OPERATIONS & MAINTENANCE COMMITTEE AGENDA

Monday, January 14, 2013
9:00 A.M.

East Bay Dischargers Authority
2651 Grant Avenue, San Lorenzo, CA 94580

OM1. Call to Order

OM2. Roll Call

OM3. Public Forum

OM4. EBDA Performance
(The Committee will be updated on EBDA’s NPDES report.)

OM5. Status Report
(The Committee will be updated on EBDA’s O&M activities.)

OM6. Adjournment
(In compliance with the Americans with Disabilities Act of 1990, if you need special assistance to participate in an Authority meeting, or you need a copy of the agenda, or the agenda packet, in an appropriate alternative format, please contact the Administrative Assistant at (510) 278-5910 or ladams@ebda.org. Notification of at least 48 hours prior to the meeting or time when services are needed will assist the Authority staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting or service.)

In compliance with SB 343, related writings of open session items are available for public inspection at East Bay Dischargers Authority, 2651 Grant Avenue, San Lorenzo, CA 94580. For your convenience, agenda items are also posted on the East Bay Dischargers Authority website located at http://www.ebda.org.

(Any member of the public may address the Committee at the commencement of the meeting on any matter within the jurisdiction of the Committee. This should not relate to any item on the agenda. Each person addressing the Committee should limit their presentation to three minutes. Any member of the public desiring to provide comments to the Committee on any agenda item should do so at the time the item is considered. Oral comments should be limited to three minutes per individual or ten minutes for an organization. Speaker’s cards will be available and are to be completed prior to speaking.)

The next O&M Committee meeting is scheduled on
Monday, February 11, 2013 at 9:00 a.m.
ITEM NO. OM4 EBDA PERFORMANCE

This information is a standing agenda item for both the O&M Committee and the Regulatory Affairs Committee. The detailed package is included in the Regulatory Affairs Committee agenda. The NPDES report shows that EBDA’s performance continues to operate within the normal range.

Please see the Regulatory Affairs Committee agenda, Item No. RA4, for November and Quarterly permit compliance data.

ITEM NO. OM5 STATUS REPORT

Alvarado Effluent Pump Station (AEPS)

Operations and Infrastructure Optimization Project (OIOP)

All comments have been received to finalize the OIOP report. Carollo will review and make changes as necessary. Anticipated completion date is the week of January 21, 2013. Once the report has been received, it will be submitted to the Board for approval. Some of the issues that have arisen will be addressed as part of EBDA’s asset management strategy.

AEPS #4 Effluent Pump

USD reported that the #4 effluent pump vibrates when not operating only during low flow. It is believed that the check valve is not fully seating. This was confirmed when USD staff closed the downstream valve and the vibration stopped.

DW Nicholson was contacted to make an emergency inspection repair on December 10, 2012. Preliminary results of that inspection were no physical damage noted with the internal workings. However, the face-to-seat was checked and was found to have over 1/8" clearance from approximately 4 o’clock to 8 o’clock position on the valve sealing surface. All shafts and bushings were checked for tightness and found to be normal. The check valve was reassembled and the pump is in the #6 lag standby position and is available for pumping high storm flows.

Staff contacted the local manufacturer’s representative for the APCO/ Willamette check valve to assist in troubleshooting. Eric Hurt, the field technician with Frank A. Olson Company, believes that two pins that connect the flapper plate to the pivot arm are not correctly aligned. The two courses of action are to either replace the check valve at a cost of $48,700 plus labor, or to rehab the check valve by replacing the internal parts. Frank A. Olsen has been requested to provide a cost for the internal parts needed to refurbish the check valve assembly. Once the cost of the internal parts plus labor has been determined, a recommendation will be made on the best and most cost-effective approach to repair the check valve.
Staff anticipates that all quote information will be received prior to the next scheduled committee meeting in February 2013.

**Hayward Effluent Pump Station (HEPS)**

**Equipment Assessment**
The City of Hayward is currently conducting a Utility Master Plan (UMP). The UMP has identified that the City may need to construct a new pump station closer to their facility. Much of the equipment at HEPS is reaching the end of its useful life and is scheduled for replacement as part of EBDA’s Repair and Replacement Fund (RRF), though building a new pump station would add significant costs. The outcome of the City of Hayward’s UMP directly affects both short- and long-term planning for the equipment replacement. To assess how long the electrical components at the HEPS could last, staff contacted Todd Beecher with Beecher Electrical Services, who has worked cost-effectively with the member agencies. Mr. Beecher provided a cost not to exceed $3,300 to conduct a complete assessment of the electrical components and provide a recommendation on what the impact on operation would be if the replacement of the ATS and MCC were delayed.

At the December MAC meeting the Managers were apprised on the verbal comments made by Mr. Beecher during his pre-bid onsite review of the HEPS electrical switch gear equipment. In Mr. Beecher’s professional experience, he believes that the maximum serviceability of the electrical switch gear equipment is no more than 2 years due to (1) the exterior condition of the equipment that shows significant signs of corrosion; (2) the age of the electrical switch gear equipment—over 35 years old—it is original equipment; and (3) his experience of a catastrophic failure in a similar situation due to a poor design by the particular manufacturer of the electrical gear. He strongly recommends that the Authority start the process of a complete replacement as soon as possible. The Agency Managers agreed that rather than spending funds to assess the electrical switch gear that staff should move forward with identifying a scope of work for replacement. Staff is currently following up with Todd Beecher to develop a scope of work for the design and replacement of the electrical switch gear at HEPS.

**Oro Loma Effluent Pump Station (OLEPS)**

**No. 4 Right-Angle Drive Replacement**
The manufacturer’s representative has been given site specific details on the operational criteria and installation data of the current Philadelphia right-angle drive unit. This information will ensure that the correct application of the Falk right-angle drive is quoted. Due to the holidays, the manufacturer’s representative will not have a revised quote until January 18, 2013.
Dahl-Beck submitted a revised bid to overhaul (replace all bearings, seals and gaskets) the #4 right-angle drive at a cost of $20,000. This cost does not include the new or repaired gears, however, it does include the cost to reinstall, laser-align and pin the unit.

Photographs of the No. 4 right-angle drive were electronically sent to Aaron Pearson of Philadelphia Gear. After reviewing the photos, Mr. Pearson believes that both bevel gears show signs of wear and need to be replaced. As for the helical gearing, he believes that the existing helical gears may only need to have a process of “kiss grind” rather than replacement. However this determination was based on photographs. In order to substantiate this determination, the gears would need to be removed from the assembly and measured.

A benefit of purchasing all new gears is that the set of gears that are removed from the No. 4 right-angle drive can be checked and refurbished for use in the No. 1 right-angle drive. In most cases, Philadelphia Gear is able to bench-repair old gearing saving up to 50% of the cost of purchasing new gears. As a note, the reason we cannot have this type of work done on the existing No. 4 right angle drive is because the downtime required to complete the bench-repair is up to sixteen weeks. Mr. Pearson noted that the life cycle of the right-angle drive unit installed at the OLEPS is approximately 40,000 hours. Currently the No. 4 right-angle drive has over 100,000 hours since its last major overhaul in 1997.

Once all quote information has been received, staff will determine the best and most cost effective course of action to proceed. Staff anticipates a recommendation to be provided to the Board in February 2013.

**San Leandro Effluent Pump Station (SLEPS)**
No change; all equipment is operational.

**Sky West Pump Station**
Staff completed an assessment of the Sky West recycled water treatment system. The following items were identified as needing to be resolved: (1) less costly means to drain and clean the contact tank and (2) tighter process control of sodium hypochlorite injection to meet compliance. Staff is working with Calcon to provide a cost to complete the following work.

1. Move the existing chlorine meter from its current location, which is approximately 100 yards away from where the process sample is taken to a more suitable location at the end of the Sky West Contact channel. This will provide tighter process control by reducing the lag time between sample pickup and analysis.

2. Install an automated valve that will be SCADA logic-controlled to allow the processed water to be returned to the inlet of the channel to allow for post
chlorination before discharge into the distribution system. This will ensure that recycled water meets the permit limit for coliform.

3. Installation of a small chemical metering pump to better control the chlorine dosing. This new metering pump will provide precise chlorine control ensuring that an adequate amount of chlorine is being added while limiting over-dosing.

Staff has written **WO# CM00000003** to Calcon to proceed with the upgrades to the Sky West recycled water system. Projected completion is scheduled for the middle of February 2013.

**Marina DeChlorination Facility (MDF)**

**Sewage Pump Replacement**
Staff has scheduled a kick off meeting with Monterey Mechanical and City of San Leandro Operations and Maintenance Supervisors to discuss the project on Wednesday 9, 2013 at the MDF.

In November 2012, California Generator Service (CGS) noted during its annual servicing of the standby generator that the unit showed sign of having a substantial fuel leak while operating. A follow up inspection by CGS in December 2012, after the standby unit had run due to a power-outage, found that the fuel transfer pump was leaking. Estimated cost to repair the fuel transfer pump is $3,300.00.

This repair will require that a standby generator to be placed at MDF during the projected 3-day downtime to replace the fuel transfer pump. Staff is working with Calcon to facilitate the placement of a temporary standby generator.

Staff has written **WO# CM00000004** to California Generator Service for the repairs. Due to the complexity of having a portable standby generator connected while the current standby is down for repairs. Staff will be scheduling the work to be completed during the next long break between storm events.

**Force main**
Sixty (60) Underground Service Alert (USA) tickets were received by EBDA during the month of December 2012. One required marking of the force main and/or a field meeting at Fairview and Neptune Way in San Leandro.

Total rainfall for the month of December

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**Asset Management Project (AMP)**

Staff participated in a conference call with David Baranowski with GHD. The purpose of the call was to:
1. Recap of various ways to represent the EBDA financials (expenses vs. reserves) in the Asset Management tool.
2. Discuss the outline of what the EBDA AMP will look like.
   (Below is a quick breakdown of the chapters, their order, and a few bullets about their purpose or what they will contain).

Manager’s Corner
- The executive summary of the AMP
- Key issues being faced by EBDA, recommendations to address the issues, actions to explore

Introduction
- Background on EBDA (their customers, services, purpose, sources of flows, and history)
- Where does their flow come from and where does it go
- The population they serve through their member agencies

EBDA Infrastructure System
- Breakdown of the EBDA assets (lift stations, force-mains, dechlorination facilities, outfall) and EBDA operations (building, staff, etc.)
- EBDA asset hierarchy
- Diagram of service area and geospatial representation of the assets
- Capacity report, % available capacity in facilities and force-mains, capacity considerations
- Installation profile(s)

Asset Condition and Performance
- Valuation breakdown (pie charts)
- Condition profile(s) – explanation of condition calculations and what they mean
- Risk profile(s) – explanation of risk calculations and what they mean, list of the high risk assets, any risk management strategies
- Asset classes, management strategies, and O&M strategies

Financial Management
- Long-term funding projection(s)
- Funding scenario(s) and explanations or outlooks, reserve fund explanation
- Recommendations

Appendices
- Asset register, complete asset hierarchy, supplemental risk plots, and supplemental R&R graphs. Any additional or supplemental information used in the AMP that you think is necessary, this could be raw data, pictures, or facility work plans.

Staff has reviewed the table of contents and feels that it has the required amount of detail. GHD is working on compiling the ‘draft’ AMP for staff review.

Wet Weather Event

The second major winter storm hit the East Bay the afternoon of December 23, 2012 and moved out of the area late in the morning of December 24, 2012. The total amount of rainfall for the event was approx. 0.90". The Marina Dechlorination Facility recorded a maximum effluent flow of 164 MGD with a daily flow of 108 MGD on December 23, 2012.
At 2:05 pm the first lead diesel engine was required to run due to the high flows, at 3:45 pm the second lag diesel engine was required to operate. Output flow at the OLEPS was maximum minute flow of 112.5 MGD. Discharge to the Hayward ponds was required from 4:15 pm to 8:15 pm on Sunday, December 23, 2012. During that time USD recorded a maximum minute flow of 59.5 MGD with all six effluent pumps in operation at AEPS. At approximately 5:00 am, Monday December 24, 2012, the first lead diesel engine shut down at which time both electric pumps (#1 and #4) were able to maintain wet well level set points. Once again, communication and cooperation with all the agencies was good. One equipment issue occurred during the event.

MDF had a sodium bisulfite pump (SBS) No. 2 failure at 12:33 am on Monday, December 24, 2012. The failure was SCADA controlled; there was no mechanical or electrical failure of the pump. Due to a higher than normal influent chlorine, a second SBS was called for by the process logic. The logic is that if when the lead SBS pump cannot deliver an adequate amount of SBS for dechlorination, a second SBS pump is called to run. Anytime a SBS pump is operating, a feedback signal is sent to the SCADA logic to verify it is operating as requested. However in this case, the No. 2 SBS was sending a feedback signal to the SCADA logic that was lower than required. The No. 3 SBS pump was signaled to run, which it did. At no time did the final effluent discharge fail to meet compliance of zero chlorine.

Staff has written WO# CM00000001 to Calcon to assist staff in troubleshooting and implementing the best corrective action to mitigate future SBS pump failures.

**Status of Transition**

Staff continues to work with Karl Royer on the following tasks:

- Wet Weather Review
- Computerized Maintenance Management System
- Marina DeChlorination Facility Operation
- Asset Management Plan
- Historical Records