

Upper Niobrara River Compact Meeting

Meeting Minutes

Nebraska Department of Natural Resources (NeDNR)
Wyoming State Engineer's Office (WSEO)

12:00 PM Mountain Time
Torrington Volunteer Fire Department
Torrington, WY
October 17th, 2018

1. Introductions and agenda review (Attachments A & B)

Tom Hayden	NeDNR	Jeff Cowley	WSEO
Carrie Wiese	NeDNR	John Harju	WSEO
Melissa Mosier	NeDNR	Brian Pugsley	WSEO
Jeremy Gehle	NeDNR	Wray Lovitt	WSEO
Gordon "Jeff" Fassett	NeDNR	Pat Tyrrell	WSEO
Beth Eckles	NeDNR	Pat O'Brien	UNWNRD
Charlie Ferrantelli	WSEO	Lynn Webster	UNWNRD

2. Review of previous meetings

- a. **Review of minutes from November 7, 2017, annual meeting:** Approved without discussion.
- b. **Review of Technical Group notes from April 19, 2018:** Approved without discussion.

3. State Reports

- a. **Wyoming:** Wray Lovitt reported that in early 2018 there was low stream flow due to a dry winter with little snowfall. However, irrigation and stock reservoirs were full due to carryover from 2017. Starting in April and continuing through July, the area experienced above normal rainfall resulting in a great crop year for hay and grasslands. Flows at the state line were estimated around 5 CFS with good flows continuing through July. Toward the end of the season, flows dropped to around 2.5 CFS, which is normal.

Most flows seen at state line are coming directly from Van Tassel Creek or backed up through the sub-soil. All-in-all, due to above normal rainfall, it ended up being a good year and there was no need for administration.

John Harju presented a list of permits issued in Wyoming for the Compact area (Attachment C). Of note, there is a temporary permit (P208706.0W) issued to Wyoming Department of Transportation for use in road construction with a point of diversion near the town of Van Tassel. A second permit (P208820.0W) for non-domestic use was issued for a large shelter belt. In addition, the One Oak/Elk Creek pipeline has necessitated enlargements on some irrigation wells in the area.

- b. Nebraska:** Tom Hayden reported that four of the six canals in the Compact area were diverting in 2018. Johnson Canal diverted in April, May and June; Ernest Canal North and Ernest Canal South were both diverting in March, May, June and July; McGinley-Stover Canal was diverting in June and July; Lakotah Canal and Cook Canal did not divert at all. Down to the above Box Butte Reservoir gage station, most of the canals came on in 2018, indicating that at times there was plenty of water in the area.

Tom reported that stream flows were measured at the WY/NE state line 13 times and averaged 4.4 CFS with a high of 11 CFS in April. Stream flows seven miles below the state line at '33 Ranch' were also measured 13 times and averaged 7 CFS with a high of 16 CFS. At Agate, there were also 13 discharge measurements and an average of 15 CFS. Releases of water from the Box Butte Reservoir resulted in higher flows of around 30-40 CFS at Agate.

In 2018, administration occurred downstream of the Compact area below Agate. On June 6, appropriations were closed off for the 1942 Spencer hydropower right. However, after the June 6 administration, a generator in the Spencer power house went out and was not operational throughout the summer. As a result, there was no administration from June to August. In August, appropriations were shut off for the 1923 Spencer hydropower right for approximately nine days. On September 26, maintenance was done to repair the power house and everything has remained open from then through the time of this Compact meeting.

Tom also commented on the repair project at Box Butte Reservoir, noting that in order to maintain the fish population, a minimum water volume (approximately 5,000 AF) has been maintained. As a result, Tom estimates that the Mirage Flats Project was able to use around 7,000 AF (normal usage is estimated at around 12,000 AF/yr), despite the loss of reservoir capacity during repairs.

4. Update on studies related to the Niobrara Basin

- a. Wyoming:** No active studies
- b. Nebraska:** Carrie Wiese reported on the status of the following studies:
 - i. Niobrara River Basin WaterSMART Grant:** No update on the WaterSMART study, it appears to be stalled in review with the Bureau of Reclamation.
 - ii. Niobrara Groundwater Model:** NeDNR is working with Olsson Associates on developing a Niobrara Basin Groundwater Model that will cover the basin as a whole, downstream of Box Butte Reservoir. Previously NeDNR has used two separate models (Upper Niobrara-White Model, and CENEB Model). There was disagreement between the two models within the areas they overlapped, thus prompting this study. The goal is to have the model finished and to start generating results within about a year. Work on developing land use data for model calibration is currently occurring.

- iii. **NPS/USGS Niobrara National Scenic River Hydrogeologic study and modeling efforts:** The report on the hydrogeologic study is expected to come out sometime this year. The model will hopefully be finished and generating results in 2020.
 - iv. **Upper Niobrara-White NRD Groundwater Recharge Study:** Pat O'Brien reported that the UNWNRD Board wanted the NRD to look at possible active or passive groundwater recharge sites within the District (including the Compact area). The study will look at potential sites and determine their suitability for groundwater recharge based upon qualitative and quantitative criteria. The UNWNRD is working with the Flatwater Group and HDR on the project and hope to have it completed by January 2019.
5. **Compact discussion:** No discussion on this agenda item.
 6. **Other Items:** No discussion on this agenda item.
 7. **Public comment:** About a year ago Bill Wilson contacted WSEO requesting assistance understanding the drainage area of Van Tassel Creek watershed in both Wyoming and Nebraska. WSEO provided drainage numbers as well as maps at that time. He recently sent an email requesting a refresher on how and where to access data on the square mile areas in the main stem, Duck Creek, and Van Tassel drainages, including the Nebraska portion. Melissa has forwarded the email to WSEO and UNWNRD, and Charlie and Wray will follow up with Bill.
 8. **Next meeting date:** Melissa Mosier will send out a Doodle Poll to schedule the next Niobrara Compact Technical Group meeting (via conference call) and it will occur around the time of the NPDC meeting.

AGENDA

UPPER NIOBRARA RIVER COMPACT ANNUAL MEETING

Nebraska Department of Natural Resources (NeDNR)
Wyoming State Engineer's Office (WSEO)

October 17, 2018, 12:00 p.m. (Mountain Time)

Torrington Volunteer Fire Department

336 West Valley Road

Torrington, Wyoming

(Park on north side of building. Enter via south tower doors)

AGENDA ITEMS:

1. Introductions and agenda review
2. Review of previous meetings
 - a. Minutes from November 7, 2017, annual meeting
 - b. Technical Group notes from April 19, 2018
3. State reports
 - a. Wyoming
 - b. Nebraska
4. Update on studies related to the basin
 - a. Wyoming
 - b. Nebraska
 - i. Niobrara River Basin WaterSMART Grant
 - ii. Niobrara Groundwater Model
 - iii. NPS/USGS Niobrara National Scenic River hydrogeologic study and modeling efforts
5. Compact discussion
6. Other items
7. Public comment period
8. Set date for next Upper Niobrara River Compact meeting and Technical group
9. Adjourn

Permits Approved in Niobrara River Basin in Wyoming since Last Fall Meeting on November 7, 2017

WR Number	PriorityDate	Company	FirstName	LastName	FacilityName	Uses	Tw	Rng	Sec	Qtr-Qtr	Appropriation(GPM)	Longitude	Latitude
P208706.0W	03/19/2018	WYDOT			ENL. ADAMS NO. 1	MIS	031N	060W	18	SW1/4SW1/4	0	-104.12107	42.6574
P208820.0W	04/05/2018		JAMES	KRUSE	KRUSE18	MIS;STK	032N	062W	15	NW1/4NW1/4	25	-104.29798	42.75424
P209338.0W	07/05/2018		JOSEPH ROBERT AND DIANE	CARPENTER	CARPENTER #1	STK	033N	061W	35	NE1/4NE1/4	25	-104.14442	42.79921
P209663.0W	08/30/2018		ROD A OR ROXIE	NELSON	SOCKY #1	DOM_GW;STK	032N	064W	04	SW1/4SE1/4	25	-104.5426	42.77132
P209738.0W	09/11/2018		SEAN	GROTE	SEAN 1	STK	032N	060W	08	NW1/4NW1/4	25	-104.10147	42.7698
P209804.0W	09/27/2018		TOM AND VALERIE	WASSERBURGER	WASSERBURGER	DOM_GW	032N	063W	05	SE1/4SW1/4	25	-104.44957	42.77161

Notes:

The State Engineer's Office is still holding, unapproved, four irrigation use applications that violate the spacing policy currently in place for irrigation use wells in the area.

The "MIS" use associated with Permit No. U.W. 208706 allows a total of 36.8 AF of water per year to be produced from the Adams No. 1 well at a rate of 850 gpm and used for road construction over a period of two years.

The "MIS" use associated with Permit No. U.W. 208820 allows for the watering of an area of wind breaks/tree rows larger than 1 acre in size.