NPNRD IMP

Meeting 3

NORTH PLATTE
Natural Resources District

NEBRASKA
DEPT. OF NATURAL RESOURCES

TODAY'S AGENDA

- Welcome
- Administration
  - August meeting recap
- Draft Basin-Wide Plan
  - Goals Beyond 1997 Levels
  - Maintaining Economic Viability
  - Maintaining Integrity of Surface Water Rights
  - Drought Planning
  - Total Depletions
- Surface Water Law (Provisions for Upstream Use)
- Pivot Conversion on Surface-Water Acres
- Conjunctive Management
- Public Comment

WELCOME

- Open meeting notice
- Safety & logistics
- Introductions

ADMINISTRATION

August meeting recap

August Meeting Recap

- Robust Review Results
  - Goals of the analysis
  - Maintain progress made
- First Increment Regulatory and Incentive Actions by NPNRD
- Prioritized topics of most importance
- Homework for the group

QUESTIONS / REFLECTIONS

DRAFT BASIN-WIDE PLAN

Goals Beyond 1997 Levels
Maintaining Economic Viability
Maintaining Integrity of Surface Water Rights
Drought Planning
Total Depletions

NORTH PLATTE
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Basin-wide Plan Goals and Objectives (Draft)

Goals

1. Incrementally achieve and sustain a fully appropriated condition, while maintaining economic viability, social and environment health, safety, and welfare of the basin
2. Prevent or mitigate human-induced reductions in the flow of a river of stream that would cause non-compliance with an interstate compact or decree or other formal state contract or agreement
3. Partner with municipalities and industries to maximize conservation and water use efficiency
4. Work cooperatively to identify and investigate disputes between groundwater users and surface water appropriators and, if determined appropriate, implement management solutions to address such issues
5. Keep the Upper Platte River Basin-Wide Plan current and keep stakeholders informed

Goal 1: **Incrementally achieve and sustain a fully appropriated condition**, while maintaining **economic viability**, **social and environment health, safety, and welfare of the basin**

1.1 Maintain **previous increment mitigation** progress

1.2 **Offset impacts of streamflow depletion** to (A) surface water appropriations and (B) water wells constructed in aquifers dependent on recharge from streamflow **to the extent those depletions are due to water use initiated after July 1, 1997**

1.3 **Make progress toward a fully appropriated condition**

1.4 **Conduct technical analyses** to support and evaluate effectiveness of plan and adequacy in sustaining progress toward a fully appropriated level of water use

1.5 **Use available funds and actively pursue new funding opportunities** to cost effectively offset depletions, as well as to develop, maintain and update data and analytical tools needed to implement this plan

1.6 **Update and continue implementing IMPs** in each Platte River Basin NRD

Goal 1: **Incrementally achieve and sustain a fully appropriated condition**, while maintaining **economic viability**, **social and environment health, safety, and welfare of the basin**

1.3 **Make progress toward a fully appropriated condition**

- 1.3.1: Understand the **economic impacts of supply variability** on water users
- 1.3.2: Assess short- and long- term basin **water supply and demand**
- 1.3.3: **Explore and implement potential measures to mitigate impacts** (hydrologic and economic) of basin supply variability **due to human-made depletions** on surface water and groundwater users
- 1.3.4: Develop a basin **drought contingency plan** for management of supplies during times of shortage

Goal 1: **Incrementally achieve and sustain a fully appropriated condition**, while maintaining **economic viability**, **social and environment health, safety, and welfare of the basin**

1.3.4: Develop a **basin drought contingency plan** for management of supplies during times of shortage.

- 1.3.4.1: Develop a **basin drought monitoring protocol** for defining and determining drought conditions.
- 1.3.4.2: Identify potential basin-wide **mitigation and response actions to drought conditions and opportunities for cooperation** across the basin (that is, management of storage water).
- 1.3.4.3: Conduct a **drought simulation workshop with NeDNR, NRDs, and water users** to assist in developing and testing of protocols during a drought.
- 1.3.4.4: Identify **roles for administering and implementing** basin drought contingency plan.

Goal 2: **Prevent or mitigate human-induced reductions** in the flow of a river or stream **that would cause non-compliance** with an interstate compact or decree or other formal state contract or agreement

2.1 **Prevent human-induced streamflow depletions that would cause non-compliance** by Nebraska with the Nebraska New Depletion Plan included within the Platte River Recovery Implementation Program, for as long as the Program exists

Goal 3: **Partner with municipalities and industries to maximize conservation and water use efficiency**

3.1 Continue to **collect data on water use and existing conservation plans** of municipalities and industries within the basin

3.2 Invite municipalities and industries to the **annual meetings**

3.3 **Establish baseline water use levels** for each municipal and industrial user by **January 1, 2026**

Goal 4: Work cooperatively to **identify and investigate disputes between groundwater users and surface water appropriators** and, if determined appropriate, implement management solutions to address such issues

4.1 **Identify disputes** between groundwater users and surface water appropriators

4.2 **Investigate and address issues** between groundwater users and surface water appropriators, based on investigation results

Goal 5: **Keep the Upper Platte River Basin-Wide Plan current and keep stakeholders informed**

5.1 **Meet at least annually** to review progress toward achieving the goals and objectives of this Upper Platte River Basin-Wide Plan and those portions of the individual NRD IMPs that implement this plan

5.2 **Improve information sharing** with interested stakeholders

5.3 **Conduct planning for subsequent increments** of the plan, as necessary

DRAFT BASIN-WIDE PLAN

Drought Planning

Drought Planning in the North Platte NRD

- The Board of Directors of the North Platte NRD believes that planning and preparing for drought is important to the long-term well-being of the District as a whole.
- In addition, drought management will be a key expectation and component of second-increment integrated management plans at the District and basin levels.
- The North Platte NRD will focus on the following key areas in implementing drought-mitigation and drought-response strategies:
  - **Education**
  - **Drought Monitoring**
  - **Impacts and Vulnerabilities**
  - **Drought Strategy & Implementation**

Education

Educate the entire community on droughts and its effects, emergency management, and sustainable conservation practices.

- Include youth and adult audiences.
- Leverage existing partnerships and resources to communicate drought information.
- Provide information on District website.

Drought Monitoring

Monitor meteorologic, hydrologic, and other tools to assess current and projected conditions for the region

- Develop informational materials and recommendations to public and decision-makers based on information assessed.

Impacts and Vulnerabilities

- Municipal water use
  - Encourage municipalities within the NPNRD to restructure water rates to incentivize conservation and to implement water use restrictions, with enforcement provisions, in times of drought.
- Preparedness
  - Engage in community emergency-preparedness activities to determine strengths and weaknesses of existing emergency-response plans.
- Water quality
  - Maintain or improve surface water and groundwater quality during drought.

Impacts and Vulnerabilities (continued)

- Water quantity
  - Identify strategies to address streamflow variability.
  - Consider further temporary reductions in water use during severe, multi-year droughts, keyed to the geography, magnitude, and timing of shortages in the local and regional hydrologic system (e.g., reduced groundwater levels).
- Vulnerability: Soil health and land cover
  - Educate NPNRD communities on maintaining and improving soil health during drought.
  - Implement and promote cost-share programs targeting soil-health measures that increase drought resilience.

Drought Strategy Implementation

- Establish and foster the local and regional partnerships needed to implement drought-management strategies.
- Seek out potential funding opportunities for drought-strategy implementation.
- Adapt management strategies to reflect lessons learned from drought situations as they occur

DRAFT BASIN-WIDE PLAN

Total Depletions

ROBUST REVIEW – UPDATE & TOTAL DEPLETIONS

NPNRD Results

NPNRD IMP Stakeholder Meeting #3

November 15, 2018

NORTH PLATTE Natural Resources District

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Robust Review Goals

- Complete monitoring activities outlined in the current IMP
- Assess progress on first increment goals and objectives
- Provide for more informed discussion of second increment objectives with the NPNRD IMP stakeholders

Robust Review Model Simulation Setup

WWUMM Area Assumptions

- Used historical calibrated version of the groundwater and watershed models (Run 028/LU004/NIR set 2 for GW only lands)
- Model is simulated from 1953 – 2063
- Irrigation pumping repeats 2009-2013 in the baseline simulation and 1997 acres and crop types in the “1997” simulation with 2009-2013 weather repeated into the future
- Municipal and Industrial baseline simulation estimates use through time to 2013 and “1997” simulation is held constant
- Surface water and commingled acres remain constant in the baseline and 1997 simulations to cancel out commingled effects

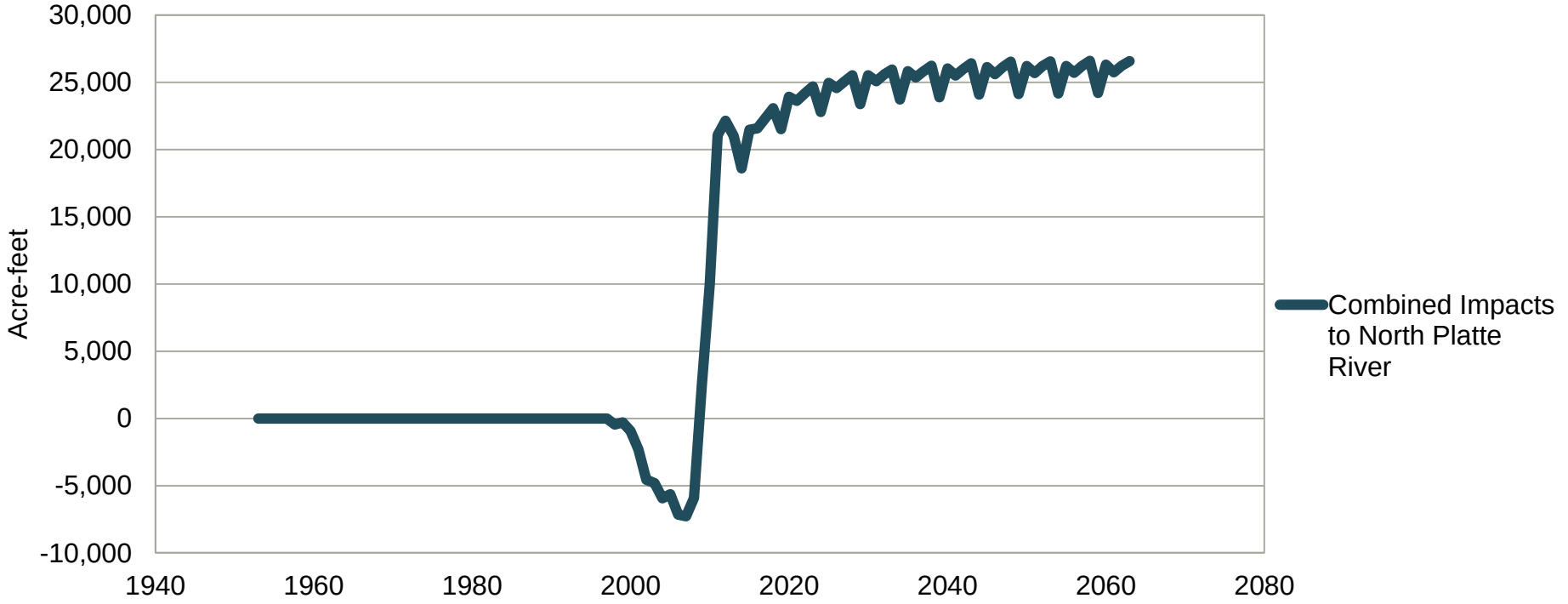
POST-1997 SUMMARY

It is the first step toward reaching a fully appropriated condition

- Positive values = increases to streamflow
- Negative values = decreases to streamflow

NPNRD Results

Total impact to NPNRD, from the Post-1997 **Changes** and Canal Recharge Event



NPNRD Summary

Post-1997 Estimates

NPNRD			
Year	**2019**	**2029**	**50-year**
Current IMP	-7,514		-8,000
Updated Estimate	21,500	23,400	26,600

- All values in acre-feet/year

- Positive values = increases to streamflow
- Negative values = decreases to streamflow

TOTAL DEPLETIONS

Indicates what more may need to done

NPNRD Inputs

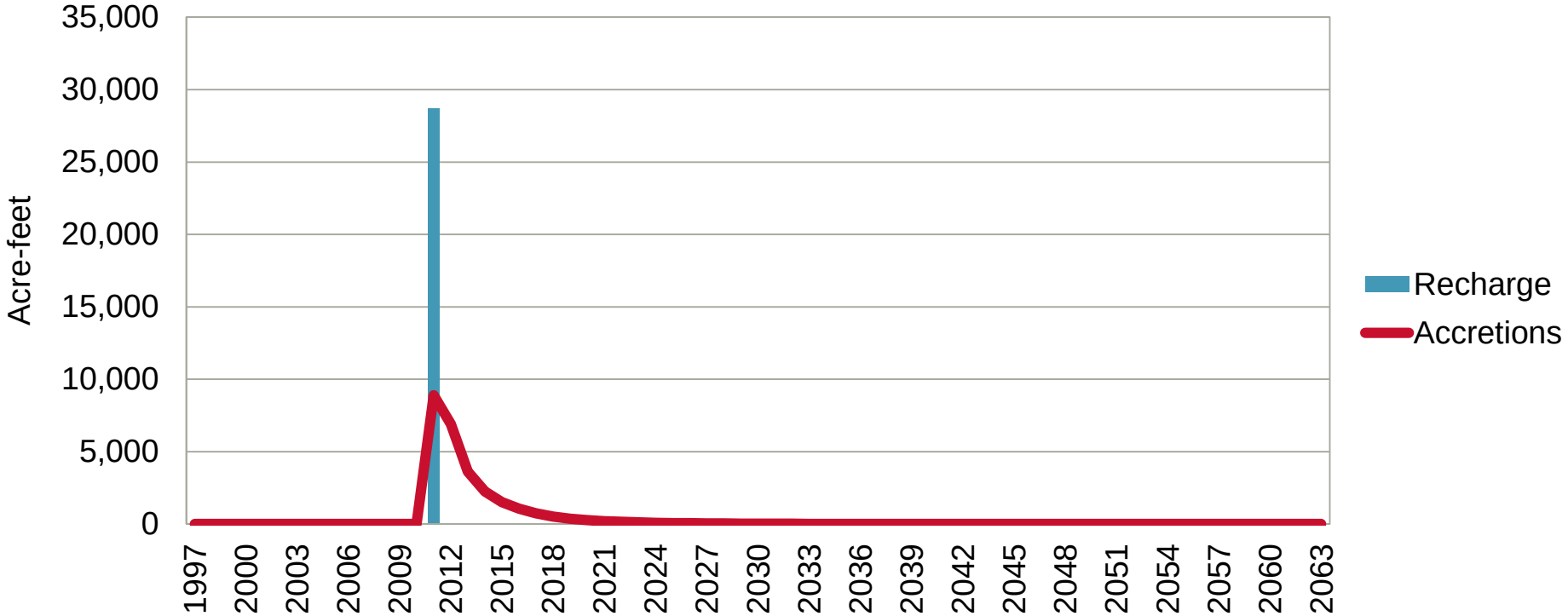
(Groundwater Recharge)

Excess Flows Diverted and Recharged into Canals in NPNRD

NPNRD	Acre-Feet of Excess Flow	
	Diversion	Recharge
2011	**61,260**	**28,739**

NPNRD

Recharge and accretions from excess flow projects



NPNRD Inputs for Total Depletions

(Change in acres)

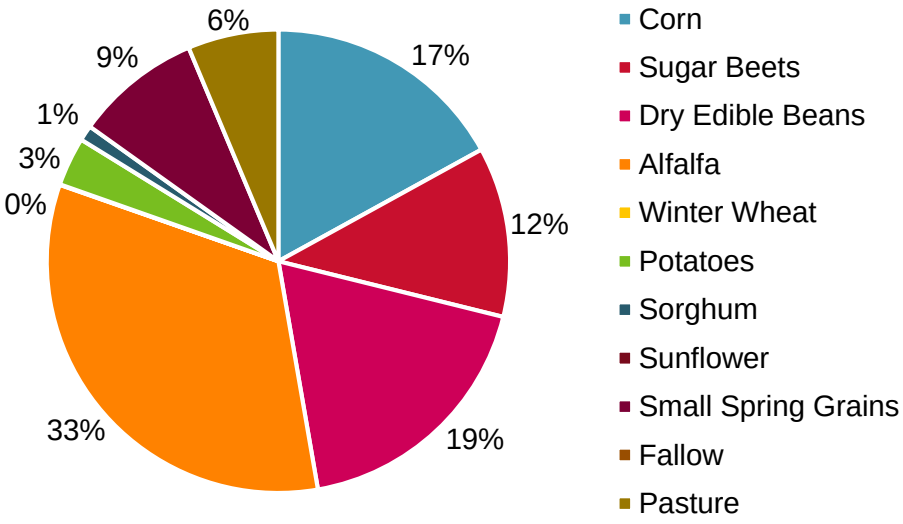
Change in groundwater-only irrigated acres 1953-2013

NPNRD	Total change (1953 to 2013)
District-Wide	**123,000 acres**

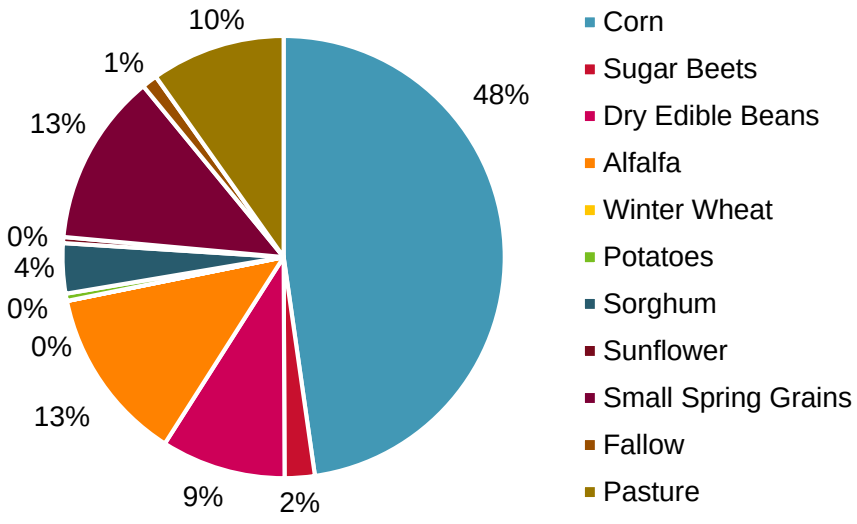
NPNRD Inputs
(Changes in crop type, district-wide)

Change in groundwater-only irrigated acre crop types 1953-2013

1953
8,000 GW-only irrigated acres



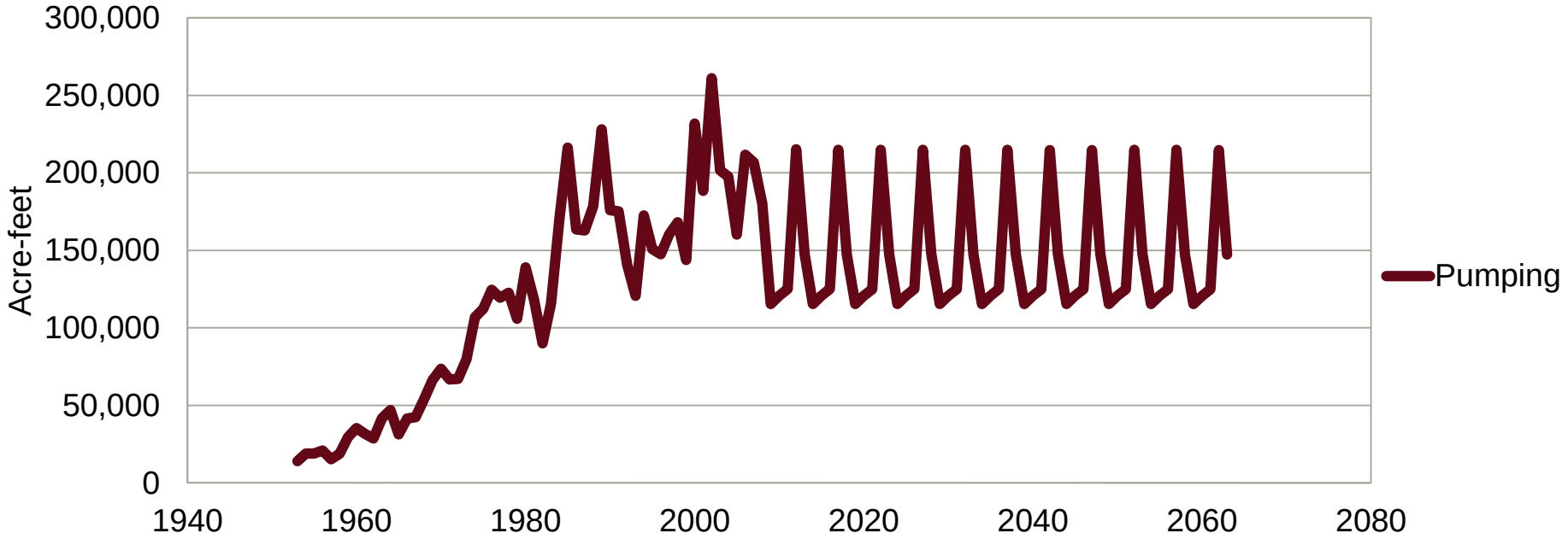
2013
131,100 GW-only irrigated acres



NPNRD Inputs

District-Wide

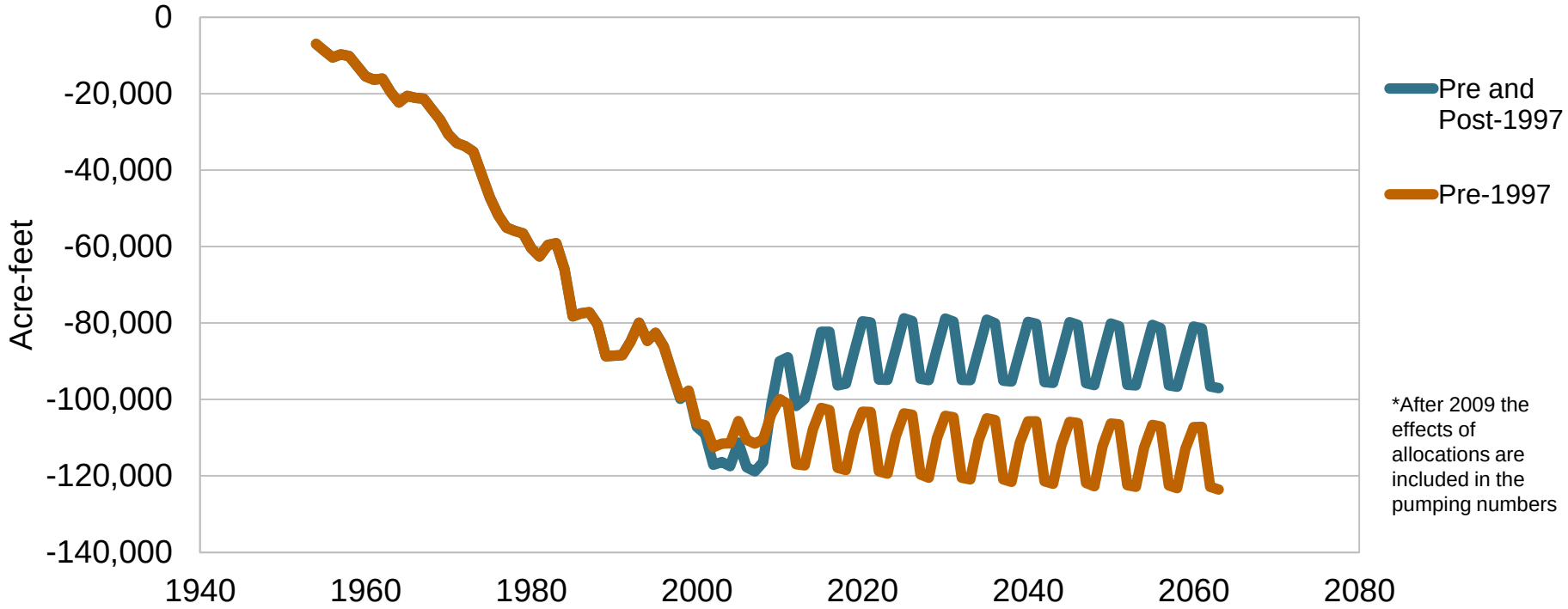
Groundwater-only irrigation pumping (123,000 acres) AND municipal/industrial uses



NPNRD

- Positive values = increases to streamflow
- Negative values = decreases to streamflow

Total impact to streamflow from pumping
Groundwater-only irrigated acres and municipal/industrial uses



Total Depletions

Indicates what more needs to be done

Post-1997

Is the first step toward reaching a fully appropriated condition

301 Centennial Mall South, 4th Floor
PO Box 94676
Lincoln, NE 68509-4676
402-471-2366

SURFACE WATER LAW

Provisions for Upstream use

Jim Ostdiek
Lincoln Field Office Supervisor
Nebraska Department of Natural Resources

NORTH PLATTE
Natural Resources District

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Outline

- **Water Administration Division**

- Permitting

- Water Administration Process

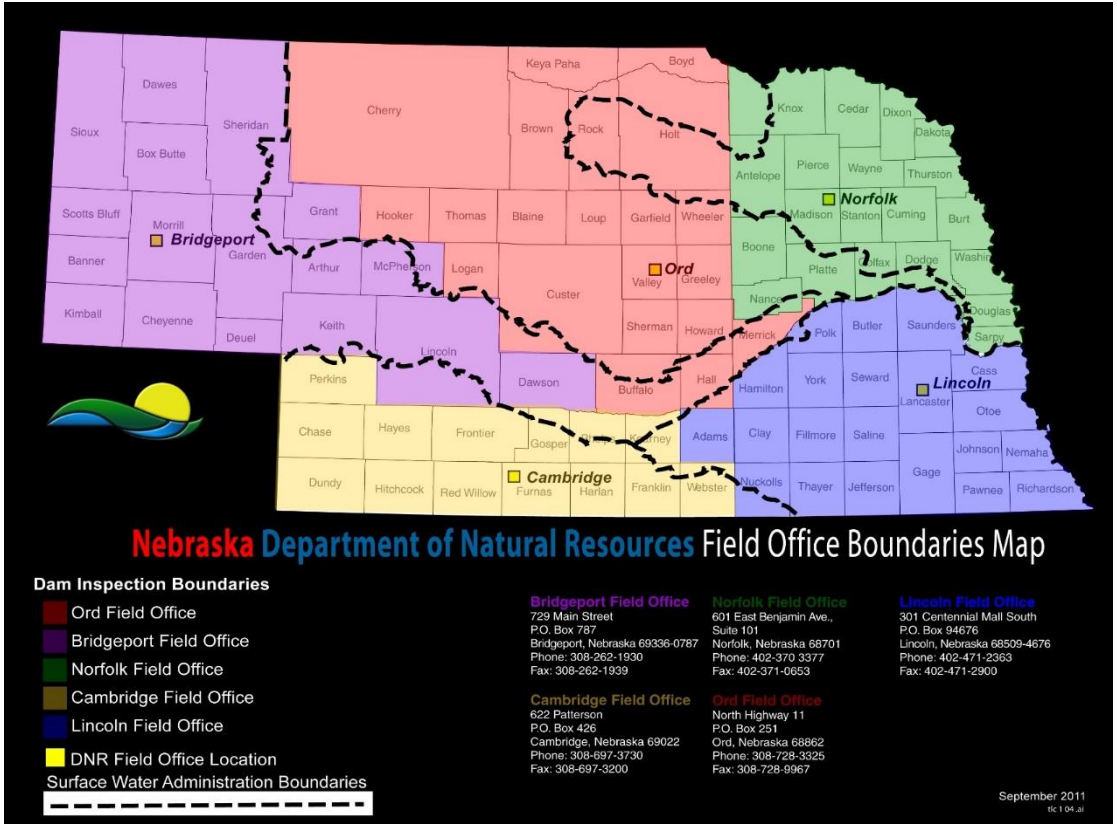
- Differences Between Groundwater And Surface Water

NeDNR Water Administration Division

The Water Administration Division enforces state statutes to ensure the orderly distribution of surface water in Nebraska, and collects data related to the Department's mission.

- Jeremy Gehle – Division Manager
- Twenty-eight full time staff members
- Five field offices, located in Bridgeport, Cambridge, Lincoln, Norfolk, and Ord.

NeDNR Water Administration Division



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NeDNR Water Administration Division

Responsibilities

Water Administration

- Compacts and Decrees
- Local Shortages
- Enforcement
- Adjudication

Data Collection

- Streamgaging
- Survey
- Dam Safety Inspections
- Water Use Reporting
- Monitoring – Pump Checks

Outline

- Water Administration Division

- Permitting

- Water Administration Process

- Differences Between Groundwater And Surface Water

Permitting

Surface Water

- The right to divert **unappropriated** waters of every natural stream for beneficial use shall never be denied except when such denial is demanded by the public interest.
  - Nebraska State Constitution Article XV-6
- Water for the purposes of irrigation in the State of Nebraska is hereby declared a natural want
  - NRS § 46-201
- Water …is… declared to be the property of the public…, subject to appropriation
  - NRS § 46-202
- As between appropriators, the one first in time is first in right
  - NRS § 46-203

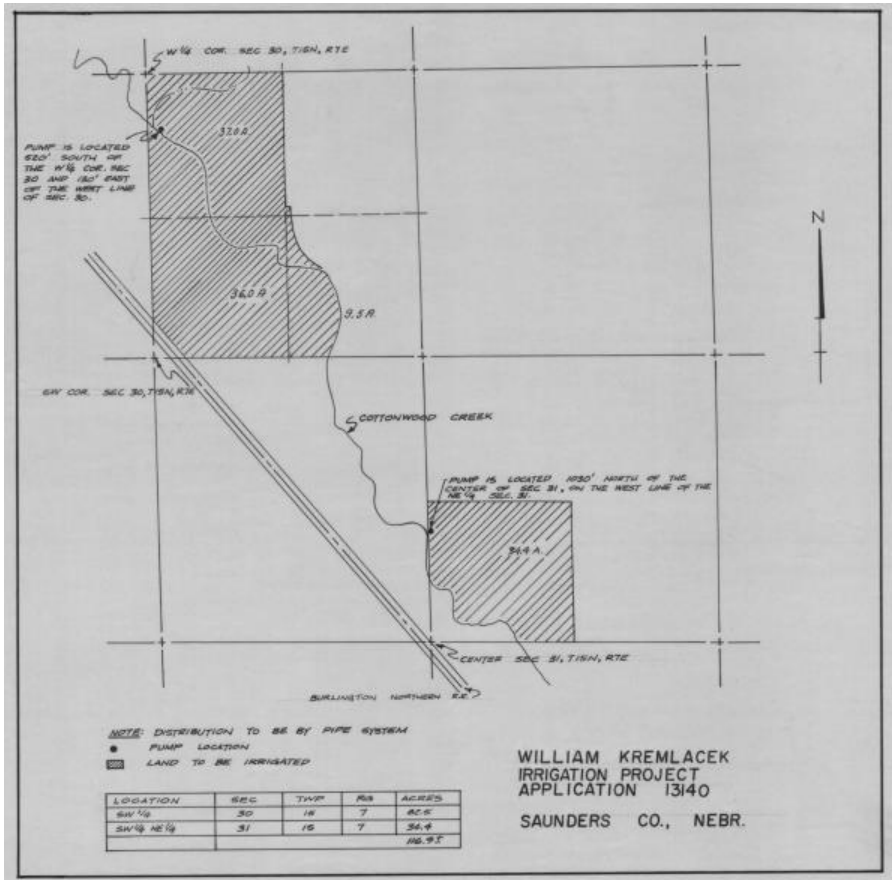
Permitting

Application to DNR Includes:

- Priority Date: First in Time – First in Right
- Type of Use: Irrigation, Storage, Municipal, Recharge, Etc.
- Location of Use
  - Map of Acres Irrigated
  - Point of Diversion – Downstream Order # Grant
  - Rate of Diversion based on 1 CFS (450 GPM) per 70 acres grant.

Permitting

Project Map



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Permitting

Application Approval

- Source
- Use
- Priority Date
- Location – Map
- Construction
- Beneficial use
- Measuring device
- Annual Reports

DEPARTMENT OF NATURAL RESOURCES

Application Approval

Water Division 1-D

This is to certify that application A-17977 for a permit to divert water has been examined.

Following consultation with the Nebraska Game and Parks Commission, the Department finds the project will not jeopardize endangered or threatened species. Application A-17977 is hereby APPROVED subject to the following limitations, conditions and notice:

1. The source of water is Lincoln Creek.
2. The water shall be used for irrigation purposes.
3. The priority date is April 23, 2001.
4. Map No. 15970 shows the lands proposed for irrigation under this permit.
5. Construction of the diversion works must begin by November 24, 2001. The Applicant must proceed diligently with the construction unless interrupted by some unavoidable and natural cause.
6. Construction of the project must be completed by April 24, 2002.
7. The amount of water shall be limited to one-seventieth (1/70) of a cubic foot per second for each acre of land irrigated by September 1, 2003.
8. A measuring device must be installed.
9. Annual reports may be required as provided by §§ 46-261 and 61-206, R.R.S., 1943, as amended.
10. Use of water under A-17977 may be denied in order of priority when water supplies do not meet the demands of downstream appropriators.

Outline

- Water Administration Division

- Permitting

- **Water Administration Process**

- Differences Between Groundwater And Surface Water

Water Administration Process

- Local Administration
  - *When Natural Flow Shortages Occur*
  - First in time = First in Right
- Enforcement
- Under Nebraska law, anyone who uses, or allows to be used, surface water for any purpose, without authority from the DNR shall, if convicted, be guilty of a Class II misdemeanor.
  - This includes, irrigating without an approved permit, violating a closing notice, not adhering to the conditions of the approved application.
- DNR can also “Lock” pumps and in certain circumstances cancel appropriations

Water Administration Process

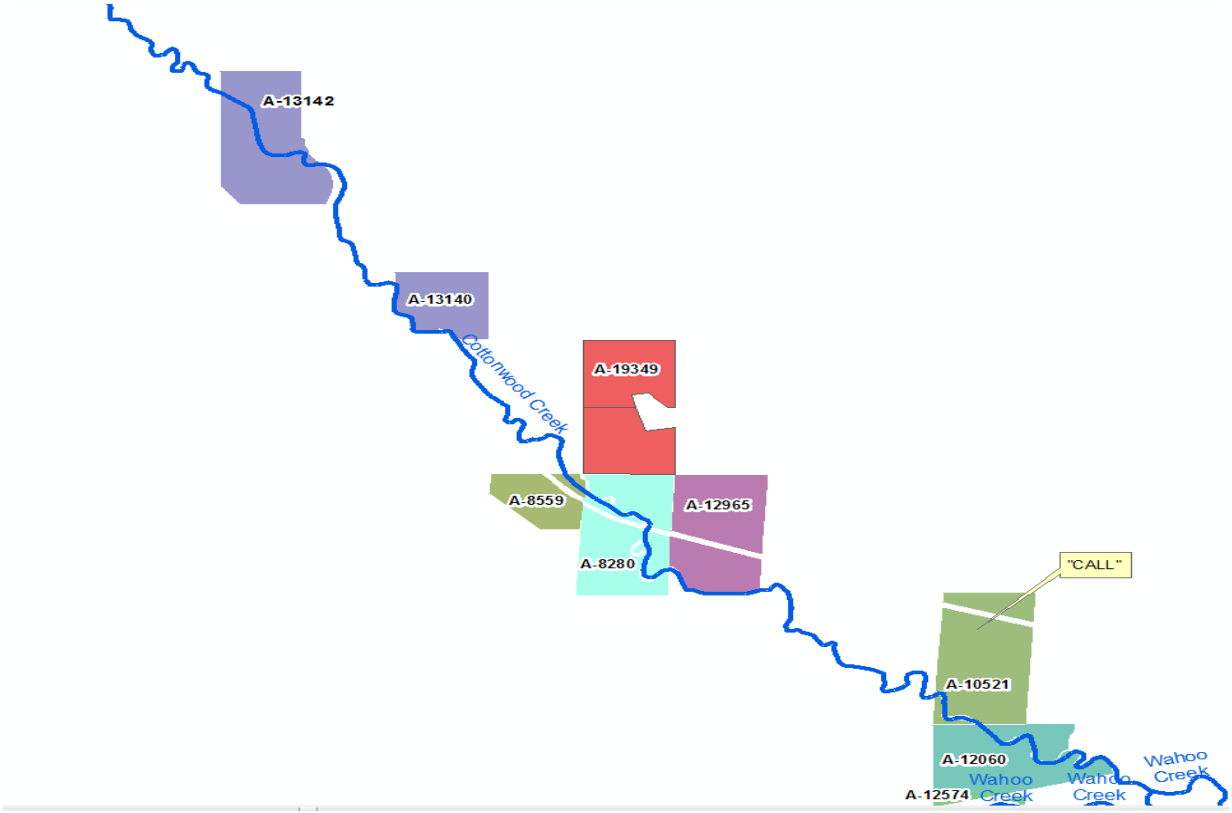
1. Appropriator runs short of Natural Flow

2. NeDNR Staff are sent to the site to make a streamflow measurement to verify shortage.
   - If sufficient water was measured at the point of the call, no action is taken. It is the duty of the appropriator to make use of the available supply
   - If there is NOT enough water at the point of the call, Field Office Personnel begin reconnaissance of the basin upstream of the point of call.

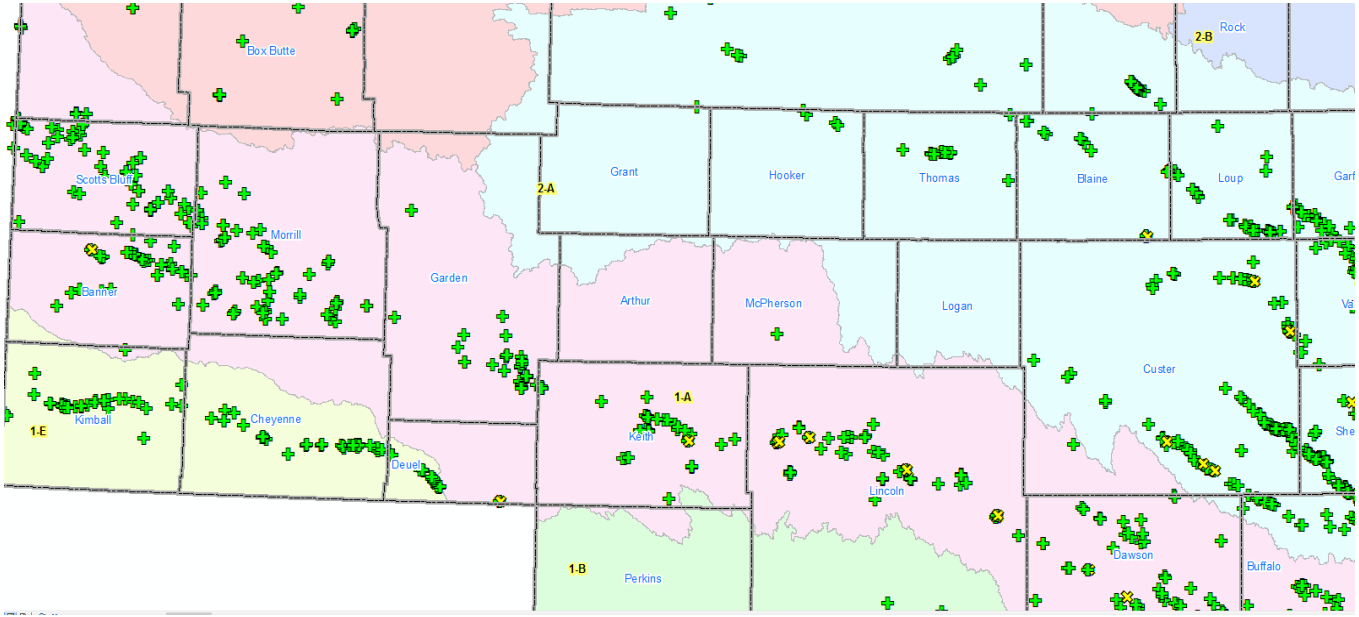
Water Administration Process

3. Take Action
   - Close all storage appropriations above the shortage
   - Begin closing junior appropriators upstream from the shortage in reverse order of priority to ensure the permitted grant is available to the senior appropriator
   - Check on the rate of diversion of senior appropriators and set pumping schedules/post canals if they are pumping at a rate greater than their grant.

Administration for a Call



Platte Basin Appropriations



Water Administration Process

4. Monitor
   - Monitor daily the shortage to ensure that no more than the permitted grant is allowed to pass.
   - Monitor diversions upstream and downstream from the shortage
   - Stream gages
   - Weather
   - As excess water becomes available, the next oldest appropriations are opened, and allowed to pump.
   - When and if natural flow is sufficient, then all junior appropriators and storage appropriations will be opened

Outline

- Water Administration Division

- Permitting

- Water Administration Process

- Differences Between Groundwater And Surface Water

Differences between Groundwater and Surface Water?

Groundwater - NRD

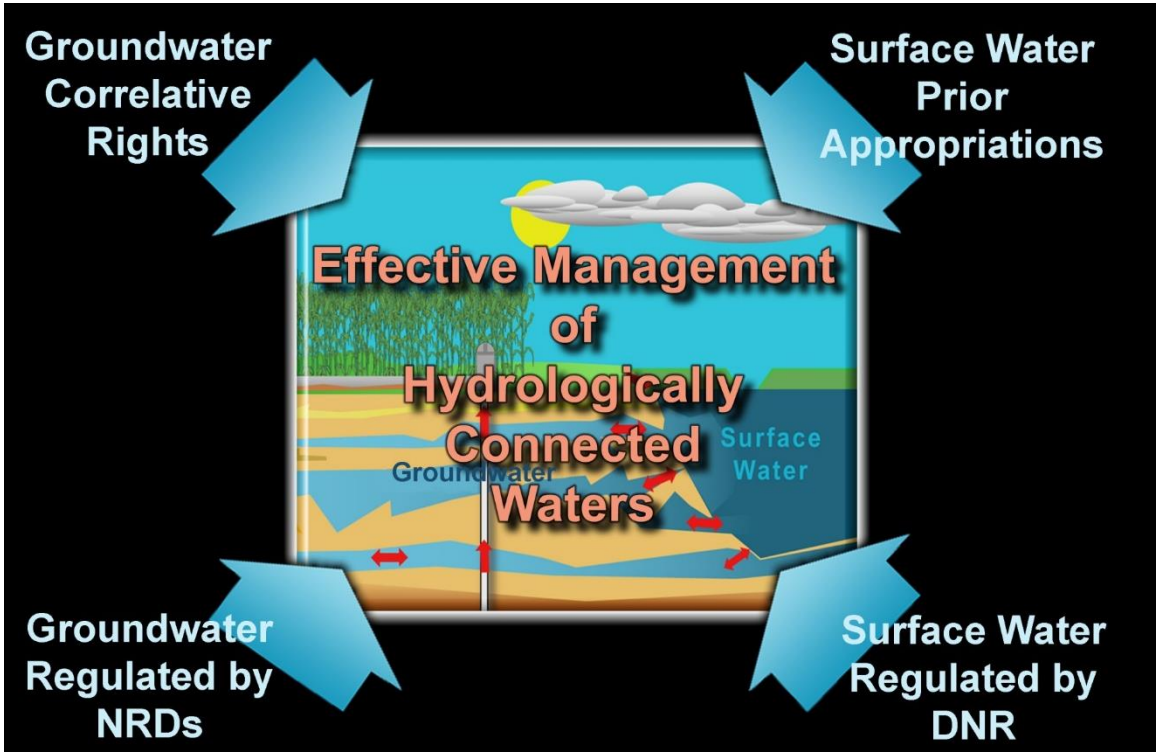
- Correlative Rights Doctrine - “Rule of Reasonable Use” - Share
- Supply dependent on aquifer storage capacity
- If supply is insufficient, all users can be put on an allocation
- Certified Acres

Surface Water - NeDNR

- Prior Appropriation Doctrine - “First-in-time, First-in-Right”
- Supply dependent upon snowpack, precipitation and Groundwater base flow
- If the supply is insufficient, junior appropriators are denied water.
- “Approved Map” – Sets limit on Acres, Location, and the “Grant”
- Adjudication procedures for cancelation – “Use it or Lose it”

Comparison of Water Management

	Groundwater	Surface Water
Management Doctrine	Correlative Rights (Rule of reasonable use)	Prior Appropriation (First in time, first in right)
Supply is dependent on	Aquifer storage capacity	Precipitation & base flow
What if there is low supply?	Allocations	Junior appropriators denied water
Irrigation area approval	NRD Certified Acres	Approved map and “Grant”
Cancellation of irrigation use	None	Adjudication procedures for 5 years of non-use: “Use it or lose it”

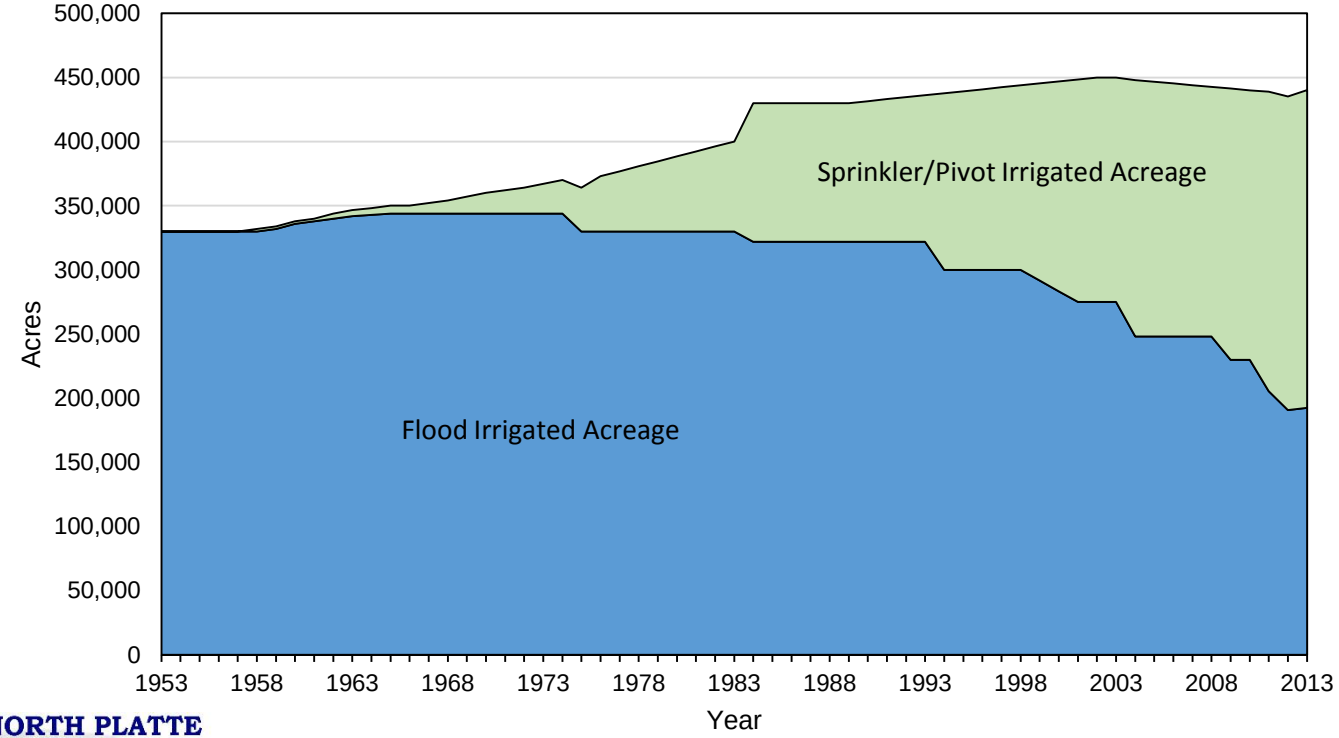

Groundwater Correlative Rights
Surface Water Prior Appropriations
Effective Management of Hydrologically Connected Waters
Groundwater
Surface Water
Groundwater Regulated by NRDs
Surface Water Regulated by DNR

PIVOT CONVERSIONS ON SURFACE-WATER ACRES

NPNRD Irrigated Acres Dataset

- The WWUM Modeling has created a detailed irrigated acreage assessment through 2013 for all water sources within NPNRD
  - Surface Water
  - Ground Water
  - Commingled
- Captured within this dataset is the irrigation method
  - Flood Irrigation and Center Pivot Sprinkler Irrigation
- Over time the flood irrigation technology has been replaced by center pivot sprinkler technology
- This change in technology effects the streamflow as the irrigation methods become more efficient which reduces diversions and irrigation inefficiency recharge

NPNRD Annual Flood Irrigated Acres vs Center Pivot Sprinkler Irrigated Acres – 1953 to 2013



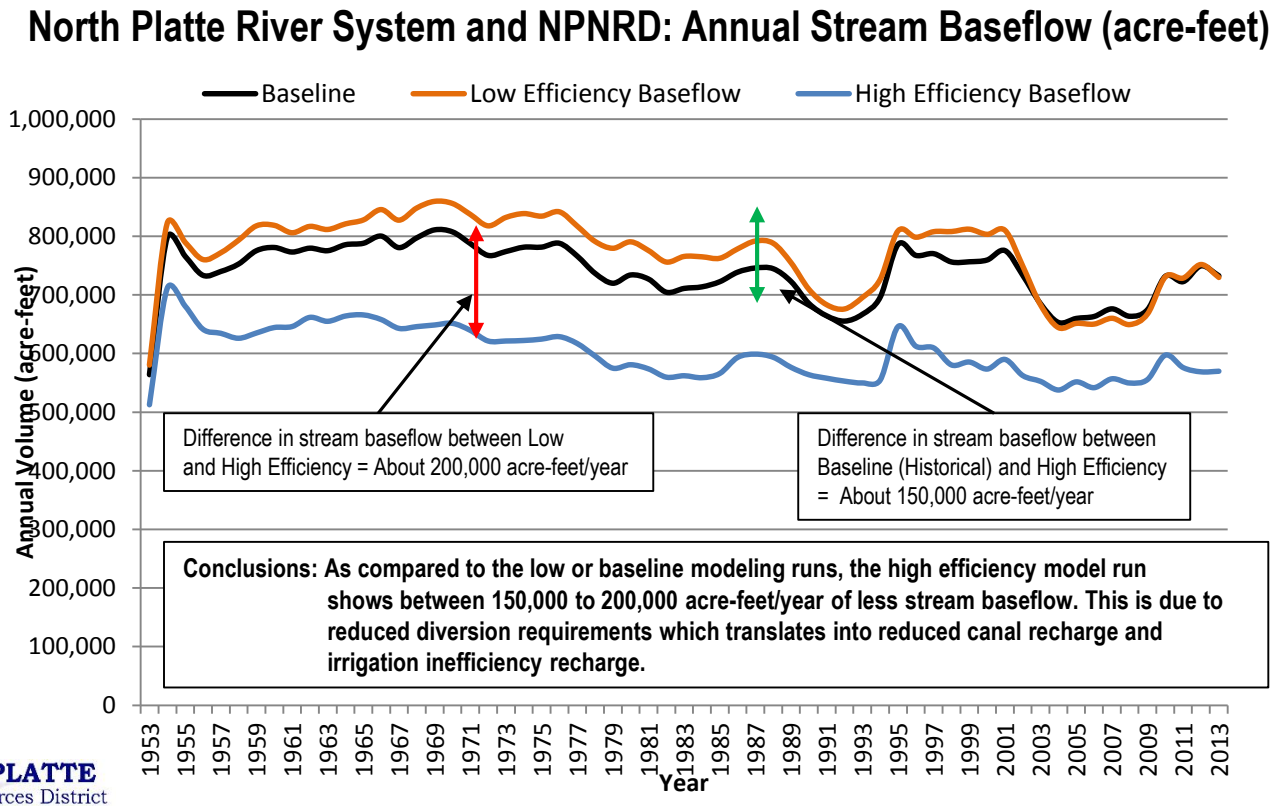
Conservation Measures Study

- Joint study between the 5 Upper Platte Basin NRDs and DNR
- Phase I Study - https://dnr.nebraska.gov/sites/dnr.nebraska.gov/files/doc/water-planning/upper-platte/publications/20140317_PlatteConsStudy_Flatwater_Final.pdf
  - Define and then narrow the list of conservation practices to those with the greatest potential impact on the water budget
    - This lead to 2 conservation measures for further study – irrigation efficiency and tillage practices
- Phase II Study
  - Estimate the effects of irrigation efficiency and tillage practices on stream baseflow
    - Historic Baseline
    - Flood or Low Efficiency Irrigation / 1950's tillage practices
    - Center Pivot Sprinkler or High Efficiency Irrigation / minimum or no-tillage practices

Conservation Measures Study

- Irrigation Efficiency Analysis
  - Three model runs were compared:
    - Baseline Model – No modifications, irrigation efficiencies reflect historic values and practices.
    - Low Irrigation Efficiency – All irrigated lands irrigation efficiencies were set at flood/gravity or low-efficiency center pivot sprinkler irrigation of 50% or 60% respectively.
    - High Irrigation Efficiency - All irrigated lands irrigation efficiencies were set at center pivot sprinkler efficiency of 95%.

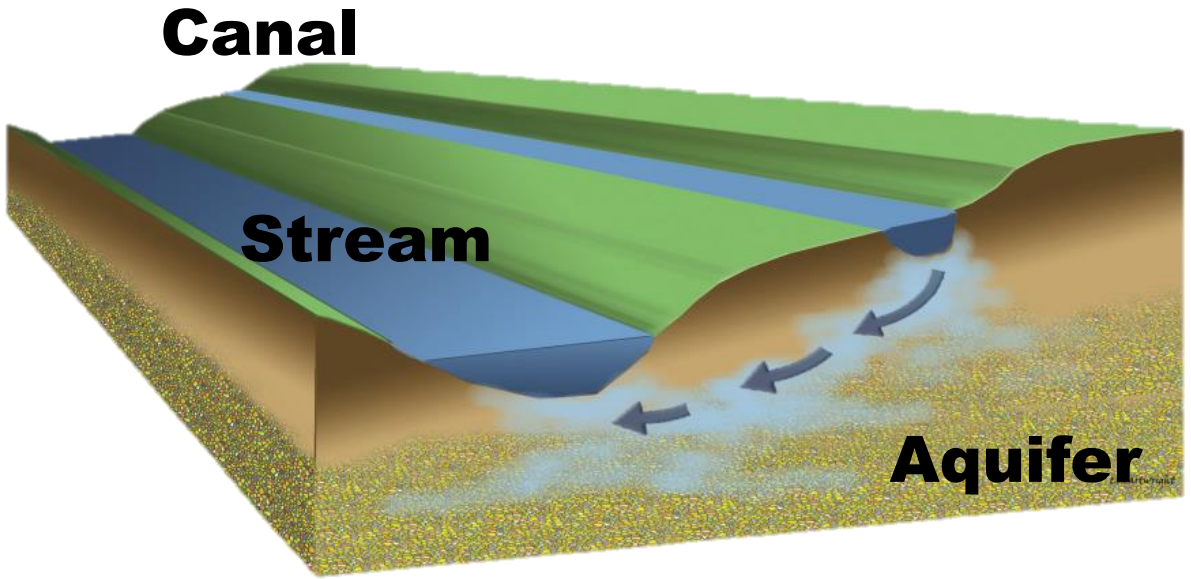
Conservation Measures Study



CONJUNCTIVE MANAGEMENT

UNDERLYING CONCEPTS OF CONJUNCTIVE WATER MANAGEMENT (CWM)

- Surface and groundwater resources are interconnected
- Decisions to improve the management of one cannot be made properly without considering the other



Conjunctive Water Management is an ***adaptive process*** that utilizes the ***connection*** between surface water and groundwater to ***maximize water use***, while ***minimizing impacts*** to streamflow and groundwater levels in an effort to increase the overall water supply of a region and improve the reliability of that supply.

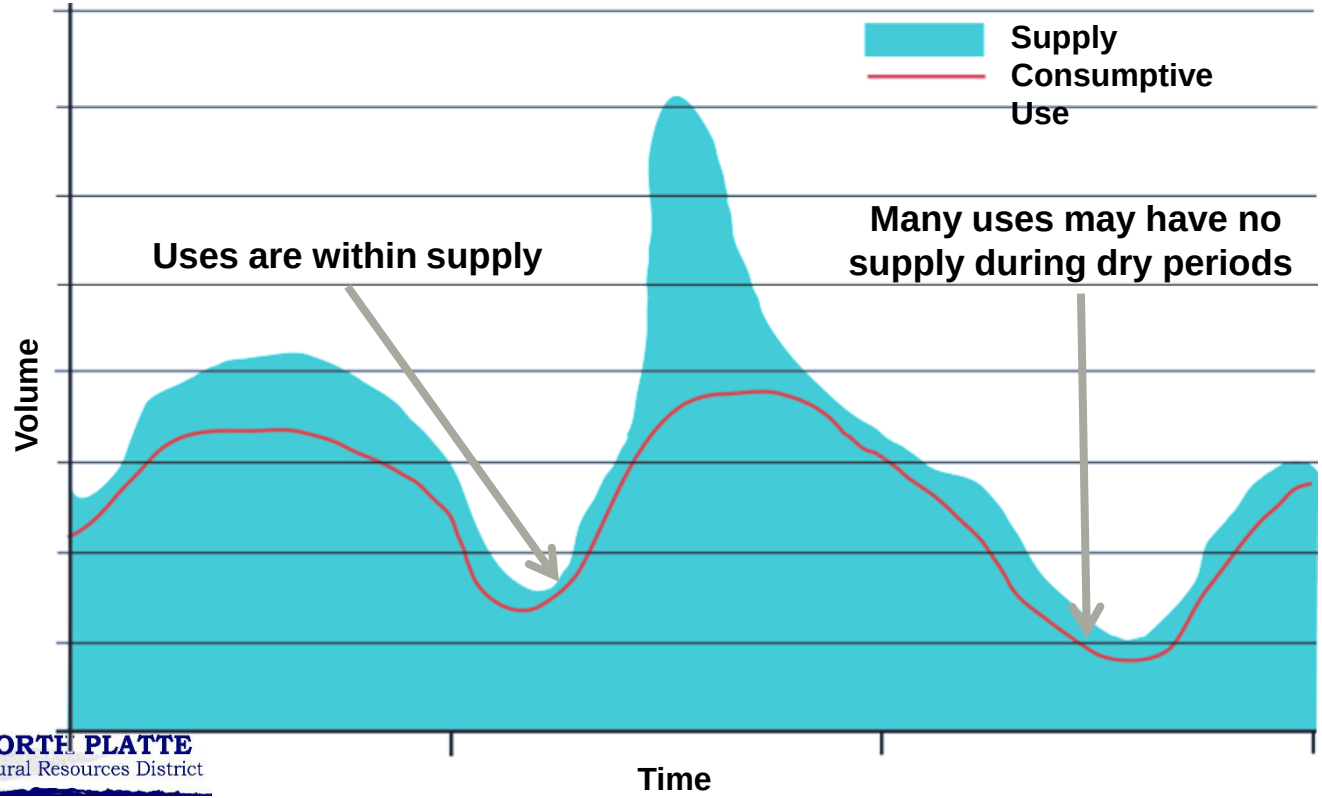
HOW IS CWM ACCOMPLISHED?

- Typically, by:
  - Using or storing additional surface water when it is plentiful
  - Relying more heavily on groundwater during dry periods

- Can change the timing and location of water for more efficient use

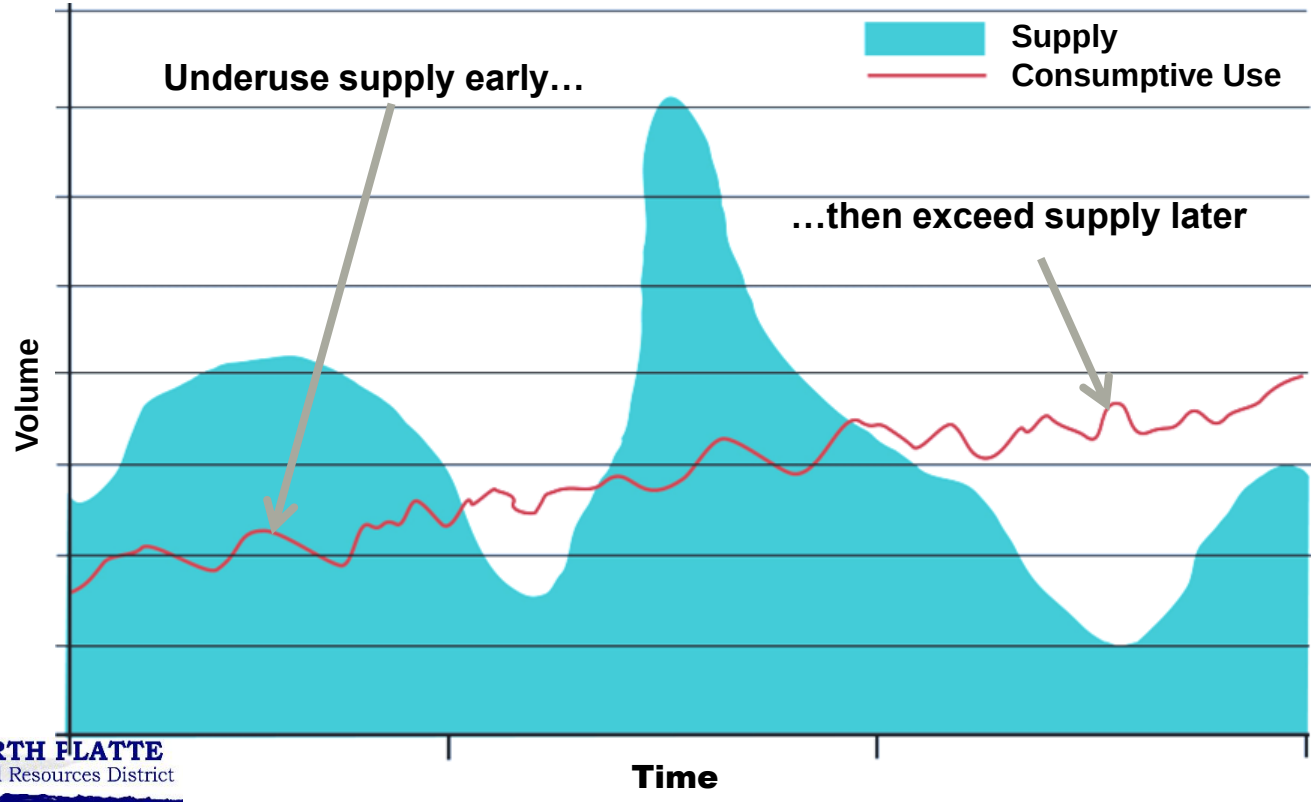
SCENARIO 1:

USING SURFACE WATER ONLY



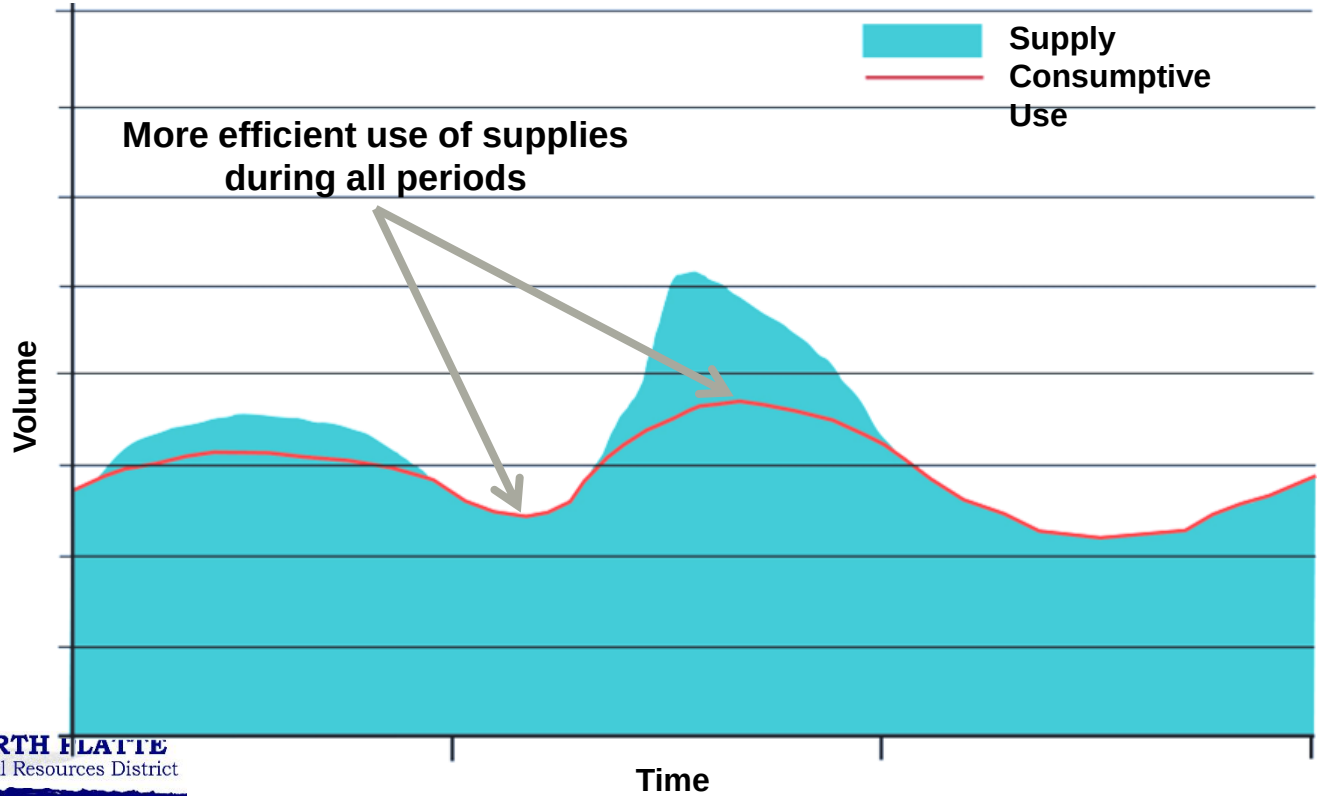
SCENARIO 2:

USING GROUNDWATER ONLY



SCENARIO 3:

MANAGING SUPPLIES THROUGH CWM

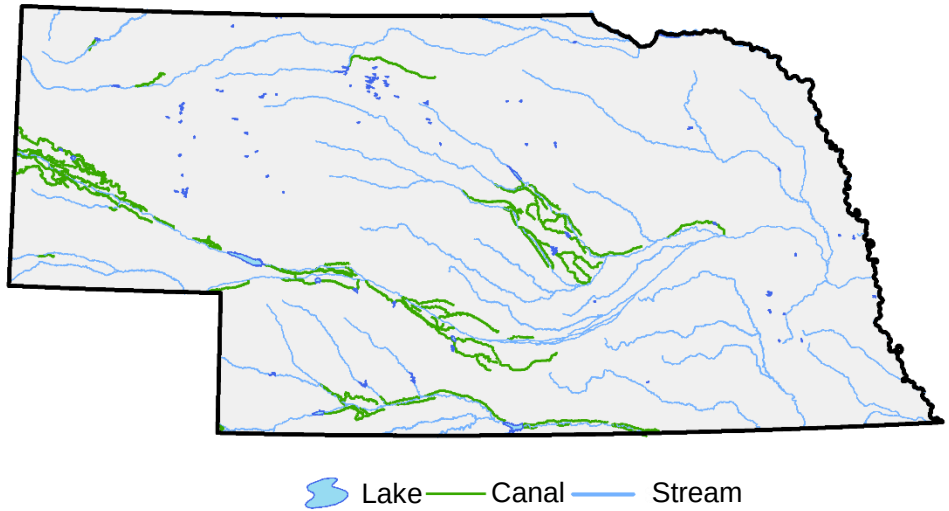


COMPONENTS OF CWM

- Surface water diversion and groundwater pumping
- Aquifer recharge
- Management of the timing of return flows
- Program for monitoring and evaluation

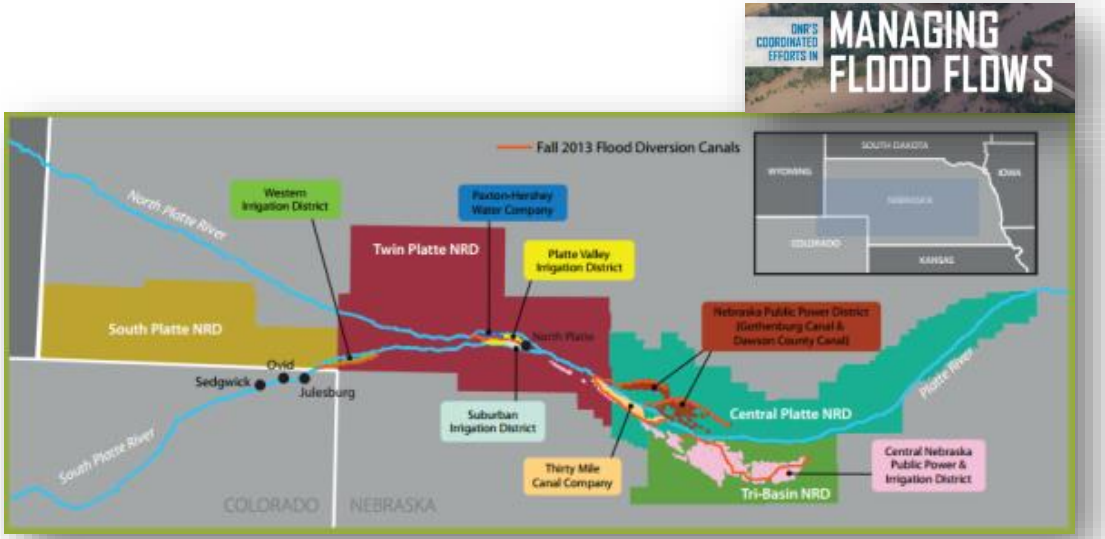
BENEFITS OF CWM

- Maximize available water supplies
- Leverage existing infrastructure
- Use existing planning framework
- Minimize the need for regulatory actions
- Customize to local opportunities or needs
- Maintain viability of existing uses



EXAMPLES OF CWM PROJECTS

- Augmentation projects
- Western canal conjunctive management study
- Water leasing arrangements
- CPNRD transfers and canal refurbishment
- Capturing excess flows using existing canal infrastructure (in partnership with irrigation districts)



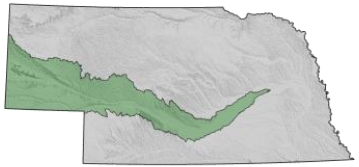
APPLYING CONJUNCTIVE MANAGEMENT

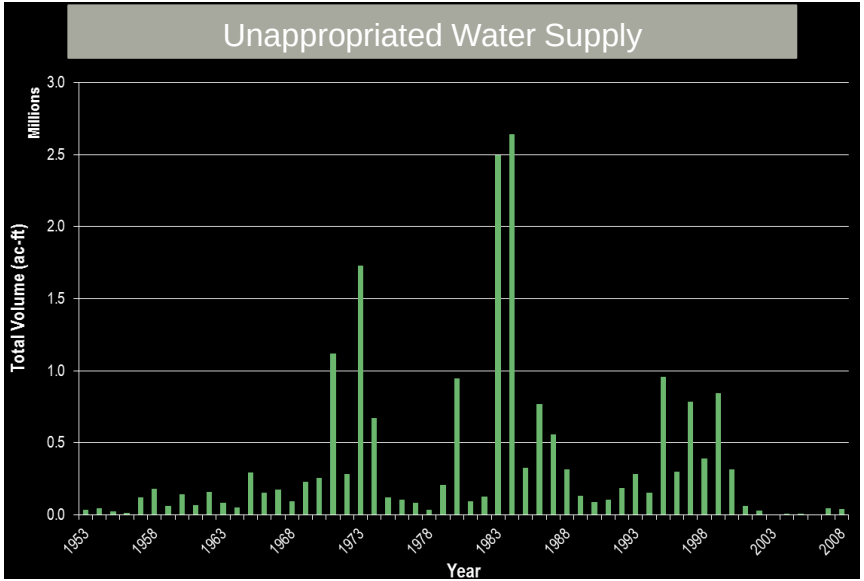
IN THE UPPER PLATTE RIVER BASIN

First Increment CWM Activities

UPPER PLATTE RIVER WATER SUPPLIES

- Receives average of 1 million ac-ft from snowmelt in Wyoming each year (North Platte Decree)
- More variable inflows in South Platte from Colorado
- Water is generally fully allocated, particularly above Elm Creek (overappropriated)
- Streamflows required to be shared under Endangered Species Act (Federal)
- Unappropriated water does occur during some very wet years, during shorter intervals, and outside of the irrigation season



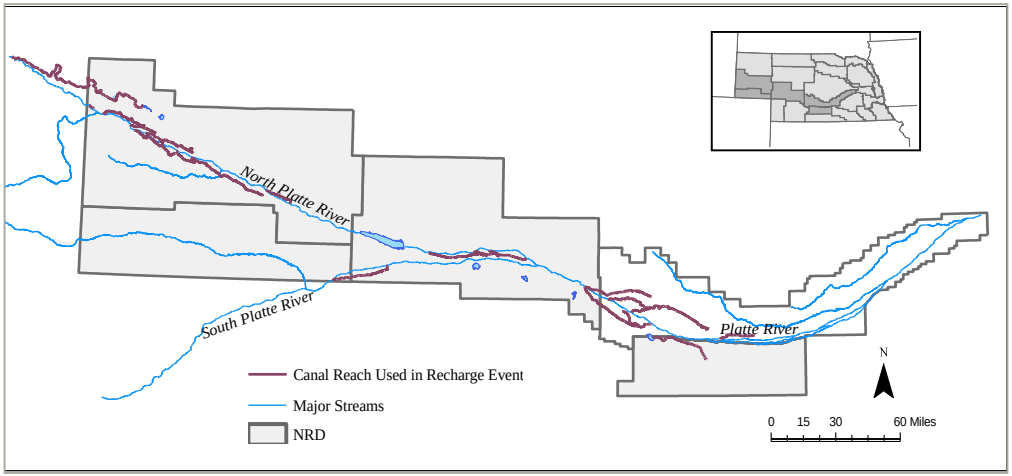


2011 PILOT PROJECT

- High flows in spring prior to irrigation season
- NeDNR coordinated with NRDs, Irrigation Districts/Canal Companies to divert excesses
- Acquisition of permits
- Contracts
- Monitor

2011 PILOT PROJECT

- 23 Canals and 5 NRDs
  - **Diversion Total** **142,000 acre-ft.**
  - **Recharge Total** **64,000 acre-ft.**
  - **NPNRD Diversion Total** **61,260 acre-ft.**
  - **NPNRD Recharge Total** **28,739 acre-ft.**



NORTH PLATTE
Natural Resources District

NEBRASKA
DEPT. OF NATURAL RESOURCES

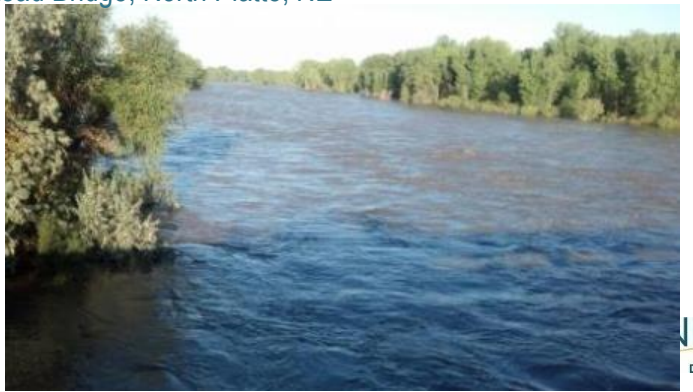
2013 FLOOD FLOWS

Friday, September 20, 2013

Saturday, September 21, 2013

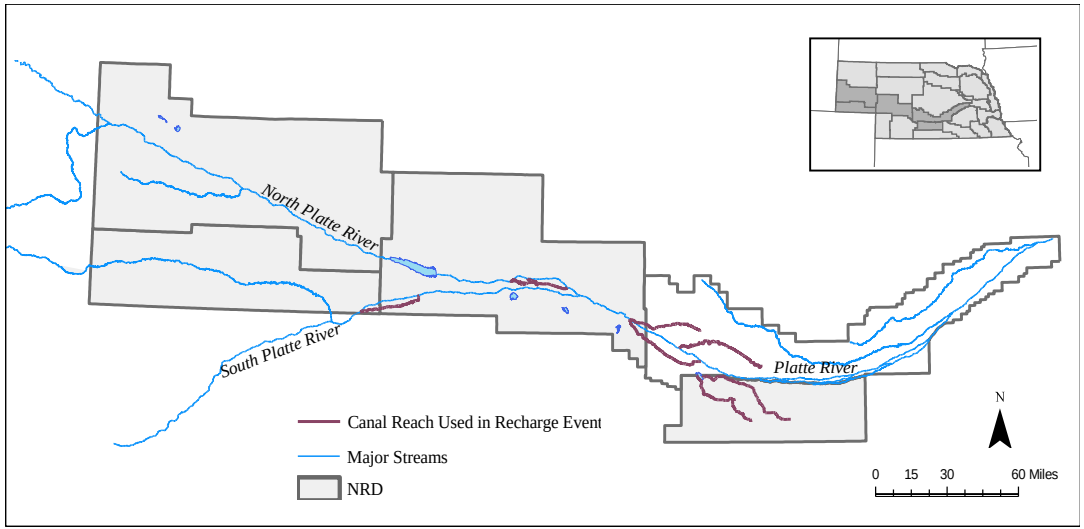
South Platte River Highway 83 Bridge, North Platte, NE

South Platte River Buffalo Bill Road Bridge, North Platte, NE



2013 FLOOD FLOWS

- 9 Canals and 4 NRDs
  - **Diversion Total** **44,000 ac-ft.**
  - **Recharge Total** **27,000 ac-ft.**



NORTH PLATTE
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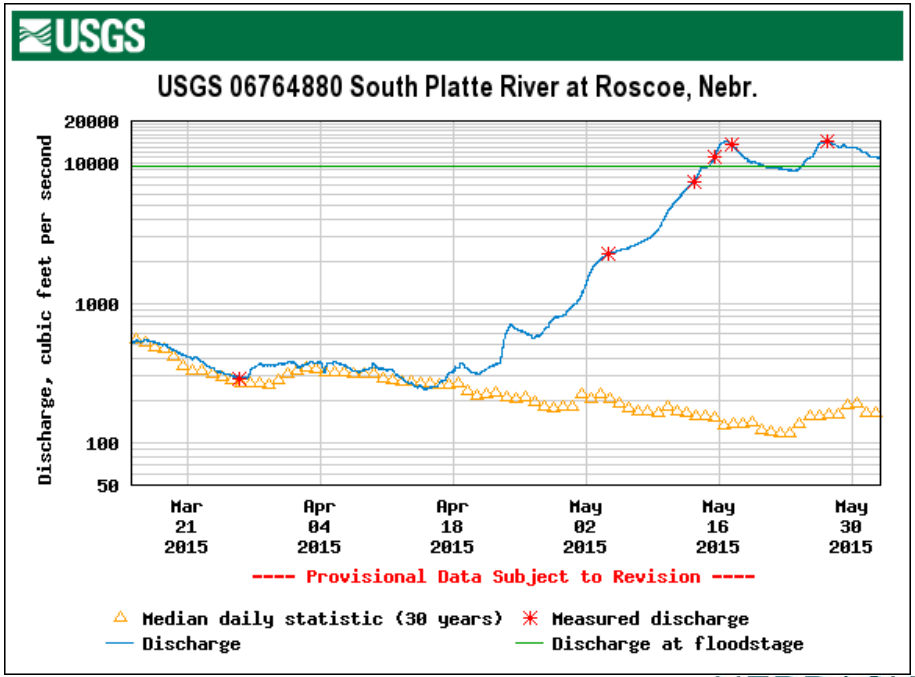
2015 FLOOD FLOWS

- Wet conditions during above average spring snowmelt
- Canals filled early
- Stored excess in lakes, reservoirs

30-Mile Canal Headworks,
June 2015



NORTH PLATTE
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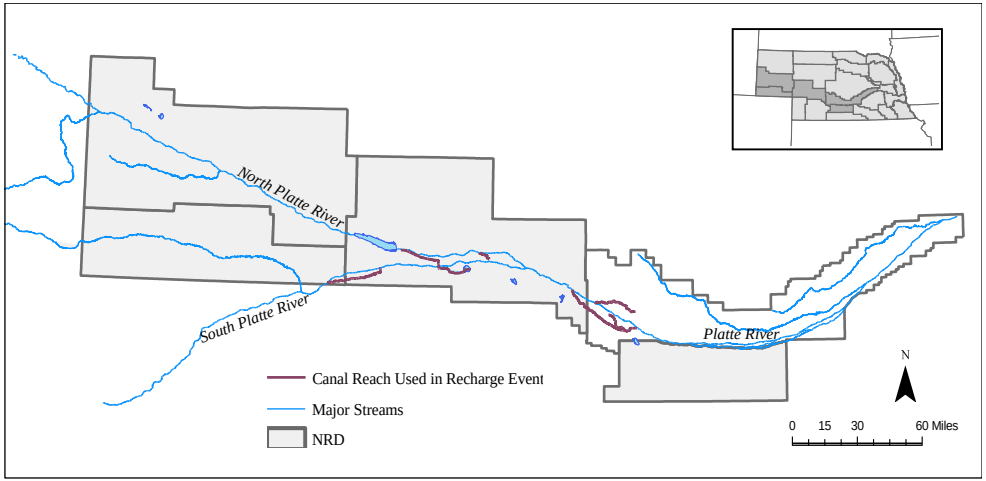
2015 FLOOD FLOWS

- 7 Canals and 4 NRDs
  - **Diversion Total** **17,700 ac-ft.**
  - **Recharge Estimate** **7,600 ac-ft.**



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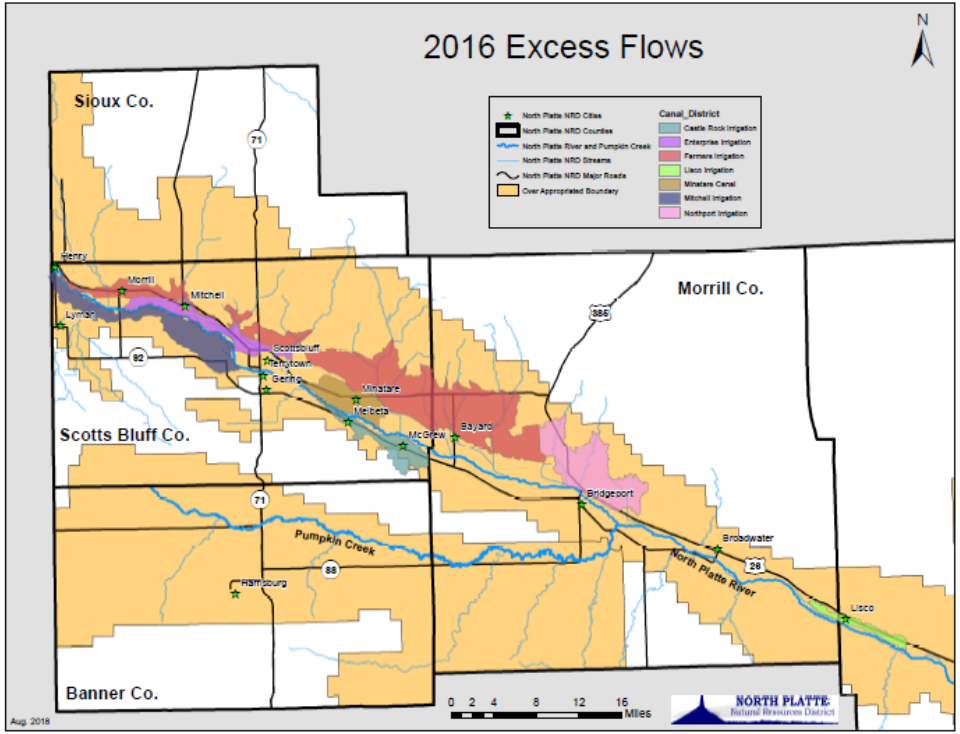
2016 FLOOD FLOWS

- 8 Irrigation Districts and Canal Companies
  - **NPNRD Diversion Total**

    30,369 ac-ft.
  - **NPNRD Recharge Estimate**

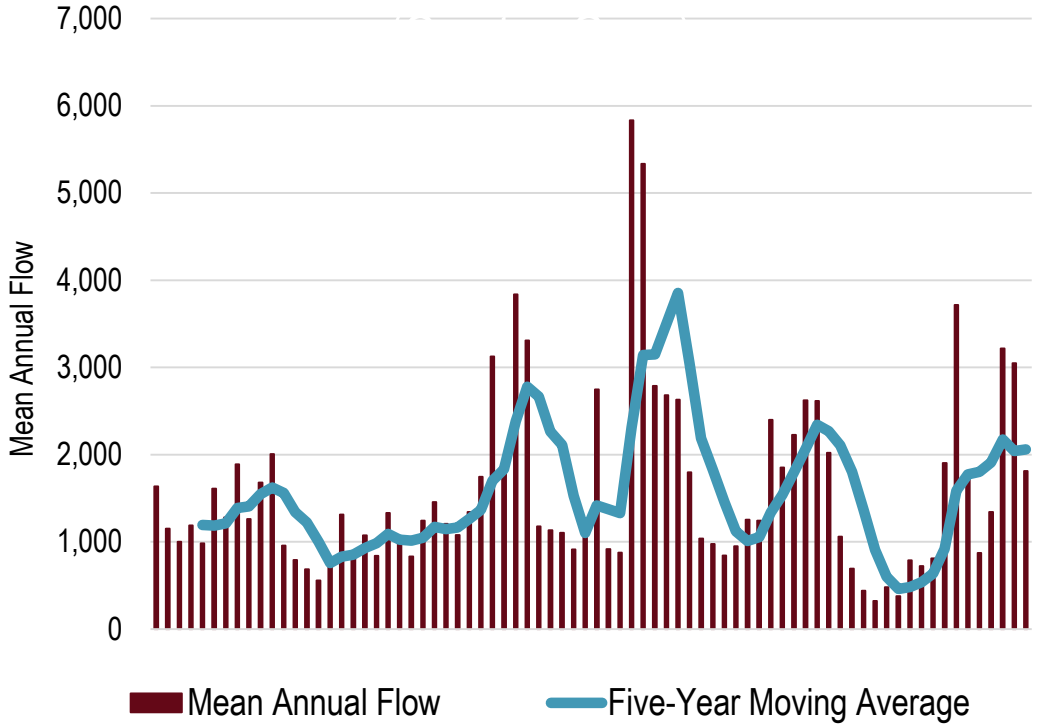
    13,812 ac-ft.



SUMMARY OF FLOOD FLOW DIVERSIONS

First Increment

- Over 200 Kaf of flood flows diverted since 2011
- Resulting recharge in excess of 100 Kaf
- Accretions will benefit Platte River flows for many years into the future
- Process in place for future successes
- Reduces the need for additional regulations
- Creates greater resiliency in future periods



NORTH PLATTE Natural Resources District

NEBRASKA DEPT. OF NATURAL RESOURCES

CWM FUTURE ACTIVITIES

- Expand implementation of CWM projects
- Enhance adaptation strategies based on management goals
- Support continued investment in maintaining and enhancing infrastructure
- Ensure that sound science and monitoring are available to support management decisions

Cozad Canal, Gothenberg, NE

CWM INFRASTRUCTURE EXAMPLES IN NPNRD

Schaneman Recharge Pits

- Have leased just over 100 acres on Enterprise Irrigation District
- Planning and will ultimately construct recharge pits to be used for surface water infiltration
- Project design has the capability of handling the entire diversion rate of the presently contracted acres, but will also allow for the construction of one or more recharge pits to allow for expansion

CWM INFRASTRUCTURE EXAMPLES IN NPNRD

Everett / Meyers Return

- Have leased four shares (320 acres) on Minatare Canal Company and have continued to divert water that would normally be delivered to those farms, but have built a direct return back to the river to gain consumptive use credit toward our goals and obligations under the IMP
- Designed with expansion in mind
- Project to date has returned back to the North Platte River 920 acre feet of water that would have otherwise been consumptively used by crops
- Annual operating cost of approximately $89,000.00 with 797 acre feet returned to the North Platte River in 2017
  - $112 per af

CWM INFRASTRUCTURE EXAMPLES IN NPNRD

Ducks Unlimited/NPNRD Recharge Project

- Actively searching for lands to temporarily lease the surface water appropriation from in order to divert that appropriation into man made recharge sites
- Those sites will not only benefit the recharging of the aquifer but will also provide needed habitat for migrating water flow
- Consumptive use credit from the temporary idling of crop acres to help NPNRD meet goals and obligations under the IMP

NEXT STEPS

Anything Additional?

- Is there anything else you think should be considered for incorporation into the IMP?

MEETING DATES

- January 17, 2019

PUBLIC COMMENT

Thank You