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Conveyance, Storage, and Operations Principles

Summary: Staff will brief the Council on an updated problem statement regarding conveyance, storage, and operations to reflect the comments and suggestions made by the Council and input from panel members at the July Council meeting. The staff will also discuss draft conveyance, storage and water operations principles. This is part of an ongoing discussion leading to Council consideration of updating 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* (Water Code section 85304). Staff will also solicit input to the draft principles from a panel of experts knowledgeable about conveyance, storage, and water operations and the Delta.

Background

During the June Council meeting, staff described how changes to the Bay Delta Conservation Plan (BDCP) could result in a need for the Council to update aspects of the Delta Plan. Primarily, the absence of BDCP may provide the Council with the opportunity to update the Delta Plan and provide additional provisions related to conveyance, storage and water operations.

At the July meeting staff provided a list of key historical milestones describing California's approach to conveyance, storage, and water operations, a preliminary problem statement to frame the Council's discussion of conveyance, storage, and water operations, and organized a series of panels comprised of policy experts, water managers, scientists, and academics to provide recommendations to the Council as it considers developing a set of high-level principles.

Some of the takeaway messages from the panel members included;

- Conveyance, storage and water operations are a system. We cannot focus on one aspect apart from the others.
- Solutions are not easy. Economic implications, climate change and its impact to water supply, groundwater depletion, and the competing needs of the ecosystem compound the complexity of options.
- The complexity of this task should not lead to paralysis. Actions need to be taken now.
- The solution should be iterative. This should be an opportunity to learn and to adjust as we move forward.
- The solution requires flexibility. Both from an operational and infrastructure perspective, but also in how the system is regulated.
- Solutions should be collaborative and include the best minds to assist government agencies.
- Decisions regarding operations should be transparent in order to be credible.
- The development of performance measures is vital.

Today's Briefing

Staff is bringing back a revised problem statement reflecting suggestions by Council members that more precisely describes water conflicts during dry years.

> *The state's interconnected network of surface and groundwater storage is insufficient in volume, conveyance capacity, and operational flexibility to meet the coequal goals. Increasingly the system is tasked to satisfy demands from people and wildlife that it was not originally designed to address. At times of water surplus, the State's surface storage is insufficient to reliably capture and convey water to meet Californians needs while also providing more natural, functional environmental flows into and through the Delta to help restore the Delta ecosystem. Conflicts exist among the needs of the environment, the needs of agriculture, and urban needs, which only exasperate during extreme dry years. The current method of conveying water through the Delta and exporting it to water users contributes, together with other stressors, to the continued decline of the Delta ecosystem.*
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> *In addition, risks to the Delta's levees from floods and earthquakes impair the reliability of water conveyance through the Delta. Reduced surface water deliveries due to constrained surface storage both above and below the Delta and to limits on water conveyance through the Delta are increasing reliance on groundwater and depleting aquifers. Subsidence caused by this overdraft, especially in the San Joaquin Valley, degrades underground storage capacity and damages conveyance facilities. Too often, surface supplies and groundwater are not operated conjunctively.*
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> *Because of these factors, reducing reliance on the Delta to meet future water supplies is difficult. In addition, current conveyance and storage infrastructure and operating rules lack the flexibility to both quickly respond to current needs and substantially address long-term effects. The lack of a consistent adaptive management approach across agencies impedes decision-making. Climate change threatens to compound many of these problems. As decisions about storage and conveyance are deferred and investments delayed, the crisis in the Delta watershed and California's water infrastructure that the Delta Reform Act identifies grows more acute.*

While much of the scope of the problem as well as the potential solutions are grounded in the ideas and science contained in the Delta Plan; the Delta Reform Act requires updates to the Delta Plan to also be based on the best available scientific information (Water Code section 85308(a)). Staff sought to better understand if any new ideas or updated research and studies have been brought to bear since the adoption of the Delta Plan; and how this new science can inform solutions and has started to collect relevant new and updated scientific information.

Incorporating what the July Council meeting panel suggested, with the best available science, staff is now also introducing a preliminary set of draft conveyance, storage, and water operations principles (Attachment 1 - Draft Principles for Water Conveyance in the Delta, Storage Systems and for the Operation of Both). These principles are the first step in

the Council's efforts to promote options for new and improved infrastructure relating to the water conveyance in the Delta, storage systems, and for the operation of both, in the Delta Plan.

In the near term, these principles may serve as broad guidance by the Council about its view of proposed storage or conveyance projects. As these principles mature, they may lead to future Delta Plan regulatory amendments or recommendations or both, but they may also inform other agencies that are evaluating projects. Foundational to these principles is the sense of urgency.

The Delta Reform Act makes clear that California's infrastructure is in crisis (Water Code section 85001) and decisions cannot be delayed into the future. Where BDCP was to provide the Delta conveyance and ecosystem restoration elements, the Delta Plan is responsible for including storage and system operations into the overall solution.

Also foundational to the principles is the understanding that new storage and conveyance solutions will not by themselves solve California's water supply shortages. A comprehensive solution must include reducing reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region that depends on water from the Delta watershed needs to improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts (Water Code section 85021).

Building on last month's input by practitioners and experts, today's briefing will include a panel of water policy experts who will provide their initial reaction to the draft principles and make suggestions for improvement. These panel members have extensive experience in approaching California's water supply challenges, and can speak to solutions that will require a system-wide approach without focusing solely on storage or conveyance individually. The panel is comprised of:

Lester Snow – Executive Director of the California Water Foundation
Mr. Snow directs the California Water Foundation program and was previously California's Natural Resources Secretary, as well as Director of the Department of Water Resources and General Manager of the San Diego County Water Authority.

Thomas Zuckerman – Mr. Zuckerman, a long-serving attorney specializing in water law, a previous member of the CALFED Bay-Delta Public Advisory Committee, previous co-counsel for the Central Delta Water Agency, and a long time Delta resident, is an expert on California Water Law with special emphasis on Delta issues.

Robert Shibatani – CEO and Managing Hydrologist for the Shibatani Group
Mr. Shibatani is a long-standing advocate and international expert in climate-adjusted hydrology, water resources application, and empirical watershed response. Mr. Shibatani is a recognized expert in California water supply development, particularly high elevation new reservoir development including climate change impacts, precipitation extremes, climate variability, reservoir sediment management, and balanced system ecology.

Barton H. "Buzz" Thompson Jr. – Robert E. Paradise Professor of Natural Resources Law; Perry L. McCarty Director and Senior Fellow, Stanford Woods Institute for the Environment (invited)
Professor Thompson is a leading expert in environmental and natural resources law and policy. His research focuses on the sustainable use of natural resources and the effective reform of regulatory institutions. Professor Thompson is a published author on such diverse topics as water markets, fisheries management, biodiversity protection, land conservation, the use of economics and market tools in environmental regulation, and cognitive barriers to resource management.

List of Attachments

Attachment 1: Draft Principles for Water Conveyance in the Delta, Storage Systems and for the Operation of Both

Contact

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