



Meeting Minutes

Meeting of the California Water Commission

Wednesday, April 21, 2021

Remote Meeting

Beginning at 9:30 a.m.

1. Call to Order

Chairperson Alvarado called the meeting to order at 9:30 a.m.

2. Roll Call

Assistant Executive Officer Laura Jensen called the roll. Commissioners Alvarado, Arthur, Cordalis, Curtin, Gallagher, Makler, Solorio, Steiner, and Swanson were present, constituting a quorum.

3. Closed Session

The Commission did not hold a closed session.

4. Approval of March 17, 2021 Meeting Minutes

Commissioner Steiner motioned to approve the March 17, 2021 meeting minutes.

Commissioner Arthur seconded the motion. All Commission members present voted in favor, except Commissioner Solorio, who abstained because he was not present at that meeting.

5. Executive Officer's Report

Executive Officer Yun said that a Water Storage Investment Program (WSIP) Project Screening question and answer workshop will take place at 1 p.m. the following day and that close to 70 people are registered for it. The WSIP Update 2021 informational flyer has been posted to the Commission's website. The white paper on the State Role in Financing Conveyance Projects will be released ahead of the May meeting. Staff is working on a plan to implement the Commission's work on water trading, which will be brought to the May meeting. Staff is assessing the Commission's fall workload and the possible need to have additional meetings. Additional staff members will be added to help handle the workload; two positions are now being advertised to help with the WSIP and water trading. In the interim, Mindy Graybill is on loan from the Department of Water Resources (DWR) to help with water trading and other work.

6. Commission Member Reports

Commissioner Arthur received a briefing from proponents of SB 351 – the Water Innovation Act. Chair Alvarado participated in the San Jose Water Company water supply assessment stakeholder group, and moderated a panel on infrastructure equity, hosted by the Silicon Valley Leadership Group.

7. Public Testimony

There was no public testimony.

8. Water Storage Investment Program: Early Funding Request (Action Item)

WSIP regulations allow for up to five percent of the Commission's maximum conditional eligibility determination (MCED) to be awarded prior to the final funding hearing to assist with permits and environmental documents. The Harvest Water Program has an MCED of \$287,512,500. The Commission will decide whether to award early funding to the Harvest Water Program (program), and if funding is awarded, the Commission will decide on an amount not to exceed \$14,375,625.

WSIP Manager Amy Young explained how early funding works, which project applicants have previously asked for and received it, and presented a short synopsis of the program, which is a conjunctive use project that will provide recycled water for irrigation in lieu of groundwater pumping. Public benefits include ecosystem and water quality improvements. The Harvest Water Program is progressing on schedule, staff sees no problems moving forward, and the program should be one of first to meet the Proposition 1 requirements for a feasibility determination.

Terrie Mitchell, Manager of Legislative & Regulatory Affairs and the Harvest Water Program for the Sacramento Regional County Sanitation District (Regional San), explained how the project is drought resistant, not rain dependent, and resilient to the impacts of climate change. It will deliver up to 50,000 acre-feet/year of recycled water to 16,000 acres for agricultural irrigation in lieu of groundwater pumping. It will restore groundwater levels up to 35 feet within 15 years, improve stream flows in the Cosumnes River, increase groundwater storage, provide 30,000 acre-feet/year for conjunctive use during droughts, and help improve regional water supply sustainability. Public benefits include Sandhill crane habitat, vernal pool habitat, wetland and riparian habitat, longer migration window for fall-run Chinook salmon, and a reduced salinity load into the Sacramento River and Delta. The program received the highest technical scores in relative environmental value and implementation risk during the application process, and is supported by multiple partners. A feasibility study is complete, water rights are secured, CEQA is 90% complete, permitting is underway, and annexation has been approved. Regional San expects to have its feasibility hearing in July of this year and its final award hearing in 2022. A funding gap of \$152 million will be paid for by Regional San rate payers.

Commissioner Steiner asked about sunken costs and was told Regional San will absorb those costs. Vice-Chair Swanson mentioned the 23% inflationary increase since the 2018 MCED. Commissioner Makler asked if Regional San's Echo Water Sanitation Project will be treating all of the wastewater and how dependent is this project on the completion of their upgrades. He was told that Echo Water will be treating all of the wastewater. He asked if there was anything in common between potential customers who have declined to take part in the program. He was told those saying no are typically smaller landowners, looking for a better rate, some are already on surface water, but as larger landowners get online, others are getting more comfortable with taking recycled water. He asked how do you plan on monitoring and enforcing landowners not pumping. He was told they are working on establishing agreements and easement terms with landowners to ensure benefits are realized. Commissioner Curtin asked how big an impact this project will have on the groundwater basin and was told the project will have a substantial benefit for Groundwater Sustainability Agencies in the area to achieve their resiliency goals. Commissioner Arthur said it was good to see the robust benefits the project

will provide and asked staff to confirm that the 5% early funding cap is calculated off of the new MCED from January, which it is. Commissioner Gallagher asked what time frame the landowners are asked to sign into, and if they are flexible. She was told a minimum 10 years, hoping incentives, such as a reliable source of water, may lead to longer contracts.

Commissioner Solorio said water recycling has been successful in Orange County. Chair Alvarado is impressed with the fast timeline, noted that the economic impact of construction jobs is timely, and asked if the applicant is pursuing funding from the infrastructure bill.

Commissioner Steiner motioned to award the full 5% for early funding. Commissioner Curtin seconded motion. Motioned passed unanimously.

9. Assessing a State Role in Financing Conveyance: Panel Discussion on State Considerations and Cross-Cutting Issues

As part of the Commission's ongoing work assessing a state role in financing resilient conveyance projects, a panel of speakers discussed state policy considerations for conveyance, and the cross-cutting issues of flood-managed aquifer recharge, green infrastructure, collaborative partnerships and governance, and innovation. Assistant Executive Officer Jensen advised the Commission to listen with an ear toward what kinds of guidance the Commission might be able to offer in its white paper based on the information presented.

Erik Ekdahl, Deputy Director, State Water Resources Control Board, presented considerations for conveyance and water rights. Those considerations included: planning long in advance will significantly shorten permitting timelines; new water rights can take a long time to process; identify roadblocks early; know where the source water comes from; new sources will require a new water right; water is not always available, many streams are fully appropriated; consider other users and uses and how that will affect whether water is available; new water rights cannot negatively affect senior rights holders; any protests by users and stakeholders must be resolved; and timelines are long, a rigorous water availability analysis will speed things up.

Michael George, Delta Water Master, State Water Resources Control Board, talked about considerations associated with conveyance across the Delta. It is a highly variable watershed, drought and flood create unpredictability, and planning for an average is foolish. Aging infrastructure is geared for managing snowmelt. The tidal Delta is a complicated part of a complicated estuary; excess water comes in a large gush, managing that supply is expensive. The Delta is both the hub and the chokepoint for the state's conveyance system. It is critical to protect water quality and the environment, particularly in dry years. Regional differences in the Delta watershed lead to dramatically different opportunities, constraints, and concerns. Competing interests generate conflict. Every diversion from the Delta has limited capacity, varies by hydrologic and regulatory condition, and is allocated according to priority. Multiple gatekeepers with multiple approval processes presents inherent uncertainty. Public benefit is stuck in the conveyance queue and the value of water is variable with location and time. Think of the potential for more leverage in investment and partnership development by filling in gaps in San Joaquin Valley; move from dependence on north-south conveyance and more east-west conveyance.

Commissioner Cordalis said water supplies from the north will become more limited as the state is plagued by drought, and the reduction of stream flows in the north has extreme negative impact on salmon populations. The Delta is the heartbeat of water use in California.

Commissioner Curtin said not to think of Delta as north-south or east-west but as the center of the system. Capture floodwaters when they come and restore the groundwater system to replace what the snowpack would have provided. Approach the water rights issue from a new perspective. Mr. Ekdahl said there are no concrete solutions, but a menu of options. DWR watershed scale modeling provides a robust scientific approach for water reliability. Mr. George said floodwater capture reduces risk of flood but also reduces flow through the Delta.

Commissioner Arthur asked about groundwater recharge and water rights if all Groundwater Sustainability Plans want to do recharge. Mr. Ekdahl said the state collectively has 50 million acre-feet in surface storage capacity, and between 850 million to one billion acre-feet of groundwater storage capacity. Options include on-farm recharge, an infiltration gallery, or injection. Mr. George said these projects are doable, but the thorny issue is land use planning and control; how to protect where groundwater recharge happens best without stepping on the toes of local land use planners.

Commissioner Curtin asked what the snowpack capacity is in a healthy year. Mr. Ekdahl said roughly 200 to 250 million acre-feet. Delta outflow is about three to five million acre-feet in a drought year, and 40 to 50 million acre-feet in a flood year.

Commissioner Solorio mentioned the three Cs – Capture, Conveyance, Conservation – and said interconnections are critical and work best when there is support from both city and county. Also, consider disadvantaged communities and equity issues. Assistant Executive Officer Jensen said both short- and long-term solutions will be addressed in the white paper next month.

Dr. Graham Fogg, UC Davis Professor Emeritus of Hydrogeology, discussed flood-managed aquifer recharge (Flood-MAR). Groundwater depletion is a worldwide problem. We have worked a lot harder in the last 50 years pumping as opposed to replenishing. Now, the worldwide trend is to get better at replenishing. In the Central Valley, reservoirs can store 42 million acre-feet, and there is subsurface room for 140 million acre-feet. Ninety-seven percent of all freshwater on earth is in groundwater. Flood-MAR potential is very high, the main mechanisms are to fallow irrigation on agricultural lands, recharge ponds at hydrologically strategic locations, and inundate floodplains. Success depends on knowing the amount of water, selecting the best sites for recharge, adequate conveyance, incentivization of recharge projects, operating groundwater reservoirs in concert with surface reservoirs, making groundwater reservoirs sufficiently transparent, and enabling effective management of both water quantity and quality. The key is to exploit geologic features to maximize Flood-MAR's potential. Dr. Fogg presented a summary of Flood-MAR in the American-Cosumnes River basin, the ingredients for success, and the problems addressed by increasing groundwater storage. Flood-MAR has tremendous unrealized potential, including up to 270,000 acre-feet/year in American-Cosumnes River groundwater reservoir, but there is significantly less potential in the southern Central Valley without conveyance improvements to move water south of Delta.

The Commission took a half-hour lunch break.

Jennifer Marr, Supervising Engineer, Department of Water Resources, gave an overview of the Flood-MAR program and its alignment activities and conveyance needs. The biggest hurdle for implementing Flood-MAR projects is governance and coordination. Potential public benefits overlap with WSIP public benefits, but also include aquifer replenishment, working lands preservation, and climate change adaptation. DWR's three-pronged approach to Flood-MAR includes watershed studies, pilot projects and studies, and guidance and outreach. The Merced study is a watershed-scale analysis that could provide guidance for studies in other areas. Pilot projects include The Nature Conservancy's multi-benefit recharge project, which evaluates and demonstrates managed aquifer recharge opportunities that deliver habitat creation, groundwater recharge, and flood risk reduction. Site selection is dependent upon conveyance restraints. DWR is currently scoping other pilot projects in the Sacramento and San Joaquin Valleys. Outreach activities include alignment with other state efforts, such as the Water Resilience Portfolio, Central Valley Flood Protection Plan, Forecast-Informed Reservoir Operation, and the Sustainable Groundwater Management Act. Conveyance issues include recharge areas not connected to surface supplies, and channels that do not meet design capacity or have inadequate capacity for multiple benefits.

Sharon Farrell, Executive Vice President, Projects, Stewardship & Science, Golden Gate National Parks Conservancy, discussed the California Landscape Stewardship Network of approximately 30 cross-boundary partnerships focused on landscape-scale work across more than 40% of the state. These networks are a central part of achieving integrated and multi-benefit projects at a watershed or larger scale to yield transformational impact. Integrated multi-benefit work can be best achieved if state agencies integrate their efforts with other state agencies through regional networks that can both be accountable and adaptable over time. Ms. Farrell encouraged the Commission, as it explores water conveyance, to consider networks as regional hubs that can integrate these and multiple other state goals and to think about green infrastructure investments in the context of these networks, so those investments are integrated into broader natural capital goals for a region. Increasing connectivity within and across state agencies is critical. Larger projects with multiple benefits are essential to effectively address the challenges of building climate change resiliency, maintaining biodiversity, connecting wildlife corridors, protecting water supplies, and restoring ecosystem benefits and services. As the complexity and scale of environmental, social, and economic challenges continue to grow, regional networks are very likely the future vehicle to keep pace with and meet these challenges.

Commissioner Curtin left at 1:55 p.m.

Michael Kiparsky, Director, Wheeler Water Institute, Center for Law, Energy & the Environment, UC Berkeley School of Law, said we need to accelerate a paradigm shift toward viewing multi-benefit natural infrastructure as the baseline expectation for our water management efforts. Slow down the passage of water, enable it to contribute to multiple aspects of the hydrologic cycle and provide as many uses and benefits as possible before it leaves the system. He asked, how can we actualize the full potential of multi-benefit projects? The Yolo Bypass is defined as a weak multi-benefit effort from a government perspective because it is primarily managed as a flood control project. Examples of large-scale programs illustrate the interconnectedness of groundwater and surface water. The ultimate realization of multi-benefit projects comes with a

reversal of our tendency to artificially divide the hydrologic cycle for our convenience in managing one piece of it at a time. Enabling strong form multi-benefit projects requires clarity, formal cost sharing, monitoring and metrics, and legitimization. Stronger policy change may be necessary to overcome the types of cultural inertia that exist. A paradigm shift is needed that flips the baseline expectation so multi-benefit becomes the assumption rather than the other way around. The State must develop more concrete agency-level policy directives that direct staff to consider multi-benefit natural infrastructure as the go-to option.

Commissioner Makler asked Dr. Fogg if the 1984-2003 study referenced in his presentation was normalized for climate change. Dr. Fogg said that period had wet, dry, and in between years, and with more climate change there would be greater fluctuation, making recharge during wet years even more important. Commissioner Makler asked, if you are recharging groundwater, are you expecting to take back out all that you put in? Dr. Fogg said that, even in a surface reservoir, you do not always get out what you put in. People who benefit from recharge cover a much larger landscape than where recharge happens, including storage, well water users, ecosystems, and surrounding parts of the watershed.

Vice Chair Swanson asked if economic incentivization should be in funding conversations, and if there is data that tells us where agricultural managed aquifer recharge would be most effective. Dr. Fogg and Ms. Marr told him of studies that have been done that look at high magnitude flows and recharge opportunities on agricultural lands.

Commissioner Arthur asked about the difference between green infrastructure and multi-benefit projects. Mr. Kiparsky said green infrastructure does not guarantee multi-benefits, but has much more potential to naturally have a broader suite of benefits and be more amenable to the multi-benefit concept.

Chair Alvarado asked who owns what gets recharged, how do you track it, and who gets paid for it. Ms. Marr said they are finding that only 30 to 40% of recharge water actually stays in that district's groundwater basin, so it has to be a public-private partnership for Flood-MAR to be successful at scale. Mr. Kiparsky explained the difference between groundwater banking and recharge net metering, where the incentive ends at the surface. There are a range of possible incentives for groundwater recharge and the best ones have not yet been figured out. Dr. Fogg said recharge net metering is the only approach that makes sense and is consistent with how groundwater hydrology works.

Commissioner Gallagher said things are different throughout the state and incentivizing concerns her as a farmer. Mr. Kiparsky said he would like to explain incentives more fully to her, and listening to her concerns as a farmer would help inform his thinking about net metering.

Chair Alvarado said we should be clear at the outset what the roles are, who contributes what, and what the expectations are.

Assistant Executive Officer Jensen said key takeaways from today's discussion include the importance of green infrastructure, Flood-MAR strategies, and overall collaboration.

10. Briefing on Division of Safety of Dams Enforcement Regulations

One of the Commission's statutory responsibilities is to approve DWR rules and regulations. Sharon Tapia, Division Chief of DWR's Division of Safety of Dams (DSOD), provided an overview

of the California Dam Safety Program and information on proposed enforcement regulations. The goal of the Dam Safety Program is to reduce life lost and property damage due to dam failure. Dam hazard classification range from low to extremely high. Dam owners include private citizens, companies, water agencies, trusts, associations, districts, cities, counties, and the state. DSOD covers inspection and surveillance monitoring, design review, construction oversight, emergency response, inundation mapping, and evaluation and risk studies. Recent dam safety laws and regulations include SB 92, which updates hazard potential classifications, requires new law for inundation maps and Emergency Action Plans (EAPs), amends annual fees, and bolsters enforcement. Permanent regulations, approved by the Commission, were previously adopted in 2018 and 2019. Now DSOD is pursuing enforcement regulations. Enforcement actions will be taken if landowners fail to submit an EAP or inundation map, to make repairs, to abate illegal status, to pay fees, or to comply with orders. Ms. Tapia explained administrative and monetary civil penalties and said that the next steps are to submit a rule-making package to the Office of Administrative Law in May, open the public comment period, hold a one-day meeting for oral comments, return to a future Commission meeting later this year for approval, and have the regulations adopted in 2022.

11. Consideration of Items for Next California Water Commission Meeting

The next meeting of the Water Commission is currently scheduled for May 19, 2021, when the Commission will hear the second State Water Project Briefing of 2021, this one focused on climate and the Delta, and will include presentations on DWR's Climate Change Adaptation Plan, green infrastructure and watershed management, Forecast-Informed Reservoir Operations, and Delta conveyance, as well as a stakeholder comment. The Commission will discuss the draft white paper on a state role in financing resilient conveyance projects and will consider any WISP early funding requests that it receives.

12. Adjourn

The Commission adjourned at 3:22 p.m.