

California Code of Regulations
Title 23. Waters
Division xx. California Water Commission
Chapter yy. Safe, Clean, and Reliable Drinking Water Supply Act of 2012
Article zz. Methods for Quantification and Management of Public Benefits
(WORKING DRAFT)

§zz. Quantification of Public Benefits

Chapter 8 of the Safe, Clean, and Reliable Drinking Water Supply Act of 2012 (the Act) provides up to \$3 billion of the proceeds from the sale of General Obligation bonds to fund eligible water storage projects that provide certain public benefits. The Act adds §79744 to the California Water Code, requiring the California Water Commission (Commission), in consultation with the Department of Fish and Wildlife (CDFW) and the State Water Resources Control Board (State Water Board) and the Department of Water Resources (DWR) to

develop and adopt, by regulation, methods for quantification and management of public benefits described in Section 79743 by December 15, 2012. The regulations shall include the priorities and relative environmental value of ecosystem benefits as provided by the Department of Fish and Game and the priorities and relative environmental value of water quality benefits as provided by the State Water Resources Control Board.

Section 79743 of the Water Code identifies five types of public benefits eligible for public funding under the Act:

- (1) *Ecosystem improvements, including changing the timing of water diversions, improvement in flow conditions, temperature, or other benefits that contribute to restoration of aquatic ecosystems and native fish and wildlife, including those ecosystems and fish and wildlife in the Delta.*
- (2) *Water quality improvements in the Delta, or in other river systems, that provide significant public trust resources, or that clean up and restore groundwater resources.*
- (3) *Flood control benefits, including, but not limited to, increases in flood reservation space in existing reservoirs by exchange for existing or increased water storage capacity in response to the effects of changing hydrology and decreasing snow pack on California's water and flood management system.*

- (4) *Emergency response, including, but not limited to, securing emergency water supplies and flows for dilution and salinity repulsion following a natural disaster or act of terrorism.*
- (5) *Recreational purposes, including, but not limited to, those recreational pursuits generally associated with the outdoors.*

Section 79741 of the Water Code limits the projects eligible for funding under Chapter 8 to:

- (a) *Surface storage projects identified in the CALFED Bay-Delta Program Record of Decision, dated August 28, 2000, except for projects prohibited by Chapter 1.4 (commencing with Section 5093.50) of Division 5 of the Public Resources Code.*
- (b) *Groundwater storage projects and groundwater contamination prevention or remediation projects that provide water storage benefits.*
- (c) *Conjunctive use and reservoir reoperation projects.*
- (d) *Local and regional surface storage projects that improve the operation of water systems in the state and provide public benefits.*

The exception under part (a) above is for streams listed under the California Wild and Scenic Rivers Act.

§zz.1. Applicability

The regulations in this Article apply to any process and methods used to quantify and manage public benefits of water storage projects authorized in Chapter 8 of the Act.

Note: Authority cited: §79714, §79740-79749, Water Code.

§zz.2. Definitions

For purposes of this Article, the following definitions shall apply:

- (a) “Act” means the Safe, Clean, and Reliable Drinking Water Supply Act of 2012.
- (b) “Applicant” means the agency or group that is submitting information to the Commission and requesting funding for public benefits.
- (c) “Application” means the package of information submitted by an applicant in support of its request for funding for public benefits.
- (d) “CDFW” means the California Department of Fish and Wildlife, formerly known as the California Department of Fish and Game.

- (e) “Commission” means the California Water Commission.
- (f) “Costs” are the value of resources and materials required for a specified economic activity. Costs include capital, operations, maintenance, and replacement costs.
- (g) “Delta” means the Sacramento-San Joaquin Delta, as defined in Section 12220.
- (h) “DWR” means the California Department of Water Resources.
- (i) “Monetized benefit” or “monetary benefit” means the dollar value of the estimated or expected level of public or nonpublic benefit provided by a proposed project. Monetized benefits include net cost savings, net revenues to sellers or producers, and willingness to pay above price actually paid by users or consumers.
- (j) “Nonpublic benefit” means a benefit that does not fall within one of the five categories defined in §79743. Nonpublic benefits may nevertheless be paid for by a local, state, or federal public agency.
- (k) “Panel” means the project evaluation panel appointed by the Commission to review applications and advise it on the projects’ eligibility and quantification of public benefits.
- (l) “Physical benefit” is the amount of benefit provided in physical units; for example, numbers of fish, acre-feet of water, acres of habitat or flooding, numbers of boaters, or concentration of chemicals in water.
- (m) “Planning horizon” is the construction period plus the expected life of a project, in years. The expected life of water storage projects is normally assumed to be not greater than 100 years.
- (n) “Proposed project” means the specific water storage project providing the public benefits for which funding is being requested.
- (o) “Public benefit” means a benefit that falls within one of the five categories defined in Water Code §79743 eligible for consideration for State funding by the Commission. For purposes of quantification under this section:
 - (1) Ecosystem improvement benefits must be the result of expected restoration of aquatic ecosystems and native fish and wildlife;
 - (2) Water quality changes that contribute to restoration of aquatic ecosystems and native fish and wildlife, including those ecosystems and fish and wildlife in the Delta, are classified as ecosystem improvement benefits. Any other benefits from water quality improvements may be considered water quality benefits under this section;
 - (3) Flood control benefits are reduction in flood damages, costs and losses;

- (4) Emergency response benefits include use of stored water to reduce water supply losses and water quality costs caused by Delta levee failures, and benefits from improved ability to maintain water supply following natural or man-made disasters.
- (5) Only outdoor recreation benefits that occur on or adjacent to the project proposed for funding under this section, or that result from stream flow or reservoir surface area improvements caused by the project's operation, or system reoperation, are eligible.
- (p) "Return on investment" is defined as net public benefits for Californians in comparison to the public costs of obtaining the benefits. Net public benefits are monetized public benefits, less any unmitigated adverse effects on public benefits, plus a consideration for non-monetized benefits, as determined by the commission's review.
- (q) "Solicitation package" means the set of information developed by the Commission and provided to applicants pursuant to Water Code §79708(a).
- (r) "State Water Board" means the California State Water Resources Control Board.
- (s) "Water Code" means California Water Code.
- (t) "Willingness to pay." The maximum value of other goods and services (generally measured as monetary value) that people would be willing to give up to obtain or enjoy a specified good or service.

Note: Authority cited: §79702.

§zz.3 Quantification of Public Benefits

All benefits must be described in terms of physical quantities such as population numbers, concentration, area, weight or volume. Most benefits can also be expressed in monetary terms, such as cost savings or value of goods or services provided. All public benefits can be considered for funding, even if they cannot be expressed in monetary terms (monetized). However, benefits that cannot be monetized cannot be included in the quantified return on investment.

The methods and process for quantifying the public benefits must:

- (a) Define the proposed project life and the without-project condition, including the future status of the physical resources for which benefits will be claimed, related facilities and water supplies.

- (b) For each public benefit, quantify the physical change provided by the proposed project as compared to the without-project condition, and show the annual amount of the benefit for each year of the proposed project's planning horizon.
- (c) Identify any cost savings enabled by the proposed project, defined as the cost of other activities or projects that would be avoided or eliminated as a result of the proposed project.
- (d) Identify and describe feasible alternatives for providing each public benefit, and identify an alternative that provides the same package of public benefits, and estimate the costs of these alternatives.
- (e) Estimate the monetized benefit corresponding to each public benefit's physical change using avoided cost, alternative cost, and willingness-to-pay information. If any benefit cannot be monetized, additional justification must be provided.
- (f) Use discounting procedures defined in to convert estimated benefits to a common point in time.
- (g) In order to calculate cost shares and benefit shares for compliance with Water Code §79746 and 79747, display project costs and nonpublic benefits using the same discounting procedures.
- (h) Provide documentation of information, assumptions, methods, calculations, and results.

Note: Authority cited: §79744.

§zz.4 Priorities and Relative Environmental Values

The methods and process for quantification of public benefits shall demonstrate how the project's public benefits align with priorities and relative environmental values provided by CDFW and the State Water Board as follows:

(a) Ecosystem Priorities

Priority ecosystem improvements identified by CDFW achieve one or more of the following (in no order of preference):

- (1) Provide recovery for endangered and other at-risk species and native biotic communities;
- (2) Rehabilitate natural processes;
- (3) Maintain or enhance populations of selected species for sustainable commercial or recreational harvest;
- (4) Protect or restore functional habitat types;
- (5) Prevent or reduce negative impacts from non-native species; and
- (6) Improve and/or maintain water and sediment quality conditions that support healthy ecosystems.

(b) Water Quality Priorities

The State Water Board's highest priorities for funding of water quality benefits associated with water storage projects include projects that (in no order of preference):

- (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) Mitigate or control mercury in water bodies on California's CWA 303(d) list that are impaired for mercury;
- (4) Reduce salinity concentrations in water bodies on California's CWA 303(d) list that are impaired for sodium, total dissolved solids, chloride, or specific conductance/electrical conductivity;
- (5) Result in Delta tributary stream flows that more closely mimic natural hydrograph patterns or other flow regimes that have been demonstrated to improve conditions for aquatic life;
- (6) Create additional supply capacity south of the Delta, and offset/reduce the current or future water demand from the Delta and its tributaries; and
- (7) Clean up or restore groundwater resources in high use basins.

(c) Relative Environmental Value

Proposed projects may vary widely in the magnitude, mix, location, and timing of benefits. Relative environmental value will be assessed (as provided in zz.6) for ecosystem and water quality benefits according to the following principles:

- (1) The benefit addresses more than one of the priorities.
- (2) The expected magnitude of the measurable benefit is greater: for example, larger increases in population numbers or habitat area for ecosystem benefit, or larger reduction in concentrations or reduction in the frequency of exceedance for water quality benefit.
- (3) The uncertainty of achieving the benefit is lower: for example, the proposal's operational commitments provide greater assurance that the benefit can be achieved, or the ecosystem benefit provides a greater likelihood of species recovery or significant habitat enhancement, or the water quality benefit provides a greater likelihood of bringing the affected water body into compliance.
- (4) The benefit will be implemented sooner.
- (5) The benefit will be more likely to result in a long-term or permanent improvement.

Other characteristics specific to individual proposed projects may also be considered in the determination of relative environmental value. CDFW and the State Water Board are responsible for providing a more detailed list of priorities and relative environmental value.

Note: Authority cited: § 79744.

§zz.5 Monitoring and Management of Public Benefits

Projects funded under the Act must be operated and managed to provide the public benefits funded by the Act. A project will not be funded unless there are assurances that the public benefits claimed will be provided. Such assurances shall include:

- (a) A detailed Operations Plan, describing how the proposed project will be operated to provide the public benefits under the anticipated range of hydrologic conditions. The plan shall also describe how operational decisions will be made if conditions fall outside the range of anticipated conditions. The Operations Plan must be consistent with the methods and process used to quantify benefits.
- (b) A Monitoring, Assurances and Reporting plan, including expected budget identifying how operations will be monitored and verified, the physical benefits that will be measured, and the location and frequency of measurement.
- (c) A list of operational, monitoring, and reporting commitments. This list will be provided to state and federal regulatory and permitting agencies for inclusion, at each agency's discretion, as conditions of or articles in a permit or license. Any project funded under the Act shall prepare a report every year that includes, at a minimum, a comparison of actual operations to those described in the operations plan.

Note: Authority cited: § 79745(a)(3).

§zz.6 General Solicitation, Review and Evaluation Process

The methods and process for the quantification of public benefits will be used in a competitive process by the Commission to rank proposed projects.

Note: Authority cited: §79740(c), 79708.

(a) Solicitation package

The Commission shall prepare and make available to all potential applicants, a solicitation package providing details on project eligibility and available funding. The package shall describe the requirements for the content, presentation and formatting of information submitted in support of a proposed project, as well as a description of the review process and schedule; evaluation criteria; and other guidance to assist applicants. The package shall also include guidelines and a range of acceptable methods for quantifying public benefits.

Note: Authority cited: §79708(a).

(b) Project Evaluation Panel

The Commission will appoint a project evaluation panel (panel) composed of technical experts from DWR, CDFW, and the State Water Board. The panel will also include other experts from state or federal agencies, academic institutions, and/or private industry who have relevant expertise to evaluate the technical information and analysis of public and nonpublic benefits. The panel shall review the information submitted in support of a proposed project and provide to the Commission an evaluation of how well the information addresses the eligibility and evaluation criteria provided in the solicitation package.

In an effort to make sure the panel is free from bias, the Commission will review potential appointments for conflicts of interest such as those proscribed under Government Code §1090. If a member of the panel, or a member of his or her immediate family, has a financial relationship with an applicant or other entity that stands to benefit from the application process or grant award, the member shall disclose such interest to the other panel members and the Commission. The Commission may, at its discretion, request such members to recuse themselves and/or appoint a replacement for that member.

Note: Authority cited: §79740(c).

(c) Determination by the Commission

For each proposed project, the Commission will:

- (a) Review the information provided for each proposed project.
- (b) Consider the panel's evaluation.
- (c) Rank potential projects based on the expected return for public investment as measured by the magnitude of the public benefits provided.
- (d) Hold a public hearing prior to funding any projects under the Act.
- (e) Prepare its final findings and funding recommendation for public benefits and provide them to the legislature.

Note: Authority cited: §79740(a), 79740(c), 79745(a)(4), 79745(b).