

Basin Study Work Group: Deschutes River Subgroup Meeting

January 21, 2015, 1:00 to 3:30 PM

Barnes and Sawyer Rooms, Deschutes Services Building, 1300 NW Wall Street, Bend, OR 97701

Call in number: 866.851-9754, 420058#

Draft Minutes

The following agenda was used.

TIME (approximate)	TOPIC	DESIRED OUTCOME
1:00 (:05)	1. Welcome: Craig Horrell, Chair	Welcome attendees.
1:10 (:05)	2. Introductions	Introductions of those in the room.
1:15 (:20)	3. Plan of Study Development: Adam Sussman, Technical Co-Coordinator. See Attachment 1 <ul style="list-style-type: none"> • Review of where we are now. • Goals for development of Task Chart. • Role of subgroup members moving forward. 	Shared understanding of today's goals for the PoS development and process moving forward.
1:35 (:20)	4. Instream Information Update: Ryan Houston, Upper Deschutes Watershed Council	Shared understanding of evolving thinking on instream information.
1:55 (1:10)	5. Task Table: Review and incorporation of feedback See Attachment 2 for the draft Task Chart to be considered in the Plan of Study. Discussion of key points we received comments on.	General agreement on Task Table.
3:05 (:15)	6. Initial ideas for Study Team structures and feedback (as time allows): Adam Sussman <ul style="list-style-type: none"> • Examples of Study Team structures from other Basin Studies 	Discussion on how to move forward after completion of PoS.
3:20 (:05)	7. Next steps <ul style="list-style-type: none"> ▪ Action items and parking lot ▪ Report to BSWG ▪ Next meeting of the Deschutes Subgroup ▪ Agenda for next meeting 	Common understanding of action items; generation of ideas for the next meeting agenda.
3:25 (:05)	8. Meeting evaluation Please fill out the meeting evaluation at your place.	Continuous improvement of meetings and processes.
3:30	ADJOURN	

ATTENDING

Adam Sussman, GSI Water Solutions
 Jeff Wieland, Upper Deschutes River Coalition
 Tod Heisler, Deschutes River Conservancy

Dave Dunahay, Central Oregon Flyfishers
 Jeff Perreault
 Jeremy Giffin, Oregon Water Resources Dept

Bonnie Lamb, Dept of Environmental Quality
Lauren Mork, Upper Deschutes Watershed Council
Ryan Houston, Upper Deschutes Watershed Council

WELCOME, INTRODUCTIONS, AND AGENDA

Craig Horrell convened the meeting and participants introduced themselves. Anne reviewed the agenda.

PLAN OF STUDY DEVELOPMENT

Adam described three purposes of today's meeting:

- A process check-in so we have common understanding of the process from here out to develop the POS
- To reach general agreement on the task table to be rolled up for discussion at the February 3 BSC meeting. The goal on February 3rd is to bring the three reaches together, along with the cross-cutting tasks budget, to understand the scale at which we will have to prioritize or seek other resources.
- To discuss study team structure

He made the following points about the process:

- The Plan of Study won't include all of the details people might want to see.
- AND the group will be involved in the future as these details get worked out.
- We are trying to add more detail to tasks (draft task table text) to illustrate how this will work. The task table text consists of a few sentences of narratives and a few bullets explaining how the tasks will be done. We don't want to spend too much time on this until we know which tasks we are moving forward with..
- The task table level of detail will be used to prioritize, think about budget.
- The task table text will provide a little more detail.
- Further detail will come after the Plan of Study is signed.

Adam showed a study team graphic from the Klamath Basin Study as an example to illustrate that we will have a study team structure moving forward that will ensure continued participation as the study is further refined and implemented. The BSC will be an integral part of this, and we already have a structure for how we work through decisions.

Mike Relf added that Reclamation is working to flesh out what steps they plan to take for some of the early tasks, like climate change analysis, including how to sequence tasks, what the budgets involved will be etc... He said Jennifer Johnson, BOR's lead on climate change, will be at the Feb 3rd meeting to help share that information and move it forward with the group. He said that BOR has not spent a lot of time looking at subgroup tasks to-date, and he will need to get BOR input back on those as well. BSWG should plan on some back and forth with Reclamation, to help define the achievable plan and what tasks fall in BOR and BSWG.

Ryan noted that the task table is probably at the right level to serve its purpose, but is not very detailed. When does Adam want people to go deeper on these? Adam said that the task table text goes one level deeper and in some cases that may be enough. In other cases, we will need more detail before letting a contract. Mike Relf said detail is useful to arrive at our plan of study, and we will need a detailed plan for how to implement the project. But that we should think about putting a broader version in the signed POS, so we have room to flex as necessary.

Kyle noted that he is a little uncomfortable about leaving it open to major changes/additions later, and suggested we focus on refinements as detail emerges, less on major changes at the broad level. Mary suggested that people are not clear on what level of detail is needed when. She suggested voicing any concerns now and Kate/Adam will keep a list and they will be incorporated as we go.

INSTREAM INFORMATION UPDATE

Ryan described the purpose of the update as sharing dialogue and thoughts as they are evolving within the instream interests related to the Deschutes subgroup instream information needs tasks, particularly what Task 2.3 means and how do put it into practice.

Specifically, the group has discussed a two-pronged approach:

1. Taking the observational work the agencies did during the fall ramp-down, writing it up into a report, identifying gaps, and continuing to do that observation, monitoring and evaluation work in the future. The work would be shared, peer reviewed, and thought put into what to add to it and how to collect that data over the next few years. This would also be done in other reaches like the Little Deschutes and Crescent Creek.
2. Using some targeted modeling to answer some questions and fill data gaps. Because large-scale modeling is expensive, so we would use targeted tools to answer specific questions

This “hybrid” approach balances empirical observation with modeling-type analysis to understand ecological benefits at various flows. The instream interests see this work as related to analysis of off-channel storage, as that option would be valuable in reaching optimal flows.

Ryan acknowledged that this is a lot more detail than is reflected in the task table, and underlined the need for a deadline and a common understanding of what level of detail is needed when. Craig suggested a Gantt chart to show project flow. Kate agreed it would be very useful to create a roadmap that laid this out with clarity, including the post-POS schedule. Kate suggested she work with Mike Relf and Adam on this.

Jason talked about the ramp-down observations. In an effort to understand what flows are necessary to access wetland habitats and to facilitate riparian vegetation, the instream crew has talked about a series of proposals, including modeling, and using LIDAR HEC-RAS. These proposals came up against some barriers, so they thoughts about other ways to do it (GIS, aerial photo documentation). Other qs’marcoinvert inventory, bedload inventory, would certain items fit under Basin Study or more related to monitoring effects of flow restoration- that would come later on, or an investigation that would fit better under a restoration proposal. Looking for feedback from BSWG on appropriate level of study. He acknowledged that there is a list of things that would enlighten us on the condition of rive (macroinvertebrate inventories and bedload inventories), but some of these things are more related to monitoring the effects of flow restoration and would require funding past the Basin Study timeline. They are looking for feedback on BSWG on the appropriate level of study to be included. Perhaps, we punt on monitoring and seek other funds further down the line. We have a fairly decent understanding of benefits at certain flow level, is that good enough?

Bonnie noted that it is a similar issue with water quality and reservoirs- it could be another \$150K.

Discussion included:

- Tod suggested documenting interesting questions because they are all important. This study won't fund all those questions, but having those outlined for the group will be really important. Early-on emphasis in the study was on how to get the flow. But get all of the important scientific questions out there, and maybe we can fund them in other ways.
- Ryan is wrestling with understanding how much information is sufficient to make decisions on desired flows.
- Kate suggested that these questions in the Upper D are related directly to water supply/demand and what is the scope of the problem we are identifying solutions to solve.
- Mike Relf noted that while Basin Studies are appraisal-level and do not emphasize data collection, there is no outright prohibition on data collection, and if the group decides targeted efforts are important, perhaps specifically on understanding instream demands, this could be justifiable. Especially if a small amount of data can help you get over a hump.
- Bonnie noted the major need is data collection in the reservoirs, so that maybe useful to document and fund elsewhere.
- Brett noted that Tod alluded to other funding sources- could we leverage those funds in the BSWG process?
- Adam reported that Dawn Weidmeier, with BOR, had seemed ok with add-on or plug-ins, but that we should not expect BOR to match them.
- Ryan noted that we are trying to understand instream demand with existing information, which is a limited pool to draw on (fall ramp down, old IFIMs). So we can hopefully talk about some new targeted info.
- Mike Relf underlined that we shouldn't constrain ourselves artificially to just use existing data. Hood River did some of that work, for example, an IFIM, in their Basin Study.
- Adam noted that this doesn't sound like a new or different conversation that what we have been discussing all along, but that now the ramp down has provided us with some information we did not have year ago, so we have more existing info to build on.
- It is important to consider whether the existing info, including the info generated by the ramp down, can be accepted by all. If some stakeholders do not trust it, we are back at square one.
- Suzanne suggested a peer review of the data and input on how useful it is to be used in certain ways.
- Jason said the ramp down monitoring provided them with a chance to go out and look at a lot of stuff, and gave them a good idea of what those flow-benefit interactions are. The information validated previous studies. It also identified some gaps or further questions, that could provide discrete opportunities for the Basin Study to help answer. There are previous studies.
- Peer review with other scientists could be set up.

REVIEW AND INCORPORATION OF FEEDBACK

Kate reported on some themes that got significant comments both during the last meeting and/or submitted by email or phone afterwards.

- Off-channel storage

- Interest in identifying admin/legal barriers.
 - Interest in investing enough to adequately assess “Monner” reservoir.
 - Suzanne expressed interest in looking at storage more broadly
 - Kate/Adam doubled the budget to \$40K, with input from Mike Relf
 - Kate handed out the storage analysis piece of the Henrys Fork Basin Study as an example of available level of analysis.
- Tradeoff-Analysis expanded to include specifically
 - Hydropower
 - Several participants strongly expressed that hydropower should be an OUTPUT, not a DRIVER of options and scenarios
 - Hydro should not be assessed until we know how much water will be in district conveyance systems due to the scenarios- we don’t want hydro revenue to become a disincentive to conservation.
 - Craig discussed how to handle this if the districts add cost-share from master plans that are looking at hydro, but acknowledged that the discussed sequencing makes sense
 - Jeff Wieland noted concern about BOR dam inspection protocols that have a severe impact on the river below Wickiup. Could any proposed hydro be a bypass benefit on Wickiup? In any case, Adam suggested we could explore bypass options in 4.1.
 - Groundwater impacts of proposed scenarios
 - Economic analysis woven throughout

Adam discussed structural changes to the task table and walked through it row by row:

- Task numbers were changed
- Added technical report writing under each task
- Added budget under both sides of the ledger for each task(BOR and cost-share)
- Continued effort of working on timelines
- Task 2: included instream and out of stream
- Language in 2.3 discussed: “altered flows” may be better described as “through a range of flow scenarios”
- Kyle thought 2.2 budget (\$10K) is too high, and that hydrologists in his department could do the work
- Kyle emphasized that water quality should be in here
- 2.5 discussion: we would need a year of data to understand water quality in the reservoirs, which could cost \$50-100K. But how do we look at impacts without that baseline data? Could we use temperature as a surrogate? A simpler study could be collecting additional temperature data this year. Riverware model has a temperature piece, and there were questions on how this could play in.
- Discussion on 5.1 developing scenarios: Agree to the two we have but leave it open to doing more. Or make the ‘set’ language simpler.
- Discussion on 3.2: \$100k in BOR- swap that over to the cost-share side. Then what would BOR be doing for \$20k? Possibly reduce this amount.
- The group agreed to this table with the suggested edits.

- Task table text will be fleshed out after the tasks are agreed upon for the whole Plan.
- After the 3rd, flesh out exhibit b for all subgroups
- We will get as far as we can on this in February

Attachment 1: Basin Study Requirements

Basin Studies address basin-wide efforts to evaluate and address the impacts of climate change. Funding is available for comprehensive water studies that define options for meeting future water demands in river basins in the western United States where imbalances in water supply and demand exist or are projected.

Each Basin Study will include four basic components:

1. Projections of water supply and demand within the basin, or improvements on existing projections, taking into consideration the impacts of climate change.
2. Analysis of how existing water and power infrastructure and operations will perform in the face of changing water realities such as population increases and climate change.
3. Development of structural and nonstructural options to improve operations and infrastructure to supply adequate water in the future.
4. A trade-off analysis of the options identified and findings and recommendations as appropriate. Such analysis simply examines all proposed alternatives in terms of their relative cost, environmental impact, risk, stakeholder response, or other attributes common to the alternatives. The analysis can be either quantitative or qualitative in measurement.

(Sources: <http://www.usbr.gov/WaterSMART/bsp> and <http://www.usbr.gov/WaterSMART/bsp/require.html>, accessed September 10, 2014)

Attachment 2: Draft Deschutes Subgroup and Overarching Task Tables-Draft discussed at meeting

Draft

Deschutes Sub-Group 1/21/2015

Basin Study Element	Task	Description	Deliverable(s)	Timeline	Budget Estimate - Reclamation and IDIQ Contractor	Budget Estimate - Non-Federal Cost Share Partner
Analyze Existing Supplies & Future Projections Develop Climate Change Scenarios Affecting Water Supplies	1.1	Summarize existing information on current water supply	Technical Report #1 - Existing & Future Water Supplies	April 2015 to July 2015	1.1	\$1,000
	1.2	Develop climate change analysis projections.			1.2	\$60,000
	1.3	Apply climate change analysis to current supplies.			1.3	\$65,000
	1.4	Write Technical Report #1.			1.4	\$3,000
Analyze Existing & Future Water Demands Develop Climate Change Scenarios Affecting Water Demands	2.1	Summarize existing information on current and future water demand (instream and out of stream).	Technical Report #2 - Existing & Future Water Demands	April 2015 to December 2015	2.1	\$1,000
	2.2	Evaluate current and future groundwater/mitigation demand.			2.2	\$2,000
	2.3	Evaluate ecological benefits of meeting baseline stream flow targets (State of Oregon In-stream Water Rights) in the Upper Deschutes. Evaluate additional ecological benefits in Upper Deschutes, Crescent Creek, and Little Deschutes at altered flows.			2.3	\$2,000
	2.4	Peer review/evaluation of existing flow/temperature modeling associated with Tumalo Creek and the middle Deschutes River (helps to inform location of instream efforts).			2.4	\$7,500
	2.5	Evaluate stream water quality and reservoir linkage.			2.5	\$1,800
	2.6	Apply climate change analysis to projected future demands.			2.6	\$60,000
	2.7	Write Technical Report #2			2.7	\$3,000
Analyze How Existing Water & Power Infrastructure will Perform in the Face of Changing Water Realities	3.1	Identify and evaluate current water and power infrastructure in the basin, and develop metrics of measuring baseline system reliability.	Technical Report #3 - Current Infrastructure & Climate Change	June 2015 to November 2015	3.1	\$5,000
	3.2	In-depth analysis of COID Infrastructure/Master Plan and Master Plan framework for other districts (directly linked to addressing water supply imbalances in Tasks 4.3, 4.4, and 5.1).			3.2	\$100,000
	3.3	Characterize projected water and power infrastructure performance based on climate change projections			3.3	\$60,000
	3.4	Write Technical Report #3			3.4	\$3,000
Develop Options to Meet Future Water Supply Needs	4.1	Crane Prairie, Wickiup and Crescent reservoir optimization options: a) modelling, b) operations, c) governance, legal and administrative constraints.	Technical Report #4 - Water Supply Options for the Future		4.1	\$25,000
	4.2	Summarize existing information on water supply opportunities (i.e. Deschutes Water Planning Initiative findings)			4.2	\$1,500
	4.3	Evaluate water conservation and re-allocation options and packages of options/projects. Identify viable options for meeting the water supply needs for irrigation, instream and municipal/water suppliers. Identify legal and administrative requirements for option implementation.			4.3	\$20,000
	4.4	Inter-district management and agreements, and governance structure.			4.4	\$2,000
	4.5	Off-channel storage options.			4.5	\$40,000
	4.6	Write Technical Report #4			4.6	\$3,000
Conduct Evaluation & Trade-Off Analysis of Options Identified	5.1	Develop scenarios to meet water supply and demand imbalances based on future near-term and long-term projections, district conservation and management plans, and opportunities identified in prior tasks (Two sets of scenarios - one with "new" storage, the other without).	Technical Report #5 - Recommended Options	January 2017 to July 2017	5.1	
	5.2	Identify cost and funding options, for both near-term (lower cost) and long-term (higher cost) projects, associated with each scenario.			5.2	
	5.3	Model outcomes of identified scenarios.			5.3	\$100,000
	5.4	Evaluate changes in supply and demand imbalance with each near-term and long-term scenario.			5.4	\$200,000
	5.5	Conduct trade-off analysis of options accounting for costs, environmental impact, risk, stakeholder response and other potential attributes.			5.5	
	5.6	Write Technical Report #5			5.6	
Draft and Final Basin Study Developed	6.1	Incorporate Technical Reports and comments into a consolidated Draft Basin Study Report: upon review of the draft, Prepare and Publish Final Basin Study.	Draft Basin Study Report and Final Basin Study Report	August 2017 to February 2018	6.1	\$30,000
	6.2	Technical Sufficiency Review			6.2	\$25,000
					*Sub-Total:	\$305,100

Notes:
*Sub-basin sub-totals account only for task budget that is specific to the sub-basin, overarching task budgets are not included
Tasks and budget numbers in bold represent items tasks that run across all sub-basins

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Over-arching Tasks 1/21/2015

Basin Study Element	Task	Description	Deliverable(s)	Timeline	Budget Estimate - Reclamation and IDIQ Contractor	Budget Estimate - Non-Federal Cost Share Partner
Project Management	Stakeholder coordination and meetings				\$30,000	\$40,000
	Study team coordination and meetings				\$40,000	\$40,000
	Change management				\$30,000	\$5,000
	Risk management				\$20,000	\$5,000
Administration	Accounting			\$5,000	\$5,000	
	Contract Management			\$5,000	\$5,000	
Contingency				\$25,000	\$25,000	
Analyze Existing Supplies & Future Projections	Summarize existing information on current water supply		Technical Report #1 - Existing & Future Water Supplies	April 2015 to July 2015	\$1,000	\$7,500
	Develop climate change analysis projections.				\$60,000	\$1,800
Develop Climate Change Scenarios Affecting Water Supplies	Apply climate change analysis to current supplies. Write Technical Report #1.				\$65,000	\$1,800
					\$3,000	\$5,500
Analyze Existing & Future Water Demands	Summarize existing information on current and future water demand (instream and out of stream).		Technical Report #2 - Existing & Future Water Demands		\$1,000	\$7,500
	Evaluate current and future groundwater/mitigation demand.			\$2,000	\$10,000	
	Apply climate change analysis to projected future demands.			\$60,000	\$1,800	
	Write Technical Report #2			\$3,000	\$5,500	
Analyze How Existing Water & Power Infrastructure will Perform in the Face of Changing Water Realities	Identify and evaluate current water and power infrastructure in the basin, and develop metrics of measuring baseline system reliability.		Technical Report #3 - Current Infrastructure & Climate Change		\$5,000	\$20,000
	Characterize projected water and power infrastructure performance based on climate change projections			\$60,000	\$1,800	
	Write Technical Report #3			\$3,000	\$5,500	
Develop Options to Meet Future Water Supply Needs	Write Technical Report #4		Technical Report #4 - Water Supply Options for the Future		\$3,000	\$5,500
Conduct Evaluation & Trade-Off Analysis of Options Identified	Develop scenarios to meet water supply and demand imbalances based on future near-term and long-term projections, district conservation and management plans, and opportunities identified in prior tasks (Two sets of scenarios - one with "new" storage, the other without).		Technical Report #5 - Recommended Options	January 2017 to July 2017	\$100,000	\$200,000
	Identify cost and funding options, for both near-term (lower cost) and long-term (higher cost) projects, associated with each scenario.					
	Model outcomes of identified scenarios.					
	Evaluate changes in supply and demand imbalance with each near-term and long-term scenario.					
	Conduct trade-off analysis of options accounting for costs, environmental impact, risk, stakeholder response and other potential attributes.					
	Write Technical Report #5					
Draft and Final Basin Study Developed	Incorporate Technical Reports and comments into a consolidated Draft Basin Study Report: upon review of the draft, Prepare and Publish Final Basin Study.		Draft Basin Study Report and Final Basin Study Report	August 2017 to February 2018	\$30,000	\$40,000
	Technical Sufficiency Review				\$25,000	\$0
Subtotal Over-Arching Tasks:					\$576,000	\$439,200
Subtotal Deschutes Sub-Group:					\$198,000	\$305,100
Subtotal Whychus Sub-Group:					\$10,500	\$40,000
Subtotal Crooked Sub-Group:					\$13,500	\$42,000
Total:					\$798,000	\$826,300