



Meeting Minutes DRAFT

Meeting of the California Water Commission and Workshop on Small Water Systems Wednesday, May 21, 2014

The Ridge Events Center
2020 Golf Course Road, Auburn, California
Meeting begins at 10:00 a.m.

1. Call to Order

The meeting was called to order at 10:05 a.m.

2. Roll Call

Executive Officer Sue Sims called roll. Commission members Joe Byrne, Danny Curtin, Joe Del Bosque, Kim Delfino, Lu Hintz, and Dave Orth were present, constituting a quorum. Commission member Anthony Saracino participated by phone. Commission member Andy Ball was absent. *Note: Commission member Ortega resigned from the Commission on May 5, 2014.*

3. Approval of April 2014 Meeting Minutes

A motion was made to approve the April 16, 2014 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 federal Water Resources Development Act was recently approved by the House of Representatives and will now go to the Senate and President for approval. The bill, which is supported by the Water Commission, has major implications for water investments and flood management in California. At a meeting of the State Water Resources Control Board (State Board) it was mentioned that the Little Hoover Commission may consider additional studies on water governance issues so staff will follow up if this occurs. Ms. Sims recently attended a symposium on fire, ecosystem, forest management, and water yield which was relevant to the interests of the Commission. Ms. Sims also testified before the Delta Stewardship Council (DSC) on the water projects survey conducted by the Commission, ACWA, and DWR. The project will be discussed further at the Commission's June meeting. The June meeting will also feature a discussion of proposed changes in groundwater management in California.

5. Action Item: Approval of State Water Project Encroachment Permit Regulations

Ms. Sims introduced the topic. The Commission has considered DWR's proposed Encroachment Permit Regulations at two previous meetings. In June 2013, the Commission approved a 45-day public comment period for the regulations. Jim Openshaw, staff counsel for the Department of Water Resources (DWR) provided a summary of what has occurred with the regulatory package since then. The regulation was released for public comment and a public hearing was held. DWR received and responded to several comments. Most were non-substantive comments, including

word changes. However, as DWR staff reviewed the regulation, they realized language regarding change of ownership of a permitted encroachment had been omitted. A new section was added and the regulations were released for an additional 15-day comment period, with no comments received. Following approval by the Commission, the package will be submitted to the Office of Administrative Law (OAL). Commissioner Curtin asked if there is a timeline for approval by OAL once the regulation is submitted. Mr. Openshaw said OAL has 30 days from the date of submission. DWR staff has provided OAL with an advance copy of the regulation package, which should expedite the review. A motion was made and seconded to approve the regulation. A vote was taken and the motion passed unanimously.

6. California Water Commission Workshop

Chairman Byrne provided background to the audience on the Commission's roles, responsibilities and recent activities. The Commission was reconstituted in 2009 to advise the Director of DWR, report annually on the State Water Project, serve as a public forum on water policy issues, approve DWR regulations, and develop a process for determining the public benefits of water storage projects. The Commission has been working to develop an early draft of regulations and guidelines for quantifying the public benefits of water storage projects, as defined by the current version of the proposed water bond. The Commission would have a key role in evaluating water storage projects that could be funded by a state water bond under the current version of the bond.

Commissioner Del Bosque provided additional background to the audience. Part of the Commission's role is to approve regulations. The Commission previously approved DWR's Agricultural Water Measurement regulations which require water districts to measure the volume of water for volumetric pricing in order to improve agricultural water use efficiency. Mr. Byrne added that the State Water Action Plan was part of the impetus for the Commission's focus on small water systems. The Commission has also been working with the Delta Stewardship Council on a recommendation of the Delta Plan to develop an inventory of near-term water storage opportunities throughout the state. Earlier this year, the Commission partnered with the Association of California Water Agencies (ACWA) to collect information about a wide range of potential water storage projects.

Commissioner Delfino added that the mountain counties are at the forefront of dealing with climate change impacts. She expressed interest in hearing about the challenges presented by climate change, how the mountain counties' water systems are being managed in the face of these changing conditions, and what can be done to help address issues of climate change.

7. Mountain Counties Regional Background/Interests

John Kingsbury, Executive Director of the Mountain Counties Water Resources Association (MCWRA), provided an overview of the mountain counties and the purpose of today's workshop. The mountain counties region is committed to statewide water solutions that protect the environment, economy, and quality of life. Mr. Kingsbury said the stewardship of California's headwaters should be advanced. There is a need to increase surface water supply and storage starting at the crest of the Sierra. The region is a leader in water use efficiency, conservation, and water recycling. The mountain counties region, defined by the California Water Plan, contains 10

major watersheds, provides 40% of the state's water supply, and houses many hydropower facilities.

Nick Konovaloff, Legislative Analyst with the Rural County Representatives of California (RCRC), said RCRC represents rural counties across a broad spectrum of issues, including water management. RCRC represents 34 member counties in California, many in the foothill and mountain regions of Northern California. Its member counties account for roughly 60% of California's counties and 50% of the state's landmass, but only about 10% of California's population. Many rural counties are 50 to 75% publically owned land, which minimizes land use decisions. It is vital that state and federal partners properly manage these forested landscapes and watersheds. Mr. Konovaloff discussed the many challenges faced by rural counties. One key issue is that small communities do not have the economies of scale required to finance their water systems. Many communities need financial and technical assistance. Proposition 218 requirements complicate the ability to finance necessary projects.

Nic Enstice, representing the Sierra Nevada Conservancy (SNC), said the Conservancy covers 22 counties, 25 million acres, and many land uses and owners. The Sierra Nevada region provides more than 60% of California's developed water. The SNC's goal is to initiate and support efforts to improve the well being of the Sierra Nevada region and all of California. The SNC's work includes the Sierra Nevada Forest and Community Initiative (SNFCI), which supports collaborative efforts across the Sierra. Another example is the Great Sierra River Cleanup, an annual event that uses volunteers to improve the health of the watershed. The SNC has a grant program funded by Proposition 84 that has distributed \$52 million to 300 projects. The Sierra Nevada Geotourism Map Guide improves outreach to a broader audience. The Mokelumne Avoided Cost Analysis advocates for fuel treatments in the Sierra. The trend of larger wildfires not only affects local landowners, but also impacts a wide range of services upon which the entire state relies. The SNC has partnered with the U.S. Forest Service and the Nature Conservancy to forecast future fires and their expected economic impacts in the Mokelumne watershed. That information was compared to the costs and benefits of fuel reduction treatments. The benefits of fuel reduction far outweigh the costs of wildfire. Mr. Curtin asked what those fuel reduction treatments are. Mr. Enstice said there are a variety of treatments, including letting wildfires burn, prescribed fires, and mechanical thinning. The report examined a broad suite of implications. Mr. Curtin hopes fuel reduction could provide enough biomass energy to sustainably serve small communities. Mr. Byrne asked how the SNC is funded. Mr. Enstice said a large portion of funding comes from environmental license plates and the state General Fund.

Steve Frisch, President and CEO of the Sierra Business Council (SBC), said the council works on rural economic development issues in the Sierra region. Environmental quality and economic prosperity can be co-equal and self-supporting objectives in rural communities. The SBC focuses on large landscape conservation initiatives, sustainable business practices, community development, and leadership development. A number of its programs are affected by California water policy. The SBC also works on agricultural water quality and water conservation measures. It is important to make infrastructure investments that simultaneously improve the economy and community vitality. Mr. Frisch suggested a broader definition of water storage because of the link between upper watershed management, water retention, and supply. California's snowpack stores more water than all of its reservoirs, and forest management can improve that water

supply. Scientific work is being done to better understand the links between forest management, biomass utilization, and water supply. The SBC is advocating for increased funding for the Sierra Nevada region in the state's proposed water bond. It is vital that the mountain counties region retain funding for long term IRWM planning. Addressing water quality issues in the Sierra Nevada, including actions such as mercury remediation, can impact water supplies and quality in the rest of California. Mr. Frisch also advocated for the work of the SNC, which was created to address environmental quality and economic prosperity. To many in the region, it seems irrational that some areas of the state receive large funding appropriations for water projects and activities, but the upper watersheds that supply the vast majority of the state's water do not. That issue will eventually need to be addressed.

Ms. Delfino agreed that there should be more research to link the cycle of forest management, biomass, and water supply. She also asked about high mountain meadow restoration, how it factors into water storage, and what research is being done. Mr. Frisch said Dr. Jeffrey Mount has done groundbreaking work on the link between mountain meadows and the timing of water supply. There are many high meadow restoration projects, but there are not, as of yet, direct measurement methods. More work could be done to prove the long term benefits of meadow restoration. Mr. Enstice said the SNC is funding a study on the issue, but drought makes it hard to apply measurements to a broader landscape. A restoration project was funded in Indian Valley Meadow and those changes are being monitored. Ms. Delfino asked whether the problem is that there are not sufficient tools for measurement or there is not sufficient investment in measurement. Mr. Frisch said there should be investment in measurement and monitoring to prove the theory that upper watershed restoration will improve water supply. That cannot be done without investing in projects. Ms. Delfino suggested that a portion of project funding could be required to go toward investments in measurement.

Mr. Byrne asked what type of work is being done to restore high meadows. Mr. Enstice said meadow channels become incised, so the meadows are not able to absorb water as the snowpack melts. Incised channels allow a large amount of water to flow in spring when it is less useful. One technique is to add soil and replant the meadows so water can seep into the aquifers and be released more slowly. Mr. Frisch added that the water is then required to be released for flood control, which means it cannot be captured, and the state must invest in more storage facilities. Mr. Enstice said the Nature Conservancy is researching which watersheds would most benefit from meadow restoration. Mr. Curtin said that if there is too much growth, water cannot get into the ground. He also asked if it is easy to move excess water to different areas of the region. Mr. Frisch said it is difficult to move water in that way.

Commissioner Orth said the state is covered by the IRWM framework, but there is not a great deal of connectivity between those groups. Many agencies and communities in the Central Valley do not consider the benefits they could receive by working with groups in the foothills and mountains. Mr. Orth asked how connectivity can be improved. Mr. Frisch said the SNC has played a pivotal role in all the IRWM groups in the Sierra Nevada and encourages collaboration. There is not a more formal process in place at this time.

Kamyar Guivetchi from DWR said there is a group called the Roundtable of Regions which was self-created by regional water management groups. DWR has encouraged them to take more of a

leadership role, but they lack resources to fully implement this work. The Roundtable of Regions is well positioned to improve connectivity. The California Roundtable for Water and Food Supply produced reports on storage and retention, agricultural water stewardship, and crisis and connectivity. Their recent report, "Crisis to Connectivity," sets out principles to consider California's water system in a more holistic and connected way.

Kerri Timmer, with the Sierra Business Council, noted that there is an emphasis on built infrastructure and asked about the Commission's role in relation to the upper watershed. Mr. Byrne said the funding in the water bond is open to all kinds of water storage. The requirement on projects that provide ecosystem benefits might help less traditional storage projects qualify for funding. Mr. Curtin added that one role of the Commission is to advise and get input. The Commission is meant to be a public forum to discuss and support ideas. Commission discussion increases the likelihood that issues may be addressed at the legislative level. The Commission is still in the process of understanding and shaping its role on this issue. Ms. Delfino said the Commission is charged with creating the regulations for funding water storage, including how to evaluate projects. In many ways, there is flexibility to define water storage, and it is a broader concept than built infrastructure. Ms. Delfino encouraged the attendees to read the Commission's draft regulations and guidelines for public benefits of water storage projects.

Gene Mancebo, with the Amador Water Agency, said the Mokelumne Watershed Interregional Sustainability Evaluation Project is a joint project between two IRWM groups. The project addresses watershed health, including groundwater, agricultural use, reclamation, conservation, and storage. Conjunctive use projects to provide for groundwater restoration in the San Joaquin Valley are also incorporated. The project may be the only joint IRWM project.

8. Challenges Facing Mountain and Foothill Communities

Marie Davis, geologist with Placer County Water Agency (PCWA), discussed the challenges faced by PCWA. Auburn is at the base of the slope of the Sierra Nevada, which intercepts the moisture that comes in from the ocean. That interception forms the water supply for most of California. Snowpack is a primary reservoir that melts and travels via conduits of forest soils. Sierra soils act as a sponge that absorb water and release it slowly into the river systems. There are three storage systems in the headwaters: snowpack, forest soils, and constructed reservoirs. The diversity of the region's water portfolio allows it to weather hard times. Water from the Sierra feeds river systems throughout California as well as the groundwater basins of the Central Valley. California depends on functioning forest soil systems to deliver water to river systems in a regulated manner. High intensity wildfires, which are increasing in frequency, damage soil in headwaters, which prevents it from acting as a reservoir. Forest management practices to suppress wildfire have allowed the growth of additional fuels. The presence of vegetation at all levels allows fire to reach the tops of trees, and vegetation on the ground allows fires to burn hot and long. Improved forest management practices can allow forests to more closely resemble their natural state so fires cause less damage. Forest management programs require subsidies because it is not an economically self-sustaining opportunity at this time. Vegetation management is a good way to invest in forest reservoirs. The American River Hydrologic Observatory is involved in trying to establish links between changes in hydrology and different forest management techniques. The aim is to quantify and understand the impacts of climate changes on hydrology.

Humanity and water are linked, and there have been documented inhabitants of the American River watershed for at least 6,000 years. Native American collaborators are still active in the watershed. Water system development changed in 1850 with the discovery of gold. Thousands of miles of canal and flume were developed throughout the mountain system to bring water down from the high country. About 1,000 miles of this gold rush infrastructure are still actively used in the mountain counties today. Communities that formed around vintage infrastructure still exist and know the idiosyncrasies and vulnerabilities of these systems. Small mountain districts are an important resource in managing the state's water supply. The systems are subject to landslides, leakage, and evaporation. Water managers focus on trying to reduce those inefficiencies and vulnerabilities. There is some connectivity in the region because some water is transferred from one basin to another through ditch systems. Local water managers are also looking to innovations in modern infrastructure. Small scale improvements to dams can improve water supply flexibility. Incremental increases in efficiency provide flexibility for all beneficial uses. Ms. Davis hopes the Commission will support infrastructure, vegetation management, and science to better understand hydrological impacts.

Commissioner Saracino pointed out that there are difficulties in quantifying the benefits of forest management practices, which will be salient when working on the Commission's final regulations. Mr. Del Bosque asked if there is danger of erosion in systems where the forest is actively managed. Ms. Davis said material is removed, but other material is placed on the soil. There is always a danger of erosion but it is minimized through best management practices for foresters. Mr. Curtin added that the bigger danger for erosion is catastrophic forest fires. He pointed out that many of the issues being discussed relate to utility providers and asked if they are part of the efforts to solve the problems. Ms. Davis said all agencies in the area are linked in infrastructure and to that extent are partners in management, but those relationships can always be improved. Where there are opportunities, funding can bring people together to find mutually beneficial projects.

Tom Cumpston, El Dorado Irrigation District (EID) General Counsel, summarized water rights challenges in the mountain counties. EID faces six primary challenges: dependence on surface water, antiquity of water rights, complexity of rights, lack of local control, securing water for growth, and climate change. There are 100,000 people in EID's 220 square mile service area, which straddles the South Fork American River and North Fork Cosumnes River. EID provides water, wastewater, and recycled water services and owns and operates a hydroelectric plant. Project 184 features four reservoirs. Natural flows and releases from those reservoirs are diverted at El Dorado Diversion Dam. Water then travels 23 miles to the El Dorado Forebay. Some water is sent to EID's treatment plant, but most is sent to its powerhouse.

EID is dependent on surface water because groundwater is not a municipal resource due to the geology of the region. There are not options to desalinate water and urban stormwater recapture is not feasible. The district does make use of recycled water. The antiquity of the district's water rights is a challenge because documenting continuous beneficial use is difficult. Modernizing projects to meet today's standards is difficult because facilities were built with little to no environmental consideration. EID also faces significant operations and maintenance challenges. Many facilities are in poor condition and most of the dams are old. The complexity of EID's water rights also causes difficulties. The district has 33 active appropriative rights, which are

predominantly senior rights. Accounting for and reporting those rights is complex. There is also a lack of local control over water resources. The Sacramento Municipal Utility District (SMUD) constructed and operates the Upper American River Project. Project 184 was owned by Pacific Gas and Electric until 1999. Jenkinson Lake was originally owned by the U.S. Bureau of Reclamation (Reclamation). EID also relies on a water service contract at Folsom Lake. EID has gained more local control recently. A 2005 agreement with SMUD allowed EID access to some storage. The population in El Dorado County is increasing and there is not enough water for growth. The district was able to turn some power rights into consumptive rights to respond to this growth. EID utilized a state finding on area of origin to vindicate the seniority of their rights and area of origin claims. The mountain counties are also dealing with the impacts of climate change. Climate change leads to dwindling snowpack, impacts the filling of reservoirs and flow patterns for direct diversion rights and power generation, and makes it more difficult to meet environmental requirements.

Mr. Curtin pointed out that fractured rock geology makes it difficult to utilize groundwater storage in El Dorado County, but that geology allows aquifers to fill in the Central Valley. Better forestry management can improve access to groundwater on the Valley floor. Mr. Byrne said it is impressive that EID has secured and maintained its water rights and gained more local control.

Gene Mancebo, with the Amador Water Agency (AWA), discussed operational challenges in foothill communities. AWA only has about 10,000 water customers. Amador County is bordered by the Mokelumne River and the Cosumnes River, both of which flow into the Delta. Operational challenges include low density customer service areas, foothill terrain, outdated infrastructure, disadvantaged communities, and rate challenges. Due to low density service areas, fewer customers must pay the cost for infrastructure. Foothill communities do not have the economies of scale required to fund a wide range of projects. Mr. Byrne asked how AWA rates compare to rates in other regions. Mr. Mancebo said AWA uses a tiered rate structure for water. Foothill terrain leads to variation in elevation. Water agencies need additional facilities, such as pumps, to deliver water. Power outages, snow, and road conditions are operational complications. Clay and rocks in the soil are common, which complicates construction. To combat some challenges, AWA is working on a \$13.4 million project to build a gravity supply line. It is a significant cost for a small agency but it will reduce power costs over time. AWA has outdated and aging infrastructure that is difficult to operate and maintain. It is difficult to adjust flow levels. Small rural agencies do not have the customer base to support infrastructure improvements. Many of AWA's systems were acquired from other small agencies. Those facilities are often in poor shape. Earthen canals are difficult to operate and maintain, and leaks are an ongoing problem. In 2006, a 300-foot section of Amador Canal was lost and had to be bypassed with pipe. AWA also deals with disadvantaged communities. Many Amador County residents are on fixed incomes, and the median age is approximately 50. About 14 % of the population lives in poverty. AWA water and wastewater rates are relatively high. As a small community, it is easy for residents to use the provisions in Proposition 218 to protest rate increases, so AWA must cope with static rates despite inflation and rising costs to manage water.

There are many potential benefits that result from making improvements in water management in the upper watersheds of the foothill and mountain communities. Improvements help protect mountain counties and the water users downstream. AWA has technical solutions but lacks

financial solutions. It is difficult to obtain adequate funding to replace aging or damaged facilities. One example of activities with benefits to downstream users is an integrated regional conjunctive use project with the East Bay Municipal Utility District (EBMUD). The project provides increased water supply and reliability for Amador and Calaveras Counties, groundwater recharge in San Joaquin County, and drought protection for EBMUD.

Don Stump, Director of Calaveras County Water District (CCWD), briefed the Commission on funding challenges. As was previously discussed, funding in the mountain counties is difficult. Calaveras County is large and home to roughly 44,000 people, but CCWD serves only 15,000 customers. Mr. Stump said most of the Sierra is a large disadvantaged community with a few flourishing areas. CCWD has reached the limit of its ability to fund projects through ratepayers. There are three watersheds in Calaveras County, all of which flow into the Delta. Despite the number of rivers, CCWD has limitations because many agencies use the water. There are many opportunities for water storage. CCWD's system was not designed for water storage and climate change, but CCWD is responding to those needs. There are many opportunities for small storage projects that would help, but there is no local funding. Small projects all along the Sierra are an opportunity for California to move into the future. In the future, the state will not have as much snowpack as it has relied upon in the past because of climate change impacts. Calaveras is located in two IRWM groups. IRWM is critical, but the funding local agencies receive is only a small portion of what they need to effectively plan for the future water needs of the region. The concept of 'beneficiary pays' is not effective because much of the water in the mountain counties benefits downstream users. Mr. Stump emphasized that the mountain counties need to be good stewards, but cannot do what is necessary without funding to create additional water storage.

Jennifer Montgomery, 5th District Supervisor for Placer County, discussed the economy of the mountain counties. Placer County covers varying elevations and reports to two different regional water quality control boards. The east side of Placer County is home to Lake Tahoe. Tahoe City normally has a robust rafting season, but will only have a three week season this year because Lake Tahoe's water elevation has already peaked for the year. The shortened season will have a huge negative economic impact on the region. Reduced snowfall adversely impacts ski resorts as well as companies that provide ski equipment, restaurants, hotels and other businesses. Placer County is also facing increasing water and wastewater rates. These higher rates are a problem for disadvantaged communities and businesses. The west side of Placer County has similar concerns about tourism. Rafting and recreation are impacted by water shortages. Decreased recreation leads to decreased county revenue. Placer County also has a large agricultural base. It is difficult to balance sustainable development, protect agriculture, protect natural resources, and ensure that water flows to other areas. Greater attention is needed on forest and watershed management so that more precipitation can be stored in the upper watersheds and released slowly over time. Ms. Montgomery said the Sierra Nevada Conservancy needs additional funding to carry out its mission. Placer County has been working on plans to construct a biomass facility since 2005, and the county hopes to begin building this summer. It is a renewable energy source that will improve the watershed, forest management, air quality, and the economy. Placer is working to determine how others can replicate the project in other areas.

Mr. Del Bosque said that attention is typically focused on the Delta while the watersheds are largely ignored. It is difficult to recover the Delta ecosystem because it is far from its natural state.

The mountain counties are closer to their natural state and provide an opportunity to adapt to climate change.

Mr. Curtin asked when Placer County began the approval process for its biomass facility. Ms. Montgomery said the idea began in 2005. The county wanted the process to be replicable. Placer County is working with Phoenix Energy and Nevada Energy to build the facility on the east side of the Sierra crest. It will be a 2.1 megawatt facility that will generate approximately five jobs for every megawatt produced. Mr. Curtin asked if the county had to go through approval by the Public Utilities Commission (PUC). Ms. Montgomery said the PUC is aware of the project. Placer County worked with partners who had already gone through the California Environmental Quality Act and National Environmental Policy Act processes. The facility will use waste products that would otherwise be piled and burned. The most difficult permitting process is with the Placer County Air Pollution Control District. Mr. Curtin said biomass facilities are priced out of the market by the PUC. Biomass is a more costly energy source, but if when all the benefits are considered, it is an important investment. Ms. Montgomery pointed out that biomass is completely unsubsidized.

Mr. Orth said the challenge is to develop an understanding of the water yield of watershed management and compare it to more traditional water management decisions. It is important to understand what yield increases can be expected from watershed and forestry management versus alternatives and think about those choices and benefits holistically.

Ms. Delfino asked if there are communities within the mountain counties that get their water from sources other than local water agencies. She also asked if there are communities in the region that are unable to participate in the IRWM process. Ms. Montgomery said many Placer residents use wells and have no ability to connect to a formal provider, and many do not want to. Mr. Stump said IRWM is a major issue for the mountain counties. Many small agencies do not participate in the IRWM process because they have few employees and often lack resources or technical knowledge. Despite the efforts, it is difficult to incorporate these communities into larger planning and decision-making processes. In addition, many Native American tribes are disadvantaged and do not participate in IRWM. Ms. Davis said PCWA has an assistance program for small agencies that is working to address these challenges.

9. Regional Program/Project Opportunities

Tom Cumpston discussed water use efficiency and best management practices (BMPs). The mountain counties are leaders in water conservation, but it is difficult for smaller agencies to implement water conservation measures. EID began Irrigation Management Services for agricultural users in 1977, which has produced significant increases in water efficiency. The various conservation programs are largely funded by grants. EID is a signatory to the California Urban Water Conservation Council and complies with all BMPs. A 2005 study on water loss showed losses at an "economic level." EID is on target for 20x2020 reductions and is a leader in energy management. Recycled water is the district's most advanced water use efficiency program. The program began in 1970s and was upgraded in the 1990s. There is a partnership with developers to construct residential units that are dual-plumbed to use recycled water for outdoor irrigation. Mr. Del Bosque asked if that water is delivered through a separate system. Mr. Cumpston said there is a separate system for storage and transmission. It is a drought-resistant

water supply for irrigation. Mr. Del Bosque asked how much it is treated. Mr. Cumpston said the water is treated to tertiary levels. The water meets all health-related drinking water standards. Commissioner Hintz asked if it is a metered system. Mr. Cumpston said there are both indoor and outdoor meters. The mountain counties have been early adopters and innovators. They are only held back by an inability to fund projects.

Rem Scherzinger, General Manager for Nevada Irrigation District (NID), discussed water storage projects. NID's high alpine storage system is predominantly snow driven. The system, which was designed to capture snow, will have to be altered in the future due to climate change. NID is considering how to manage watersheds in the face of changing conditions. Sediment removal is one of NID's main projects. The local sediment contains mercury, so NID has piloted a mercury removal device. They plan to begin removing sediment and mercury in June 2014. Mr. Byrne asked how much storage may be increased through sediment removal. Mr. Scherzinger said NID is trying to recover storage capacity they have lost. All NID's reservoirs are currently impacted. Mercury removal also provides environmentally sensitive aggregate. NID wants to bring the method to full scale usage and develop a method for other districts to replicate. Mr. Curtin asked if mercury removal is a pilot project. Mr. Scherzinger said NID has the only machine. The State Water Resources Control Board has a method to sequester but not remove mercury. The majority of the Sierra has problems with mercury. Mr. Curtin asked if there is a similar problem in the Coast Range. Mr. Scherzinger said the Coast Range also has mercury issues that could be addressed by mercury removal. NID is currently trying to determine what unit of measure can be used for financial comparisons. NID needs to engage in a portfolio of projects now in order to maintain its water supply. Immediate modifications can be a small buffer. NID is now engaging in forest management. The state also needs to diversify its water storage portfolio, including more water storage in the Sierra.

Andy Fecko, with PCWA, briefed the Commission on water supply reliability in northern California. PCWA has reservoirs in the alpine areas, and infrastructure to serve western Placer County. Downstream, Folsom Lake is operated for multiple beneficiaries. Water supply reliability from state and federal reservoirs has decreased markedly since they were first constructed. Folsom Lake has dropped lower over time. Some of that water supply reliability must be regained. The North State Water Alliance released a plan that includes a combination of storage projects for better water supply reliability. New diversions from the Sacramento River would take pressure off the American River. There is pressure on Folsom Lake to respond to water quality issues in the Delta. That pressure is in direct competition with endangered species in the lower American River. Responsible water agencies must suggest solutions. Those solutions include increasing water conservation, storage, and conveyance. Cooperation is also vital. Local agencies have come together during this drought and these activities should continue. Recycled water is part of the future for the region. Additional upstream storage and new Sacramento River diversions will be critical. With these investments, more water would be available in Folsom Lake which would have statewide benefits.

Hank White, from Foresthill Public Utility District, provided an overview of the Sugar Pine Dam raise. The Sugar Pine Dam was constructed by Reclamation in 1980 with the potential to be enlarged. The reservoir's current capacity is 7,000 acre-feet, but it was designed to be expanded to 10,000 acre-feet. Increasing the reservoir capacity would provide immediate benefits. The

Foresthill service area is quite small, and its water supply system is well developed. The system serves their customers well, but there is regional responsibility to manage resources to benefit others. Sugar Pine Dam was built so radial arm gates could be installed, but Foresthill lacks a funding source to build and install these gates. If it could move forward with the project, storage capacity would increase by 30% and the region would be better prepared for growth. Water would be captured when it is available, enhance fisheries, improve ecosystem resources, provide additional flood protection, and impound high quality water. The project is shovel ready.

Mr. Byrne encouraged the participants to review the Commission's draft regulations and the water bond. There are some restrictions on how the Commission can distribute funding. To qualify, 50% of funded public benefits must be ecosystem benefits and there must be a benefit to the Delta. Ms. Delfino added that it would be useful to also provide guidance on how funding should be distributed to provide the greatest overall benefit for California.

Dave Eggerton, General Manager of the El Dorado County Water Agency (EDCWA), discussed statewide connections to the watersheds. EDCWA is a planning agency that advocates for policy and works with water purveyors to ensure a reliable water supply. EDCWA focuses on how state law, policy, and investments can be connected to local needs. Local actions can also provide options for dealing with statewide challenges. There are resources available in the mountain communities that could be utilized by the state. Last year's Rim Fire raised awareness that changes in fire behavior threaten headwaters. There are actions that can be taken now to protect existing water quality and flows, but local agencies lack funding to perform these activities. EDCWA expects to work with the Delta Stewardship Council on headwater management issues. ACWA plans to adopt a framework document for headwater management soon. Headwater issues affect all of California, not just the mountain regions. The Governor's Water Action Plan includes a chapter on investing in headwaters. Mr. Eggerton suggested that EDCWA might provide a presentation to the Commission at a later time to discuss the progress that is being made. One of the projects underway locally will involve groundwater banking downstream in the Sacramento area. There is available groundwater storage that exceeds the capacity of Folsom Lake. This project will balance the needs of water users and the environment. There will also be a focus on headwater management. Financing the project is a major obstacle and EDCWA does not have the resources to execute these projects without outside support.

Paul Sciuto, Assistant General Manager with South Tahoe Public Utility District (STPUD), discussed water management on the east slope of the Sierra. The east slope of the Sierra Nevada contains the Truckee River Basin and the Carson River Basin. STPUD serves the south shore of Lake Tahoe and is entirely reliant on groundwater. The district also treats and exports recycled water. Water from Lake Tahoe flows to Pyramid Lake in Nevada through the Truckee River System. Current snowpack in the basin is about 20% of normal for this time of year. The Truckee River Operating agreement governs how water is used throughout the basin. The agreement addresses water quality and the environment. Additional headwaters in Alpine County are in the Carson River Basin. The Carson River provides agricultural flows for ranchland irrigators in California. Flows continue into Nevada and end up in the Carson Sink. STPUD owns two reservoirs on the Carson River. The Carson River Basin is governed by the Alpine Decree and is a federally adjudicated area. There are several main water companies and many small water companies in the Tahoe basin. The Lake Tahoe Fire Partnership aims to join local agencies to address fire flows. STPUD is the

largest district in the Tahoe basin. The state's Porter Cologne Act mandates that all treated effluent must be transported outside of the Tahoe Basin, which means that recycled water cannot be used in the basin. The 1.6 billion gallons of recycled water that STPUD produces per year is instead used for irrigation in the Carson River Basin.

Mr. Stump pointed out that the mountain counties work closely with one another, state agencies, and stakeholders. They have accomplished a lot with very little. The region recognizes its role in environmental stewardship for the state and takes that role seriously, but needs support.

10. Public Comment and Discussion of Next Steps

Supervisor Montgomery said she reviewed the draft regulations for quantifying public benefits and asked if the water yield from meadow restoration and watershed treatments would count as surface water or groundwater. Ms. Delfino suggested that anyone providing comments to the draft regulations should also provide suggestions on how those benefits should be counted.

Mr. Byrne said the workshop was enlightening and put the headwaters into clearer perspective for the Commission members. Mr. Curtin encouraged the workshop participants to become involved in discussions about the water bond because the content of a revised bond is currently being discussed in the Legislature. Mr. Curtin also made a motion for Commission staff to investigate a joint meeting with the Board of Forestry to put issues into a joint regulatory perspective. A larger conversation about forest health, water, and energy could result in policy changes. Ms. Delfino noted that there are other entities involved in those issues and collaborative projects going on in the Sierra. The U.S. Fish and Wildlife Service and the Department of Fish and Wildlife have been very engaged. It may be useful for one of those projects to be highlighted at a future Commission meeting. Mr. Curtin said he would like to find focus before expanding the Commission's efforts too much, but it would be helpful to expand the conversation. A motion was made to have staff look into collaboration with the Board of Forestry and any relevant entities. A vote was taken and the motion passed unanimously.

Mr. Del Bosque said the meeting was enlightening, particularly because it was held in the area being discussed. He noted that it is important to know what goes on in the headwaters and expressed interest in learning more.

Mr. Byrne adjourned the meeting at 2:33 p.m.