

Basin Study Work Group Steering Committee (BSC) Meeting

October 4, 2016, 10:00 pm - 12:00 pm

DeArmond Room, Deschutes Services Building, 1300 NW Wall Street, Bend, OR 97701

ATTENDANCE

Shawn Gerdes, Arnold Irrigation District
Mark Reinecke, Avion Water Company
Dave Dunahay, Central Oregon Fly Fishers
Craig Horrell, Central Oregon Irrigation District
Adam Sussman, City of Bend
Bill Duerden, City of Redmond
Gail Snyder, Coalition for the Deschutes
Tod Heisler, Deschutes River Conservancy
Terry Smith, Lone Pine Irrigation District
Mike Britton, North Unit Irrigation District
Theresa DeBardelaben, Oregon Department of Agriculture

Paul Lipscomb, Oregon Land and Water Alliance
Kyle Gorman, Oregon Water Resources Department
Mike Tripp, Trout Unlimited
Mike Riehle, US Forest Service
Jeff Wieland, Upper Deschutes River Coalition
Ryan Houston, Upper Deschutes Watershed Council
Rex Barber, Water for Life
Robert Spateholts, Portland General Electric
Doug DeFlitch, U.S. Bureau of Reclamation
Kimberly Priestley, WaterWatch of Oregon

MEMBER ATTENDANCE BY PHONE

Bonnie Lamb, Oregon Department of Environmental Quality

MEMBER ATTENDANCE BY EMAIL/PHONE AFTER THE MEETING

Member Organizations Not Present

Bend Paddle Trail Alliance
Central Oregon Cities Org.
City of LaPine
City of Madras
City of Prineville
Confederated Tribes of Warm Springs
Crooked River Watershed Council
Deschutes County
Deschutes County Soil & Water Conservation District
Native Reintroduction Network
Natural Resources Conservation Service
Ochoco Irrigation District
Swalley Irrigation District
Three Sisters Irrigation District
Tumalo Irrigation District

Also Attending:

Mike Relf, U.S. Bureau of Reclamation
Jennifer Johnson, U.S. Bureau of Reclamation
Midge Graybeal, Anderson Perry & Associates
Phil Chang, Senator Merkeley's Office

Garry Harris, North Unit Farmer
Ray Hartwell, Summit Conservation Strategies
Craig Lacey, citizen
Lisa Seales, Oregon State University
Shon Rae, Central Oregon Irrigation District
Bea Armstrong, Deschutes River Conservancy
Kevin Crew, Black Rock Consulting
Margi Hoffman, Farmers Conservation Alliance
Jim Powell, citizen
Mike Taylor, Wild River Owners Association
Greg Swenson, PBS Engineering
Tim Bretz, PBS Engineering
Jonathan LaMarche, Oregon Water Resources Department
Jeff Perrault, citizen

In addition, Niklas Christensen, contractor with Watershed Professionals Network, attended; Kate Fitzpatrick, Deschutes River Conservancy, attended as Process Coordinator. Kelsey Wymore, Deschutes River Conservancy, attended as Process Support and recorded meeting minutes.

AGENDA

The group used the following agenda as a guide during their meeting:

1. Welcome, introductions, and minutes
2. Study Element Updates
3. Modeling Update, Jennifer Johnson (Reclamation)
4. Water Movement Options, Adam Sussman (GSI)
5. COID System Improvement Plan Update: Craig H.
6. Oregon Spotted Frog Update: Bridget Moran/Craig
7. Communications Update
8. Public Comment: Kate
9. Next steps

WELCOME, INTRODUCTIONS, AND MINUTES

Craig Horrell welcomed everyone and asked for self-introductions.

Meeting Minutes Approval

Minutes from the July 19, 2016 meeting were approved. **ALL GREEN CARDS**

Next Meeting Announcement

The next meeting will be held December 6, 2016 from 1PM – 3PM in the DeArmond room. The November and January meetings will be canceled.

STUDY ELEMENT UPDATES

Mike Relf presented updates for Bureau of Reclamation tasks:

- Current Input/Review
 - Draft memo on SNOTEL stations (Crooked River) to improve forecasting ability is out for review with a small group and will be distributed more broadly soon.

- Draft Memo on diversion improvement measurement of diversions (Crooked River) will be distributed soon.
- Storage Assessment
 - In the Crooked, Phase II will use a modest amount of funds to evaluate a potential dam raise on Prineville Reservoir. The likely approach will estimate potential additional storage based on basin hydrology, and a proxy approach and existing information from previous studies to estimate potential costs.
 - In Whychus Creek, Phase II is not yet clear. Re-regulating reservoirs within TSID are being covered in the WCA. There is some interest in exploring an additional concept of Three Creeks Dam, yet no budget has been allocated for this.
 - Preliminary info has been compiled for the Phase I evaluation of the Deschutes options. Evaluation has evolved into looking at three potential sites to offset some of the storage in the upper Deschutes Basin: Monner, upper Haystack and O'Neil sites.
 - Because one or all of these sites alone may not reap enough water as previously thought might be available in a proposed Monner Reservoir, Reclamation staff suggested looking at a new site that did not show up in previous assessments: Sherwood Canyon near Smith Rock State Park on the north side of the Crooked River. Mike put up a map of this site and asked if anyone in the group had any knowledge of it or initial reactions.
 - Landownership is Crooked River National Grasslands and private.
 - There appears to be no perennial stream here.
 - Mike reported that he has sent the storage working group a draft evaluation matrix of the three Deschutes options, and an inquiry on meeting dates for the next meeting. Please let him know if you are not on this group and want to be. This group will make recommendations on overall plan, schedule and budget for task.

Niklas presented updates for OWRD-funded elements:

Water Conservation Assessment:

- The Basin Study is leveraging the Farmers Conservation Alliance work with the irrigation districts that is assessing seepage and on-farm efficient opportunities.
- There was a Water Conservation Assessment meeting in August with about 25 people in attendance. The group recommended waiting for FCA results before doing additional work and allocating remaining budget under the (36k remaining budget) for the Water Conservation Assessment task. The FCA is now expected to be completed in March (estimated Nov/Dec when the working group met).

Upper Deschutes Ecological Assessment:

- River Design Group/HDR have calibrated the hydraulic model and are running it using the Habitat Suitability Criteria previously circulated to BSWG.
- Riparian habitat suitability is still being developed.

Middle Deschutes/Tumalo & Whychus Temperature Assessments (UDWC)

- The Upper Deschutes Watershed Council finished this work last March; specifically, it used empirical data to generate regression equations showing flow-temperature relationships. Reclamation will use these equations in baseline Riverware modeling and again when it runs scenarios to generate information on estimated temperature outcomes of different water management/flow scenarios. Reclamation will only use equations in months where they were statistically significant.

Hydrologic Forecasting

After a spring meeting with NRC, OWRD, Reclamation and Tom Painter from NASA, Niklas drafted a memo assessing how improved hydrologic forecasting could improve water management in the basin. This memo has been reviewed by a small group and will be circulated to BSWG next week.

Crooked River Temperature Assessment

- Portland State University is building and calibrating the CE-Qual model which will model temperatures in the reservoir and lower Crooked River. They will present the baseline model in December, and the working group will choose three management scenarios to be run under historic climate conditions (ex. modified release schedule, additional storage volume, stream shading etc...)
- PSU will then hand the model off to Reclamation. If BSWG wants Reclamation to evaluate additional management scenarios and/or climate change, this will require additional budget. Mike has estimated around \$23k for Reclamation to do the analysis. Reclamation has \$50K in scope reserve. BSWG can consider in February whether it is interested in spending a portion of scope reserve on additional analysis options.

Legal Policy Economics – GSI & Summit Conservation Strategies (SCS):

- SCS developed, with BSWG, a framework for the multi-criteria assessment; we will be revisiting this at the December meeting to get specific about metrics and criteria.
- Surveys are out in the irrigation districts to assess potential scale and costs of temporarily leasing water rights between district patrons and instream. These surveys will close at the end of October and Summit Conservation Strategies will evaluate responses in November, providing preliminary results to BSWG in December.
- GSI has completed a tech memo regarding new storage.
- GSI has drafted a groundwater mitigation memo that projects the need for groundwater mitigation demand. Short term mitigation demand (20 years) appears to be around 13,000 mitigation credits (One credit = one acre foot).
- GSI will be talking more in-depth about Task 4, Water Movement Options later in the meeting.

MODELING UPDATE

Jennifer Johnson gave an update on modeling progress (see attached PPT for presentation).

- The goal of modeling in the Basin Study is to understand current and potential future water supply and demand relationships.

- The 1984-200 model is calibrated.
- In the next couple of weeks, Bureau of Reclamation expects to get the final model of GSFlow.
- VIC and GSFlow will look at the 2040's and 2060's and produce ten sets of climate adjusted future flows. One future time period and 3 future scenarios will be selected.
- Current diversions will be adjusted reflect changes in crop water needs assuming a static crop mix under climate change (bounded by current water rights).
- Temperature analysis will use the regression equations developed by the Upper Deschutes Watershed Council
- A member asked if the model accounts for municipal use. Jennifer answered that the Bureau of Reclamation is not developing the estimates, but they can add this feature to the model.

Modeling Schedule:

October 2016 - Jan/Feb 2017

- Develop climate adjusted future flows
 - Select three future scenarios
- Run baseline water resources and groundwater scenarios
 - Baseline includes historical and three future climate adjusted inflows
- Baseline regression temperatures analysis

March-May 2017

- BSWG will use information from Baseline analysis to develop three management scenarios

May-July 2017

- Reclamation will simulate management scenarios
- Potential Reclamation CE-QUAL modeling

August-October 2017

- Analysis of results

October 2017

- Documentation of results

GSI WATER MOVEMENT OPTIONS

To-date we have talked a lot about options to generate additional water supply to meet basin needs (Water Conservation Assessment, Storage, water transactions). GSI's Task 4 assesses the way we can move that water around in the basin to meet needs for ag, instream and municipalities. In the spring, BSWG will be using both water supply and water movement options to package together scenarios to be modeled in Riverware. GSI's job in Task 4 is to evaluate each potential water movement option, describe opportunities and potential barriers associated with each one.

Adam Sussman gave an overview of its Task 4 work to:

- Make the group aware of the options and information that may be used in water movement analysis.
- Gather input on any options BSWG members have questions about, like, don't like, or identify any options that have been left out

Adam also mentioned the Deschutes Water Planning Initiative Water Supply Movement Options Glossary which already outlines a fairly comprehensive list of options. (Starting on p.

119 of this document

<http://www.deschutesriver.org/DWPI%20final%203%20narrative%20and%20appendix.pdf>

Information/discussion included:

- Options requiring Oregon Water Resource Department process are: water rights transfers, allocation of conserved water, exchange, instream leases.
- Options that don't involve Oregon Water Resources Department process: District-to-District Management Agreements, Minimum streamflow agreements.
- Another member asked if a scenario that supposed Whychus Creek hit summer low flow and irrigation patrons used ground water during this period instead of surface water, how much of this groundwater use affects springs downstream – will the modeling be able to predict this? Jennifer answered that it is possible to impact groundwater and it depends on available data for specific locations and scenarios. Kate added that this management scenario in Whychus has been identified as an area of interest for this analysis.
- A member suggested that we consider the possibility of pumping cooler groundwater into the stream and using the warmer surface water for diversions in Whychus Creek.

COID SYSTEM IMPROVEMENT PLAN

Craig provided an overview of the recently-completed draft of Phase I of COID's System Improvement Plan. The Executive Summary can be accessed here:

<http://code.ahmbrands.com/wowbook/coid.php#book2/>

- Overall district priorities for projects are: 1-Delivery, 2-Conservation, 3-Pressurized water, 4-hydropower opportunities
- Black Rock has completed Phase I of the SIP, which assesses losses in COID's main canals and laterals (down to 5 cfs)
- Phase II will look at on-farm conservation opportunities
- Phase III will put together a capital plan to build out projects.
- This information can inform the development, with basin stakeholders, of a larger water management plan for the basin.
- Phase I findings are:
 - Pilot Butte canal estimated 156 cfs of canal loss. It will cost \$186 million to pipe this and conserve 156 cfs.
 - The Central Oregon canal has 100 cfs of estimated loss; it would cost \$225 million to pipe it.
- Phase II, the on-farm component, should be complete by FCA in March. By June 2017, COID will have a capital plan to start implementing. Other districts are following with this same approach. COID's capital plan will include all districts that will be modernizing their systems so prioritizations between districts can occur based on the best opportunities.

OREGON SPOTTED FROG UPDATE

Craig reported they are making progress.

PUBLIC COMMENT

Mike Taylor, Wild Rivers Owners Association, thanked the group for the ongoing collaboration. He noted that the Upper Deschutes recently fell below natural flows and fish are dying. He stated that the public is starting to become aware and asked the group to please keep their sense of urgency.

NEXT STEPS

Meeting adjourned by Craig Horrell.

MEETING EVALUATION

Members were provided forms on which to write one piece of feedback about what they liked about the meeting, indicated below with a plus symbol (+), and one piece of feedback about what they would like to change for the next meeting, indicated with a delta symbol (Δ). Each check mark (✓) indicates that someone repeated an item. The following comments were received.

+	Δ
+ Getting the group back together	Δ Members having side conversations
+ Updates are welcome	
+ Information was great	
+ Great progress	

ATTACHMENT A: BSC ACTIVE MEMBERS LIST

From Section 3.a of the Charter: “If a member organization does not participate in decision-making at two consecutive meetings by attendance or by email (see 4.a.vi), that organization cannot participate in decision-making until after it participates at two of the prior four meetings.”

P=participated

O=participated by phone or email afterwards

Empty cell=no participation

Organization	4/5/16	6/7/16	7/19/16	10/4/16
Arnold Irrigation District		P		P
Avion Water Company	P	P	P	P
Bend Paddle Trail Alliance				
Central Oregon Cities Organization	P			
Central Oregon Flyfishers	P	P	P	P
Central Oregon Irrigation District	?	P	P	P
City of Bend	P	P	P	P
City of La Pine				
City of Madras				
City of Prineville	P			

Organization	4/5/16	6/7/16	7/19/16	10/4/16
City of Redmond	P	O	O	O
Coalition for the Deschutes		P	P	P
Confederated Tribes of Warm Springs	P			
Crooked River Watershed Council	P	P	P	
Deschutes County	P	P	P	
Deschutes County Soil & Water Cons. Dist.				
Deschutes River Conservancy	P		P	P
Lone Pine Irrigation District		P	P	P
Native Reintroduction Network	P	P		
Natural Resources Conservation Service	P		P	
North Unit Irrigation District		P		P
Ochoco Irrigation District	P	P		
Oregon Department of Agriculture	P	O	P	P
Oregon Dept. of Environmental Quality	O	O	O	P
Oregon Land and Water Alliance	O		P	P
Oregon Water Resources Department	P	P	P	P
Portland General Electric		P	P	P
Swalley Irrigation District	P	P	P	
Three Sisters Irrigation District	P	P	P	
Trout Unlimited	P	P	P	P
Tumalo Irrigation District			P	
U.S. Bureau of Reclamation	P		O	P
U.S. Fish and Wildlife Service	P	P	P	P
U.S. Forest Service	O	P	P	P
Upper Deschutes River Coalition	P	P	P	P
Upper Deschutes Watershed Council	P	P	P	P
Water for Life	P	P	P	P
WaterWatch of Oregon	P	P		P