



Meeting Minutes

Meeting of the California Water Commission

Wednesday, November 16, 2022

State of California, Resources Building

715 P Street, First Floor Auditorium

Sacramento, CA 95814

Beginning at 9:30 a.m.

1. Call to Order

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

2. Roll Call

Commissioners Arthur, Bland, Gallagher, Matsumoto, Solorio, Steiner, and Swanson were present, constituting a quorum.

3. Closed Session

The Commission did not hold a closed session.

4. Approval October 19, 2022 Meeting Minutes

Commissioner Solorio motioned to approve the October 19, 2022, meeting minutes.

Commissioner Steiner seconded the motion. Commissioners Arthur, Bland, Gallagher, Matsumoto, Solorio, and Steiner voted in favor. Chair Swanson abstained.

5. Executive Officer's Report

Assistant Executive Officer Laura Jensen welcomed Commissioner Bland, and said Commissioner Arthur's October meeting comment regarding the public comment process for the Water Storage Investment Program (WSIP) contracts for the administration of public benefits will be addressed at the January meeting's WSIP process overview. Also in January, the Commission will consider a tribal comment policy. There will be no December meeting.

6. Commission Member Reports

Chair Swanson and Vice-chair Steiner welcomed Commissioner Bland, who introduced himself.

7. Public Testimony

There was no public testimony.

8. Consideration of Action in Support of Resolutions of Necessity for the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project (Big Notch Project) – Batch D, Step 2 (Action Items)

On September 8, 2022, the Department of Water Resources (DWR) notified the Commission of its intent to seek Resolutions of Necessity (RON) for the Big Notch Project (BNP) in furtherance of a potential eminent domain action. DWR cannot commence an eminent domain proceeding unless the Commission first adopts the RON. At the Commission's October 19, 2022, meeting,

DWR presented a report on each property, containing information required by Code of Civil Procedure. At this meeting, the Commission considered whether there was enough evidence to satisfy the Code of Civil Procedure and adopt the RON for each property noted on the agenda, which requires that the Commission find that the public interest and necessity require the proposed project; the proposed project is planned or located in the manner that will be most compatible with the greatest public good and the least private injury; the property described in the resolution is necessary for the proposed project; and that either the offer required by Section 7267.2 of the Government Code has been made to the owner or owners of record, or the offer has not been made because the owner cannot be located with reasonable diligence. To adopt the RON requires a two-thirds vote of all members, which is a minimum of six votes in favor, regardless of the number of Commission members present.

Commission Legal Counsel Holly Stout explained that this is the second step for the RONS that were presented at the October 2022 meeting.

Catherine McCalvin, Manager of the State Water Project (SWP) Ecosystem Improvement Branch, presented an overview of the BNP, including its goals and impacts on SWP operations. The BNP is a regulatory requirement to mitigate for SWP and Central Valley Project (CVP) impacts to endangered fish, will enhance floodplain rearing habitat and fish passage in the Yolo Bypass, and is required for the long-term coordinated operations of the SWP and CVP compliance by the 2019 National Marine Fisheries Service (NMFS) Biological Opinion and the 2020 California Department of Fish and Wildlife (CDFW) Incidental Take Permit (ITP). The Fremont Weir diverts Sacramento River flood flows into the Yolo Bypass and disconnects the river and the floodplain during fish migration periods. The proposed BNP includes excavated channels and a gated headworks that reintroduce the connection for fisheries purposes. The operation period is from November 1 to March 15. In March 2022, DWR filed a Notice of Exemption with Yolo County which provided a CEQA exemption to allow acquisition of properties for restoration purposes.

Rachel Taylor, from DWR's Office of General Counsel, presented information regarding the specific properties listed on the agenda and how those properties are necessary to meet the goals of the BNP, and updated the Commission about the efforts DWR has made to work with the landowners. DWR is seeking flowage easements for the purpose of fish passage as required mitigation for the long-term operations of the SWP and has authority under Water Code to acquire property rights required and necessary for the operation of the SWP. This provision allows DWR to acquire the property without changing, replacing, or supplanting the existing public use. They are also seeking future rights for the adaptive management portion of the easements. DWR is not authorized to operate the project for adaptive management purposes. The adoption of the RON does not stop negotiations, nor does it have any bearing on the discussions of compensation for infrastructure changes necessary for the property operation. DWR conducted several meetings with elected officials and landowners about how the adaptive management process will work. California Code allows condemnation of a property already dedicated to a public use for compatible public use if it will not unreasonably interfere with or impair the use as it exists or is expected to exist in the future. Existing conservation easements remain in priority and DWR's actions will not modify the terms of those easements.

8A. David and Alice Te Velde Revocable Family Trust. DWR is seeking an 1,895.26-acre easement and 7.49 acres in fee. The land is currently used for field crops and orchard development. The property is encumbered by a Wildlife Heritage Foundation (WHF) conservation easement.

Public comment by Darla Guenzler, Executive Director of WHF, who said the purpose of the easement is to preserve agricultural land, open space, and flood protection. The easement holder is entitled to compensation that shall not be less than nor shall it exceed the fair market value. As a tax-exempt organization, WHF must use the proceeds from any condemnation to replace the acres lost. WHF requests to be involved in any settlement negotiations with the landowner on compensation so they can undertake the process of replacing those acres, possibly by encumbering other areas of comparable preservation value that DWR may identify.

Vice-chair Steiner asked Ms. Taylor to respond to Ms. Guenzler's comments and was told that conservation easement holders have their own standing as property holders, and DWR is open to talking with WHF about their financial impact concerns. The vice-chair referenced the Agent Diary which noted there were no issues with the landowner regarding the offer.

Commissioner Arthur asked Ms. Taylor about the process after the RON is approved, and how a compatibility evaluation might affect compensation, and was told DWR makes a determination for an appraised value and determines there is no negative impact on the conservation easement. The easement holder is entitled to make their own analysis, and to negotiate appropriate compensation. Federal conservation easement holders are not bound by California law and have their own process.

Commissioner Bland asked Ms. Taylor to explain the adaptive management monitoring plan and was told it is based on a six-step process for scientific analysis. It takes approximately seven to 10 years of data to determine if the project is successful, but due to the state's unpredictable water flow, they would need a 10- to 15-year span to gather the necessary data.

Commissioner Arthur asked Ms. Taylor if the modeling efforts are included in the potential adaptive management steps and how would DWR operate differently under adaptive management. She was told that the compensation packages are based on the worst-case scenarios that would have the maximum impacts on the properties, and any change to the project would require a determination by the regulatory agencies, gathering of data, input from landowners, and a very detailed process involving permitting and environmental review. Vice-chair Steiner asked Ms. Taylor to verify that they would not be able to change the construction of the project without going through the process, and was told construction is already in progress, but the project's operation is bound by permits and environmental documents. For DWR to operate it differently they would have to obtain additional permissions.

Commissioner Arthur motioned to vote on the RON for the property. Commissioner Bland seconded. Commissioners voted 7-0 to adopt the RON. Motion passed.

8B. Ronald Lee Snider II. DWR is seeking a 30-acre easement. The land is currently used for duck hunting, recreation, agriculture, and agricultural conservation purposes.

Commissioner Arthur asked Ms. Taylor to describe the landowner communication and interaction going forward after the RONs and once operation of the project begins, and was told that some landowners are willing to talk with DWR and some are not. Most communication is with the real estate agents. Most requests are for additional information, some have provided counteroffers. The RON allows DWR to file a condemnation action in court. DWR needs possession by October 2023 to operate the project, but that does not stop ongoing negotiations. Information about operations is publicly available on DWR's website but not communicated directly to the landowner.

Vice-chair Steiner motioned to vote on the RON for the property. Commissioner Gallagher seconded. Commissioners voted 7-0 to adopt the RON. Motion passed.

8C. Martin J. Aroz and Joan M. Aroz Revocable Family Trust. DWR is seeking a 70-acre easement. The land is currently used for duck hunting. The property is encumbered by a United States Fish and Wildlife Service (USFWS) conservation easement.

Public comment by Curt McCasland, assistant regional director with the USFWS, who said they submitted written comments for two items on today's agenda – 8C and 8G – and wants to ensure they are made part of the administrative record, as well as their letters sent in February.

USFWS has a conservation easement in each of these parcels that, absent the waiver of sovereign immunity, are not subject to condemnation. Both easement parcels were purchased to maintain and preserve migratory bird habitat. It is not clear if the proposed flowage easements are compatible with the conservation easements, and they are working with DWR to collect more information and analyze the issue. The USFWS compatibility determination process is markedly different than the compatibility assessment conducted by DWR, and they question the finding that the flowage easement will have no negative impact on duck clubs and waterfowl habitats for migratory birds. USFWS disagrees with DWR's assertion that impacts will be minimal. Flowage that exceeds the current amount of flooding on the properties cannot be seen as subordinate if it results in the easement lands no longer being suitable as waterfowl habitat. In making your RON, you must find that this project is most compatible with the greatest public good and the least private injury. While the USFWS is in overall support of the project, they have concerns over the issuance of RONs for these parcels as they believe the flooding could have negative effects to the public benefits which their easement requires. They are willing to work with landowners and DWR to address possible impacts to the properties. They understand that to make the RON the Commission must verify if any written offer has been made. USFWS is unaware if this is the case with the two parcels issued today on which they hold conservation easements. They have a federal process that includes law regulations and policy that needs to be followed regardless of how DWR proceeds with this easement process.

Commissioner Arthur asked Ms. Taylor if the offer required by Section 7267.2 of the Government Code has been made to the owner or owners of record, or the offer has not been

made because the owner cannot be located with reasonable diligence, and was told, yes, the first written offer was made to the owner of record on August 3, 2022.

Commissioner Matsumoto asked Ms. Taylor if the owner of record was the fee owner, and if they negotiate with the landowners and easement holders separately. She was told, yes, the owner of record is the fee owner. The reporting requirement for conservation easement holders is different. They get the notice of intent to acquire. DWR negotiates directly with the landowners, who can decide whether to include the easement holder in the discussion. In this case, USFWS has been in communication with the landowner.

Commissioner Bland asked Ms. Taylor if USFWS's concerns were pointed out in their comment letter and was told, yes, there are a series of comment letters as part of the record.

Commissioner Solorio motioned to vote on the RON for the property. Commissioner Arthur seconded. Commissioners voted 7-0 to adopt the RON. Motion passed.

8D. Frank Webb Properties LLC. DWR is seeking a 115-acre easement. The land is currently used for row crops. The property is encumbered by a WHF conservation easement.

Public comment by Darla Guenzler, Executive Director of WHF, who said the purpose of this easement is to provide protection for the Swainson's hawk, a species listed as threatened, and other raptors for foraging purposes. The proposed flowage easement could change over time and future floodplain restoration is unclear. The flow of water could uproot vegetation and deposit sediment and debris that would diminish or destroy habitat values. Raptors are dependent upon rodents, rabbits, and reptiles, all of which can be drowned in floodwaters or have their burrows filled in. DWR's monitoring strategy regards the operational aspects of the property, but how do they assess the impacts on foraging hawks and other species? The flowage easement is currently junior to the conservation easement, but it is still prohibited by the terms of the easement, and they foresee conflict and having to issue notices of violation.

Commissioner Gallagher asked Ms. Taylor about the letter raising concerns from the property owner that was not included in the attachments, and was told it will be updated.

Vice-chair Steiner asked Ms. Taylor if they are talking with WHF in addition to the landowner, and was told that they have been in communication and are working on scheduling a meeting.

Commissioner Matsumoto asked Ms. Taylor about compensation to the easement holder and mitigation of the impact on the easement, and was told if it is determined there was damage to the value of the easement, they are entitled to compensation. As a joint project between DWR and the U.S. Bureau of Reclamation (USBR), approval by regulatory agencies, including CDFW, was required. The foraging and burrowing habitats are already in a managed floodplain area that floods 70 percent of the year. Commissioner Matsumoto also asked if the regulatory agencies have been consulted outside of the BNP environmental review with respect to this easement, and what the mechanism is for resolving the disagreement, and was told if they cannot reach an agreement it goes to court.

Commissioner Bland asked Ms. Taylor if the mitigation responsibility is DWR's, and was told, yes, for the BNP operation, which is separate from the enforcement authority WHF controls over the property. They each do an assessment of compatibility and negotiate a solution.

Commissioner Solorio motioned to vote on the RON for the property. Commissioner Bland seconded. Commissioners voted 7-0 to adopt the RON. Motion passed.

8E. Running W Land LLC. DWR is seeking a 390-acre easement. The land is currently used for open space, recreation, and hunting. The property is encumbered by a WHF conservation easement.

Public comment by Darla Guenzler, Executive Director of WHF, who said the conservation easement was created for giant garter snake habitat mitigation, and it specifically requires the landowner to not grant any additional easement without the prior written authorization of the easement holder, USFWS, and CDFW, if the proposed activities would interfere with the conservation values of the property. Much more substantive discussion with DWR is needed.

Public comment by Jana Affonso, Assistant Field Supervisor with the USFWS San Francisco Bay Delta Fish and Wildlife Office, who wants to ensure their comment letter is made part of the administrative record, as well as letters from February and July 2022. USFWS has a third-party beneficiary interest in the parcel. The 2002 conservation bank agreement was intended for the permanent protection of the giant garter snake habitat, and says that the grantor shall not grant any additional easements without prior written authorization from the WHF. Wetlands on the property provide foraging habitat and basking and winter refugia for the snake.

Commissioner Gallagher asked Ms. Taylor how they can legally put another easement on the land, and was told that the agreement between landowner and easement holder is not binding on the State of California, which has eminent domain authority. What they are doing is called a taking. The landowner is not granting them the right, they are taking it.

Chair Swanson asked if the documents mentioned have been include in the administrative record, and was told yes, they have been.

Commissioner Arthur asked Ms. Taylor to describe the change in ownership and if proper notification was given, and was told that at the time the notices were sent they went with the owner on record with the county recorder's office. Notices were sent on time to each of the owners, with confirmation received from the new owner, California Waterfowl Association.

Vice-chair Steiner asked Ms. Taylor if any of the comment letters are missing, and was told that the letters from February and July will be added to the administrative record.

Commissioner Matsumoto asked Ms. Taylor if DWR plans to engage the easement holder to work out the disagreements, and was told yes, negotiations with the USFWS are ongoing and negotiations with WHF are beginning.

Commissioner Solorio motioned to vote on the RON for the property. Commissioner Matsumoto seconded. Commissioners voted 7-0 to adopt the RON. Motion passed.

8F. Albert J. Lassaga and Johanna G. Lassaga. DWR is seeking an 80-acre easement. The land is currently used for row and field crop cultivation.

Vice-chair Steiner motioned to vote on the RON for the property. Commissioner Gallagher seconded. Commissioners voted 7-0 to adopt the RON. Motion passed.

8G. H Pond, LLC. DWR is seeking a 499.52-acre easement. The land is currently used for duck hunting, recreation, and conservation lands. The property is encumbered by a USFWS conservation easement.

Public comment by Brian Manning of the Desmond Law Firm, who asked why they are taking an easement that they may not need. Operations are bound by 6,000 cubic feet per second (cfs) from November 1 through March 15. Code of Civil Procedure (CCP) 1240.220 allows taking for future use so long as that use is within seven years. The information presented today said it is likely going to be 10 to 15 years, up to 12,000 cfs, and with an extended time frame. The Commission is adopting a RON today to take property rights, a vast power that the government has. All coordination that occurred prior to today is for naught. To find that the project is necessary, and planned in a manner that is compatible with the greater public good and least private injury, is too big of an unknown. To adopt a RON is to approve a future take. New EIRs will then be required, so today's decision should be limited to 6,000 cfs.

Commissioner Solorio asked if Ms. Taylor wanted to clarify anything in response, and she said the CCP and Water Code both allow for future rights, the seven-year time frame pertains mostly to the evidence code, where the burden of proof is on the landowners to prove that DWR would not be using those rights within that time period. After seven years the burden of proof is on DWR. Laws in the Yolo Bypass require this type of projects to have adaptive management and monitoring plans. Compensation is based on potential maximum flows.

Vice-chair Steiner asked Ms. Taylor if a decision today changes the November 1 through March 15 timeframe, and was told no, the RON does not make any project operational changes.

Commissioner Solorio motioned to vote on the RON for the property. Commissioner Arthur seconded. Commissioners voted 7-0 to adopt the RON. Motion passed.

8H. Skyrakers Duck Club. DWR is seeking a 140-acre easement. The land is currently used for duck hunting, recreation, and conservation lands. The property is encumbered by a Wildlife Conservation Board (WCB) conservation easement.

Vice-chair Steiner noted that a counteroffer has been made and asked Ms. Taylor if discussions are going on with the landowner and was told yes, a response is being prepared.

Commissioner Gallagher motioned to vote on the RON for the property. Vice-chair Steiner seconded. Commissioners voted 7-0 to adopt the RON. Motion passed.

8I. Peter E. Glide, et al. DWR is seeking a 340-acre easement. The land is currently used for duck hunting, recreation, and conservation lands. The property is encumbered by a Natural Resources Conservation Service (NRCS) conservation easement.

Vice-chair Steiner asked Ms. Taylor about a letter from NRCS and one from an attorney, and was told that the latter included a counteroffer that DWR is preparing a response to.

Commissioner Matsumoto motioned to vote on the RON for the property. Commissioner Arthur seconded. Commissioners voted 7-0 to adopt the RON. Motion passed.

8J. Los Rios Farms, Inc. DWR is seeking a 188.23-acre easement. The land is currently used for row and field crop cultivation.

Vice-chair Steiner motioned to vote on the RON for the property. Commissioner Bland seconded. Commissioners voted 7-0 to adopt the RON. Motion passed.

The Commission took a five-minute break.

9. State Water Project Briefing: Water Supply Contract Extension and Construction Updates

SWP Financial Manager Hong Lin explained the Water Supply Contract Extension Amendment status and DWR's plan for its implementation. The 29 SWP contractors and DWR have long term Water Supply Contracts that go back to the 1960s. The original contracts include 75-year terms with ending dates as early as 2035. DWR issued system revenue bonds to support financing for SWP capital projects with payment periods ending by 2035. The amendment will extend the contract term to 2085. It will increase operating reserves and establish additional funds to address SWP financial needs. It will implement new provisions to simplify the billing process and cost recovery, and enhance coordination between DWR and the contractors regarding SWP financial matters. The SWP system revenue finance committee will be officially established with representatives from DWR and the 29 contractors. DWR filed a CEQA Notice of Determination, and filed the validation action to confirm the legality of the amendment. Opponents challenged DWR's validation in 2019. In April 2022, Sacramento County Superior Court issued judgements in DWR's favor in the validation case and two related cases. DWR and 25 of the contractors have already executed the amendments. DWR is currently working with the remaining four contractors. The amendment takes effect January 31, 2023. Capital costs incurred on or after January 1, 2024, would be financed with bonds that mature beyond 2035, which means instead of 12 years to pay off the debt it can be extended to 30-35 years. A new cost allocation and billing system automates much of what is now done manually.

Vice-chair Steiner asked if all 29 water contractors need to agree to the new terms or can some opt for a shorter term, and was told there is a threshold to be met with a certain number of contractors and acre-feet, which has already been exceeded. DWR anticipates all 29 contractors will execute the agreement. There will be some huge capital needs in the next 10 years, and the cost compression will benefit all contractors and their rate payers.

Commissioner Bland asked how much of the cost recovery is contingent upon water supply, enhancing the aging infrastructure, or the standardized fixed cost, and was told it is to recover all costs of operating and maintaining the SWP, as well as any future infrastructure or capital needs. The SWP provides multiple benefits, the majority being water supply. Those costs are recovered by the 29 contractors. Benefits like flood protection, fish and wildlife, and recreation are non-reimbursable by the water contractors, and covered separately through a general fund. The water supply portion has O&M costs, capital costs, and the power component. Those are recovered through the contractors paying the debt service.

Commissioner Matsumoto asked if there are additional provisions within the amendment and was told that the component that allowed flexibility in water management has been taken out, and the amendment only focuses on extending the financing terms, recovering the costs beyond 2035, and augmenting the reserve accounts. She then asked if the other components will be revisited before 2035 and was told they were not aware of any current negotiations.

Commissioner Gallagher asked if it is financially beneficial to repair aging infrastructure now as opposed to when it fails, and was told that DWR's Asset Management Program looks at all facilities and equipment, and optimizes the maintenance strategy to determine what will get the best benefit for the SWP. There is finite funding.

The Commission took a one-hour lunch break.

Sergio Escobar, DWR Division of Engineering Acting Manager, briefed the Commission on the status of major SWP investigative, construction, and refurbishment efforts for 2022. The 13 he identified are a sampling of more than 300 distinct projects and programs that contribute to the no-fail utility of the SWP. The SWP Fire and Life Safety Modernization program includes fire detection, alarms, and suppression systems; protected egress routes; HVAC modifications; new domestic and water lines; and emergency responder communications. SWP Physical Security Upgrades at each field division include security operations centers, guard shacks, impact rated gates and bollards, security fencing and cameras, hardened doors and windows, and key card readers and door contacts. The Big Notch project will create critical floodplain habitat for juvenile fish and improve a migration corridor for adult fish. The project includes an intake channel, headworks structure and control building, transport channel, pedestrian bridge, and an electrical communications connection to the adult fish passage facility. California Aqueduct Canal Liner and Embankment Repair sites were identified through a condition assessment team and prioritized based upon risk. There are multiple panel replacement and repair methodologies, and repairs are prioritized based on operational constraints and environmental limitations. Fifty-two sites were completed in 2022. Radial gates on the California Aqueduct control the flow between canals and pipelines. Refurbishment included structural improvements, blasting and recoating, and modifications for future maintenance. The Montezuma Slough Radial Gates Refurbishment Project includes the repair and recoating of all gate trunnions, fabricating stoplogs for bay isolation during the gate outage, and maintenance and repairs on the gate hoists and gearboxes. Construction was completed in 2022 on the Bethany Dams Restoration and Rodent Burrow Prevention Project, ensuring dam safety by refacing the dam with wire mesh and armoring with rip rap. DWR-Division of Engineering designed a veneer of permanent armoring to protect the dams from future burrowing. The

Clifton Court Forebay Initial Burrow Remediation and Maintenance will address long-standing maintenance needs at Dyer, Patterson, and Clifton Court Forebay dams. The presence of endangered species and habitat has prevented routine maintenance and led to a lengthy and costly environmental permitting process. The Oroville Dam River Valve Outlet System Rehabilitation Project will install two 72-inch spherical valves. The project includes the demolition and reconstruction of the thrust block and pressure relief wall, and the installation of a new hydraulic system, electrical system, ventilation system, and seat water system. The Gianelli Pumping-Generating Plant Unit Refurbishment and the Dos Amigos Pumping Plant Unit Refurbishment and Automatic Voltage Regulator Replacement includes redesigning, replacing, and refurbishing rotating and embedded components to original equipment manufacturer design, as components are at the end of their service life. The Emergency Drought Barrier in the West False River mitigates the negative impacts of extreme drought conditions and slows salinity intrusion with the release of fresh water. A notch was constructed in January 2022 and refilled in April 2022. Removal of the rock will be fully removed by December 2022. SB 626 New SWP Construction Delivery Authorization adds two additional public works construction procurement methods: Construction Management/General Contractor and Design-Build. These are limited to projects necessary for construction, maintenance, or operation of elements of SWP facilities, and are limited to seven projects under each procurement method. They are not authorized for the Delta Conveyance Project.

Public comment by Dierdre Des Jardins, with California Water Research, who said there was a sinking fund for replacement of the power facilities that was discontinued in the 1990s. There is a significant expense at this time, and she is concerned there isn't any increase in charges. Under law, for any projects constructed with the CVP revenue bonds, DWR is required to charge sufficient revenue for O&M. Is the Commission looking at the total system repair needs, making sure the situation is not adversely affecting other needed maintenance?

Public comment by Matt Mentink, Oroville Comprehensive Needs Assessment (CNA) Ad Hoc Member, who said the previous contract stated that DWR maintains the right to do any maintenance, repair, and replacement of facilities as they see fit, and the water contractors reserve the right to challenge those reimbursement charges later. The current contract says the water contractors will have 50/50 power sharing and making recommendations to the Director on what to approve and what not to approve. There are finite funds available and there is grave concern from the downstream citizens. He is a four-time evacuee of the Feather River Basin. The spillway incident of 2017 taught us that we have not done an adequate job of maintenance to the facilities at Oroville. The radial gates have served their 50 years of life expectancy. The CNA report said everything is fine. His concern goes to the transparency of the prioritization between delivery and public safety. Since 20 percent of the reservoir was funded by the Army Corp of Engineers for the purpose of flood protection and public safety, there ought to be some representation on the public interest side to sit in on those meetings.

Commissioner Arthur asked how projects are prioritized, and was told DWR prioritized projects based on certain factors, such as risk. The objective is to make the fixes before there is a failure they are unable to control, or the cost goes up because of the emergency situation.

Commissioner Solorio asked what the water contractors' level of review and input on the proposed projects is, and was told there is a collaboration with them on certain projects which they are briefed on throughout the year. He also asked if there were any large projects that could enhance the amount of water that could be more efficiently delivered and was told that DWR does not have any planned dams or reservoir projects.

10. Long-term Drought: Expert Panel on Protecting Communities and Species

In support of Water Resilience Portfolio Action 26.3, the Commission welcomed an expert panel to explore the impacts of drought on communities and fish and wildlife. Assistant Executive Officer Laura Jensen responded to comments and feedback received at the October 2022 meeting. ACWA will be engaged in the process going forward. The Commission will hear about forest management, land repurposing, drought planning, supply needs, desalination, and groundwater recharge at upcoming expert panels and working groups. State Water Board staff will be available to answer questions on water rights, and water pricing will be part of the discussion on how to keep water districts whole during drought. The Chair and Vice-chair will have the opportunity to present the White Paper to the California Drought Principals, with the possibility of presenting at State Water Board and Department of Food and Agriculture meetings. Staff will also conduct outreach to advocacy groups and interested parties, and will encourage them to leverage the Commission's work. Staff will be guest editing the January and February open access issue of the American Water Resources Impact Magazine, focused on preparing the West for prolonged drought.

Dr. Jay Lund, Professor of Civil and Environmental Engineering at University of California, Davis, talked about ecosystem and community vulnerabilities to drought. Compared to Israel, California has a much more intricate system, and a tremendous infrastructure and institutional ecosystem to run it. Private, public, local, state, and federal agencies all need to work together. California has more flood years and drought years on average than any other part of the country. We could be at the beginning of a 200-year drought. Climate is warming and sea levels are rising. We will get less snow and runoff, and more variability, such as floods and droughts. Paradoxically, we could have less runoff and more floods with the same precipitation. Changes in economic structure affect water demands. We have gone from a mining economy to an agricultural, to an industrial, to a service economy, all of which have big implications for water demands. Economic prosperity is dependent on how well we manage drought. Disasters like wildfires, droughts, and floods bring decisiveness to our body politic, and innovation to rebalance local, regional, state, and federal actions. The most drought vulnerable sectors are not urban and agriculture; these are mostly well-prepared and well-insulated. The most drought vulnerable areas are aquatic ecosystems, groundwater, the Delta, and rural communities. Our native ecosystems are declining, with a lot of disruptions from massive historical land and water developments and invasive species. There have been major reductions in pollution and substantial prevention and improvements in new water and land developments, but a lot of our environmental problems today are legacies from past impacts playing themselves out. It is impossible for us to restore to the condition in the early 1800s. Ecosystem management in this state lacks a business model, steady sources of revenue, an agreed-upon objective, and accountability. We have terrible problems with groundwater that SGMA will hopefully help. It will probably require that we fallow between a half-million to two-

million acres of irrigated land, mostly in the San Joaquin Valley. We are going to have to do ecosystem restoration with very little water. The Delta has physical instability due to land subsidence, sea level rise, floods, earthquakes, ecosystem instability from habitat alteration and invasive species, the high cost to repair islands, worsening water quality, and growing overall water scarcity. Small rural communities do not have economies of scale, it is hard to organize them, and quite often they are poorer. They are vulnerable to drought draw-down by the agriculture around them, have unsafe water systems and wells due to nitrate and other contaminants, and problems often related to finance and organization. Sectors like communications and energy use public goods charges for funding, but Prop. 218 has made it difficult for larger cities to provide subsidies for poor communities. The mission for ecosystem health is difficult and hard to define. You need regular funding that programs can depend on, and a more coherent and accountable structure for ecosystem management. Problems with expertise and accountability exist. Resistance is futile, the future is going to be different, and some changes are inevitable. There are a lot of good things we do in managing water in California, very few parts of the world would trade our water problems for theirs, and very few Californians would trade our water problems for problems of much of the world.

Justine Massey, Policy Manager and Attorney at Community Water Center, talked about the perils and priorities of long-term drought. Clean water is a human right, not a privilege. More than one million people in California are impacted by unsafe drinking water each year, not including water systems with less than 15 connections or private wells. There is a clear concentration of public water systems out of compliance with drinking water standards in the Central Valley and on the Central Coast. The challenges disproportionately impact low-income and Latino communities. There is no second-class water. The state has the responsibility to make sure drinking water needs are protected and not waived away as a cost of business, or set aside as something too difficult or inconvenient to address. We need to make improvements in detecting vulnerable wells, take protective measures with the groundwater we have, and be ready to provide emergency water and long-term solutions if wells go dry or are contaminated. We need to prevent impacts to domestic and community wells instead of replacing the water no longer coming out of their taps. Climate change sets us up for feedback loops. In a drought, farms that rely on surface water deliveries turn to groundwater to irrigate their crops. Deeper wells are drilled, causing groundwater levels to drop, often below the reach of domestic wells, and cause the concentration of contaminants to increase. When residents look to conserve water, they decrease their amount of outdoor watering, and lose the trees that were protecting them from heat extremes. The soil is compacted due to lack of root filtration and less able to absorb rainwater. There were nearly 1,000 private drinking water well outages in 2021, and 1,350 so far in 2022. Over-pumping must be addressed to solve the problem. SGMA is a big step forward, but we are not budgeting a large enough margin of error. A 2020 study by the Water Foundation found that there will be between 4,000 and 12,000 well failures in the San Joaquin valley by 2040, that could impact up to 127,000 Californians. Those that are most impacted are the ones who least contributed to the problem. Unsafe tap water can be found in almost every county, but the San Joaquin Valley and Central Coast are disproportionately impacted. Contaminated groundwater is primarily the result of intensive agricultural and industrial activities. As groundwater levels drop, contaminant concentrations increase, and can be pulled toward wells not previously impacted. In terms of infrastructure, we are not currently resilient.

Racial inequities in California's drinking water can be linked to the early formation of farmworker communities that were excluded from nearby cities as they developed on racial grounds. Well replacement can cost, on average, \$55,000. While families are experiencing these impacts, the agriculture industry has seen only a three-percent reduction in profits. There is a disconnect in representation on decision making boards and committees. The Safe and Affordable Drinking Water Fund provides \$14 billion over 11 years, but is not sufficient for the rapidly accelerating need. The need for land repurposing is clear. Multi-benefit projects need to demonstrate how precisely they will benefit vulnerable communities. We also need to think about local hire benefits and farm worker pay stability. The AGUA coalition, with members from 33 impacted communities, called out the discrepancies in the use of water, and asked if corporate factory farms and corporate agriculture are being held to the same standards as small farms and regular people. They are interested in a low-income rate assistance program for water like there is for gas and electricity. Community outreach programs should teach the importance of conserving water and how to maintain trees and natural life.

Melissa M. Rohde, Principal of Rohde Environmental Consulting, LLC, talked about the impacts of long-term drought on ecosystems. To maintain a consistent, reliable water supply, we have adapted to this variable hydro-climatic condition by moving water from wet to drier places, and storing water during wet periods for use during drier periods. Our ecosystems have a completely different relationship with the natural ebb and flow of our rivers and aquifers that our climate provides. Plants and animals use these seasonal cues to carry out key life processes like reproduction and migration. If groundwater demand is high, water can become out of reach of plants. Short-term impacts from drought are mild enough for ecosystems to recover. When groundwater depletion is severe, it can result in permanent habitat or species loss. Under long-term drought conditions or chronic groundwater depletion, catastrophic conditions occur that are either acute or chronic. Recent studies from the Santa Clara River showed that widespread vegetation mortality occurred during the 2012-2016 drought, due to groundwater levels falling too rapidly and too deep for the plant roots to access. In other river systems where vegetation had deeper roots, the long-term effects of drought are more subtle. Declining shallow groundwater puts ecosystems at risk. Forty-four percent of ecosystems statewide have experienced a significant long-term decline in groundwater from 1985-2019, compared to 28 percent having a significant increase. Groundwater level decline has intensified in the last two decades, and is most prevalent within ecosystems in areas of the state where groundwater regulation is absent. Most of California's groundwater remains unregulated and vulnerable to depletion. Comprehensive statewide groundwater management is needed. SGMA only applies to major alluvial aquifers. In the Central Valley, 95 percent of wetland and river habitat has been lost over the past century. Groundwater supports drought oases in either direct or indirect ways, depending upon the species and the life stage it is in. A large portion of our state's rivers have already been hydrologically altered, and the ecosystems have long lost their spring pulses and summer base flows that they have evolved with. This results in many ecosystems effectively being irrigated by conveyance infrastructure, dam releases, and wastewater effluent discharges. We need more comprehensive state policies and science-based targets that locals can use to better manage their ecosystems. To better prepare our ecosystems for drought, we can seize the opportunity that SGMA provides by implementing it right. It is a beautifully written law that provides an overarching policy to ensure that our

groundwater is sustainably managed to protect vulnerable users. But without more specific state directives, technical support, or science-based targets, local agencies are falling short of the potential that SGMA provides. We need to achieve comprehensive groundwater management for all of California, whether by expanding our administrative definitions of what groundwater basins include, or if we need to pass more comprehensive groundwater legislation, to make sure we are proactively managing our water and not reactively dealing with the consequences. We need to be more prepared and intentional about ecosystem water needs, with clear, state-led goals and science-based targets that local managers can use.

Public comment by Dierdre Des Jardins, with California Water Research, who said the recent drought was not just in the Southwest, but across the entire northern hemisphere. There is something significant going on, with greatly increased evapotranspiration. A recent study showed even the best climate models underestimate evapotranspiration during drought by 40 percent. We are probably underestimating the drying in watersheds in critically dry years. The water supply projects are still using a central tendency model that does not capture the kind of drying that we have been seeing in the watersheds. WSIP applications required the extreme warming scenario, but if we look at actual inflows and SWP deliveries over the last decade, we will find that climate change is accelerating. The runoff model that DWR used simply fails to capture the type of drying we have seen in the lower Colorado River Basin and the Sierra Nevada. There is a U.S. Geological Survey model that is more calibrated and detailed.

Public comment by Tami McVay, Director of Emergency Services at Self-Help Enterprises, who said they are responding to the drought in real time. When a family going without water calls them, they will restore access to water within 72 hours. They do water quality testing, and are a response, recovery, resiliency, and preparedness emergency services team. They provide education around water conservation, water quality, and the future of water. It is important to keep water, especially in the San Joaquin Valley, at the top of the priority list.

Commissioner Solorio asked Ms. Massey if any of the wells that fail come back in a healthy way and was told generally wells do not come back once they have gone dry unless there is a sudden recharge of the groundwater. He said the presentation was an eye-opener on the ecosystem with the ultimate question of who is responsible to make that area healthy.

Vice-chair Steiner asked Dr. Lund about the restoration of the Salton Sea and was told it has existed since 1905 by an accident of engineering, fed by drainage water from irrigation. Once they found better economic uses for the drainage water, less has flowed in and the sea has been contracting and evaporating. That has serious implications for air quality in the basin.

Commissioner Arthur noted the overlap of SGMA between the presentations on rural communities and ecosystems. She asked Dr. Lund why the assistance for low-income folks that the energy and telecommunications industries provide does it not happen in the water sector. He said that might be a good policy to follow, at least in part, for water, certainly in rural areas. There are people in the water industry who know how to make it work, they are going to pay attention to how that money is being spent, less they be taxed even more if it is not effectively used. There will be problems with SGMA implementation, but things will be much worse without it. She asked Ms. Massey for comments on the funding side for water affordability and types of fixes that are needed to connect rural systems to larger systems, and was told that

while emergency response is not the solution, it is incredibly important and needs more funding than it currently receives. As for consolidations, there is a very long timeline.

Commissioner Gallagher said she disagrees with the three-percent net profit and agriculture not being vulnerable; that is not the reality in the agricultural world right now. Dr. Lund said there are certainly places locally that are devastated by this drought in terms of agriculture. But balance that out with other places, like Salinas. He is surprised at how well they are doing. The Sacramento Valley is much more affected than the San Joaquin. With SGMA implementation we are looking at a two-million acre-foot a year permanent water shortage for the southern half of the San Joaquin Valley. She asked about the importance of partnerships in solving these problems and Dr. Lund said that is one area where droughts are useful, because everybody gets excited, and they get desperate, and they start looking for people to cooperate with. It might take a few droughts to knock down some of the silos.

Vice-chair Steiner said water agencies throughout the state have been struggling with Prop. 218 not allowing them to reallocate the costs of water to those who can afford it and give a benefit to those who are struggling. It is a very large stumbling block in discussing the issue of affordability. Dr. Lund said if you had the public goods charge on water utilities, much of it would be dedicated to helping poor folks afford water. If the state required a fee of all the urban water agencies, they would have to pass that fee along. You could either socialize that pot of money locally, regionally, or statewide, and direct it to the places that need it most.

Commissioner Matsumoto said there is a contrast between what we heard this morning about the world-class infrastructure system built to deliver water, and this afternoon about the have-nots of the water system, and the under-delivered and under-represented in governance, funding, and investment. SGMA is based on local governance, which is good, but there is a state backstop piece missing. If the largely under-represented are excluded, ecosystems left out, and community drinking water left high and dry, I hope as a Commission we can work on that.

Chair Swanson said this is a huge, complicated problem, that will take some deep thinking and commitment to make some of these changes. We are going to walk through probably the worst bloodletting in permanent tree crops in many, many years. Covid-19 led to the inability to export any kind of nut, we have record costs of growing just about everything, prices are unbelievably low, and we have a water problem. He would not be surprised if the economics dictate that the agricultural industry takes 300,000 acres of trees out right now. We need to look at what we grow where. Every ranch needs to be highly productive. We need things that grow on an annual basis. When we have water, we grow them. A lot of those types of crops are less mechanized and will support the labor markets in these disadvantaged communities. He sees potential opportunities for us to solve multiple problems together.

11. Consideration of Items for Next California Water Commission Meeting

The Commission will not meet in December. The next meeting of the Commission is currently scheduled for Wednesday, January 18, 2023, when it will hear a presentation from staff on the WSIP "Road to Final Funding", host a drought expert panel, receive a final draft of the 2022 SWP Annual Review, as well as hold elections for chair and vice-chair in 2023, review the Commission's 2023 workplan, and consider the Commission's Tribal Comment Policy.

12. Adjourn

The Commission adjourned at 3:22 p.m.