
**2026 ANNUAL INTEGRATED
MANAGEMENT PLAN REPORT:**

**MIDDLE NIOBRARA NATURAL
RESOURCES DISTRICT**

&

**NEBRASKA DEPARTMENT OF
WATER, ENERGY, AND
ENVIRONMENT**

REPORT OF 2025 DATA AND MANAGEMENT ACTIONS
ANNUAL MEETING HELD APRIL 13, 2026



Purpose

In 2015, the Middle Niobrara Natural Resources District (MNNRD or District) and the Nebraska Department of Natural Resources (NeDNR) began work on a jointly developed voluntary Integrated Management Plan (IMP). IMPs provide a framework for natural resources districts (NRDs) and the Department to collaboratively manage hydrologically connected surface water and groundwater at a local level. The Middle Niobrara voluntary IMP was developed in accordance with the Nebraska Groundwater Management and Protection Act and included consultation with stakeholders from MNNRD. In late 2019, the District and the Department reached agreement on a draft IMP, and a hearing was held to take testimony from the public. After considering testimony provided at the public hearing the District and the Department agreed to adopt the IMP, which became effective on December 20, 2020.

On July 1, 2025 the Department of Natural Resources and the Department of Energy and Environment merged to form the Department of Water, Energy, and Environment (DWEE or Department). As outlined in the IMP, the District and Department meet annually to share data, exchange annual reports, and discuss actions taken to implement the IMP. Annual IMP reports are intended to facilitate the exchange of information between the MNNRD and DWEE, and to keep the public informed about integrated water management activities within the district. This report covers the actions and progress made by NeDNR/DWEE in 2025 to implement the IMP—with a focus on surface water. The MNNRD completed a separate report that describes the actions and progress made in voluntary IMP implementation—with a focus on groundwater.

Department Reporting

The Department annually reports on data related to the following. Items in **bold** are required under the IMP. Other data presented in this report are collected by the Department and shared to present a more complete picture of water management actions in the district.

- **Surface water use**
 - ◇ **Irrigation**
 - ◇ **Municipal**
 - ◇ **Industrial**
- **Surface water permitting**
 - ◇ **New surface water appropriations granted**
 - ◇ **Transfers/cancellations of surface water appropriations**
 - ◇ Pumpsite observations
 - ◇ Voluntary water use reporting
- **New groundwater permits issued**
- **Streamgage measurements from Department-maintained streamgages**
- **Surface water administration**
- **New depletions accounting report**
- **New data collected or model/study results (conservation measures, riparian ET, etc.)**

Surface Water Use

The Nebraska Department of Natural Resources is responsible for issuing surface water permits in the state. In the MNNRD, 73% of all surface water permits are for irrigation, either from a naturally flowing source or from a reservoir. The remaining surface water permits allow for water storage, domestic and industrial uses, and instream flow protections. **Table 1** shows a breakdown of all active surface water permits in the district by use type as of December 31, 2025. It also includes the total number of each permit type, acres approved for irrigation, and the cumulative rate in cubic feet per second (cfs) or volume granted in acre-feet (af) for each type of permit.

Table 1. Surface Water Use in the Middle Niobrara NRD as of December 31, 2025.

Active Surface Water Permits in the Middle Niobrara NRD as of December 31, 2025					
Purpose of Permit		Number of Permits	Acres Approved for Irrigation	Grant (cfs)	Grant (af)
Irrigation	Direct Flow: Diversion from naturally flowing source for irrigation	110	49,654.3	700.17	N/A
	Storage Use: Diversion from a reservoir for irrigation.	11	35,655.5*	N/A	5610
Irrigation Permits Total		121	49,654.3	700.17	5610
Storage	Storage of water in a reservoir	30	N/A	N/A	78,869.84
	Storage Permits Total	30	N/A	N/A	78,869.84
Other	Domestic Use	6	7.4	0.13	6
	Aggregate washing	1	N/A	0.89	N/A
	Fish culture	1	N/A	N/A	98
	Instream Flow	2	N/A	110	N/A
	Livestock Watering	4	N/A	0.52	0
All Other Permits Total		14	7.4	111.54	104
All Surface Water Permits Total		165	49,661.7	811.71	84,583.84
*These permits are associated with Ainsworth Irrigation District and allow for irrigation with water from storage on land already approved for irrigation from natural flow. Therefore, acres approved under these storage use permits are not counted in total irrigated acres.					

Surface Water Permitting

In 2025, there was one new surface water permit issued by the Department. Detailed information about this permit is presented in **Table 2**. There was one dismissed/denied permit in the District in 2025 and no cancelled in full, cancelled in part or expired permits. These permits can be seen in **Table 3**. Seven additional permitting actions included provisional relinquishments and reassignment of acres are shown in **Table 3**. **Figure 1** shows the locations of all 2025 surface water permitting actions within the Middle Niobrara NRD.

Table 2. New surface water permitting actions granted in 2025.

New Surface Water Permitting Actions								
Appropriation Number	Approval Date	Priority Date	Point of Diversion Location	Use	Source	Acres	Grant	Associated Variance
A-20107	12/8/2025	9/29/2025	S22 T32-R40W	IR	Niobrara River	240.0	3.43 cfs	N/A

Table 3. Cancelled in Full, Cancelled in Part, Expired, Dismissed or Denied Permits.

Cancelled in Full, Cancelled in Part, Expired, Dismissed or Denied Water Permitting Actions								
Appropriation Number	Approval Date	Priority Date	Point of Diversion Location	Use	Source	Acres	Grant	Associated Variance
A-18876	N/A	2/17/2012	S22 T35-R23W	IR	Lost Creek	140	2.0 cfs	N/A

Table 4. Summary of surface water modifications in 2025.

Modifications To Surface Water Permits January 1, 2025 to December 31, 2025				
Appropriation Number	Approval Date	Cancelled Date	Status	Modification Number
A-5218	7/21/2025	N/A	Approved	PREL-11057
A-10620	7/21/2025	N/A	Approved	PREL-11058
A-5218	9/3/2025	N/A	Approved	PREL-11393
A-10620	9/3/2025	N/A	Approved	PREL-11394
A-5218	7/21/2025	N/A	Approved	REA-11059
A-10620	7/21/2025	N/A	Approved	REA-11060
A-5218 A-10620	9/3/2025	N/A	Approved	REA-11395

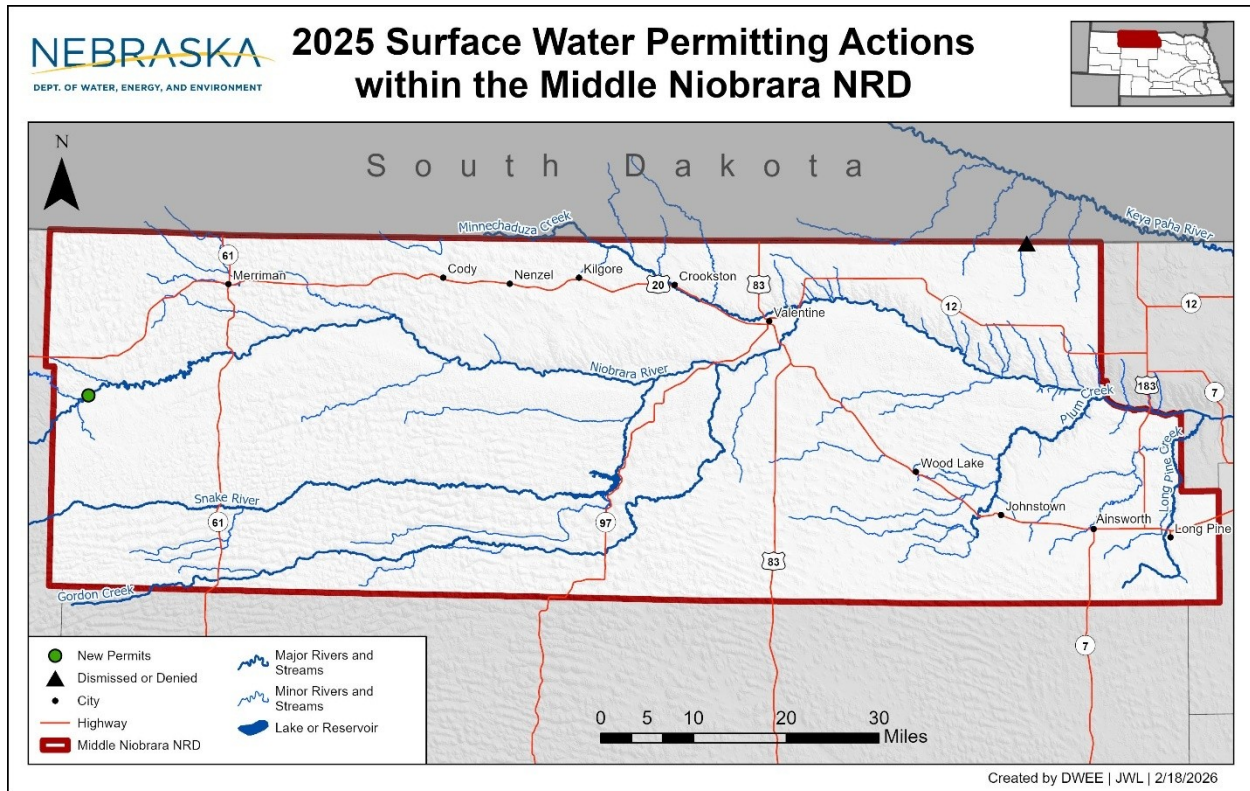


Figure 1. 2025 surface water permitting actions within Middle Niobrara NRD.

Pump Site Observations

The DWEE field office staff regularly inspects pump sites of surface water diversion points as conditions allow. Not all pump sites are inspected every irrigation season, and some pump sites may be visited more than once per season. See **Table 5** and **Figure 2** for more information. As part of inspections, field staff collect the following data:

- Evidence of pump site
- Pumps that are running
- Crops in field
- Irrigation method

Table 5. Surface water pump site observations in the Middle Niobrara NRD in 2025.

2025 Surface Water Pump Site Observations			
Total number of Irrigation Permits	Number of Pump Sites Inspected	Number of Pump Sites Set up for Irrigation	Distinct Sites Visited
121	103	49	100

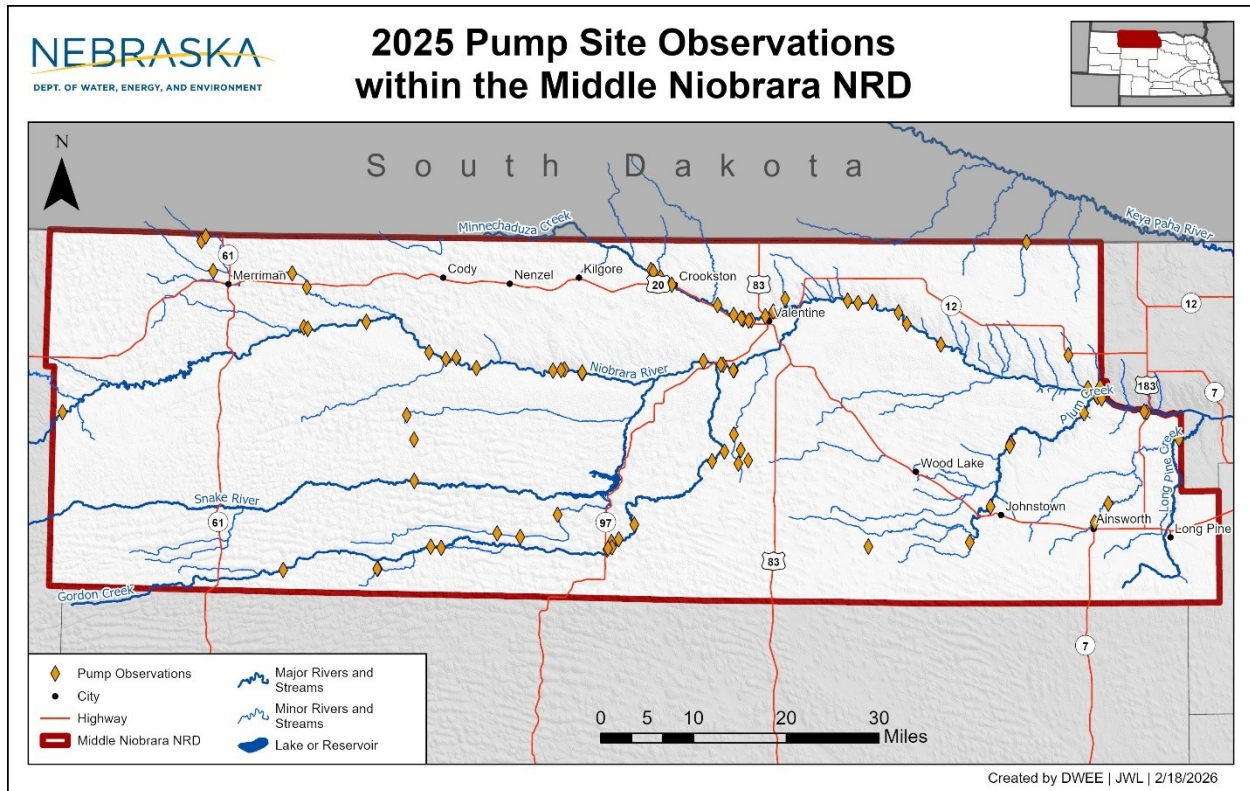


Figure 2. Pump site inspections within the Middle Niobrara NRD in 2025.

Voluntary Water Use Reporting

Currently surface water use reporting within the MNNRD occurs on a voluntary basis. DWEE requests water use data from all irrigation permit holders through surveys that contain questions about use or non-use, acres irrigated, estimated amount of water applied, and type of crops grown. **Table 6** provides a summary of MNNRD’s voluntary water use survey responses.

Table 6. Voluntary surface water reporting within the Middle Niobrara NRD in 2025.

2025 Voluntary Surface Water Reporting							
Natural Resources District	No. of Water Rights	No. of Reports	No. of Reports SW Irrigated	No. of Reports Not Used	No. of GW Irrigated Reports	SW Irrigated Acres	SW Inches Per Acre
Middle Niobrara	96	23	19	73	4	2,687	7.6

Groundwater Permitting

The Department, in accordance with *Neb. Rev. Stat. § 46-613.01, §§ 46-639 to 46-653*, issues groundwater transfer permits for municipal use. **Table 7** provides a summary of the permitted maximum water withdrawals for the city of Ainsworth’s municipal groundwater transfer permit. Annual reports for this permit are provided by the City of Ainsworth and available upon request.

In 2025, there were no new groundwater permits issued by DWEE in the Middle Niobrara NRD.

Table 7. Department issued groundwater transfer permits in Middle Niobrara NRD.

Department Issued Groundwater Transfer Permits as of December 31, 2025					
Permit Holder	Appropriation Number	Priority Date	Maximum Daily Withdrawal	Total Annual Withdrawal	Required Reporting
City of Ainsworth	MT-3	12/29/2003	1,440,000 Gallons	73,730,000 Gallons	Yes

Stream Gage Measurements

The Department maintains four streamgages within the MNNRD portion of the Niobrara River Basin. These gages are located on the Niobrara River near Nenzel, the Snake River at Doughboy, the Snake River near Burge, and the Ainsworth Canal from Merritt Reservoir. The Department also monitors water levels at Merritt Reservoir. Additionally, The USGS operates two streamgages in the district, located on the Niobrara River near Sparks and on Long Pine Creek near Riverview. **Figure 3** shows the location of all active streamgages in the district. Yearly charts for DWEE and USGS streamgages and water level readings at Merritt Reservoir for the 2025 calendar year can be found in **Appendix A**. Each chart contains the following information.

- Mean Daily Discharge for the reporting year and gage lifetime.
- Maximum, median, minimum cumulative volumetric discharge for gage lifetime.
- Reporting year cumulative volumetric discharge.

The stream gages from 2025 show that last year was similar to each gages median year in the past with the exception of the “Niobrara River @ Nenzel” gage. This gage was similar to the minimum cumulative volume in 2021, with 2025 having 4,000 more af of water that passed through.

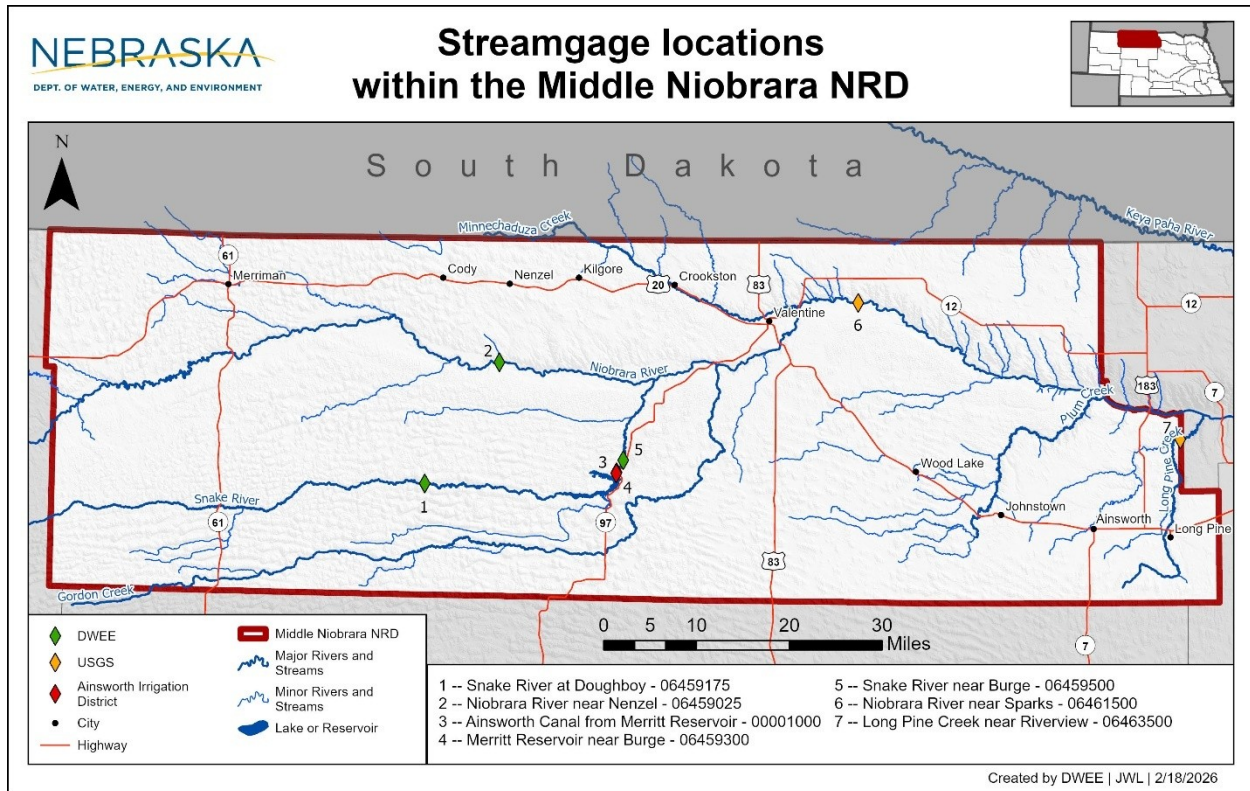


Figure 3. Location of DWEE and USGS operated stream gages in Middle Niobrara NRD.

Merritt Reservoir started the 2025 irrigation season with a storage volume of 62,656 af on May 1 and ended the season on September 30 with a storage volume of 56,915 af. Peak reservoir storage occurred on June 17 with a volume of 66,780 af and the minimum reservoir volume of 48,371 af occurred on August 29. The Ainsworth Canal, which supplies water to the Ainsworth Irrigation District, recorded a total of 66,352 af of water diverted from May 19 through September 21. A graph for Ainsworth Canal can be seen in Appendix A.

Surface Water Administration

Since 1895, Nebraska has had an administrative system¹ overseeing the orderly use of the state's surface water resources. All diversions of surface water for irrigation, hydropower, industrial use, municipal use, domestic use, storage, and other uses require a permit from the State with each having certain responsibilities, limitations, and conditions associated with it. The Department has jurisdiction over all matters pertaining to surface water rights including the distribution of available supply during times of water shortages and adjudication of established water rights. The activity of distributing the

¹ For additional information on the administrative system, please see the following links: <https://dwee.nebraska.gov/surface-water> or <https://dwee.nebraska.gov/surface-water/statutes-rules-regulatory-history/natural-flow-permits-overview>

supply of surface water on a stream during shortages is called “surface water administration.” Rules for surface water administration are set out in Nebraska Revised Statutes, Chapter 46, and operate on a first-in-time, first-in-right principle.

In 2025 the Niobrara Basin, below Box Butte Reservoir and above the confluence of the Niobrara and Missouri Rivers, had closures starting in March and continued periodically until October. See **Table 8** for a breakdown of the surface water notices.

Table 8. Surface water administration in the Lower Niobrara Basin in 2025.

Surface Water Administration							
Water Division	Date of Closure	Date Reopened	Days Closed	Permit Type	No. Affected	Reason for Closure	Reason for Reopening
2C - Niobrara River	3/25/2025	5/17/2025	64	Direct Flow	7	Instream flow not being met	Instream flow is being met
				Storage	4		
	4/22/2025	5/28/2025	36	Direct Flow	142	Instream Basin Management flows are not being met (From 1942)	Instream Basin management flows are being met
				Storage	94		
	5/9/2025	5/28/2025	19	Direct Flow	187	Instream Basin Management flows are not being met (From 1923)	Instream Basin Management flows are being met
				Storage	119		
	6/5/2025	6/19/2025	14	Direct Flow	133	Instream Basin Management (From 1942)	Instream Basin Management flows are being met
				Storage	108		
	6/11/2025	6/24/2025	13	Direct Flow	1	Instream flow not being met	Instream flow is being met
				Storage	1		
	7/4/2025	10/1/2025	89	Direct Flow	131	Instream Basin Management flow not being met (From 1942)	Instream Basin Management period ends
				Storage	108		

Surface Water Administration							
Water Division	Date of Closure	Date Reopened	Days Closed	Permit Type	No. Affected	Reason for Closure	Reason for Reopening
	7/9/2025	09/18/2025	71	Direct Flow	184	Instream Basin Management flow not being met (From 1923)	Instream Basin Management flows are being met
				Storage	119		
	8/11/2025	8/19/2025	8	Direct Flow	1	Instream flow not being met	Instream flow is being met
				Storage	1		
	8/26/2025	9/2/2025	7	Direct Flow	1		
				Storage	1		
	9/9/2025	9/12/2025	3	Direct Flow	1		
				Storage	1		
	10/3/2025	10/16/2025	14	Direct Flow	4		
				Storage	4		

Groundwater and Surface Water Depletions from New Development

Stream depletions are calculated to quantify the impact that groundwater and surface water development has on a stream based on an appropriation’s estimated consumptive use and its proximity to the stream. Annual consumptive use for an appropriation is estimated by multiplying its approved acres by the net irrigation requirement (NIR), in inches (in), for corn at that appropriation’s location. Consumptive use is then multiplied by the location’s stream depletion factor (SDF)² to estimate the volume of water depleted from the stream by that appropriation over a 50-year time frame.

$$\begin{aligned}
 &(\text{acres}) * (\text{NIR}) = \text{estimated consumptive use (acre-inches of water)} \\
 &(\text{acre-inches}) / (12 \text{ inches}) = \text{estimated consumptive use (acre-feet of water)} \\
 &(\text{consumptive use}) * (\text{SDF}) = \text{stream depletion}
 \end{aligned}$$

Table 9 lists estimated stream depletions resulting from new groundwater development reported by MNNRD in 2024. **Table 10** lists stream depletions associated with approved surface water appropriations for 2025.

² SDF represents the proportion of water that would come from streamflow (as opposed to groundwater) at a certain location over 50-years of pumping. Surface water appropriations have an SDF of 1.0.

Table 9. Estimated stream depletions for new groundwater permits approved by MNNRD in 2025.

2025 Approved Groundwater Permits					
Location (S-T-R)	Source	Acres	Net Irrigation Requirement (in)	Annual Consumptive Use (af)	Calculated Stream Depletion (af)
35-32-22	Groundwater	87.35	9.6728	70.41	60.13
29-30-22	Groundwater	50.00	8.6464	36.03	20.58
34-34-32	Groundwater	150.00	12.0708	150.89	29.49
5-33-31	Groundwater	140.00	11.5068	134.25	15.94
8-33-31	Groundwater	140.00	11.4428	133.50	46.26
13-33-27	Groundwater	28.4 ³	12.2384	28.96	6.5
Total		567.35		554.03	178.97

Table 10. Estimated stream depletions for surface water applications submitted prior to December 31, 2025.

Stream Depletions from Approved Surface Water Permits							
Location (S-T-R)	Approved Date	Priority Date	Source	Acres	Net Irrigation Requirement (in)	Annual Consumptive Use (af)	Calculated Stream Depletion (af)
22-32-40	12/8/2025	9/29/2025	Niobrara River	240	12.3	246.00	246.00

Controls listed in the IMP state that the Department may issue new surface water appropriations as long as the cumulative stream depletions associated with those appropriations are less than or equal to the cumulative depletions associated with new groundwater appropriations reported by the MNNRD. **Table 11** lists the total calculated depletions to the Niobrara River resulting from groundwater permits approved in 2025 and surface water permits approved in 2025, as well as any remaining allowable depletions from surface water development.

³ Acres here were assigned by MNNRD and used by MNNRD to calculate approval ranking and used by DWEE to calculate stream depletion only, no new irrigated acres.

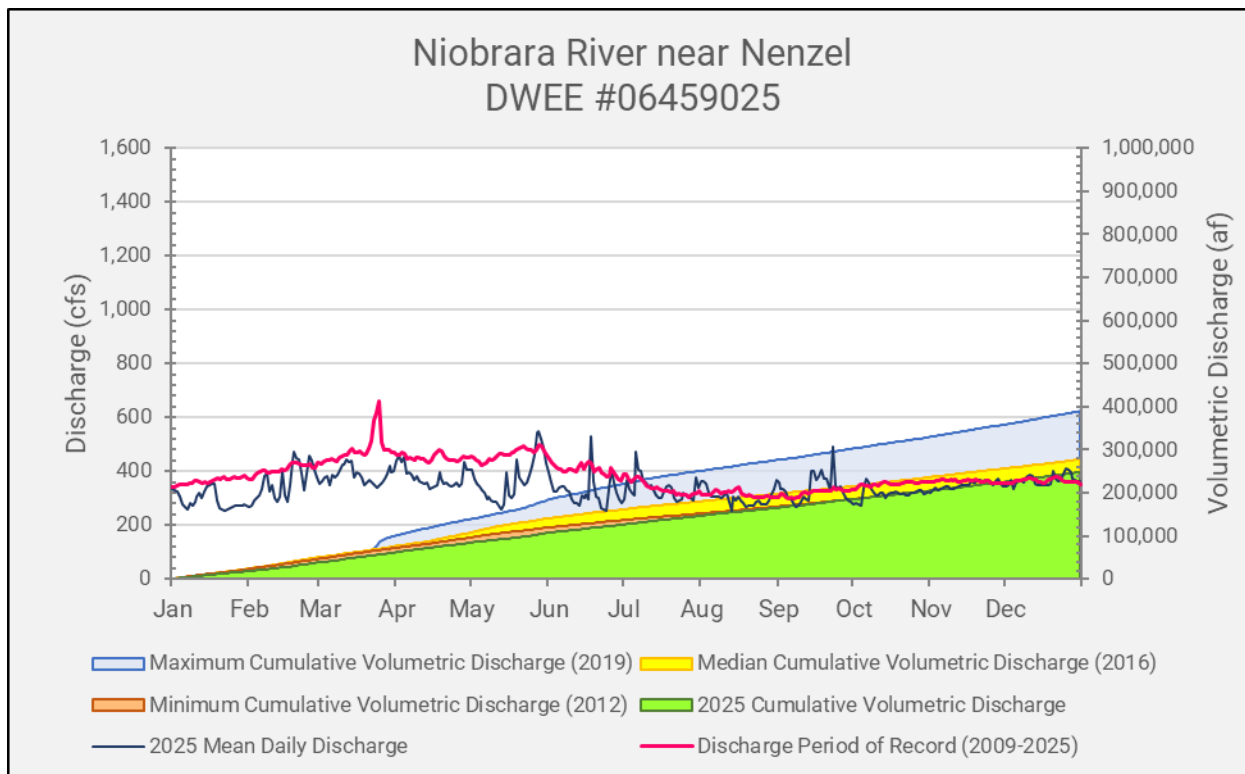
Table 11. Available surface water depletions based on 2025 MNNRD Groundwater development.

Surface Water Depletions Balance as of 12/31/2025		
2024 Carryover Available SW Depletions	685.12 af	
2025 Groundwater Depletions Approved	178.97 af	
2025 Surface Water Depletions Approved		246.00 af
Remaining Available Surface Water Depletions		618.09 af

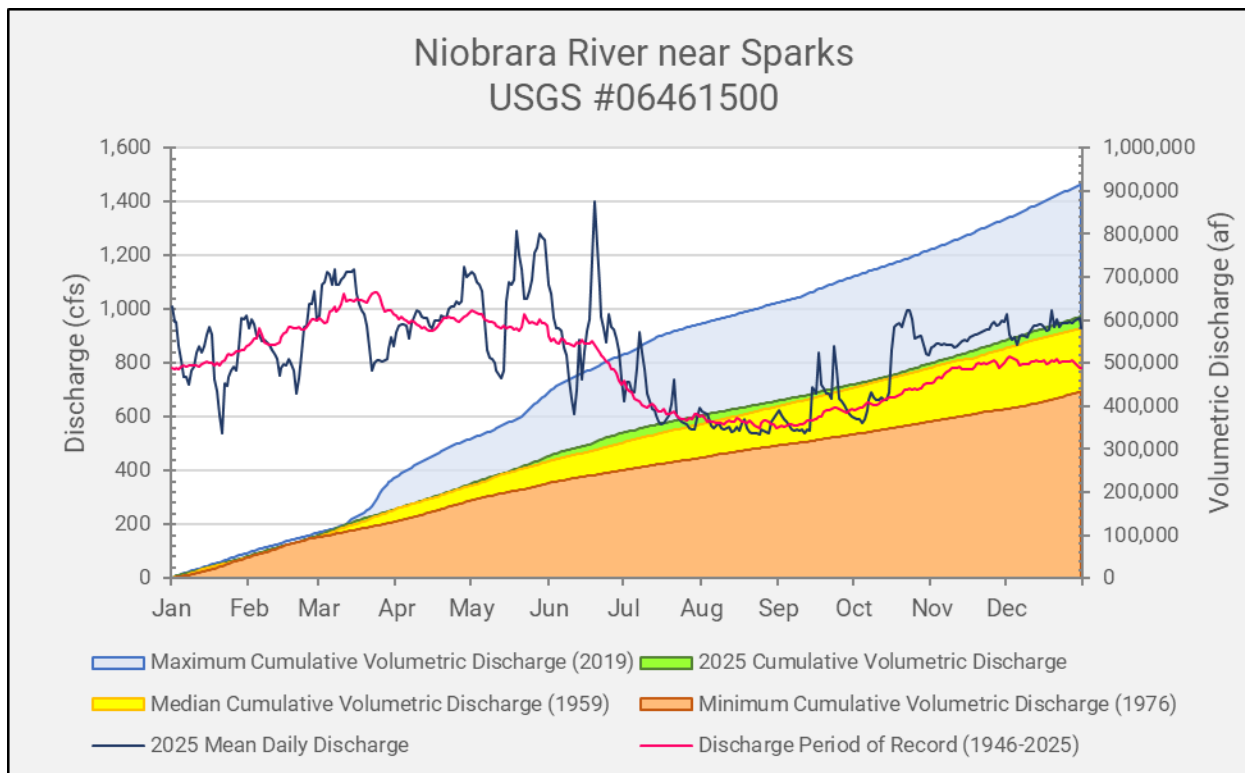
Current Studies and Modeling

In 2020, the Department began collaborating with the USGS and National Park Service on the development of a groundwater model that would cover the District. The USGS has completed model calibration and has shared draft documentation with the Department for agency review. Model files will be published once the USGS has finalized its documentation.

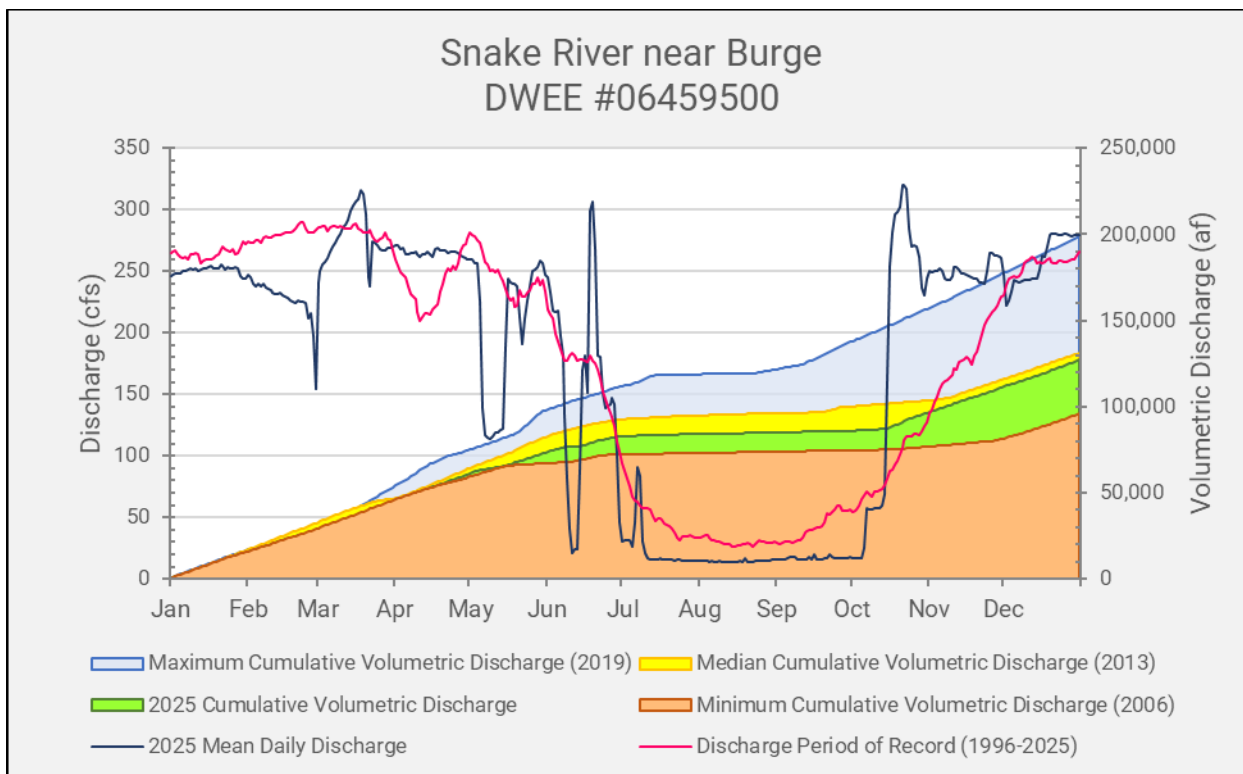
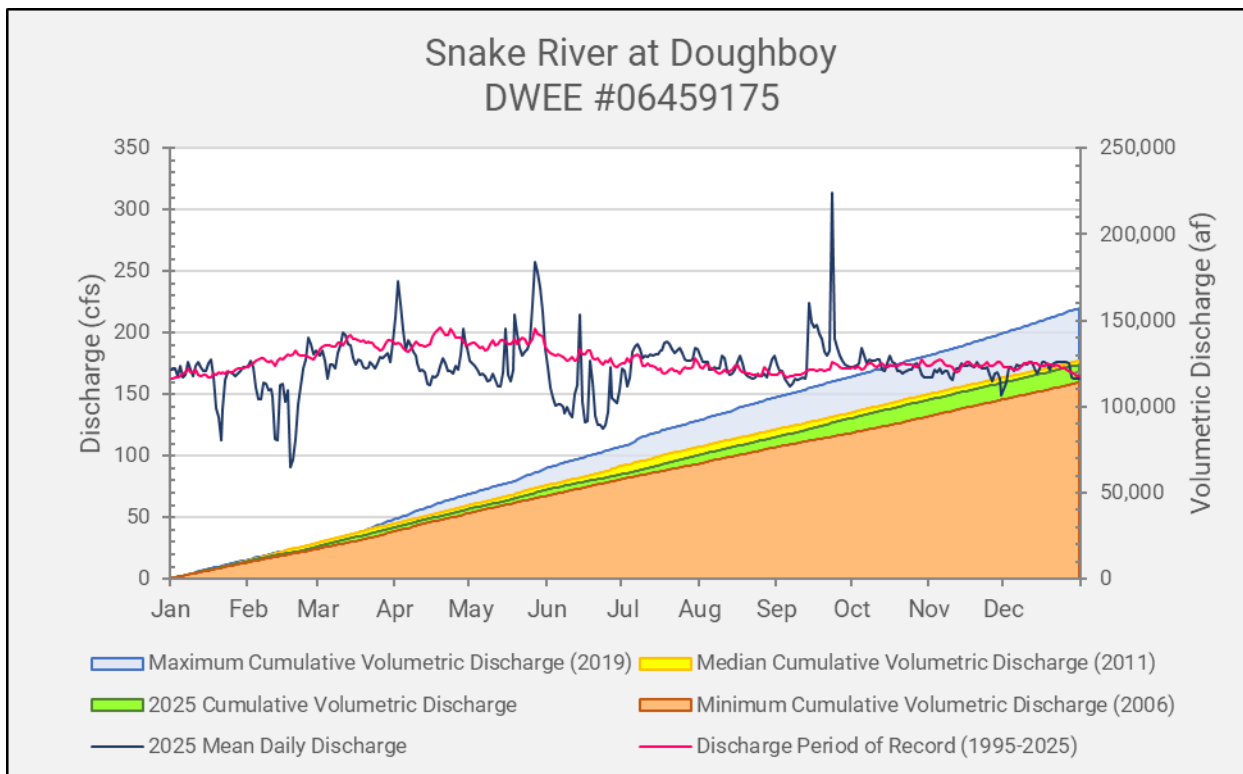
Appendix A STREAMGAGE MEASUREMENTS



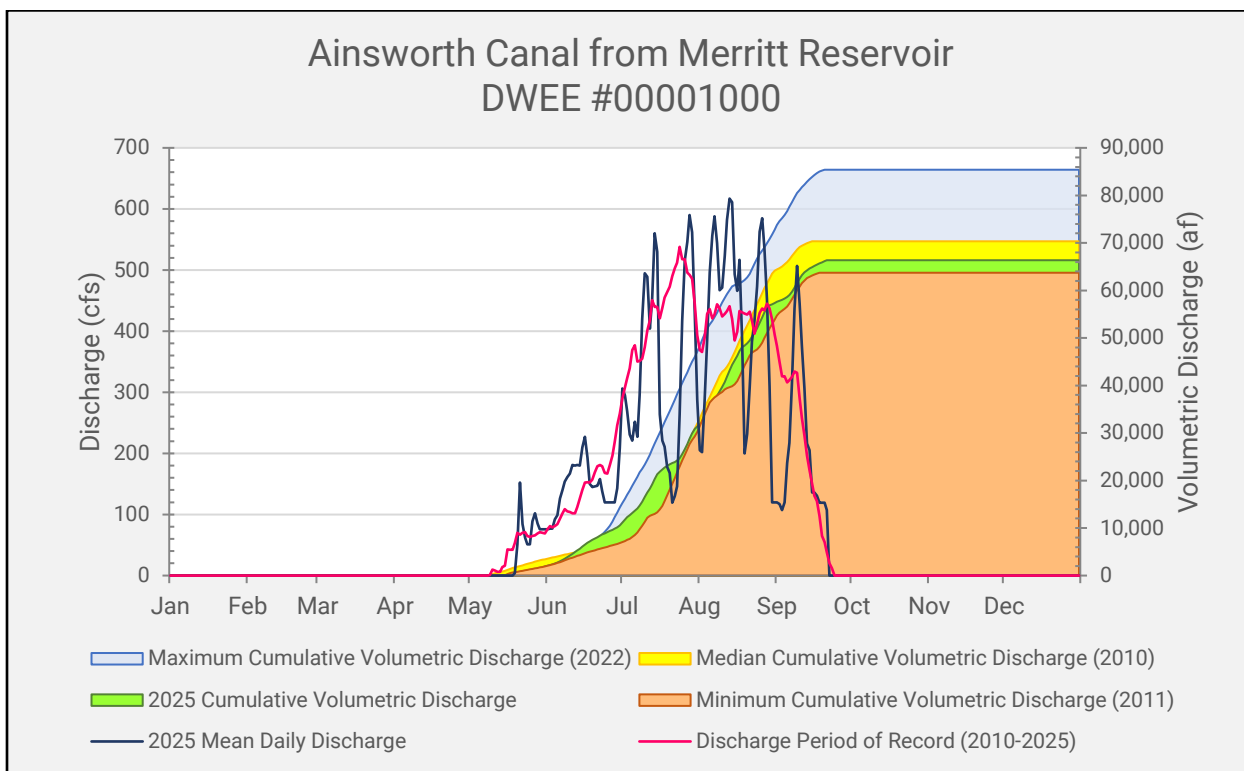
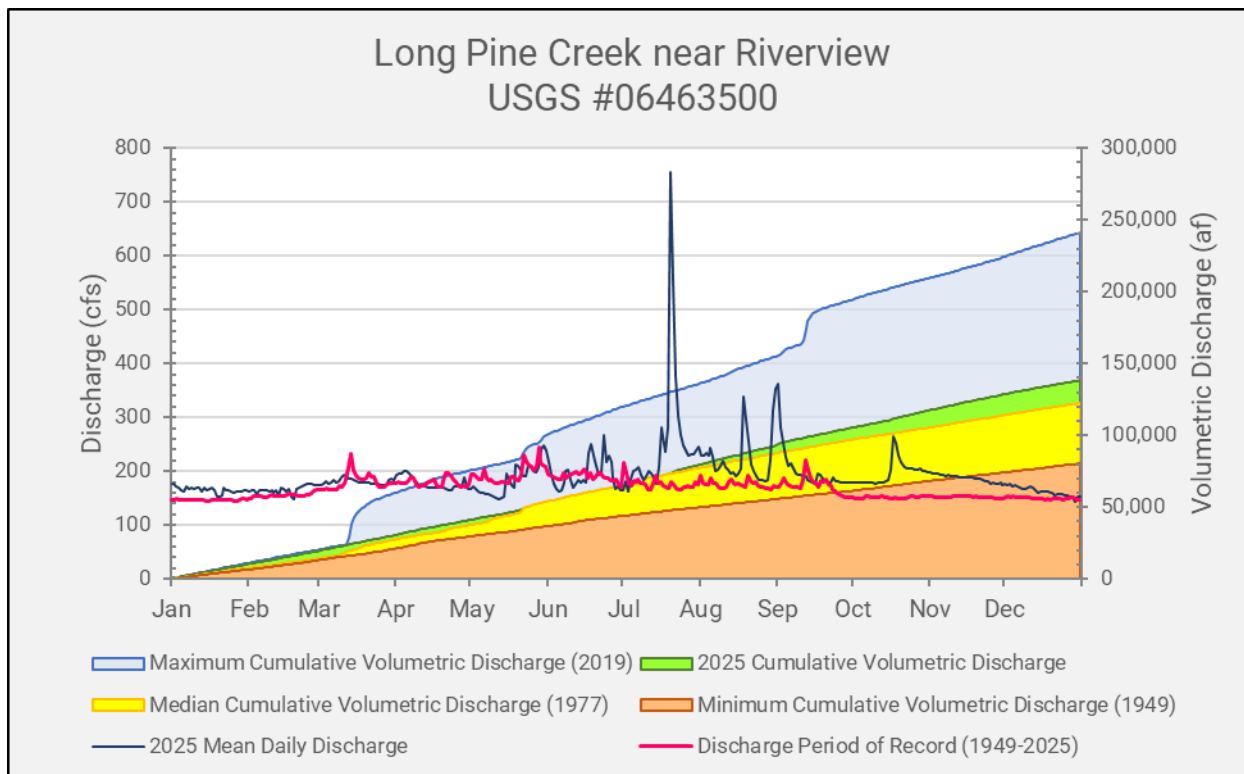
Note. Minimum Cumulative Volumetric Discharge (2012) is mostly hidden behind 2025 Cumulative Volumetric Discharge.



Appendix A STREAMGAGE MEASUREMENTS



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