



Memorandum

Office of the City Manager

TO: City Council
Commission & Committee Members

FROM: Kevin S. Woodhouse, City Manager
Lisa Petersen, Public Works Director

DATE: November 5, 2021

SUBJECT: Follow-up to October 23-24 Weekend Storm

This memorandum is being provided to City Council and all Commission and Committee members, as well as posted for the public, to provide important information in the aftermath of the recent October 23-24, 2021, bomb cyclone and atmospheric river storm event. This information includes the most recent data of which City staff is aware as of November 5th. City staff will continue to gather regional data, as it becomes available, for comparison to Pacifica's data.

The Storm

- The recent storm dropped over 6 inches of rain in a 24 hour period in Pacifica, qualifying it as a 1% chance storm event;
- The Water Board has noted that this rainstorm was “record-setting” and that it was “not surprising” that the record setting rain cause sewage spills throughout the region.

Impact to Pacifica

- Water intrusion into the sewer collection system caused the following Sanitary Sewer Overflow (SSO)/Pump Station Bypass events in Pacifica:
 - 44,000 gallons of storm water/sewer wastewater mixture from a manhole in Linda Mar at Peralta near Crespi;
 - 2.93 million gallons of storm water/sewer wastewater mixture bypass to beach at Linda Mar Pump Station.
- Based on test results from the Calera Creek Water Recycling Plant, it is estimated that 90% of the bypass flow to the beach was rainwater, 10% sewer wastewater;

- The City immediately and proactively reported this SSO/Bypass information to the Water Board;
- The City also immediately closed Pacifica State Beach, implemented the required ocean water testing protocols through the San Mateo County Health Department, and by Friday following the storm the beach was safely reopened;
- Pacifica’s Calera Creek Water Recycling Plant stayed up and running throughout the storm and did not need to bypass effluent.

Impacts to Other Cities

- Current reporting from cities in the region to the Water Board for SSO events for manhole overflows show 23 occurrences that exceeded 10,000 gallons of rainwater/sewer wastewater mixture in the bay area during this storm;
- The highest spill rate reported to date for this storm for a manhole was recorded in Richmond with over 800,000 gallons of overflow;
- The highest treatment plant bypass event reported to date for this storm was recorded at the South San Francisco/San Bruno Treatment Plant at 4.5 million gallons of effluent;
- The next highest treatment plant bypass event reported to date for this storm was recorded at East Bay Municipal Utility District at 3 million gallons of effluent;
- Daly City’s plant, the North San Mateo County Treatment Plant, reported reaching capacity at its equalization basin, and having to bypass 2.45 million gallons of effluent;
- Certified final reports regarding treatment plant bypass events are due from all cities to the Water Board by the beginning of December.

Design and Performance of the Wet Weather Equalization Basin

- The City’s 2.1 million gallon Wet Weather Equalization Basin significantly reduced the impact from this storm, preventing 2.1 million gallons of rainwater/sewer wastewater mixture from spilling onto City streets in the lower Linda Mar area, and cutting the necessary bypass event at Linda Mar pump station by 40%;
- Holding this liquid in the EQ Basin also allowed the Calera Creek Water Recycling Plant (CCWRP) to continue operating without failure, processing over 17 million gallons/day during the storm when it typically processes 4 million gallons/day;
- Pacifica’s EQ Basin and the wet weather basin in Redwood City are sized for a 10% chance, 24-hour storm event, which is a larger rainstorm design than the other three wet weather basins in the area, and was a design size approved by the Water Board;
- The benefit of the EQ Basin can also be gauged by looking at historical storm events and the volume of bypasses and occurrence of flooding:
 - On December 11, 2014: 3.4 inches of rain, extensive flooding in Linda Mar, and 4.6 million gallons bypassed;
 - On January 25, 2018: 3.2 inches of rain and 6.9 million gallons bypassed;
 - Compared to October 23, 2021: 6.87 inches of rain and 2.9 million gallons bypassed.
- Design size, location, and cost of Pacifica’s EQ Basin was the result of a significant public process, feasibility study and environmental review, with notable public opposition to its cost impact to rate payers. Designing a larger basin would have entailed significantly higher cost to ratepayers, could not have been built in its current location,

and would have required it to be located elsewhere with potentially significant impacts and higher cost;

- Extensive project history and information is available for review at:
https://www.cityofpacificca.org/depts/pw/wwt/eq_basin.asp

Improving Capacity to Handle Large Storms in the Future

- The EQ Basin is one wastewater infrastructure improvement to improve environmental conditions in Pacifica;
- The City's efforts since 2011 on many sanitary sewer collection system upgrades, with an average of \$1.5 to \$2 million in upgrade work completed each year to address infiltration and inflow (I/I) into the City's sewer system, have contributed, and will continue to contribute, to the City's ability to handle significant storm events;
- The City's recently approved Collection System Master Plan Update identified four new projects (including one on Crespi) to address I/I into the City's sewer system.