Summary of Meeting between
Nebraska Department of Natural Resources (NDNR) and
Wyoming State Engineer's Office (WSEO)

3:00pm (Mountain Time)
October 22, 2015
Branding Room
Goshen Co. Fairgrounds, Torrington, Wyoming

I. Introductions and agenda review

The meeting was attended by the following:

Name	Representing
Jeff Fassett	Nebraska Department of Natural Resources (DNR)
Tim Freed	Nebraska DNR
Tom Hayden	Nebraska DNR
Pat O'Brien	Upper Niobrara White Natural Resource District (NRD)
Lynn Webster	Upper Niobrara White NRD
John Harju	Wyoming State Engineer's Office (SEO)
Wray Lovitt	Wyoming SEO
Sue Lowry	Wyoming SEO
Brian Pugsley	Wyoming SEO
Beth Ross	Wyoming SEO
Pat Tyrrell	Wyoming SEO
Bill Wilson	Citizen At-Large

There were no additions to agenda. In staffing updates, Beth Ross recently took over Jodee Pring's position with the SEO after Jodee departed in 2014. Beth will represent Wyoming for Technical Group calls and assignments moving forward. Tim Freed also joined the Niobrara Compact Technical Group on behalf of the Nebraska DNR.

II. Review the minutes from prior meetings

There were no corrections or additions to the meeting summaries from the October 21, 2014 meeting or the April 10, 2015 Technical Group conference call.

III. State Reports

a. Wyoming

Wray Lovitt reported on water supply conditions for the past water year, in which the outlook started off rough but due to the significant level of precipitation starting in June, the supply

forecast improved. The SEO performed a number of high capacity safety of dams inspections as a result of the heavy June rains. The high flow level from the Lusk flood that occurred in early June is unknown. Although Manville is the headwaters, he confirmed that Lusk only received about an inch and a half of rain therefore the high flows likely came from a wider drainage area. One reservoir overtopped but there was no damage related to it. Many stock reservoirs experienced damage from the heavy rains. State line gages were destroyed from a separate storm and local area rain gages later reached maximum capacity. Suffice to say, there was no regulation in Wyoming in the basin during the summer thanks to the heavy rains.

John Harju reported that not much oil and gas exploration has occurred in the Wyoming portion of the Niobrara drainage since the last meeting. There have not been any new surface water related permits in the area in years and about five domestic and/or stock watering wells have been approved since the April Technical Group meeting. Some permits have been denied because of inadequate well spacing.

b. Nebraska

Tom Hayden reported that administration on the Niobrara started around March 30th but was eased for much of the summer due to heavy rains. It was reinstated at Mirage Flats on July 13th and at Spencer on July 29th.

Nebraska saw the effects of early June heavy rains on June 3rd when the city of Manville flooded. Following this event, the Nebraska DNR tracked peak flows throughout the drainage: the state line inflow peaked on June 5th at 10.13 feet and 1,650 cfs. Six miles downstream at 33 Ranch (which was the only gage that was lost as a result of the Manville flood), the peak was 8.78 feet and 1,380 cfs. Twelve miles further downstream at Agate the peak occurred on June 7th at 8.5 feet and 1,000 cfs, then further on June 8th at 11 feet and 1,240 cfs. Above Box Butte reservoir, flows reached 250 cfs and remained at that level for eight days; by June 11th the storage level reached 23,473 AF.

IV. Update on various studies related to the basin

a. UNWNRD Conjunctive Management Model Project
b. Niobrara River Basin WaterSMART Study

Tim Freed provided an overview of Integrated Water Management Division efforts currently underway at the Nebraska DNR. He then reviewed the background of the WaterSMART grant in collaboration with the Bureau of Reclamation. Two models developed under this grant evaluate the impacts of climate variability on water resources availability in the basin. The Upper Niobrara-White groundwater model – also referred to as an integrated or conjunctive water management model – examines the hydrologic impacts of climate conditions and multiple management scenarios for the Upper Niobrara Basin. The Central Nebraska groundwater model examines the impacts for the Middle and Lower Niobrara basins. Both models utilize historically calibrated baseline data to explore baseline flow and groundwater level changes subject to three different climate variability scenarios (more

precipitation, lower precipitation and higher temperatures, and central tendency conditions). They also allow for the exploration of flows under various demand scenarios. The results from these efforts look at the effects of stress and future water availability to assess how the model performs.

Now that the research goals under the grant have been completed, the DNR modeling team planned to meet about the Integrated Water Management Plan and decide next steps on how to proceed with this and other groundwater modeling efforts.

V. Compact discussion

Pat Tyrrell reviewed past discussions on surface water permit monitoring provisions. Tom Hayden pointed out that the state line monitoring well depth 54-year historic high is 37.5 feet. The last reading was 35.66 feet. There are other monitoring wells in this districted that are not monitored by the Nebraska DNR; several NRDs work with the USGS closely on managing these monitoring wells. There has been some indication that the summer floods helped augment groundwater levels. Groundwater withdrawals from NRD wells were minimal this year because of available surface water flows. Wray Lovitt added that the situation was the same in Wyoming this year. Pat Tyrrell highlighted the Horse Creek metering order on 60 wells in the basin, and Jeff Fassett acknowledged that Nebraska also has a fairly aggressive effort to require meters on wells across the state in collaboration with several NRDs.

VI. Public comment

Bill Wilson, a citizen of Sioux County, Nebraska, joined the meeting and briefed the committee about the widespread damages throughout the North Platte and Niobrara River basins as a result of the early June floods. He requested to see analysis of the possible peak flows and recharge in the basin as a result of the floods. Tom Hayden reminded everyone that Nebraska has a relatively good idea of these peak flows as reported earlier during the meeting. Everyone agreed that more information from the impacts on the Wyoming side of the basin is needed. John Harju offered to bring monitoring well data to the next Compact meeting to illustrate if any changes were seen before and after the floods in Wyoming.

Mr. Wilson also asked about the possible influences of snowpack from the Van Tassel and Duck Creek areas on streamflow; Wray Lovitt offered to calculate the acreage of these drainages and Tom Hayden added that monitoring well data from the state line would be useful for this exercise as well.

VII. Future meeting arrangements

It was agreed that the technical group should meet in the spring again via teleconference. A tentative date was set for April 5th, 2016.

The next Compact meeting was set to be in person during the same timing as the fall North Platte Decree Committee (NPDC) meeting. The meeting for the fall, 2016 will be scheduled when the NPDC April meeting is held.

VIII. Other items

There were no other items to discuss.

The Meeting adjourned at 4:20pm.

Notes compiled by:
Beth Ross
December 28, 2015