



City of Sacramento City Council

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915 I Street, Sacramento, CA, 95814
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Meeting Date: 1/25/2011

Report Type: Information

Title: Pioneer Reservoir Incident Report

Report ID: 2011-00082

Location: District 4

Recommendation: Receive and File.

Contact: Mike Yee, Plant Services Division Manager, 808-5670;
Bill Busath, Interim Eng Manager, 808-1434, Department of Utilities

Presenter: None

Department: Department of Utilities

Division: Plant Services O&M Support

Dept ID: 14001221

Attachments:

- 1-Description/Analysis
- 2-Background.

City Attorney Review

Approved as to Form
Joe Robinson
1/18/2011 5:40:15 PM

City Treasurer Review

Prior Council Financial Policy Approval or
Outside City Treasurer Scope
Russell Fehr
1/14/2011 3:56:38 PM

Approvals/Acknowledgements

Department Director or Designee: Marty Hanneman - 1/18/2011 4:19:26 PM

Assistant City Manager: Cassandra Jennings - 1/18/2011 5:30:23 PM



Description/Analysis

Issue:

During a storm on October 24th, 2010, there was a flooding incident that occurred at Pioneer Reservoir Treatment Plant. As a result of the flooding, operation of the facility was temporarily disabled and it was necessary to reroute Combined Sewer System (CSS) flows around the Pioneer facility until the storm abated. The flooding also caused severe damage to the equipment at the facility. Since the incident, approximately \$180,000 has been spent on materials, supplies and replacement equipment to restore complete functionality of the facility, and safeguards have been implemented to prevent this from happening again. In accordance with the CSS National Pollutant Discharge Elimination System (NPDES) permit, incident reports have been filed with the California Regional Water Quality Control Board (RWQCB). At this time it is not known whether the RWQCB may pursue any enforcement action for this incident. More detailed information is provided in the Background section of this report.

Policy Considerations:

After the Pioneer facility was disabled, rerouting of CSS flows around the Pioneer facility was necessary to avoid flooding of the downtown area and the rest of the CSS service area and minimize damage to City facilities.

Environmental Considerations:

California Environmental Quality Act (CEQA):

Emergency repairs to utility service facilities do not require environmental review under the California Environmental Quality Act, pursuant to Section 15269(b) of the CEQA Guidelines.

Sustainability:

The emergency repairs were consistent with the Sustainability Master Plan goals to reduce pollution in our water.

Commission/Committee Action: None

Rationale for Recommendation: N/A. Informational Only

Financial Considerations: Approximately \$180,000 has been spent on materials, supplies and replacement equipment to restore complete functionality of the facility. There were sufficient funds in the two existing CIPs that were used to fund the emergency purchases; Unplanned Corrective Maintenance Program in the Sewer Fund (X14000100) and Storm Drainage System Failures in Drainage Fund (W14002100). The CIPs were in place to cover Sewer and Drainage failure events such as this.

Emerging Small Business Development (ESBD): No bids were requested because the purchases of materials, supplies and replacement equipment for the repairs were made from approved vendor lists.



Background:

Pioneer Reservoir, located at Front and V Street, next to the Towe Ford Museum, is a critical part of the City's Combined Wastewater Control System and a key component of the City's National Pollutant Discharge Elimination System (NPDES) Permit Number CA 0079111, Order Number R5-2010-004 to operate its Combined Sewer System (CSS). Under the City's CSS Operations Plan, Pioneer Reservoir functions as a temporary detention basin that prevents flooding in the CSS and temporarily stores combined sewage, a combination of the existing mix flow of sewer and irrigation with the addition of rain flow during storms, and then returns it to the system for full treatment at the Sacramento Regional County Wastewater Treatment Plant. Pioneer Reservoir also provides for primary treatment of combined sewage prior to discharge to the Sacramento River during heavy storm events – such discharges occur at discharge locations authorized under the City's CSS NPDES permit.

During the storm of October 24, 2010, a malfunction occurred in the facility that resulted in the treatment component of Pioneer Reservoir being disabled due to inundation of the pump control room and laboratory, which consequently damaged essential equipment. Post-incident investigation by City staff indicates that an overflow channel bypass valve that was open rather than closed, was most likely the cause of the initial flooding that began the incident.

Once the facility was disabled, City operators took immediate measures to safeguard the public health and that of City workers by rerouting CSS flows around the Pioneer facility and isolating the flooded area, which included the facility parking area, a SMUD transformer and a backup generator. These emergency measures were effective in avoiding flooding of the downtown area and the rest of the CSS service area and minimizing damage to City facilities. Rerouting CSS flows around the Pioneer facility resulted in increased discharges to the river without treatment at two of the City's permitted discharge locations until the storm receded.

During and subsequent to the event, City staff notified Regional Water Quality Control Board (RWQCB) staff. Interim reports were subsequently submitted that explained the events, and a final report was submitted in December 2010 including a detailed timeline of events, in accordance with RWQCB staff requests. At this time, it is unknown whether the RWQCB will pursue any enforcement action for this incident.

The majority of damage caused by the incident was to electrical and mechanical gear that had been submerged. Damaged equipment was removed and replaced as quickly as possible. The majority of the damaged equipment has been replaced or repaired and the facility has been successfully utilized for recent storm events. Approximately \$180,000, split between sewer and drainage CIP funds, has been spent on materials, supplies and replacement equipment to restore complete functionality of the facility.

In an effort to prevent this event from happening again, engineered and operational safeguards are being implemented, such as reinforcement of the access hatch, floor level sensors, and audio alarms. Operational changes include pre-storm plant inspections, valves being locked out and other operational procedure changes.