Monterey One Water
Providing Cooperative Water Solutions

Review: January 2018 Untreated Wastewater Release

On January 20, 2018, Monterey One Water (M1W) reported the unfortunate release of untreated wastewater into the ocean through its outfall pipe, which sits 2 miles off shore and 100 feet below the water's surface. In response to the release, the Agency initiated an action plan based on the total of 4.9 million gallons of wastewater entering the Regional Treatment Plant during the timeframe of the release. After Agency staff reviewed the data and performed physical simulations of the incident, the final untreated wastewater release volume was calculated to be 2.87 million gallons.

What went out the outfall?
In the simplest terms, wastewater is used water. M1W predominately receives wastewater from domestic sources, coming from sinks, showers, washing machines, dishwashers, toilets, etc. Wastewater is over 95% water and as it moved through the outfall, the untreated wastewater mixed with other sources – treated wastewater and salt water from the California American slant test well, which are regulated waters routinely released to the ocean by M1W and other local agencies.

What happened to this wastewater?
As the combination of water sources traveled through the outfall pipeline, the dilution process began. A hydraulic model of ocean conditions and meteorological data at the time of the release estimated the dilution rate of 811:1 (811 parts ocean water per 1 part of wastewater). This dilution and mixing occurred in and immediately surrounding the outfall pipe. M1W laboratory staff sampled the surface water surrounding the outfall pipe within six hours of the release notification, and found no elevated levels of bacteria. In addition to sampling, the Agency contacted several area marine conservation centers that monitor animal health and no sick or injured animals were reported because of the release.

How did this happen?
The M1W Regional Treatment Plant is staffed 24 hours a day. Wastewater enters the Plant through a screen to filter out debris. As debris builds up, a rake clears the screen to keep water flowing smoothly. On the evening of January 19, the rake's electronic control malfunctioned, and the alarm system did not alert the operator in the control room. The control room is the hub for everything happening at the Plant and the on-duty operator relies on continuous computer monitoring and alarms to maintain the Plant's operation. For employee safety during the overnight hours, the shift operator remains in the control room. As the screen became blocked, the water level in the holding structure rose and eventually overflowed into the ocean discharge pipe, bypassing the treatment plant.

What preventative measures have been taken?
Immediately upon discovery, the malfunctioning equipment was replaced and back-up systems were installed to ensure an event like this does not happen again. New redundancies include the installation of an infrared camera, satellite-based alert sensors that operate independent of the Plant's computer system, and additional staff on the night shifts. In addition, M1W has worked with an independent consultant to complete a comprehensive evaluation of the equipment and procedures surrounding the event.

What is the role of the Regional Treatment Plant and Monterey One Water?
Monterey One Water's Regional Treatment Plant processes the wastewater of 250,000 people in the area. In its nearly 30 years of operation, this is the only incident of its kind to occur at the Regional Treatment Plant. Wastewater that enters the Plant normally goes through mechanical, biological, and chemical treatment processes. The end result is safe, treated wastewater that meets or exceeds the regulatory requirements designed to protect public health, water quality, and the environment.

Treated wastewater then takes one of three paths: (1) the treated water moves to a third treatment process to become recycled water used by local growers to irrigate edible food crops like lettuce and strawberries, (2) the treated wastewater is released into the ocean through the 60-inch diameter outfall pipeline during periods when recycled water is not needed for agriculture, or (3) the treated wastewater will go through additional advanced purification processes once construction is completed on M1W's new advanced water purification facility, which will treat the water to a level better than drinking level standards before being pumped into the ground for future urban use.

In 2017, M1W produced over 4 billion gallons of recycled water for reuse in the irrigation of crops, reducing the use of well water and benefiting the Salinas Valley Basin aquifer.

Both the staff and Board of Directors of Monterey One Water take this incident seriously. We are dedicated to serving our communities and customers, and we are committed to working with other agencies to enhance water supply sustainability and diversification for our region. The release evaluation process has been critical and will help the Agency assess our technology and procedures to ensure we remain a reliable and innovative community resource.

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