State of California
California Water Commission

California Code of Regulations, Title 23. Waters
Division 7. California Water Commission
Chapter 1. Water Storage Investment Program

Initial Statement of Reasons

Background and Authority

In November 2014, California voters approved Proposition 1, the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1, California Water Code Sections 79700-79798) affirming the need for a safe and reliable supply of water to support the state's economy, environment, and quality of life. Proposition 1 continuously appropriated $2.7 billion to the California Water Commission (Commission) to fund the public benefits associated with water storage projects. The Commission is implementing the requirements of Proposition 1 through the Water Storage Investment Program (Program or WSIP).

The legislature, in California Water Code Section 79754, directed the Commission to adopt by regulation, in consultation with the Department of Fish and Wildlife (CDFW), the State Water Resources Control Board (State Water Board), and the Department of Water Resources (Department or DWR), processes and methods for the quantification and management of the public benefits of water storage.

Problem Statement

The Legislature adopted, and voters approved, Proposition 1 to finance a water quality, supply, and infrastructure program to address the various challenges and needs facing California's water resources, and made the following findings, codified in California Water Code section 79701[1], including:

- Government has a responsibility to safeguard clean and safe water for homes, businesses, and farms and this responsibility is critical to protecting the quality of life for all Californians;
- Every Californian should have access to clean, safe, and reliable drinking water;
- Droughts continue to plague California;
- California's water infrastructure is aging and deteriorating;
- Funding is necessary to implement the California Water Action Plan[2] objectives of more reliable water supplies, restoration of important species and habitat, and a more resilient and sustainably managed water infrastructure;

[1] All references are to the California Water Code unless otherwise noted.

- "Developing and guarding our water resources is critical for California to maintain vibrant communities, globally competitive agriculture, and healthy ecosystems."
- Water conservation and recycling are "commonsense methods to make more efficient use of existing water supplies";
- "Sustainable water management in California depends upon reducing and reversing overdraft and water quality impairment of groundwater basins. Investments to expand groundwater storage and reduce and reverse overdraft and water quality impairment of groundwater basins provide extraordinary public benefit and are in the public interest"; and
- "Protecting lakes, rivers, and streams, cleaning up polluted groundwater supplies, and preserving water sources that supply the entire state are crucial to providing a reliable supply of water and protecting the State's natural resources."

Water storage plays a key role in California, where the quantity, timing, and location of water demand frequently do not match the natural water supply availability. Water storage is fundamental to managing variability in water supply for human and environmental purposes and is a critical tool for providing water management flexibility in California. New surface water or groundwater storage capacity can provide improvements to the operations of the state water system and a robust set of benefits, including water supply reliability for municipal and industrial uses, agriculture, and ecosystem purposes. Increased surface storage can also provide water to improve flow regimes and lower water temperatures to increase fish survival in rivers and the Sacramento-San Joaquin Delta (Delta), as defined in Water Code section 85058. Increased surface storage also provides flood storage space, water quality improvements, hydropower generation, and recreation opportunities. Increased groundwater storage can provide groundwater recharge, reduce overdraft, and minimize or stabilize land subsidence. It may also capture flood flows and improve water quality. When conjunctively managed (i.e., managed in a planned and coordinated manner), surface and groundwater storage projects can provide synergistic benefits for all or many of these desired outcomes.

Improving water supply reliability depends on the ability to capture and store water during peak flows and wet years. Water storage serves as a "water savings account" that allows water to be captured and stored until needed and can allow for more efficient water use when integrated with other water management tools, such as conservation and recycling. For example, water conserved through water use efficiency practices, such as reduced irrigation losses, could be stored in water storage facilities and "saved" for use at another time or for another purpose.

In addition, Proposition 1 affirms the role of water storage as part of a comprehensive approach to address California's water resources challenges. Major state and federal planning efforts suggest that water storage is an integral part of the State's comprehensive set of water solutions. Most recently, the California Water Action Plan[3] concluded that California needs to expand its water storage capacity.

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[2] California Natural Resources Agency (CNRA), California Department of Food and Agriculture, and California Environmental Protection Agency, 2014. California Water Action Plan. Available at: http://resources.ca.gov/california_water_action_plan/

[3] CNRA, et al., 2014.

Chapter 8 of Proposition 1 allocates $2.7 billion to the Commission to expend on public benefits associated with water storage projects that improve the operation of the state water system, are cost effective, and provide a net improvement in ecosystem and water quality conditions. The water storage projects funded through this Chapter must also provide measurable improvements to the Delta ecosystem or to the tributaries to the Delta. Chapter 8 directs the Commission to establish, by regulation, methodologies for identifying and quantifying the public benefits of water storage projects, but does not specify procedures for determining the cost effectiveness of projects, allocating the costs of the proposed projects to beneficiaries, or identifying which projects will receive funding. Chapter 8 specifically designates five public benefits associated with water storage that may receive funding: ecosystem improvements, water quality improvements in the Delta or other river systems, flood control benefits, emergency response, and recreational purposes.

Purpose of Regulation

The purpose of the proposed regulation is to interpret and implement the provisions of Sections 79750-79760. The Commission must establish a methodology (or methodologies) to quantify the public benefits of water storage projects. The Commission also needs to specify what information applicants need to provide to the Commission to allow it to evaluate projects to receive funding. These regulations:

- Set forth the procedures and requirements for applicants to identify the benefits of proposed storage projects, determine the cost effectiveness of proposed projects, and allocate the costs of the proposed projects to beneficiaries;
- Specifies procedures for submitting and reviewing applications and information that will be required;
- Includes the priorities and relative environmental values provided by CDFW and the State Water Board, as required by Section 79754; and
- Requires an operations plan and a monitoring, reporting, and assurances plan, to demonstrate and assure the future management of public benefits.

Necessity of Drafted Regulations

Definitions

§6000. Definitions

This article defines words, phrases, and acronyms to provide clarity to their specific use in the regulation. Many of these terms are used in other regulations or statutes and it is necessary for the Commission to use these terms consistently with other programs.

General Provisions, General Selection Process, and Funding Commitments

The first section establishes how the Commission will treat information that is submitted to the Commission that an applicant believes represents confidential business information or poses security

concerns. Additionally, these sections define the project entity eligibility requirements; general solicitation, review, and selection processes; and funding commitments that the Commission will use to implement the program and allocate public benefits funds through a competitive public process.

§6001. General Provisions

Proposed section 6001(a) addresses the confidentiality of information submitted to the Commission. All information submitted is subject to the California Public Records Act (California Government Code section 6250 *et seq.*) (PRA) unless it is marked "confidential" and meets one of the requirements stated in the proposed regulations. The proposed regulations require an entity submitting information the entity believes to be confidential to identify the portions of the documents containing the confidential information and provide contact information for the entity in the event the Commission receives a request for public records pursuant to the PRA. These provisions are necessary to ensure all parties know how the Commission will treat such records, and the process the Commission will follow if a PRA request is received related to the records. Proposed section 6001(a) is necessary to inform all applicants that their application and supporting information will become part of the public domain once their application is received by the Commission. This section also describes the process for potential disclosure requests of information submitted with applications that is identified as "confidential".

The general provisions, section 6001(b), define the basic eligibility requirements for applicants and project types under Proposition 1, as set forth in Water Code sections 79712(a) and 79751. Water Code Section 79712(a) limits applicants for funding to public agencies, nonprofit organizations, public utilities, federally recognized Indian tribes, state Indian tribes listed on the Native American Heritage Commission's California Tribal Consultation List, and mutual water companies.

Water Code Section 79751 limits the types of water storage projects that may receive funding for public benefits under Chapter 8. Specifically, the following types of projects are eligible for funding:

- Surface storage projects identified in the CALFED Bay-Delta Program Record of Decision (dated August 28, 2000), except those projects prohibited by Chapter 1.4 of the Public Resources Code;
- Groundwater storage projects and groundwater contamination prevention or remediation projects that provide water storage benefits;
- Conjunctive use and reservoir reoperation projects; and
- Local and regional surface storage projects that improve the operation of water systems in the state and provide public benefits.

Water Code section 79759 allows joint powers authorities to apply for funds for public benefits associated with CALFED surface storage projects only. A joint powers authority applicant is precluded from having as a member any "for-profit corporation or any mutual water company whose shareholders and members include a for-profit corporation or any other private entity" (Section 79759(b)).

Section 6001(b) implements and makes specific Water Code sections 79712 and 79751, within the limitations of section 79759. This is necessary to inform potential applicants of the basic eligibility requirements.

§6002. General Selection Process

The general selection process describes the process to be used by the Commission to receive applications and an overview of the process to be used to evaluate applications and select projects for funding. This section clarifies for applicants how the Commission will solicit and review applications during the solicitation and application process, so potential applicants know what to expect during the solicitation periods and what must be provided in pre- and full applications.

Section 6002(a). The process for soliciting applications is a two-step process – a pre-application followed by a full application submittal. The two-step solicitation process facilitates early identification of eligibility issues or potential project fatal flaws. Potential applicants will receive pre-application feedback for their proposed project from the Commission and will be able to view other potential project pre-application information. This allows potential applicants to evaluate Commission feedback as well as other potential projects and decide whether they would like to invest the effort of assembling and submitting a full application and whether changes to the project can lead to a more competitive application. The two-step process will also allow the Commission to gauge the types of applications that may be submitted during the full application phase and to see how proposed projects might integrate with other potential or existing storage projects to increase public benefits. Each step will have a distinct solicitation period.

Section 6002(b). This subsection describes the pre-application process. Because the pre-application is used to inform the Commission and potential applicants about potential projects, the pre-application is mandatory. The mandatory nature of the pre-application will allow project proponents to make informed decisions regarding full application preparation.

Section 6002(b)(1). The applicant will receive a notification to submit the pre-application by going to the Commission's website or via email after entering their information on an email mailing list. Alternatively, an applicant may ask to receive a letter via regular mail. The applicant will have two months to submit the pre-application. Two months will provide sufficient time to write a brief document. The pre-application will be submitted by the applicant electronically to the Commission. Staff will post all of the pre-applications on the Commission website within 14-days of the pre-application due date. A period of 14-days will allow sufficient time for Staff to post the documents and give additional time to Staff in the event that there any technical issues. Posting the pre-applications on the Commission website allows all possible applicants and stakeholders to view proposed projects.

Section 6002(b)(2). The pre-application is a brief document that generally describes the proposed project. The information is kept simple and no supporting information is required. The pre-application process requires an applicant to submit basic information such as the name of the entity that will apply for funding, the name of the contact person for the entity, the entity address, an email address for the contact person at the entity and the entity's phone number. The name of the proposed project, location, costs, description, potential project benefits, and how the proposed project meets the eligibility requirements of the proposed regulations are also required information. The pre-application also contains an acknowledgement that the applicant understands that submitting a pre-application

does not guarantee funding and requires the applicant to submit the pre-application with an attestation indicating the information is true and correct.

All of this information is necessary for the Commission to evaluate the scope of projects that may apply for funding, as well as to ensure applicants have sufficient information to meet the requirements of the proposed regulations. This information may also help the project proponents identify projects that are more likely to be successful if integrated with another project.

Section 6002(b)(3-5). These sections address how the Commission will review the mandatory pre-applications. Staff will review the pre-applications that are submitted by the pre-application due date. Staff will assess whether each proposed project is likely to meet eligibility requirements. The Commission will receive feedback from Staff and public comments at a public meeting before providing their final feedback to the applicant. The final feedback will be posted on the Commission's website and will include a discussion of whether the proposed project appears to meet the eligibility requirements of the Program and whether the proposed project is likely to have measureable improvements in the Delta or its tributaries, as required per Water Code section 79752. This process allows applicants to consider the Commission's feedback of the pre-application and public comments received by the Commission, as well as posted information on other potential projects, before they expend the resources to prepare a full application.

Section 6002(c) Full Application Process. This subsection describes the required elements of an application. The required elements provide the information necessary for the Commission to implement the requirements of Water Code section 79757(a), verify the magnitude of public benefits claimed, and ensure the claimed public benefits will be provided over the project's useful life.

Section 6002(c)(1). If an applicant has completed the pre-application and determines to proceed with an application, it must be submitted by the applicant during the application solicitation period to be considered for program funding. The application solicitation period will be six months from the date of the notice to allow submission of applications. Applicants can work on the application materials in anticipation of the solicitation period. Staff believes a six month solicitation period provides sufficient time for applicants to compile and submit the required documentation. The solicitation will be announced through email and on the Commission's website and will be available through the Department's on-line submittal tool which can be found at www.water.ca.gov/grants. Alternatively, an applicant may ask to receive a letter via regular mail. Information requested in the application is used for two purposes: (1) WSIP-specific information for eligibility confirmation and funding decisions and (2) general information needed for general obligation bond (GO bond) accountability. For all GO bonds, including Proposition 1, the State has tracking and reporting responsibilities which includes posting information on a Bond Accountability website. The website enhances transparency in state government activities by providing the public with information about bond expenditures.

The applications will be posted on the Commission's website. This will occur within 30 days of the close of the application solicitation period. This additional time is needed because of the high volume of

documentation anticipated in association with the applications. Additionally, if there are technical difficulties, they should be resolved within thirty days.

Section 6002(c)(2) This subsection details all of the information that the applicant must provide for a complete application. The required information is necessary for the Commission to make findings set forth in Proposition 1 and is consistent with other existing statute and policies and will assist in the review process. For example, the applicant is required to provide documentation that demonstrates managerial, technical, and financial capacity of the applicant, this is not, on its face, a requirement of Proposition 1, but rather bond law and best management practices/policy for disbursing general obligation bond funds.

Section 6002(c)(2)(A) The project name, objective, legislative information and location are necessary to inform the Commission of the project's location and provide general information that are required fields in the Department's on-line application software. It is not possible for the Commission to evaluate a project without this information.

Section 6002(c)(2)(B) A signed resolution from the applicant which at a minimum acknowledges the applicant's intent to submit an application and may also include an acknowledgment to enter into a funding agreement with the Commission if awarded. This is necessary to show that the authorized representatives of the applicant are aware of the application and are in agreement to submit the application and eventually, enter into a funding agreement with the Commission.

Section 6002(c)(2)(C) The contact information is necessary to ensure the Commission can contact the appropriate entity during the evaluation of the project and throughout the term of funding, if the project is funded, and is also a mandatory field in the Department's on-line application software.

Section 6002(c)(2)(D) The Commission will evaluate whether the entity applying for funding is eligible for funding based on the qualifications of section 6001(b) of the proposed regulations. However, the applicant is required to explain to the Commission which provision of the eligibility criteria applies to the applicant. This explanation is necessary because the applicant has more information about its eligibility than the Commission, but the Commission is the ultimate arbiter of eligibility. It is only with the submission of this information that the Commission can determine an applicant's eligibility.

Section 6002(c)(2)(E) The applicant must also include in the application the total amount of funding requested, total project costs, estimated capital costs, benefit and cost analysis, cost allocation and information regarding commitments from non-public benefit cost share partners that provide at least 75 percent of the non-public benefit cost-share. This information is necessary because the Program can only cover up to 50 percent of the capital costs of the project and Program funds must be used to provide the public benefits listed in Water Code section 79753. Because the Program can only fund up to half of the capital costs of the project, the Commission needs to be sure that other funding has been secured for the remaining portion of the project not funded by the Program. Submission of this information will allow the Commission to determine whether sufficient other funds are available and to assess the viability of the project from a financial perspective.

Section 6002(c)(2)(F) The applicant is also required to submit a project schedule through the initial year of project operation. The schedule will inform the Commission of the timeframe needed to design and construct the project which will be used to evaluate the project for readiness and give an idea to the Commission of the timeframe needed to expend bond funds as well as an idea of when the public benefits would begin to be realized.

Section 6002(c)(2)(G) A detailed description of the anticipated project operations is required to show how the proposed project will operate after implementation to provide the public benefits claimed.

Section 6002(c)(2)(H) The applicant must provide supporting documentation regarding the claimed physical benefits and measurable improvements to the Delta. This documentation must include analysis and explanations for assumptions, datasets, and methodologies used to calculate the claimed benefits. This documentation and explanation will be used by the Commission to determine if the applicant has reasonably calculated the public benefits associated with the project and that the project will provide measurable improvements to the Delta or the Delta tributaries as set forth in Water Code section 79752.

Section 6002(c)(2)(I) The applicant must also summarize how the project will improve local, regional, or state water supply reliability or operations. This summary will help the Commission to determine whether the proposed project improves a state water system as identified in Water Code section 79750(b).

Section 6002(c)(2)(J) The applicant must also provide sufficient documentation demonstrating the project is feasible, including engineering, environmental, and economic studies evaluating the project's feasibility. To ensure the integrity of these reports and studies, they must be reviewed, approved, and signed by an engineer licensed by the State of California. These requirements ensure the project's practical viability, that the project will comply with the engineering standards imposed by the State of California, and will assist the Commission to make a finding that the project is feasible as identified in Water Code section 79755(a)(5)(B).

Section 6002(c)(2)(K) The applicant must provide a description of the entity's managerial, technical, and financial capacity to build and operate the project. In the short term, the applicant will need to be financially able to meet the State's reimbursement requirements which mean that the applicant would need to cover costs until they are reimbursed either on a monthly or quarterly basis. Longevity of the entity in the operation of the project is a critical consideration for the Commission. This information ensures the applicant entity can manage the project and has adequately considered the long-term commitment to operate and maintain the project.

Section 6002(c)(2)(L) Integration is a key component of California's water system. Project applicants must summarize the project's integration with existing projects or explain whether it could or does integrate with other projects to increase benefits. By explaining to the Commission ways in which projects could be integrated, the Commission can better understand the entire scope of any potential investment in an individual project's public benefits.

Section 6002(c)(2)(M) Water Code section 79754 required the Commission to adopt regulations that include priorities and relative environmental values for ecosystem and water quality benefits. Applicants must explain how the project addresses the priorities listed in the regulation in a comprehensive manner so that a relative environmental value can be assigned to the project and the Commission can have a better understanding of the overall ecosystem and water quality benefits.

Section 6002(c)(2)(N) All project applicants must also submit a preliminary monitoring, assurances, and reporting plan to ensure the project, once implemented, will achieve its stated benefits and the State will receive the appropriate return on investment for the public benefits of the project.

Section 6002(c)(2)(O) All applications must also include an explanation of the project's advancement of the long-term objectives of restoring the Delta's ecological health and improving water management for beneficial uses of the Delta so that the Commission can make this specific finding as directed in Water Code section 79755(a)(5)(B).

Section 6002(c)(2)(P) All applicants must also provide environmental documentation that is publicly available. This information is critical to the application to ensure the project provides a net improvement in environmental conditions and to understand the mitigation and compliance obligations of the project.

Section 6002(c)(2)(Q-R) The applicant will also need to explain how the project will comply with all local, state, and federal laws and regulations, including existing environmental mitigation or compliance obligation requirements. The project must comply with all of these laws to receive funding and an explanation of an applicant's compliance strategy will inform the Commission about the applicant's intention regarding its compliance with laws. In conjunction with this explanation, the applicant must also provide a list of all local, state, and federal permits or other approvals that will be necessary to implement the project. The applicant must also provide the status of the applications for these permits or approvals and an estimated time of obtaining the permits, certifications, or approvals. These documents take a substantial amount of time to obtain and time is critical in implementing water storage capacity. The Commission is directed to make a finding regarding a project's compliance with all local, state, and federal laws and regulations in Water Code section 79755(a)(5)(B).

Section 6002(c)(2)(S) Finally, the applicant must attest, under penalty of perjury, that information provided in the application is true and correct to the best of the applicant's knowledge. This ensures the applicant accurately represents the information to the Commission and provides a potential penalty in the event an applicant is not truthful in the application. This is necessary to ensure the integrity of the application process.

Section 6002(c)(3) Completeness Review. This section describes the process of reviewing each submitted application for completeness. Completeness means that all of the required questions have been answered and all of the required attachments are functional (electronic files can be opened) and all attachments were received with the submitted application. "Completeness" also means that the application was submitted by the due date. A complete application is needed in order to provide an adequate review and is a prerequisite to obtaining funding in the Program.

Staff will review each application and make sure all of the required items are included in the application. Staff will conduct the completeness review within 45 days. As it is unknown how many applications will be submitted and considering the size of the applications, 45 days seemed an appropriate amount of time to conduct the completeness review. If Staff notices that an item is missing or there was an uploading error in the electronic submission, Staff will notify the applicant by email that information is missing. This provision is necessary to ensure all applicants have an opportunity to correct any minor deficiencies, while still maintaining the integrity of the program to encourage applicants to complete substantive application requirements in a timely fashion. Notification by email is preferred as it quickly provides documentation of the missing material and provides more immediate notification to the applicant of any deficiencies. The applicant will then have 14-days to respond with the missing material. This 14-day period allows for simple omissions to be corrected, but does not allow enough time for an applicant to produce new documents or analyses. Applications are expected to be complete when submitted, including all substantive analyses and modeling. It is crucial to receive the missing materials in a timely fashion and add them to the application package so that Staff can move the application to the next phase. If the applicant does not respond or provide the missing materials in the 14-day period, the Commission will then be notified and will have final say as to whether the application will or will not move forward to the technical review.

Section 6002(c)(4) Eligibility Review. In addition to the completeness review, each full application will be reviewed for eligibility before the technical review. Water Code sections 79711, 79712, 79751, and 79752 require that applicants meet the following eligibility requirements:

- The applicant must be eligible (Water Code section 79712);
- The project type must be eligible (Water Code section 79751);
- The project may not have an impact on a designated wild and scenic river (Water Code section 79711(e)); and
- The project must provide measurable improvements to the Delta or a tributary to the Delta (Water Code section 79752).

As stated earlier, Water Code section 79712 lists eligible applicants as “public agencies, nonprofit organizations, public utilities, federally recognized Indian tribes, state Indian tribes listed on the Native American Heritage Commission’s California Tribal Consultation List and mutual water companies” (Water Code section 79712(a)). The participation of mutual water companies in joint powers authorities is limited by Water Code section 79759(b) to preclude mutual water companies whose shareholders and members include a for-profit corporation. Staff review of eligibility is necessary to ensure applications forwarded for technical review were submitted by an eligible applicant.

Water Code section 79755 also requires that projects have a completed environmental document and feasibility studies and have entered contracts with both the non-public parties that will derive non-public benefits from the projects and the public agencies that administer the public benefits before the Commission may allocate funds. Water Code section 79712 also requires applicants comply with urban water management, agricultural water management, or groundwater management laws, if applicable. Although Water Code section 79757 sets an outside deadline of January 1, 2022 for completion of

feasibility studies, the Commission is interpreting this to be the latest the commission may allocate funds to a project. However, the Commission may allocate funds in anticipation of providing funding, and set appropriate requirements for supporting documentation, including those statutorily required by Water Code section 79755.

Water Code section 79755 indicates the Commission can allocate funds only when all five of the listed conditions have occurred, which include feasibility studies and contracts for cost shares. It is not reasonable to assume the Legislature intended for the Commission to wait until 2022 to allocate and spend funds given the findings of section 79701, which includes providing "a comprehensive and fiscally responsible approach for addressing the varied challenges facing California's water resources" (Water Code section 79701(j)).

If there is a question regarding any of the eligible items, it will be added to the additional information request to the applicant which is summarized in section 6002(c)(5)(F) below. All eligibility items are listed specifically in Proposition 1.

If the applicant's project affects groundwater levels or quality, additional compliance with laws will be required to be shown in the application and reviewed during the eligibility review. In 2014, the Sustainable Groundwater Management Act was passed. This landmark legislation changes how groundwater is managed in the state. Currently, groundwater management is in transition between current groundwater management plans and the sustainable groundwater management plans contained in the Act. The Commission has approval authority of the regulations coming out of the Act. As the Commission implements the storage funding, it is important that projects that impact groundwater are consistent not only with existing groundwater management, but is also transitioning to the newer sustainable groundwater management processes. The Commission does not want to fund a storage project impacting groundwater if the project cannot demonstrate adequate groundwater management. Staff will review an applicant's explanation of how it intends to meet those requirements to ensure any investment made pursuant to Chapter 8 will contribute to the sustainable management of groundwater.

If the groundwater project is not in an adjudicated basin, then the applicant must meet additional requirements.

Section 6002(c)(5) Technical Review. This section describes the technical review process. This process includes an in-depth review by technical experts of each eligible application. This section informs applicants what will be evaluated by the technical reviewers to determine that all technical requirements have been sufficiently met for the Commission to make a finding that the project is feasible under Water Code section 79755(a)(5)(B).

Section 6002(c)(5)(A). The technical reviewers will assess specific application materials. The technical reviewers will not choose projects to be selected for funding, but will assess quality of applicant analyses presented in the application, verify public benefits claimed, process application information to formulate initial ratings, and pass decision level information on to the Commission to make funding decisions. In order to conduct the technical review, specific application components are required and

therefore listed in this section of the regulations. The listed components are a subset of the application not additions to the application components found in section 6002(c)(2).

The magnitude of the quantified public benefits, as asserted in the application based on the qualifications of section 6004 of the regulation, will be evaluated by comparing the modeling and assumptions used against the benefits claimed. This is necessary to ascertain whether the applicant's quantifications are reasonable when assessed against the data supporting the project.

The resiliency of the quantified public benefits to future uncertainty refers specifically to anticipated performance of the project under potential future climate and sea level conditions. The resiliency is evaluated by two different means. The climate and sea level conditions for the without-project future conditions specified in Section 6004(a)(1)(c) contains a climate scenario that represents a "median level of change in future climate and sea level conditions" that can be evaluated within model operational parameters. Additionally, resiliency will also be evaluated by the sensitivity analysis in Section 6004(a)(8) that contains climate scenarios that represent a "high degree of change toward challenging future climate and sea level conditions".

The technical review will also assess whether the costs presented for the project are reasonable in light of the supporting project information. Cost shares will be evaluated to verify that the cost shares were calculated appropriately based on supplied supporting documentation, a party's costs are consistent with their benefits, and the Program's cost share is consistent with Water Code section 79756. Evaluating the return on investment and cost-effectiveness is critical to determining whether the project is a good investment of state funds. This evaluation is an important economic indicator of the viability of the project.

The technical review will also include verification of claimed improvement to the operation of the state water system. The state water system is defined in Section 6000(a)(95). Per Water Code section 79750(b), the authorized funding is for the public benefits associated with water storage projects that improve the state water system. The technical review will be based on claimed benefits of the project, associated supporting information such as model runs, and applicant's claims of state water system improvements of the project.

The engineering, environmental, economic, and financial feasibility of the project will be evaluated to ascertain whether the project is reasonable, given the supporting data and information about the project. Evaluation of feasibility is necessary to support the Commission's feasibility finding per Water Code section 79755(a)(5)(B).

The project's ability to address ecosystem and water quality priorities of the CDFW and the State Water Board will be evaluated as part of the technical review. The evaluation will be conducted by applying the relative environmental values for ecosystem and water quality to the project's claimed benefits and supporting information supplied as part of the application.

As additional substantiation of claimed public benefits, information supplied in the application on monitoring and management of benefits will be evaluated. This information will help ensure public

benefits are realized and helps establish the project as a good investment of state funds. This information will also feed into agency contracts per Water Code section 79755(a)(3).

Review of how the proposed project integrates or could integrate with existing or other projects helps the Commission better understand the entire scope of any potential investment in an individual project's public benefits as well as ensures maximizing public benefits for the invested funding.

Quality of the analyses provided as part of the application will be evaluated to ascertain the public benefits claimed by the project. Applications with good quality analyses likely contain the most realistic project outcomes. Applications with poor quality analyses will likely not produce claimed benefits.

The technical review includes the entity's managerial, technical, and financial capacity to operate the project. Longevity of the entity in the operation of the project is a critical consideration for the Commission. This information ensures the applicant entity can construct the project and has adequately considered the long-term commitment to the operation and maintenance of the project.

Finally, the technical review will confirm eligibility for the Program by ensuring the basis for eligibility asserted in the application is consistent with the requirements of section 6002(c)(4)(B) of the regulations.

Section 6002(c)(5)(B) This section sets the maximum period for the technical review. Eighteen months was chosen because each application will contain substantial documentation, such as feasibility studies, detailed environmental documents, operations plans, and the application questions themselves. Staff anticipates it will require a substantial amount of time for staff to review applications. If staff determines information is missing or incorrect (discussed below), staff will request additional information from the applicant. The applicant is given 60 days to provide the additional information. Staff will then assess any additional information, and then finish the review. Although 18 months is set as the maximum time for review, staff will try to complete the review before the end of the 18 month period.

Section 6002(c)(5)(C) While reviewing each application, technical reviewers may find, for a variety of reasons, that additional or clarifying information is needed. For example, the applicant may omit a model run or required climate scenario or may have used the wrong discount rate or the wrong dollar year in the public benefits quantification. The technical review will determine if any additional data are necessary or if errors in quantifications need to be corrected. This part of the review is necessary to ensure the Commission makes a fully informed funding decision based on accurate information on the value of the public benefits conferred by the project.

Section 6002(c)(5)(D) Section 79754 specifically directed CDFW and the State Water Board to contribute ecosystem and water quality priorities and relative environmental values sections to the regulations and these agencies (in addition to DWR) have agreed to assist with technical reviews that correspond to their expertise.

Section 6002(c)(5)(E) The technical reviewers will look to the requirements of section 6004 to evaluate the quantification of benefits. Since CDFW and State Water Board provided ecosystem and water quality priorities and relative environmental values, respectively, they will provide a review and evaluation for those categories. This evaluation will occur during the technical review to ensure the assumptions stated and data used to quantify the public benefits are a reasonable and accurate representation of the public benefits to be conferred by the Project.

Section 6002(c)(5)(F) As discussed in sub-item 6002(c)(5)(C), if the technical reviewers determine that additional or clarifying information is needed to proceed with the technical review, they will request such information from Commission staff, who will request the information from the applicant. Any changes to the calculations of benefits can cause a "domino-effect" of change to the cost share formulas, cost allocations, and sensitivity analyses, so the applicant may need to update not only the document that has an error (or needs additional or clarifying information), but any document that would be affected by the new information. Staff anticipates the applicant will be able to make such changes in a 60-day period. If the applicant does not submit the changes within the 60-day period, the application will be reviewed with the originally submitted information and scored accordingly. The Independent Peer Reviewers and Commission will be made aware of any missing information or deficiencies in the application through the technical assessment.

Section 6002(c)(5)(G). The field of technical experts in the water arena is relatively small and some reviewers could have a conflict of interest with a specific application submitted. Staff will ensure reviewers will not be assigned to an application the reviewer may be otherwise interested in which would cause a conflict.

Section 6002(c)(6) Independent Peer Review. The assessments of the technical reviewers will be evaluated in an independent peer review process (IPR). The IPR is necessary to ensure the project evaluations are conducted objectively, consistently, and completely and that best available science is used to inform the Commissioners' decisions per Water Code section 79707(d).

The field of potential independent peer reviewers in the water arena is relatively small and some independent peer reviewers could have a conflict of interest with a specific application submitted, a technical reviewer, or project beneficiaries. Staff will make sure that independent peer reviewers will not be assigned to an application where a conflict might exist.

The independent peer reviewers are necessary to determine whether the technical review is performed consistent with the requirements of the regulations. Staff anticipates the independent peer reviewers may have questions regarding the review, and must be allowed to contact the technical reviewers to clarify assumptions, calculations, or other information necessary to confirm (or refute) the technical reviewer's assessment of the application.

Section 6002(c)(7) Commission Initial Funding Decision Process. The Commission will make initial funding decisions for projects that best achieve the objectives and priorities of Water Code section 79750 *et seq*. All of the Commission's deliberations will be conducted at regularly scheduled and

publicly-noticed Commission meetings and all meeting materials will be posted on the Commission's website to ensure transparency and compliance with Water Code section 79750(c).

This subsection of the regulations lists all of the determinations the Commission must make to determine the initial funding decisions which are outlined in Water Code sections 79750(a), 79752, 79756(a-b), 79757(a)(2), and 79755(a)(5)(B). The Commission will make these decisions based on the technical reviews and independent peer reviews. To determine the appropriate amount of funding to be allocated to a project for the public benefits, Water Code section 79753(b) specifically noted that the Commission cannot fund environmental mitigation measures or compliance obligations, unless they are associated with providing public benefits.

Section 6002(c)(7)(A) requires staff to provide the Commission with the completed technical reviews and independent peer reviews. These reviews will be used during Commission deliberation at a Commission meeting to make funding decisions. These reviews will also be publicly posted at the time they are provided to the Commission. Providing these reviews to the Commission is necessary so the Commission can make an informed decision about funding a project. Posting the reviews publicly ensures an open and transparent process in evaluating the project and allows public comment on the project's reviews. Public participation ensures transparency when spending public money on a project.

Section 6002(c)(7)(B)(1–10) lists all of the determinations the Commission must make to be consistent with the enabling language in Water Code sections 79750, 79752, 79755, 79756, and 79757. Specifically, the project must:

- Be cost effective (Water Code section 79750(b));
- Improve the operation of the state water system (Water Code section 79750(b));
- Provide a net improvement in ecosystem and water quality conditions (Water Code section 79750(b));
- Have net public benefits greater than the cost to provide the public benefits (Water Code section 79757(a)(3));
- Provide measureable improvements to the Delta or to the tributaries of the Delta (Water Code section 79752);
- Have a cost share that is less than or equal to 50 percent of the proposed project's total capital costs (unless it is a conjunctive use project) (Water Code section 79756(a));
- Have ecosystem benefits that are at least 50 percent of the total public benefits funded by the Program (Water Code section 79756(b));
- Be feasible (Water Code section 79755(b)(5)(A));
- Advance the long-term objectives of restoring ecological health and improving water management for beneficial uses of the Delta (Water Code section 79755(a)(5)(B)); and
- Be consistent with all applicable laws and regulations (Water Code section 79755(a)(5)(B)).

Stating these requirements in the regulations is necessary to ensure all of the requirements are listed together in one place, to provide a checklist to the Commission and Commission staff to ensure all of the proper findings are made prior to a funding decision.

Section 6002(c)(8-9). Once the initial funding decisions are made by the Commission, the public will have at least three weeks to provide comments. After the comment period, the Commission will consider the comments and finalize the initial funding decisions. Once finalized, the Commission will enter into Conditional Funding Commitments with successful applicants.

§6003. Funding Commitment

The process of committing funding involves multiple steps, including a Conditional Funding Commitment (section 6003(a)), Funding for Permits (section 6003(d)), and a Final Funding Commitment (section 6003(e)). Additionally, restrictions are made on the encumbrance of funds in section 6003(b), including reporting requirements contained in section 6003(c). These multiple steps aid the applicant and the Commission by allowing for some variation in project specific timelines to satisfy provisions in Water Code section 79755(a) while efficiently moving funding to successful projects, providing necessary information to the applicant so they can complete the provisions of Water Code section 79755(a), and allowing for verification by the Commission of any impacts to public benefits that would change the funding allocation before the final funding commitment.

To make funding decisions in a competitive process using a measure of expected return on investment of public benefit, per Water Code section 79750(c), the Commission needs to compare projects of different types to one another. In order to maximize the public benefit, all projects for funding consideration need to be reviewed at the same time; however, the process must also account for projects being able to move forward at different rates in regard to required provisions in Water Code section 79755(a).

Section 6003(a) Conditional Funding Commitment. The Commission will make initial funding decisions based on the steps in section 6002(c)(7). Based on the finalized funding decisions, the Commission will document the Conditional Funding Commitments via resolution adopted at a regularly scheduled Commission meeting. Applicants will also receive a letter, by regular mail, reflecting the conditional commitment and requirements that must be completed by the successful applicant to obtain a Final Funding Commitment. The successful applicant must comply with the provisions contained in Water Code section 79755(a) prior to receiving the funding amount awarded. The Conditional Funding Commitment allows projects to proceed in meeting the provisions of Water Code section 79755(a) with an increased assurance of State funding and allows for projects to move forward from this step at their own pace. Projects that can obtain Water Code section 79755(a) provisions quickly are not delayed by projects on a slower trajectory. One significant advantage to the funding program in using a Conditional Funding Commitment is to the applicant's efforts in securing 100 percent of the contracts for the non-public benefit cost share per Water Code section 79755(a)(2). This provision is difficult for applicants to satisfy if the State's cost share is unknown. The Conditional Funding Commitment provides information applicants need to fully secure the non-public benefit cost share for the project.

Section 6003(a)(2)(F) requires a limited waiver of sovereign immunity, if applicable, in order for a tribe to enter into a funding agreement with the Commission for a project that occurs on land as described in section 6003(a)(2)(F)(1.-3.).

Section 6003 (b) and (c). The use of a Conditional Commitment necessitates additional measures for clarifying how the Commission will act during the Conditional Commitment and what the Commission needs to move beyond a Conditional Commitment. Section 6003(b) clarifies that the commitment is conditioned on the Water Code section 79755(a) provisions and that the Commission will not encumber funding until the provisions are met. Commission staff anticipates the timeline for some projects to complete the Water Code section 79755(a) provisions could be on the order of 5 years or longer, depending on project size or complexity. As such, monitoring of progress on the conditioned provisions and any changes to claimed public benefits resulting from those provisions is important information that feeds into the Commission's final commitment in section 6003(e). Section 6003(c) defines the monitoring and reporting of those conditional provisions to ensure the Commission is aware of progress or lack thereof. This section specifies multiple possible frequencies for reporting to accommodate the anticipated variety of project specific timelines.

Section 6003(d) Funding of Permits. Pursuant to Water Code section 79755(c), the proposed regulations allow funding recipients to request funding specifically for finalizing necessary permits and environmental documentation. The intent of this provision is to aid those applicants that need State assistance with this specific work. Not all applicants will need this assistance, so the language does not make this mandatory. Section 6003(d) clarifies that the funding for permits is part of the conditional commitment and not additional to the funding committed pursuant to section 6002. The regulation sets the maximum percentage of the conditional commitment that can be used for finalizing permits at ten percent so the majority of the program funding will be used for construction activities. Because the intent is to aid those applicants that potentially have a cash flow issue, the permit funding may be awarded before any funding for construction activities is committed.

Section 6003(e) Final Funding Commitment. This section describes what the Commission needs to move from Conditional Commitment to the Final Funding Commitment. Section 6003(e)(1) allows the Commission to determine if a project is not making sufficient progress on requirements of the Conditional Commitment and rescind the Conditional Commitment. At the time of Conditional Commitment, the funding recipient has the responsibility of meeting those conditions described in section 6003(b). Section 6003(e)(1) provides a mechanism for the Commission to ensure the funding recipient works to meet the conditions in a timely fashion. Should the funding recipient fail to do so, the Commission has the ability to rescind the Conditional Commitment. In the process of completing the provisions of section 79755(a), a project's public benefits may change due to finalized permit conditions, finalizing environmental documents, negotiating non-public cost share contracts, or the negotiating the contracts with agencies that will administer the public benefits. Section 6003(e)(2) provides for updating the calculation of quantified benefits if such a change occurred. Section 6003(e)(3) provides for the Commission's consideration of any change that has occurred since the Conditional Commitment. If changes in public benefit occurred, the Commission may need to adjust the Program cost share to maintain consistency with section 79756. The Commission will then make a final funding commitment. Section 6003(e)(5) states the need for an executed agreement for disbursement of funds and Section 6003(e)(6) ensures the reimbursement timing is consistent with statute. This section also includes

requirements applicable when a Tribe is the funding recipient. In such instances a limited waiver of sovereign immunity is needed so that contractual mechanisms for the funding agreement are effective.

Quantification and Management of Benefits

Water Code section 79754 requires the Commission to "develop and adopt, by regulation, methods for quantification and management of public benefits" and that 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." Article 3 specifically implements those statutory requirements.

Section 6004. Requirements for the Quantification of Benefits

Quantification of benefits of a proposed project entails the use of data, analytical methods (including models), and associated assumptions that are relevant and justified for that specific project. The relevant, justifiable quantification methods will depend on each project's characteristics – surface or groundwater, its location, source of stored water, operational rules, uses of stored water, and the water users, ecosystems, and other physical resources potentially affected by the project. The Commission cannot know in advance all of the projects that may be submitted for funding and so cannot specify in regulation the quantification methods that are relevant and justified for all possible projects. Further, some potential projects will already have developed and implemented quantification methods for their feasibility and environmental studies. These already-implemented methods are likely to vary across projects. Prescribing quantification methods in regulation could potentially require extensive and costly revision of existing feasibility and environmental analyses.

Therefore, the quantification methods described in section 6004 consist primarily of quantification principles and performance standards that an applicant must follow in order for its project to compete for public funding under this program. In addition, a set of economic parameters that do not depend on the specific characteristics of each project, such as discount rate and future energy costs, are specified in order to provide consistency of analysis. If an applicant's quantification methods used in its feasibility and environmental analyses meet the standards, the application would be eligible to participate in the competitive evaluation and funding process. This approach is consistent with the Administrative Procedure Act allowing for performance standards rather than prescriptive standards (Government Code 11340.1).

Section 6004 addresses the principles and standards that applicants must use to quantify the public benefits. The requirements in this section are to be used by applicants to quantify the benefits of the proposed projects to ensure that the expected benefits and costs are expressed completely and consistently and that the results are comparable across projects. Requirements for quantification of costs are also included here because funding decisions will be made in part on the basis of costs provided by applicants (see Water Code sections 79750(b), 79750(c), and 79756(a)). Therefore, costs must also be estimated and presented in a manner consistent with benefits and consistent across projects.

Section 6004(a). Benefit quantification follows the generally-accepted steps used in feasibility studies and environmental impact analysis – namely to define a benefit or impact as a change relative to a baseline condition (see for example, U.S. Water Resources Council (1983)[4]; DWR (2014)[5]; and CCR Title 14, Chapter 3, 15125(a)). The first step is for applicants to carefully define the baseline (without-project) condition. Second, conditions with the proposed project must be defined. Then the changes are quantified as the difference of the with-project versus without-project conditions, first in physical terms (e.g., increased numbers of fish, improved water quality), then in monetized terms. Project costs must also be provided and the methods for estimating the costs must be consistent with existing standards used by Department and the U.S. Bureau of Reclamation[6] for estimating costs of water resource projects. Benefits estimates are used to allocate the project costs among the public benefits that may be funded by the Program and benefits that must be funded by other parties (Water Code sections 79755(a)(2), 79756(a), and 79756(b)). Uncertainty analysis is required to allow the Commission to understand how the project's benefits are affected by potential future uncertainties. Finally, applicants must provide sufficient detail to demonstrate the soundness and quality of the benefit estimates.

Section 6004(a)(1). The applicant must define the without-project future conditions to assess the benefits and impacts of a proposed project. The benefits and impacts of a proposed project are determined by the differences between the with-project and without-project future conditions. Water storage projects can affect the physical and socioeconomic environment in many ways. To properly assess the benefits and impacts of a proposed project, the without-project future conditions must be sufficiently defined to include all relevant information that could affect the calculations of benefits and impacts. The relevant information includes:

- Infrastructure - Existing and already-planned water supply or conveyance projects could affect or be affected by the proposed project.
- Future population - Many water-related benefits such as avoided flood damage and ecosystem benefits increase as the affected population increases.
- Land use - Avoided flood damages, irrigation water supply, and ecosystem value are examples of benefits that depend on land use.
- Water use and operations - Storage projects are designed to operate to support existing and planned uses of water and their operation must be integrated into the operation of other projects and hydrologic systems.
- Laws and regulations - All water projects must be planned to operate within the set of laws and regulations regarding water rights, drinking water quality, species protection and recovery, etc.
- Future climate and sea level conditions - Future climate will affect runoff and availability of water for storage. Sea level rise will affect a project's potential benefits for water quality and flood control in coastal and estuarine areas.

[4] U.S. Water Resources Council, 1983. Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. Washington, DC.

[5] DWR, 2014. Handbook for Assessing Value of State Flood Management Investments, Sacramento.

[6] U.S. Bureau of Reclamation (Reclamation), 2007. Cost Estimating Directives and Standards. FAC 09-01. October 15, 2007.

It is expected that a project's environmental documentation and feasibility study will provide a comprehensive description of conditions and potential effects, so this section of the regulation specifies that only those conditions that are "needed to quantify the potential benefits and costs" and "relevant to the project" must be included in the application. Best available information and reasonably foreseeable future conditions are standards that support reliable, sound, non-speculative analysis for the Commission to evaluate. The specific requirements in sections (A) through (D) ensure the without-project future conditions are defined consistently and comparably across projects.

Section 6004(a)(1)(A). This section sets the California Environmental Quality Act (CEQA) future no-project condition as the default condition, but allows an applicant to explain how and why future conditions may be different in the application than in the CEQA analysis. For example, the applicant may need to evaluate a more distant future condition in order to project all relevant benefits and costs. Additionally, the applicant may not have included future climate and sea level conditions consistent with those described in the regulations in their CEQA future no-project conditions. If so, the without-project future conditions will differ from the CEQA future no-project condition in regards to these assumptions. This section is required in order to demonstrate consistency or to explain differences between the conditions used to quantify a project's benefits and those used to analyze potential impacts for CEQA compliance. CEQA compliance is required for all projects to proceed to construction.

Section 6004(a)(1)(B). This requirement ensures that all effects of the project on the state water system are considered, not only those in the immediate vicinity of, or within the area served by, the proposed project. This consideration is required by and consistent with Water Code section 79750(b): "…benefits associated with water storage projects that improve the operation of the state water system…." Also, this requirement ensures all benefits and costs in the State are counted. Any project impacts to the State Water Project and Central Valley Project must be described in the application. The Commission will want to fully evaluate projects that have impacts on these systems that may be unacceptable to the Department or the U.S. Bureau of Reclamation as the owners/operators of these projects.

Section 6004(a)(1)(C). This section establishes the future climate change conditions that all applicants must include in the analysis submitted with the application. Climate change is required in the quantification of public benefits of water storage projects to comply with Governor Brown's Executive Order B-30-15 and AB 1482, which require State agencies to account for climate change in project planning and investment decisions. The "median level of change in future climate and sea level conditions" for California at mid-century (characterized by climate conditions during the 30 years surrounding 2050) are represented by projected changes in average statewide temperature of 4.9 degrees Fahrenheit warmer and projected sea level rise of 30 centimeters. DWR climate change program staff worked with DWR's external Climate Change Technical Advisory Committee, comprised of 14 members representing the diverse areas of expertise in describing and assessing climate change, to select a suite of 20 climate projections that are most appropriate for California water resource planning and analysis. The 20 climate projections were comprised of 10 Global Climate Models (GCMs) run with

two different emission scenarios (1 optimistic-Representative Concentration Pathway [RCP][7] 4.5 and 1 pessimistic-RCP 8.5). The median level of change in future climate conditions was developed by downscaling the 20 GCM projections to a 6 kilometer grid resolution across California using a cutting edge technique called Localized Constructed Analogs (LOCA). The downscaled projections were then assessed to understand the likely range of potential future changes resulting from future climate changes. A single projection that represented most closely the median impacts across all projections was selected from the suite of 20 projections to represent the mostly likely or median future climate conditions for inclusion in the without-project future conditions. All climate change metrics compare changes between the historical period (1961-1990) and mid-century climate period (2036-2065). The projected sea level rise of 30 centimeters is based on guidance from the California Coastal Commission's Sea Level Rise Policy Guidance (http://documents.coastal.ca.gov/assets/slr/guidance/August2015/0_Full_Adopted_Sea_Level_Rise_Policy_Guidance.pdf).

It is important that all applicants use the same climate change assumptions so that project effects and benefits are comparable across projects.

Section 6004(a)(1)(D). Benefits and costs must be estimated over each project's planning horizon (per Sections 6004(a)(4-6) of the proposed regulation). This section allows applicants to use reasonable assumptions and extrapolations as needed when the existing planning documents do not cover the necessary time horizon.

Section 6004(a)(2). Defining the with-project future conditions is the second step in the generally-accepted approach to quantifying benefits or impacts of a proposed project. Using the without-project future conditions as a starting point, the applicant describes any new features of the proposed project that could have an effect on the future conditions. It is expected that each applicant's completed environmental documentation and feasibility study will already have much or all of this information.

Section 6004(a)(3). Calculating physical changes is the third step in quantifying benefits or impacts of a proposed project. Project benefits and impacts are determined by quantifying the physical changes between the with-project future conditions and without-project future conditions that would be created or caused by the proposed project. Physical changes may be positive or negative for a specific resource condition.

The effects of water storage on water supply, ecosystem, water quality, and other resources vary substantially over time and by location. This is especially true in California, where precipitation is highly variable within a year and across many years. The basic idea of storage is to capture water at one time and location and provide it at another time and location at which it is more valuable. Therefore, appropriate analysis of benefits of water storage must account for temporal variation and geographic

[7] Representative Concentration Pathways (RCPs) are four greenhouse gas concentration (not emissions) trajectories adopted by the Intergovernmental Panel on Climate Change for its fifth Assessment Report (AR5) in 2014.

scale. Section 6004(a)(3)(A) provides further guidance and requirements for the analysis of physical changes:

- Subsection 1. requires applicants to use information from the historical hydrologic datasets that include precipitation, inflows, storage, flows, water diversions, and water consumption to quantify physical changes resulting from the proposed project. Further, the information must reflect the actual sequence of and cover the observed range in hydrologic conditions. An applicant cannot construct its own hydrologic data or select only the best subset of data to support its project. Historical hydrologic datasets provide the range of meteorologic and hydrologic variability, including driest and wettest years and extended droughts. The hydrologic datasets will be modified to account for future conditions as described in Subsection 3. This is required in order to demonstrate how the proposed project would perform under actually-observed, variable hydrologic conditions and avoids possible biases that could result from other ways of constructing hydrologic data.
- Subsection 2. requires that the analysis be conducted at a level of detail (geographic scope, resolution, and time-step) sufficient to quantify benefits. For example, an annual time-step analysis would not be sufficient to evaluate flow or temperature during a critical period for aquatic species in the spring or summer.
- Subsection 3. is a statement of the standard practice for modifying the hydrologic record (what happened in the past) to account for future conditions, such as changes in facilities.
- Subsection 4. requires that applicants show their work, so that the Commission and the public can understand and evaluate the merits of the proposed project. Commission decisions will have to consider all positive and negative impacts of proposed projects; therefore, all physical changes and how those physical changes were calculated must be fully disclosed.

Section 6004(a)(3)(B). Proposed projects may have negative effects on environmental, water, or other resources. If those impacts are not fully mitigated as indicated in the environmental documentation, they must be quantified in a comparable way as the benefits so that the net public benefits of the project can be computed.

Section 6004(a)(4). Once the physical changes (i.e., benefits and impacts) are calculated, the applicants shall, to the best of their ability, monetize all of the physical benefits. Physical benefits in different units of measurement cannot be directly added into a single measure of magnitude. Benefits must be expressed in a common unit to do this and monetized units (dollars) are the standard way that is done in project analysis and feasibility studies. Applicants must express the physical benefits in monetized values if possible and combine into a single value in order to allow the Commission to "[rank] potential projects based on the expected return on public investment" (Water Code section79750(c)), to show that funded projects provide ecosystem improvements that are at least 50 percent of total public benefits of the project funded (Water Code section 79756(b)), and to show that benefits to each party are consistent with that party's share of total project cost (Water Code section79755(a)(2).

Section 6004(a)(4)(A). All applicants must report benefits and costs in 2015 dollars. Expressing costs or benefits in constant dollars means displaying values paid or received over a number of years according

to their purchasing power in a stated year. All monetized values from other years must be expressed in, or if necessary adjusted to, the stated constant dollar year. This puts all costs and benefits at the same price level. 2015 is selected because inflation levels through 2015 will be known by the time applications are being prepared. A constant dollar year beyond 2015 cannot be selected because future inflation is unknown. This requirement ensures that monetary benefits and costs from different projects will be comparable with respect to general, economy-wide price inflation. Reporting benefits and costs in constant dollars is standard practice in economic evaluation of projects (U.S. Water Resources Council, 1983; DWR, 2014).

Section 6004(a)(4)(B). All applicants must analyze the benefits and costs of the proposed project based on the expected life of the proposed project. However, benefits and costs become increasingly uncertain the farther they are projected into the future. Therefore, an upper limit of 100 years is set to ensure that highly speculative benefits beyond 100 years will not be counted. This is consistent with federal guidelines for water project economic evaluation (section 2.2.1(c)), U.S. Water Resources Council, 1983).

Section 6004(a)(4)(C). All applicants must use a discount rate of 3.5 percent. The discount rate is a real (inflation-free) interest rate that allows all benefits and costs occurring in future years to be valued in their current worth so that they can be compared and combined. If projects were allowed to use different discount rates, their benefits and costs would be weighed differently and therefore they would not be compared fairly. This requirement causes future real costs and benefits to be reduced according to a real interest rate, considers the economic principle that benefits are worth less as they occur farther in the future, and ensures that benefits and costs of different projects are comparable.

For reference, example discount rates applied to public investments are displayed in Table 1. Economists have developed three fundamental approaches regarding how to implement discounting, 1) the social rate of time preference (SRTP), 2) the social opportunity cost of capital (SOC), and 3) the shadow price of capital. In general, SRTP tends to provide the lowest discount rate (1 to 4 percent) although some economists propose long-term, inter-generational rates that are near zero. SOC tends to provide the highest rates; perhaps 5 to 8 percent.

Table 1. Options for Real Discount Rate

Option Name	Description	Current value	Advantages	Disadvantages
DWR Rate	Has been used by DWR for State project evaluations for years	6%[1]	Precedent in DWR grant programs; may approximate opportunity cost of capital	No recent, formal documentation or update.
Federal Emergency Management Agency Rate	Rate for Pre-Disaster Mitigation grant program	7%	Compliance with the Office of Management and Budget (OMB) benefit-cost analysis	OMB Circular A-94 BCA rate not changed since 1992.

Option Name	Description	Current value	Advantages	Disadvantages
			(BCA) guidelines, intended to be based on the marginal opportunity cost of private investment per OMB Circular A-94	
Water Resources Development Act Rate	Rate for federal water projects	3.375%[2]	Consistency with federal feasibility studies; related to federal cost of capital	Changes very slowly over time, so lags changes in federal cost of capital[4]
California cost of borrowing, Legislative Analyst's Office (LAO) Prop 1.	LAO assumed a nominal rate of just over 5%	About 3%[3]	Reflects state costs of capital	Not known how LAO developed[4]
California cost of borrowing, independent	Develop a rate based on CA bond interest costs	3.5% (tentative)	Reflects state costs of capital	Must be calculated – no publication to use as standard reference[4]

[1] The DWR rate of 6 percent was based generally on an estimate of the opportunity cost of capital.

[2] Discounting methods for the federal Water Resource Development Projects are specified by the Water Resources Development Act (WRDA) of 1974. The rate is based on a mix of federal Treasury Bond yields, but the annual change in the rate is capped. During periods of rapid change in interest rates, the WRDA rate can diverge from the federal cost of capital by a substantial amount.

[3] The California Legislative Analyst's Office (2014)[8] prepared an analysis of borrowing costs for Proposition 1. After adjusting for an estimated expected long-term inflation rate of 2%, the real rate is 3%.

[4] These rates can be heavily influenced by short and medium term federal monetary policy (e.g., Quantitative Easing).

California's appropriate discount rate for evaluating public benefits of water projects should not be based on the private opportunity cost of capital. First, repayment of bonds is not drawing money out of the private sector because no new tax revenue is available. Rather, bond repayment diverts existing tax revenue from other state-funded programs. Second, most bond buyers are likely to be out of state, so the opportunity cost of their investments do not matter from a State perspective.

The real interest rate at which California General Obligation bonds are sold is arguably the most realistic basis for the State's cost of capital and therefore the appropriate discount rate for public benefits. The WSIP technical team conducted a review of recent bond costs to estimate the likely nominal rate for

[8] Legislative Analyst's Office, 2014. Overview of State Bond Debt. Prepared by the Legislative Analyst's Office for Proposition 1. http://www.lao.ca.gov/ballot/2014/overview-state-bond-debt-110414.pdf

State bonds. Since 2008, the state has paid an average of 3.22 percent for revenue bonds. The current general obligation bond rate is about 3.25 percent. Several adjustments to this rate are appropriate:

- First, the bonds will not be sold immediately and then might be sold over a period of ten years. Current bond rates reflect expansionary monetary policy (low Federal Reserve interest rates). Recent expectations by the Federal Reserve Board of Governors[9] indicate that longer-term federal funds rates could rise by 2 to 3 percentage points by 2017. In response, bond rates are expected to increase over the next several years.
- Second, the State's borrowing rate reflects investors' (bond buyers') assessment of the risk that they will be repaid by the State. However, the risk that taxpayers take in investing in public benefits of water storage projects is likely to be greater than that, considering the significant uncertainties about future hydrologic, economic, climate, and ecosystem conditions. Therefore, the WSIP team believes that an appropriate discount rate, though based on the State's real borrowing rate, should be higher to reflect the larger risk of achieving the future public benefits.
- The nominal rate must be adjusted for expected inflation. The Federal Reserve Bank of Cleveland reports that its latest estimate of 10-year expected inflation is 1.88 percent and its estimate of 30-year expected inflation is 2.2 percent[10]. The Federal Reserve Board of Governors (FRB, 2015) expects inflation to be about 2.0 percent in the long run.

Staff has considered these factors of expected inflation, changes in monetary policy that the FRB has signaled, and the inherent risk in future levels of public benefits and recommends that all public benefits be evaluated using a real discount rate of 3.5 percent, as reflected in the proposed regulations.

The discount rate to apply for private benefits may be different. The private rate should also be based on borrowing costs, but borrowing costs expected to finance the private share of construction costs should also be adjusted for expected inflation of 2 percent.

Section 6004(a)(4)(D). Population forecasts published by the California Department of Finance are widely accepted population forecasts and are available for all areas of the State. Using consistent population forecasts ensures that population-dependent future benefits analyses are consistent across projects.

Section 6004(a)(4)(E). Cost-effectiveness is defined in section 6000 of the proposed regulation. This requirement ensures that funds will be provided "to the commission for public benefits associated with water storage projects that … are cost effective," (Water Code section 79750(b)). Because cost-effectiveness is a requirement to allocate funds, the applicant must calculate, display, and justify that the project is cost effective.

[9] Federal Reserve Board (FRB), 2015. Federal Reserve Board of Governors. Minutes of the Federal Open Market Committee. Summary of Economic Projections. June 16-17, 2014. Downloaded July 24, 2015 from http://www.federalreserve.gov/monetarypolicy/fomcminutes20150617ep.htm

[10] Federal Reserve Bank of Cleveland (FRBC), 2015. Estimates of Inflation Expectations, July 17, 2015. Downloaded July 22, 2015 from: https://www.clevelandfed.org/en/Our%20Research/Indicators%20and%20Data/Estimates%20of%20Inflation%20Expectations.aspx

Section 6004(a)(4)(F-G). These requirements describe how the physical benefits must be monetized and tabulated using one or more of the three methods. The definitions of "avoided cost", "feasible", and "willingness to pay" are provided in section 6000 of the proposed regulation. If the project reduces an existing or planned cost, then the avoided cost benefit applies. If the project provides a physical benefit that could be provided by some other feasible means, then alternative cost is calculated. If reliable information is available to estimate willingness-to-pay, then that is calculated. Applicants are not required to use all three methods. These directives are necessary to inform applicants how to monetize physical benefits of the project.

Section 6004(a)(4)(H). Benefits may change over the planning horizon due to population change, change in the real costs of water and electricity, climate change, and institutional and regulatory changes such as the Sustainable Groundwater Management Act, among many reasons. Changes occurring during the planning horizon can have a substantial effect on quantified benefits. Therefore, the reasons and calculations behind any changes must be provided, so their validity can be evaluated.

Section 6004(a)(4)(I). This directive is provided for applicants to monetize the physical benefits of the projects over the project's planning horizon. Since the climate change and sea level conditions for the without-project future conditions described in section 6004(a)(1)(C) represent year 2050, when calculating the benefits prior to 2050, applicants shall interpolate between current condition benefits and 2050 condition benefits. For projects extending beyond 2050, applicants shall use 2050 conditions as the basis for calculating benefits for each year from 2050 until the end of the planning horizon.

Section 6004(a)(5). Total project costs estimates are required to ensure all costs are accounted for and are included in the proposed project's financial feasibility analysis. The capital costs which are a major portion of the total project costs are used in determining cost shares among the project beneficiaries including Program cost share for public benefits. The capital costs are also used in the calculation of the expected return for public investment, pursuant to Water Code section 79750(c). These estimates, as required by statute, are necessary to ensure all costs are included in the Commission's evaluation of the project.

Section 6004(a)(5)(A). Expressing costs in constant dollars (2015) means displaying money or values paid or received over a number of years according to their purchasing power in a stated year. All monetized values from other years must be expressed in, or if necessary adjusted to, the stated constant dollar year of 2015. This puts all costs and benefits at the same price level across projects, so they can be compared fairly. It is expected that inflation levels through 2015 will be known by the time applications are being prepared. A constant dollar year beyond 2015 cannot be selected because future inflation is unknown.

Section 6004(a)(5)(B). All project cost estimates shall be no more than five years old at the time of the submission of the application. Cost estimates that are more than five years old shall be re-estimated with current labor and materials pricing data to reflect current market conditions. This requirement is consistent with U.S. Bureau of Reclamation's cost estimating guidelines (Reclamation, 2007) and is necessary to ensure the cost estimates are consistent and comparable across projects.

Section 6004(a)(5)(C). Cost estimates that are less than or equal to five years old at the time of the submission of the application shall be escalated to 2015 dollars using U.S. Bureau of Reclamation Construction Cost Trends (Reclamation, 2015). This requirement is consistent with U.S. Bureau of Reclamation's cost estimating guidelines (Reclamation, 2007) and necessary to maintain comparable dollar values across projects. Escalating the cost estimates provides a means of measuring changes in construction costs relative to time. Requiring applicants to use U.S. Bureau of Reclamation Construction Cost Trends to escalate cost estimates to 2015 dollars ensures that the cost estimates are consistent and comparable across projects.

Section 6004(a)(5)(D). This requirement ensures that the cost estimates are developed using professional experience and sound engineering judgement and have been reviewed and approved by a professional engineer.

Section 6004(a)(5)(E). This requirement provides consistency with California Energy Commission forecasts[11] and helps ensure project analyses will be comparable across projects. Energy costs have a strong influence on groundwater pumping and conveyance costs and some projects may produce electricity. Real energy costs are expected to increase in real terms in the future. The California Energy Commission (CEC, 2014) mid-demand scenario predicts that real electricity rates will increase 1.7 percent annually over the 2012 to 2024 period. The electricity prices that provide this result are reproduced in Table 2 below.

Table 2. Energy Prices, CEC 2014 Final Forecast

Electricity Year/Period	Average Price (2012 cents/kWh)		
	Low Demand Scenario	Mid Demand Scenario	High Demand Scenario
2012	13.4	13.4	13.4
2015	14.0	14.6	15.2
2020	14.2	15.7	17.2
2024	14.9	16.4	18.0

kWh = kilowatt hour

[11] California Energy Commission 2014. California Energy Demand 2014–2024 Final Forecast Volume 1: Statewide Electricity Demand, End-User Natural Gas, Demand, and Energy Efficiency. Staff report. CEC-200-2013-004-V1-CMF. January. http://www.energy.ca.gov/2013publications/CEC-200-2013-004/CEC-200-2013-004-V1-CMF.pdf

The annual rate of increase from 2012 ($0.134 per kWh) to 2024 is 1.7 percent. The CEC has not provided a basis for energy cost escalation after 2024.

Section 6004(a)(5)(F). This requirement helps ensure project analyses will be comparable across projects and conveyance costs related to energy will be consistent with energy cost escalation in sub-paragraph E. For existing conveyance facilities, the capital cost has already been incurred and recovery of that cost must occur in both the without-project and with-project future conditions.

Section 6004(a)(6). This section defines how to compare project benefits to costs and how the information should be presented. The calculation in subsection (B) is required by Water Code section 79750(c) "Projects shall be selected by the commission through a competitive public process that ranks potential projects based on the expected return for public investment…". Staff considered several alternative measures of return on investment including benefit/cost ratio and internal rate of return. The alternative measures were discussed with commissioners and a public stakeholder advisory committee. The benefit/cost ratio, as proposed, was selected as an easily calculated and widely understood measure for return on investment.

Section 6004(a)(7). Water Code sections 79750(b), 79750(c), 79753(a), 79755(a)(2), 79756(a), and 79756(b) require that Program funding be directly related to, justified by, and consistent with public benefits conferred. Cost allocation assigns total project costs to public and non-public benefit categories to meet the requirements of the statutes and that demonstrate the project is economically and financially feasible. Water Code section 79755(a)(5)(B) requires the Commission to determine that a project is feasible to be eligible for Program funding.

This section instructs applicants to allocate costs among benefit categories, both public and non-public. The section clarifies that not all costs of the public benefits eligible for funding by the Program need be allocated to the Program – portions may be funded by other sources, including private and local sources and the United States government. Item 1 instructs applicants to consider the portion of the public benefits that are received by Californians. The requirements in Items 2 through 5 are necessary to ensure projects meet requirements of Water Code sections 79756(a), 79756(b), and 79753(b) and mirror the statutory language.

Section 6004(a)(8). Uncertainty analysis is required to allow the Commission to understand how the project's benefits are affected by potential uncertainties. Applicants are required to prepare sensitivity analyses to identify and disclose the potential impact of sources of uncertainty on expected physical changes and public benefits associated with the proposed project. Sensitivity analyses also include reconsideration of conclusions based on the evaluation of model results that are shown to change. Sensitivity analyses may be performed qualitatively, applying professional judgment without use of modeling studies, if potential input changes and conclusions can be tested through simplified calculations or qualitative reasoning. The requirement in Subsection 1 meets Governor Brown's Executive Order B-30-15 and AB 1482, which require State agencies to account for climate change in project planning and investment decisions by providing the Commission with additional information about the sensitivity of benefits to the uncertainty of future climate conditions.

Subsection 1, part a, requires quantitative analysis of the proposed project under conditions representing a "high degree of change toward challenging future climate and sea level conditions". This is necessary to meet the Governor Brown's Executive Order B-30-15 and the requirements of AB1482. This includes drier climate (less precipitation) and higher temperature and sea level compared to the "median level of change in future climate and sea level conditions" required in the without-project future conditions. This sensitivity analysis using the "high degree of change toward challenging future climate and sea level conditions" will assess the proposed project's resiliency to stressful future climate conditions. Of the climate change projections discussed previously (in regard to section 6004(a)(1)(C)), one climate change projection was selected from the suite of 20 projections to represent the "high degree of change toward challenging future climate conditions" for use in sensitivity analyses required for the proposed project. All climate change metrics compare changes between the historical period (1961-1990) and mid-century climate period (2036-2065). The projected sea level rise of 60 centimeters is based on guidance from the California Coastal Commission's Sea Level Rise Policy Guidance (http://documents.coastal.ca.gov/assets/slr/guidance/August2015/0_Full_Adopted_Sea_Level_Rise_Policy_Guidance.pdf).

Subsection 1, part b, requires discussion, analysis, and disclosure of how potential future climate and sea level conditions might reduce the public benefits of the proposed project claimed, and how, if reduced, operations of the proposed project could be adapted to sustain public benefits claimed. This disclosure is important to inform how the ecosystem and water quality public benefits provided by the proposed project could be sustained throughout the planning horizon of the project. This is necessary to ensure the requirements of Water Code section 79753(a) continue to be met throughout the life of the project. Some projects may have inherent flexibility in the operations, which provides those projects with advantages for providing resilient benefits in the face of uncertain future conditions. Of the climate change projections discussed related to section 6004(a)(1)(C), the range of potential future climate and sea level conditions for consideration was selected from the suite of 20 projections for quantitative or qualitative analysis required to support this disclosure requirement. All climate change metrics compare changes between the historical period (1961-1990) and late-century climate period (2070-2099). The projected sea level rise of 105 centimeters is based on guidance from the California Coastal Commission's Sea Level Rise Policy Guidance (http://documents.coastal.ca.gov/assets/slr/guidance/August2015/0_Full_Adopted_Sea_Level_Rise_Policy_Guidance.pdf).

The requirements in Subsection 2 build on Section 6004(a)(1)(A), which requires the applicant to describe how and why the conditions between the without-project future conditions and those shown in the applicant's CEQA No Project Alternative are different and the implications of those differences. The differences between the without-project future conditions and those shown in the applicant's CEQA No Project Alternative extend to the cumulative analysis of the proposed project when including future projects and water management actions not related to the proposed project. This subsection requires discussion, analysis, and disclosure of how potential future cumulative conditions, including using future projects and water management actions, might reduce the public benefits of the proposed project. This

disclosure is necessary to determine whether the ecosystem and water quality public benefits provided by the proposed project could be sustained throughout the planning horizon of the project.

Section 6004(a)(9). Technical evaluation of projects and documentation of that evaluation are fundamental to the Commission's review and selection of projects for funding. The quantification methods in the proposed regulation are intended to provide consistency across projects. However, the diversity of projects, locations, and mix of benefits means that professional expertise must be used to evaluate applications. Evaluations cannot simply rely on information submitted without understanding how it was developed. Applicants' disclosure of data, assumptions, methods, calculations, and sources is required for reviewers to assess the soundness and quality of the information presented.

§6005. Priorities

§6005 includes the ecosystem priorities and water quality priorities provided by CDFW and State Water Board as required by Water Code Section 79754. These priorities articulate what types of ecosystem and water quality public benefits can be realized by water storage projects. They are necessary because the statute requires them to be provided and included in the regulations to ensure public benefits of projects are quantified and appropriate.

Ecosystem Priorities

CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species, and serves as the trustee for fish and wildlife resources (Fish and G. Code, §711.7 and 1802). As such, CDFW manages California's fish and wildlife resources for their ecological values and for their use and enjoyment by the public. CDFW bases its ecosystem priorities for the WSIP on existing environmental laws and regulations, as well as a wide body of scientific research, statistics, and modeling from multiple technical sources, and the efforts of multiple departments and agencies. These priorities address multiple levels of ecosystem organization and processes including biotic and abiotic components of the environment. CDFW's highest priority species for the WSIP are species listed under the California or federal Endangered Species Act, as well as other sensitive or at-risk native species that depend on the Delta and its tributaries for their survival. Fish species that meet one or more of these criteria include winter-run, spring-run, fall-run, and late-fall run Chinook salmon, Central Valley steelhead and rainbow trout, green sturgeon, white sturgeon, Delta smelt, longfin smelt, Pacific lamprey, and Sacramento splittail. In addition, aquatic, riparian, and wetland habitats that support migratory birds of the Pacific Flyway, neo-tropical migratory birds, and a variety of native reptiles, amphibians, mammals, and plants are also priorities for CDFW. Surface water and groundwater storage projects targeting these priorities will need to be implemented within an adaptive management framework that addresses species response to changing environmental conditions, including hydrologic variability and climate change.

CDFW organized the potential ecosystem benefits associated with water storage projects into two categories, but they are not listed in a "rank" order of priority:

(1) Flow and Water Quality: Impacts to native fish and wildlife species resulting from flow modifications and poor water quality are well-documented and can include adverse chemical,

physical, and biological changes to water and habitat. More specifically, flow and water quality are major determinants of fish abundance, distribution, and overall viability. As a result of the construction of dams, levees, and water diversions on major waterways, the historic natural hydrograph has been altered such that the magnitude, timing, duration, and stability of flows are insufficient to support native fishes in habitats that exist across the state, and degraded water quality conditions have impaired both the movement and health of now imperiled fish and wildlife species. Projects that produce a more natural hydrograph and provide appropriate water quality conditions will help support native fish and wildlife populations.

The priorities under the Flow and Water Quality category are focused on the ecosystem benefits of providing water, at the appropriate quality, magnitude, and flow rate, to necessary watershed locations, at the appropriate time.

Projects that can provide supplemental or alternative water delivery strategies, via operational or stored releases, especially cold water releases, could provide many ecosystem benefits to sensitive fish and wildlife species.

(A) Provide cold water at specific times and locations to increase the survival of salmonid eggs and fry: This critical ecosystem priority is necessary for the survival of salmonid eggs and fry, which cannot survive above certain temperatures. Under a natural hydrograph, runoff and access to habitat in upper elevation streams provides cold water sufficient for holding, spawning, and embryo incubation. Under the current, modified hydrograph, cold water is typically derived from deep water releases stored in managed lakes.

(B) Enhance flows to improve habitat conditions for in-river rearing and downstream migration of juvenile salmonids: Enhanced flows can improve habitat conditions such as temperature, turbidity, salinity, dissolved oxygen, substrate, nutrients, and vegetative cover that support juvenile salmonids as they develop and migrate downstream. Improvements in habitat conditions can contribute to other beneficial factors such as an increase in food availability, in-water shelter (to avoid predators), and shaded aquatic cover, all of which contribute to an increase in the ability of fish to survive this life stage. Additionally, enhanced flows could also provide juveniles access to areas more suited for rearing, such as floodplain areas.

(C) 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: This priority focuses on the importance of providing minimum flows and minimizing drastic changes in flow releases. Dramatic changes in flow can result in stranded fish and dewatered redds, both of which can cause significant mortality of early-life-stage salmonids.

(D) Increase flows to improve ecosystem water quality: It is important to provide favorable water quality conditions for wildlife and ecosystem health. Increased flows typically

improve water quality conditions such as temperature, turbidity, salinity, dissolved oxygen, and nutrients levels, which contribute to the improved health of fish and wildlife species that utilize aquatic habitats.

(E) Increase flows to support anadromous fish passage by providing adequate dissolved oxygen and lower water temperatures: Low dissolved oxygen or high water temperatures can act as barriers to fish movement and delay migration. Warm water temperatures increase susceptibility to disease, diminish energy reserves, and may negatively affect reproductive success. Delays in migration may increase the potential for fish mortality in the form of predation or stress. Cold water releases from upstream storage reservoirs typically carry more dissolved oxygen and can effectively lower in-river temperatures to more favorable levels.

(F) Increase attraction flows during the upstream migration period to reduce straying of anadromous species into non-natal tributaries: Successful adult migration of anadromous fish depends on flow quantity, timing, and water chemistry. Fish hold in the lower reaches of streams until a pulse of water attracts them. Fish key in on the water chemistry of their natal streams that is carried downstream by flows in order to return to where they hatched. Non-natal tributaries, side channels, and water diversions can confuse migrating fish and cause them to stray. If fish stray into the wrong tributary they may either be stuck and unable to successfully spawn or endure significant delays. Migration and straying delays may increase the potential for fish mortality to predators or stress and could have sub-lethal effects that affect spawning success.

(G) 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: Delta outflows have been positively correlated with increased abundance of several estuarine species. Freshwater outflows shift the low salinity zone westerly where more favorable habitat conditions occur.

(H) Maintain groundwater and surface water interconnections to support instream benefits and groundwater dependent ecosystems: Maintaining these connections increases flow for fish rearing and migration, dilutes contaminants and fine sediments, improves water quality resulting from groundwater recharge and filtering, and supports habitat for aquatic and semi-aquatic species such as surface wetlands, springs, and seeps.

(2) Physical Processes and Habitat: The alteration of the Delta watershed has fundamentally changed the physical, chemical, and biological characteristics of ecosystems in which native species have evolved. Over 80 percent of the Central Valley's historical floodplains, riparian, and wetland habitats have been lost in the past 150 years in part due to the construction of dams, levees, and water diversions as part of flood control and water delivery systems. These human activities have altered natural flow regimes, greatly reduced access to spawning and rearing

habitats of native fish species, and increased competition between native and non-native species for food, space, and other resources. These human activities have impacted native fish and wildlife populations. Furthermore, loss of wetlands has reduced the quantity and quality of habitats for migratory birds and other species.

The Physical Processes and Habitats category describes priorities that are aimed at ways to improve or expand sensitive habitats that support a variety of protected and sensitive species, including native species that have commercial, recreational, scientific, or educational value.

(A) Enhance flow regimes to improve the quantity and quality of riparian and floodplain habitats for aquatic and terrestrial species: Historical channel modifications and California's water conveyance infrastructure have reduced riparian and floodplain habitat. The inundation of floodplain habitat is valuable for fish rearing and provides important habitat for many other terrestrial, aquatic, and semi-aquatic species. Flows that increase frequency, magnitude, and duration of floodplain inundation all have varying degrees of benefits depending on targeted species.

(B) 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: Habitat stability and diversity can be improved by enhancing floodplain inundation. Furthermore, floodplain inundation objectives can be managed to focus on the creation of primary and secondary food sources and the habitat needs of targeted juvenile fish species.

(C) Enhance the temporal and spatial distribution and diversity of habitats to support all life stages of fish and wildlife species: Providing habitat enhancements on a larger scale and over a longer period will benefit species and the habitats in which they live. Diversifying habitats by targeting specific life stage needs is often beneficial.

(D) Enhance access to fish spawning, rearing, and holding habitat by eliminating barriers to migration: Fish need different habitat conditions depending on their life stage. Much of the spawning, rearing, and holding habitat conditions needed for fish are limited or are not accessible due to barriers. Barriers can be associated with water quality conditions such as dissolved oxygen deficiencies or temperatures that are too high. Barriers can also be physical obstructions such as dams and weirs. Providing improved water quality conditions via flow increases generally eliminates water quality related barriers; however, physical barriers must be manually removed or water must be artificially rerouted to allow access around the obstruction and provide a pathway for fish to pass.

(E) Remediate unscreened or poorly screened diversions to reduce entrainment of fish: The Delta watershed contains numerous diversions. Many of these diversions are inadequately screened. Inadequately screened diversions can entrain fish resulting in impingement against intake infrastructure, susceptibility to predation, and sometimes

death. Properly screening intake structures and diversions can reduce entrainment and improve fish survival.

(F) 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: Wetland and riparian environments provide essential habitat to multiple sensitive species of fish and wildlife. Providing additional water can enhance these habitat types by increasing their size and availability. Enhancing these habitat types improves the overall health and stability of these important systems.

(G) Develop and implement non-native invasive species management plans utilizing proven methods to enhance habitat and increase the survival of native species: Eliminating or reducing non-native species from the environment can reduce competition to native species and improve the native species' survivability. Management plans ensure that fact-based methods and strategies are used when initiating a management action.

(H) Enhance habitat for native species that have commercial, recreational, scientific, and educational value. The mission statement of CDFW is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. This priority is focused on the native species and habitats of California that provide human enjoyment and educational assets and is consistent with CDFW's mission.

Water Quality Priorities

The State Water Board's mission is to preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations (State Water Board Resolution No. 2015-0004). The listed water quality priorities do not necessarily reflect the State Water Board's overall priorities for water quality improvement and protection; rather, they reflect high priority water quality issues that could be positively influenced by water storage projects as defined by the Act. The priorities are not listed in a "rank" order of priority because the State Water Board cannot evaluate the relative environmental benefits of prospective projects, or generally elevate the importance of one water quality benefit over another, without information on the specific merits of the projects or the ability to evaluate tradeoffs. The State Water Board's specific priorities for water quality improvements associated with water storage projects are described below:

(1) Temperature: Temperature influences physical, chemical, and biological processes of an aquatic ecosystem. In particular, warm waters, such as those released from some temperature-stratified reservoirs or occurring in low-flowing streams, can adversely impact species that depend on cooler water temperatures. There are 76 water bodies (rivers and streams) on California's Clean Water Act (CWA) 303(d) list of impaired water bodies that are listed for temperature

impairment. Among those water bodies, 42 are downstream of a reservoir (no reservoirs are listed as impaired for temperature). This priority is necessary because water storage projects that may be funded by the Program can have the capacity to improve water temperature in temperature-impaired water bodies.

(2) Dissolved Oxygen: Almost all aquatic life depends on oxygen dissolved in the water for their health and survival. Dissolved oxygen in reservoirs and low-flowing streams, for example, can occur at levels that adversely impact aquatic life. There are 133 water bodies on California's CWA 303(d) list of impaired water bodies that are listed for dissolved oxygen impairment. Eight (8) of those water bodies are reservoirs and 66 are water bodies downstream of a reservoir. This priority is necessary because water storage projects that may be funded by the Program can have the capacity to improve dissolved oxygen levels in dissolved oxygen-impaired water bodies.

(3) Nutrients: High levels of nutrients can cause water to become polluted and can result in serious environmental, public health, and economic impacts. Such impacts particularly occur in slow-moving and stagnant waters, where resulting algal blooms can deplete the dissolved oxygen required for aquatic life survival. There are 170 water bodies on California's CWA 303(d) list of impaired water bodies that are listed for nutrient impairment. Among those water bodies, 11 are reservoirs and 42 are downstream of reservoirs. This priority is necessary because water storage projects that may be funded by the Program can have the capacity to improve nutrient levels in nutrient-impaired water bodies.

(4) Mercury/Methylmercury: Methylmercury, a product of methylated mercury, is a neurotoxin that poses health risks to humans and wildlife through consumption of contaminated fish. It has been predicted that about half of the State's reservoirs have fish with methylmercury levels high enough to warrant a mercury control program. There are 194 water bodies on California's CWA 303(d) list of impaired water bodies that are listed for mercury impairment. Among those water bodies, 83 are reservoirs and 85 are water bodies downstream of a reservoir. The State Water Board and the nine regional water quality control boards are developing a statewide water quality control program for mercury, which includes developing water quality objectives to protect humans and wildlife that consume locally-caught fish, and a control program to address mercury-impaired reservoirs. This priority is necessary because water storage projects that may be funded by the Program can have the capacity to improve mercury and methylmercury levels, including the development and implementation of a mercury control program, in mercury-impaired water bodies.

(5) Salinity: Elevated salinity in California's surface water and groundwater can damage crops, degrade drinking water, and damage industrial equipment. High concentrations of salt in water also inhibit the ability to recycle water. Some salinity impairment is caused or exacerbated by flow modification, such as occurs with reservoir releases and seawater intrusion. California's CWA 303(d) list of impaired water bodies lists 144 water bodies as impaired for salinity, measured as chloride, sodium, electrical conductivity/specific conductance, and/or total

dissolved solids. Among those water bodies, 78 are water bodies downstream of a reservoir and two are reservoirs. The Delta is also listed for salinity impairment. This priority is necessary because water storage projects that may be funded by the Program can have the capacity to improve salinity levels in salinity-impaired water bodies.

(6) Groundwater Resources: The Department has prioritized California's groundwater basins as high, medium, low, or very low based on various factors, including overlying population, groundwater dependency, and number of public supply wells. The basin prioritization indicates that 127 of California's 515 groundwater basins and sub-basins are high priority (43 basins) and medium priority (84 basins). Because high- and medium-priority basins account for 96 percent of the State's annual groundwater pumping and supply 88 percent of the population overlying groundwater basins, the State Water Board is basing the groundwater quality priority on these Department-designated basins. This priority is necessary because water storage projects that may be funded by the Program can have the capacity to improve groundwater quality, through contamination prevention or remediation, in high- and medium-priority basins.

(7) Delta Tributary Flows: Hydrology of the Delta watershed has been highly regulated by water diversion, storage, and use; as a result, flows have become more homogenous. Native aquatic species, which have evolved to take advantage of flow and habitat variability, have been adversely affected by physical and flow-related habitat simplification, which often favors exotic species over native species. Projects that improve flow for the Sacramento-San Joaquin Delta ecosystem are a high priority for the State Water Board. This priority is necessary because water storage projects that may be funded by the Program can have the capacity to improve flows that are critical to meeting the Bay-Delta Plan[12] water quality objectives, which are established to protect fish and wildlife beneficial uses through inflows to the Delta from the Sacramento and San Joaquin rivers and Delta outflows.

(8) Delta Water Demand: Incremental improvement to instream flow conditions and water quality can potentially be achieved in the Delta watershed by increasing local water supplies, which can be affected by water storage. This priority is necessary because water storage projects that may be funded by the Program can have the capacity to affect reliance on Delta waters, resulting in improved Delta flows and water quality.

(9) Water for Basic Human Needs: Water Code Section 106.3 establishes the State policy that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes and requires all relevant State agencies to consider this policy when adopting regulations and grant criteria. This priority is necessary because water storage projects that may be funded by the Program can have the capacity to provide water for these basic human needs in the State.

[12] State Water Board, 2006. Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. December.

§6006. Relative Environmental Value

§6006 includes relative environmental values of the ecosystem benefits and water quality benefits provided by CDFW and State Water Board as required by Water Code section 79754.

Relative Environmental Value of Ecosystem Benefits

The Relative Environmental Values of ecosystem benefits reflect the benefits sought through the ecosystem priorities and are necessary to quantitatively and qualitatively evaluate and compare a project's proposed benefits. The Relative Environmental Values are the metrics that will be used to measure the ecosystem benefits previously described.

While the ecosystem priorities are intended to be of equivalent importance, the extent to which projects contribute to the desired ecosystem benefits may vary greatly. Project proposals should describe specific information such as number, magnitude, mix, location, duration, and timing of benefits. Project proposals should also include clearly stated goals and objectives for ecosystem improvements, including programs for monitoring and adaptive management and strategies for resilience in the face of climate change. The criteria in the regulation will be used by the CDFW to determine the relative environmental value of the ecosystem improvements.

(1) Number of ecosystem priorities addressed by the project: This relative environmental value metric will be used to determine how many of the ecosystem priorities a project addresses. This metric encourages projects that seek to address multiple priorities.

(2) Magnitude and certainty of ecosystem improvements: The "magnitude of ecosystem improvements" means the quantity and scale of the ecosystem improvement. This provides a means to distinguish, for example, between a high density improvement over a small area in contrast to a low density improvement over a large area. A metric to evaluate the size and scale of the improvement is necessary to measure the value provided and compare projects and similar improvements to each other. The "certainty of ecosystem improvements" means the degree of confidence that the ecosystem improvement will benefit a targeted species or habitat. It is necessary to understand the certainty of an improvement in order to weigh the environmental risk and value associated with a particular proposed benefit.

(3) Spatial and temporal scale of ecosystem improvements: The "spatial scale" means the geographical dimensions of an ecosystem improvement. This metric is necessary to understand the dimensions or the "footprint" of a project's proposed ecosystem improvement and will allow the comparison of projects and similar improvements to each other. The "temporal scale" means the scheduled timeframe in which an ecosystem improvement action will be implemented. This information is important for evaluating the appropriateness of the timing and value of the improvement, and comparing projects and similar improvements to each other.

(4) Inclusion of an adaptive management and monitoring program that includes measurable objectives, performance measures, thresholds, and triggers for managing ecosystem benefits: Adaptive management and monitoring plans are an important way to determine the reliability, accuracy, adaptability, performance, and enforceability of proposed ecosystem improvements.

As more specifically defined in the regulatory text, the measurable objectives are quantitative and specific statements of desired outcomes that can be evaluated. Performance measures are methods that will be used to assess the status and trends of progress toward achieving the goals and objectives, thresholds are the limit at which the ecosystem improvement no longer meets the objective, and triggers are the point at which an ecosystem improvement requires a management action. The content and effectiveness of a these plans will be considered when comparing projects and similar ecosystem improvements to each other.

(5) Immediacy of ecosystem improvement actions and realization of benefits: The "immediacy of ecosystem improvement actions" means how much time will elapse before an ecosystem improvement action will be implemented. This metric is necessary to understand how quickly in the project timeline the ecosystem improvement portions of a project will commence and will allow for comparisons between projects and similar improvements. The "realization of benefits" means the expected time that will elapse before an ecosystem improvement will achieve measurable and quantifiable outcomes. This is important because an ecosystem improvement action may be initiated; however, it might take several years before ecosystem improvements fully meet the project's objectives. It is necessary to understand the realization timeline in order to review the value of the improvements and effectively compare projects and similar ecosystem improvements.

(6) Duration of ecosystem improvements: The "duration of ecosystem improvement" means the length of time an ecosystem improvement is expected to exist or provide intended benefits. The longevity of a proposed benefit affects its value and helps to effectively compare projects and similar ecosystem improvements.

(7) Consistency with species recovery plans and strategies, initiatives, and conservation plans: It is important for project proponents to utilize existing recovery plans and strategies, initiatives, and conservation plans, and science based approaches for ecosystem improvement analysis and project development. Consistency with recognized planning documents may promote synergies with other efforts. During the project application process, the Commission will provide a list of useful documents for applicants to reference. .

(8) Location of ecosystem improvements and connectivity to areas already being protected or managed for conservation values: The location of ecosystem improvements can drastically affect their value to species and their habitat. Improvements that occur in proximity to other managed/conservation lands provide an added benefit to species that occur there. In most cases contiguous ecosystem improvements are more valuable than isolated patches. It is necessary to understand the specific location of ecosystem improvements in order to make conclusions about the value of the ecosystem improvement provided and to effectively compare projects and similar ecosystem improvements.

(9) Efficient use of water to achieve multiple ecosystem benefits: This relative environmental value metric is important because California is in a severe drought. It is intended to promote the

intelligent use of water and to encourage ecosystem water efficiencies where possible. This metric encourages water use that serves multiple ecosystem improvements. An example of efficient water usage for multiple ecosystem benefits could be a scenario where water is released from a reservoir to provide cold water flows for spawning salmonids, which is then diverted to provide giant garter snake foraging habitat (emergent wetlands) while conjunctively recharging a depleted groundwater aquifer. Understanding the level of ecosystem water efficiencies will help in the comparison of projects and similar ecosystem improvements.

(10) Resilience of ecosystem improvements to the effects of climate change: The "resilience of ecosystem improvements to the effects of climate change" means the flexibility a project will have through operations or other means to adapt to climate change, in order to maintain its ecosystem improvements. This metric is necessary to evaluate the consistency of the ecosystem improvement in light of hydrologic variability, sea level rise, and other effects of climate change. This metric addresses the certainty that the ecosystem improvements will be maintained over time. It is necessary to understand the efforts a project proponent has made to prepare for various climate change scenarios in order to reach conclusions about the value of the ecosystem improvement and to effectively compare projects and similar ecosystem improvements.

Relative Environmental Value of Water Quality Benefits

While the water quality priorities are not listed in rank order, the extent to which projects contribute to the desired water quality benefits may vary greatly. Project proposals should describe specific information such as number, magnitude, location, duration, and timing of water quality improvement benefits. Project proposals should also include clearly-stated goals and objectives for water quality improvements, including programs for monitoring and adaptive management and strategies for climate change resilience. The State Water Board identified criteria in the regulation that will be used to determine the relative environmental value of water quality improvement benefits. Information regarding these criteria will be required to compare the relative environmental value of water quality benefits proposed by eligible projects.

1. Number of Priorities: This criterion is necessary because a project that addresses multiple water quality priorities may result in achieving a higher relative environmental value of water quality improvement benefits compared to other proposed projects.

2. Magnitude and Certainty Improvements: This criterion is necessary because a project that proposes to achieve a larger degree or quantity of water quality improvement toward achieving a water quality priority, compared to other proposed projects, may result in achieving a higher relative environmental value of water quality improvement benefits. In addition, projects that demonstrate a greater probability that water quality improvements will result, compared to other proposed projects, may result in achieving a higher relative environmental value of water quality improvement benefits.

3. Spatial and Temporal Scale: This criterion is necessary because a project that proposes to achieve water quality improvements at the location and during the time period needed toward

achieving a water quality priority, compared to other proposed projects, may result in achieving a higher relative environmental value of water quality improvement benefits.

4. Adaptive Management and Monitoring Program: This criterion is necessary because a project that establishes a decision-making process and program that includes monitoring and performance measures, which allow for the evaluation of a project's ability to address specific water quality improvements, may result in achieving a higher relative environmental value of water quality improvement benefits.

5. Immediacy of Improvement Actions and Realization of Benefits: This criterion is necessary to determine how quickly a project initiates project implementation and achieves water quality improvements. Projects with more immediate implementation and improvements may result in achieving a higher relative environmental value of water quality improvement benefits than a project that takes longer to implement actions and improve water quality.

6. Duration of Improvements: This criterion is necessary because a project that proposes to sustain water quality improvements over an extended period of time may result in achieving a higher relative environmental value of water quality improvement benefits than a project with a shorter duration for water quality improvements.

7. Consistency with Laws and Policies: This criterion is necessary because the relative environmental value of water quality improvement benefits proposed to be achieved by a project may be dependent upon the project's ability to comply with applicable laws, regulations, and policies.

8. Connectivity of Improvements: This criterion is necessary because a project that demonstrates hydrological or other connections of water quality improvements in areas that are in proximity to areas that already support beneficial uses of water or are already being managed for water quality may result in achieving a higher relative environmental value of water quality improvement benefits compared to other proposed projects.

9. Resilience of Improvements to Effects of Climate Change and Drought: This criterion is necessary because a project that demonstrates flexibility, through project operations or other means, to adapt to hydrologic variability, sea level rise, and other effects of climate change may result in achieving a higher relative environmental value of water quality improvement benefits compared to other proposed projects.

10. Extent of Improvements for Basic Human Needs: This criterion is necessary because, per Water Code Section 106.3, every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. Projects that satisfy this need where it is not being met may result in achieving a higher relative environmental value of water quality improvement benefits.

11. Extent of Groundwater Corrections: Groundwater resources play a vital role in maintaining California's economic and environmental sustainability. During a typical year, approximately 40 percent of the State's total water supply comes from groundwater. During dry years, groundwater contributes up to 60 percent (or more) of the State's total supply and serves as a critical buffer against the impacts of drought and climate change. Ensuring proper management of groundwater resources has become even more important as California continues to experience drought conditions. Projects that correct undesirable groundwater results due to extraction may result in achieving a higher relative environmental value of water quality improvement benefits compared to projects that do not address this issue.

§6007. Managing Public Benefits

Water Code Section 79754 requires the Commission to develop and adopt by regulation methods for quantification and management of public benefits. §6007 defines the requirements for funding recipients to ensure that public benefits are monitored and managed over the project life. The monitoring and management of public benefits will be described in a monitoring, assurances, and reporting plan and the contracts with agencies responsible for administering the public benefits (Water Code section 79755(a)(3)). This section requires funding recipients to provide annual reports to the Commission once the projects are operational so the Commission can ensure that funded projects are being operated and managed to provide the benefits as claimed in the applications.

Section 6007(a)(1) requires the applicant to identify the public benefits claimed. This is necessary to explain whether the public benefits claimed and the management plans are consistent with the benefit claimed.

Section 6007(a)(2) defines the operations plan or documentation required to manage the public benefits. This documentation is required so the Commission can ensure the project will be properly monitored. The required information included in the documentation is necessary to ensure the project applicant has sufficient knowledge to manage the project in a variety of conditions. Specifically, project operations and public benefits under a variety of hydrologic conditions are important for monitoring because the magnitude of public benefits will fluctuate commensurate with the water year type and the amount of water in storage.

A description of the monitoring the project will undergo is necessary to convince the Commission the applicant has sufficient monitoring in place to ensure public benefits will continue to be provided. Additionally plans for operations if conditions fall outside the range of anticipated conditions or if public benefits are not provided as anticipated are required to ensure the applicant has a plan for unexpected conditions. Similarly, potential management or corrective actions to the project are important to understand so the Commission understands the potential impacts to the public benefits if unexpected hydrologic conditions occur.

Section 6007(a)(3) requires the applicant to provide a monitoring, assurances, and reporting plan to describe how the public benefits will be monitored, measured, and reported after project implementation. The monitoring, assurances, and reporting plan is required so the Commission can

ensure that the public benefits will be properly monitored and measured. This plan needs to include the following items:

- Measurable goals and objectives are the expected results/outcomes of a project. The goals and objectives will be measured against the performance of the project to determine whether the project objectives (benefits) are met.
- Metrics, which are a set of measurements used to quantify results, will need to be defined for each public benefit in order to evaluate the performance of the project against the benefits.
- Conceptual models are representations of physical processes or ecosystem functions to allow evaluation of consequences or identification of uncertainty for specific management actions. Conceptual models can provide several benefits. The knowledge and hypotheses about ecosystem structure and function summarized in conceptual models can lead directly to potential restoration actions. Conceptual models can also help to define monitoring needs. The monitoring report needs to include conceptual models relevant to each monitoring action to help define the monitoring needs.
- Physical, chemical, or biological parameters are required to measure the magnitude of the public benefits provided by the project. As described in Section 6004(a), the magnitude of benefits are calculated using the physical, chemical, or biological change in each benefit resource condition that is created or caused by the project. The plan needs to describe the physical, chemical, or biological parameters that will be used to measure the physical benefits.
- The location and frequency of monitoring actions need to be identified in the plan. Some public benefits, such as ecosystem, are specific to a location or time. Therefore, the location of monitoring and measuring of benefits needs to be identified. Also, some benefits are seasonal or may require more frequent monitoring than other benefits. Therefore, the frequency of monitoring and measuring of benefits needs to be identified in the plan.
- Because some water management actions, particularly for ecosystem, are dependent on hydrologic or biological conditions, the plan needs to identify thresholds and triggers that would initiate those management actions.
- The plan needs to identify the parties responsible for conducting the monitoring program. This will allow the Commission and public to hold responsible the entity responsible for monitoring and reporting the public benefits.
- The reporting frequency needs to be identified in the plan so the Commission and public know when the monitoring report is due and how frequently the report is updated.
- Applicants are required to identify funding sources and financial commitments to perform the monitoring and reporting. This ensures that funding is available to do the monitoring and reporting through the life of the project.
- The plan needs to describe where and how the monitored and measured information on the public benefits will be made publicly available so the public will know where to find this information.
- Because public benefits of a project can change due to changes in regulatory standards and biological conditions, the applicant needs to develop and commit to implementation of an

adaptive management program so that the project can be adaptively operated to provide the public benefits.

Section 6007(b) requires funding recipients to submit a publicly available report to the Commission and the public agencies identified in Water Code section 79754 on an annual basis commencing with the end of the first full year of operation. The report will inform the Commission on the operations of the project and the actual public benefits provided by the project.

Section 6007(c) allows for the CDFW, the State Water Board, and the Department, as the agencies responsible for administering the public benefits of a funded project, to include any additional preliminary operations, monitoring, and management requirements in the contracts required by Water Code Section 79755(a)(3). This allowance is required because final project operations may be modified after the application period when the funded projects are undergoing final design and implementation.

Section 6007(d) indicates that the conditions of the permits required for the operations of the funded project shall supersede any preliminary operations, monitoring, and management commitments made by the applicant in their funding application. This is required because final permitted project operations may be different from those described in the project application.

Section 6007(e) requires the funding agreement between the Commission and the funding recipient to include language consistent with the requirements of the contracts and permits identified in subsections (c) and (d). This is to ensure all contracts and related documents are describing consistent requirements for the funded project's operations and maintenance and no conflicts exist between these contracts.

Benefits of the Proposed Regulation

The regulation will ensure that California's investment in public benefits associated with water storage projects will be fair and equitable, conducted using best available science, and derived through an open and transparent process. The regulation provides applicants with a clear understanding of the analysis requirements for evaluating their proposed projects. Further, the regulation clearly articulates the priorities of the CDFW and State Water Board for ecosystem and water quality benefits and relative environmental values.

The regulation will allow the Commission to be able to invest in public benefits associated with water storage projects that best meet the public benefits requirements and priorities of Proposition 1. Funded projects will provide public benefits that improve the operation of the state water system, ecosystem and water quality conditions, flood management, emergency response, and recreation throughout the State in a manner that is cost effective and maximizes the return on investment of public funds.

Documents Relied Upon

Commission staff relied on standard water project evaluation methods and protocols to develop the quantification methods and required assumptions. These documents are:

- California, State of, Department of Finance, 2014. E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2013 and 2014. Sacramento, California.

Downloaded May 2014 from http://www.dof.ca.gov/research/demographic/reports/estimates/e-1/view.php

- California Energy Commission 2014. California Energy Demand 2014–2024 Final Forecast Volume 1: Statewide Electricity Demand, End-User Natural Gas, Demand, and Energy Efficiency. Staff report. CEC-200-2013-004-V1-CMF. January. http://www.energy.ca.gov/2013publications/CEC-200-2013-004/CEC-200-2013-004-V1-CMF.pdf
- California Legislative Analyst's Office. 2014. Overview of State Bond Debt. Prepared by the Legislative Analyst's Office for Proposition 1. http://www.lao.ca.gov/ballot/2014/overview-state-bond-debt-110414.pdf
- David W. Pierce, Daniel R. Cayan, and Bridget L. Thrasher, 2014: Statistical Downscaling Using Localized Constructed Analogs. J. Hydrometeor, 15, 2558–2585. doi: http://dx.doi.org/10.1175/JHM-D-14-0082.1
- DWR, 2008. Economic Analysis Guidebook. State of California. The Resources Agency. Sacramento, CA. January.
- DWR, 2010. Proposal Solicitation Package, Proposition 1E Stormwater Grants Round 1. Division of Integrated Regional Water Management. Sacramento, CA. August.
- DWR, 2014. Handbook for Assessing Value of State Flood Management Investments, Sacramento.
- DWR, 2015: Perspectives and Guidance for Climate Change Analysis. A Technical Information Record of work completed by the DWR Climate Change Technical Advisory Group.
- Economics Group, U.S. Bureau of Reclamation, 2010. Economics Guidebook. Technical Service Center, Bureau of Reclamation, U.S. Department of the Interior. Denver.
- Federal Emergency Management Agency, 2006. *2006 Guidelines for Benefit-Cost Analysis.* http://www.fema.gov/media-library-data/20130726-1523-20490-0544/2006_bca_guidance.pdf
- Federal Reserve Bank of Cleveland, 2015. Estimates of Inflation Expectations, July 17, 2015. Downloaded July 22, 2015 from: https://www.clevelandfed.org/en/Our%20Research/Indicators%20and%20Data/Estimates%20of%20Inflation%20Expectations.aspx
- Federal Reserve Board, 2015. Federal Reserve Board of Governors. Minutes of the Federal Open Market Committee. Summary of Economic Projections. June 16-17, 2014. Downloaded July 24, 2015 from http://www.federalreserve.gov/monetarypolicy/fomcminutes20150617ep.htm
- Intergovernmental Panel on Climate Change, 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor and H. L. Miller (eds.). New York, NY: Cambridge University Press. Accessed online at http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml
- Legislative Analyst's Office, 2014. Overview of State Bond Debt. Prepared by the Legislative Analyst's Office for Proposition 1. http://www.lao.ca.gov/ballot/2014/overview-state-bond-debt-110414.pdf

- Office of Management and Budget (OMB), 1992. Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs. OMB Circular A-94, Washington, D.C. October 29.
- Rahmstorf, S., 2007. A Semi Empirical Approach to Projecting Future Sea Level Rise. Science 315:368–370. DOI: 10.1126/science.1141283. Accessed online at http://www.pik potsdam.de/~stefan/Publications/Nature/rahmstorf_science_2007.pdf
- National Research Council, 2012. Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future. The National Academies Press, Washington, DC, 2012. Available at: http://www.nap.edu/catalog.php?record_id=13389
- U.S. Army Corps of Engineers (USACE), 2009. Water Resource Policies and Authorities Incorporating Sea level Change Considerations in Civil Works Programs. 2009. Accessed online at http://planning.usace.army.mil/toolbox/library/ECs/EC1165 2 211_1Jul2009.pdf
- USACE, 2014. Subject Economic Guidance Memorandum 15-03 Unit Day Values for Recreation for Fiscal Year 2015. CECW-P. October 28. http://planning.usace.army.mil/toolbox/library/EGMs/EGM15-03.pdf
- USACE, 2011. Water Resource Policies and Authorities Incorporating Sea level Change Considerations in Civil Works Programs. 2011. Available online at https://ipcc-wg2.gov/njlite_download2.php?id=10861
- USACE, 2000. Planning guidance notebook. Engineer Regulation 1105-2-100. Washington, D.C. April.
- Reclamation, 2007. Cost Estimating Directives and Standards. FAC 09-01. October 15, 2007. Available at: http://www.usbr.gov/recman/fac/fac09-01.pdf
- U.S. Water Resources Council, 1983. Economics and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. Washington, D.C. March 10.

CDFW based its priorities on a wide body of scientific research, statistics, and modeling from multiple scientific sources and the efforts of multiple departments and agencies. The ecosystem priorities discussed above are reflected in the following list of existing environmental laws and regulations, species recovery plans and strategies, initiatives, and conservation plans, on which CDFW relied to develop its ecosystem priorities for the WSIP:

- CDFW, 2015. State wildlife action plan, 2015 update: A conservation legacy for Californians. California Department of Fish and Wildlife with assistance from Ascent Environmental, Inc., Sacramento, CA. Available: https://www.wildlife.ca.gov/SWAP/Interim-Products.
- Central Valley Joint Venture, 2006. Central Valley Joint Venture Implementation Plan - conserving bird habitat. Prepared for U.S. Fish and Wildlife Service, Sacramento, CA.
- East Contra Costa County Habitat Conservancy, 2006. East Contra Costa County habitat conservation plan and natural community conservation plan. Available: http://www.co.contra-costa.ca.us/depart/cd/water/HCP/documents.html. Accessed: December 22, 2011.
- State Water Board, 2006. Water quality control plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. State Water Resources Control Board, Division of Water Rights, Sacramento, CA. December.

- National Marine Fisheries Service, 2014. Recovery plan for the evolutionarily significant units of Sacramento River winter-run Chinook salmon and Central Valley spring-run Chinook salmon and the distinct population segment of California Central Valley steelhead. National Marine Fisheries Service, California Central Valley Area Office, Sacramento, CA. Available: http://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/domains/california_central_valley/final_recovery_plan_07-11-2014.pdf.
- San Joaquin Council of Governments, 2000. San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. San Joaquin Council of Governments, Stockton, CA. Available: http://www.sjcog.org/DocumentCenter/View/5.
- Solano County Water Agency, 2012. Public Draft Solano Multispecies Habitat Conservation Plan. http://www.scwa2.com/water-supply/habitat/solano-multispecies-habitat-conservation-plan.
- U.S. Fish and Wildlife Service, 1999. Draft recovery plan for the giant garter snake (Thamnopsis gigas). US Fish and Wildlife Service, Region 1, Portland, OR.

Description of Reasonable Alternatives

Alternatives to the regulation proposed include application of a more prescriptive or less prescriptive (i.e., performance-based) approach to developing the requirements of the regulation.

Alternative 1 – More Prescriptive Regulation

Alternative 1 would include more prescriptive standards than what is included in the current proposal. This alternative would include identifying specific datasets, methods, and models acceptable for use in the applicant's benefit and cost analysis. For example, the Commission could require the use of the USACE flood damage analysis software (e.g., HEC-FDA) for the analysis of flood damage reduction benefits or the use of the DWR and the U.S. Bureau of Reclamation's water resources planning simulation software model for the operations of the State Water Project and Central Valley Project, CalSIM II, for analysis of proposed project operations. A very prescriptive approach would require all project analyses be conducted using the same analytical tools and assumptions for level of development and physical, biological, chemical, economic, and other resource conditions. The Commission rejected using very-specific, prescriptive requirements for the regulation because the variability in potential project size, type, and location made selection of a specific standard impractical. Selecting a specific standard could unfairly bias the selection process to a specific type of project or applicant, particularly if the standard required very expensive analysis. The Commission members and most stakeholders preferred a more performance-based standard that allows applicants to determine the most appropriate datasets, methods, and models for their project analysis.

Alternative 2 – Less Prescriptive Regulation

Alternative 2 would include less prescriptive standards than what is included in the current proposal. This alternative would allow for the most flexibility for applicants to determine datasets, methods, and models for use in their benefit and cost analysis. The Commission rejected using a less prescriptive standard for the regulation because a large variability in reporting metrics would not allow for direct comparison of projects. A solely performance-based standard would result in large variations in project analysis between the applications and comparison of projects would be challenging. For example,

without specifically requesting that applicants report benefits and costs in 2015 dollars, applicants could choose their own constant dollar year and applications would not be comparable. The Commission was also concerned whether applications would have to be adjusted or modified by the review team to develop comparable data, this could lead to challenges of the project analysis if applicants felt the modifications were incorrect.

This Alternative could potentially reduce some quantification costs to applicants. However, shifting the responsibility of analytical consistency to Commission staff and other agencies participating in the review team would likely increase their costs substantially.

Alternative 3 – Single-Step Application Process

The current draft regulations lay out a two-step application process. The Commission and staff considered a single-step application process as an alternative. The single-step alternative would require all application materials to be submitted at one-time, with no early input from the Commission. A single-step may reduce applicants' application development time. However, the substantial drawback to this approach would be that a project applicant would not find out potential fatal flaws or eligibility issues prior to expending substantial resources to complete the final full application.

Alternative 4 – Multiple Solicitations

The Commission considered options regarding the number of solicitations for the WSIP, including whether to conduct multiple solicitations and set aside funds or do a separate solicitation for small projects. The current concept for the WSIP is to endeavor to commit all available WSIP funds to qualified projects in a single solicitation. Various stakeholders have encouraged the Commission to consider altering this concept to include at least two separate solicitations and consider having a separate solicitation for small projects.

Pros of having multiple solicitations include:

- Extends the window of opportunity for potential applicants to apply to the program.
- Allows for variation in each solicitation round focusing on a specific program aspect (for example, one type of project in one solicitation, another type of project in another solicitation).
- Allows initially unsuccessful applicants to reapply.
- Allows the Commission to evaluate whether any process improvements are needed between solicitations.

However, cons of having multiple solicitations include:

- Prolongs the time and costs needed to award all funding and subsequently moving actual work on the ground forward.
- Evaluation of benefits becomes confined to each solicitation versus evaluating all projects' public benefits at one time. This prevents the Commission from maximizing the total amount of public benefits funded.

- Water source conflicts for funded projects must be evaluated cumulatively. For example, projects funded after the first solicitation must be evaluated for water source conflicts with the projects that have been previously funded.
- Additionally, Proposition 1 is explicit that projects should be compared against each other for the magnitude of the public benefits conferred. "Projects shall be selected by the commission through a competitive public process that ranks potential projects based on the expected return for public investment as measured by the magnitude of the public benefits provided, pursuant to criteria established under [Chapter 8]." (Section 79750(c)). Reading this language narrowly, it appears the Legislature intended for all projects to be compared to each other and, based on the magnitude of public benefits of each individual project and its ranking, receive funding based on that magnitude. Multiple solicitations based on the size of the projects undermines this competitive application.

The WSIP is currently structured to consider all proposed projects in a collective pool. In the course of developing the Program, there has been recurring discussion on whether it would be beneficial to "set aside" portions of the available funds for specific categories of projects. In this alternative, a specified portion of the funds would be dedicated to projects with a total cost of less than a specific amount.

Pros of creating a small project set aside include:

- Creates more certainty of available funding for applicants with small projects.
- Can create a more of a level playing field if evaluation criteria do not allow comparison of projects of various sizes.
- May accelerate the realization of public benefits, assuming that a smaller project could be constructed and begin providing benefits faster than larger projects.

Cons of creating a small project set aside include:

- Can tie up funding if the set aside is too ridged and exceeds project demand.
- Definition of a small storage project is fairly subjective (e.g., could be defined by total project cost, benefit level, facility foot print, customers served, etc.).
- Small projects may not maximize the return of investment as measured by the magnitude of public benefits.
- Additionally, setting aside funds for certain projects undermines the competitive nature required by Water Code section 79750 to value the magnitude of the public benefits provided. The Program is not designed to fund all projects. The purpose of the Program is to fund public benefits associated with water storage.

Staff found the need for multiple funding rounds to be unnecessary. Currently, the process attempts to utilize criteria that normalizes large and small project benefit; for example using unit cost per benefit type and benefit-cost ratios. Additionally, the program currently considers implementation complexity, so commissioners will be able to consider the timelines and risks a project may face in getting to a state

of construction readiness. Generally, smaller projects should have the edge over larger projects when considering implementation complexity.

Once conditional commitments are made, projects must meet provisions in the Water Code in order to reach final award and the current process allows for projects to move at their individual paces to construction readiness. Therefore, running multiple solicitations does not result in any acceleration in timeline to get funding "on the street". The need of the Commission to maximize public benefit for the available funding points toward a single solicitation so that all projects' public benefits compared at the same time and a single funding decision maximizes the public benefits for the mix of projects funded. Further, a single round will facilitate identifying and avoiding water source conflicts.

Alternative 5 – Include Special Provisions for Disadvantaged Communities (DACs)

The Program does not contain specific obligations towards assisting DACs, as other Proposition 1 programs do. The Program is specifically dedicated to the investment in public benefits associated with water storage. These public benefits are the only benefits that may be directly funded by the Program. As a result, the current WSIP program is not structured to include any specific dedicated funding directed toward assisting DACs because to do so would not be supported by the provisions of the governing statutes. However, by investing in public benefits of water storage, there may be indirect benefits to DACs that help address water supply issues.

Pros for including DAC considerations include:

- May assist in supporting the human right to water, depending on whether the non-public water supply benefits serve communities without access to a safe, clean, and affordable water supply.

Cons for including DAC considerations include:

- Project alignment with statutory program requirements is not possible and could create "false opportunity" which would encourage the submission of projects that may inherently be non-competitive.
- The Program does not include a waiver or reduction of matching funds requirements of the statutory language. Specifically, Program funding is only available for the public benefit costs and may be expended only for ecosystem improvements, water quality improvements, flood control benefits, emergency response, and recreational purposes. Additionally, the public benefit cost share of a project is limited to fifty percent of the total capital costs of the project, pursuant to Water Code section 79756. DAC projects, like other projects, would be required to fund all of their non-public benefit costs and possibly some of the public benefit costs, depending on the cost allocation.
- Funding decisions are made based on the amount of public benefits as defined in Water Code sections 79752 and 79753, which do not include water supply.

While the Commission has stated that DAC considerations are a priority, compliance with the statutory requirements for the Program may be burdensome for a DAC project proponent. For example, Water Code section 79752 requires projects to provide measurable improvements to the Delta ecosystem or

tributaries to the Delta. DAC projects may have difficulty meeting that provision because of the location or size of the project or the objectives for operating the project.

Staff does not recommend attempting to change the program to specifically accommodate DAC projects as statutory requirements do not align well with DAC needs.

Alternative 6 – More Extensive Climate Change Analysis

Governor Jerry Brown's Executive Order B-30-15 and AB1482 require State agencies to account for climate change in project planning and investment decisions. To comply with these directives, climate change should be required in the analyses and quantification of public benefits of water storage projects for the WSIP. Several methods and approaches of incorporating climate change in water resources planning were considered. In general, selecting an approach to climate change analysis hinges on the type of decision that must be made and the level of resources available to conduct the analysis. The more rigorous the analysis, the more resources required. Climate change analysis options for the WSIP were developed to draw on the same suite of climate change projections as will be used for the forthcoming 4th California Climate Change Assessment.

While climate scientists' understanding of the climate system has increased, the range of climate projections has not reduced. There are many sources of uncertainties inherent in future climate projections due to different general circulation models (GCMs) and projections of greenhouse gas emissions levels. More than 60 GCMs have been developed by different groups of scientists around the world, and different GCMs represent the climate system differently resulting in differences in climate projections.

Commission staff worked with the Department's climate change program staff and outside climate experts to devise four different options for conducting climate change analyses for the WSIP project evaluations. Each of the four options were based on recently completed work by the DWR Climate Change Technical Advisory Committee. Individual climate change projections were chosen from a suite of projections to represent two specific types of potential future conditions: 1) most likely or median impacts conditions and 2) highly challenging impacts conditions. All climate change metrics compare changes between the historical period (1961-1990) and mid-century climate period (2036-2065).

The following are options were considered for the climate change analyses associated with the quantification of public benefits of water storage projects for the WSIP.

Table 3. Summary of Modeling Requirements by Climate Analysis Options

	Total Modeling Runs Required for Climate Change analysis	**Baseline Hydrology**	**Future Conditions Hydrology**	**Hydrology for Economic and other analyses**
Option 1	3	Historical	Challenging Future	Historical
Option 2	2	Median Future	NA	Median Future

Option 3	4	Median Future	Challenging Future	Median Future
Option 4	4	Median Future	Challenging Future	Median Future & Challenging Future

Option 3 is currently represented in the draft regulations. Option 4 would require applicant's to do two sets of hydrologic, operations, and economics analyses: one for the median future and one for the challenging future. Option 4 would be burdensome and costly to the applicants and Commission sought to balance the right amount of information needed to make informed investment decisions and requiring applicants to do too much additional analyses beyond what CEQA requires. Option 3 was determined to be the best balance.

Alternative 7 – No Conditional Funding Commitment

The Commission could use a process that makes initial funding decisions only when all provisions of Water Code section 79755(a) are completed for projects to be considered for funding. This alternative introduces three issues that burden applicants. Completion of provisions in Water Code section 79755(a) prior to initial Commission funding decisions requires applicants to make large investments in project preparation work with the risk that the project may not proceed should Program financing not be obtained. Additionally, for the Commission to compare projects to maximize public benefits, projects that complete Water Code section 79755(a) provisions quickly would be stalled waiting for other projects to also complete their provisions before the Commission begins to consider potential projects for funding. Finally, Water Code section 79755(a)(2) stipulates that applicants must produce contracts for 100 percent of the non-public benefit cost share. Obtaining a contractual commitment per the Water Code is difficult if the applicant does not know if they will be successful in obtaining Program funding or the potential amount of Program funding. Using the multiple step funding commitment process helps resolves these burdens to the applicant.

A successful applicant must comply with the provisions contained in Water Code Section 79755(a) prior to receiving the funding amount awarded. The Conditional Funding Commitment allows projects to proceed in meeting the provisions of Water Code section 79755(a) with an increased assurance of State funding and allows for projects to move forward from this step at their own pace. Projects that can obtain 79755(a) provisions quickly are not delayed by projects on a slower trajectory. One significant advantage to the funding program in using a Conditional Funding Commitment is to the applicant's efforts in securing 100 percent of the contracts for the non-public benefit cost share per Water Code section 79755(a)(2). This provision is difficult for applicants to satisfy if the State's cost share is unknown. The Conditional Funding Commitment provides information applicants need to fully secure the non-public benefit cost share for the project.

No Alternative is Less Burdensome and Equally Effective

The Commission has concluded that no alternative to the proposed regulation is less burdensome and equally effective. It has reached this conclusion through extensive discussion of alternatives (described above) with Commissioners, a stakeholder advisory committee, and staff. Alternative 2 described above

is potentially less burdensome on agencies that choose to apply for funding, but for reasons stated, the Commission does not view it as effective in achieving the purposes of Proposition 1.

The Proposed Regulation Provides a Performance Standard for Quantification of Benefits

The Proposed Regulation provides potential applicants flexibility in selecting and implementing the most appropriate quantification methods for their projects. More than one method for quantifying benefits is potentially available for each of the five public benefit categories and the most appropriate method depends on the details of the proposed project - its features, location, and operations and the availability of appropriate data and studies that would be needed to apply different methods. However, any method used must meet certain standards regarding how the analysis is structured, justified, and documented. Article 3 of the proposed regulation includes the standards that must be met.

Economic Impact Assessment

In accordance with Government Code section 11346.3, the staff has determined that the proposed regulatory action would not eliminate existing businesses within the State of California, and would not affect the creation of new businesses or the expansion of existing businesses currently doing business in California. The proposed regulatory action would not eliminate jobs within the State of California, and would not affect the creation of jobs within California.

Small businesses would not be subject to the proposed regulations because the regulations govern eligible applicants per Water Code 79712, which do not include small businesses. Additionally, the voluntary nature of the program would not require any small business participation.

Additionally, the following findings support the proposed regulations:

- The proposed regulation will not result in a significant or permanent change in the number of jobs within the state.
- No creation or elimination of businesses within the state would occur as a result of this proposed regulation.
- The proposed regulation would not affect the competitive advantages or disadvantages of businesses within the state.
- The proposed regulation would not significantly affect investment in the state.
- Incentives for innovation in business products, materials, or processes would not be affected.

The objective of the proposed regulations is to invest in public benefits associated with water storage. The benefit of this investment will support the statutory purposes associated with the program and promote ecosystem improvements, water quality improvements, flood control benefits, emergency response, and recreational purposes associated with water storage project.

There are no significant adverse impacts directly affecting businesses. Direct costs related to the proposed regulation fall on state agencies to conduct the proposal solicitation and review process and on local agencies that choose to apply for state funding through the WSIP. See the attached EFIA.

Duplication or Conflicts with Federal Regulations

The proposed regulation implements a new state investment program that does not have a federal counterpart and does not impact, duplicate, or conflict with Federal regulations or statutes. The Commission has reviewed federal regulations and standards specifically regarding quantification of public benefits for water storage projects and has striven to develop methods consistent with those (see Water Resources Council, 1983, incorporated by reference into the Code of Federal Regulations, Title 43, Subtitle B, Chapter 1, §404.4). Differences between the proposed regulation and the federal regulations occur where required by provisions of Proposition 1 or other state law or where required to evaluate benefits from the state's perspective rather than the federal perspective.

Environmental Impact Assessment

The purpose of the WSIP is to fund public benefits associated with water storage projects. These regulations cover the application process, quantification of public benefit benefits, and management of public benefits. Activities resulting from the application process are mainly technical analysis and administrative and include developing, receiving, reviewing, and evaluating applications. Some travel may be incurred during this process to attend public meetings or workshops. Such activities associated with these regulations will not have an impact on the state's environment. Specific environmental impacts as a result of potentially funding projects will be described in the applications and will be analyzed by a specific project's lead agency in accordance with applicable law.

Pre-Rulemaking Outreach

Although not legally required, the Commission developed an extensive stakeholder outreach and communication program to receive input from stakeholders about potential Program regulations. In April 2015, the Commission convened a Stakeholder Advisory Committee (SAC) to provide technical and policy input on the development of the regulations. The SAC was a representative cross-section of more than 30 stakeholders with experience and expertise in interest areas pertinent to the Program. The SAC members provided input specific to stakeholder concerns while drafting these proposed regulations. The SAC met from April to October 2015 and provided valuable insight and advice to the Commission on the development of the Program and the draft regulations specific to information the stakeholders could provide in the evaluation process of the Program. This process allowed the Commission to draft a regulation that meets the intent of Proposition 1, while creating a practical and implementable program to receive applications from projects to fund the public benefits associated with water storage projects.

Additionally, the Commission held public workshops in locations across the state to provide information about the Program and allow the public to provide early comments on the draft regulations. Public meetings were held in Chico, Fresno, and Pleasant Hill in April 2015; Napa, West Sacramento, and Bakersfield in July 2015; and Yuba City, Pleasant Hill, and Fresno in October 2015. These workshops were held in recognition of the applicant-centered nature of these proposed regulations.

In June 2015, the Commission participated in a joint Proposition 1 Tribal Consultation Workshop in Sacramento. Since June, the Commission has met privately with several tribal representatives at their request.