

**DOLORES RIVER DIALOGUE
STEERING COMMITTEE
Jan. 4, 2011**

Present: Randy Carver, MVIC; Jim Fisher, DWCD alternate; David Graf, Colorado Division of Wildlife; Vern Harrell, Bureau of Reclamation; Meghan Maloney, San Juan Citizens Alliance; Peter Mueller, The Nature Conservancy; Don Schwindt, DWCD. Guests: Ken Curtis, DWCD hydrologist; Mike Preston, DWCD general manager; Chuck Wanner and Dale Smith, Trout Unlimited. Also Marsha Porter-Norton, facilitator; Ann Oliver, DRD science; and Gail Binkly, recorder.

Agenda: The agenda was approved with no changes.

Snotel (snowpack telemetry) site funding: Ken Curtis said he and Vern traveled to Salt Lake City recently to meet and go over issues with the National Weather Service's Colorado Basin River Forecast Center. The center, along with the Natural Resources Conservation Service, produces the runoff and water-supply forecast for this area. The NRCS operates the Snotel system, which collects snowpack and climate data across the West. Through the NRCS, Ken and Vern learned that the Colorado Water Conservation Board has some funds available in the current fiscal-year budget that could provide up to \$15,000 for a new Snotel site. A basic Snotel costs about \$25,000, with an additional \$2,000 needed for soil moisture and temperature probes. Vern said this is a one-time cost; NRCS pays for ongoing maintenance of Snotels.

Ken said at present just four Snotels are used to provide forecasts for the Dolores River Basin. Scotch Creek, at 8,800 feet, is the lowest in elevation and Sharkstooth is at about 10,600 feet. The other three are all above 10,000 feet. However, the Snotel at Sharkstooth is still new and will need data from several more years before it will be fully utilized. The regional forecast center has been looking for additional sites.

Ken said the ultimate decision about where to locate a new Snotel would be made by the NRCS. They want the site to be within a mile of a road. A likely schedule would involve selecting the site this summer, doing the permitting process next winter and installing the Snotel in 2012. The NRCS likes to have one winter to watch a chosen location to see if there are problems such as wind piling the snow.

Ken said it would be good to make a commitment so that the CWCB can sequester the matching \$15,000. He said the NRCS and CWCB would like a commitment prior to the start of the legislative session.

Don recommended seizing this opportunity and said more information would be useful for forecasting.

David asked whether it is now possible to glean information about lower-elevation snow using satellite data and aerial surveillance. He wondered how long the Snotel technique, which employs remote telemetry but not satellites, will be useful. Ken said forecasters are making a big foray into satellites but he doesn't believe the basic technology will change in the next decade. Ken said researchers will probably use satellite data to verify their models. Ultimately

Snotels may not be needed as much, but he thinks they will retain value for verification purposes.

Don said the new site or sites should be carefully considered. It might be useful to have more information from the Rico-area mountains, perhaps across from Scotch Creek on top of Stoner Mesa. He said there might be real value in having two new sites, one at low elevation.

Meghan asked whether the forecast center sees validity in having Snotels at lower elevations. Ken said yes, but they also want one above 11,000 feet.

Peter said it would be good to have a site on a north-facing slope above 11,200 feet because that is where runoff will come from when the reservoir is already 80 to 85 percent full from snowmelt at lower and south-facing slopes.

Mike said it would be good to have a Groundhog-area Snotel. He said the lower-elevation snow courses that are maintained by DWCD are read just once a month, so there would be benefit to having a low Snotel that could be read in real time. Ann said an alternative would be to increase visits to those low sites. Mike said it's a major effort to do that, requiring the use of a snowmobile, and having another Snotel would be much more practical.

Funding was discussed. Meghan said the SJCA is very supportive and she believes they could help with the local match, but she isn't sure what the amount would be. She suggested asking the Southwestern Water Conservation District for funds. Vern said the Ute Mountain Ute Tribe contributed to the Sharkstooth Snotel, and recommended taking the proposal to them as well.

Vern said he believes DWCD has \$3,000 left from the Sharkstooth funding. Ken said he would check into that. Randy said MVIC gave \$5,000 toward that site and would probably do the same for a new site.

Marsha asked whether a field trip possibly involving the spill and hydrology committees or even the full DRD might be helpful. Ken said that was a good idea and suggested asking to join the NRCS personnel on their site visits in the spring or summer.

There was consensus to seek such a field trip and to support a new Snotel site or sites. Organizations will see what funding they can contribute. Ken will investigate the old funding left from Sharkstooth.

Marsha said additional Snotels were an idea the rafting community has long promoted and it would be good to let them know of this development. Meghan agreed and said she is in contact with Nathan Fey of American Whitewater and others in that community.

Ken said the river forecast center as an entity is relatively new. It will have a "webinar" in about a week. Ken will provide the link for the webinar and Marsha will forward it to the members.

Big Gypsum report: Marsha said the Big Gyp monitoring site was funded by a CWCB grant from September 2009. The report to the CWCB was prepared in haste because of an earlier-than-expected deadline. Marsha said the report, which was prepared by Ann, Chester Anderson, and Rob Anderson, is a DRD document.

Ann gave a PowerPoint presentation providing an overview of the report. She said although the report has been available since July 2010, there are several reasons to discuss it now:

- To provide a forum to hear concerns about questions;
- To build a common understanding of the best available information relevant to the downstream environment – related to native fishery and riparian ecology;
- To coordinate with the launching of “A Way Forward” and access to the biologists involved in that inquiry;
- To possibly generate more proposal ideas.

Ann said since the report was released, Chester and Rob have conducted more field work, so what was included in the report was not complete. Rob has since concluded his data analysis and Chester will be reporting this year on his work to date.

The idea behind the effort was to take an in-depth look at data from the Dolores River regarding native fish and riparian ecology, and catalogue the opportunities for improvement based on the literature. The focus was data generated on the Dolores. She said this report is not exclusively about Big Gyp but about the Dolores River below the dam. The report’s title is a misnomer because of the title of the grant, which was the name on the original request.

Ann said scientific questions with a fair level and quality of data and analysis available for the Dolores include:

- Status of native fish
- Status of non-native fish
- Changes to flows pre- and post-dam
- Water quality (temperature, dissolved oxygen, nutrients)
- Role of base flows in supporting availability of bluehead and flannelmouth habitat at Big Gyp.

Questions not well studied on the Dolores include:

- Is native fish spawning successful?
- Where are the key spawning habitats on the Dolores?
- Are tributaries for the Dolores important to the native fish?
- How are reduced peak flows affecting natives and non-natives?
- Is temperature a factor for native fish populations on the Dolores?
- What is the primary stressor to native fish (discerning relative roles of base flows, non-natives, reduced peak flows, water quality and/or other factors)?

Ann said there is a lot of opinion but not a lot of data regarding those questions, particularly the last one.

Don said he had not had time to read the report and asked whether it was still possible to provide significant input into it. He said there had been a good discussion of his concerns at the DRD-SC’s December meeting, but many people were absent that day. He said the term “reduced peak flows” in the final question provided an example of his concerns. He said the key question is, what is the appropriate baseline for us to look to for improvement of the downstream environment? Don said the hydrology has undergone a number of changes: first came the pre-

MVI period, then 100 years of MVI, then the post-dam but no-use era, then the 100-year drought. He said we have finally reached an expected future condition of the hydrology of the Dolores after the 100-year drought. Don said all the data ties back to these anomalies rather than expected future conditions. The report needs to tackle that head-on.

Ann said she had considered how to address some of those factors. Her intent was not to try to establish a baseline or delve into arguments about causes. She wanted to focus on where we are now and, if the goal is to improve these resources, what some of the possible tools might be. She said it is useful to understand the baseline because it can suggest ideas about causes, but the Dolores is a tangled system and she doesn't think concrete answers will ever be known for many questions. That leaves managers with the option of trying different measures to improve riparian conditions and see if they work, and to decide whether measures should also be taken to improve the status of native fish. She agreed that it is not fruitful to focus on the past and better to focus on where things stand now and what the science says could be done to improve conditions and resources.

Don said there might be value in including his statement regarding changes in hydrology into the introduction to the report. He questioned the use of the term "reduced peak flows". David said he agreed the word "reduced" could be taken out when discussing peak flows. He said there is data showing that the flows have been reduced, but *peak* flows are the factor, and the term "reduced" creates bias.

Ann said she could take out the word.

Marsha said the DOW asserts that there are declines in native fish and asked how to deal with that. Ann said she was working with two sets of information from the DOW, one from Dan Kowalski and one from Jim White.

Don said he thought all the information regarding native fish prior to McPhee was anecdotal. Ann and David said that was not true. David said there is a report from 1965, and Ann said there are two Valdez reports from 1982 and 1992 that are quantitative. David said Valdez did sampling with a net from a canoe that method is very different from the sampling methods used now, but the data still has value.

Don said it is good if there is indeed old data, but conditions still have to be considered in the context of hydrology. He advised just laying out the eras and hydrology in the introduction and saying the data has to be interpreted considering that. Ann urged him to read that section carefully.

Marsha said the summary PowerPoint will be sent out to everybody. People should read the report and this topic can be kept on the agenda till people are comfortable with the report.

Returning to the overview, Ann said Anderson and Stuart (2007) said of nine sites sampled on four rivers between 2000 and 2005, Big Gyp had the highest percent composition of roundtail chub by far but only the fifth-highest biomass of roundtail. The fish at Big Gyp are small relative to other rivers. Big Gyp had a high catch per unit and had the highest-percentage native fish composition. Ann believes more effort should be put into sampling at Big Gyp.

Ann said her takeaways were:

- Look species-by-species and reach-by-reach.
- Set management objectives on a reach-by-reach basis.
- Address spill management across a long time (i.e., 10 years)
- Big Gyp seems to be worth increased sampling effort. It's relatively easy to access and sample. It had highest native-fish composition in 2007, 1990 and 1991 and had the highest CPUE for roundtail chub in 2007.
- Find out more about spawning requirements and where spawning occurs for each species.
- Look more closely at tributaries and at flows.

Marsha asked what will be the format by which the report is considered. Don said he trusts Ann's efforts and does not want to wordsmith the entire document. He said if his concerns are addressed he will be fine with it.

David said he has two particular sections to review and needs to be sure the sections relating to fisheries are all right.

Marsha said the goal is to get the report finalized and resubmitted by May because there will be a new round of funding beginning. Those dollars will become available July 1. Marsha said the DRD-SC can look at a redline version integrating new research before the next round of funding. Committee members should try to read the report and have their comments to Ann by Jan. 25.

Don said the role of Marsha as facilitator, Ken as hydrologist and Ann as science coordinator is to produce documents that generally reflect the coordinated views of the DRD-SC. It then becomes the committee's product. He said this morning's discussion was useful.

Next steps:

- Marsha will send the PowerPoint to the committee. The report will be kept on the agenda. There can be a Version 2 if desired.
- Rob's and Chester's work will need to be integrated, maybe via an appendix.

Follow-up on current proposals: Regarding "A Way Forward" (the native-fish inquiry of the Legislative Committee), Marsha said the committee is waiting to see what data is available from the DOW. The scientists have not signed their contracts yet.

Hydrology Committee update: Marsha said all the key documents regarding the Dolores Project are now contained on a CD. The Hydrology Committee will be going through those to develop an understanding of the governing documents.

Science Committee update: Ann said graduate student Adam Coble has provided his final thesis on the recruitment and growth of three riparian tree species to the DRD and will send a hard copy to be housed at the DWCD office.

2011 budget: Marsha presented a handout of the final budget. It now includes funding for the DRD web site. The total is \$29,000. Marsha will write the grant request to the SWCD but needs to know for how much. She said \$26,000 has been raised already.

Marsha said the DRD started operating under its new structure in April of last year, so this is essentially an 18-month budget to the end of 2011. Don suggested asking the SWCD for \$26,000 to match what has been raised because the SWCD often provides 50-50 matching grants.

Marsha said she will ask Bruce Whitehead of the CWCB for some feedback. She will make a grant request for \$26,000 and say it will provide funding to the end of 2012.

DRD goals document: Marsha said she believes time should be set aside to create a goals document. She said goals can relate to different aspects of the DRD and the river:

- Resource management
- Group process (e.g., have a certain number of meetings/year)
- Science (e.g., getting the 319 Watershed Study done)
- Hydrology

Don said he was comfortable with the last three, but resource management can be contentious. He said it might be better to couch such goals as “adaptive-management goals”. Some of the current proposals would fit under that. He agreed the issue deserves agenda time.

Ann suggested delineating what “success” is in terms of number of rafting days, trout biomass, etc. However, she recommended leaving out the flow recommendations as they are a tool to get to outcomes.

It was agreed to put the goals discussion on the agenda for February.

Public comment: Chuck said one of the problems with goals is it takes so long to demonstrate a hypothesis. David said perhaps the goal should be to have a viable adaptive-management process so you can see what is being done to attain a goal.

Chuck suggested making a five-year commitment to an adaptive-management strategy so there is enough time to see results. He said for some goals there might be only one out of five years when it would be possible to try a particular strategy.

Meeting notes: The Sept. 29 minutes were approved with revisions by Ann and David. The Dec. 7 minutes were approved with no changes.

Next meeting: The next meeting will be Tuesday, Feb. 1, at 9 a.m. at the DWCD board room.