

NPBRT Minutes: 3-29-11 Meeting
NFS Conf. Room (3-5PM)
100 Main Street, Walden, CO

Members/Liaisons Present

(* Voting members)

Deb Alpe
Mike Alpe
Paula Belcher
*Kent Crowder
Pete Conovitz
*Tom Hackleman
Deb Heeney
*Kay Meyring
*Randy Miller
*John Rich
Ann Timberman
Hunter Townsend
Carl Trick II
*Ty Wattenberg
*Rick Wyatt
*Barbara Vasquez

Guests Present

Nolan Doesken
Jim Dustin
Shanna Lewis
Erin Light
Wendy Ryan
Liz Schnakenberg

Members/Liaisons Absent

*Mike Allnutt
*Jimmer Baller
*James Carothers
*Scott Fischer
*Mike Honholz
Michael Wright

I. Agenda Review: The agenda was accepted as published.

II. Approval of NPBRT Minutes: Feb.15, 2011 Meeting

Three corrections were requested which included 1) clarification of the description of 1041, 2) correction of description of document on historical ditches and 3) request to remove 'off channel' limiter on additional storage in list of potential future consumptive uses. John Rich motioned and Ty Wattenberg seconded the motion to accept the minutes with those corrections; the corrected minutes were approved unanimously and will be sent out to the distribution list.

III. Nolan Doesken, State Climatologist, Denis Reich, CSU Extension Water Resource Specialist & Wendy Ryan, Research Associate, CSU Atmospheric Science

Update on the WSRA funded project: "Monitoring the Effects of Weather Conditions on Evapotranspiration in the North Platte River Basin"

Wendy reported on the history of the project and the results to date. The proposal

was approved (NPBRT & CWCB) by 8/08 and the contract was in place by 3/09. Wendy thanked Deb Alpe, Carl Trick, Curran Trick, Phil Anderson and others in North Park for their help in getting this project equipment installed and monitored. Three weather stations have been installed in North Platte Basin: Larand (8 mi S of Walden), Cowdrey (9 mi N of Walden) & Hebron (13 mi SW of Walden). They include a rain gage, an anemometer (wind speed & direction), a pyranometer (solar radiation), temperature and relative humidity. Due to some technical difficulties, not all the desired data has been collected. The stations have been brought on-line so the data can be viewed on the CoAgMet site. Because of these sites and the Automated Weather Observation Station (AWOS) at the Jackson County airport, we are gathering a lot more quantitative data on the North Park weather! The three sites are quite similar in average monthly max temperatures (approx 25 to 55 deg F over the year). The average monthly min temperatures (approx -5 to 40deg F over the year) are up to 5deg warmer in Larand than the other two sites. The rain gage works for rain (but not snow unless it's warm enough for the snow to melt). The gage at Hebron has not worked, and will be replaced this spring. The rain data for the other two sites show up to a 0.25in differences in average monthly precipitation, but neither site was consistently higher than the other. The wind direction during the growing season (May – Sept) at Hebron and Larand is predominantly SW whereas Cowdrey shows a second component out of the N/NW in addition to the primary W/SW component. The wind runs (miles/month) in Larand are the highest, followed by Hebron, then Cowdrey. Nolan commented that if we were to compare wind speeds from these stations (set at 2m – approx. 6 ft) with the airport station, the airport data would be higher on average because it's taken at 30ft. (The Automated Weather Observation Station (AWOS) at the airport has been broadcasting weather info for several years but recently had an air-card installed to connect to Verizon and transmit the data to the National Weather Service.) In addition to the standard weather gages, automated Atmometers (ET gages) were installed. However, they did not work well at all.

A fourth site plays an important role in the data collection: the two lysimeters on the Arapaho National Wildlife Refuge. Shanna Lewis has been taking the data and watering the devices, which consists of a column of soil with grass growing on the top, completely isolated from the surrounding soil by a closed-bottom square-sided 'can' that's set approximately 3-ft deep into the site such that the grass is flush with the surrounding vegetation. Both Kimberly-Penman alfalfa reference evapotranspiration calculated using weather data from Cowdrey & Larand and pan evaporation data were approximately 10-20% higher than data collected from the lysimeter plots near the refuge. This suggests that the lysimeters may be more closely mimicking actual ET rates than potential due to infrequent watering. Discussion ensued about the frequency of watering or the lysimeters that is required to mimic the almost constant standing water in the irrigated hay meadows. Ann Timberman volunteered that one of the summer techs hired at ANWR could help Shanna this summer.

The preliminary calculations of the crop coefficient for each of the three sites (2010 data only) based on the lysimeter data were shown (see presentation). Interestingly, the values (approx 0.8-0.9) for all three sites midsummer (early July–mid Sept) are similar to the value (0.82) that's been used historically in North Park.

The presentation material is self explanatory in most cases and will be sent in a separate email due to size.

Carl offered his congratulations to Wendy & Nolan for their work on this important project. Denis Reich commented that he was still interested in determining whether there was interest on the part of the North Park agriculture community in learning more about the CoAgMet website and how it might be used to increase irrigation efficiency. He and a colleague currently have a proposal into CWCB for a grant to upgrade the CoAgMet website. If funded, they anticipate having the work done in 2012.

IV. Reagan Waskom, Director for the Colorado Water Institute – Update on project to identify ecosystem services provided by irrigated hay meadows.

The one-page summary of the points Reagan covered is attached with these minutes. Please refer to it for more details. The conclusion that he presented was that North Park was too large and there was insufficient data (biological & economic) to support the proposed project.

In face of insufficient data, Reagan has elected focus his graduate student's master's thesis project in a much smaller area in Livermore Valley (Larimer County). The area is under intense pressure from urban growth. The market for urban water helps define the economic value of the water that would be used alternatively to maintain agriculture and ecosystem services.

Barbara commented that the situation in the Livermore Valley was similar to the ongoing tension between the Front Range, which is shopping for trans-basin diversions to 'water' urban growth versus West Slope, which is fighting to keep the water connected to the land for agriculture & environmental purposes. In essence, some in the Front Range assert that 'water should flow to money'. Is this what's required to get to an estimate of the economic value of the ecosystem services? Reagan complemented the summary of the problem, but didn't have an alternative to offer. Ann Timberman commented that data already exists for establishing the value of wetlands relative to wildlife-based recreation (hunting, fishing, viewing).

Carl Trick asked Reagan whether the presentation by Australia at the recent Water Congress would be applicable in any way. Reagan explained that the Australians, in the face of a 13yr drought, completely rebuilt a water system, paying \$3-4B public funds. The water saved by this system was split 3 ways equally between ag, urban and environmental applications. However, the water was severed from the land and the value was set on the open market, independent of end use. Reagan said he'd think about how this might inform his project in Colorado.

Kent invited Reagan back to meet with the [North Platte](#) Basin Roundtable to keep us informed about their research progress and stated that they would be welcome in [North Park](#) if they felt their [research methodologies](#) could be developed to the point that they felt confident in their ability to accurately define the economic value of irrigated wetlands.

V. Barbara Vasquez/Carl Trick

Summary & Next Steps: Consumptive Use Projections

Barbara reviewed the summary (see attachment) of the future potential consumptive use prioritization. In it's final form, the summary includes a page for each of the

prioritized uses with comments drawn from the individual RT member rating sheets. The RT members had the opportunity to offer suggestions/request changes to the summary at this meeting. Kent suggested that geothermal be added as a potential heat source for the fish farm. Rick Wyatt asked that 'off channel' be removed from the general comments for additional storage. Rick also suggesting 8' as a minimum depth to ensure fish survived he winter. Ann suggested that firefighting be removed from the list, since Barbara commented that if the water was needed for this purpose, no prioritization would be discussed!

Carl commented that this was done to provide a parallel to the NCNA for the Basin Report. There was further discussion of 'next steps'. Barbara will update the summary with the comments/corrections offered at this meeting. In addition, it was agreed that, where easily accomplished, the estimates of water required would be sharpened. Additional storage (double the current 30,700 AF) and additional irrigated acreage (approx. 14,000 AF) maximums will stand as they are. Kent agreed to work with oil/gas development folks to refine that estimated water use. Even though #9 on the list, Barbara offered to investigate the water requirements for a distillery. John Rich agreed to provide a better estimate of water needs for biomass energy generation. These refined estimates will be included in the final summary of potential future consumptive needs.

VI. Kent Crowder - Annual Meeting of NPBRT

Agenda and summary of 2010 accomplishments by the NPBRT are attached.

- 1) Election of officers. The current Chair (Kent Crowder), Vice Chair (Barbara Vasquez) and Recorder (Barbara Vasquez) were each unanimously reelected to those positions.
- 2) Kent reviewed the key accomplishments during the past year (see attachment).
- 3) The WSRA projects list and associated budget was reviewed (see attachment). The current Basin account balance is \$379,495.
- 4) Posting of notices (time/location) for RT meetings was discussed. Currently the meeting announcement goes out by email to all members (voting & nonvoting) as well as to a long list of interested parties. There is also a public service announcement published in the Jackson County Star. It was agreed that these two forms of notice were sufficient.
- 5) A list of the current membership of the NPBRT was reviewed (see attachment). The only current vacancies are nonvoting nonresident members with water interests in the basin. Kent commented that the likely candidate for that type of position would be the City of Ft Collins (trans-basin diversion recipient), but that he didn't think it was a requirement to have those positions filled.

VII. Deb Alpe: Education Committee Update

Deb summarized her experience at the Summit in Denver (see more info below). In addition, she hosted Kristin Maharg for two days last week, arranging for interviews with a number of people including Eric Wagner, Barbara Vasquez, Bill Willcox (Lake John), Ty Wattenberg & Blaine Evans. Kent and Barbara both provided her with additional material from which to draw when assembling the Education and Outreach presentations for the North Platte Basin.

VIII. Carl Trick II/John Rich – CWCB/IBCC Update

Carl commented on the Summit hosted by CWCB/IBCC in Denver on Mar.3. It was hugely successful from the attendance perspective (approx 300). The information that was presented and discussed in the full group and in breakout sessions was similar to the topics that the CWCB & IBCC are wrestling with, but the Summit provided an opportunity for members of RTs from around the state to hear and discuss those topics. Five people from our RT attended: Carl Trick, Deb Alpe, John Rich, Kay Meyring and Barbara Vasquez. Carl complemented D Heeney and D Alpe for the high quality poster that they created for the Summit to highlight the North Platte Basin. John Rich and Kay Meyring echoed the complements. Barbara commented that the Summit was valuable also for the opportunity to network with folks from the CWCB (board and staff), IBCC and basin RTs from around the state. There was no IBCC update because there hasn't been an IBCC meeting since our last NPBRT meeting.

IX. Old Business

Barbara summarized the NCNA meeting earlier this afternoon. Rick Henderson & Corey Engen gave an update on their efforts to establish a tool for the assessment of the impact of diversion structures on in-stream fisheries. They convened a small group of experts in Feb and devised a two-page assessment tool that derives a lot of the detail from work done in the past 10-15 years in the NW (Idaho & Montana). Several groups will be using it this summer including TU (primarily in the White River), FS (Rick plans to assess all the structures on the Med Bow-Routt NF) and Flywater (Corey will be working on multiple North Park properties with private property clients to assess and rank structures for repair/replacement). TNC has also expressed an interest in using this tool. Next fall, they'll reconvene to review their experiences and determine if/how to refine the assessment tool. They plan to publish two versions of this assessment tool: a comprehensive tool for scientist and a 1-page tool that could be used quite effectively by the public with a camera, a measuring tape and an hour in the field.

V. New Business:

None offered.

VI. Set Next Meeting: The dates for the next meeting is set for Tue, Apr.19 (3-5PM winter hours) in the FS Conference Room. Because the conference room gets much more use over the summer months, dates were tentatively set through July: May 17, June 28 & July 19 (all summer hours 7-9PM), so please mark your calendars. The July date is intended to coincide with the CWCB meeting in North Park.

ATTACHMENT PREVIOUSLY SENT:

- 1) Corrected minutes from the 2-15-11 NPBRT meeting

ATTACHMENTS SENT WITH MEETING MINUTES:

- 1) Reagan Waskom's One-page summary

- 2) Agenda & Summary of previous year's activities for Annual meeting
- 3) North Platte Basin RT membership list
- 4) List of North Platte WSRA projects & funding summary
- 5) Future North Platte Consumptive Use Prioritization

ATTACHMENTS SENT SEPARATELY FROM THE MEETING MINUTES:

- 6) Presentation by Wendy Ryan/Nolan Doesken