MANAGEMENT STRATEGY · ENVIRONMENT

No flow requirements

A management strategy in the COEQWAL scenario library

> This strategy removes existing minimum flow requirements on rivers and streams throughout the Central Valley, the Trinity River, and rim watersheds where they are defined in CalSim3. Delta outflow requirements are not removed: D1641 and biological opinion requirements remain in place, as in the Current Operations scenario.

This brief describes *a scenario in which minimum flow requirements are removed throughout the Central Valley and CalSim3 model domain*, one of 28 management strategies in the COEQWAL scenario library. Each strategy is simulated once under each of five hydroclimates; the references note at the end of this brief lists the model runs.

§2 WHAT THIS STRATEGY CHANGES

The strategy sets existing minimum flow requirements to zero on rivers and streams throughout the Central Valley, the Trinity River, and rim watersheds where such requirements are defined in the model. Delta outflow requirements are not removed — the requirements of D1641 and the biological opinions remain in place as they are set under current operations. This scenario is intended as an exploratory reference scenario to better understand the effects of existing flow requirements in the system.

The scenario was created by switching flow-requirement options off where switches exist in the model code and manually setting requirements to zero elsewhere. The COEQWAL modeling team could not locate a reliable,

comprehensive, and independent listing of the minimum-flow variables in CalSim3 before setting up the run, so some requirements may have been missed, although every attempt was made to find minimum flow requirements in the CalSim3 model code.

The strategy was envisioned as an exploratory reference point against which high-flow-requirement configurations — the functional-flows strategies — and the standard flow requirements can be compared.

§3 THE CONFIGURATION IN DETAIL

The table compares the eight operational fields that define this strategy against current operations — the strategy that represents existing operational rules, recent (2020) land use, and TUCPs. Rows that match current operations are shown in light gray; rows that differ are highlighted.

ASPECT	CURRENT OPERATIONS	THIS STRATEGY
TUCP actions	Active	Active
SGMA actions	None	None
Land use	2020 LandIQ	2020 LandIQ
Delta regulations	Standard	Standard
BiOps	2019 / 2020 ITP	2019 / 2020 ITP
Infrastructure	Standard	Standard
Flows	Standard	Existing minimum flow requirements on Central Valley tributaries and the Trinity River set to zero; Delta outflow requirements maintained as under current operations; functional flows not active
Allocation / priorities	Standard	Standard

§4 LINEAGE AND SOURCE

This configuration was created by the COEQWAL team by copying the broader functional-flows study and deactivating all flow requirements — the functional flows along with the pre-existing minimums. It is built on the COEQWAL Current Operations scenario using DWR's adjusted historical hydrology with the 2020 LandIQ land-use dataset. The CalSim model files for this strategy are referenced by the run IDs in the references note at the end of this brief.

§5 RELATED STRATEGIES

RELATED STRATEGIES — ENVIRONMENT

Winter-run refuge flows. Sacramento River flow requirements and Shasta cold-water storage protection to support Sacramento River winter-run Chinook salmon life-cycle needs.

Functional environmental flows with reduced crop acreage. Functional flow requirements combined with reduced irrigated acreage across the Central Valley, reflecting groundwater management under SGMA.

Winter-run refuge flows with reduced crop acreage. The winter-run refuge flows combined with reduced irrigated acreage across the Central Valley, reflecting groundwater management under SGMA.

Increase Delta outflows (65% unimpaired flow target). USBR Alternative 3 for the Long-Term Operation of the Central Valley Project, with Delta outflow requirements set to roughly 65% of unimpaired volume.

Increase Delta outflows (55% unimpaired flow target). USBR Alternative 3 for the Long-Term Operation of the Central Valley Project, with Delta outflow requirements set to roughly 55% of unimpaired volume.

Functional environmental flows. Functional minimum flow requirements on tributaries to the Sacramento and San Joaquin rivers, derived from natural-flow estimates.

§6 WHAT THIS DOESN'T SAY

This brief describes a scenario representation in CalSim, not a real-world policy proposal or implementation plan. The strategy as modeled may not capture all details necessary to support direct translation to actual operations. The brief does not predict, evaluate, or recommend any outcome — it describes what the scenario changes about CalSim's representation of the system. For what the model produces under this strategy, see the result briefs referenced in §7.

§7 SEE RESULTS FOR THIS STRATEGY

To see modeled outcomes under this strategy across all nine key outcomes at the reference hydroclimate, see the *Rivers, salmon and the Delta ecosystem* theme brief.

To see outcomes at a specific location of interest, see the relevant LOI briefs — particularly those for locations on the Sacramento and San Joaquin rivers and their tributaries.

Compare this strategy in the data explorer → (https://coeqwal.org/explore?strategy=s0030)

REFERENCES — MODEL RUNS

Each strategy is simulated once under each of five hydroclimates. The table lists the model run behind this strategy and the current-operations run it is compared against, for each hydroclimate, so any reader can trace this page to specific CalSim runs.

HYDROCLIMATE	THIS STRATEGY	CURRENT OPERATIONS
Historical hydroclimate (adjusted)	s0030	s0020
Moderate climate stress (EC-Earth3-Veg)	s0143	s0134
Moderate-high climate stress (cc50)	s0071	s0047
High climate stress (cc95)	s0091	s0056
Extreme climate stress (TaiESM1)	s0117	s0108