



Meeting Minutes

Meeting of the California Water Commission

Wednesday, August 18, 2021

Remote Meeting

Beginning at 9:30 a.m.

1. Call to Order

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

2. Roll Call

Executive Secretary Kimberly Muljat called the roll. Commissioners Alvarado, Arthur, 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 July 21, 2021 Meeting Minutes

Commissioner Steiner motioned to approve the July 21, 2021 meeting minutes. Commissioner Solorio seconded the motion. Commissioner Arthur and Chair Alvarado abstained as they were not present at the July meeting. All other Commission members present voted in favor.

5. Executive Officer's Report

Executive Officer Joseph Yun gave his report from his office in the new California Natural Resources Agency building. He said Commission staff will be receiving new phone numbers, and introduced a new staff member, Associate Governmental Program Analyst Theresa Stearn. He said a stakeholder advisory group has convened to help with the Commission's work in groundwater trading. The group has two members each from four fields: environmental organizations, community-based organizations, groundwater sustainability agencies, and small farm representatives. The September Commission meeting will be virtual and take place on Tuesday, September 14.

Chair Alvarado asked if any members of the stakeholder advisory group can speak to water re-use and groundwater basin replenishment. Executive Officer Yun responded that he was unsure if any members had that expertise, but he would look into it.

6. Commission Member Reports

There were no Commission member reports. Commissioners Makler, Curtin and Solorio said that prior commitments would require them to leave the meeting early.

7. Public Testimony

There was no public testimony.

8. Water Storage Investment Program: Kern Fan Groundwater Storage Project Update

Fiona Sanchez, Director of Water Resources for Irvine Ranch Water District, provided an overview of the Kern Fan Groundwater Storage Project (Kern Fan) and updated the Commission on the project's status and progress toward implementation.

The project will store water lost to the ocean, improve flexibility in operation of the State's water system and provide multiple public and non-public benefits, including flows for spring- and winter-run Chinook salmon, intermittent wetland habitat, water for emergency response, improved groundwater sustainability within Kern County sub-basin, and additional water supply reliability. Kern Fan has existing partnerships with State Water Project contractors, Kern County Water Agency and Dudley Ridge Water District.

Ms. Sanchez highlighted several components of the project and proposed locations of facilities, and updated the Commission on their schedule to complete the Proposition 1 requirements. The draft feasibility report is scheduled for review by Commission staff in September 2021 and they anticipate coming before the Commission for a feasibility determination in November 2021.

The Commission received a public comment from Peter Nelson who asked if the presentation was available on the website and was told that it has been posted on the August meeting page of the Commission website.

Commissioner Steiner asked if the project will generate any power. Ms. Sanchez said there will be no power components included in the project.

Commissioner Arthur asked how the intermittent wetlands will provide benefits to migratory birds. Ms. Sanchez said they will be acquiring 1,200 acres of land, and 1,000 acres of the land will be recharged which will provide a stop for waterfowl.

Commissioner Solorio asked about the challenges the project anticipates. Ms. Sanchez said one is identifying the location for the turnout on the California Aqueduct and another is finalizing the alignment for the conveyance, both of which they are close to accomplishing.

Commissioner Makler asked how frequently they expect to receive article 21 water. Ms. Sanchez said Article 21 water is only available during wet years and they anticipate only six or seven pulse flows over the life of the project.

9. Water Storage Investment Program: Pacheco Reservoir Expansion Update

Ryan McCarter, Engineering Manager of the Pacheco Project Delivery Unit with Santa Clara Valley Water, provided an overview of the Pacheco Reservoir Expansion Project and updated the Commission on the project's status and progress toward implementation.

This project partners with the San Benito County Water District and the Pacheco Pass Water District. Project benefits include enhanced habitat for federally threatened steelhead trout, enhanced water supply in below-normal years to south-of-Delta wildlife refuges, increased

water supply reliability and emergency water supply, improved water quality San Luis Reservoir water supplies, reduced flooding along Pacheco Creek and of disadvantaged communities.

Mr. McCarter mentioned several components of the current reservoir and highlighted the changes with the expansion. The reservoir will be expanded from 5,500 to 140,000 acre-feet, with a 300-foot dam. The design of the project has been updated since the WSIP application, with the benefits staying the same. Costs have increased by approximately \$561 million in 2015 dollars.

The draft Environmental Impact Report is scheduled for public release in November 2021, and they anticipate coming before the Commission for a feasibility determination in December 2021.

Commissioner Makler inquired about the confidence of the project given the cost increase and engineering design. Mr. McCarter said the project is at a 10 percent design level, and the latest cost estimate, which includes a 25 percent design contingency and a 20 percent construction contingency, is based on this design. As they refine the design – they are currently working on the 30 percent design – they anticipate reducing the design contingency.

10. Groundwater Accounting and Budgeting Platform

Tara Moran, Chief Executive Officer with the California Water Data Consortium, and Christina Babbitt, Senior Manager of the California Groundwater Program at Environmental Defense Fund, provided information on the state/private partnership to develop a freely available, open-source groundwater accounting and budgeting platform.

Their vision is to launch an accessible, open-source water accounting platform that integrates data from a variety of sources and effectively communicates this information to support local, regional, and state water management decisions. A common accounting platform would provide a consistent approach while reducing costs, be tailored to local conditions, support local understanding and decision-making, improve water management outcomes, promote intra- and inter-basin coordination and regional analyses and review, and serve as the basis for well-designed trading programs. Water Resilience Portfolio actions 3.6 and 21.3 were identified as priorities in a groundwater trading program.

The first phase of project implementation is to expand platform accessibility and functionality, followed by pilot projects and scenario planning. Stakeholder engagement will include public meetings, targeted outreach, and three working groups that meet on a quarterly basis: advisory, technical, and platform scaling.

They are partnered with the Rosedale-Rio Bravo Water Storage District (Rosedale) in Kern County, which serves approximately 44,000 total acres of irrigated agriculture, industrial, and residential land uses. Half of the irrigated acreage is planted in permanent crops and SGMA designated them as critically over-drafted. Rosedale's water accounting and trading platform pilot project started in 2018, co-developed by water managers and landowners. Its implementation was guided by workshops and mock trading sessions.

During a demonstration of the online dashboard, Ms. Moran and Dr. Babbitt explained that the accounting functionality is the core of the platform: it receives input on water use and water supply data and informs water budgets. Water trading and modeling scenarios can be added to the platform. Other expansions to the platform include the integration of additional data inputs, co-development of common groundwater data standards, and integration of open-source scenario planning and visualization features.

Vice Chair Swanson asked how many sources they envision pulling data from and how “real time” do they see the platform operating. They currently have an aggregate of local data input and moving forward will include metering data from SGMA. Permission levels will dictate how much data will be accessible, such as pumping data. There could be a three- to four-week lag on data dependent upon the satellites.

Commissioner Steiner asked who decides who gets an account, is it the basin, those within the basin, and do they have to pay for it. The tool is voluntary, no one within SGMA will be required to use it. In the case of Rosedale, their district requested the platform and all landowners within it get a free account. She asked if anyone can view your account and was told that in Rosedale individual landowners can only see their account. She asked if the district has the ability to stop trades between individuals and was told that rules need to be developed to inform what trading makes sense, and the scenario planning tool helps with that.

The Commission took public comment. Patty Poire, Executive Director for the Kern Water Authority, gave her support for the project and said the accounting platform will be the foundation in moving SGMA through the next 20 years.

Commissioner Makler asked once a party decides to participate, how do you go about enforcement, will it require new metering, and will transactions be able to take place directly on the platform as opposed to offline. He was told that metering is not currently required and enforcement will come down to a good relationship with the district and the landowners onboard. In Rosedale, financial transactions are negotiated between landowners offline, then trades are registered within the platform afterwards. Commissioner Makler also expressed interest in seeing a demonstration of the program at some point.

Commissioner Arthur asked about safeguarding natural resources, small- and medium-size farms, and disadvantaged communities, and how this tool would connect with what GSAs have to do in terms of monitoring for undesirable results. The scenario planning tool will help monitor trades and changes in groundwater levels through time.

Public comment by Justin Fredrickson, Environmental Policy Analyst with the California Farm Bureau, who said it will be an important tool if implemented successfully, it looks promising, and they are supportive in concept.

Commissioner Gallagher asked if the water district they are getting their data from has a combination of surface water and groundwater. The presenters responded that, when they

decide where the pilot basins will be, at least one of them will have surface water as a component.

11. State Water Project Flexible Resources Study

Ghassan AlQaser, State Water Project Power and Risk Office Manager, provided an update on the Flexible Resources Study being conducted to assess the State Water Project's (SWP) potential to support the State's clean energy policy governing flexible demand for electricity, as required by SB-49 Energy: appliance standards and SWP assessment.

The goal of the study is to increase the ability to provide grid reliability support and services, enable the integration of renewable resources, reduce overall greenhouse gas emissions, support clean energy policy implementation, and provide recommendations for state and federal funding for specific elements. The nine-track study was broken down by grid reliability benefits, clean energy benefits, and challenges. DWR is currently in the last phase of the study with the development of the assessment report.

The nine tracks include shaping SWP load and generation, reoperations of select SWP pumping plants, pumped storage, integrating battery storage with renewable resources, retrofit of select pumping plants to variable speed pumps, hydraulic and transient modeling and aqueduct stability, real-time market load bidding, adding pockets of storage at strategic locations, and the integration of on-site solar generation at pumping plants.

Mr. AlQaser listed SWP short-term, mid-term, and long-term opportunities. Challenges include evolution of power market, escalation in transmission access charge, changing regulatory policies and the California Independent System Operator (CAISO) market design, aging infrastructure and inherent constraints, aqueduct subsidence, climate change impacts, competing SWP priorities, financial impacts to the State Water Contractors, water demand flexibility, safety and security compliance, and workforce retention.

Next steps include briefing the Commission before finalizing the assessment report, circulating draft report to industry partners for review, and submitting final report to the Legislature.

Vice Chair Swanson asked if Mr. AlQaser could narrow down the challenges to the most important ones and was told the market design is evolving very quickly, and the changes coming can easily add obligations or deprive entities such from providing services. The 10-fold escalation of transmission charges presents a challenge to managing the cost of delivering water to customers. Subsidence impacts all the flexibility that the system can have.

The Commission took public comment. Jonathan Young, Energy Manager for the State Water Contractors, discussed DWR's ongoing efforts to assess possible scenarios where the SWP could increase energy production during peak hours and further absorb renewable energy. The development of the SB-49 report is key to identifying near-, mid-, and long-term solutions, and he supports the need to find new funding sources separate from the cost being paid for water deliveries.

Commissioner Makler said DWR's work on the SWP has provided system reliability with the integration of renewable resources and they have fulfilled if not exceeded SB-49 goals.

Chair Alvarado asked to define short-term, mid-term, and long-term timelines. Short-term is one to three years, mid-term is three to seven years, and long-term is 20-plus years. She suggested when the presenter returns in December, he could spend time talking more about the challenges and opportunities, and how the Commission's platform can help inform these issues.

The Commission broke for lunch at 12:17 p.m.

Commissioner Makler left the meeting at 12:19 p.m.

12. Groundwater Trading: Panel Discussion on Exploring Groundwater Trading

The Commission hosted a panel to explore how groundwater trading is being implemented in California and elsewhere, focusing on safeguards for vulnerable water users, stakeholder engagement, governance and oversight, and the state role in trading programs. Paul Gosselin, DWR's Deputy Director of Sustainable Groundwater Management, led the panel discussion, and was joined by Ann Dimmitt, Integrated Management Plan Manager for the Twin Platte Natural Resources District; Dr. Matthew Fienup, Exchange Administrator Fox Canyon Water Market; and Marc Friberg, Executive Director, External and Regulatory Affairs, Edwards Aquifer Authority.

Ms. Dimmitt said in Nebraska they have been doing transfers since 2005, matching up willing buyers with willing sellers in certified acres, and giving growers the flexibility to be more efficient and more productive in their land use. It is important to have a clearly defined set of rules in which all growers are treated equally and helps protect the environment and the farmers.

Dr. Fienup represents a groundwater sustainability agency (GSA) of 55,000 acres of agricultural land in coastal California. Created as a special district in 1982 with a regulatory structure in place that included metering, safe yield, and allocated pumping. They set up a water market and began transfers two year ago. A stakeholder group formed and approved regulations which include an effective governance system, public transparency, allocation system that ensures vulnerable communities are represented, accurate water use data, and testing evaluation.

Mr. Friberg said Edwards Aquifer Authority was created by Texas Legislature in 1996 as a cap and trade system designed to manage 572,0000 acre-feet of water, protect endangered species, and balance the needs of the region. The system creates a regulatory framework and facilitates groundwater trading programs. Management balances spring flow protection and regional groundwater needs.

Mr. Gosselin asked how groundwater trading programs incorporate safeguards to protect vulnerable water users and the environment. Dr. Fienup said safeguards have to start before you contemplate a regime of water transfers. Vulnerable communities and the environment

need to be part of an allocation system. Groundwater dependent ecosystems need to be protected before transfers happen. Special management areas are designated areas of sensitivity within the broader basin. Directional restrictions on trade only allow transfers in specific directions across these boundaries. They use a number of mechanisms to protect the opportunity of smaller growers to have access to the trading market. Ms. Dimmit said they do not see issues between large and small growers as there is enough supply and demand. Work with county zoning to apply rules that will not allow encroachment on small growers' water rights. Environmental acts comes from the surface water side. Mr. Friberg said they were created with safeguards in mind, and the cap was created to provide spring flow for endangered species. Allocation was based on historical use. Over time they saw large transfers that would have different impacts on the system, and have implemented some that restrict transfers over certain hydrologic divides to ensure safeguards for the spring flows, and to ensure a market in place for small users. A drought reduction scheme allows them to curtail authorized rights across the board in the case of environmental impacts.

Mr. Gosselin asked how important stakeholder engagement was in designing and testing and adaptively managing a trading program. Ms. Dimmit said it is key to have a local board of directors governing rules developed by local stakeholders, including ranchers, irrigators, school systems, and anyone who has a role in water. Mr. Friberg said their 15-member board of directors is set up to represent different interest groups. Ongoing conversations are important. It is hard to enter the market without knowing the people within the market. Dr. Fienup said there is a rich history of stakeholder involvement going back to the late 1980s. Six months before SGMA, growers saw cuts to groundwater use coming and were eager to be part of an innovative solution. A growers group developed structure and rules, then after SGMA worked with municipal and environmental water users to produce something that all are eager to use.

Mr. Gosselin asked about governance and oversight, how they ensure fairness and transparency, how unintended consequences and complaints are addressed, and what enforcement mechanisms are in place. Dr. Fienup said they are a formal, centralized market with one place to submit bids and offers, one system for matching willing buyers and sellers, and transfers are pre-approved by the agency. They have universal telemetric monitoring of extraction and automated reporting, and use a third-party exchange administrator. The regulator provides governance and enforcement, the exchange is hosted by an objective third party. Mr. Friberg said they govern the market because they issue the permits, but they have no role in trade negotiations. They do investigate notice of claims if water rights are under question. Ms. Dimmit said their office oversees transfers and submits an annual report to the state. If someone is not in compliance, they have authority to shut their well down. Groundwater is owned by the state; overlying landowners can use it for beneficial purposes.

Mr. Gosselin asked what the appropriate state role is in regulated water markets - technical assistance, oversight, or other rules to ensure protection to the vulnerable. Mr. Friberg said the State of Texas played an important role by creating a framework for the market then stepped

away. There is oversight from the state legislature, and they can play a big role from a technical assistance standpoint, such as modeling resources. Ms. Dimmit said the state provided technical support for basins, and let locals do as much as they can. They have the tools and software and that helps with consistency across markets. Dr. Fienup said SGMA lays a good foundation because it recognizes the importance of local management, which has information not available on a larger scale. The state can make sure groundwater sustainability plans are well written and credible.

Mr. Gosselin asked about lessons learned, things the presenters would do differently, and future challenges they see ahead. Ms. Dimmit said working with local folks and getting their perspective is very important. It will be challenging going forward when crop prices go up and down and you see an influx or lack of trading. Some rules may need to be revisited. Mr. Friberg said you need to be mindful of the amount of resources needed to truly manage the system. The amount of time you need ramps up in times of drought. He noted that, as they adapt their rules, they must be aware of the impacts their regulatory decisions will have on the market. They are continually dealing with a changing farming community and making sure ownership issues are correct. As water law continues to evolve in the state legislature, they must be sure the way they manage their water market is not impacted. Dr. Fienup said their water market requires reauthorization annually so each year the rules will adapt slightly. Incentives are powerful. You can do better than no harm to disadvantaged communities and environmental outcomes, there is potential to benefit those users.

Commissioner Gallagher asked how we can prevent agricultural land from going fallow. Mr. Friberg said when they issue irrigation permits, they split their transferability. Half is transferable, the other stays with the land for irrigation purposes. Dr. Fienup said they have strict urban containment policies and are just now beginning agricultural to municipal transfers. Trading has the potential to reduce fallowing.

Vice Chair Swanson asked if small farmers and disadvantaged communities are able to survive in this environment without state support. Mr. Friberg said their historical use basis protects small farms. They are a fee-based organization and agricultural users pay lower fees. They do not pay farmers to fallow their land, but they do pay irrigators to reduce their pumping at certain times. Dr. Fienup said they have a centralized anonymous marketplace; small users are represented in the allocations process. Meaningful evaluation and enforcement of groundwater sustainability plans is a good step.

Vice Chair Swanson asked about the satellite monitoring study and Dr. Fienup said he will share the paper written on that topic.

Commissioner Curtin said it is more important than ever to get these issues – water storage, SGMA, water trading – sorted out at the local level. Unless we look to the coast or other inventive ways, how do we handle scarcity?

Commissioner Arthur asked Dr. Fienup if a managed wetland could be involved in a water market. He said the next basin over created a system that paid farmers to flood farmlands in times of high water to preserve riparian habitats. Fox Canyon's stakeholders emphasized their goal to implement an adaptive approach where anyone can be a market participant, so environmental water users could purchase water for nature.

Commissioner Steiner asked if Fox Canyon can get SWP water or Colorado River water. Some cities within the basin can get some but not agricultural land.

13. Consideration of Items for Next California Water Commission Meeting

The next meeting of the Water Commission is scheduled for Tuesday, September 14, 2021, when the Commission will hear from DWR Director Karla Nemeth, State Water Project briefings on drought planning and subsidence, updates from state representatives on the implementation of the Sustainable Groundwater Management Act, a facilitated panel of agricultural and community stakeholders, a summary of small-group discussions on groundwater trading, and an expert panel on groundwater trading.

14. Adjourn

The Commission adjourned at 2:12 p.m.