



Meeting Minutes DRAFT

Meeting of the California Water Commission

Wednesday, July 17, 2013

State of California, Resources Building
1416 Ninth Street, First Floor Auditorium
Sacramento, California 95814
Beginning at 9:30 a.m.

1. Call to Order

Chairman Joe Byrne called the meeting to order at 9:34 am.

2. Roll Call

Executive Officer Sue Sims called roll. Andy Ball, Joe Byrne, Danny Curtin, Joe Del Bosque, Lu Hintz, and Anthony Saracino were present, constituting a quorum. Kim Delfino arrived shortly after roll was called.

3. Approval of Meeting Minutes

A motion was made and seconded to approve the June 19, 2013 meeting minutes. A vote was taken and the motion passed unanimously.

4. Executive Officer's Report

Sue Sims provided the Executive Officer's report. The Little Hoover Commission is looking into governance and legal structures related to climate change. They have asked the Commission for any recommendations and the first hearing will be held on August 22. Ms. Sims is working with the Association of California Water Agencies on their Statewide Water Action Plan. DWR will develop recommendations for the Governor and Legislature. Rachel Ballanti has been appointed as the Commission's Assistant Executive Officer. Her duties will be expanded to be consistent with similar boards and commissions.

5. Presentation on Hydraulic Fracturing by California Department of Conservation

Tim Kustic, State Oil and Gas Supervisor for the Department of Conservation's (DOC) Division of Oil, Gas and Geothermal Resources (DOGGR) briefed the Commission on hydraulic fracturing (fracking) activities in California and the regulations that DOC is developing to address public safety and environmental impacts. Mr. Kustic supervises drilling operation, maintenance and abandonment of wells; and the operation and maintenance, removal or abandonment of tanks and facilities. They permit owners of wells to utilize methods for oil or gas recovery. DOGGR has a staff of 160 in six division offices and was created at the request of the oil and gas industry.

One of DOGGR's first jobs was to discourage "dump flooding" and to protect groundwater. During the oil drilling process, is put down injection wells to push oil towards the surface at the producing well. In

general, about 95% of the fluid brought to the surface is water and 5% is oil. Annually, about 2.7 billion barrels of water are cycled through California oil and gas operations. Just less than a billion barrels are placed in water disposal wells.

Additionally, some wells produce fresh water (as opposed to high-TDS water). In Kern County, fresh water is cleaned and shipped to agriculture and livestock. In Monterey County, it is used to recharge groundwater. Of the 866 million barrels of water produced by oil operations every year, 198 million barrels are available for freshwater uses. In total, the oil and gas industry in California uses 5.6 million barrels of water for well drilling, hydraulic fracturing and cementing.

In the eastern United States, hydraulic fracturing has been combined with horizontal drilling which, allows for retrieval of gas out of shale. Horizontal drilling can extend for up to 3 miles which makes gas fracking feasible with little risk of not finding an economic well. Land formations in California have lots of folds, faults and bends unlike other areas of the country. The Monterey formation is currently producing oil through conventional methods; however, there is discussion of using fracking to reach shale gas. So far this technique has not been used to successfully access shale gas. Industry is working towards unlocking the shale gas reserves in the Monterey.

Hydraulic fracturing of existing, permitted wells in California does not currently require additional permits, leading to a lack of information about the practice. To gather data, DOGGR has asked industry to voluntarily start reporting on the FracFocus website. Based on reports so far, 700 wells are being fracked in California. Since fractured wells in California are generally vertically drilled, typically 130,000-180,000 gallons of water are used per well, much less than in horizontally drilled wells. It is unlikely that wells in California would ever use a huge water volume per well.

During the current California legislative session, 12 bills related to fracking were introduced; however, now there is only one bill. DOGGR began development of fracking regulations a year ago. They have held seven workshops to gather information and explain fracking to the public. Five additional workshops are planned. This summer they will begin the formal rulemaking process. The draft regulations require that companies do a fracture radius analysis in a 1,000 foot sphere and submit it to DOGGR for review prior to fracture stimulation. A 24 hour advance notice of fracturing operations is required to allow observation of fracturing by DOGGR staff. Companies must continuously monitor pressure rates and concentration during fracturing. Daily monitoring will continue for 30 days and monthly monitoring for five years following hydraulic fracturing. Additionally, the draft regulations require companies to disclose basic details for all wells, such as operator, well, depth, fluid content, tracers and volume, and to use FracFocus.

The California Uniform Trade Secrets Act applies to some of the information that companies are required to provide under the draft regulations. Trade secret law prevents public disclosure of trade secrets but it does not prevent regulatory agencies from obtaining the information as needed. DOGGR's goal for the regulations in development is to establish a procedure for companies to assert the trade secret claim and specify when trade secret information must be provided to DOGGR or others.

The regulations also address the storage of hydraulic fracturing fluids. Storage and handling of fluids must be in compliance with existing facilities regulations. Additionally, companies must have a Spill Contingency Plan, and spill clean-up and reporting is required.

Mr. Saracino asked how DOC will address the effects of subsidence on well seals and casings, especially in the Central Valley. Mr. Kustic said that the potential for problems related to subsidence exists in all well operations. A well may produce fluid for decades, even though fracturing may only take 20-60 minutes so well integrity is and has been important. Casings can be designed to compensate for subsidence. Additionally, it is necessary to have continuous monitoring for failure and strict regulations. There have not been studies to show that fracking causes additional subsidence, but subsidence sometimes occurs over the course of years and must be addressed. Mr. Saracino asked where disposed fluid will go. Mr. Kustic said that in general in California, produced water goes back into the well and is used as part of the oil operation, so it does not need to be disposed.

Ms. Delfino asked about acidizing. Mr. Kustic explained well stimulation is a general term and hydraulic fracturing is only one subset. Additionally, there is acid fracking (or acidizing), which dissolves rock. The acid can also be used at lower pressures to increase permeability. Legislation may regulate acid fracking in conjunction with hydraulic fracturing.

Ms. Delfino asked if oil and gas companies are responsible for reporting on all fluids going in and coming out of a well. Mr. Kustic said they are, unless there are trade secrets. DOC has been working closely with the State Water Board on regulations. The draft regulations require the notices of fracturing to go to DOGGR and the Regional Water Board. Trade secrets, such as specific chemicals, would be reported to the DOC and available to other regulators, while other information would be publically available on FracFocus. Communication about chemicals with the Water Board will be addressed in the next version of the regulations. In response to questions about FracFocus, Mr. Kustic stated that FracFocus was created by the Oil and Gas Interstate Commission 30 years ago. There are concerns about whether information reported to FracFocus will be subject to Public Records Act requests, and how to ensure an operator is reporting.

In response to questions, Mr. Kustic said current regulations address methane leakage and state there should not be any methane escaping from any well in California. He noted that typical hydraulic fracturing fluid consists of 95% freshwater, 4.5% sand and 0.5-1% chemicals, which returns with the produced water into the existing water treatment system. Mr. Ball asked if any of the fracturing chemicals have been found in the surrounding groundwater. Mr. Kustic said he did not believe so, but Regional Water Boards monitor groundwater.

Mr. Saracino asked if coordination of groundwater monitoring with Regional Boards be part of new regulations. Mr. Kustic said the regulations will contain additional monitoring of groundwater.

6. Update and Briefing on the Delta Plan by the Delta Stewardship Council

Phil Isenberg, Chair of the Delta Stewardship Council, provided an update on the Delta Plan. The Delta Plan was adopted in May 2013. In the following 30 days, seven lawsuits were filed by different interest groups, which mainly focused on the Bay Delta Conservation Plan (BDCP). Mr. Isenberg stated the challenge is to move and store water more efficiently in California. The Delta must be provided with adequate flows for environmental purposes such as timing, pulsing and temperature; all of which have been altered. It is vital to return to the natural flow patterns and to restore habitat. New urban growth within the Delta is inconsistent with a reliable water supply and a protected Delta environment. We must flood-proof the Delta as much as possible, but the State has other interests as well.

The Administration supported adoption of the Delta Plan; however, larger issues need to be addressed such as the co-equal goals and future water supply. Mr. Isenberg congratulated the Commission and

DWR on increasing salaries for SWP employees and emphasized the importance of maintaining existing infrastructure for water supply reliability.

Mr. Saracino asked for an example of how the Plan will be enforced. Mr. Isenberg said the statute stated State and local efforts should be consistent with the Delta Plan; however, the Council only has regulatory authority over covered actions. The statute also defined covered actions. The proposing agency must determine which actions are covered actions. Any party can appeal the “covered action” determination to the Council. An agency can proceed with a project without agreement by the Council, but may be open to legal action.

Ms. Delfino asked for a summary of the comments the Council recently submitted on BDCP. Mr. Isenberg stated that the BDCP will not be included in the Delta Plan nor will it be eligible for funding unless it meets all of the conditions established in the Water Code. The Water Code makes the Council a responsible agency under California law and the Council has recently released their sixth responsible agency comment letter on BDCP. The Delta Plan encourages the development of the BDCP but does not support a particular alternative. The Council does not have authority to change the BDCP. The Council can decide whether or not the BDCP is consistent with law and ask questions. If the Department of Fish and Wildlife approves the BDCP as a Natural Community Conservation Plan, and meets legal requirements, the Council will incorporate it into the Delta Plan.

7. Update on State Water Project Issues

Carl Torgersen, Department of Water Resources Deputy Director for the State Water Project (SWP), provided an update on the addendum finalized by the Brown Administration on July 3, 2013, which raised salaries for many specialized job classifications. Mr. Torgersen thanked the Commission for their support and efforts to address the recruitment and retention crisis facing the SWP. He noted that it took 10 years to get this problem fixed, a good example of the restraints the SWP faces. He also asked for continued support of SWP staff in the future.

Discussion of SWP contract extension negotiations was deferred to the August 21 meeting.

~~8. Action Item: Consideration of Letter to the House Committee on Transportation and Infrastructure in Support of Federal Water Resources Development Act of 2013~~

9. Briefing on Desert Renewable Energy Conservation Plan by California Energy Commission

Roger Johnson from the California Energy Commission (CEC) provided an overview of the Desert Renewable Energy Conservation Plan (Plan). Energy Commissioner Karen Douglas sent regards to the Commission.

The Plan is a habitat conservation plan that streamlines and expedites permits for renewable energy projects while conserving endangered species and their habitats. The Renewable Energy Action Team oversees the development of the plan and consists of the CEC, California Department of Fish and Wildlife (DFW), Bureau of Land Management, and U.S. Fish and Wildlife Service (USFWS). The Plan applies to an area of 22.5 million acres in Southeastern California. It will minimize environmental impacts and prioritize lands for both renewable energy projects and habitat conservation using a regional approach. It will also provide permits. The Plan will streamline, standardize and create a predictable process for endangered species authorizations, as well as facilitate the California Renewables Portfolio Standard and enable long-term renewable energy development beyond 2020.

One focus area is Imperial County, which is home to the Salton Sea. This area is quite large and primarily agricultural. The County will determine which areas will be developed. The Plan will cover construction and development, operations and maintenance and the decommissioning of renewable energy projects. Covered species include around 50 specific plants and animals. The list is developed with the input of applicants, the public, stakeholders and independent science advisors.

The Plan also observes the Garamendi Principles which recommend use of existing right of ways before new right of ways are acquired. Utility transmission planners have formed the Transmission Technical Group, which will release a report in December identifying transmission projects. Imperial Irrigation District will construct a new transmission line and collector station that will advance California's 33% Renewable Portfolio Standards goals. Local governments and agencies may opt-in after the plan is completed. The Plan is likely to require additional analysis under CEQA/NEPA.

The Plan's Preliminary Conservation Strategy was completed in October 2011. Draft alternatives were completed in December 2012. As part of the effort, the Energy Commission has entered into grant agreements with five counties including Imperial, Inyo, Los Angeles, San Bernardino and San Luis Obispo. DFW is supporting both the Plan and Salton Sea Restoration. The Renewable Energy Action Team agencies are meeting with biologists and managers to move forward on conservation and restoration of Salton Sea habitats in conjunction with the Plan.

The Plan covers resources under the Salton Sea or future resources exposed in the sea bed. Discussions are taking place with Imperial County regarding additional funding. The Energy Commission plans to request a new appropriation for new planning grants. Ms. Delfino strongly supports a new appropriation.

10. Case Study of the Public Benefits of a Proposed Water Storage Project

A panel consisting of Jim Wieking, Chief of DWR's Feasibility Assessment Office, Thad Bettner, General Manager for the Glenn-Colusa Irrigation District, and Sharon McHale, of the Bureau of Reclamation discussed potential North of the Delta Offstream Storage (NODOS) as a case study for public and non-public benefits of water storage projects. Mr. Wieking discussed public and non-public benefits, allocation of costs and financing. He noted the Environmental Impact Report (EIR) and feasibility report are currently in the works so the information presented today is preliminary and is subject to revision, but provides an example of public and non-public benefits.

Per the proposed language of the 2014 Water Bond, the public cost share can be up to 50%. Ecosystem improvements must be at least 50% of total public benefits funded. Primary objectives of the NODOS project include municipal, industrial and environmental water quality; flexible energy generation; emergency response; water supply; and ecosystem. Secondary objectives include recreation and flood protection. It has been difficult to assess a value to emergency response benefits. Alternative projects vary in location, conveyance, size and operations. Locations being considered include Red Bank Reservoir, Newville, Colusa, and Sites Reservoirs.

Sites reservoir was used as an example for the presentation. The proposed Sites Reservoir is on the boundary of Colusa and Glenn Counties. In order to design and build this project, several issues would need to be addressed. Roads would need to be modified. Dams and new conveyance methods would need to be built. Mr. Wieking explained the planned reservoir operation schedule, including filling and water deliveries.

Operations would need to be integrated with the Central Valley Project (CVP) and State Water Project (SWP) in order to achieve the expected benefits. Sites would relieve some pressure (water supply, river flows, exports and storage) on Trinity, Shasta, Oroville and Folsom Dams.

Mr. Wieking then discussed how the NODOS planning team measures benefits. Models including agricultural, municipal, industrial, and water quality models are used to analyze the effects of the proposed reservoir. DWR developed localized models for the Sacramento Valley. Ecological models developed by Reclamation assess geomorphology and riparian habitat. There are additional quantitative and qualitative analyses in process. These models produce many results. Eventually, one result must be chosen, and economic models are used to calculate the benefits of that result.

Sites offers two potential recreation locations. It could also improve lake levels at existing reservoirs. Recreation benefits would be accrued at Sites, Folsom, Shasta, Trinity and Oroville and are measured in visitor days. Sites could also provide flood damage reduction in the project vicinity up to 8,600 acres, which is a relatively small amount.

Sites could potentially generate up to 125 megawatts of new hydropower through pump-back facilities. It could be quickly be adjusted to complement other renewable energy sources which might have a lesser reliability. It is difficult to make a definitive statement about those economic benefits because the renewable energy market is new. The analysis presented today does not include that benefit.

The water benefits of Sites Reservoir would include water supply, water quality and ecosystem enhancement. The biggest gain would be in water supply, followed by water quality, then ecosystem. There would be more benefits in dry/critical years. Most benefits would occur on the west side of State, south of the Delta.

There would be system flexibility and emergency response benefits to Shasta, Oroville, Trinity and Folsom Lake Reservoirs. In the driest years, the largest benefit would be to Shasta, then Oroville. During drought years, coldwater pools in existing reservoirs are particularly vulnerable. Sites would put water back into the existing reservoirs allowing the system to be more flexible.

Water quality benefits would occur mostly in the Delta, and would include Municipal and Industrial, Agricultural, and Environmental benefits. Ecosystem benefits would include improving coldwater pools and in-stream flows in the Sacramento Valley. The largest federal annual benefits would be to water supply, ecosystem enhancement and water quality. Federal benefits to hydropower, recreation and flood damage reduction would be much smaller.

Total proposed project costs are about \$3.4 billion. Total annual costs are estimated to be \$190 million. Total annual benefits are estimated at \$231 million, with net annual benefits of \$41 million. This is a benefit cost ratio of 1.2. The largest piece of the \$3.4 billion cost would be for the pumping and generating plants. The dams would be the next largest expense, then conveyance. Miscellaneous costs, roads and outlet works would be additional expenses.

Cost allocation assigns project costs based on who is receiving the benefits. Water supply beneficiaries would be allocated \$2 billion of the cost. Ecosystem enhancement costs are currently projected to be \$864 million. Water quality costs would be \$375 million. Hydropower, recreation and flood damage reduction interests would be allocated the balance of the costs. Approximately 56 % of the costs are

allocated to non-public benefits, and 44 % to public benefits. Ecosystem benefits make up 72% of those public benefits.

Sharon McHale, Project Manager with the Bureau of Reclamation discussed financing. The basic principle of cost allocation is that shared use of multi-purpose of facilities results in cost savings compared to single purpose facilities. Costs are assigned to partners by project purpose. A State water bond, the federal government, CVP Contractors, SWP Contractors and power utilities may finance the project. Ms. McHale presented three funding scenarios. The amount water contractors/users and utility providers would pay remained the same, but the contribution by the State and federal governments varied.

Thad Bettner, General Manager for the Glenn-Colusa Irrigation District, discussed the Sites Joint Powers Authority (JPA). Water Code 79749 of the water bond would authorize a Sites JPA. Senator Feinstein is also proposing similar language in the current federal appropriations bill. JPA members include Glenn County, Colusa County, Glenn-Colusa Irrigation District, Tehama Colusa Canal Authority, Reclamation District 108, Maxwell Irrigation District, Yolo County Flood Control and Water Conservation District and DWR, which is a non-voting member.

The JPA is currently conducting public outreach and information sessions in cooperation with DWR and the Center for Collaborative Policy. They are providing focused outreach to specific stakeholders. Outreach could true up the EIR/EIS to improve the formal public review process and comments.

The JPA is considering issues including the calculated value of the project versus ability to pay for the project; the process for valuing water; non-public funding mechanisms; and effects of BDCP on the performance of the project. They are developing a financial modeling tool to evaluate different funding and payment scenarios. They are hoping to expedite the construction schedule to reduce interest costs.

Mr. Ball and Mr. Saracino asked to hear in-depth discussion of how the cost models are used.

Mr. Bettner noted interested payers have not yet been identified. Most of potential partners need more information on how conveyance would work.

Mr. Saracino asked about the potential funding scenarios. Mr. Bettner explained that the federal contribution is unknown, and the different scenarios account for different levels of federal funding. Mr. Byrne commented on integrated system operations and management, as well as coordination of agencies. Ms. McHale noted that coordination is key and existing operations agreements may need to be renegotiated. Mr. Wieking stated that assurances for both public and private benefits are a huge issue and asked for input from the Commission. Mr. Del Bosque asked how planned operations compare to current system operations. Mr. Wieking explained that in the models, the baseline assumption replicates current system conditions and operations, and evaluate the changes that Sites reservoir would create.

11. Consideration of Items for Next California Water Commission Meeting

Items for the August 2013 meeting may include SWP contract negotiations and operational issues, a draft letter on WRDA, a staff draft of regulations and an update on 20x2020.

Mr. Del Bosque announced the Latino Water Coalition meeting will take place in Fresno on August 3 and invited Commission members to attend. Mr. Del Bosque would like to hear about other reservoir projects currently being studied at a future Commission meeting.

Mr. Ball congratulated the Commission on its contribution to the SWP salary negotiations.

Mr. Byrne adjourned the meeting at 12:48pm.