Please note that this document has been updated to reflect the passage of Proposition 1, but no substantive changes have been made.

Title 23. Waters
Division xx. California Water Commission
Chapter 8. Water Quality, Supply, and Infrastructure Improvement Act of 2014
Article zz. Methods for Quantification and Management of Public Benefits
(WORKING DRAFT)

DRAFT

§zz. Quantification of Public Benefits

Chapter 8 of the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (the Act) provides up to $2.7 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 §79754 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 79753 by December 15, 2016. The regulations shall include the priorities and relative environmental value of ecosystem benefits as provided by the Department of Fish and Wildlife and the priorities and relative environmental value of water quality benefits as provided by the State Board.*

Section 79753 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 79751 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 or method used to quantify and manage public benefits of water storage projects authorized in Chapter 8 of the Act.

Note: Authority cited: §79712, §79750-79759, Water Code.

§zz.2. Definitions

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

(a) "Act" means the Water Quality, Supply, and Infrastructure Improvement Act of 2014.

(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 California Water Code § 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 §79753. 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 §79753 eligible for consideration for State funding by the Commission.

(p) "Return on investment" means 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 DWR and provided to applicants pursuant to Water Code §79706(a).

(r) "State Water Board" means the California State Water Resources Control Board.

(s) "Water Code" means California Water Code.

DRAFT

(t) "Willingness to pay" means the maximum monetary value of other goods and services that people would be willing to give up to obtain or enjoy more of 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.

(a) The following clarify how the categories of benefits shall be quantified:

(1) Ecosystem improvement benefits must be the result of an expected contribution to 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.

(b) The quantification of public benefits must be based on the principles below:

(1) Benefits must be defined for the expected life of the proposed project and relative to the without-project conditions. The without-project condition must include the future status of the physical resources for which benefits will be claimed, related facilities, and water supplies.
(2) Benefits must be based on the quantified physical change provided by the proposed project as compared to the without-project condition for each year of the proposed project's planning horizon.

DRAFT

(3) Cost savings enabled by the proposed project are calculated as the cost of other activities or projects that would be avoided or eliminated as a result of the proposed project.
(4) Where possible, a feasible alternative must be identified that provides the same package of public benefits as the proposed project. The alternative cost to the proposed project is the estimated cost of the least costly feasible alternative.
(5) Where possible, the monetized benefit corresponding to each public benefit's physical change must be quantified using avoided cost, alternative cost, or willingness-to-pay information. If any benefit cannot be monetized, justification must be provided.
(6) Discounting procedures must be used to convert estimated future benefits to a common point in time. DWR shall provide appropriate discount factors and rates in the solicitation package described in §zz.7(a).
(7) In order to calculate cost shares and benefit shares for compliance with Water Code §79756 and §79757, project costs and nonpublic benefits must be quantified and discounted using the same discounting procedures.
(8) Quantification must be supported by clear documentation of information, assumptions, methods, and calculations.

Note: Authority cited: §79754.

§zz.4 Limitations Regarding Funding of Public Benefits

The Act limits funding in relation to quantified public benefits as follows:

(a) Ecosystem improvement benefits must be at least 50 percent of total public benefits requested for funding. If non-ecosystem public benefits are more than ecosystem public benefits, then the difference is not eligible for funding. (Reference: §79756(b))

(b) The public benefit cost share of a project, other than conjunctive use and reservoir reoperation projects, may not exceed 50 percent of the total costs of the project. (Reference: §79756(a))

(c) The entire package of public benefits provided by the project must be provided in a cost-effective manner. (Reference: §79750(b))

§zz.5 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

Ecosystem benefits associated with water storage projects prioritized by CDFW should 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; or
(6) Improve and/or maintain water and sediment quality conditions that support healthy ecosystems.

(b) Water Quality Priorities

Water quality benefits associated with water storage projects prioritized by the State Water Board should achieve one or more of the following (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 storage capacity south of the Delta, and offset/reduce the current or future water demand from the Delta and its tributaries; or
(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 based on:

(1) The number of ecosystem and water quality priorities addressed.
(2) The expected magnitude of the measurable benefits; for example, increases in population numbers or habitat area for ecosystem benefit, or reduction in

DRAFT

concentrations or reduction in the frequency of exceedance for water quality benefit.

(3) The certainty of achieving the benefits: 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) How soon the benefits will be provided. Benefits achieved sooner are preferable to benefits provided later.

(5) The duration or permanence of the benefits.

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: § 79754.

§zz.6 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. Assurances that the public benefits will be provided shall be based on:

(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: § 79755(a)(3).

§zz.7 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: §79750(c), 79706.

(a) Solicitation package

DWR 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: §79706(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 experts from other 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: §79750(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.

DRAFT

Note: Authority cited: §79750(a), 79750(c), 79755(a)(4), 79755(b).

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