



California Water Commission

Water Storage Investment Program

Review Administrative Draft Regulations

Draft Regulations

- Section 6000 – Definitions
- Section 6001 – General Provisions
- Section 6002 – General Selection Process
- Section 6003 – Funding Commitments
- Section 6004 – Quantification of Benefits
- Section 6005 – Priorities
- Section 6006 – Relative Environmental Value
- Section 6007 – Managing Public Benefits

Ecosystem and Water Quality Priorities and Relative Environmental Values

California Water Code §79754

CWC, in consultation with the CDFW, State Water Board, and DWR, to develop and adopt, by regulation, methods for quantification and management of public benefits by December 15, 2016. The regulations must include:

- Priorities and relative environmental value of **ecosystem benefits** as provided by the CDFW
- Priorities and relative environmental value of **water quality benefits** as provided by the State Water Board

Regulations Article 3 – Quantification and Management of Benefits, Section 6005 Priorities

Focus on Ecosystem Priorities

CDFW Priorities – Flow and Water Quality

- i. Provide cold water at times and locations to increase the survival of salmonid eggs and fry.
- ii. Enhance flows to improve habitat conditions for in-river rearing and downstream migration of juvenile salmonids.
- iii. Maintain flows and appropriate ramping rates at times and locations that will minimize dewatering of salmonid redds and prevent stranding of juvenile salmonids in side channel habitat.
- iv. Increase flows to improve ecosystem water quality.
- v. Increase flows to support anadromous fish passage by providing adequate dissolved oxygen and lower water temperatures.

CDFW Priorities – Flow and Water Quality (cont'd)

- vi. Increase attraction flows during the upstream migration period to reduce straying of anadromous species into non-natal tributaries.
- vii. Increase Delta outflow to provide low salinity habitat for Delta smelt, longfin smelt and other estuarine fishes in the Delta, Suisun Bay, and Suisun Marsh.
- viii. Maintain groundwater and surface water interconnections to support instream benefits and groundwater dependent ecosystems.

CDFW Priorities – Physical Processes and Habitat

- i. Enhance flow regimes to improve the quantity and quality of riparian and floodplain habitats for aquatic and terrestrial species.
- ii. Enhance floodplains by increasing the frequency, magnitude, and duration of floodplain inundation to enhance primary and secondary productivity and the growth and survival of fish.
- iii. Enhance the temporal and spatial distribution and diversity of habitats to support all life stages of fish and wildlife species.
- iv. Enhance access to fish spawning, rearing, and holding habitat by eliminating barriers to migration.

CDFW Priorities – Physical Processes and Habitat (cont'd)

- v. Remediate unscreened or poorly screened diversions to reduce entrainment of fish.
- vi. Provide water to enhance seasonal wetlands, permanent wetlands, and riparian habitat for aquatic and terrestrial species on state and federal wildlife refuges and on other public and private lands managed for ecosystem values.
- vii. Develop and implement non-native invasive species management plans utilizing proven methods to enhance habitat and increase the survival of native species.
- viii. Enhance habitat for native species that have commercial, recreational, scientific, and educational value.

Regulations Article 3 – Quantification and Management of Benefits, Section 6006 Relative Environmental Values Focus on Ecosystem Improvements

Relative Environmental Values (REVs) – Ecosystem Improvements

- 1) Number of ecosystem priorities addressed by the project.
- 2) Magnitude and certainty of ecosystem improvements.
- 3) Spatial and temporal scale of ecosystem improvements.
- 4) Inclusion of an adaptive management and monitoring program that includes measurable objectives, performance measures, thresholds and triggers for managing ecosystem benefits.
- 5) Immediacy of ecosystem improvement actions and realization of benefits.
- 6) Duration of ecosystem improvements.

Relative Environmental Values – Ecosystem Improvements (cont'd)

- 7) Consistency with species recovery plans and strategies, initiatives, and conservation plans.
- 8) Location of ecosystem improvements and connectivity to areas already being protected or managed for conservation values.
- 9) Efficient use of water to achieve multiple ecosystem benefits.
- 10) Resilience of ecosystem improvements to the effects of climate change.

Regulations Article 3 – Quantification and Management of Benefits, Section 6005 Priorities

Focus on Water Quality Priorities

State Water Board Priorities

- 1) Improve water temperature conditions in water bodies on California's Clean Water Act (CWA) Section 303(d) list that are impaired for temperature.
- 2) Improve dissolved oxygen conditions in water bodies on California's CWA 303(d) list that are impaired for dissolved oxygen.
- 3) Improve nutrient conditions in water bodies on California's CWA 303(d) list that are impaired for nutrients.
- 4) Improve mercury conditions in water bodies on California's CWA 303(d) list that are impaired for mercury.
- 5) Improve salinity conditions in water bodies on California's CWA 303(d) list that are impaired for sodium, total dissolved solids, chloride, or specific conductance/electrical conductivity.

State Water Board Priorities (cont'd)

- 6) Protect, clean up, or restore groundwater resources in CASGEM high- and medium-priority basins.
- 7) Achieve Delta tributary stream flows that resemble natural hydrograph patterns or other flow regimes that have been demonstrated to improve conditions for aquatic life.
- 8) Reduce current or future water demand on the Delta watershed by developing local water supplies.
- 9) Provide water for basic human needs, such as drinking, cooking, and bathing, in disadvantaged or similarly situated communities, where those needs are not being met.

**Regulations Article 3 – Quantification and
Management of Benefits, Section 6006
Relative Environmental Values
Focus on Water Quality Improvements**

Relative Environmental Values – Water Quality Improvements

- 1) Number of water quality priorities addressed by the project.
- 2) Magnitude and certainty of water quality improvements.
- 3) Spatial and temporal scale of water quality improvements.
- 4) Inclusion of an adaptive management and monitoring program that includes measurable objectives, performance measures, thresholds, and triggers for managing water quality benefits.
- 5) Immediacy of water quality improvement actions and realization of benefits.
- 6) Duration of water quality improvements.

Relative Environmental Values – Water Quality Improvements (cont'd)

- 7) Consistency with water quality control plans, water quality control policies, and the Sustainable Groundwater Management Act (2014).
- 8) Connectivity of water quality improvements to areas that support beneficial uses of water or are being managed for water quality.
- 9) Resilience of water quality improvements to the effects of climate change.

Relative Environmental Values – Water Quality Improvements (cont'd)

- 10) Extent to which water quality improvement provides water for basic human needs, such as drinking, cooking, and bathing, in disadvantaged or similarly situated communities, where those needs are not being met.
- 11) Extent to which undesirable results that are caused by groundwater extractions are addressed.