

Salmon return to Moke River in record numbers

The Valley Springs News / November 29, 2023

The 2023-2024 fall run of Chinook salmon on the Mokelumne River is now the most successful return in more than 80 years, according to the East Bay Municipal Utility District.

More than 20,000 fish – and counting have returned from the Pacific Ocean to spawn in the river, the most since record keeping began in 1940, EBMUD reported on Nov. 16.

“This year’s historic return highlights EBMUD’s longstanding collaboration in the region and our deep commitment to sustaining this vital fish hatchery and protecting the river’s habitat,” said EBMUD Board President Andy Katz. “We are proud to celebrate this achievement with our local, state and federal partners, as well as the broader community, which has entrusted us with safeguarding this precious natural resource.”

The Mokelumne River serves as the primary drinking water source for 1.4 million customers served by EBMUD in Alameda and Contra Costa counties. The not-for-profit public agency is dedicated to balancing customers’ water needs with environmental protection and river stewardship.

To mitigate for habitat losses that resulted from damming the river, EBMUD manages river flows, enhances habitat, and funds the Mokelumne River Fish Hatchery, which is operated in partnership with the California Department of Fish and Wildlife. The Mokelumne River contributes only about 3 percent of the freshwater flow into the Sacramento-San Joaquin Delta, yet its salmon population makes up as much as 50 percent of the commercial catch off the coast of California.

Salmon returns are counted every year during the spawning season, which runs from August through January. These Chinook return to their home waters in the Mokelumne to reproduce and die after spending two to five years maturing in the Pacific Ocean.

The pattern is a significant stage in the salmon life cycle and a strong indicator of the habitat’s ecological health and the population’s survival rate. On Oct. 29, 2023, EBMUD biologists tallied the largest one-day salmon count in 30 years – 1,941 fish.

The science-driven hatchery management program by EBMUD and CDFW includes operations that support ocean fisheries and natural spawning on the river. When the season is complete and full data is available, experts will determine which strategies contributed most to the success on the Mokelumne, given some rivers are experiencing low returns, as has Mokelumne in previous years. Long-term strategies include:

- Habitat enhancement to improve the natural river spawning and rearing, in partnership with both the U.S. Fish and Wildlife Service’s Anadromous Fish Restoration Program and the CDFW.
- Flow management, including pulse flows from EBMUD’s Camanche Reservoir into the river to attract returning fish; coordination with the U.S. Bureau of Reclamation to close the Delta Cross Channel to reduce straying; and management of the Camanche cold water pool to support spawning, incubation, and rearing.
- Hatchery management, including investments in chillers and ultraviolet filters to improve egg survival; collaboration on the release of juvenile fish; and management of the fish ladder leading into the fish hatchery.
- Statewide closure of California’s 2023 commercial and recreational salmon fishing season to protect the Central Valley fall-run Chinook population; the commercial and recreational salmon fishing fleet, which funds the production of ocean enhancement fish at the hatchery, forewent the season and contributed to this year’s success.

“The Mokelumne faces many challenges,” said EBMUD Manager of Fisheries and Wildlife Michelle Workman. “It is a small river that can be overwhelmed by flows from larger Central Valley rivers when attracting salmon back from the ocean. But through collaborations with our agency partners, we have found winning strategies. This year’s large run allows us to meet our hatchery goals as well as improve natural production numbers in the river by maximizing the use of the available spawning habitat we worked so hard to build. Decades of work to improve the natural habitat are paying off.