

# Dolores River Dialogue

Science Committee

November 18, 2010

1:00 p.m. to 3:00 p.m.

WebEX

## *Meeting Notes*

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### I) Introductions

Attendees: Chris Burkett, Cynthia Dott, Peter Mueller, David Graf, John Sanderson, Martin Moses, Doug Pickering, Vicki Phelps, Mike Preston, Ann Oliver

Ann introduced Adam. His masters work was funded in part through the DRD with funds from the CWCB. Adam sought and received input from many partners interested in the Dolores. He will be presenting his final results in person on November 30 to the full DRD. The purpose of today's presentation is to give the Science Committee a chance to preview Adam's work, ask questions and give feedback.

### II) Presentation by Adam Coble: **"Riparian Tree Response to Variability in Climate and Altered Streamflow along the Dolores River, Colorado"**

#### Q and A

Cynthia asked where Adam's climate stations were. Adam: Cortez Uravan and Telluride. Adam has data sets from 1961 to 2008 for each station. Adam suggested that it would be helpful to restart the Dolores Climate Station.

With respect to Adam's statement that there is "no apparent effect of river damming on cottonwood establishment", the following discussion ensued:

Cynthia asked if the reason for this finding could be related to the timing of peak flows. Adam thought not, but suggested it could be related to root suckering (versus sexual establishment from seeds). Martin asked if Adam has considered the density of mature trees (as sources of suckering) at a given sample site. Adam had not. Adam said that the explanation for the discrepancy in establishment between pre-dam and post-dam establishment, and for the gaps in establishment is not clear. None of the predictors that he modeled were significant in explaining these phenomena.

John noted that there is evidence (from Yampa and other rivers) that sexual reproduction plays a more important role in meandering settings versus more stable settings with colluvial deposits.

Cynthia noted that at the FLC long term study site established by Preston Summers (upstream of Bradfield Bridge), all the reproduction is asexual root suckering.

David noted that it is not really appropriate to say there is “no effect of damming on establishment”, cautioning to not overstate the findings.

Adam clarified that the “Summer Minimum Flow” predictor is from July 1 to September 30.

David asked if Adam can characterize the type of water year resulting in establishment. Adam noted that there is no statistical correlation of establishment with high spring flows. Found that *P. deltoides* cottonwood establishment was mostly seedling recruitment. David hypothesized that perhaps the combination of newly exposed areas within the channel and higher base flows promoted establishment (related to phenomena of observed encroachment on channel by vegetation).

There was a question about whether Adam had looked closely at New Mexico Privet establishment. He did not but noted that paper by Rood. Ann offered to send that paper out to participants (attached).

Based on his findings, Adam recommended maintaining the seasonal variation of flows on the Dolores. He also noted that the low summer minimum flows may have been limiting establishment during the pre-dam period.

Mike noted that big spills and higher base flows reinforce one another vis a vis the fish pool budget. He asked if the benefit from higher base flows need to be sustained over time. Adam cited that Cooper found on the Green: not necessarily