

Niobrara Compact Technical Group

Meeting Minutes

Nebraska Department of Natural Resources (NeDNR)

Wyoming State Engineer's Office (WSEO)

10:00 a.m. Central Time / 9:00 a.m. Mountain Time

April 5th, 2016

Conference Call – GoTo Meeting

1. Introductions

Tom Hayden	NeDNR	Wray Lovitt	WSEO
Tim Freed	NeDNR	Brian Pugsley	WSEO
Mahesh Pun	NeDNR	Sue Lowry	WSEO
Melissa Mosier	NeDNR	Beth Ross	WSEO
		John Harju	WSEO

2. Nebraska Update

a. Nebraska Report

The Niobrara River averaged about 5 cfs at the stateline from October to March. The Agate gage has averaged about 15.6 cfs during the same time period. Box Butte Reservoir is about 8 feet higher right now than this time last year. Toe drains will need to be repaired at some time in the near future and it needs to be decided when would be a good time to drain the reservoir for construction. Nebraska has rehabbed many of the canals in the Niobrara Basin and installed new gage shelters. Satellite capabilities will be installed in the near future. Overall, great precipitation in the area all winter and the ground is saturated.

b. NRD activities

Basin-wide planning activities are slowing down as the Niobrara NRDs and NeDNR await news on whether or not a bill related to the Spencer Hydro permit passes in this session of the Legislature. If it is approved, parties will have to take some time to interpret it and determine how to move forward. Individual NRD Integrated Management Plans (IMPs) are moving along. The Upper Loup NRD and NeDNR will hold a public hearing on their IMP on April 14th, 2016. Middle Niobrara NRD will hold their first stakeholder meeting for their IMP on April 13th, 2016. The Upper Elkhorn NRD is in the beginning stages of developing their IMP. Annual IMP meetings have been held with the Lower Niobrara and Upper Niobrara White NRDs, at which data was exchanged, the IMPs were assessed, and the public was given the opportunity to comment.

c. Questions from Fall 2015 Niobrara Compact Meeting

Q What is the timeframe for the WaterSMART model alternative management scenarios?

A The canal recharge and pumping station location alternative management scenarios were compared to a baseline using the 1960-2010 timeframe, climatic conditions, and 2010 land use data. The baseline and future alternative management scenarios were then run using forecasted climatic conditions for 2030-2059.

Q What kind of irrigation practices are used in the study area?

A Primarily center pivot and gravity irrigation systems.

Q What are the alternative scenarios being compared to?

A Alternative scenarios were compared to the baseline model, in which 2010 land use was kept constant, so that the impact of climate variability and alternative management scenarios could be studied.

Q Have all of the funds from the Bureau of Reclamation's WaterSMART grant been used?

A Yes.

d. Conjunctive Water Management Model

No new news. Models are set-up for the Upper Niobrara White Model (watershed model, surface water operations model, and groundwater model) and the Middle Niobrara (watershed model and groundwater model).

3. Wyoming Update

a. Wyoming Report

There have been quite a few storms in the area, so the soil moisture profile is in good shape. The April 4th measurement at the stateline was 8.2 cfs. All reservoirs are either full or filling at this time.

To address comments from the public at the fall 2015 meeting: the Van Tassel drainage has 84 square miles of drainage and the Duck Creek drainage is 117 square miles.

b. Wells Report

Wyoming provided a spreadsheet of well permits issued since spring 2015. The only permit of much interest was labeled MIS and was for multiple stock tanks spread out in one area.

c. 2015 Lusk Flood Event

Wyoming has taken a look at the groundwater monitoring well data to see if there was an impact from the June 2015 Lusk Flood Event and what the peak flows might have been. On the surface water side, USGS is conducting two technical reviews and data is still preliminary. Peak flows at the Highway 85 bridge at Lusk were about 2450 cfs. Total peak flow of the Niobrara in the vicinity of Lusk occurred at Wasserberger Road and was about 9300 cfs.

To determine the impact of the Lusk flood event on groundwater levels, Wyoming pulled together the hydrographs from all of the groundwater monitoring wells that they maintain in the Niobrara Basin. Wyoming cannot report with confidence that there was an impact on the wells nearest to the Niobrara stream channel near Lusk. It does appear, however, that there was significant groundwater recharge near the state line. The data from the USGS well and the UNL well, both at the stateline, are slightly different and it should be verified that these are two different wells. This will be on the agenda for the fall 2016 Niobrara Compact meeting. The Wyoming Department of Transportation will also issue a report analyzing the Lusk flood event in the coming months. The document will be shared when it is available to the public.

d. Other Topics

In 2015, the Wyoming Water Development office began the Northeast River Basin Plan Update. Plans are updated approximately every 7 to 10 years, and this is the second round of updates for the Northeast Wyoming River Basin, which includes the Niobrara River Basin. The update will run through 2017. Currently, the Water Development office is working with a consultant on compiling data and several public meetings have been held. By next year, there should be more to report on how the update is going. A groundwater study of the Northeast Wyoming River Basin performed by the Wyoming Geological Survey is taking place concurrently.

4. Topics for next Niobrara Compact Meeting

- Update on any alternative scenarios and conjunctive management modeling associated with the Upper Niobrara White Model.
- Clarification on the USGS and UNL monitoring wells near the stateline.

The fall Niobrara Compact meeting will be scheduled after the fall NPDC meeting date is set.