Stormy Weather Special - What Happens to All That Excess Water?

We've received a lot of rain this week. A question people sometimes ask the Chamber: why does so much of the Monterey Peninsula's winter water flow go into the ocean instead of being collected and used?

We know the answer to that question.

Central Coast Rivers End Up in Lagoons/Estuaries Next to the Ocean

First, the hydrological and geographical basics. In the dry season, our region's major rivers (the Salinas River and Carmel River) flow into lagoons/estuaries that are blocked by sand bars. In the rainy season, natural water flow pierces the sand bars, or the government pierces them using excavation equipment to control flooding. In very dry years, the sand bars never open at all.

Three similar but smaller lagoons/estuaries were once located on the Monterey Peninsula between the Salinas River and the Carmel River, but they have been engineered into artificial lakes. Today they are known as Roberts Lake/Laguna Grande in Seaside (which were once a single estuary but now are separated by Del Monte Boulevard), Lake Del Monte on the Naval Support Services campus in Monterey, and Lake El Estero in Monterey. There are also two small lakes in Monterey related to Lake El Estero but separated by Fremont Boulevard: Lagunita Mirada and a sediment basin called Washerwoman's Pond.

These lakes are fed by intermittent creeks (such as Hartnell Creek, Iris Canyon Creek, Don Davhee Creek, Majors Creek, Aguajito Creek, Josselyn Canyon Creek, and Canyon Del Rey Creek), municipal stormwater systems, and some groundwater percolation. These lakes receive quick and substantial water flow from winter storms because precipitation cannot percolate into the granitic base of the Monterey Peninsula under the surface soil. In the summer, these creeks dry up.

When storms arrive, excess water from these lakes is conveyed through culverts to outfalls on the beach and then into Monterey Bay. In the case of Lake El Estero, the City of Monterey controls water levels with a pump station and manages release of water before and during storms to prevent flooding.

Can Something Be Done With This Excess Water Going to the Ocean?

Our regional sanitation district is Monterey One Water - formerly known as the Monterey County Water Pollution Control Agency (MCWPCA) until a name change in 2017. In 2013, this agency identified the most promising new water sources for a water recycling program, now known as the Pure Water Monterey/Groundwater Replenishment Project.

Agency consultants evaluated stormwater directly released into Monterey Bay and the excess water released into Monterey Bay from Roberts Lake/Laguna Grande, Lake Del Monte, and Lake El Estero. Could Monterey One Water divert that water into the interceptor pipeline that conveys municipal wastewater to its Regional Treatment Plant, and from there send the water to a tertiary treatment plant that could recycle it for irrigation and potable use?

According to a 2015 environmental review document for Pure Water Monterey, an analysis of Dry and Wet Weather Urban Runoff concluded that “collection and conveyance of all urban runoff to the MRWPCA sewer conveyance and treatment system for the benefit of the GWR project would not be technically feasible, and even collecting a majority of it would be cost prohibitive.”

These Monterey Peninsula area urban runoff projects were subsequently eliminated from consideration for water diversion for Pure Water Monterey: Laguna Grande Lake, Roberts Lake, Del Monte Lake, the Bay Avenue Outfall in Seaside, the Del Monte Dry Weather Diversion in Seaside, the New Monterey Urban Diversion, and Areas of Special Biological Significance (ASBS) Compliance Wet Weather Diversion in Pacific Grove.

The one Monterey Peninsula urban runoff concept included in the Pure Water Monterey environmental review and project approval was diversion of excess water from Lake El Estero in Monterey to the municipal wastewater interceptor. A 2014 report estimated that an average of 87 acre-feet per year (AFY) could be diverted to the interceptor for recycling in the Pure Water Monterey project. If a stormwater drainage area in the downtown area adjacent to Lake El Estero was connected to the lake instead of an outfall near Fisherman’s Wharf, the diversion potential would increase to 136 AFY.

Pure Water Monterey construction went forward after approval in 2015, but the Lake El Estero component has not been included to date as a new water source for recycling. That situation is now changing!

Next Steps for Lake El Estero Excess Water Diversion for Recycling

The Fiscal Year 2022-2023 California state budget included $1 million for the Lake El Estero diversion. Preliminary environmental analysis is happening and civil engineering design will happen this year. The public will get a chance in early 2024 to review the design and environmental impact documents, and then the Monterey City Council will consider approval, followed by construction. Three years is the current estimate of the time from design through construction.

At this time the Lake El Estero project for Pure Water Monterey will entail changes to the existing lake pump station and sewer infrastructure at the north side of the lake and existing infrastructure in the vicinity of the Pearl Street and Figueroa Street intersection at the southwest side. The recently-completed Franklin Storm Drain Project was not directly related to expanding

the drainage basin to divert more water to Lake El Estero, although it did divert some stormwater from the outfall near Fisherman’s Wharf to the Lake El Estero box culvert outfall.

In the summer of 2022, the City of Monterey installed water level monitoring devices at a few key locations within the City's storm drain system, including at Lake El Estero and the box culvert to the beach. Data from these devices, along with pumping rate data, will be incorporated into a revised water runoff and capture analysis for the diversion project. This data will also help the City respond more immediately and effectively in its flood control operations.

Is there any way for the City of Monterey to qualify for water entitlements for this diverted water? The City is researching the possibility. In 2021, the City of Monterey and Monterey One Water staff had a brief preliminary call with staff of the State Water Resources Control Board (SWRCB) Division of Water Rights to navigate the agency’s permitting and licensing process. The City must apply to the SWRCB for a permit to develop the Lake El Estero diversion to Pure Water Monterey and then obtain a license from the SWRCB for final confirmation of the water right after the project is complete.

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