

Report on 2022 Activities  
Basin-Wide Plan for Joint Integrated Water Resources  
Management of Overappropriated Portions of the  
Upper Platte River Basin

Upper Platte Basin-Wide Annual Meeting  
August 3, 2023

Caitlin Kingsley, Environmental Specialist III

# NEBRASKA

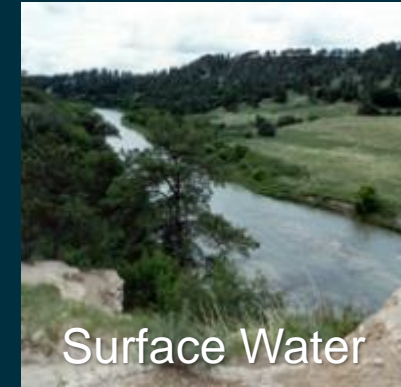
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Water Planning  
and Integrated  
Management



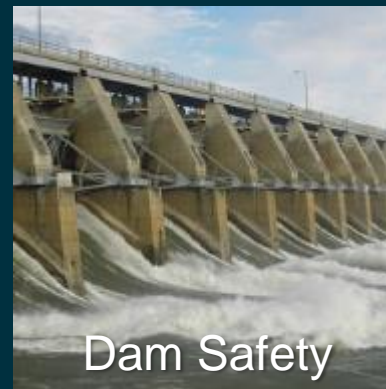
Surface Water



Groundwater



Floodplain  
Management



Dam Safety



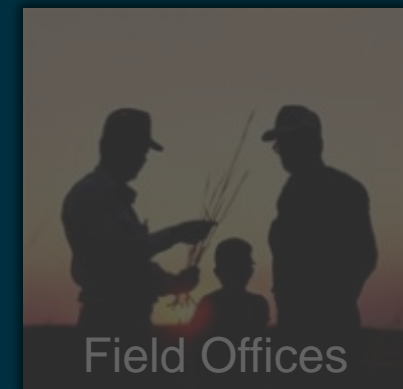
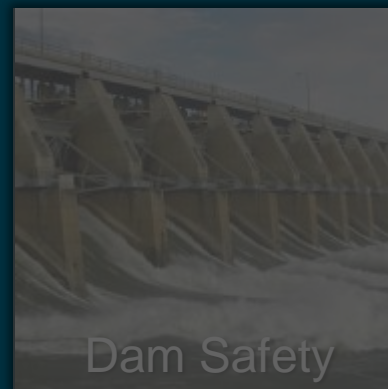
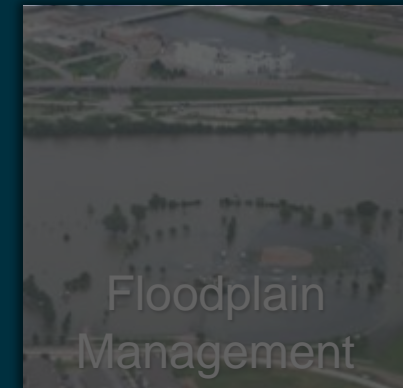
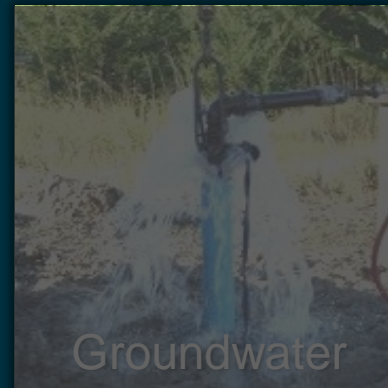
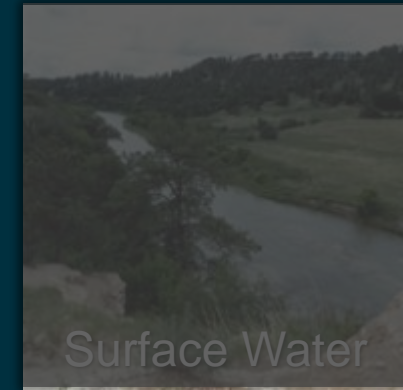
Field Offices

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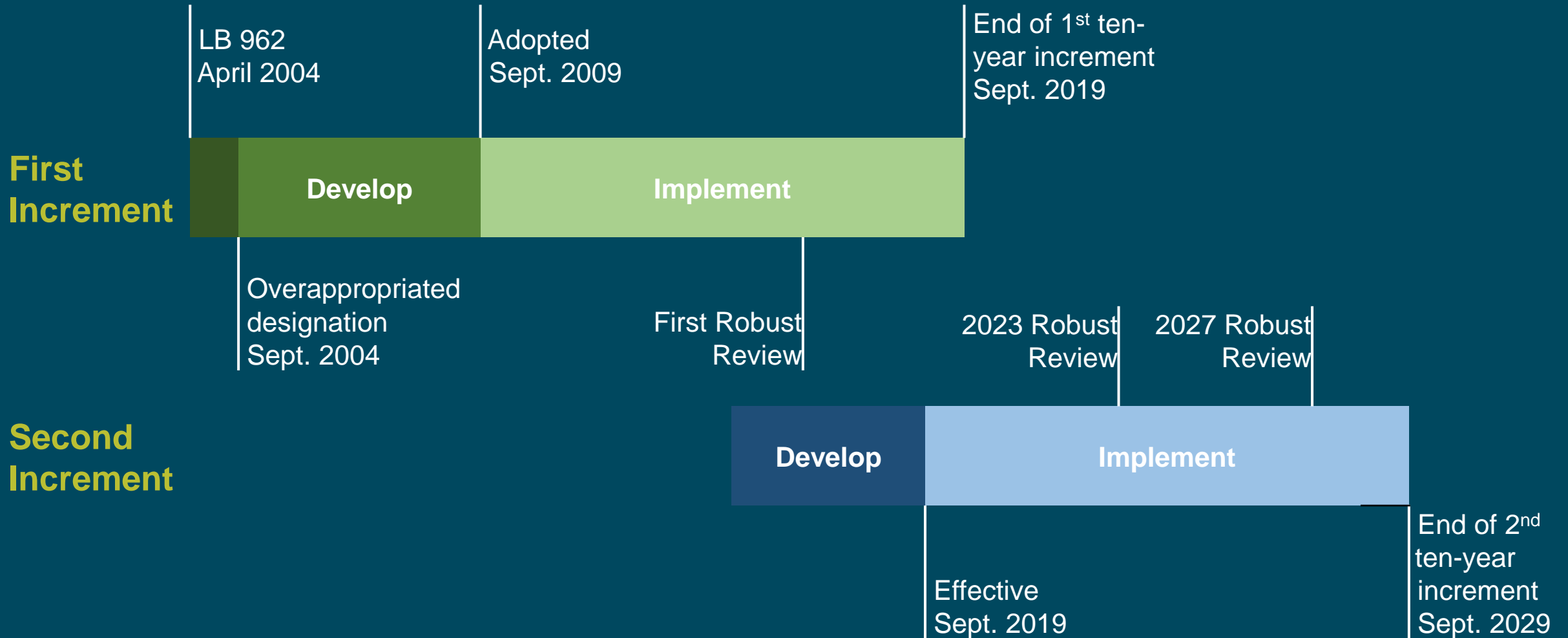
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# Upper Platte Basin-Wide Plan Timeline



# Robust Review

## ➤ Purpose:

1. An evaluation of the impact of pre- and post-July 1, 1997, development, and progress towards Plan goals/objectives/action items

## ➤ Outcomes:

1. A 50-year estimate of the **streamflow depletions** associated with pre- and post-1997 levels of water use development within the hydrologically connected area of the overappropriated basin within each NRD and within the entirety of each NRD.
2. A 50-year estimate of **streamflow accretions** associated with management actions implemented by each NRD and NeDNR within the hydrologically connected area of the overappropriated basin within each NRD and within the entirety of the NRD.
3. A summary of the net streamflow depletions within the overappropriated basin resulting from groundwater pumping within each NRD.

# Robust Review Updates

- Aiming for model runs by September 2023, completion by the end of 2023
- Updates from prior Robust Review:
  - MMA updated the COHYST model
  - ARI updated the WWUM
  - Land use was updated
  - Municipal and Industrial pumping calculations were updated
  - Additional excess flow recharge amounts were calculated and included
  - TFG completed the Conservation Study and used results to update CROPSIM

# Drought Plan Development in the Basin

- Action Item 1.3.4: Develop a Basin drought contingency plan for management of supplies during times of shortage.
  - Basin-wide Drought Contingency Plan to be completed within the first 3 to 5 years of 2<sup>nd</sup> increment and address conditions under a basin-wide or regional drought condition.
  - The Basin-wide Drought Contingency plan will serve as a guide for plans to be developed by individual Upper Platte NRDs as part of this action item.



# Drought Contingency Planning

July 2022	Oct	Jan 2023	April	July	Oct	
Engage Drought Task Force and Draft Plan				Review & Incorporate Comments	Bureau Review & Incorporate Comments	Finalize & Adopt Plan
<b>Meeting 1</b> July 21, 2022 Vulnerabilities Drought Impacts	<b>Meeting 2</b> March 29, 2023 Mitigation and Response Actions Monitoring		<b>Meeting 3</b> May 23, 2023 Monitoring Mitigation Response Scenarios	<b>Meeting 4</b> June 27, 2023 Feedback on Monitoring, Mitigation & Response	<b>Finalize Plan</b> End of 2023	

Project website: <https://dnr.nebraska.gov/water-planning/drought-planning/upperplattebasin>



# Decision Support System for Excess Flows

## DSS Public Dashboard

*\*All data on this page are provisional and subject to revision. Data displayed below is the best available but please be aware that it can be affected by ice conditions, equipment malfunctions, and/or telemetry complications.\**

DSS Water Administration Dashboard

Select Date: Yesterday
Select a date: No date selected

**Lake McConaughy Reservoir**  
7/27/2023 - Provisional

55.9%

974,600 AF / 1,743,000 AF

**Overton Instream Flow**  
7/27/2023 - Provisional

187 cfs

0 cfs / 600 cfs

**Odessa Instream Flow**  
7/27/2023 - Provisional

335 cfs

0 cfs / 1000 cfs

**Grand Island Instream Flow**  
7/27/2023 - Provisional

523 cfs

0 cfs / 1000 cfs

**Duncan Instream Flow**  
7/27/2023 - Provisional

561 cfs

0 cfs / 1000 cfs

**North Bend Instream Flow**  
7/27/2023 - Provisional

2080 cfs

0 cfs / 1800 cfs

**Louisville Instream Flow**  
7/27/2023 - Provisional

3710 cfs

0 cfs / 3700 cfs

Grand Island USFWS Target Flow - Provisional

Actual: 523 cfs

Target: 1200 cfs

Hydrologic Condition on 7/27/2023: Normal

**Excess Flow Permits**

11

Open

0

Closed

11

**Latest Administration**

A-18922 - Cozad Canal from Platte River  
Status: Close  
Effective: 7/24/2023, 12:00 PM  
Reason for Administration: Recharge - Excess flow is NOT available


A-18923 - Orchard-Alfalfa Canal from Platte River  
Status: Close  
Effective: 7/24/2023, 12:00 PM  
Reason for Administration: Recharge - Excess flow is NOT available

- 📍 A-18922: Cozad Canal from Platte River - Close
- 📍 A-18923: Orchard-Alfalfa Canal from Platte River - Close
- 📍 A-18924: Thirty Mile Canal from Platte River - Close
- 📍 A-18999: Tri-County Canal from Platte River - Close
- 📍 A-19900: Dawson County Canal from Platte River - Close
- 📍 A-19901: Gothenburg from Platte River - Close
- 📍 A-19902: Paxton-Hershey Water

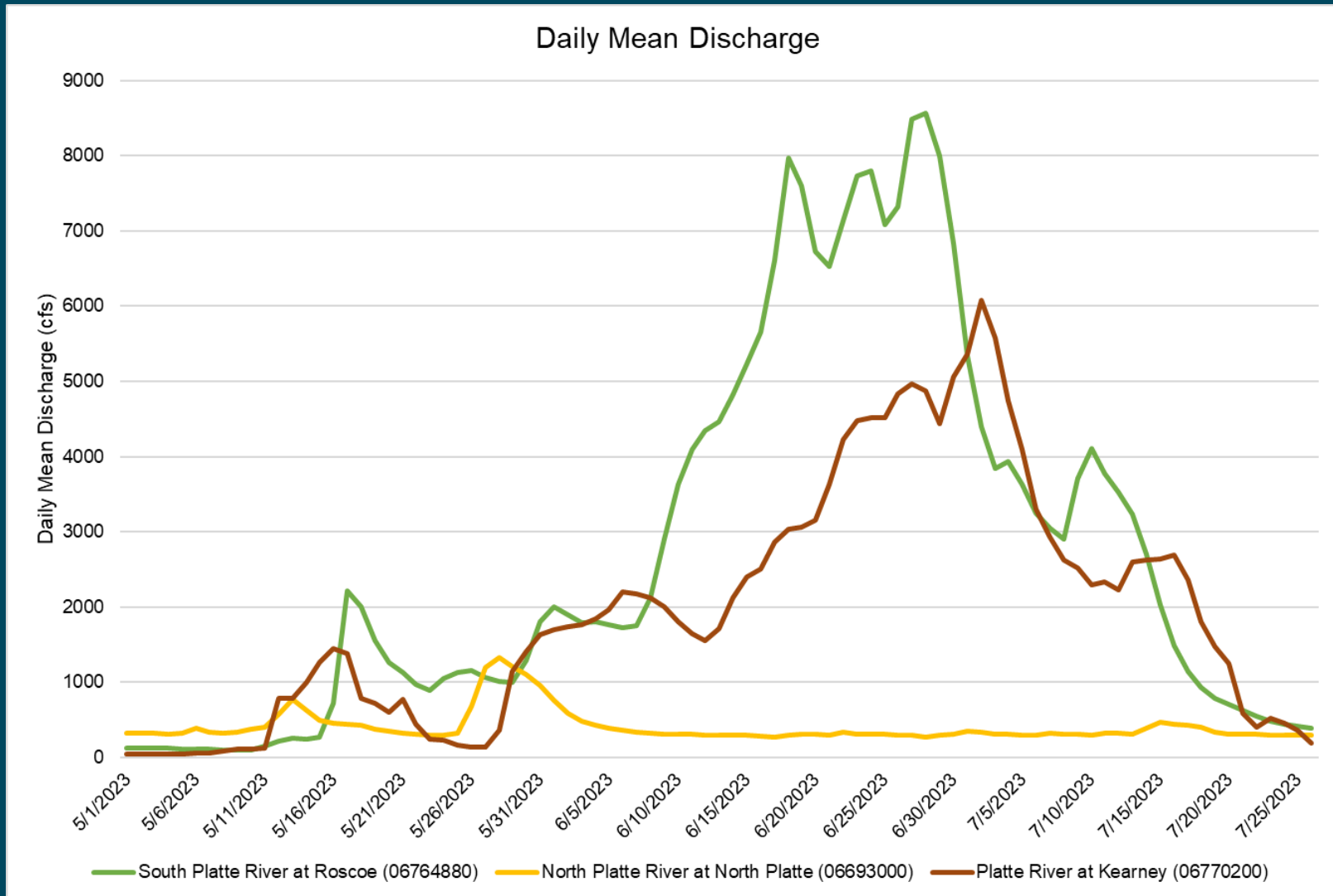
Sources: Esri, USGS | Nebraska Game & Parks Commission, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS | Sources: Esri, TomTom, U.S. Department of Commerce, U.S. Census Bureau | State of Nebraska, Department of Transportation | Powered by Esri

# Excess Flow Communications

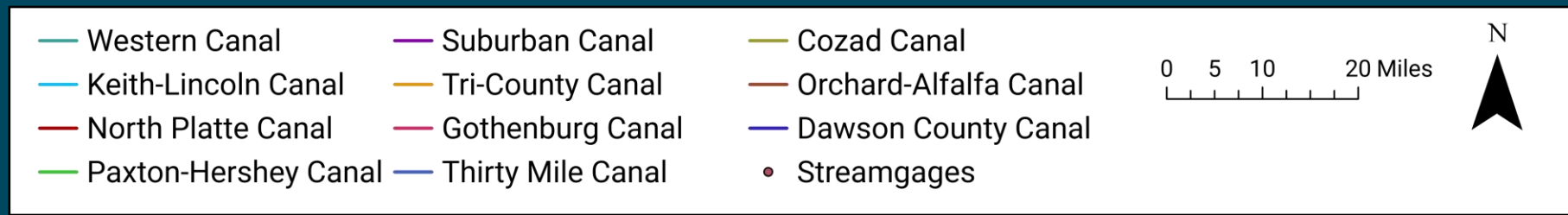
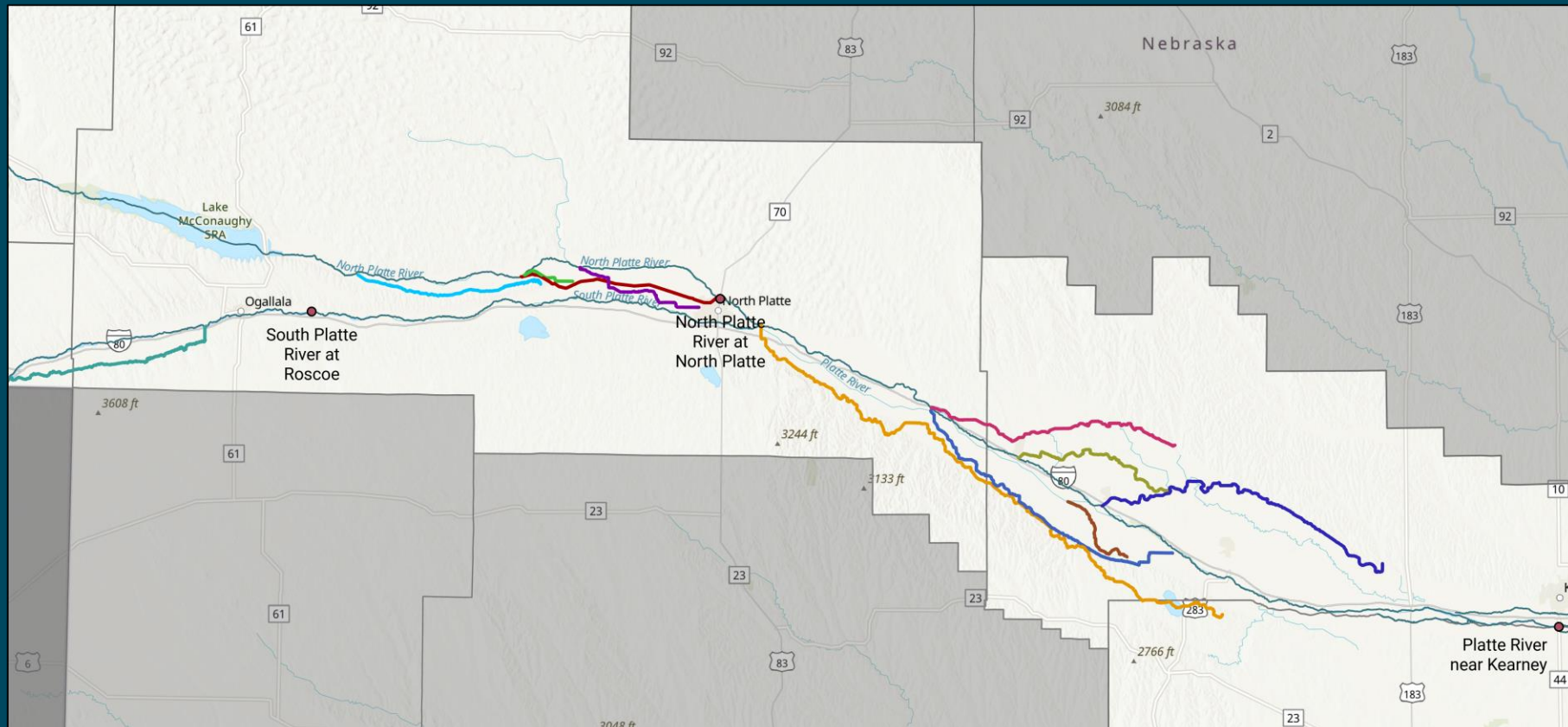
- When excess flows are available, NeDNR Water Administration sends notice to the owner/operator of the recharge appropriation
  - Open effective date & time
  - Allowed diversion rate in cfs
  - Water source & carrier
- When excess flows are no longer available, NeDNR Water Admin issues a closing notice
- DSS contains the latest administration for each active excess flow permit

<b>Excess Flow Permits</b>  <b>11</b>		<b>Latest Administration</b>
<b>Open</b> <b>0</b>	<b>Closed</b> <b>11</b>	A-18922 - Cozad Canal from Platte River Status: <b>Close</b> Effective: 7/24/2023, 12:00 PM Reason for Administration: Recharge - Excess flow is NOT available
		A-18923 - Orchard-Alfalfa Canal from Platte River Status: <b>Close</b> Effective: 7/24/2023, 12:00 PM Reason for Administration: Recharge - Excess flow is NOT available

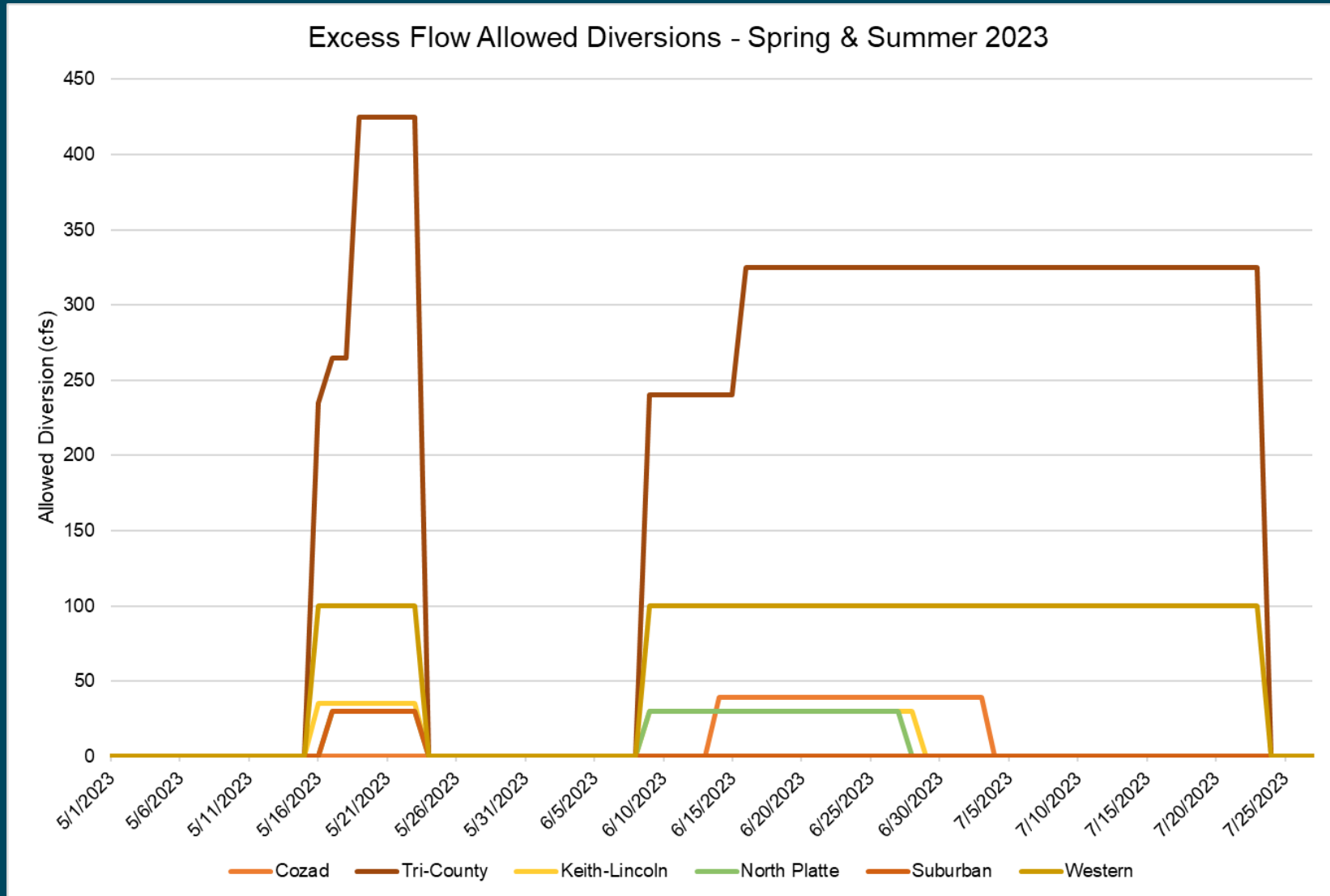
# 2023 Excess Flows



# Canals With Active Excess Flow Permits in 2023

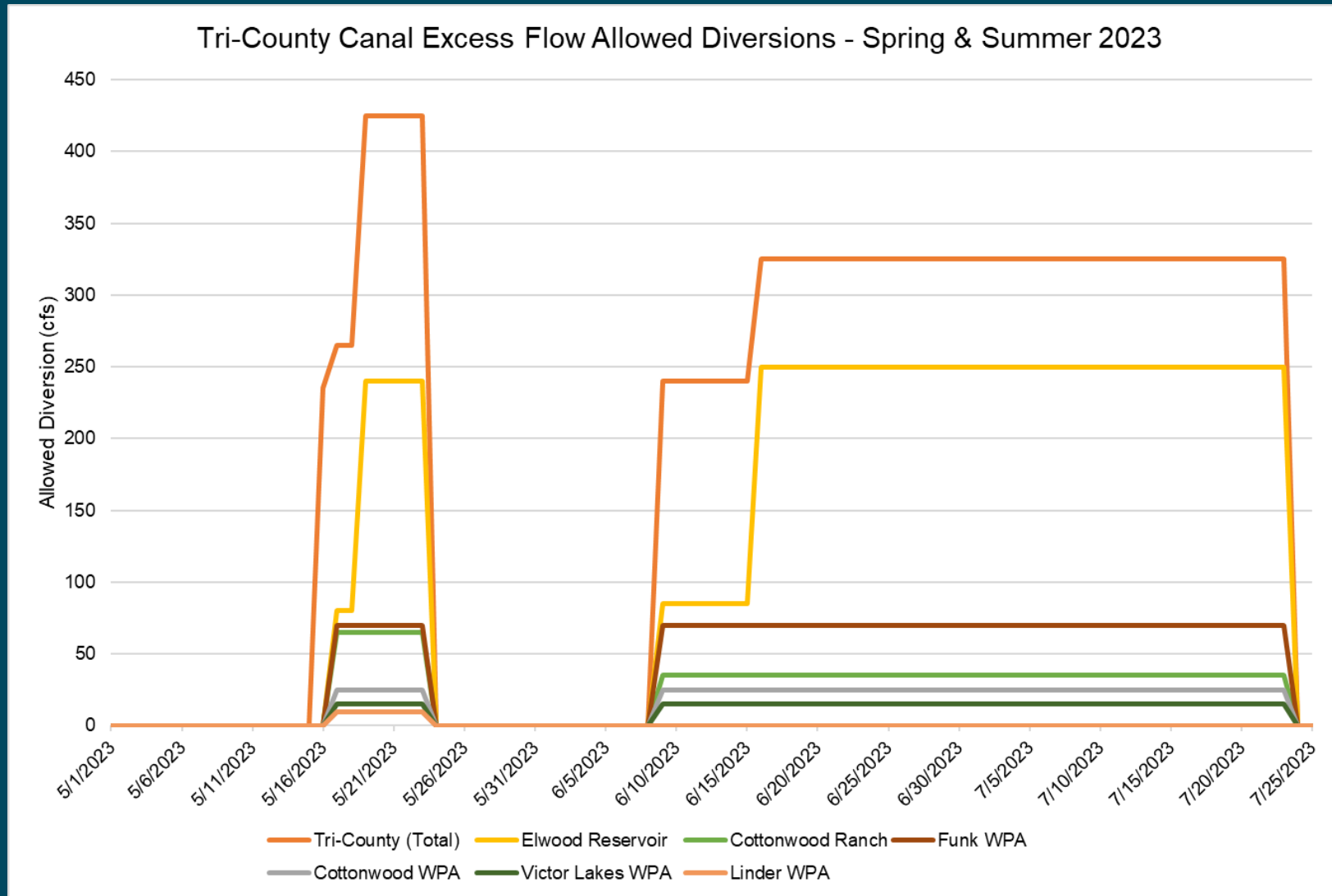


# 2023 Excess Flows





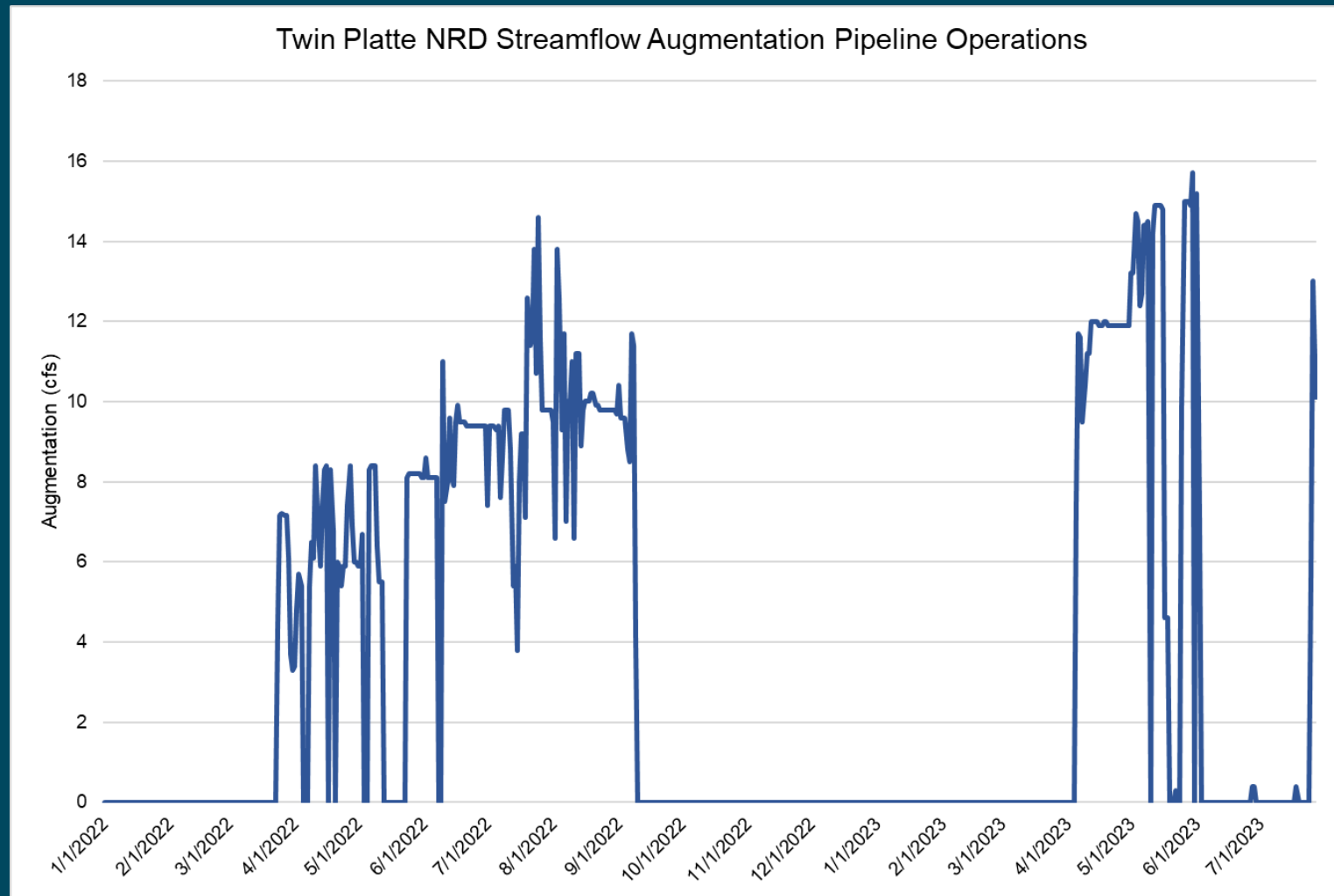
# 2023 Excess Flows – Tri-County Canal



# NeDNR Communication for Platte River Augmentation - Twin Platte NRD Streamflow Augmentation Pipeline

- NeDNR Water Administration notifies TPNRD and Pipeline Operator when there is administration for water rights and/or State-protected flows occurring at or below Tri-County Canal
- Pipeline Operator notifies NeDNR and TPNRD when they begin pumping
- Daily pumping reports – values get added to PWAP
- NeDNR Water Administration notifies TPNRD and Pipeline Operator again when administration actions end

# TPNRD Platte Augmentation – 2022 & 2023





# Summary of 2022 Activities in the Upper Platte Basin

- Nine (9) new surface water permits
  - 8 temporary recharge permits
  - 1 temporary manufacturing permit
- One (1) groundwater transfer permit
- Three (3) dam construction approvals
- No new net depletions to the basin

# Surface Water Permits Approved in 2022

Appropriation Number	Approval Date	S-T-R W	Source or Canal	Use	Grant in CFS	Grant in AF	Surface Water or Groundwater Mitigation	Associated Variance
A-19801	1/14/2022	30-15-38 W	Lake McConaughy, A-2374	Temporary Manufacturing		2	Variance granted pursuant to 457 Neb. Admin. Code Ch. 23 § 001.06	VAR-9469
A-19807	3/1/2022	19-12-26 W	Gothenburg Canal	Temporary Recharge	100		Variance granted pursuant to 457 Neb. Admin. Code Ch. 23 § 001.03	VAR-9543
A-19808	3/1/2022	18-10-23 W	Dawson County Canal	Temporary Recharge	100		Variance granted pursuant to 457 Neb. Admin. Code Ch. 23 § 001.03	VAR-9544
A-19813	3/14/2022	18-14-36 W	Keith-Lincoln Canal	Temporary Recharge	80.56		Variance granted pursuant to 457 Neb. Admin. Code Ch. 23 § 001.03	VAR-9561
A-19814	3/14/2022	13-14-34 W	North Platte Canal	Temporary Recharge	201		Variance granted pursuant to 457 Neb. Admin. Code Ch. 23 § 001.03	VAR-9569
A-19815	3/14/2022	14-12-43 W	Western Canal	Temporary Recharge	176.26		Variance granted pursuant to 457 Neb. Admin. Code Ch. 23 § 001.03	VAR-9563
A-19816	3/14/2022	12-14-33 W	Suburban Canal	Temporary Recharge	77.47		Variance granted pursuant to 457 Neb. Admin. Code Ch. 23 § 001.03	VAR-9565
A-19817	3/14/2022	18-14-33 W	Paxton-Hershey Canal	Temporary Recharge	102.78		Variance granted pursuant to 457 Neb. Admin. Code Ch. 23 § 001.03	VAR-9567
A-19831	4/25/2022	8-13-29 W	Tri-County Canal	Temporary Recharge	950		Variance granted pursuant to 457 Neb. Admin. Code Ch. 23 § 001.03	VAR-9610

# Dam Safety Permits Approved in 2022

- Three dam repair projects which do not increase the capacity of the dams above the originally permitted volumes

Plan Number	Order Date	Dam Status	S-T-R W	Project Name	Source	Use
P-20855	1/31/2022	Approved	9-13-40 W	Brule Creek Watershed Site 1A Dam Remedial Repair	Brule Canyon Creek	Flood Control, Storm Water Management
P-20885	8/25/2022	Approved	30-8-22 W	Elwood Dam Seepage Mitigation Project	TR-Plum Creek	Irrigation
P-20890	3/14/2022	Approved	9-14-3 W	Dam Rehabilitation Jones Creek Reservoir	TR-Clear Creek	Erosion & Flood Control

# Groundwater Transfer Permit Approved in 2022

- One permit: TA-55
- TA-55 allows for irrigation of up to 9.9 acres in Wyoming from a well located close to the Wyoming state line in Scotts Bluff County
  - TA-55 did not allow additional water to be withdrawn – amount limited to 33.5 AF approved under TA-31
  - No increase in pumping volume + allocation below crop consumptive use value

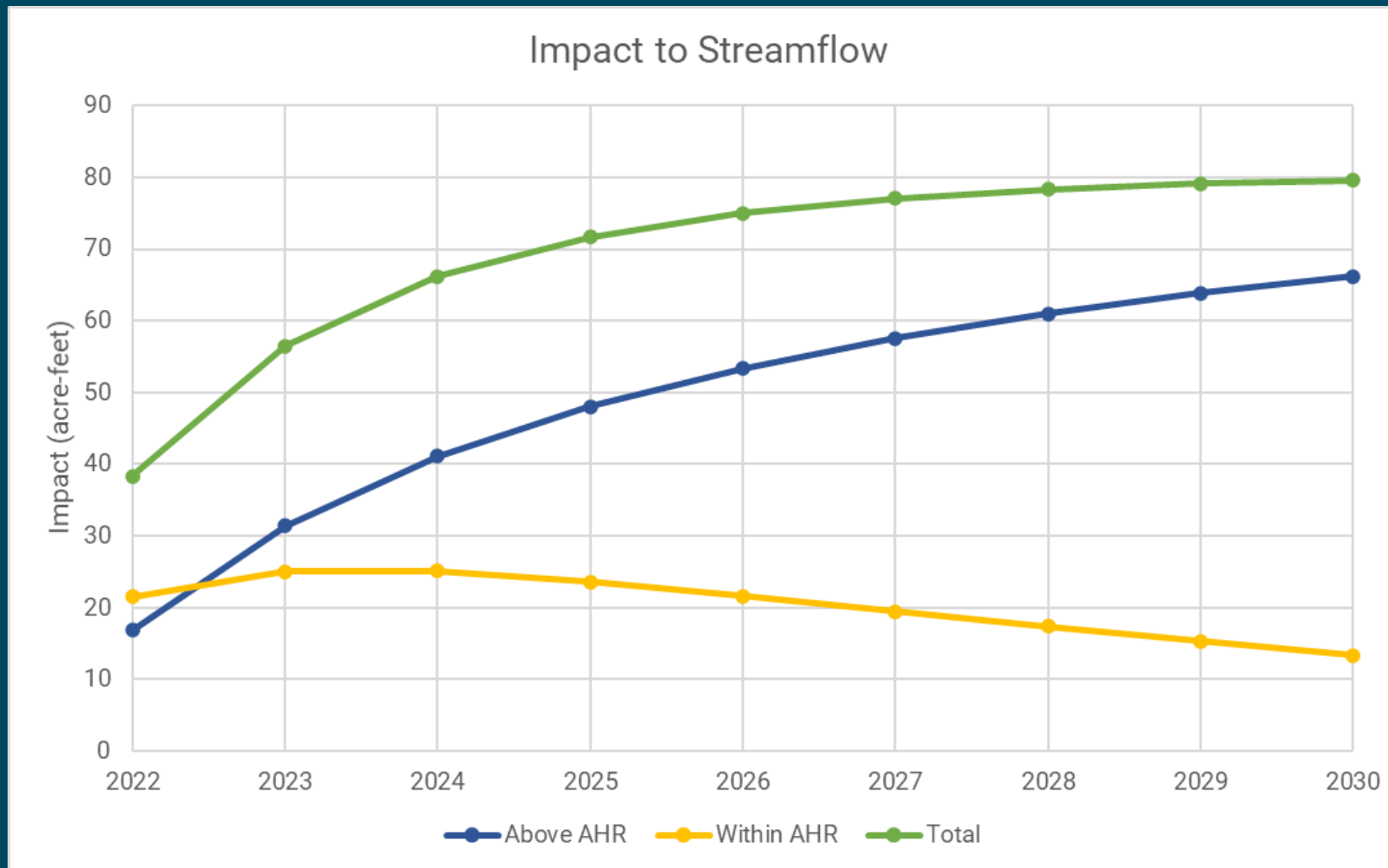
Permit Number	Well Registration Numbers	NRD GW Transfer Permit Number	Approval Date	Well Type	S-T-R W	Permitted Max. Daily Rate (gal)	Permitted Annual Consumptive Use (AF)	Offset Scheme
TA-55	G-015400	N/A	6/1/2022	Irrigation	16-23-58 W	252,000	33.5 (Approved under TA-31)	N/A

# 2022 Depletions and Accretions

	CPNRD (114 Permits)			NPNRD (1 Permit)			SPNRD (No Permits)			TBNRD (6 Permits)			TPNRD (15 Permits)			All NRDs
Year	Depletion	Mitigation	Net Effect	Depletion	Mitigation	Net Effect	Depletion	Mitigation	Net Effect	Depletion	Mitigation	Net Effect	Depletion	Mitigation	Net Effect	Total Net Effect
2022	-11	32	21	0	0	0	0	0	0	0	1	0	-19	36	17	38
2023	-33	58	25	0	0	0	0	0	0	-5	6	0	-27	58	31	56
2024	-55	79	24	0	0	0	0	0	0	-9	10	1	-32	73	41	66
2025	-74	95	22	0	0	0	0	0	0	-12	14	2	-35	83	48	72
2026	-90	109	19	0	0	0	0	0	0	-14	16	2	-38	92	53	75
2027	-105	121	17	0	0	0	0	0	0	-15	18	3	-41	98	58	77
2028	-118	132	15	0	0	0	0	0	0	-16	19	3	-43	104	61	78
2029	-129	142	12	0	0	0	0	0	0	-18	21	3	-45	109	64	79
2030	-140	150	10	0	0	0	0	0	0	-19	22	3	-47	113	66	80

All values in acre-feet

# Impacts of 2022 Activities on Streamflow



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# THANK YOU

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