



County of Monterey

Item No.9

Board Report

Board of Supervisors
Chambers
168 W. Alisal St., 1st Floor
Salinas, CA 93901

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- a. Consider receiving an update on the implementation of the Interim Operations Plan for San Antonio and Nacimiento Reservoirs; and
- b. Provide direction to staff as appropriate.

SUMMARY

On November 21, 2022, the Monterey County Water Resources Agency Board of Directors (BOD) adopted the Interim Operations Plan for Nacimiento and San Antonio Reservoirs (IOP). During the first year of implementation early season storm activity resulted in the attainment of all IOP triggers beginning on January 5th, 2023. However, natural flows had by then established passage conditions which persisted continuously beyond the IOP passage day goal (sixteen days) and so no IOP action was needed.

In 2024, the second year of IOP implementation, all triggers were met on February 1st and staff determined that an immediate release action presented a high probability of meeting threshold flows in the lower Salinas River as identified in the Flow Prescription (260 cfs at the USGS gage, Salinas River near Chualar) to successfully provide conditions favorable to upstream passage of adult Steelhead. A release of 300 cfs was initiated on February 1st. By February 3rd, weather and river forecasts indicated the imminent certainty that storm flows would indefinitely provide and sustain passage flow targets, prompting the immediate termination of the IOP release action.

DISCUSSION:

IOP Development and Adoption

The *Salinas Valley Water Project Flow Prescription for Steelhead Trout in the Salinas River* (Flow Prescription), was incorporated into water rights licenses 7543 and 12624, and Permit 21089. It targets providing steelhead migration to and from the lower Salinas River Basin, which includes the Arroyo Seco and the lower Nacimiento River, and Monterey Bay, through the mainstem of the Salinas River. Steelhead Trout passage and habitat is known to occur in the upper Arroyo Seco. Spawning and rearing habitat in the Arroyo Seco is recognized to be the highest quality and most accessible in the lower Salinas River Basin. Releases of water from Nacimiento and San Antonio Reservoirs, in efforts to facilitate such passage, will provide benefits in and passage to the Arroyo Seco, lower Nacimiento River and other potential habitat areas of the upper Salinas River.

The Flow Prescription characterizes an adaptive management approach as being essential to ensuring the proposed actions achieve their desired effects for the following reasons. The natural hydrology and hydraulics of the system are highly variable, and the Agency has the ability to influence only a portion of this system. It was acknowledged that it will take time to fully understand the system. A typical

steelhead life-cycle is on the order of 4 to 5 years, with a high degree of variability and finally, it will take time to fully understand how operations benefit one species of fish without severe harm being caused to other beneficial water uses within the system.

Agency staff developed the IOP in 2022 to address National Marine Fisheries Service (NMFS) concerns regarding steelhead migration flows during dry periods. Agency staff determined that flow enhancement triggers first defined in the Flow Prescription and in effect since 2010 had fallen short of providing the anticipated passage opportunities during some hydrologic year types. Specifically, as documented in the Agency's SVWP Flow Monitoring Report 10-Year Review (included as an appendix to the attached adopted IOP), the target for dry-normal year types is 16 passage days. During the first 13 years of SVWP operations (2010-2022) no adult upstream passage days were recorded in any of the four dry-normal category years.

Incorporating nine months of stakeholder input through regular meetings with NMFS, USFWS and the Reservoir Operations Advisory Committee, the IOP was distributed and presented to the ROAC at its October 2022 meeting and was adopted by the Board of Directors at its November 21, 2022 meeting.

The adopted IOP provides Agency staff discretion to utilize adaptive management to supplement naturally occurring streamflow events that would provide multiple benefits, including: providing steelhead passage opportunities in the absence of currently existing operational flow enhancement triggers, while adhering to all existing water rights, operational agreements and adopted release schedules; supporting the ongoing development of the Salinas River HCP through the gathering of pertinent supportive data and information; and providing enhanced recharge of Salinas Valley water supply aquifers through Salinas River percolation. As written and adopted the IOP is in effect until a Habitat Conservation Plan (HCP) is adopted.

2023 Implementation of IOP

In late December 2022, a combination of storm activity, streamflow, and forecasts indicated a strong potential to meet hydrologic triggers defined in the IOP that would warrant consideration of release actions aimed at enhancing steelhead migration opportunities. Accordingly, staff developed contingency plans to augment natural streamflow events in late 2022 and early 2023 while actively monitoring watershed conditions. A sequence of late December and early January atmospheric rivers resulted in attainment of all triggers beginning on January 5th. Also beginning on that date, natural flows brought about passage condition goals described in the IOP while forecasts and developing watershed conditions indicated a high likelihood that continued flows would amply provide for sustained passage conditions into late-January, without the operational assistance of executing an IOP action. Conditions continued to be monitored and no IOP action was taken. Persistent storm activity into mid-January resulted in exceedance of the IOP passage day goal (sixteen days), obviating the need for further consideration of IOP releases for the remainder of the water year. By April 1, 2023, following the conclusion of the January 1-March 31 upstream passage time window defined in the Flow Prescription, 85 consecutive upstream passage days had been achieved without IOP action.

2024 Implementation of IOP

Following the opening of the Salinas River Lagoon on January 4th, storms brought inflow to

Nacimiento Reservoir in mid-January. On February 1st the final IOP hydrological trigger was met as stormflow connected the Arroyo Seco to the Salinas River. Staff determined that an immediate release action presented a high probability of meeting threshold flows in the lower Salinas River (260 cfs at the USGS gage, Salinas River near Chualar, as identified in the Flow Prescription) to successfully provide conditions favorable to upstream passage of adult Steelhead. A release of 300 cfs was initiated on February 1st. By February 3rd, weather and river forecasts indicated increased storm activity with imminent certainty that flows would provide and sustain passage flow targets. This prompted the immediate termination of the IOP release action after less than two days. By February 4th, lower Salinas River flows exceeded IOP passage thresholds and would remain well above 260 cfs for the next four months.

Conclusion

Staff finds that, in its first two years of implementation, the IOP, as written and adopted, has effectively precluded and minimized the need for supplemental release action, by application of IOP triggers as written, and through monitoring and evaluation of hydrologic conditions while providing a conditions-based mechanism to take advantage of opportunities to address identified Flow Prescription shortcomings through adaptive management. Staff recommends continuation of IOP implementation without modification to the plan.

Strategic Plan Goals and Objectives

Agency effort on this process aligns with Monterey County Water Resources Agency Strategic Plan Goal B (planning and new projects); Strategy 7 (Use data and analysis to make informed decisions) and Goal E (Community Relations) Strategy 4 (Provide information on Agency Operations to stakeholders).

OTHER AGENCY INVOLVEMENT:

National Marine Fisheries Service and U.S. Fish and Wildlife Service

FINANCING:

Staff time associated with reservoir operations are included in the FY24 approved budget in Fund 116 - Dam Operations.

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Attachments:

1. Board Order