



DRAFT Meeting Minutes

Meeting of the California Water Commission

Wednesday, November 14, 2012

State of California, Resources Building

1416 Ninth Street, First Floor Auditorium

Sacramento, California 95814

Beginning at 9:30 a.m.

1. Welcome and Introductions

Chairman Anthony Saracino called the meeting to order at 9:33 a.m.

2. Roll Call

Executive Officer Sue Sims called roll. Joe Byrne, Joe Del Bosque, Kim Delfino, Luther Hintz, and Anthony Saracino were present, constituting a quorum. Andy Ball and Danny Curtin were absent.

3. Approval of Meeting Minutes

A motion was made and seconded to approve the draft minutes from the October 17, 2012 meeting. A vote was taken and the motion passed unanimously.

4. Executive Officer's Report

Executive Officer Sims chose not to provide a report in the interest of time, but instead commented on agenda items throughout the meeting.

5. Report on State Water Project Tour

Joe Byrne provided an overview of the State Water Project (SWP) tour he attended on October 18, 2012 along with Commission members Andy Ball and Joe Del Bosque. They toured the Vista del Lago Visitors Center at Pyramid Lake, Warne Power Plant, Alamo Pumping Plant, Edmonston Pumping Plant and the east and west branches of the aqueduct. Staff briefed the members on current challenges which include recruitment and retention issues and overall efficiency of the system. At Alamo Pumping Plant, Commission members discussed a turbine that was planned but not installed. Mr. Byrne touched on the Commission's role in SWP management, asking why that generating unit is not operational, given the amount of revenue that could be generated through its use. He suggested more attention should be paid to efficiency within the system as a whole. Mr. Del Bosque said the facilities were very impressive and the employees seemed very dedicated and capable. He hopes to see better retention in the future. Ms. Sims added it was apparent at Alamo Pumping Plant that assets are being underutilized. An estimated \$300,000 in power generation is lost per month due to the missing unit. Ms. Sims would like to report back to the Commission on its status at a future meeting.

9. Report on *A Framework for Regulatory Transition: Accommodating Projected Climatic Shifts at the Operational Level* (Taken out of order)

Robert Shibatani presented his report titled “A Framework for Regulatory Transition: Accommodating Projected Climatic Shifts at the Operational Level.” Mr. Shibatani stated this document will be used as a background source for an upcoming water trends panel at the Association of California Water Agencies Conference in December 2012. It will be used as a focal point at the upcoming Environmental and Water Resources Institute Symposium and it was also used as a keynote climate change focal point for the last two California Water Law and Policy Conferences in San Francisco. Georgetown Law recently showed interest in the paper as well. This issue is being moved forward both nationally and internationally.

The four main elements of climate change adaptation strategies are science, policy, dissemination of information to the public, and the regulatory framework. An effective climate change adaptation policy needs all of these essential strategies. California currently has one of the most well developed climate change policies. A complete climate change policy would mean that California is dealing with things such as climate sensitized infrastructure, climate sensitized operational practices, and climate sensitized regulations. California has spent time and resources developing the first three necessary adaptation strategies. The fourth strategy, the regulatory framework, has not been advanced to the same extent. No one agency can develop this strategy alone; state agencies must come together. California must develop a regulatory framework that is as flexible as climate change science.

The regulatory framework must stay on pace with the quickly changing environment. For example, the regulatory framework involves all of the regulatory instruments, tools and documents which allow operational managers to do what they do on a daily basis at the operational level. This includes water right permits, decisions, approvals, biological opinions, Request for Personnel Action (RPA), etc. Many of these documents were created years ago assuming that the hydrology would not change. We must ask if these tools and documents are still valid in today’s hydrological context. The regulatory framework must be as dynamic as the changing environment.

Mr. Shibatani noted this report is for informational purposes only, but it does raise warning flags that water users will be faced with increasing challenges in meeting regulations in the future.

6. Briefing on Ecosystem Services by the Director of the California Department of Conservation

Mark Nechodom, Director of the Department of Conservation (DOC), provided the Commission with a briefing on ecosystem services. He spent the last four years in Washington, D.C. as the Director of US Department of Agriculture’s new Office of Environmental Markets, which was created by Congress a result of an emerging market for ecosystem services such as carbon sequestration, water quality trading and wetlands trading. The Secretary of Agriculture was

charged with the responsibility to develop guidelines and frameworks for reporting, measuring and trading ecosystem services, with an emphasis on carbon. He worked a great deal on resource economics and valuing ecosystem services.

Mr. Nechodom discussed the connection between ecosystem services and public policy. A common understanding of sustainability was discussed in the Brundtland report in 1983-84, which defines sustainability in future options and sustaining the environment for future generations. Now, definitions of sustainability are changing. People are asking how we can derive significant energy resources, well being, and wealth building capability from the land and be able to continue to do so forever.

This is a particular challenge for the DOC which regulates non-renewable resources such as oil, gas and mining. These industries are moving towards adopting green practices such as green mining. Historically, the science of ecosystem services focused on counting and measurement of ecosystem improvements. However, accounting -- linking the science and counting to metrics and markets -- was not taken into consideration until recently. This is a difficult task and will take a public policy commitment. Prior to consideration of accounting, we must ensure the counting system is verifiable.

There is an enormous amount of capital waiting to move into these new markets, as there is a profit to be made. Investors will look to the government to set the standards, and determine the monitoring, verification and reporting protocols, before a real market can be created. That is what the Air Resources Board (ARB) has done with carbon and what we are currently working on in California water quality trading markets. For example, if there is too much nitrogen in the water, how do you allow point sources to reduce their effluent into the bodies of water without creating so much "gray" (conventional) infrastructure that it collapses from its own financial weight? There is a trade-off between gray infrastructure and green infrastructure. For example, the city of Santa Rosa has an order from the Regional Water Quality Control Board in 2008 to move to a net zero nitrogen and phosphorous emission into the Laguna de Santa Rosa, a tributary to the Russian River. The order allows Santa Rosa to pursue alternatives to gray infrastructure and \$46 million has been bonded to the city to spend on structural materials or on changes in conservation practices. If it can be proven that a comparable nitrogen reduction can be made by other means, then the city can use green infrastructure instead of gray infrastructure.

In successful water quality trading markets, the gray infrastructure option is usually so expensive that green infrastructure costs about one-third of the amount. Other water quality trading markets failed for two reasons. First, there was no model of record linking specific actions to water quality outcomes. Second, there was a lack of consensus regarding the use, validity, and proper deployment about the model of record. Ultimately, the goal of doing this is to reduce and streamline the cost of meeting regulatory targets. One example of success comes from Ashland, Oregon where, instead of building a \$15 million refrigerator to cool water, they invested \$4.6

million in shading the water. They developed a model of record called the "Shade-a-lator," which is now used as a regulatory tool.

Ms. Delfino asked what the DOC is doing to move beyond individual projects and create broader ecosystem services policies. Mr. Nechodom said he expects nitrogen trading to spread throughout the Tulare basin, Central Coast, Salinas Valley, and surrounding areas. DOC was one of 12 organizations to receive a \$500,000 Conservation Innovation grant from the Natural Resources Conservation Service (NRCS)/U.S. Department of Agriculture (USDA) to help build the infrastructure for the model for nitrogen trading. They are also working with DWR to look at potential for habitat credit trading in the Delta. DOC is seeking approximately 112,000 acres of restoration of habitat in the Delta. There are possibilities for a trading market or at least a less expensive way to spend public dollars on Delta restoration. DOC is also exploring using the shade-a-lator for the salmon habitat in the North Coast, however DOC has no direct regulatory authority.

Ms. Delfino asked what Mr. Nechodom thought of pushing forward broader statements from the government and establishing a centralized focus, such as Oregon's Senate Bill (SB) 518. Mr. Nechodom said SB 518 is a fine example of agreement on basic principles. However, it does not do anything or allocate a budget for ecosystem services. Oregon does have the Watershed Enhancement Board which has a budget of more than \$40 million per year and is chaired by the Secretary of State. However, their work is not outcome or metric based.

Ms. Delfino asked about metrics for production of ecosystem services. Mr. Nechodom said the DOC is working on this and have partnered with the Environmental Defense Fund to enhance those metrics. California has been the leader in conservation banking. The most common metrics are functional acres and characteristics of habitat. He agreed that creating common metrics is important.

Mr. Saracino said the public does not generally respond well to ecosystem services because the term does not resonate. He encouraged Mr. Nechodom to continue to search for a better term.

Mr. Del Bosque asked if the hold-up of the federal farm bill was impacting the DOC? Mr. Nechodom said that it is to a certain extent. The DOC's conservation program partners with the NRCS's farm and rangeland protection program. The longer NRCS is financially starved the less analysis DOC can do. The broader effect is that worries about payments make farmers less likely to invest in conservation.

Ms. Delfino said in addition to accounting, it is necessary to identify who will be delivering the program. A program's success is sometimes based on its relationship with the surrounding community. The Williamson Act Model is well received by the agricultural community and should be considered as a delivery model for the program. Mr. Nechodom said he would be happy to return to discuss the Williamson Act with the Commission. He commended the Defenders of Wildlife for their work with the Rangeland Trust and Coalition.

7. Discussion of Issues Regarding Public Benefits of Water Projects

Mark Cowin, DWR Director, spoke about the legislative process for the Water Bond. He noted that it was a crucial piece of the 2009 water package. Over time, California's water system is aging and having a harder time achieving all the benefits for which it was designed. California's population and the demand for those benefits have increased. More storage will improve flexibility and reduce constraints. The question to be answered is where and how do you make those investments. The idea behind the water storage section of the bond was to provide funding for broad public benefits, use those to incentivize investments from end-users of water in storage projects, and address constraints which are affecting all end-uses of water. The negotiations went on over a multi-year period. During the negotiations, those who were pro-storage wanted a broad definition of public benefits while those who were against storage wanted the narrowest definition. The negotiations went as far as they could. The agreed upon language made everyone comfortable enough to support the bond. Sometimes the legislative process requires that you get as far as you can, then direct someone else to figure out details. That someone is the Commission. That is how the Commission ended up with this important responsibility. Mr. Cowin urged the Commission to take the broadest possible viewpoint and not spend time parsing the words. He asked the Commission to think broadly about what public benefits are, how they should be quantified, and what the role of public funding is in providing for those benefits. He advised them to not spend a lot of time trying to decipher the meaning of public trust; in this case it is pretty simple. The general notion of "public trust" was improvement in water quality to large bodies of water that serve multiple purposes and provide broad public benefit. Assuming that the bond moves forward, having a quantifiable definition and framework for public benefits will be important for not just storage projects, but water infrastructure in general in California.

Mr. Saracino thanked Director Cowin and stated that today the Commission will discuss water quality. Ms. Sims stated that staff has been working with the consultant to identify some of the outstanding issues related to public benefits of storage projects. Now that the Commission has received additional perspective from on legislative intent, those issues can be discussed further. The topic for today's meeting is water quality. Over the next few meetings, other definition issues will be addressed. When the Commission has reached a decision staff can develop a concept paper for each topic and use those papers to solicit further public input.

Steve Hatchett presented an issue paper on water quality. The definition of an eligible water quality public benefit is "water quality improvements in the Delta, or in other river systems, that provide significant public trust resources, or that clean up and restore groundwater resources." It is important to keep in mind the distinction between the Delta and other river systems versus groundwater resources.

Staff has developed two reasonable interpretations of this language. The first proposal is narrow, whereas the second is more broad. Staff's first proposed option clarifies the intent of the Act by rephrasing it as "water quality improvements in the Delta, or in other river systems, that either 1) provide significant public trust uses, or 2) clean up and restore groundwater resources." This implies the legislature did not intend that all water quality benefits should be eligible, but rather only those that provide public trust resources. The second option rephrases the definition as "water quality improvements either in the Delta, or in other river systems, so long as these are significant public trust resources," which may not be clearly recognized as a public trust resource under California law. In this case, any water quality benefit would be eligible, even if it is obtained by a consumptive water user.

Three examples projects were presented to the Commission to show how each interpretation would affect the outcome. The first example is a surface storage project that increases Delta inflows, improving fisheries and the quality of water exported from the Delta. Under the first option, the water quality benefit which accrues to local water users would not count as a funded benefit. The second option would allow both water quality benefits and fisheries benefit to be eligible for funding.

The second example is a project which increases Delta inflows and improves water quality of Delta exports. That exported water is used in southern California to recharge a groundwater basin and improve the groundwater quality. Under the first option, the portion of the water used for improving groundwater resources, even though it may eventually be used municipally, would still count as a funded benefit. Under option two, the broader interpretation would be the same on that kind of project.

The last example is a local project in southern California that cleans up a local river and captures water to recharge a degraded groundwater basin. Both options would fund the project if it can be proven that there is a benefit to the Delta.

Mr. Byrne asked what else would need to be funded for the project in the first example. Mr. Hatchett stated in the narrow interpretation, the water user benefits would be funded by local users and additional investments may be required. Mr. Saracino added public funding can only fund up to 50% of the project. Ms. Delfino stated that option one makes the most sense. She interprets the bond language to apply to benefits that result in improvement of public trust resources.

Mr. Saracino reminded the Commission that 50% of the public benefits need to be ecosystem benefits. Mr. Goyal asked if a benefit for water quality which improved the ecosystem would count towards both categories. Mr. Saracino said if a benefit improves the ecosystem then the ecosystem requirement of the legislature has been satisfied, as long as it is equal to 50%. There

are many different scenarios the Commission may encounter and they cannot try to anticipate all possible iterations. Ms. Delfino stated this question is making the issue more complex and the question at hand is how to quantify the public benefit cost.

Mr. Del Bosque stated the options are not clear enough to make a decision and he is still open to more input. The discussion today brought up questions to which he would like to give more thought. Ms. Sims recommended that staff summarize the initial direction of the Commission for further public input and discussion.

Mr. Saracino noted that if a proposed project has overall benefits to the Delta ecosystem, the water quality benefits need not necessarily be directly related to the Delta in order to be eligible for funding.

Roger Mann noted there are additional options to the ones discussed today and they may be worth looking into. The Commission may wish to explore other benefits that result after the water has been exported, such as public health benefits. Mr. Saracino said the Commission's role should be to provide general guidance instead of trying to anticipate all scenarios.

Mr. Hintz asked how projects on other river systems would "tie in" to the Delta. Mr. Goyal referred to an example that Mr. Hatchett had used earlier, where local project on a river in San Diego, for example, captures water from the river and uses it to recharge a degraded groundwater basin. If this water is used in lieu of Delta exports, it would increase the Delta outflows and that would directly benefit the Delta ecosystem. Reducing the amount of water exported from the Delta would benefit the Delta. The legislation stated each project must benefit the Delta ecosystem to be eligible for funding. The project can also tie into the Delta in some other way, besides water quality. Mr. Byrne asked how to guarantee flow for something in southern California. Mr. Hatchett said the applicants would still need to demonstrate how the project would tie back to the Delta.

Mario Santoyo, stated he was involved with the water bond negotiations and agreed with Director Cowin's advice to interpret the legislation broadly. Water quality improvements in the Delta also provide a significant benefit to the quality of water that is delivered to two-thirds of Californians. It also provides a reduction of salt loading in agricultural sector. There may be projects that provide clean water into the Delta system which helps the ecosystem and have additional benefits to Californians that are not specific to the project in question. He recommended the Commission reassess the benefits in a holistic way to identify sub-benefits of the projects.

Mr. Del Bosque said the Commission should think more generally about benefits as the Commission's determinations will be long lasting. The Commission may wish to look at public

benefits as they will be in the future. He would like more input and to look at the questions more thoroughly. Ms. Delfino stated it is not a closed matter and she appreciates looking at the questions in a general sense, but it is important to be mindful of what is written in the legislation. Mr. Saracino stated there was a distinction made between beneficiary or project benefits and public trust benefits, and the Commission must be mindful of that distinction.

Jim Wieking, who also worked on the staff water quality proposal, said he appreciated Ms. Delfino's commitment to being mindful of what is written in the legislation. An important distinction is whether the legislature intended to say public trust "uses" or public trust "resources." If public trust uses was intended there is a list that will fall into that category. Public trust resources would indicate a broader view and may include the Delta or the river systems of the state. In this case, groundwater would be mentioned separately because it is not a public trust resource. Mr. Saracino said he understood Mr. Wieking's comment but did not necessarily agree with it. It was helpful in distinguishing between public trust use and resources. He directed staff to begin working on a concept paper under the general guidance given by the Commission at today's meeting.

8. Briefing on State Water Project Power and Energy Issues

Veronica Hicks, Chief of DWR's State Water Project Power and Risk Office, briefed the Commission on State Water Project (SWP) power and energy issues. She discussed the SWP energy profile, the benefits it provides to the electric grid, recent energy legislation and administration policies, DWR actions to reduce greenhouse gas emissions, and the cap and trade market for greenhouse gas emissions.

The SWP was designed to take advantage of drops in elevation to create hydropower. It is the third largest generator of clean hydropower in California, generates 40% to 60% of SWP needs and produces about 14% of California's hydropower. The SWP represents 4% of the electric grid load and is the sixth largest California utility in terms of power consumption, but is only approximately 9% of the size of PG&E. Currently, DWR imports energy from a coal fired power plant in Nevada; however, that contract will be up next year and will not be renewed. Beginning in 2014, half of that energy will be replaced with natural gas from the new Lodi Energy Center.

The SWP provides benefits to California's electrical grid by pumping off-peak, and generating power on-peak which stabilizes and reduces stress on the grid. DWR also has agreements with electrical grid operators to reduce its pumping at key times. This flexibility has been reduced in recent years due to pumping restrictions and aging infrastructure.

Ms. Hicks reviewed recent legislation and administration policies influencing the SWP. AB 32 concerns greenhouse gas emissions reporting requirements and cap and trade. The Renewable Procurement Standard requires 33% of energy resources to be renewable. While DWR is not held to that standard in the legislation, it is nonetheless looking at reducing greenhouse gas emission by using more renewable sources. DWR released its own Climate Action Plan and meets with the

Governor's Office staff every six weeks to provide an update on renewable energy sources and greenhouse gas emissions.

The SWP contributes less than 1% of greenhouse gas (GHG) emissions in California. DWR reports and verifies its GHG emission and was one of five state agencies to be certified of California Climate Action Registry from 2007 through 2009. DWR reported its GHG emissions to the Climate Registry in 2010 and 2011. DWR has released a Climate Action Plan memorializing DWR goals of reducing GHGs 50% below 1990 levels by 2020 and 80% below 1990 levels by 2050. Emissions will be reduced significantly by discontinuing use of the Reid Gardner coal plant, partnering with the Lodi Energy Center, and using renewable energy. DWR is also looking at progressively layering in renewable energy sources. By 2050, there will be a possibility of having zero emissions in some years. DWR has chosen progressive procurement; it has already met AB32 standards and progressive procurement allows time for technology improvements and future legislative and policy decisions.

DWR has entered into a contract with Alameda Municipal Power for geothermal and landfill gas for four years. It has been in operation since the 1980's and DWR pays for energy it receives. DWR is looking for potential new contracts for solar energy. Negotiations on a new project should conclude by the end of this year. DWR also has an opportunity to procure new small and large hydropower generation. DWR is looking to develop renewables on state property such as a solar project at Pearblossom pumping plant. This location has lots of sun, existing infrastructure, which has no endangered species, and has gone through the CEQA process.

As noted earlier in the meeting, Alamo Power Plant has an empty bay for another generating unit. DWR is working with its Division of Engineering to obtain more current cost estimates for adding a unit and to see if a surge tank will be needed at this site. If the cost benefit analysis turns out to be positive, the new unit should be operational by 2016. DWR is looking at the SWP system-wide for opportunities to add new hydropower generation. Thermalito Afterbay river outlet is one possibility. DWR is also reducing greenhouse emissions and saving energy by replacing and refurbishing pumps.

Under the cap and trade system, the Air Resources Board caps emissions produced in California and sells allowances. This provides an incentive to reduce emissions. The first auction for allowances is today. The SWP is covered by cap and trade and did not receive any free allowances as it is not a retail end user electricity provider. The cost of allowances for 2013 is estimated to be \$30 million.

Mr. Saracino asked if the SWP costs associated with the cap and trade program will be a "one to one" increase to the end users. Ms. Hicks said yes, that all costs are billable to the State Water Contractors. DWR is working with the Contractors and keeping them informed on how DWR is managing those costs.

Ms. Delfino stated there is some controversy around the impacts solar and wind projects have on the environment. Efforts to reduce negative impacts have discussed potential procurement reform and environmental screens. She asked if DWR has considered screens as part of the procurement process. Ms. Hicks stated they have not, but DWR has looked at the CEQA process and any issues associated with that. DWR also does its own CEQA review for contracting.

Mr. Byrne asked how the decision will be made as to whether or not the additional unit at Alamo Pumping Plant will be installed. Ms. Hicks said although it is the decision of the Director and DWR also collaborates with the water contractors.

10. Consideration of items for next California Water Commission meeting

Topics for the December meeting include the Commission 2013 Workplan, Alamo Pumping Plant, California Water Plan Forest Management Strategy, State Water Project Annual Report, Public Benefits of Water Projects, and election of Chair and Vice-Chair. Mr. Byrne requested an update on the retention issue.

11. Public Comments

None.

Mr. Saracino adjourned the meeting at 11:36 a.m.