

Meeting Minutes

Meeting of the California Water Commission

Wednesday, July 15, 2015

State of California, Resources Building

1416 Ninth Street

First Floor Auditorium (Morning) and Room 340 (Afternoon)

Sacramento, CA 95814

Beginning at 9:30 a.m.

1. Call to Order

The meeting was called to order at 9:31 a.m.

2. Roll Call

Executive Officer Paula Landis called roll. Commission members Andrew Ball, Joe Byrne, Joe Del Bosque, Maria Herrera, David Orth, and Armando Quintero were present, constituting a quorum. Commission members Daniel Curtin and Paula Daniels came in a shortly after roll call.

3. Approval of June 2015 Meeting Minutes

A motion was made to approve the June 17, 2015 meeting minutes. Commissioner Orth requested an edit to a statement that was attributed to him. He clarified that on the topic of public benefits, he was contrasting traditional return on investment against return on investment as defined in chapter 8, which is specifically focused on the value of public benefits. A vote was taken and, pending the requested clarification, the motion passed unanimously.

4. Executive Officer's Report

Paula Landis provided the Executive Officer's Report. There are three public information meetings planned, scheduled to take place on July 27 in Napa, July 30 in Davis, and August 10 in Bakersfield. She also stated that the Office of Chief Counsel for the Department of Water Resources (DWR) recently closed its advertisement for a full time attorney for the Commission, and interviews will take place in the near future.

5. Commission Member Reports

On July 9, Commissioner Orth participated in a meeting coordinated by Allen Ishida of the Tulare County Board of Supervisors. The meeting hosted representatives from the counties of Fresno, Tulare, Kings, and Kern. Mr. Orth answered questions about Proposition 1 and provided clarity on Chapter 8 and eligibility for funding on storage projects.

On June 19, Commissioners Orth and Del Bosque participated in the San Joaquin Valley Partnership Drinking Water Forum in Hanford and gave a presentation on the Water Storage Investment Program (WSIP).

On July 7, Commissioner Byrne met with the Irvine Ranch Water District, and on July 9 he and Commissioner Daniels met with representatives from Semitropic Water Storage District to talk about the WSIP. He also gave a briefing to the East Branch Area State Water Project contractors on June 29.

6. Public Testimony

There were no public comments at this time.

7. Legislative Update

Kasey Schimke, DWR Assistant Director for Legislative Affairs, provided a list of current legislation relevant to the Commission and DWR. The list included legislation on the drought, groundwater, water management, and other water-related issues.

Mr. Schimke highlighted the recently passed Assembly Bill (AB) 1, by Assembly member Cheryl Brown, which sought to prohibit municipalities from fining their residents for not watering their lawn during a drought. He also mentioned Senate Bill (SB) 13, introduced by Senator Fran Pavley, which makes technical changes to the Sustainable Groundwater Management Act (SGMA) in order to better manage the groundwater within California.

He also mentioned water management and planning bills SB 208 and SB 555, and “miscellaneous” item SB 471, which would add water treatment projects to the types of projects eligible for funding from the Greenhouse Gas Reduction Fund.

His final update was on SB 554, which proposed that a sitting member of the Water Commission may be removed from their appointment if found to have violated conflict of interest laws. That bill did not pass policy committee.

8. Action Item: Consideration of Model Water Efficient Landscape Ordinance Regulations

Peter Brostrom, DWR Water Use Efficiency Program Manager, provided the Commission with DWR’s revised draft of the Model Water Efficient Landscape Ordinance (MWELO). Governor Brown’s April 1, 2015 Executive Order B-29-15 directed DWR to revise the MWELO to increase water use efficiency standards. The draft brought before the Commission is the result of the coordinated discussions and feedback received from the public and stakeholders between April and July 2015.

First adopted in 1992, the MWELO has historically been subject to revisions in the subsequent years to accommodate needs associated with previous droughts, as well as to incorporate improvements in efficiency. The recent Executive Order directed DWR to revise the MWELO to

increase water use efficiency standards through more efficient irrigation systems, greywater usage, onsite storm water capture, and by limiting the portion of landscapes that can be covered in turf.

The MWELO applies to new development and landscape retrofit projects that require a permit and meet a landscape size threshold. Water allowance for a landscape is based on the size of the landscape area, the amount of reference evapotranspiration (based on the water needs of a rapidly growing, cool season grass), and evapotranspiration adjustment factor (based on the ratio of plant water use to irrigation efficiency). Exceptions for a higher water allowance are permitted in recreational areas and designated “special landscapes” irrigated with recycled water. The MWELO also offers a prescriptive checklist compliance option for landscapes less than 2,500 square feet (Appendix D).

Mr. Brostrom highlighted six key components of the revisions to the MWELO. The revised draft ordinance:

- Lowers the maximum applied water allowance from 70% of reference evapotranspiration to for 55% for residential and 45% for commercial, industrial and institutional properties.
- Increases irrigation efficiency by requiring irrigation devices to meet a new national standard of lowered and consistent usage.
- Provides incentives for graywater use by simplifying compliance requirements for landscapes where all the water demand is met through greywater or onsite rainwater capture.
- Lowers the size of landscapes to which the ordinance applies from 2,500 square feet to 500 square feet for new development projects.
- Includes measures to increase onsite storm water capture by requiring tillage and compost to increase water infiltration.
- Specifies new reporting requirements for local agencies. Local agencies are required to revise their own ordinances by December 1, 2015. If they do not, their ordinances will default to the standards dictated by the MWELO.

DWR plans to form a landscape stakeholder committee to discuss future revisions to the ordinance and how to implement them at the local level. Revisions may be made on a three-year basis. In the fall, DWR hold workshops and training to assist local agencies as they adapt to the new requirements of the ordinance. If the MWELO regulation is approved by the Commission, it will be submitted to the Office of Administrative Law as a file and print submission.

Commissioner Quintero asked whether this new ordinance could limit options for reducing water use even further during future drought conditions, and asked if shock absorbers were built into the MWELO. Mr. Brostrom noted that native plants can often withstand greater reductions in water use than traditional lawns and therefore decrease demand hardening.

Commissioner Ball stated that there needs to be a greater effort to reduce obstacles to utilizing graywater, and that the excessive costs and permits required for retrofitting is prohibitive and frustrating. Mr. Brostrom replied that he understood that frustration, and stated new homes can

easily be fitted with graywater conversion plumbing, but older homes are harder to retrofit, especially when they are built on a slab and cannot be re-piped. There are currently no practical solutions that are not costly and complicated, but in instances where graywater is not available, recycled water is a possible alternative.

Commissioner Daniels requested that the Commission members receive updates and feedback on the ordinance as it is implemented, and Mr. Brostrom agreed to update the Commission when he makes his report for the State Water Resources Control Board (State Board) early next year. Ms. Daniels then asked if the new revisions mentioned the integration of onsite stormwater capture, and Mr. Brostrom replied that the topic is one that still needs to be worked through.

Commissioner Curtin expressed concern about the role of trees in landscaping, stating that there are some trees that will not be able to thrive using the lower water allotments. Mr. Brostrom reminded the Commission that the MWELo mainly applied to new and rehabilitated landscaping, not existing landscaping. For new landscaping, he recommended a dedicated irrigation system that would specifically water only the trees that need it. He also recommended choosing trees that do not require large amounts of water if the option is available. DWR is making every effort to disseminate information to the public on how to choose and maintain water-efficient trees. He also reminded the Commission that permits will only be needed for substantial projects on areas over 2,500 square feet.

Ron Wolfarth, representing Rain Bird Corporation, stated that Rain Bird, a California-based manufacturer of irrigation products, has been keeping up-to-date on the MWELo revisions and have in the past made comments on the drafts as they have been published. He complimented DWR staff on their responsiveness, supported the July 9th draft as it was written, and encouraged the Commission to adopt it.

Bob Raymer, Senior Engineer with California Building Industry Association (CBIA), stated that CBIA participated in the draft revisions by providing DWR with the consolidated comments of several interested parties. The comments, totaling 15 pages, came from a coalition of commenters from organizations such as the Building Standards Commission, Department of Housing, League of California Cities, and California Building Officials. CBIA supports DWR's incentivization of graywater and rainwater capture and the prescriptive approach (Appendix D).

Tracy Quinn, representing the Natural Resources Defense Council (NRDC), stated that the most significant change that they see is the addition of a prescriptive approach in Appendix D. Acknowledging that this approach will likely become the primary compliance path, NRDC feels that the current version contains several issues of concern and should not be adopted in its current state. She highlighted 10 items that need to be addressed, and stated that the item as a whole needs to be reviewed by industry experts and stakeholders. She requested that the Commission defer their vote. Commissioner Ball responded that timing was a concern, and that there would still be opportunities for revisions after the adoption of the ordinance. Mr. Brostrom added that Appendix D only applies to projects under 2,500 square feet.

Commissioner Daniels asked what the average landscape size is in California. Mr. Brostrom replied that the average landscape size in California is approximately 2,500 to 3,000 square feet. Commissioner Byrne asked about the cost of compliance. Mr. Brostrom said the cost varies depending on the size and the detail of design as well as the soil composition and quality of the existing land. A consumer may expect to pay \$1,000 or more for an audit.

Larry Rohlfs, representing California Landscape Contractors Association (CLCA), stated that CLCA (trade association of landscape contractors and related landscape officials) has been following the MWELo since its inception and compliments DWR staff for their work. They agree with Commissioner Ball's assessment that it is better to adopt the ordinance sooner rather than later, and agree that revisions can be made in later versions. CLCA supported the ordinance and encouraged the Commission to adopt it.

Ed Pike, Senior Engineer with the California Utility Codes and Standards Team, stated that they appreciate the inclusion of landscape irrigation audit standards, but recommend adding clarification to the some language so that they can be correctly implemented with absolute certainty. He also stated that it is important to make sure that developers are consistent in which sites they audit, and that language to that effect should be added.

Bob Chase, Deputy State Architect, made a comment on behalf of the Division of the State Architect (DSA). DSA and their clients mostly agree with the ordinance, but have some problems with some of the calculations provided in the June draft. A standard water allowance differential between residential and commercial is typically 10-12%. However, for water meter requirements, the differential jumps to 80%. Commercial meter requirements begin at 5,000 square feet, whereas residential requirements begin at 1,000 square feet. Mr. Chase stated that this is a huge difference, and it may behoove DWR to decrease that gap by either increasing residential meter landscape size threshold or lowering commercial thresholds.

John Norwood, representing the California Pool and Spa Association (CPSA), stated that the CPSA requests that the Commission deny the adoption of the revised July 9th draft of the MWELo. CPSA is concerned about the reduction in landscape size threshold. The ordinance only mentions the size of a landscaping project. The amount of water needed for a 2,500 foot lawn is different than that of a 500 foot lawn with a deck or a patio. Non-aquatic landscapes such as stone and concrete are not considered, and on its surface, it may end up keeping residents from installing a pool if they already have a lawn, and vice-versa. It also does not give credit to the fact that a pool or spa may initially take more water, but is ultimately more efficient because they are not prone to evaporation or seepage. Mr. Brostrom responded that the ordinance would not apply to existing landscapes, and reminded everyone that the MWELo is based on surface area, not water amount. The 2,500 square foot rule is for the entire landscape, and the installation of a pool will not trigger the ordinance unless the pool itself is 2,500 square feet.

Commissioner Herrera asked if DWR staff had received comments from stakeholders on Appendix D since the July 9th version was released. Mr. Brostrom said that NRDC's comments were the first. Mr. Brostrom offered to review NRDC's comments to see if any that should have

been included and could be incorporated quickly. Staff Counsel Maureen King noted that any revisions to the proposed MWELO need to be made available to the public prior to a vote. The Commission postponed a vote until later in the day to allow DWR to propose additional changes to Appendix D.

9. Sustainable Groundwater Management Act Implementation: Presentation of Proposed Draft Basin Boundary Emergency Regulation Highlights

Steven Springhorn, one of DWR's Sustainable Groundwater Management Act (SGMA) implementation team leads, stated that the SGMA team is currently finalizing the Draft Basin Boundary Emergency Regulations. When the draft is complete, it will be released for a public comment period which will include a series of public meetings. DWR will update the Commission throughout the process and seek adoption of the regulations in October or November. There are a number of ways that the public can communicate with DWR, and all comments will be posted on the DWR website.

Mr. Springhorn then provided an overview and definitions of California groundwater basins and sub-basins as defined in Bulletin 118. The most recent update to Bulletin 118 was in 2003, and this document is the source of current basin boundaries.

By January 1, 2016, DWR must adopt Basin Boundary Emergency Regulations which establish a process for local agencies to request changes to existing basin boundaries. The regulations will include instructions to local agencies on how to submit information required for basin boundary revisions. This will include demonstrating how the proposed basin can be sustainably managed, technical information on boundaries and conditions in the proposed basin, consultation with interested parties in affected basins, and details on any other information DWR deems necessary to justify revision.

All basins will begin with existing Bulletin 118 boundaries. If modifications are not requested by local agencies, the Groundwater Sustainability Agencies and Groundwater Sustainability Plans (GSA/GSP) will be formed in existing basins and the boundaries will carry through to the next Bulletin 118, scheduled for release in 2017. If local agencies request boundary modifications, the modifications can be made for scientific or jurisdictional reasons. Scientific changes are based on hydrology. Jurisdictional modifications can be internal, consolidation, or subdivision. The process will be transparent and noticed publically, and input from the public and stakeholders will be considered throughout. He discussed the minimum notification standards a requesting agency must follow during the boundary modification process.

Local agencies must obtain local support and provide technical information. For scientific changes, changes may be made even without local support. During these processes, if any of the science cannot be justified or if any of the required components are missing, DWR may deny them or sent it back for revisions. For jurisdictional changes, there must be broad local agreement for basin boundary revisions. The level of local agency support required is based on the type of modification. There is also an opportunity for protest at any time in the process, but the content

of the protest must be backed up with scientific or technical justification. The final step in the modification process is DWR review and public notification, followed by a final Commission review.

The SGMA team will hold public meetings and consider public comments through September, and present those comments to the Commission in September. In October and November, the team will present the proposed regulations to the Commission for adoption, after which they will be submitted to Office of Administrative Law.

Commissioner Orth asked when the GSAs would be informed of the updates to Bulletin 118. Mr. Springhorn responded that the draft list of approved boundary revisions will be available in spring 2016. Mr. Orth acknowledged the importance of adhering to DWR's calendar but urged for flexibility when possible where the GSAs are concerned so that their requests are not denied due to pending boundary issues that are out of their control.

10. Presentation by the Department of Fish and Wildlife on Ecosystem Priorities and Relative Environmental Values for the Water Storage Investment Program

Scott Cantrell, Chief of the California Department of Fish and Wildlife's (CDFW) Water Branch, presented DFW's draft ecosystem priorities and relative environmental values. The priorities and relative environmental values have been developed in coordination with Commission staff, stakeholders, and several state and federal agencies.

Proposition 1 requires that the Commission's regulations for the WSIP include priorities and relative environmental values for ecosystem benefits from CDFW and priorities and relative environmental values for water quality benefits from the State Water Board. CDFW's draft ecosystem priorities are:

1. Promote the recovery of endangered, threatened, and other at-risk native fish species and native fish assemblages through water project operations. This priority includes improvements to the flow, oxygenation, and temperatures of rivers and Central Valley tributaries in order to facilitate the breeding and lifecycle of salmon, steelhead, sturgeon, and other native species.
2. Restore physical processes and flow regimes to improve native habitats and natural communities to promote the recovery of endangered, threatened and other at-risk native species. This includes providing pulse flows to activate fluvial geomorphological processes, enhancing habitat complexity and quality for multiple species, and restoring historic salmonid habitat.
3. Enhance commercial and recreational opportunities. This priority calls for the provision of reservoir-based recreation and efforts to increase the populations of the occupant wildlife.
4. Reduce the negative impacts of non-native species on native species and natural communities by developing and implementing invasive species management plans and water project operations plans that use methods such as flushing flows and thermal control to suppress non-native species.

5. Prevent or reduce negative impacts from in-river structures on anadromous fishes by remediating unscreened or poorly screened diversions that entrain fish, and work to construct and remediate existing barriers and operation facilities to improve fish passage.

6. Increase quality and quantity of aquatic and riparian habitat and managed and unmanaged wetlands by providing water to enhance wetlands and riparian habitat for the benefit of aquatic and terrestrial species, and enhancing managed seasonal wetlands on wildlife refuges and other lands being managed for public ecosystem values.

CDFW has also identified 11 relative environmental values. These include 1) number of ecosystem priorities addressed, 2) consistency with existing conservation and recovery plans, 3) water use efficiency, 4) measurable rather than descriptive benefits, 5) proximity to existing resources, 6) expected magnitude of measureable benefits, 7) clear performance measures, 8) certainty of achieving benefits, 9) immediacy of benefits, 10) duration of benefits, and 11) climate change adaptability and resilience,

Commissioner Orth asked Mr. Cantrell how CDFW intends to balance certainty with climate change adaptability and resilience. Mr. Cantrell responded that if a project is claiming to provide a suite of benefits, it has to be supported by technical and quantitative information. He added that there are tools of quantifying benefits to species and habitats. Projects should provide benefits with a high degree of certainty, but also remain flexible and adaptable.

Following a break for lunch, the Commission reconvened in the Resources Auditorium.

11. Presentation by the State Water Resources Control Board on Water Quality Priorities for the Water Storage Investment Program

Dorena Goding, Staff Environmental Scientist with the State Water Resources Control Board (State Water Board), presented eight draft water quality priorities for the WSIP. Five of the priorities focus on improvement of conditions in water bodies that have been specified as requiring attention under California's Clean Water Act (CWA). The State Water Board's draft priorities include improvement of temperature, dissolved oxygen, nutrient, mercury, and salinity conditions in water bodies on the CWA 303(d) list. Improvement of water temperature levels will ameliorate exceedances of water quality objectives for temperature downstream of reservoirs. Improving temperature levels also has the added benefit of naturally improving the aforementioned dissolved oxygen, mercury, and nutrient conditions. Ms. Goding provided several potential strategies for achieving each priority.

The State Water Board's draft water quality priorities also emphasize the protection and clean-up of groundwater in DWR's California Statewide Groundwater Elevation Monitoring (CASGEM) high-priority and medium-priority basins. These basins account for 96% of California's annual groundwater pumping and 88% of the population overlying those basins. Care of groundwater basins is extremely important because groundwater contamination is costly and difficult to clean up.

Another one of the State Water Board's draft priorities is to achieve Delta tributary stream flows that resemble natural hydrograph patterns or other flow regimes that will improve conditions for aquatic life. Achieving this priority may involve designing projects to divert and store (in surface impoundments or groundwater basins) high flows that exceed established instream flow criteria caps or other levels that are demonstrated to exceed flows needed for aquatic habitat, or to cause human or environmental harm.

The final State Water Board draft priority is to reduce the current or future water demand on the Delta watershed by developing local water supplies. Achieving this priority may involve maximizing use of recycled water, increasing storm water capture and reuse, emphasizing low impact development and green infrastructure technologies, and promoting conjunctive use or other groundwater storage that results in measurable improvements to Delta flows.

Commissioner Herrera asked if the State Water Board has any recommendations regarding the Human Right to Water, and suggested incorporating communities that do not have access to safe drinking water into the priorities. Ms. Goding replied that disadvantaged communities are a concern and that she will be consulting with the State Water Board to see how their needs can be incorporated into the priorities. Nathan Weaver, Staff Counsel for the State Water Board, also discussed how the Human Right to Water relates to the water quality priorities. The State Water Board reviewed the public trust language in Proposition 1 and it is their opinion that the legislature did not intend to incorporate water supply for domestic consumption into the Public Trust Doctrine. On the topic of groundwater for safe consumption, the State Water Board is still working on ways to integrate and address the Human Right to Water. It may also be possible to incorporate it though the emergency response public benefit category.

Commissioner Orth stated that he would like to see more reconciliation of State Water Board's priorities with language in the California Water Action Plan regarding decreasing reliance on the Delta, and that he would like to see State Water Board incorporate some of the concepts of Integrated Regional Water Management.

Commissioner Byrne asked if certain relative environmental values will be prioritized, and Ms. Goding stated that they agree with the approaches taken by CDWF and intend to use a similar approach.

8. Action Item: Consideration of Model Water Efficient Landscape Ordinance Regulations

Mr. Brostrom presented the following proposed changes to Appendix:

- Irrigation controllers will be required to utilize a rain sensor.
- Areas less than 10 feet in width in any direction should be irrigated with subsurface irrigation designed to produce no runoff or spray.
- Commercial, industrial, and institutional projects over 1,000 square feet should have a sub-meter to measure landscape water use.

Mr. Brostrom noted that there was an additional Errata Sheet that added “parkway” to the definitions, because it was inadvertently removed. Mr. Raymer and Ms. Quinn both stated that these changes were acceptable. Ms. Quinn and Commissioner Ball expressed that it would be preferable if the term “plant area” were replaced with “landscape area” in Section 3 of Appendix D, but Commissioner Daniels stated that the changes were enough to warrant moving forward. A motion was made and seconded to approve the regulation with the changes incorporated by the Errata Sheets. A roll call vote was taken and the resolution passed unanimously.

Following a break, the Commission reconvened in room 340.

12. Update on Program and Administrative Activities for Water Storage Investment Program

Jenny Marr, WSIP Project Manager, provided an update on the activities of the WSIP project team. Commission, public, and stakeholder feedback has been incorporated into the *Program Goals, Objectives, and Principles*, and Ms. Marr described each individual change to the Commission. She highlighted two goals, which were added to the document:

- “Promote integration of projects that will provide large scale public benefits that are greater in the sum of benefits than of the individual projects”
- “Maximize system resiliency to ensure public benefits are provided in an uncertain future (e.g., under climate change scenarios)”

Ms. Marr noted that she received a comment earlier in the day from a Stakeholder Advisory Committee (SAC) member, requesting removal of “large scale public” from the goal promoting integration. She agreed that non-public benefits could also be goals of integration and supported the change. Commissioner Orth noted that the goal lacked a component of synergy and suggested changing the language to “collectively provide benefits.”

Further changes were made to the program principles to include consideration of climate change and additional findings in Proposition 1.

A motion was made and seconded to approve the document with the changes discussed. A roll call vote was taken and the document was approved unanimously.

Ms. Marr then discussed updates on administration and the status of various workgroups. Staff is developing a scope of work for a new consultant contract. They hope to have a new consultant team in place by October or November. The regulations work group is developing internal drafts of the regulations and application requirements. The first of these drafts will be available in September and October. Some definitions have been changed to reflect feedback from the SAC. The application review process has been changed to incorporate additional public comment. Staff is also working on application evaluation criteria and metrics; their goal is to create clearly articulated criteria that can be tied to metrics, potential methods of analysis, common assumptions, and application requirements.

The engineering work group is currently developing and documenting common assumptions and recommendations for assessing with and without project conditions. The team is developing physical and economic common assumptions, and will present them to the SAC for discussion in August. They are also developing recommendations on unit values for water. The ecosystem and water quality work group is finessing definitions of ecosystem priorities as well as measurable improvements to the Delta and its tributaries.

13. Update on Stakeholder Process for Water Storage Investment Program

The SAC met on July 1, and their next meeting is scheduled for August 5. There are also public information meetings scheduled for the July 27, July 30, and August 10. The next Commission meeting will take place in Los Angeles on August 19. The Commission will hold a public workshop in September to discuss project evaluation criteria. Two state and federal agency coordination meetings have also been added to the meeting calendar for later in the year.

At their July meeting, the SAC discussed common assumptions, net improvements to water quality and ecosystem conditions, and quantification of public benefits. In August, the SAC will discuss the application process, common assumptions, evaluating net improvement, and the formal rulemaking process. SAC members expressed that their support for technical assistance during the application process and like the idea of integration, but felt that the responsibility should fall on project applicants. The SAC also noted that early information is vital for integration of projects.

Commissioner Orth stated that in the SAC meetings he has attended, the general mood was that people are still trying to figure out their place in the big picture. He and Commissioner Quintero agreed that SAC members appreciate it when Commission members attend the meetings, and encouraged them to attend. Commission members and staff discussed ways in which communication and feedback can be increased between the Commission and SAC.

Commissioner Daniels asked if stakeholders are willing to go on the record when making their comments, and Ms. Marr replied that generally speaking, if an organization sends an official letter to the Commission, then it is considered "on the record", but comments made during an SAC meeting are not attributed.

Ms. Marr spent a few minutes going over the final scoping survey results, which were based on 159 viable responses. Most project proponents were public agencies, and the project types were mostly split between groundwater storage, local/regional surface storage, and reservoir reoperation or conjunctive use. The survey did not account for projects that could fall under multiple categories, because participants could not select more than one project type. Only 59% of respondents claimed their project would provide ecosystem improvements, and only 24% claimed they would provide ecosystem improvements to the Delta or its tributaries, both of which are required. The initial sum total cost of all projects submitted was around \$43 billion. When ineligible projects were filtered out, the figure dropped to around \$10 billion; the maximum state cost share for those projects is approximately \$5 billion.

The overall takeaway message from the survey was that more education is needed on project eligibility, and that most respondents' projects were not yet ready. There also were many applicants who did not claim that their project will benefit the Delta or its tributaries, despite that being a requirement.

Commissioner Byrne suggested that staff consider how projects that are not hydrologically connected to the Delta can achieve benefits to the Delta and how those benefits must be connected to the project. Ms. Marr responded that in statute the public benefit must be associated with a storage project; there must be a direct connection between the storage project and the public benefit.

Commissioner Orth asked if an indirect Delta benefit through an operational contract would be acceptable. Ms. Marr replied that if the proponent could tie the change in operations to the improvement, then indirect association may be acceptable. Commissioner Curtin stated that if a link can be made from a groundwater storage location to the Delta or its tributaries, then it would be worth pursuing.

14. Water Storage Investment Program Issue Working Session: Definitions, Public Benefits, and Technical Review

Ms. Marr first discussed options for selecting independent peer reviewers. The independent peer reviewers will provide an objective, independent and external peer review of the evaluations and findings of the technical review team. The individuals on the team will be contracted peer reviewers and will not act as an official body. The peer reviewers will assist Commission and DWR staff with their workload, and will be required to have expertise in areas such as the State Water Project and Central Valley Project operations, surface water hydrology and reservoir operations, and groundwater hydrology and operations. Ms. Marr provided two options for identifying and selecting the peer review candidates. The staff recommendation (option 1) is to recruit reviewers through a request for qualifications package developed by WSIP staff. Under option 2, WSIP staff would develop the charter for the activities of the peer reviewers, required areas of expertise, qualifications, and criteria for selecting the peer reviewers, and then identify and compile a list of candidates.

Commissioner Quintero stated that he preferred option 1 because it seems to remove perceived bias and allow consultants to apply and be hired. Commissioner Del Bosque asked how many reviewers staff anticipates needing, and Ms. Marr responded that staff hopes to have six. Commissioner Daniels commented that expertise from universities and scientists outside of DWR could be a welcome source of assistance. She also expressed concern that six experts may not be enough to people to cover the numerous areas of expertise that will be needed. Ms. Landis and Ms. Marr noted that six reviewers is a target, but there may be more. Members of the Commission agreed that staff should move forward with option 1.

Ms. Marr directed the Commission to an issue summary paper on eligible water storage projects. In response to previous discussions on the subject, the WSIP staff has clarified definitions of

CALFED surface storage projects, groundwater storage projects, and conjunctive use and reservoir reoperation projects. Staff consensus was that nearly all groundwater storage projects fall under the category of conjunctive use, but that a clear delineation of the two definitions was necessary because there is an exception in the statute that gives the Commission discretion to award more than 50% of the total cost to conjunctive use and reservoir reoperation projects. The definition of groundwater storage projects was written to be intentionally narrow. There will likely be few projects that bank groundwater but are not tied to conjunctive use. Commissioners Orth and Daniels noted that their understandings of conjunctive use involve the coordinated management of both surface and groundwater.

Tracie Billington, Chief of DWR's Financial Assistance Branch, stated that the key reason staff is attempting to develop distinct definitions is cost share. Groundwater storage may be a subset of conjunctive use, but since the statute makes a distinction between the two, staff inferred that there is a difference between them. Ms. Landis added that conjunctive use implies a supply that can be tapped from multiple sources, and provides benefits to overlying land owners.

Commission members stated that the act of defining groundwater banking in a way that does not also constitute conjunctive use is going to be a challenge. Ms. Marr reminded the Commission that they have the discretion to forgo awarding more than 50% to conjunctive use projects. If they chose to do so, they would no longer need two separate definitions; for example, they could say that the purpose of the WSIP for all groundwater projects could be defined as conjunctive use. Commission members said they do not want to forgo that discretion. Commissioner Ball pointed out that the broad definition of conjunctive use provides the Commission with more discretion.

Commissioner Byrne also added that the responsibility should be on the applicant to provide the reasons why they believe their project is groundwater storage or conjunctive use. Ms. Marr noted that several SAC members asked why the definition of groundwater storage projects was so narrow.

Miriam Gordon, representing Clean Water Action, stated that three organizations had remarked that the definition of non-conjunctive groundwater storage was too narrow, and that she would be curious to hear what the stakeholders would say about the changes being discussed. Ms. Marr responded that the definitions were created very purposefully, and that the narrow language was designed intentionally to ensure that the Commission has wide discretion on its ability to fund projects. Commissioner Del Bosque pointed out a connection between the language in the *Program Goals, Objectives, and Principles* regarding promoting integration of projects makes it and conjunctive use projects.

No comments were received on the definition of local and regional surface storage projects, so no changes were made.

Next, Ms. Marr discussed the definitions of the five public benefits that can be funded by the WSIP, highlighting changes that were made based on comments. There are some recent modifications to the additional considerations and examples that accompany the definition of

ecosystem improvements. Benefits to non-native species will not be counted as ecosystem benefits. Both positive and negative ecosystem impacts will be considered when evaluating benefits. Ecosystems include both aquatic and terrestrial. Benefits to wildlife refuges will be considered eligible as ecosystem benefits. The Commission discussed the requirement that projects provide ecosystem improvements in the Delta or its tributaries. Ms. Marr pointed out that not all ecosystem improvements must be in the Delta or tributaries.

Commissioner Daniels asked if CDFW's recreational priorities will be included in the definition. Ms. Marr stated that those priorities will not fall under the category of ecosystem benefits. The benefits and priorities will be considered separately, and the total magnitude of benefits may be broader than CDFW's priorities.

On the definition of water quality, stakeholders provided feedback on the current definitions of the language "significant" and "public trust resources." Ultimately, the Commission must determine what is significant. Staff can use the relative environmental value of water quality improvements to evaluate level of significance, but ultimately it will be up to the Commission. Several SAC members wanted the Human Right to Water included as a public trust resource, but as was covered by Mr. Weaver earlier in the day, State Water Board legal counsel has determined that Human Right to Water is not a public trust resource. There are other program areas, such as the groundwater cleanup aspect of water quality benefits and emergency response, into which Human Right to Water may fit. Ms. King added that there are other chapters in the bond that can more comfortably incorporate it, but it would be stretching the law if the Commission considered it as a public trust resource.

Ms. Gordon pointed out that the public trust doctrine has evolved since the case law upon which Mr. Weaver's analysis relied. The requirement that all state agencies must consider Human Right to Water is relatively new, and the Commission does not have to be bound by previous case law. They have some latitude since the statute did not exist previously. Commissioner Byrne responded that he would be uncomfortable breaking new legal ground in the interpretation of the public trust doctrine, especially when there are other chapters in the bond where the Human Right to Water would be more appropriately included. Commissioner Herrera stated that if the Human Right to Water cannot be directly included, then other concessions need to be made to prioritize projects that benefit disadvantaged communities. Ms. King said that staff is working to include the Human Right to Water in a way that is legally feasible.

On the subject of flood control benefits, one stakeholder comment asked staff to keep the definition of flood control benefits narrowly defined to the statute language. Staff responded that "including but not limited to" implies a variety of flood control benefits.

For emergency response, staff prefers to use a definition that is expansive and not limiting. They proposed clarifying that when water is dedicated to emergency response it must be truly dedicated, and cannot be used for any other purposes. Ms. Marr was of the opinion that emergency response supplies should be available for adaptive management for any emergency purposes. Staff is continuing to discuss whether water supply for customers, which is considered a

non-public benefit, should be considered a public benefit in an emergency condition. Stakeholder response to this varies: some feel that emergency supply to customers should be considered a public benefit during emergencies, and others say that it is a private benefit under all circumstances. Commission members generally agreed that water supplied to customers in an emergency situation should be an emergency response public benefit.

Marguerite Patil, representing Contra Costa Water District, stated that some districts will bank huge amounts of water for emergency supply. For example, a six-month emergency supply in Contra Costa County can be 44,000-70,000 acre feet.

Ms. King pointed out that there is a legal distinction between a water supply that is owned privately and one that was acquired through the award of bond funds. If bond-acquired water is sold, it will lose its tax exempt status.

The SAC comments were supportive of the staff definition of recreation benefits, so no changes were made. Ms. Marr clarified that if an applicant has a recreation benefit that results from an ecosystem benefit, they can decide to count that benefit in either category, as long as it is not counted as both. Ms. Patil added that interpretive and educational purposes may also be included as recreation benefits.

Ms. Gordon stated that in previous SAC meetings, members debated whether there would be two phases of funding or just one. She asked if a final decision had been made. Ms. Landis replied that that there would only be one round of funding. Commissioner Daniels expressed a preference to allot funding in stages. She stated that having a clearer picture of the universe of projects will help not only in figuring out what to fund, but what funding to hold back. Ms. Landis responded that there is a timing issue; by the time the Commission will begin funding, they are going to be encouraged to fund as much as possible as quickly as is feasible. Ms. Billington added that if funding is phased, it will be based more on the projects' readiness, and that no funding will begin until the applicant has 100% of their non-public benefit contracts in place.

Ms. Gordon stated that since both the Commission and the project applicants are learning as they go, a more conservative process for awarding funds may be a better approach for everyone involved. The Commission can hold back funding for applicants that are not ready, and make modifications to the application process if lessons are learned.

Commissioner Curtin and Ms. Landis expressed that the subject has already been settled, and that there will be a negative response by the public if the Commission is perceived to be taking too long to distribute funds.

After the agenda items were discussed, the floor was open for public comment.

Rachel Zwillinger, Water Policy Advisor for Defenders of Wildlife, stated that Defenders of Wildlife is concerned with staff's interpretation of section 79753(b) of the bond, which states that Chapter 8 funds may not be used for existing mitigation and compliance obligations. The staff interpretation is that Chapter 8 funds can pay for existing mitigation and compliance, but it is the

position of Defenders of Wildlife that they should not, because that would constitute using bond funds to pay for something that private interests should have paid for. Their interpretation is that the Commission can fund compliance and mitigation obligations that arise as a result of a funded project, but should not allow for funding on items that are unrelated or previously existing. Ms. King responded that Chapters 4 and 6 speak to this topic with more specificity than Chapter 8, whose temporal language was broader. She added that the language could have easily been made more specific had the authors designed it that way, and that in the legislative history of this issue is limited. Ms. Zwillinger felt that there is legislative precedent to support her case and will provide supporting documentation.

Ms. Patil made the final public comment, requesting that letters and feedback from the public and stakeholders be posted on the website in a timely fashion.

Chairman Byrne adjourned the meeting at 4:43 p.m.

Meeting Minutes

Meeting of the California Water Commission

Thursday, July 16, 2015

State of California, Resources Building

1416 Ninth Street

Room 335

Sacramento, CA 95814

Beginning at 8:30 a.m.

1. Call to Order

The meeting was called to order at 8:30 a.m.

2. Roll Call

Executive Officer Paula Landis called roll. Commission members Joe Byrne, Joe Del Bosque, Danny Curtin, David Orth, and Armando Quintero were present. Commission member Andy Ball was absent, and Commission members Paula Daniels and Maria Herrera came in a shortly after roll call.

3. Action Item: Consideration of Model Water Efficient Landscape Ordinance Regulations

This item was not heard. The Commission acted on this item on July 15, and discussion was not carried over.

4. Water Storage Investment Program (WSIP) Issue Working Session: Definitions, Public Benefits, and Technical Review

Tracie Billington, Chief of DWR's Financial Assistance Branch, discussed how the relative environmental values of water quality and ecosystem benefits will be incorporated into the project evaluation process. One approach is to evaluate projects based on the magnitude of public benefits provided, and then evaluate a subset of projects for relative environmental values. Another option is to evaluate relative environmental values for all projects and bring each evaluation to the Commission. Once the metrics for determining ecosystem and water quality priorities and relative environmental values are finalized, it will be easier to compare and weigh projects against one another. However, if there are a large number of applications, review may be time-consuming if the Commission does not use some manner of pre-screening process.

Commissioner Orth asked if relative environmental values will be evaluated for every project. Ms. Billington responded that if projects are screened for magnitude of public benefits first, the project list would be narrowed and remaining projects would then be reviewed for relative environmental values. Mr. Orth stated that the public would not support any method that screens out projects before they reach the Commission members. Commissioner Curtin added that if they use a pre-screening process, small projects may be unfairly screened out. The calculation of

magnitude of benefits must be designed to take not only size, but also proportion into account. Jenny Marr, WSIP Project Manager, added that the Agency team (the Delta Stewardship Council, Department of Fish and Wildlife, the State Water Resources Control Board, and the Department of Water Resources) would prefer to evaluate the relative environmental values of ecosystem and water quality benefits separately, since a composite score may not provide an accurate picture.

The logistics of how the applications will be presented to the Commission are still being determined. Staff will provide the Commission with a review of each application. A ranking method may be employed with each category being ranked separately. Return on public investment is also very important and must be incorporated in the ranking. Commissioner Curtin noted that there are many variables upon which potential projects can be judged, but public benefits are the key factor. Commissioner Orth stated that the language in the statute, regarding expected return on public investment provides clear instruction as to how the Commission should select projects. Return on investment should be the first ranking criteria; application of relative environmental values would follow.

Stephen Hatchett, Consulting Economist with CH2M Hill, reminded the Commission that that the return on investment (ROI), while important, should not be the only consideration to determine magnitude of public benefits. One way to calculate ROI is to compare quantified magnitude of public benefits to the amount of public money that is being invested. Another way to calculate ROI would be to take those figures and put them put it into a broader context, incorporating other values and then deciding as a body what their returns are. Whatever method is chosen needs to be conveyed to the project applicants so that they can incorporate it into their applications.

Commissioner Quintero pointed out that the Commission's criteria should emphasize net public benefits. Commission Legal Counsel Maureen King stated that the statute does have language that addresses net improvement. Ms. Marr added that staff has been working on a list of evaluation criteria. That document will be discussed during the August Stakeholder Advisory Committee and Commission meetings. Each criterion will be entered into a decision support tool that the Commission can use to weigh the ramifications of different decisions. Commissioner Quintero stated that the overarching effects of a project on the state water system should be included in the criteria, if it is not already.

Chairman Byrne asked if the ecosystem and water quality priorities and relative environmental values will be factored into the quantification of public benefits. Ms. Billington noted that staff will try to quantify all of the public benefits, but must incorporate priorities and comparative analysis on the ecosystem and water quality benefits. It will be a two-step process, beginning with a quantification of all of the public benefits. There is an array of evaluation criteria, one of which would be the magnitude of public benefits, another of which would be priorities and relative environmental values. The question of how to determine the impact of a project on the state water system still remains.

The definition of “measurable improvements to the Delta ecosystem or its tributaries” was the next item discussed. Staff has determined that the ecosystem improvements must be quantifiable and must be associated with the storage project. Commissioner Curtin asked for clarification about what might be considered an improvement. Ms. Billington said improvements could include changed timing of flows and improved temperatures. Ms. Billington noted that projects do not have to be in the physical boundaries of the Delta to provide benefits to the Delta or its tributaries.

Commissioner Del Bosque asked if applicants will quantify the public benefits of their projects and if those calculations will be reviewed during the technical review process. Ms. Billington answered that the reviewers and technical team will provide the Commission with assessments of the accuracy of information provided by the applicants.

The Commission discussed whether mitigation and land or habitat purchases may meet the eligibility criteria for Delta ecosystem improvements. Ms. Marr said that proponents must prove that improvements from habitat areas not directly connected to the storage project are still associated with the project. Mitigation actions are not benefits to the Delta. Commissioner Byrne stated that it may be stretching the language of the statute to focus on applications that do not fit a more traditional understanding of improvements to the Delta. Ms. Marr added that this topic was informally discussed by the Stakeholder Advisory Committee. The individuals who participated in the conversation do not believe that storage projects with actions for Delta benefits tacked on should qualify. She also stated that the responsibility is on the applicant to make sure their project achieves the evaluation criteria.

Marguerite Patil, representing Contra Costa Water District, stated that there a lot of applicants contemplating groundwater projects, but they may not know how to ensure the kinds of benefits that the statute requires. It is a control and institutional issue. She suggested the Commission reach out to the Metropolitan Water District of Southern California on this issue.

Commissioner Del Bosque suggested the Commission discuss definition of improvements to the state water system at a future meeting.

Mr. Hatchett provided an overview of how public benefits can be quantified. He asked the Commission to consider whether they should employ a prescriptive approach, or allow for a more flexible approach to quantifying benefits. Mr. Hatchett described how quantifying benefits meets the requirements of the statute including public benefits ratios, cost effectiveness and return on public investment.

Mr. Hatchett provided a step-by-step framework for how public benefits can be quantified and allocated. The steps include: defining future conditions with and without project, calculating the physical changes associated with the project, estimating economic value of physical benefits, comparing benefits to costs, and allocating costs to public and non-public benefits categories. Next, he provided examples of the types of information that applicants would be asked to provide

regarding their public benefits. He also explained the avoided-cost method of monetizing benefits.

The calculations of benefits vary based on the nature of the benefit. A direct physical action will be easier to quantify than an action that is designed to have an indirect or peripheral benefit. The applicant will be asked to provide the value of the benefits and a cost of alternative action; the quantified economic benefit should be lesser of the two.

Commissioner Byrne asked how an applicant would approach the process if they are dedicating water for unspecified environmental purposes. Mr. Hatchett replied that the calculation will be easier to do if the goal is more specific, but that they can still make estimates.

Commissioner Quintero asked if the quantification methods will vary between surface water projects and groundwater projects. Mr. Hatchett replied that at this time there is not a clear answer.

Commissioner Daniels expressed concern about selecting projects based on assigned monetary values, and asked if it would be a better idea to utilize monetary quantification later in the selection and funding process. Mr. Hatchett responded that the statute suggests that quantification in common units must occur for the Commission to judge certain aspects of a project. Applicants will be encouraged to make the best calculations they can, and are allowed to delineate individual costs based on their projected accuracy. That way the Commission will know ahead of time which figures are certain and which may change, and can adjust their decision as they see fit.

Commissioner Quintero suggested using units of water as a common denominator. Mr. Hatchett replied that per-unit calculations may work for some benefits but not others, such as recreation and flood control. Commissioner Curtin added that some projects serve multiple purposes, which also complicates the per-unit calculation.

Mr. Hatchett then discussed common assumptions for project analysis. Common assumptions are a set of requirements and recommendations that will be provided to project applicants. Their purpose is to ensure consistency in applications so that projects can be compared. Staff is preparing physical and economic common assumptions.

Physical common assumptions may include hydrology and climate change, Delta conditions, surface water and groundwater operations and quality, riverine conditions, hydrodynamics, aquatic and terrestrial resources, energy, recreation resources, and others to be determined as they arise. Economic common assumptions may include discount rate, planning horizon, current and future dollar projections, construction contingencies, future population levels, real energy costs, and unit values of water. At the Stakeholder Advisory Committee meeting scheduled for August 5, staff will ask the stakeholders for their input on how flexible or prescriptive the requirements for common assumptions should be and what they should include.

Mr. Hatchett noted that staff has developed some common values for recreation benefits. Commissioner Daniels expressed concern that recreation benefits exist beyond what can be easily monetized. Mr. Hatchett said staff will provide unit values for some benefits, but those will not apply universally. Some benefits may be monetized well, but applicants may choose not to monetize some benefits, and the Commission can review that information to make decisions. Ms. Marr added that applications will include physical benefits if they cannot be monetized. Commissioner Daniels requested that staff ask the Stakeholder Advisory Committee if this method of quantifying recreational benefits is an issue. Mr. Hatchett pointed out that the unit valuables will be available to applicants, but not required.

Commissioner Curtin stated that it may be difficult for groundwater storage projects to have recreation benefits, but it is possible. For example, a recharge basin can just as easily double as a lake for boating and fishing. Ms. Patil agreed, stating that it may be difficult to value the benefit, but it is easy to value the cost it took to provide that benefit. Recreation is not, by its nature, a money-making investment, but incorporating recreation into the public benefits as a peripheral perk is still a good way to maximize the benefits. Commissioner Herrera stated that the Commission has a unique opportunity to promote recreation for people who need it, and should be incentivizing it.

Mr. Hatchett provided an example of a hypothetical groundwater project and described some of the benefits that it could provide. For example, an applicant with a conjunctive use project with ecosystem benefits, might state that their project would increase above-ground water supply for ecosystem improvement, increased stream flow, or reduced Delta reliance. If an applicant claimed that their project includes water quality benefits, they could include the economic benefits that would come from improved quality of groundwater, improved aquifer water quality, or reduced costs associated with water treatment or salinity damage repair.

In a conceptual conjunctive use project, an applicant may want to create something that does not exist, as opposed to improving or restoring something that already does. For example, they may want to construct a groundwater pumping and recharge mechanism that would divert flow into recharge or in-lieu storage and promote the use of stored groundwater instead of river diversions. In this case, the additional flows in the river may promote fish populations.

Mr. Hatchett provided examples of how a cost/benefit analysis would be performed on conceptual conjunctive use project and a conceptual surface storage project, breaking down some possible project components and their per-unit costs and weighing them against the projected benefit. The statute does not specifically require this method of analysis, but Mr. Hatchett recommended using it as a simple way to determine if the project's benefits will exceed its costs. He concluded by stating that cost allocation is a necessary step to determine a public funding share based on public benefits. The Commission will need to rank potential projects based on the expected return for public investment; conventional cost allocation methods are preferred, but can be adjusted to provide cost shares that meet WSIP requirements.

Over the upcoming months, staff will be developing unit-values of water using economic models and water transfer price information; completing work for economic common assumptions, methods, and metrics; revising their tool and methods report; and incorporating final quantification methods into their draft regulations.

Commissioner Byrne asked how unit values will be determined. Mr. Hatchett responded that unit values of water will largely be based on statistical analysis and historical water transfer. Staff does not intend to create unit values for fish or waterfowl, because the values would be too specific to particular species or locations. There are other units that cannot be measured, such as flood flow mitigation; in this case, you must measure the actual cost of flood damage and not the hypothetical cost of what flood mitigation was able to prevent.

Ms. Patil stated that water transfers have historically been used as a metric to value water but are not always reliable. Currently, water transfers are not possible because water is not being moved through the Delta. The value of water may be site-specific so the Commission may want to allow for flexibility. Mr. Del Bosque added that the location of the water source impacts its value. Mr. Quintero noted that water districts have a good sense of what recycled water costs in their areas. Costs should also be related to the value of the service that water will provide. The Commission concluded that more discussion was needed to determine how flexible or prescriptive the methods for economic quantification should be.

5. Consideration of Items for the Next California Water Commission Meeting

The next meeting will be held on Wednesday, August 19 in Los Angeles. There will be a SGMA update, an update on critically over-drafted groundwater basins, and updates on the program and administrative activities and stakeholder process for the WSIP. There will also be an issue working session featuring a discussion of common and preferred assumptions, management and monitoring of public benefits, project selection criteria/metrics, options for integration study, decision-making tools, and applying priorities and relative values in the application review process.

Chairman Byrne adjourned the meeting at 11:03 a.m.