key influence on fall-run Chinook salmon returns Central Valley-wide in 2014 with impacts to flows and water temperatures. Most river systems saw significant reductions when compared to long-term average returns. Salmon returns in the Central Valley are cyclical, typically declining in dry years and years of warmer ocean temperatures, and increasing in wet years and years of cooler ocean temperatures. However, there are many other important factors that influence escapement, particularly on the Mokelumne River, where salmon have to traverse the Delta and are impacted significantly by export pumps, Delta Cross Channel (DCC) operation and predation. Figure 1 shows salmon escapement to the Mokelumne since records began in 1940. Escapement values for 2014 are not yet available for the other river systems; however it is likely that the Mokelumne River will prove to be the exception in regards to the overall decline in salmon numbers experienced in the valley.

As the current drought continues, management actions will be water focused on maximizing the benefits of limited water supplies allocated to in-river fisheries. Much of the focus this past summer was managing Pardee and Camanche reservoirs to maintain the required cold water pool

in Camanche for fall spawning releases. These efforts were so successful that not only did the District meet its requirements, but the Mokelumne River Fish Hatchery served as a temporary home for American River Hatchery trout due to the excessive temperatures at that hatchery. Although the drought has resulted in challenges, the 2014 Mokelumne escapement continued to be strong. A significant factor for this could be favorable ocean conditions throughout 2012 when 2011 fall-run salmon offspring first entered the ocean. Moreover, program changes implemented in 2009 and continued through 2014 have played a role in recovering and increasing the Mokelumne population more quickly than any other system in the Central Valley. Program changes included moving the release location of the hatchery fish to Jersey Point to balance increased survival and reduced straying, conducting fall pulse flows, working with our partners to close the DCC gates, and raising yearling fish. With all of these actions the goal is to maximize the number of salmon surviving and returning to the Mokelumne River.

Partnership members and stakeholders continue to find innovative ways of maximizing the benefits of limited water resources. The District received approval from the State Water Resources Control Board to reduce releases in March 2014, to save water for fall pulse flows in October and November 2014, which serve to attract adult salmon into the river. Additionally, the operation of the Freeport Project resulted in additional supplies for in-river releases due to the gainsharing provision in our Joint Settlement Agreement with the resource agencies. Since 2009 the strategy of releasing pulse flows has been extremely successful in boosting salmon returns to the river. For the second consecutive year Woodbridge Irrigation District (WID) operated its dam to provide releases timed to augment the District's six pulse flows events from Camanche Dam. WID conducted four additional pulse flow events in November without any Camanche pulse. All of these pulses resulted in large increases in daily passage of salmon by Woodbridge Dam. The "reoperation" of WID did not require any additional water release from District reservoirs and demonstrated the strong collaborative relationship that exists between our agencies.

The Mokelumne River Fish Hatchery Coordinating Team (HCT) has been meeting for approximately a year and is assessing the feasibility of implementing the recommendations of the Hatchery Scientific Review Group (HSRG). The HSRG was a federally directed initiative to evaluate and recommend improvements to assist in the recovery of Central Valley salmonids. Some of the recommendations in the HSRG could affect the Mokelumne Hatchery including:

- Elimination of trucking programs that release salmon off site;
- Until trucking programs are eliminated, 100 percent coded wire tag and 25 percent marking of all juvenile salmon hatchery production;
- Improve spawning protocols to increase genetic diversity; and
- Develop new hatchery monitoring and evaluation programs.

District biologists have been actively engaged with agency staff, advocacy groups and others in key forums, such as the HSRG Statewide Policy Team and Central Valley HCT, to help guide the process towards an outcome that will continue the successes of the last six years.



Staff highlights our fisheries program in regional and statewide forums, making presentations at the American Fishery Society Conference and other venues. Our successful program on the Mokelumne is widely viewed as one of the best in the state.

## **NEXT STEPS**

The drought will continue to be at the forefront in regards to fishery management activities in the Mokelumne River. Staff, working with resource agencies, has developed a plan to maximize survival of naturally produced salmon on their spring migration from the Mokelumne River to the ocean. Depending upon river conditions, the District also plans to continue to experiment with barging hatchery produced juvenile fish down the river in lieu of trucking, and using radio telemetry to study outmigration progress of naturally produced fish. These efforts will continue in collaboration with the resource agencies, advocacy groups, research institutions and local stewardship community. EBMUD will continue its long-term, successful efforts to support the Mokelumne River fishery and will work with resource agencies and others to ensure that any Delta "fix" or Central Valley drought management actions are protective of the Mokelumne fishery. Staff will ensure that the hatchery continues to support a sustainable fishery in a manner that is compatible with the protection and recovery of listed salmonids in the Central Valley.

ARC:RGS:JS:dec

Attachment

I:\SEC\Board Related Items\02-24-15 Sustainability/Energy Cmte\WNR - 2014 Chinook Salmon Return.Docx

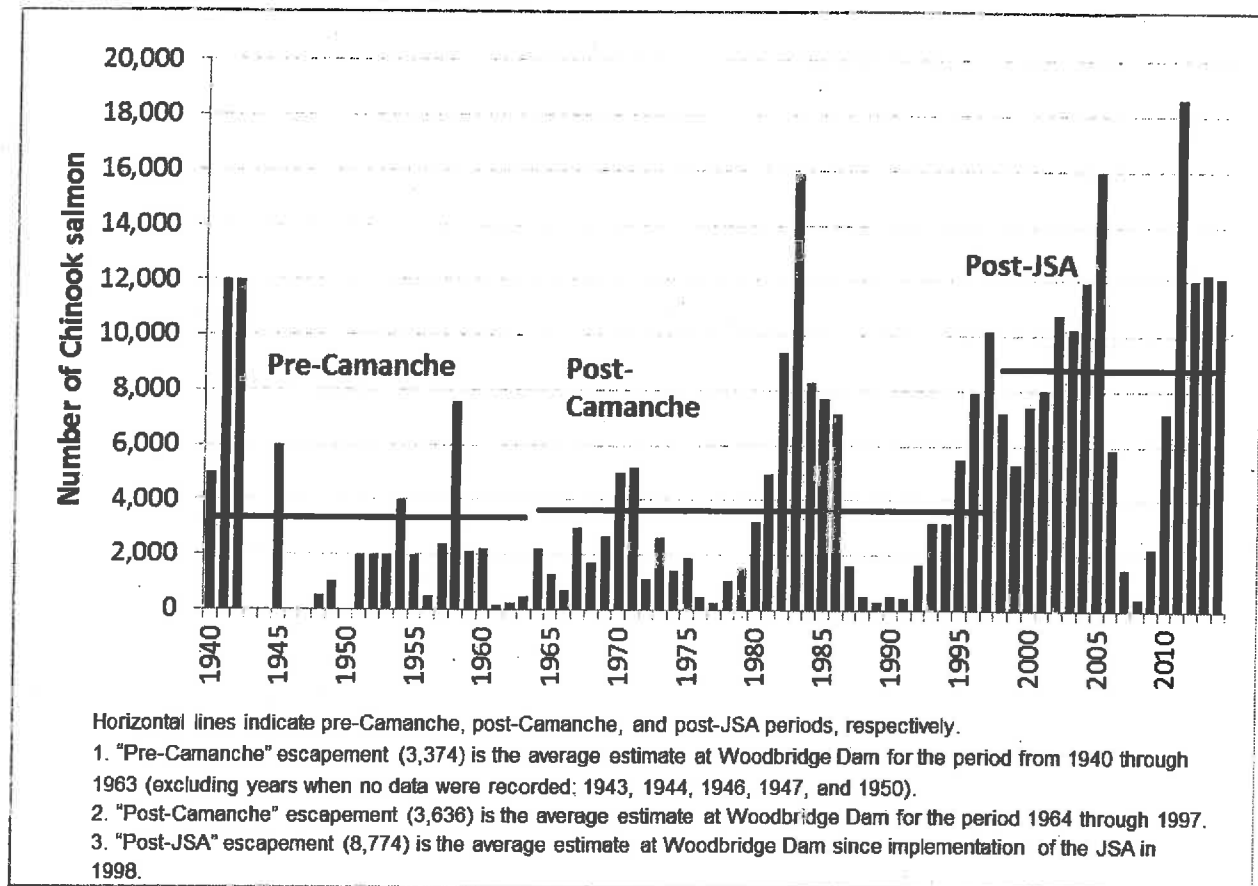


Figure 1. Annual Chinook salmon escapement totals to the lower Mokelumne River since 1940.

## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: February 19, 2015

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *ARC*

FROM: Richard G. Sykes, Director of Water and Natural Resources *RGS*

SUBJECT: 2014 California Groundwater Legislation

### INTRODUCTION

On September 16, 2014, Governor Edmund G. Brown signed three bills into law, AB 1739 (Dickenson), SB 1168 (Pavley) and SB 1319 (Pavley). Collectively, these bills are referred to as the Sustainable Groundwater Management Act (SGMA) of 2014. While the SGMA applies to all groundwater basins in California, it contains special requirements for basins that the Department of Water Resources (DWR) has designated as medium- or high-priority. EBMUD has a basin within the service area that is categorized as medium-priority and further has interest in supplemental supply opportunities within areas of the state where high-priority basins are found. Therefore, the legislation directly impacts the District. The SGMA has an associated implementation timeline. This memorandum presents a summary of the SGMA and its impacts on EBMUD. A presentation on SGMA will be provided to the Sustainability/Energy Committee at its February 24, 2015 meeting.

### DISCUSSION

#### Groundwater Sustainability Agencies (GSAs) and Groundwater Sustainability Plans (Plans)

The SGMA recently passed by the California legislature fundamentally changes management of California's groundwater basins. The act permits the creation of groundwater sustainability agencies (GSAs) for all basins and requires the adoption of Groundwater Sustainability Plans (Plans) for basins designated as medium- or high-priority by DWR. GSAs may choose to perform the functions below. Under the SGMA, GSAs are authorized (but not required) to:

- Adopt rules, regulations, ordinances and resolutions;
- Conduct investigations of water rights;
- Require well registration;
- Require well owners/operators to measure and report extractions;
- Require reporting of diversions of surface water to storage;
- Acquire property and water rights;
- Reclaim water;
- Impose well spacing requirements;

- Regulate groundwater extraction, including limiting or prohibiting groundwater production;
- Impose fees and assessments; and
- Undertake enforcement actions for noncompliance.

Although GSAs may request that counties provide well construction applications for GSA review, counties maintain well permitting authority.

The SGMA requires that GSAs for all medium- and high-priority basins adopt a Plan, or provide an alternative to a Plan by January 31, 2022 (or by January 31, 2020 for basins subject to critical overdraft). Plans are required to ensure that a basin is sustainably managed to avoid undesirable results, which are defined as follows:

- Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply;
- Significant and unreasonable reduction of groundwater storage;
- Significant and unreasonable seawater intrusion;
- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies;
- Significant and unreasonable land subsidence that substantially interferes with surface land uses; and
- Surface water depletions that have significant and unreasonable adverse impacts on beneficial uses of surface water.

Plans must include long-term goals, measurable objectives and interim milestones to achieve the basin's sustainability goal within twenty years of Plan implementation. These Plans are significantly more comprehensive than Groundwater Management Plans (GMPs), which were the previous tools used by agencies including EBMUD to address groundwater basin management.

The SGMA specifically exempts small private wells from monitoring provisions. However, a GSA may choose to impose other conditions and /or fees for these types of wells.

#### State Intervention

In addition to imposing a number of new requirements on local agencies related to groundwater management, the SGMA also provides for state intervention when local agencies are unwilling or unable to manage their groundwater basin(s). Specifically, the State Water Resources Control Board (SWRCB) is authorized to designate medium- and high-priority basins as "Probationary Basins" if:

- No local agency has been designated as the GSA by June of 2017; or
- The agency designated as the GSA fails to prepare and adopt a Plan by January 31, 2022 (or Jan. 31, 2020 if the basin is deemed in critical overdraft); or

- For critically overdrafted basins, if the Plan developed is deemed inadequate and groundwater extractions are resulting in a depletion of surface water and/or are at risk of long-term overdraft.

For probationary basins, the SGMA authorizes the SWRCB to remove groundwater authority from local agencies and to adopt and implement an interim plan that would bring the basin into balance and address basin objectives not being met.

The SGMA also has provisions that allow for the creation of memorandums of agreement, Joint Power Authorities, or other legal agreements should multiple agencies be interested in management of the basin and further be viewed as a suitable management entity.

#### Groundwater Basins in the EBMUD service area

Within the EBMUD service area, there is one medium-priority groundwater basin, the East Bay Plain Basin (EBPB), see Figure 2 (attached). In the 1990s the District did extensive studies of the EBPB to determine its potential as a supplemental water supply source during times of drought. Those studies concluded the following:

- The EBPB could be considered two subbasins (a northern and a southern subbasin), as they are not connected hydrologically (Figure 2 also depicts the subbasin divide);
- The southern subbasin held some potential as a supplemental supply source; and
- The northern subbasin had no potential as a municipal supply source.

Following the completion of The Bayside Groundwater Project Phase 1, EBMUD led a stakeholder driven effort to develop a GMP for the southern half of the EBPB. EBMUD's Board of Directors certified the GMP on March 26, 2013. The purpose of the GMP was to define management objectives for the basin and assure that it would continue to serve as a resource for EBMUD's customers in the years ahead.

In 2014, the District accepted groundwater elevation data collection and reporting responsibilities by agreeing to be the California Statewide Groundwater Elevation Monitoring (CASGEM) entity for the southern subbasin. The northern EBPB has no CASGEM monitoring entity. DWR, who administers the CASGEM program, does not formally recognize that the basin is divided into a northern and southern subbasin. They consider the EBPB as one basin as described in DWR Bulletin 118. Under the SGMA, there is a procedure that will be developed to allow entities to request basin subdivision and boundary changes.

#### Impacts to EBMUD of the Groundwater Legislation

In the East Bay Plain, EBMUD will face the following compliance issues for SGMA:

- EBMUD may request to become a GSA or risk state oversight of the groundwater basin and potential loss of state grant funds.
- If EBMUD becomes a GSA, it will need to greatly expand the technical scope of its South East Bay Plain GMP to address new SGMA requirements.

- EBMUD will need to consider new subbasin designations.
- EBMUD will need to engage stakeholders in the East Bay Plain and adjacent groundwater basins in the new GSP process.

*Impacts outside of EBMUD's service area*

EBMUD is partnering with San Joaquin County (SJC) on a groundwater demonstration project in the northeast portion of the County, which is designated as a high-priority basin. There is the potential that if SJC is unable to address SGMA requirements, it could impact the development of the demonstration project, and delay the operation of a permanent conjunctive use project. In addition, until such time as SJC is CASGEM compliant, it will likely be prevented from accessing state grant funding. On the other hand, SGMA may ultimately force a more extensive and consistent level of groundwater management in the basin, benefiting future groundwater banking opportunities.

**NEXT STEPS**

Implementation of the SGMA will take several years. The District will track SGMA implementation and evaluate compliance strategies in the next two years.

RGS:MTT:TBF:dec

Attachment

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