

PRELIMINARY WORKING DRAFT FOR DISCUSSION PURPOSES ONLY

CALIFORNIA CODE OF REGULATIONS
TITLE 23.WATERS.
DIVISION 7. CALIFORNIA WATER COMMISSION
CHAPTER 1 WATER STORAGE INVESTMENT PROGRAM

Article 1 Definitions

Section 6000. Definitions (Definitions without text are still being developed)

As used in this Chapter, the terms below shall have the meanings **noted**:

- (a) "Alternative cost" means the cost of the lowest-cost, feasible alternative to providing a physical benefit provided by a proposed project.
- (b) "Applicant" means the entity that is formally submitting a grant application. This is the same entity that would enter into an agreement with the State should the grant application be funded.
- (c) "Application" means the submission to the Commission that requests grant funding for a proposed project that the applicant intends to implement.
- (d) "Avoided cost" means the reduction in a without-project conditions cost that would occur as a result of the proposed project.
- (e) "Beneficial uses of the Delta" means
- (f) "Beneficiaries" means
- (g) "Biological conditions" means
- (h) "CALFED Surface Storage Projects" mean Los Vaqueros Reservoir Expansion, In-Delta Storage Project, Sites Reservoir, and Temperance Flat Reservoir.
- (i) "Commission" means the California Water Commission
- (j) "Commitment" means
- (k) "Complete application" means an application that consists of all of the requested information and supporting documentation, which is understandable, and submitted prior to the close of a solicitation.
- (l) "Conjunctive use projects" means projects that allow for the coordinated and planned management of both surface water and groundwater resources in order to maximize the efficient use of both resources. Water supplies, regardless of whether the source of water is surface water, recycled water, or groundwater, are stored in the groundwater basin through recharge for use later. Conjunctive use projects would include projects in which a water management agency(ies) manage their water supplies in a coordinated manner in order to optimize their portfolio of water supplies
- (m) "Constant dollar year" means the year to which all dollar values are adjusted for inflation so they can be compared.

Comment [MM1]: CCWD would like to review definitions again once the list has been completed. Comments provided below are not exhaustive and are based on work done to date.

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- (n) "Construction contingencies" means a separate cost item in the project cost estimate to compensate for unforeseen or changed site conditions, owner-directed orders for change, and quantity overruns.
- (o) "Contract cost" means the estimated cost of the contract for construction of the project at time of bid or award.
- (p) "Cost effectiveness" means a comparison of the project public cost share to the cost of the least-cost feasible means of providing the same or more amounts of the project public benefits.
- (q) "Cost share" means
- (r) "Cost allocation" means
- (s) "Days" means calendar days.
- (t) "Delta" means the Sacramento-San Joaquin Delta as defined in Water Code Section 12220 and the Suisun Marsh as defined in Public Resources Code Section 29101.
- (u) "Demobilization" means
- (v) "Department" means the Department of Water Resources
- (w) "Discount rate" means real interest rate, applied to constant dollars, used to calculate present value or annual equivalent (amortized) value.
- (x) "Ecosystem improvements" mean a public benefit that contributes to the restoration of aquatic ecosystems and native fish and wildlife, including those ecosystems and fish and wildlife in the Delta. Ecosystems shall include aquatic and terrestrial habitats and natural communities. Ecosystem improvements may include changing the timing of water diversions, improvement of flow conditions, temperature, reducing direct entrainment of species, or other benefits that contribute to the restoration of aquatic ecosystems and native fish and wildlife, including those ecosystems and fish and wildlife in the Delta, per Water Code Section 79753(a)(1).
- (y) "Encumbrance of funding" means the collective internal accounting and bond accountability actions initiated by Staff to allocate specific amounts of authorized general obligation bond funding to specific grantees.
- (z) "Environmental documentation" means documentation required by the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq.
- (aa) "Emergency response" means an amount of water storage or supply dedicated to emergency response purposes that are outside of normal facility operations or average water supply for all other purposes (i.e., water supply is reduced for the expected (average) amount of water used for emergency purposes). Per Water Code Section 79753(a)(4), emergency response includes, but is not limited to, securing emergency water supplies and flows for dilution and salinity repulsion following a natural disaster or act of terrorism, and to provide supplies during a declared emergency drought.
- (bb) "Existing condition" means the level of development, infrastructure, population, land use, water use, climate and all other relevant factors including operations plans, agreements, laws and regulations that are in place in the current or a very recent year, normally stated as a year.
- (cc) "Feasibility" means

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- (dd) "Field cost" means the estimate of the capital costs of a project from award to construction closeout. The field cost equals the contract cost plus construction contingencies.
- (ee) "Flood control benefits" means a public benefit that reduces or prevents the detrimental effects of flooding as a result of new storage projects. Per Water Code Section 79753(a)(3), flood control benefits include, but are 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.
- (ff) "Future condition" means the level of development, infrastructure, population, land use, water use and all other factors including operating plans, laws and regulations that are projected to change in the future, normally stated as a particular year in the planning horizon.
- (gg) "Grantee" means an applicant that receives an initial or final funding commitment.
- (hh) "Groundwater contamination prevention project" mean a project that prevent groundwater contamination by eliminating contamination sources from point sources (landfills, leaking gasoline storage tanks, leaking septic tanks and accidental spills) or non-point sources (naturally occurring contaminants such as iron, sulfates, radon, and arsenic and runoff from parking lots, pesticides and fertilizers that infiltrate the soil) or a project that prevents seawater intrusion or migration of contaminants into groundwater basins through the use of seawater or hydraulic barriers.
- (ii) "Groundwater remediation project" mean a project that remove constituents or contaminants that have degraded water quality of the groundwater and restore the capacity of the groundwater basin storage for beneficial uses.
- (jj) "Groundwater storage project" means
- (kk) "Hydrologic record for analysis" means a period of historic years chosen for the analysis that has continuous hydrologic information such as precipitation, inflows, storage, flows, water diversions, and/or water consumption available.
- (ll) "Improve the operations of the state water system" means
- (mm) "Internal rate of return" means
- (nn) "Level of development" means
- (oo) "Local and regional surface storage project" means a project that stores water above ground from a natural or artificial impoundment that improves the operation of water systems in the state and provide public benefits that provided water deliveries within a more limited geographic area when compared to the CALFED surface storage projects or other components of the State Water Project or Central Valley Project. Such projects primarily address increasing local or regional self-reliance, improving the operations of the local or regional water system, or improving integrated regional water management.
- (pp) "Long-term planning analysis" means
- (qq) "Magnitude of public benefits" means
- (rr) "Measurable improvements" means physical, chemical, or biological parameter improvements that can be quantified at a specific location and time.

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~~(ss)~~ “Mitigation land” means land that is required by permitting agencies to provide compensatory mitigation intended to offset known environmental, cultural, and/or archeological, impacts associated with project implementation.

~~(ss)~~~~(tt)~~ “Mobilization” means

~~(tt)~~~~(uu)~~ “Mutual water company” means a private corporation or association organized for the purposes of delivering water to its stockholders and members at cost, including use of works for conserving, treating, and reclaiming water as defined in Public Utilities Code Section 2725-2729.

~~(uu)~~~~(vv)~~ “Net improvement” means

~~(vv)~~~~(ww)~~ “Non-contract costs” means costs for engineering and design, construction management, project close-out, administration, legal services, and permitting.

~~(www)~~~~(xx)~~ “Non-public benefit” means benefits provided by a project other than the public benefits identified in Water Code Section 79753(a)(1-5).

~~(xx)~~~~(yy)~~ “Period of analysis” means the future time period over which project costs will be paid and benefits received, normally based on the expected useful life of the project.

~~(yy)~~~~(zz)~~ “Period of record” means

~~(aaa)~~ “Permits” means local, state, and federal permits required for project implementation and operation.

~~(zz)~~~~(bbb)~~ “Physical benefits” means

~~(aaa)~~~~(ccc)~~ “Physical change” means

~~(bbb)~~~~(ddd)~~ “Physical conditions” means

~~(ccc)~~~~(eee)~~ “Planning horizon” means the future time period over which project costs will be paid and benefits received, normally based on the expected useful life of the project.

~~(ddd)~~~~(fff)~~ “Pre-application” means the first step in a two-step application process. The pre-application contains applicant and general project information.

~~(eee)~~~~(ggg)~~ “Present value” means the sum of discounted future costs or benefits over the period of analysis.

~~(fff)~~~~(hhh)~~ “Program” means the Water Storage Investment Program

~~(iii)~~ “Project beneficiary” means

~~(ggg)~~~~(iii)~~ “Project land” means land that must be acquired in order to construct or operate the project.

~~(hhh)~~~~(kkk)~~ “Projected condition” means

~~(iii)~~~~(lll)~~ “Projected condition with climate change” means

~~(jjj)~~~~(mmm)~~ “Public benefit” means ecosystem improvements, water quality improvements, flood control benefits, emergency response, and recreation associated with storage projects.

~~(kkk)~~~~(nnn)~~ “Public trust resources”, as related to Water Code Section 79753(a)(2), means fishery protection, fish and wildlife conservation, preservation of waterways in their natural state, and recreation. Water quality improvements in the Delta, or in other river systems, that provide these public trust resources are public benefits.

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Comment [MM2]: Need to determine if these are included in covered project costs

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Comment [MM3]: Unclear if this cost is eligible for reimbursement

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~~(lll)~~(ooo) “Public utility” means every common carrier, toll bridge corporation, pipeline corporation, gas corporation, electrical corporation, telephone corporation, telegraph corporation, ~~water corporation~~ public water agency, sewer system corporation, and heat corporation, where the service is performed for, or the commodity is delivered to, the public or any portion thereof.

~~(mmm)~~(ppp) _____ “Recreational purposes” mean a public benefit that provides outdoor recreation activities associated with water bodies (such as rivers, streams, lakes, wetlands, and the ocean) and wildlife refuges that are accessible to the public. Recreational benefits must be directly affected by the proposed project and be open to the public.

~~(nnn)~~(qqq) “Reservoir reoperation project” mean a project that involve the modification of the operations of existing surface storage reservoir to improve operational efficiencies or respond to changing conditions. A reservoir reoperation project may involve modification of flood operations to allow encroachment into the flood reservation space using improved flood forecast information such as forecast-based operations. A reservoir reoperation project may also include construction of appurtenant infrastructures such as spillways, radial gates, tunnels, or conveyance facilities. Such projects must result in long-term operational changes that support public benefits and operational changes must be documented in a facility’s operations document or operating permits (e.g., a Water Control Manual for a reservoir).

~~(ooo)~~(rrr) _____ “Resource areas” means

~~(ppp)~~(sss) _____ “Socioeconomic conditions” means

~~(qqq)~~(ttt) _____ “Spatial resolution” means

~~(rrr)~~(uuu) _____ “State water system” means all of the state’s water systems collectively, including local, regional, state and federal systems that provide water resources benefits within California.

~~(sss)~~(vvv) _____ “Surface and groundwater operations” means

~~(ttt)~~(www) _____ “Tributaries to the Delta” means all river systems that make up the Sacramento River watershed and the San Joaquin River watershed (i.e., the natural/topographic hydrologic basins). Tributaries to the Delta include areas upstream of dams.

~~(uuu)~~(xxx) _____ “Water quality improvements” mean a public benefit that improves water quality to provide significant public trust resources in the Delta or in other river systems or that clean up or restore groundwater resources, per Water Code Section 79753(a)(2).

~~(vvv)~~(yyy) _____ “Watersheds” means

~~(www)~~(zzz) _____ “Willingness to pay” means the amount of money that people would be willing to give up for a quantity of a good if there was no alternative means of obtaining that same quantity.

~~(xxx)~~(aaa) _____ “With project condition” means

~~(yyy)~~(bbb) _____ “Without-project condition” means

NOTE: Authority cited: Water Code Section 79706, 79754

Reference: Water Code Section 79712, 79750(b), 79750(c), 79751(a-d), 79752, 79753(a)(1-5), 79755(a)(2-3), 79755(a)(5)(B), 79755(a)(5)(C), 79756(a), 79757(a)(3)

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Article 2. Guidelines

Section 6001. General Provisions

- (a) Confidentiality
 - (1) Information submitted to the Commission pursuant to this chapter is public. Any privacy rights, as well as other confidential protections afforded by law with respect to the content of pre-application and full application are waived by the applicant.
- (b) Eligibility
 - (1) Eligible applicants consist of the following:
 - i. Public agencies
 - ii. Nonprofit organizations
 - iii. Public utilities
 - iv. Federally recognized Indian tribes,
 - v. State Indian tribes listed on the Native American Heritage Commission’s California Tribal Consultation List
 - vi. Mutual water companies
 - (2) Eligible project types include:
 - i. CALFED surface storage projects
 - ii. Groundwater storage projects
 - iii. Groundwater contamination prevention or remediation projects
 - iv. Conjunctive use projects
 - v. Reservoir reoperation projects
 - vi. Local surface storage projects
 - vii. Regional surface storage projects

NOTE: Authority cited: Water Code Section 79706
Reference: Water Code Section 79712, 79757

Section 6002. General Selection Process

- (a) The general selection process utilizes a two-step application process. Each step shall have a distinct solicitation period. The first step, pre-application, contains basic applicant and project information. Project information gathered in the pre-application step shall be posted on the Commission’s website and public comment will be solicited. Applicants shall consider the Commission’s assessment, public comments received by the Commission, as well as posted project information before deciding to prepare the second step, full application. When the Commission opens the second step solicitation for full applications, applicants deciding to continue in the selection process shall prepare and submit a full application for Commission use in the project selection process.
- (b) Pre-application
 - (1) Applicants for grant funding shall complete and submit a pre-application, using the Department’s on-line application submittal tool, during the solicitation period.

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- (2) The pre-application shall contain:
- i. Eligible applicant information
 - ii. Eligible project type
 - iii. Project name, location, water source, and description
 - ~~iii~~-iv. Project cost
 - ~~iv~~-v. Summary of Estimated magnitude of ~~public-physical~~ benefits reported in their natural units over the project planning horizon
 - ~~v~~-vi. Potential beneficiaries, distinguishing public vs non-public
 - ~~vi~~-vii. Estimated location, description, and magnitude of measurable improvements to the Delta ecosystem or to the tributaries to the Delta.
 - ~~vii~~-viii. Self-certification that the applicant understands the pre-application is initial step in the selection process, does not guarantee project funding, and that a full application is necessary to fully establish eligibility and provide information necessary for funding decisions by the Commission.
- (3) Staff shall review all pre-applications and assess the information to determine which proposed projects will likely meet the requirements for eligible applicant, proposed project, public benefit, and measurable improvements to the Delta ecosystem or to the tributaries to the Delta.
- (4) The Commission shall issue pre-application project assessments. The assessments shall either state that the pre-application information appears to meet the program provisions for eligibility and measurable improvements to the Delta or to the tributaries to the Delta, or provide recommendations to address deficiencies including eligibility issues before applicants decide to prepare full applications.

(c) Full Application

- (1) Applicants for grant funding under the program shall complete and submit an application, using the Department's on-line application submittal tool, prior to the close of the application solicitation. A complete application shall contain at least the following information:
- i. Documentation demonstrating eligibility
 - ii. Proposed project description
 - iii. Documentation that demonstrates project feasibility
 - iv. Documentation which supports and substantiates claimed physical benefits and improvements to the Delta or to the tributaries to the Delta
 - v. Benefits and cost analysis
 - ~~vi~~. Most recent publically available environmental document ~~and~~
 - ~~vi~~-vii. Sstatus of necessary permits
 - ~~vii~~-viii. Documentation that demonstrates consistency with applicable laws and regulations
 - ~~viii~~-ix. Documentation that demonstrates advancement of the long-term objectives of restoring ecological health and improving water management for beneficial uses of the Delta
 - ~~ix~~-x. Estimated project costs

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- ~~x~~xi. Estimated project schedule
- ~~xii. Preliminary Monitoring, Assurances, and Reporting Plan~~
- ~~xiii. Documentation that demonstrates program Ecosystem and Water Quality Priorities and Relative Environmental Values~~
- ~~xiii~~xiv. Documentation demonstrating managerial, technical, and financial capacity
- ~~xiv~~xv. Other items deemed necessary by the Commission

(2) Eligibility and Completeness Review

- i. Staff shall review each application for completeness and eligibility.
- ii. If any eligibility or completeness deficiencies are identified. Staff shall notify the applicant and provide a listing of the identified deficiencies.
- iii. The applicant shall be provided a 14-day period to submit the requested information to the Commission. If an applicant does not furnish the requested information within the 14-day period, then the application shall be disqualified and will not be considered for grant funding.
- iv. Applications that are deemed eligible and complete by Staff shall be moved to the technical review phase.
- v. Each application shall be reviewed for eligibility in accordance with paragraphs 1-6 below:
 1. Documentation demonstrating the applicant is eligible as listed in Section 6001(c)(1).
 2. Self-certification that the project meets all of the following criteria:
 - a. Is an eligible project type under Section 6001(c)(2);
 - b. Does not adversely affect any river afforded protection in the California or Federal Wild and Scenic Rivers Act;
 - c. Is in compliance with all applicable laws and regulations; and
 - d. Provides measurable improvements to the Delta ecosystem or to the tributaries to the Delta.
 3. Submittal of the most recent publicly available version of the proposed project's environmental document.
 4. Documentation from duly authorized representatives of non-public benefit cost-share partners demonstrating commitments to provide not less than 75 percent of the non-public benefit cost-share.
 5. For applications where an urban water supplier (as defined in Water Code section 10617) or agricultural water supplier (as defined in Water Code section 10608.12) is receiving grant funds, documentation indicating the urban or agricultural water supplier is in compliance with the requirements of Part 2.55 (commencing with Section 10608) of Division 6 of the Water Code.
 6. For applications that include proposed projects that directly affect groundwater levels or quality self-certification of compliance with one of the following:

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- a. Preparation and implementation of a groundwater management plan in compliance with Water Code Section 10753.7.
- b. Participation or consent to be subject to a groundwater management plan, basin-wide management plan, or other plan that meets the requirements of Water Code Section 10753.7(a).
- c. Conformance with the applicable requirements of a water rights adjudication in the subject groundwater basin(s).
- d. Documentation that the project is located in a low or very low priority groundwater basin, as determined by the Department, and a commitment that the applicant will develop a groundwater management plan that meets the requirements of Water Code Section 10753.7 within 1-year of the submittal date of the full application.

(3) Technical Review

- i. Applications that are deemed complete and eligible by the review outlined in Section 6003(c)(3) of these regulations shall have the following application components subjected to a technical review:
 1. Documentation that establishes the operational, technical, economic, financial and environmental feasibility of the proposed project.
 2. Demonstration that the proposed project provides measurable improvements to the Delta ecosystem or to the tributaries to the Delta.
 3. A preliminary Monitoring, Assurances, and Reporting Plan that describes the metric, timing, location, and methods for monitoring claimed public benefit and other actions that ensure public benefits are achieved.
- ii. Staff shall work with qualified technical reviewers from the Department, State Board, California Department of Fish and Wildlife, and other technical resources as Staff determines are needed.
- iii. The technical reviewers shall determine whether the application contents are sufficient to conduct the necessary review, whether additional or clarifying information is necessary, or whether errors in the quantification of public benefits or cost allocations are identified.
- iv. If such additional or clarifying information is necessary, or quantification errors have occurred, staff shall notify the applicant and provide a listing of the needed information, clarifications, or errors. The applicant shall provide requested information within ~~30~~60 days of the request.

(4) Independent Peer Review

- i. Staff shall work with independent peer reviewers consisting of technical experts that are not associated with the technical reviewers or any application received by the Commission. The independent peer reviewers shall consider the technical reviews and document whether they agree with the evaluations.

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- ii. The independent peer reviewers may contact the technical reviewers should they have any clarifying questions before completing their evaluation.
- iii. In an effort to ensure that peer reviewers are free from bias, Staff shall evaluate potential reviewers for conflicts of interest such as those proscribed under Government Code Section 1090. If a peer reviewer, 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 reviewer shall disclose such interest to Staff and shall be recused from reviewing any applications with which there is a conflict of interest.

(5) Commission shall make initial funding decisions based on the findings of the technical reviews, independent peer reviews and public input provided to the Commission.

(6) Initial findings, technical reviews, and peer reviews will be made available to the applicants and posted on the commission's website and made available for public comment.

~~(5)(7)~~ Applicants and the public will have at least 14 days to respond to initial funding decisions.

NOTE: Authority cited: Water Code Section 79706, 79750, 79712

Reference: Water Code Section 79751, 79757, 79755(a), 79755(c), 79706

Section 6003. Funding Commitments

(a) The process of committing funds involves a multiple steps. The Commission shall make initial funding decisions based on the steps in the general selection process. The initial funding decision shall be expressed as an initial commitment to grantees but actual allocation of funding shall be contingent on the grantee complying with the provisions contained in Water Code Section 79755(a). The grantee shall submit to the Commission routine progress reports that document the progress that the grantee is making towards complying with the provisions contained in Water Code Section 79755(a). The time necessary for a project to meet all the provisions will vary from project to project. When all required provisions are met, funds can be encumbered.

~~(b) The Commission may provide funding for a project to complete the necessary permits, per Water Code Section 79755(c). The decision to provide such permit funding is at the discretion of the Commission and shall be considered part of the overall cost allocation of funds to a project.~~

~~(c)~~(b) Initial Funding Commitment

- (1) The Commission shall pass a resolution documenting any initial funding commitments.
- (2) The Commission's initial funding commitment ~~is the maximum grant funding provided to a project. This amount~~ may be adjusted ~~downward~~ as projects are

Comment [MM4]: Once hard commitment has been received, Commission should provide immediate reimbursement for all eligible project costs including permitting, final environmental documentation, land acquisition, final design. Could have a time limit on how far back costs may be reimbursed but exact dates still need to be worked out.

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finalized. Any such adjustment shall be reflected in the Commission’s final funding commitment per Section 6003(e)(1).

- (3) Staff shall send letters to each applicant authorized to receive funds reflecting the Commission’s initial funding commitment and requesting any information needed to progress from the initial commitment to the funding agreement(s). This may include:
- i. Audited financial statements.
 - ii. Items stated in Water Code Section 79755(a).
 - iii. Additional information on environmental documentation status, or on urban water management plans, agricultural water management plans, or groundwater management plans.
 - iv. Reporting interval for status of Water Code Section 79755(a) items.

~~(d)~~(c) Funding for Finalizing Permits, Completion of Environmental Documentation and Permitting and Other Requirements. Notwithstanding subsection (a) of this section, funds may be encumbered for work associated with finalizing permits once the initial funding commitment is made.

- (1) Staff shall draft a funding agreement limited to finalizing permits eligible project costs incurred to meet all outstanding requirements.
- (2) ~~Such funding for finalizing permits is included in the initial funding commitment; funding for finalizing permits is~~ not an addition to the initial funding commitment per Water Code Section 79755(c).
- (3) Funding for finalizing permits, permitting and other outstanding requirements shall not exceed 10 percent of the initial funding commitment.

~~(e)~~(d) Funding for Construction and/or Project Reoperation Activities

- (1) Funding for construction activities remains contingent until a final operations plan and all items in Water Code Section 79755(a) are complete.
- (2) From the time of the initial funding commitment until all items in Water Code Section 79755(a) are complete, the grantee shall report to the Commission at least annually with updates on the requirements in Water Code Section 79755(a).
- (3) If the grantee does not make timely progress to complete the items in Water Code Section 79755(a), the Commission may make a determination of failure to make substantial progress towards completing the required documents in 79755(a) and rescind the initial commitment of funds.
- (4) When a grantee has complied with the requirements in Section 6003(e)(1) of these regulations, the Commission shall make a decision regarding a final funding commitment at publically noticed Commission meeting.
- (5) Funding Agreements for Construction Activities
 - i. Funds shall be encumbered for work associated with construction activities once all items in Section 6003(e)(4) of these regulations are complete.
 - ii. Commission staff shall draft a funding agreement encompassing the construction activities.

Comment [MM5]: Other requirements could include work needed to finalize cost share agreements among all interested parties, water rights modification, development of final operation plans, final design, all associated permitting costs including land acquisition, land acquisition for project construction, entering into contract with state agencies, etc.

Comment [MM6]: Can grant funding be used to reimburse previous capital costs to do a project? If so, what is the timeline?

Comment [MM7]: Requires definition and what will happen to the rescinded funds

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NOTE: Authority cited: Water Code Section 79706

Reference: Water Code Section 79706, 79755(a), 79712(b)

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Article 3. Quantification and Management of Benefits

Section 6004. Quantification of Benefits

(a) The applicant shall quantify the public and non-public benefits provided by the proposed project over the planning horizon. The applicant shall distinguish between public and non-public benefits in order to provide accurate cost allocations and determination of allowable grant funding. The magnitude of benefits shall be calculated using the physical change in each benefit resource condition that is created by or caused by the proposed project. To comply with this section, the methods used by the applicant to quantify the benefits shall include the following:

(1) Define the Without-Project Future Conditions. Applicants shall define the without-project future conditions for surface and groundwater operations, physical, biological, and socioeconomic conditions, and other resource areas as needed to quantify the potential benefits and costs of the proposed project. The without-project future conditions shall be ~~consistent with CEQA and/or NEPA, adjusted to reflect the level of development, infrastructure, land use, water use, operations, agreements, laws and regulations.~~

i. If the without-project future conditions are different than those shown in the applicant's CEQA No Project alternative, the applicant shall describe how the conditions are different and the implications of those differences, including any sensitivity analyses ~~conducted.~~

ii. The without-project future conditions shall not include conditions that will be addressed through sensitivity analyses described in Section 6004.(a)(1)(viii).

(2) Define the With-Project Future Conditions. The applicant shall define and assess future conditions with the project completed as proposed (i.e., the with-project conditions).

i. The with-project future conditions shall be based on the without-project future conditions and include any and all additions or modifications specific to the proposed project.

~~ii. The applicant shall include in the study area for analysis any watershed(s)/regions(s), including the Delta and other watersheds of State Water Project and Central Valley Project facilities, which may have changes created by or caused by the proposed project.~~

(3) Calculating Physical Benefits. The applicant shall quantify the physical benefits provided by the proposed project by comparing the physical changes of the with-project to the without-project future conditions.

i. The applicant shall:

1. Use long-term sequential datasets drawn from the available hydrologic period for analysis, sufficient to account for the range of meteorologic and hydrologic variability, including driest and wettest

Comment [MM8]: Seems unwise and potentially problematic if the benefits are calculated using a different baseline than the impacts.

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- years, and extended droughts for both existing and future conditions.
2. Use a geographic scope, spatial resolution, and time-step that are sufficient to accurately quantify the physical benefits claimed.
 - ~~3. Develop a revised set of hydrologic input data to be consistent with the without-project future conditions. If the applicant determines that the required revisions are not applicable to the analysis of a proposed project, the applicant must explain why not.~~
 - ~~4.3~~ Document how calculations of expected physical changes are derived, and show the linkage between the proposed project, its operations plan, and the expected physical changes created or caused by the proposed project.
- ii. ~~The applicant shall demonstrate water balance by including the following items:~~
 - ~~1. The sources and fate of water supply provided by the proposed project over the planning horizon.~~
 - ~~2. Beginning and ending conditions for storage.~~
 - iii. Physical benefits shall be reported using appropriate physical metrics and units as needed to support claimed economic benefits.
- (4) Monetize the Value of Project Benefits. The applicant shall, to the extent practicable, estimate the monetary value of physical benefits in accordance with ~~paragraphs i-viii below~~ the requirements stated in the Proposal Solicitation Package. If physical benefits cannot be monetized, the applicant shall provide justification why and include a qualitative description of the benefits.
- i. The analysis shall be conducted in constant 2015 dollars. All future costs and benefits must be displayed in constant dollars for each year of the planning horizon.
 - ii. The planning horizon shall not exceed the expected life of the project, or ~~100 years, whichever is less~~ the planning horizon in the environmental documentation for the project, plus the construction period.
 - iii. A 3.5 percent real (inflation-free) discount rate shall be used for all calculations involving discounting, compounding, present value, or annual equivalent (amortization) values of public and non-public benefits.
 - iv. Where future population levels are relevant to benefits calculations, the applicant shall use population forecasts that are consistent with ~~2015 the~~ most current Department of Finance population projections.
 - v. If there is at least one alternative means of providing the same amount or more of physical public benefits as provided by the proposed project, applicants shall calculate and display the cost of the least-cost of these alternative means.
 - vi. The applicant shall determine for each year of the planning horizon and for each benefit category the following items:

Comment [MM9]: Many technical definitions required to meet this and possibly redundant with the physical changes above.

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1. Avoided cost
 2. Alternative cost
 - ~~3. Willingness to pay benefit, if the willingness to pay benefit can be monetized, justified, and documented~~
- vii. The amount of physical benefit valued using avoided cost and the remaining amount valued using ~~either the alternative cost or willingness to pay must be displayed~~. Methods for evaluation must be justified.
- ~~viii. To claim benefits that trend upward over the planning horizon, the applicant shall provide the monetary benefits estimates for at least two years between the present and the end of the planning horizon. Interpolation and extrapolation may be used to estimate benefits for the remaining years of the planning horizon.~~
- (5) Estimate the Project Costs. The applicant shall include the total project costs, including construction, interest during construction, contingencies, land acquisition, mitigation, operations and maintenance, repair, and replacement costs within the planning horizon.
- i. All cost estimates shall be in 2015 dollars.
 - ii. All cost estimates shall be no more than 5 years old at the time of the submittal of the application.
 - iii. Cost estimates that are 5 years old or less at the time of the submittal of the application shall be escalated to 2015 dollars using cost escalation indices.
 - iv. Allowance for mobilization/demobilization shall not exceed 5% of the contract cost.
 - v. Construction contingencies shall not exceed 20% of the total construction cost.
 - vi. Non-contract costs shall not exceed 25% of the field cost.
 - vii. Future real energy costs or energy cost savings shall be escalated 1.7 percent annually to 2024 unless otherwise justified. Real unit energy costs shall be held constant thereafter unless justified.
 - viii. Conveyance costs shall be based on existing conveyance rates adjusted for future energy costs.
- (6) Compare Benefits to Costs. The applicant shall display and compare the present value of all benefits and costs of the proposed project.
- i. For each benefit category, the applicant shall provide the following items:
 1. The present value of the expected value of monetary benefits over the planning horizon.
 2. The estimated public cost share for each public benefit category, in present values, and documentation regarding how each public cost share was calculated.
 - ii. For any monetized public benefit, the applicant shall calculate the expected return for public investment by:
 1. The internal rate of return to the State investment, and

Comment [MM10]: Recreation benefits must be considered differently

Comment [MM11]: This is way too technical to be in the regulations and will be assessed by the review teams.

Comment [MM12]: Will reimbursements be updated to reflect actual costs in present value dollars?

Comment [MM13]: All of this is too specific for regulations

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2. The ratio of the present value of public benefits to the present value of the public cost share.
- (7) Allocate Costs to Beneficiaries. The applicant shall allocate all costs to the project beneficiaries and justify the method selected for the allocation.
 - i. Project costs shall be allocated to public and non-public benefit categories. Applicants shall justify the costs allocation method selected.
 - ii. Public benefit cost shares for the five public benefit categories listed in Water Code Section 79753(a) may be allocated to the State, the United States, local governments, or private interests. The share of public benefit cost shares allocated to the State:
 1. Shall consider the share of public benefits received by Californians
 2. Are subject to the limits imposed by Water Code Section 79756.
- (8) Sources of Uncertainty. The applicant shall ~~conduct quantitative sensitivity analyses, to the extent practicable, to~~ demonstrate how the expected public benefits provided by the proposed project change due to potential future uncertainties including but not limited to climate change and sea level rise, changes in regulatory conditions and future water projects or management actions.
 - i. ~~Sensitivity analyses shall include:~~
 1. ~~Climate change and sea level rise~~ — TBD
 2. ~~Delta outflow requirements~~ — TBD
 3. ~~Future projects or water management actions~~ — TBD
 - ii. Quantitative sensitivity analyses are preferred. ~~However, if~~ the applicant determines that the quantitative sensitivity analyses are not applicable to the analysis of a proposed project, the applicant shall explain why not.
- (9) Documentation. The applicant shall provide documentation to support data, assumptions, methods, calculations, and results. The applicant shall use sources of information that are publicly available whenever possible or submitted with the application. The quality of the documentation will be evaluated as part of the technical review.

Comment [MM14]: Might be reasonable to insist on quantitative estimates for climate change but really a qualitative assessment of future projects or associated regulatory uncertainty should be good enough because folks can make different assumptions and therefore it will not necessarily help rank projects.

NOTE: Authority cited: Water Code Section 79754
Reference: Water Code Section 79756, 79755(a)(2), 79757(2)

Section 6005. Priorities ~~(The priorities section is current as of the July SAC meeting. Changes to the text will be inserted into the next draft when DFW and the State Water Board finalize their priorities.)~~

- (a) In accordance with Water Code Section 79754, the California Department of Fish and Wildlife has determined ecosystem priorities as follows:
 - (1) Promote the recovery of endangered, threatened, and other at-risk native fish species and native fish assemblages through water project operations

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- (2) Restore physical processes and flow regimes to improve native habitats and natural communities to promote the recovery of endangered, threatened and other at-risk native species
- (3) Enhance commercial and recreational opportunities
- (4) Reduce the negative impacts of non-native species and natural communities
- (5) Prevent or reduce negative impacts from in-river structures on anadromous fishes
- (6) Increase quality ~~and quantity~~ of aquatic and riparian habitat and managed and unmanaged wetlands

Comment [MM15]: Will be difficult to achieve as part of a storage project

Comment [MM16]: Will be difficult to achieve as part of a storage project

Comment [MM17]: Storage projects are not habitat creation projects unless project mitigation can be counted for funding

(b) In accordance with Water Code Section 79754, the State Board has determined the water quality priorities as follows:

- (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;
- (6) Protect and/or clean up 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; and
- (8) Reduce current or future water demand on the Delta watershed by developing local water supplies.

NOTE: Authority cited: Water Code Section 79754
Reference: Water Code Section 79754

Section 6006. Relative Environmental Value (The relative environmental value section is current as of the July SAC meeting. Changes to the text will be inserted into the next draft when DFW and the State Water Board finalize their relative environmental value text.)

- (a) In accordance with Water Code Section 79754, the California Department of Fish and Wildlife has determined relative environmental values shall be assessed for ecosystem benefits based on the following, including but not limited to:
 - (1) Number of ecosystem and water quality priorities addressed

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- (2) Projects that implement actions in recovery plans and strategies, initiatives and conservation plans
 - (3) Environmental water use efficiency-concurrent benefits, multiple uses of the same block of water
 - (4) The quantitative value of the ecosystem and water quality benefits, along with the spatial and temporal component of those benefits, described using metrics such as flow, volume of coldwater pool, temperature, durations of benefit, floodplain inundation acres, number of recreational days, and species life stage
 - (5) Proximity of projects to areas that are already being protected and managed for ecosystem values
 - (6) The expected magnitude of the measurable benefits; for example, a measurable increase in a population or habitat area; a reduction in water quality contaminant concentrations or reduction in the frequency of exceedance to achieve a water quality benefit.
 - (7) Projects that include clear metrics and performance measures
 - (8) The certainty of achieving the benefits including operational commitments to provide assurances that the benefits will 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.
 - (9) Immediacy of benefits provided. Benefits achieved sooner are preferable to benefits achieved later.
 - (10) Projects that clearly include strategies for climate change adaption and resilience.
- (b) In accordance with Water Code Section 79754, the State Board has determined relative environmental values shall be assessed for water quality benefits by evaluating each proposed project's specific merits during the technical review phase of application review.

NOTE: Authority cited: Water Code Section 79754
Reference: Water Code Section 79754

Section 6007. Managing Public Benefits

- (a) Applicants shall demonstrate how the proposed project will be operated to provide the public benefits claimed. The applicant shall submit the following information:
 - (1) An operations plan or documentation describing, at a minimum, the following items:
 - (i) How the proposed project will be operated to provide public benefits under a range of hydrologic conditions; and
 - (ii) How operational decisions will be made if conditions fall outside the range of anticipated conditions.

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- (2) A preliminary monitoring, assurances, and reporting plan that, at a minimum includes the following items:
 - (i) Goals of the monitoring program;
 - (ii) A description of how operations will be monitored and verified;
 - (iii) The physical, chemical, or biological parameters that will be measured;
 - (iv) The location and frequency of measurement;
 - (v) The parties responsible for conducting the monitoring program; and
 - (vi) A listing of funding sources to be used to support the monitoring program.
- (3) At a minimum, any project funded under the program shall, on an annual basis commencing with the end of the first full year of operation, submit a report to the Commission and the public agencies identified in Water Code Section 79754. The report shall include at a minimum, a comparison of actual operations to those described in the final operations plan and a summary of annual public benefits provided. The reports shall be submitted annually for the useful life of the project or until such time as the Commission makes a determination that the reports are no longer necessary. This and any additional reporting requirements shall be implemented through the funding agreement or agency contracts specified in Water Code 79755(a)(3).

NOTE: Authority cited: Water Code Section 79754, 79706a
Reference: Water Code Section 79754, 79706a