

## Update on Development of Delta Plan Amendment(s) Regarding Conveyance, Storage and the Operation of Both to Achieve the Coequal Goals

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**Summary:** As part of the preparation for a Delta Plan Amendment on “Conveyance, Storage, and the Operation of Both”, the Council will be briefed by State agency staff regarding current activity to fund new storage projects as well as an ongoing study of reoperating State and federal water projects.

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### **Background**

Water Code section 85304 requires the Delta Plan to promote options for new and improved infrastructure relating to the water conveyance in the Delta, storage systems, and for the operation of both to achieve the coequal goals. To promote options for water conveyance infrastructure in the Delta, the 2013 Delta Plan recommended the successful completion of the Bay Delta Conservation Plan (BDCP) — a Natural Communities Conservation Plan (NCCP). In light of the Brown administration's April 2015 announcement of a new preferred alternative to BDCP that would not complete BDCP as a NCCP, but instead construct water conveyance facilities through an initiative called California WaterFix, the Council is moving forward on its commitment to revisit the topic and pursue a high-priority Delta Plan amendment, as stated in Appendix A of the 2013 Delta Plan.

To guide development of an amendment, the Council adopted the “19 Principles for Water Conveyance in the Delta, Storage Systems, and for the Operation of Both to Achieve the Coequal Goals” (<http://deltacouncil.ca.gov/docs/19-principles-water-conveyance-delta-storage-systems-and-operation-both-achieve-coequal-goals>) in November 2015. Since that time, additional relevant information has been released related to storage and operations that could inform the Council on these topics. In March 2016, the Council approved a workplan for the proposed amendment which stated that staff would arrange briefings for the Council to better understand related work being done and decisions being made by other entities.

The Council has reviewed options and issues affecting water conveyance in the Delta extensively, including briefings on water conveyance infrastructure proposed in BDCP (August 2013, May 2014, January 2015) and its approval of letters formally commenting on versions of BDCP's environmental impact reports (May 2014 and October 2015). Less attention has been provided thus far to ongoing studies of improvements to the projects' storage systems (the last Council briefing was in April 2014), and to the operation of the projects' conveyance and storage systems to further the coequal goals.

Today's briefings are intended to inform the Council of current efforts to address storage and potential reoperation of the State's flood protection system, the State and federal water supply system, and the roles of the Department of Water Resources (DWR), the California Water Commission (CWC), and other agencies in these activities.

## The Delta Plan's Recommendations Regarding Storage and Operations

The Delta Plan recommends the completion of surface water storage studies identified in the 2000 CALFED Record of Decision and investigation of other storage opportunities. The Delta Plan includes two recommendations on the topic of storage and operations:

**Complete Surface Water Storage Studies** (WR R13). The California Department of Water Resources should complete surface water storage investigations of proposed off-stream surface storage projects by December 31, 2012, including an evaluation of potential additional benefits of integrating operations of new storage with proposed Delta conveyance improvements, and recommend the critical projects that need to be implemented to expand the state's surface storage.

**Identify Near-term Opportunities for Storage, Use, and Water Transfer Projects** (WR R14). The California Department of Water Resources, in coordination with the California Water Commission, Bureau of Reclamation, State Water Resources Control Board, California Department of Public Health, the Delta Stewardship Council, and other agencies and stakeholders, should conduct a survey to identify projects throughout California that could be implemented within the next 5 to 10 years to expand existing surface and groundwater storage facilities, create new storage, improve operation of existing Delta conveyance facilities, and enhance opportunities for conjunctive use programs and water transfers in furtherance of the coequal goals. The California Water Commission should hold hearings and provide recommendations to the California Department of Water Resources on priority projects and funding.

The CALFED storage studies include:

- Shasta Lake Water Resources Investigation (Potential enlargement of Shasta)
- North-of-the-Delta Off-stream Storage Investigation (aka Sites Reservoir)
- Upper San Joaquin River Basin Storage Investigation (aka Temperance Flat Reservoir)
- Los Vaqueros Enlargement Investigation (Contra Costa Water District)
- In-Delta Storage Program (Delta Wetlands)

The Council was briefed on the status and initial recommendations of these storage studies in April 2014. Since that briefing, DWR, the U.S. Bureau of Reclamation, and the Contra Costa Water District have completed some of the investigations. In addition, the Association of California Water Agencies, CWC, and the Council completed their survey to identify smaller projects that could be implemented within the next 5 to 10 years to expand existing [surface and groundwater storage facilities](#). The Council was

briefed on this effort in November 2013, which is available at [http://www.deltacouncil.ca.gov/sites/default/files/documents/files/Item\\_17\\_Attach\\_1\\_2.pdf](http://www.deltacouncil.ca.gov/sites/default/files/documents/files/Item_17_Attach_1_2.pdf).

## **The California Water Commission's Water Storage Investment Program**

The year after the Council adopted the Delta Plan, California voters passed Proposition 1, *the Water Quality, Supply, and Infrastructure Improvement Act of 2014*, to fund storage and other water management projects. This bond act provided, in part:

...The sum of two billion seven hundred million dollars (\$2,700,000,000) is hereby continuously appropriated from the fund, without regard to fiscal years, to the commission for 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...(Water Code section 79750(b)).

Proposition 1 identified CWC as the designated agency to award these funds for water storage projects which provide public benefits. The types of projects eligible for what is commonly referred to as "Chapter 8" (a reference to the pertinent Bond chapter) funding are:

- CALFED Bay-Delta Program Record of Decision projects
- Groundwater storage projects and groundwater contamination prevention or remediation projects
- Conjunctive use and reservoir reoperation projects
- Local and regional surface storage projects

Proposition 1 also includes language excluding some projects from potential funding. Expansion of Shasta Reservoir is excluded because Proposition 1 refers to the Wild and Scenic Rivers Act, 5093.524(c), which states "...no department or agency of the state shall assist or cooperate with, whether by loan, grant, license, or otherwise, any agency of the federal, state, or local government in the planning or construction of any dam, reservoir, diversion, or other water impoundment facility that could have an adverse effect on the free flowing condition of the McCloud River, or on its wild trout fishery." Because expansion of Shasta Reservoir would affect reaches of the McCloud River immediately upstream of the reservoir, it is ineligible for funding.

Notably, the following Proposition 1 language related to funding storage projects is specific to the Delta:

The commission... (must find and determine)... that the project is feasible, is consistent with all applicable laws and regulations, and will advance the long-term objectives of restoring ecological health and improving water management for beneficial uses of the Delta (Water Code section 79752).

A project shall not be funded pursuant to this chapter unless it provides measurable improvements to the Delta ecosystem or to the tributaries to the Delta (Water Code section 79755(a)(5)(B)).

CWC is developing draft regulations for the quantification and management of public benefits to guide applicants for Proposition 1 funding. The proposed regulations on the quantification of benefits were published in the Office of Administrative Law's Notice Register on January 29, 2016 which initiated the formal rulemaking process and commenced the 45-day public comment period that ended on March 14, 2016. CWC is still looking to revise and possibly modify the regulations to include language on evaluation of the application. Proposition 1 defines public benefits associated with water storage projects that are eligible for funding as:

- Ecosystem Improvements
- Water Quality Improvements
- Flood Control Benefits
- Emergency Response Benefits
- Recreation Benefits

To gather information on potential projects which may seek Proposition 1 funding, CWC called for storage proponents to submit concept papers in early 2016 summarizing potential water storage projects and their benefits. This early call for projects provides the possibility to assist project proponents and to identify potential regional partners as well as potential conflicts among projects.

Council staff has tracked and coordinated with CWC since Proposition 1 was passed in 2014. Council staff has been a member of the State agency team which assisted CWC with the development of the regulations as well as submitted a comment letter in support of the regulations and the process that the program has made to date.

### **Department of Water Resources System Reoperation Program**

The Delta Reform Act provides:

The department, in consultation with the United States Army Corps of Engineers and the Central Valley Flood Protection Board, shall prepare a proposal to coordinate flood and water supply operations of the State Water Project and the federal Central Valley Project, and submit the proposal to the council for consideration for incorporation into the Delta Plan. In drafting the proposal, the department shall consider all related actions set forth in the Strategic Plan (Water Code section 85309).

This section builds upon provisions of Water Code section 83002(b)(6)(B)(i), which allocated resources "for planning and feasibility studies to identify potential options for the reoperation of the state's flood protection and water supply systems to optimize the

use of existing facilities and groundwater storage capacity.” The law specifically directed these studies to incorporate appropriate climate change scenarios and explore four objectives:

- Integration of flood protection and water supply systems to increase water supply reliability and flood protection, improve water quality, and provide for ecosystem protection and restoration.
- Reoperation of existing reservoirs, flood facilities, and other water facilities in conjunction with groundwater storage to improve water supply reliability, flood hazard reduction, and ecosystem protection and to reduce groundwater overdraft.
- Promotion of more effective groundwater management and protection and greater integration of groundwater and surface water resource uses.
- Improvement of existing water conveyance systems to increase water supply reliability, improve water quality, expand flood protection, and protect and restore ecosystems.

Upon enactment of the law, DWR developed its System Reoperation Program to coordinate the study with other State and federal agencies, local water districts, groundwater managers, and other stakeholders by identifying potential goals for reoperation of the statewide flood protection and water supply systems. The potential goals were narrowed down to:

- Improve the reliability of water supply
- Reduce flood hazards
- Restore and protect ecosystems (not specific to the Delta)

Although the State’s water supply and flood management infrastructure is physically interconnected, the management of the water system is not integrated, consolidated, or even necessarily coordinated. The System Reoperation Program assumes that the State can improve and enhance existing water supply by optimizing operation and management of its physical infrastructure connections. DWR focused on the Central Valley, both north and south of the Delta, where much of the State’s flood control and other water management infrastructure is located. This infrastructure and its operation has a profound affect on the State’s aquatic ecosystem, and there is a high potential for ecosystem improvement, according to DWR, through reoperation of its infrastructure.

The program was developed in phases:

- Phase 1: Plan of Study (Completed in 2011)
- Phase 2: Strategy Formulation and Refinement (Completed in 2014)
- Phase 3: Assessment of Strategies (Completed in 2015)

The next phase of the System Reoperation Program will consist of evaluation of the reoperation of reservoirs to support enhanced ecosystem flows, to support sustainable groundwater management, to obtain additional benefits with integration of potential new storage that may be funded by Proposition 1, and to obtain expanded benefits with potential new Delta conveyance associated with California WaterFix.

The study, drawing on planning principles from the 2009 California Water Plan Update, focuses on actionable recommendations. The program identified assumptions and constraints and developed building blocks that could achieve the program objectives. The building blocks were combined and reduced to 22 potential reoperation strategies, which were further refined through forecast-based operations analysis and tradeoff analysis as well as a public outreach and vetting process. The study concluded:

- Existing surface reservoirs have limited flexibility
- Releasing flows for ecosystem benefits impacts water supply and the storage of water for cold water pool
- Forecast-based operations improve system flexibility
- Forecast-based operations plus conjunctive management could facilitate enhancement of ecosystem, water supply, and flood protection

The program also developed an analytical framework for integrated analysis of surface water and groundwater for future use.

### **Today's Panel**

Today's panel will provide additional information to the Council about these storage and water project operations activities, in preparation for the planned Delta Plan amendment on Delta conveyance, storage, and the operation of both. The panel members are:

- **Joseph Yun**, the Program Manager of the Water Storage Investment Program for CWC. Mr. Yun will summarize the Water Storage Investment Program, the concept papers for potential projects, and the status on current and future efforts by CWC. This will include the description of the process, as well as tasks and schedule of tasks moving forward.
- **Ajay Goyal**, the Program Manager, Principal Engineer, and Statewide Infrastructure Investigations Branch Chief at DWR. Mr. Goyal will present a summary on the System Reoperation Study, its findings, and likely outcomes.

The Council may wish to consider the following questions during this meeting:

- What are the primary obstacles to optimizing System Reoperation?
- How will the recommendations from the System Reoperation Study be implemented and who is responsible for their implementation?
- How would future hydrologic conditions affected by climate change alter the benefits or recommendations from the System Reoperation Study?

- How will CWC's Proposition 1 Grant Program be informed by the System Reoperation Study?
- How might planned Delta conveyance improvements affect the recommendations identified in the Reoperation Study?
- Storage project funding is dependent upon projects providing "measurable benefits" to the Delta ecosystem. How will this work?
- Based upon information in the concept papers, where and how much storage could be potentially added?

### **Update on other Actions to Develop a Delta Plan Amendment Addressing Conveyance, Storage, and Operations**

Council staff is at work on various fronts to advance the development of a Delta Plan amendment addressing conveyance, storage, and operations. Administrative steps to complete the contract with our Delta Plan consultant, MWH, are proceeding, with a target of starting work on July 5. Staff are currently researching best available information and existing studies regarding conveyance, storage, and operations that can inform the amendment and potential white papers about issues unaddressed by current studies. A draft staff straw proposal is being developed and will be released in order to receive additional, focused input from agencies, stakeholders, and Council members later this summer.

### **Fiscal Information**

Not applicable.

### **List of Attachments**

None.

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