

MEETING SUMMARY

Tulare Basin Watershed Connections – Working Group January 27th, 2015

Participants

Michelle Selmon – California Department of Water Resources (DWR) (interim working group lead)
John Austin – retired, formerly National Park Service
Roger Bales – UC Merced Sierra Nevada Research Institute (SNRI)
Sarah Campe – Sierra Nevada Conservancy (SNC)
Carole Combs – Tulare Basin Wildlife Partners (TBWP)
Heidi Eisner – Kings River Conservation District (KRCD)
Jihadda Govan – Bureau of Land Management (BLM)
Rob Hansen – Tulare Basin Wildlife Partners (TBWP)
Dave Hoffman – Deer-Creek Tule River Association (DC TRA)
Carolyn Hunsaker – US Forest Service (USFS) (on the phone)
Matt Hurley – Angiola Water District (AWD)
Denise Kadara – Tulare Basin Wildlife Partners (TBWP)
Kayode Kadara – Community of Allensworth
Bobby Kamansky – Southern Sierra Regional Water Management Group (SSRWMG) (on the phone)
Adam Livingston – Sequoia Riverlands Trust (SRT) (on the phone)
Jennifer Morales – California Department of Water Resources (DWR)
Koren Nydick – Sequoia/Kings Canyon National Parks (SEKI)
Eric Osterling – Kings Basin Water Authority (KBWA)
Lucas Patzek – (Ag Innovations Network) (on the phone)
Mohammad Safeeq – UC Merced Sierra Nevada Research Institute (SNRI)
John Shelton – CA Department of Fish and Wildlife (CDFW)
Nikki Woodard – Tulare Basin Wildlife Partners (TBWP) (on the phone)
Katie Young – Vollmar Natural Lands Consulting (VNLC)

Presentation by John Austin on ‘water demand’

- ✚ John began by reminding us of earlier discussions at the 2014 Watershed Connections workshops about the frequently mentioned problem of ‘demand exceeding supply’.
 - He noted that there did not appear to be a common understanding of the term ‘demand’.
- ✚ California Water Plan Update 2013 uses the term demand in eight different ways that range from a measure of **consumption** (amount of water used) to a measure of **desire** (how much we could use if it were available):
 - Measures of consumption:
 - Applied water (total amount actually used in a given year)
 - Includes both consumptive use and reuse and return flows, and groundwater withdrawals including overdraft
 - Dedicated and developed supplies (sustainable component of applied water)
 - Same as applied water minus groundwater overdraft
 - Net water use
 - Includes applied water, water loss from the distribution system, and outflow leaving the service area
 - Same as applied water minus reuse and groundwater recharged from surface applications

- Average year water demand (average amount of applied water or the historical water demand)
 - Measures of desire:
 - Explanation for past changes in the amount of applied water (demand)
 - Temporal demand
 - Projecting future water demand relative to future water supplies under various scenarios
 - Water demand (how much water would we use if it was available)
 - Per Evelyn Tipton at DWR, water portfolios do not address water demand in the sense of users’ desire or need, but rather on actual use (applied use, net use, etc) in past years
 - No economic component to this (Water Plan makes the assumption that prices does not change when talking about water demand)
 - In the Tulare Basin, agriculture could essentially make productive use of as much water as they can get
- ✚ Presentation summary/major points
 - Average water year demand exceeds average dedicated and developed water supplies.
 - A long term groundwater overdraft condition exists (33 cubic miles of storage lost since 1860).
 - Developed water supplies are a limiting factor for agriculture. If more water was available agriculture would make productive use out of it.
 - Increasing supply does not necessarily reduce groundwater overdraft.
- ✚ The group discussed the fact while we need to remain cognizant of these varying definitions of demand in our discussions and make sure we are talking about the same concept when using the term, we need to stay focused on what we can reasonably affect with our collaborative efforts (e.g. finding ways of capturing excess supply that comes in the form of stormwater; bringing together partners to facilitate and help identify funding for watershed management).
- ✚ Other comments:
 - Do we have an accurate accounting of water use? Where is ETo occurring?
 - Water security means storage, but we also have to reduce ETo. Where is the storage potential, and how can that benefit the region?
 - Using historic lake basins as storage reservoirs would cause mass ETo but can increase moisture in the system. We call ETo “loss”, but if it stays in the system it may produce benefits such as increased snow fall.
 - Recharge is needed not only in Valley but also in foothills.
 - Economics show us that even in drought year the commodities will have an increased price and agriculture can still be successful.
 - Pistachios have latent demand so you have to provide water for 7 years before you see production, then they live 100 years, so demand is hardened for the next 93 years.
 - How will demand be referred to in the future within the bounds of this working group? Should we no longer use the term demand since this group is not highly concerned with demand?
 - We are concerned with groundwater recharge projects and stormwater management.
 - Extreme events have always defined this region, we need to keep in mind these rare, but significant events are not just disasters; they help wipe the slate clean and can be ecologically beneficial.

- We can design projects that increase groundwater recharge and should incorporate groundwater management in our subgroups this year.
- How much of this mapping and data is available already like pre-identified spots for groundwater recharge, and identified agencies to lead and grants to fund, instead of starting from ground zero?
- What about the work that IRWMs have done, can we pull from that? (YES!)
 - Watch for a California Water Foundation study that hasn't hit the streets yet
- We need to have these projects ready for when funds become available.
- Demand is going to change with price, it's not about how much water you use, it's how much water a person would use at a certain price. Per J Austin- what's really important is what was actually used.
- We need to stay focused on goals of groundwater recharge, and reliability.
 - Subgroups will define their specific goal(s) and objectives as a first step
- It sounds like we ultimately have no control over demand being that people will use as much as we give them. We can educate people on the effects of hardening off demand.
- Making people climate literate should be a priority for this group.

Potential Pilot Project in Kings River watershed – Sarah Campe

- ✚ There is a huge need for education, but she can't do it alone!
 - Must identify where to start talking about upper watershed management and why it's important to lower watershed users.
 - We need to interest an NGO to obtain a grant to do this kind of messaging. Sarah has a couple groups in mind. SNC has a fund development analyst to help match grants with a program. Please let Sarah know if you have any suggestions and she'll follow up.
- ✚ The next piece is getting a project on the ground.
 - Work on coordination between the upper watershed groups to identify an interagency landscape level project. This could be submitted for funding through an IRWMP.
- ✚ Can we demonstrate the benefits to downstream user groups to gain their support at any point in the project? Sarah will start talking with some of these upper watershed managers and will help coordinate this effort.
- ✚ Questions and comments
 - What are the goals for the education campaign?
 - Both agencies and forest land owners recognize the need for land management. There are barriers and there's no overall strategy to look at a landscape scale over long terms to determine where the best places are for restoration and management
 - Often multiple treatments are need to restore proper function
 - How can we come together to leverage limited funding?
 - How can we meet all of our agencies' objectives and choose the best projects?
 - Who would monitor these projects and how would we gauge success?
 - We could pair up different programs to monitor projects
 - The fire effects program looks at biomass but not hydrologic impacts
 - PSW and UC Merced are already working on this
 - Per Roger, evapotranspiration is increasing due to climate warming and we have about 50% more biomass in the forests due to management practices
 - Roger said that there is a theoretical opportunity to increase water yield from the upper watersheds by decreasing biomass. Increasing water yield would require sustained management to keep actual ET below potential ET.
 -

- Roger has a modeling project (using Carolyn's and Critical Zone Observatory data) that is nearing completion that may help decide where these projects can go.
- Data also available from SNAMP (Sierra Nevada Adaptive Management Project) that looked at two study catchments.
 - However, the thinning was more for biomass removal rather than to assess ecological benefits.
- There are other tools; ET data and satellite data has really grown recently.
- CZO project will continue for the next 10 years to determine if management has helped
 - If there's a fire we can study it afterwards.
- We have many short term and long-term questions about how to manage forests in a changing climate.
- ✚ Carolyn: Does the Tulare Basin have the social context to get people in the valley interested in upper watershed management?
 - Grant opportunity through the UC Santa Barbara National Center for Ecological Analysis
 - Bring together a 'think-tank' to see if there are industry stakeholders (water suppliers, users, economists, etc.) with interest in getting together.
 - **Anyone interested in helping write that grant let Carolyn know.**
 - Q: Don't we already know there is interest in this?
 - A: We know there interested but putting money on the table is different.
- ✚ Roger discussed the UC Water Security and Sustainability Research Initiative
 - \$3.5 million to launch to bring UC researchers from four campuses to focus on CA issues.
 - Roger included possible study area for a groundwater research project to link the water cycle and expand on Kings River and CZO work. Focus for 1st year is water accounting systems for the state, and 2nd is groundwater sustainability.
 - They will have a series of partnership meetings on what will be feasible and where.
 - Roger would like to build a groundwater observatory.
 - Need to build a business and science plan for 10 year sustainability.
 - Roger (or someone else related) will join the upper lower watershed connections subgroup to help keep this group up to date on this initiative.
 - The Pajaro Valley and coastal locations are potential project sites.
- ✚ The UC is not the only money of the table for long term projects.
 - Dinky Collaborative got funding and they have a monitoring collaborative so we can link with them.
 - Bobby is writing a white paper on the Sierra IRWMP challenges and benefits , so he'll be circulating this white paper to get support and for looking into future of IRWMP.
- ✚ Lucas discussed the California Roundtable on Water and Food Supply
 - This group has been focused on the Kings Basin, would like to expand to Tulare Basin.
 - Looking to improve linkages between upper and lower watershed and economic incentives to do so.

Next Steps for Topic-Based Subgroups

- ✚ Set goals and objectives for subgroups and make sure to connect with the other subgroups.
- ✚ We have the opportunity to merge subgroups. In particular, we will likely merge the Extreme Events subgroup into the Resilience to Increasing Climate Variability subgroup.
- ✚ Subgroups need to get together once or twice before the next big group meeting.
 - Start list of potential projects.

- Identify low-hanging fruit (and higher-hanging fruit!)/no-regrets projects and information gaps.
 - Think about when and where the subgroup needs to connect with other subgroups?
 - We all recognize that there is overlap and some groups may be combined at some point, but having a few folks specifically focus in on these topics that we have repeatedly identified as our priorities will be the most efficient way to identify steps that can be taken to move forward (rather than trying to have this larger group work through those details).
- ✚ We need to decide on a decision making process (for subgroups, but also for the working group itself).
 - The Governance subgroup will work on this.
 - Southern Sierra Cooperative has a MOU with decision making guidelines written out already – Koren will send to Michelle to forward to the Governance subgroup.
 - Roger offered UC Merced staff to the subgroups.
 - Do we need an outreach and education subgroup?
 - Not for now...education, planning and project development, as well as filling research gaps, will be task assigned to each subgroup.
- ✚ A checklist will be developed for subgroups to help them stay on task.

Fresno Regional Foundation Grant to Tulare Basin Wildlife Partners – Niki Woodard

- ✚ Title: *“Education and Advocacy for Resource Sustainability in the Tulare Basin”*
- ✚ Grant includes funds to prepare eight articles for publication.
 - This group can help with messaging for the general public.
 - Goal is to raise awareness on groundwater, sustainability, climate change, etc. and shift the Tulare Basin outlook on these issues.
 - Could be branded as coming from this group.
 - Niki will circulate a survey before and after for feedback on the effectiveness.
 - **Need a series title: Any suggestions?!**
- ✚ Article ideas:
 - ETo and effects on water supply
 - Groundwater management
 - Climate change
 - Multi-benefit and multi-stakeholder projects
 - **Working group task: Suggest topics and people to talk to**

Other Items

- ✚ Roger Bales discussed the SNRI (Sierra Nevada Research Institute) Climate Communications Workshop
 - Teenie Matlock and Martha Conklin also part of the new Center for Climate Communications.
 - UC Merced will be working with the Merced IRWM (they received Implementation grant funds to do so).
 - Messaging for gaining support for funding water infrastructure
 - Can they help build messages that work?
 - Comment: It’s not just the message itself, but the ‘how’ and ‘who’.
 - Facilitated dialogue is great for building support and buy-in.
 - Roger agreed and mentioned a Water Research Foundation report that he’ll send to Michelle to distribute to the group.