

# DIALOG REPORT #12

## WATER, WATER...WATER – EVERYONE IS TALKING ABOUT IT AND SO ARE WE

DIALOG HELD FEBRUARY 27, 2014

LIONS GATE HOTEL, SACRAMENTO, CALIFORNIA, AND

INYO NATIONAL FOREST SUPERVISOR'S OFFICE, BISHOP, CALIFORNIA

### OVERVIEW

This Sierra Cascades Dialog program brought together interested individuals to discuss water in relationship to the ecological needs and impacts to the forest ecosystem; the use and conservation of water in the Sierra Cascades, and water's use as a base for recreational activities in the national forests.

In planning for the day, the Sierra Cascades Dialog Steering Committee agreed that a program to discuss the subject of water in the forest ecosystem – from State water policy to the amount available as a natural resource – would be valuable for the Forest Plan Revision (FPR) activities underway (at the time) in U.S. Forest Service (USFS) Region 5. Thus, the topic of “water” for Dialog #12 was framed within the context of the Preliminary Need to Change for the FPR process and the following topic emphasis areas:

- Meadows/Rivers, Streams and Riparian Ecosystems.
- Vegetation, Wildlife and Fire.
- Diversified Recreation.

The Sierra Cascades Dialog program provides information about a subject to the attendees and serves to support a forum for the public and stakeholders to give input to the USFS Forest Plan Revision process. Coincidentally, this particular Dialog came at a time when many in California, including natural resource managers, government leaders and utility directors had just launched efforts to address a drought in the State of California and the associated impacts from the Governor's declaration of a Drought Emergency in January 2014.

DIALOG PURPOSE: PROVIDE  
INPUT AND FEEDBACK WITHIN THE  
CONTEXT OF THE PRELIMINARY  
NEED TO CHANGE

From predictive drought conditions to reflections of the Rim Fire threatening urban water supply in the San Francisco Bay Area, water seemed to be the critical topic among many segments of the population.

Approximately 140 stakeholders participated in the Dialog in Sacramento, and 25 stakeholders participated in Bishop, California. Participants included USFS staff and stakeholders who represented many diverse interests including conservation and environmental groups; fire safe councils; contractors; County, State and Federal government entities; forest products industry representatives; land managers and private landowners; outdoor recreation enthusiasts; and rural community members and scientists. Approximately 15 people identified themselves as attending for the first time. Given that the topic was water, people were also asked to identify if they live or work in the northern part or the southern part of the state, and whether they lived in rural communities or more urban areas. There was sizeable and well-dispersed geographic representation in the room. In addition, stakeholders from the eastern part of the Sierra Nevada were present at the Bishop meeting location. It was noted that there was no one present who self-identified as representing the agricultural industry, a hydro-electricity entity or a water agency at the Dialog. For one of the few times since the inception of the Dialog, someone in the audience (one of the volunteer facilitators) self-identified as representing youth or young adult – being 25 years or younger.

The intent of the Dialog is for stakeholders to engage in conversation on forest land management issues of regional importance for the Sierra Nevada and the Cascades. The goal of the Dialog is to create shared understanding among participants with diverse viewpoints and to explore far-reaching issues. The stakeholder input and the resulting outcomes of the day inform future USFS decisions.

The Sierra Cascades Dialog program began in fall of 2010. The first Dialog helped the USDA Forest Service Regional Office refine the *Leadership Intent for Ecological Restoration*. The second Dialog on *Values, Attitudes and Beliefs* informed the Region's biological assessment for forest planning and led to the science synthesis. Dialog #3 looked at *Improving Rural Economies* built on work underway in partnership with County elected officials, the Sierra Nevada Conservancy, the Biodiversity Council and other initiatives around the State. The fourth Dialog on *Science Synthesis* identified questions the stakeholders wanted that process to answer.

The fifth Dialog vetted a *Collaborative Model* for each early adopter forest to use during the Forest Plan revision.

The current Collaborative Guide includes Dialog participants' suggestions, including Collaboration & Communication Plans that the early adopter forests (i.e. Sierra, Sequoia, and Inyo) and Region 5 developed with stakeholders.

The sixth Dialog on *Adaptive Management in Forest Planning* increased understanding about planning as a cyclical process. The seventh Dialog on *Recreation: Social and Economic Benefits* informed future forest planning by deepening understanding about demographic trends and the implications for forests. The eighth Dialog on the *Science Synthesis* increased understanding of the Science Synthesis report, including how scientists addressed questions identified through the Dialog. The ninth Dialog focused on *Bioregional Assessment for Forest Planning* by looking at conditions and trends for the bioregional assessment, resulting in a report that was the gist of Dialog #10.

In December 2013, Dialog #11, focused on wildland fire. *Still Standing – Wildland Fire and Resiliency* was designed to explore the impacts of wildland fire on ecological and community resiliency and the economic, social and cultural effects of large fires, including Wildland Urban Interface (WUI).

This report provides a summary of Dialog #12 – *Water, Water...Water – Everyone is Talking About It and So Are We*. The report shares insights into the need for this valuable resource and some of its conflicting uses; it

also looks at the role of the Sierra Nevada and Cascades in the statewide water system. The report reviews the activities of the day from the Dialog, provides highlights to the presentations, and captures key content of discussions (to the extent possible since participants worked in small groups during parts of the day). Additional notes from each of the facilitated small group discussions, as well as the complete set of graphic facilitation notes, are summarized in separate companion documents.

## WELCOME AND DIALOG OVERVIEW

**Deb Whitall, Ph.D., Acting Ecosystem Planning Director, USDA Forest Service Region 5** welcomed the participants and provided highlights of the Sierra Cascades Dialog program. She explained that information from the previous Dialog “conversations” has influenced the Forest Service’s strategy for the FPR process. The Dialog process continues to provide input, foster understanding and build trust among the Forest Service leadership and staff and the many stakeholders.

Deb shared that the FPR process was currently exploring the “preliminary Need to Change” in the “pre-NEPA” (National Environmental Protection Act) phase of the FPR. This phase allows for recommendations of changes to the existing forest management plans and allows for discussion of these recommendations before they are formally reviewed. The recommendations can be submitted and evaluated in a more formal review process later in the spring. In April 2014, the Forest Service anticipates publishing a Notice of Initiation (NOI) to prepare an Environmental Impact Statement (EIS) and start a public scoping period. *(Note: post Sierra Cascades Dialog #12, the USFS changed the time line. The April issuance of the NOI and the public meetings were postponed to a later date.)*

## WATER IN THE STATE AND THE NATIONAL FOREST SYSTEM

Two keynote speakers gave detailed overviews about water throughout the State of California and water as a special natural resource in the forest ecosystem of the Sierra Nevada and Cascades.

The presentations ensured that the cross section of stakeholders shared common knowledge and basic information about water throughout the State generally and in the Sierra Cascades specifically.

**Eric Hong, Chief, North Central Regional Office, Division of Integrated Regional Water Management, State Department of Water Resources (DWR)**, gave a presentation on the current condition of supply, the aquatic ecosystem and the water yield in the State and how the Sierra Nevada range contributed. **Chris Nota, Regional Forester's Representative, Sacramento, USFS Region 5** provided information and insight about water in the forest system as a reservoir for downstream uses, as a recreational resource, and as a necessary commodity.

Together, they presented facts that demonstrated the importance of the water supplied by the Sierra Nevada and Cascades. The Sierras provide 62 percent of the water in reservoir storage throughout the State. Some of that storage is through rain and runoff, but the snowpack itself is the largest "reservoir" in the State. In addition, the water from the Sierras is the source for 82 percent of the hydroelectric power generated and accounts for 10-15 percent of the electric capacity in the State.

The national forest system serves to protect the watershed; at the same time, it is the water that benefits forests, especially meadows. Slow runoff is good for meadows. The head waters of many major rivers and the source of Bay Delta Water is in the Sierras. Watershed management and water resource management are key to the natural "plumbing system" of California. The water runoff contributes to biodiversity, rural economies, hydroelectricity, drinking water availability, and more.

Management of the watershed and associated resources presents many challenges. **Eric Hong** summed up some of the challenges with water management at a State level including an increase in population and development that in turn increases demand, and an aging infrastructure that needs to be maintained and replaced. In addition, climate change will heavily impact the way water is collected and stored. As the climate warms, precipitation will most likely take the form of rain and not snow. This will affect water storage and supply. The challenge will be to balance reservoir operations, flood protection and water supply.

Another big challenge from the State and USFS viewpoints is upstream versus downstream management. Most of the water rights are held by downstream users. This requires coordination among users because the water is already claimed by downstream users before it can be used for anything upstream. Eric suggested solutions through management strategies that result in some level of program coordination or quantity control. The DWR's Water Plan Update recommends 30 resource strategies, including forest management and coordination through regional partnerships and inter-regional projects.

**Chris Nota** highlighted resource management challenges by reviewing the big picture of the relationship of water within a forest system. She emphasized how interconnected the watershed and the forest are. A healthy and resilient forest will contribute to water resources. The challenge of forest management is that water resource management is just a piece of the larger picture and must integrate with fire management, vegetation management and meadows and road management. They all have positive and negative impacts and are related to each other. Forest management is not just water management, yet water is extremely important to the forest.

Chris explained that currently, California is experiencing an "endless fire season." Because of the basically year-round dry conditions, there is a danger of wild land fire throughout the entire year. The aftermath of a fire leaves the land susceptible to the impacts of landslides and erosion and sediments that contaminate the water supply (reservoirs). The USFS Leadership Intent to increase the pace and scale of restoration could ultimately help. Thinning, fuel treatments and the use of debris (biomass) could help address the impacts of fire and thus the impacts on the watershed. Adverse impacts to water resources on forests can be expected if wildfire risk is not reduced.

#### CALIFORNIA'S FORESTS AND WATER FACTS

18 NATIONAL FORESTS IN CALIFORNIA

HEADWATERS FOR MOST OF CALIFORNIA'S  
RIVERS ARE IN THE SIERRAS

MORE THAN 50% OF WATER RUNOFF COMES  
FROM FORESTS' WATERSHED

PROVIDES DRINKING WATER FOR 23 MILLION  
PEOPLE IN SIERRA NEVADA AND WESTERN  
NEVADA, BAY AREA AND SOUTHERN CALIFORNIA  
CITIES

THE HYDROELECTRIC POWER GENERATED  
PROVIDES 10-15% OF THE STATES' TOTAL  
ENERGY SUPPLY

Wildfire risks and climate change are challenges for the USFS in a number of ways, and specifically when looking at water resources. The Sierra Cascades are critically important to California's water resources and will become more important with climate change.

Funding remains a challenge. To respond to the objectives, the USFS needs funding of: more scientific studies and analysis; "boots on the ground" watershed and meadow restoration; road maintenance and fire management activities, such as thinning and clearing the biomass.

The USFS and DWR have collaborated on efforts and continue to work with other government agencies and conservation groups. Funding is needed to protect the Sierra Nevada Cascades forests as both a natural environmental resource and a commodity supplier. The presentations called for a shift in funding priorities from reactive to proactive and from quick fixes to planned strategies. Funding sources might be available through the US Department of Agriculture Farm Bill or bond measures.

*Some common themes to Eric's and Chris' presentations:*

- The value of the Sierra Cascades as a natural resource, water pipeline and power generator.
- The need for balance among the various uses – conservation, agriculture, recreation, rural / local industry and others.
- The importance of bringing all parties to the table to collaborate and plan. Collaborative efforts and partnerships will help accomplish the needed restoration work.
- The value of Public Education and Public Engagement both upstream and downstream. People need to know the source of their water.

### Questions & Discussion

- How do we address the impacts of the fires?
- Where can we find funding?
- At what point in the process do we analyze for cumulative impacts to do work on the landscape before a catastrophic fire?

## DIALOG – BREAK 1

The initial break out for the morning was designed to establish common goals and understanding of concepts by having a discussion about value statements regarding water as a resource. The summary of all the breakout discussions is an accompanying report to this document. The summary below reflects the comments and reactions shared upon reconvening.

***“How do we continue current uses and trends and manage the forests better?”***

### Legislation and Policy

- Make rules flexible.
- Make NEPA more flexible. NEPA has the potential of being a challenge because it can take too long and leave project proponents waiting while out-of-area individuals or parties hold up a project.
- Collaborate with groups to share resources.
- Establish shared objectives around common currency.

### Funding

- Address the need for more resources.
- Investigate possibility of a “Hydro-Cap and Trade”
- Groups should pool resources.

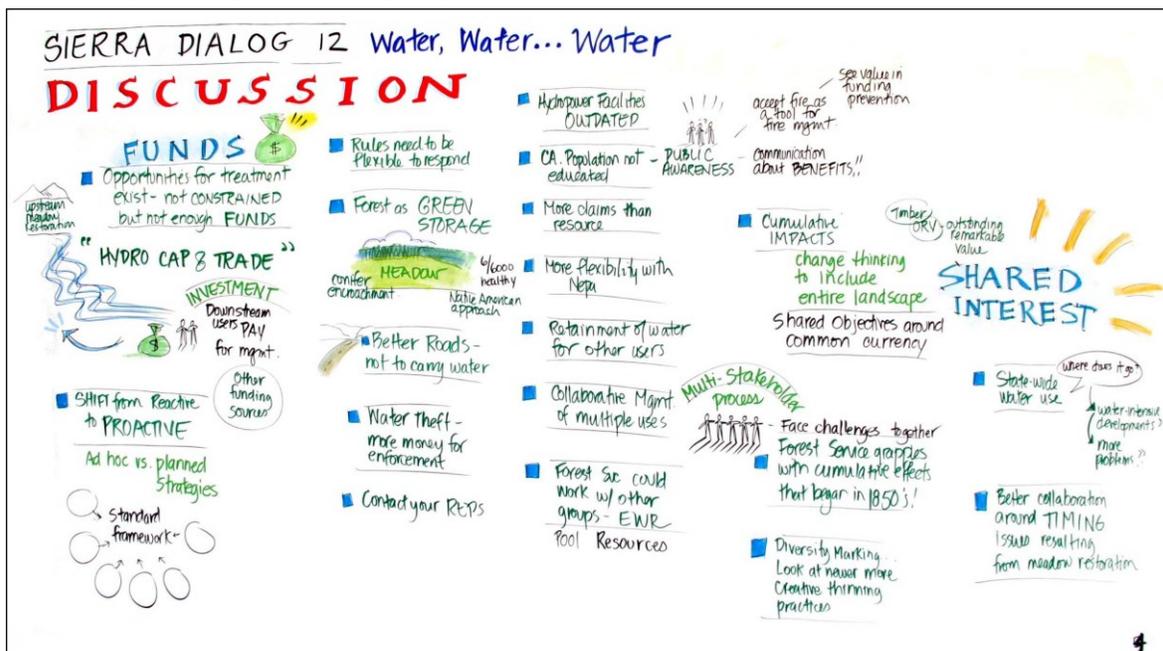
### Environment and Ecosystem, Resource Management

- Think of a forest as “green storage.”
- Meadow restoration is essential for healthy forest and responding to climate change.
- Identify shared interests.
- Use fire as a tool for forest management.
- Better roads for access and resource conservation.

### Public Education

- Educate public about the problems with water-intensive developments.
- Communicate about how conditions that happen upstream affect water users downstream.
- Replace outdated infrastructure and facilities.
- More claims for water than resources are available.
- Educate and inform so that people think of the cumulative impacts.

Graphic below captures the many ideas, thoughts and suggestions offered from the audience following the small group discussions.



## PANEL PRESENTATION – WATER IN THE FOREST ECOSYSTEM

The afternoon session was designed to look at conditions and trends, scenarios and case studies from invited speakers related to **social, economic and ecological sustainability of water quality and quantity.**

The discussion was in the context of topic areas of emphasis for the Need to Change:

- Meadows /Rivers, Streams and Riparian Ecosystems;
- Vegetation, Wildlife, and Fire and
- Diversified Recreation.

Invited presenters representing ecology, aquatic ecosystems, Tribal communities and recreation providers were asked to offer opinions from their particular interests using four framing questions:

The presenters spoke of sustainability, climate change, historical appreciation and everyday use of water; the importance of the meadows as a water filter and water used to counter fire.

1. What most threatens the watershed, water source, or water quality in the context of the topic emphasis areas?
2. If stewardship and sustainability are paramount, what are some of the best management practices that contribute to such – how is sustainability maintained?
3. Based on the current conditions, what would you like to see as potential desired conditions in the Preliminary Need to Change?
4. What will help the Forest Service most in managing the conflicting desires?

### MARK DREW

**Dr. Mark Drew's** presentation emphasized meadows as an important part of the forests' aquatic system. He started his comments with a call to action regarding the Need to Change and the FPR. He challenged everyone to start thinking and planning now to generate good, actionable ideas. The Sierras are in a critical state and work needs to be done, he said, noting that the meadows in many areas have deteriorated and need to be restored. He called for collaboration among individuals and agencies, including – scientists, non-governmental organizations (NGOs) and the USFS. With smart planning and by working collectively to develop the metrics, there are opportunities to meet desired conditions in the National Forests for aquatic systems.

### KENNY GLASPIE

Representing a recreational stakeholder interest, specifically, Off-Road Vehicles (ORVs), **Kenny Glaspie** spoke to conditions of the meadows and trail maintenance, among other topics. He explained that trails need water for recreational use. Ultimately, lack of water is costly. For example, a water truck is needed to compact soils on a road. The water is safe for the people and the environment, a substitution would not be. He provided another example of using recycled water with wash racks to maintain vehicles.

Outdoor recreation brings thousands of jobs and \$46 billion into the State's economy. The biggest challenge is to determine how much that impacts outdoor recreational water use. Agriculture uses about 80 percent; landscaping for golf, baseball, etc., uses about 10 percent, and that leaves 10 percent for drinking and other uses.

### RON GOODE

**Ron Goode**, Tribal Chairman for the North Fork Mono Tribe introduced the Native American value of sustainability into the discussion. Chairman Goode shared a historical perspective regarding how the landscape had changed over the generations. Native Americans are culturally dependent on water uses. Water is key to their livelihood, and it comes with a practice of taking care of the land so that it can be retained in meadows. The natural burns kept the landscape open, allowed for less mass on the ground to impact water flow and allowing for more meadows. The meadows act as sponges to release water in the summer. Chairman Goode spoke to the importance of small cultural burning ceremonies for Native Americans.

In response to earlier conversation points, Chairman Goode emphasized that the tribes have not relinquished their water rights. At a recent Tribal Water Summit, more than 90 tribes collaborated with Federal and State government representatives to develop Guiding Principles for the inclusion of tribal ecological considerations in water-related resource planning and management.

Currently, there are nine restoration projects on tribal lands. Three of the projects are in meadows, and three are with black oak stands. The partnership and collaboration aim to work towards continued sustainability of the forest and the watershed.

### DAVID HERBST

Climate change greatly influences the conversation about water resource management and forest planning. **Dr. David Herbst** has been studying climate change and drought effects on the ecological systems of Sierra Nevada streams. His work directly informs the Forest Service. He shared information about the Sentinel Monitoring Network project, which determines how climate change is impacting hydrology in the Sierra

Nevada ecosystem. The USFS is interested in the project to learn more about climate change and how to protect and restore aquatic habitats.

David predicted more erratic rain and snow seasons. Warm rain will accompany snow, causing early melts. The summer months will bring drier perennial streams. Smaller flows and snow packs will impact hydro electricity generation. Hydrologic capacity will fall and dry years and droughts will continue.

David spoke to the need for more resources to be spent on monitoring and data collection. Models that are “gaming” the effects of climate change should not be substituted for actual data and monitoring. The USFS would benefit by prioritizing monitory resources, a move that would help with the Desired Conditions as part of the FPR.

#### CAROLYN HUNSAKER

**Carolyn Hunsaker** spoke to balance and sustainability between forest health and ecosystem services. She talked about the Science Synthesis work and shared results of the King's River Experimental Watershed (KREW) Study Area: water-yield variability, forest restoration, riparian study, water quality, meadow hydrology and Yosemite toad, etc. KREW looked at the five places to store water: air, vegetation, streams and lakes, and soil and groundwater wells

Through her work and research, Carolyn explores the question of, “Can we conduct forest restoration with acceptable short-term effects and beneficial long-term effects.

Carolyn was the Research Ecologist and Principal Scientist for KREW, which collected some baseline data. The study suggests treatments to reduce fire risk to selected homes, studying them again in five to six years.

## DIALOG DISCUSSION – SUMMARY

After the afternoon panel presentations, the larger group broke up into small groups for discussion.

In summary, while the panelists clearly stated their own viewpoints, they all spoke on the common themes of collaboration and partnerships among stakeholders as the one approach to work toward resource management. They agreed on a need for a level of conservation and planning – even contingency planning. And there is a desire to establish a fair share use with water.

During the panel discussion and in the comments period afterwards, audience participants shared the following interests.

- The FPR needs to include a Meadow and Riparian discussion. Best management practices should be reviewed, and not all meadows should be treated the same.
- The discussion is about water and water quality, but there is also a social and economic perspective.
- Funding remains a priority on everyone’s list.
- There is a need for more science and monitoring, with the latter including cattle grazing.
- There has to be a "fair share" of the uses, balancing recreation, resource protection and ecosystem concerns, among others. A network of fuel breaks and riparian areas should be established.

## QUESTIONS AND DISCUSSION

In addition to the general interests described above, the following comments and questions were posed to the speakers

Directed to Carolyn Hunsaker: What do you mean when you say ‘intensity’? What do you mean when you say reduce forest cover by 40 percent? Starting at what base area? Can it be patchy?

For all speakers: There was no discussion of what methodology to use to assign value to ecosystem services. What methodology can / should be used?



Deb Whitall reminded everyone of the next Dialog and provided the [Region 5's website](http://www.fs.usda.gov/main/r5/home) at <http://www.fs.usda.gov/main/r5/home>, which offers information on the FPR.

## RELATED DOCUMENTS

*Summaries of the Dialog table top discussions and graphic notes are included at the end of this report, and the PowerPoint presentations from the presenters can be found on the [Sierra Cascades Dialog](http://www.fs.usda.gov/detail/r5/workingtogether/?cid=STELPRDB53492) website at <http://www.fs.usda.gov/detail/r5/workingtogether/?cid=STELPRDB53492> 18.*

## GRAPHICS BY PAULA HANSEN