# Upper Platte Basin Drought Contingency Plan

Upper Platte River Basin-Wide Plan Annual Meeting

Central Platte NRD office

August 1, 2024

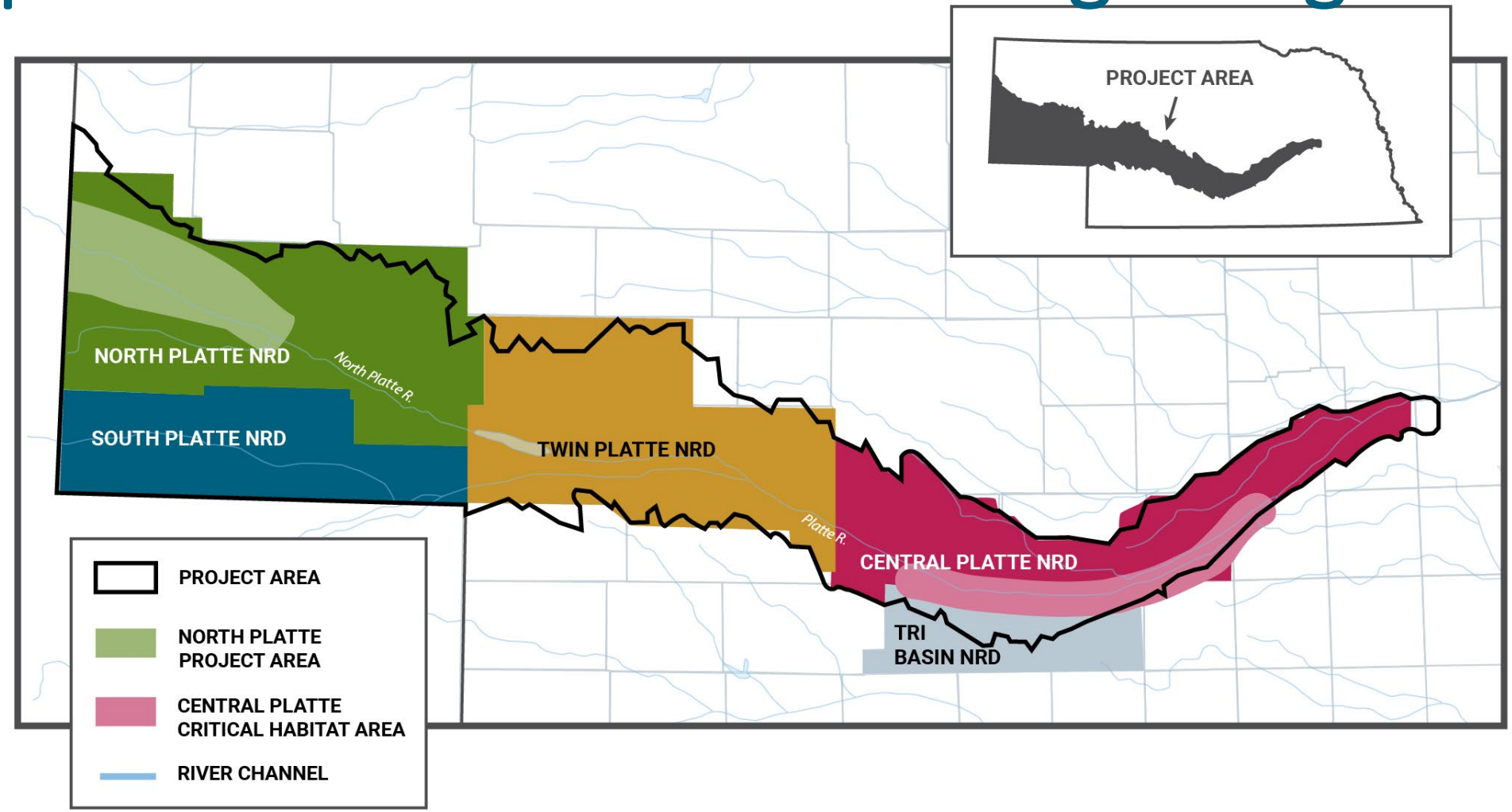
# Drought Plan Development Process

- Convened a Drought Task Force
  - Met a total of 4 times
  - Completed a tabletop drought scenario exercise
- Drought Task Force and POAC reviewed plan during development

# Drought Plan Contents

- **Introduction & Basin Information**
- **Operational & Administrative Framework**
- **Vulnerability Assessment**
- **Drought Monitoring**
- **Potential Mitigation and Response Actions**
- **Plan Implementation**

# Upper Platte River Basin Planning Background




CPNRD CENTRAL PLATTE NATURAL RESOURCES DISTRICT

North Platte NATURAL RESOURCES DISTRICT

SOUTH PLATTE Natural Resources District

Tri Basin Natural Resources District

TWIN PLATTE NATURAL RESOURCES DISTRICT

NEBRASKA DEPT. OF NATURAL RESOURCES

BUREAU OF RECLAMATION

# BOR Requirements & Basin-Wide Plan Requirements

| | USBR WaterSMART Agreement | Upper Platte Basin-Wide Plan | Found In DCP |
|---|---|---|---|
| **Plan Administration, Implementation and Updates** | 5.2.5 Operational and administrative framework<br><br>5.2.6 Plan development and update process | Action Item 1.3.4.4: Identify roles for administering and implementing the Basin drought contingency plan. | **Section 2.0:** Pages 27–31 |

- Coalition can issue a Drought “watch” or “warning” based on conditions
- Drought watches and warnings increase internal POAC communication and external stakeholder communication
- The DCP does not require POAC members to implement basin-wide “on-the-ground” mitigation or response actions
- Specific mitigation or response actions may be implemented at an NRD or local level

# BOR Requirements & Basin-Wide Plan Requirements

| | USBR WaterSMART Agreement | Upper Platte Basin-Wide Plan | Found In DCP |
|---|---|---|---|
| **Vulnerability Assessment** | 5.2.2 Vulnerability assessment | From Action Item 1.3.4: Elements of a drought contingency plan include: Vulnerabilities (Action Item 1.3.1)<br>• Action Item 1.3.1: Understand the economic impacts of supply variability on water users<br><br>1.3.1.1: Identify who is affected (hydrologically and economically) by water supply variability.<br><br>1.3.1.2: Partner with impacted water users to gather data and study economic impacts of supply variability | **Section 3.0:** Pages 37–58 |

The sector vulnerability to drought as ranked by the Drought Task Force was:

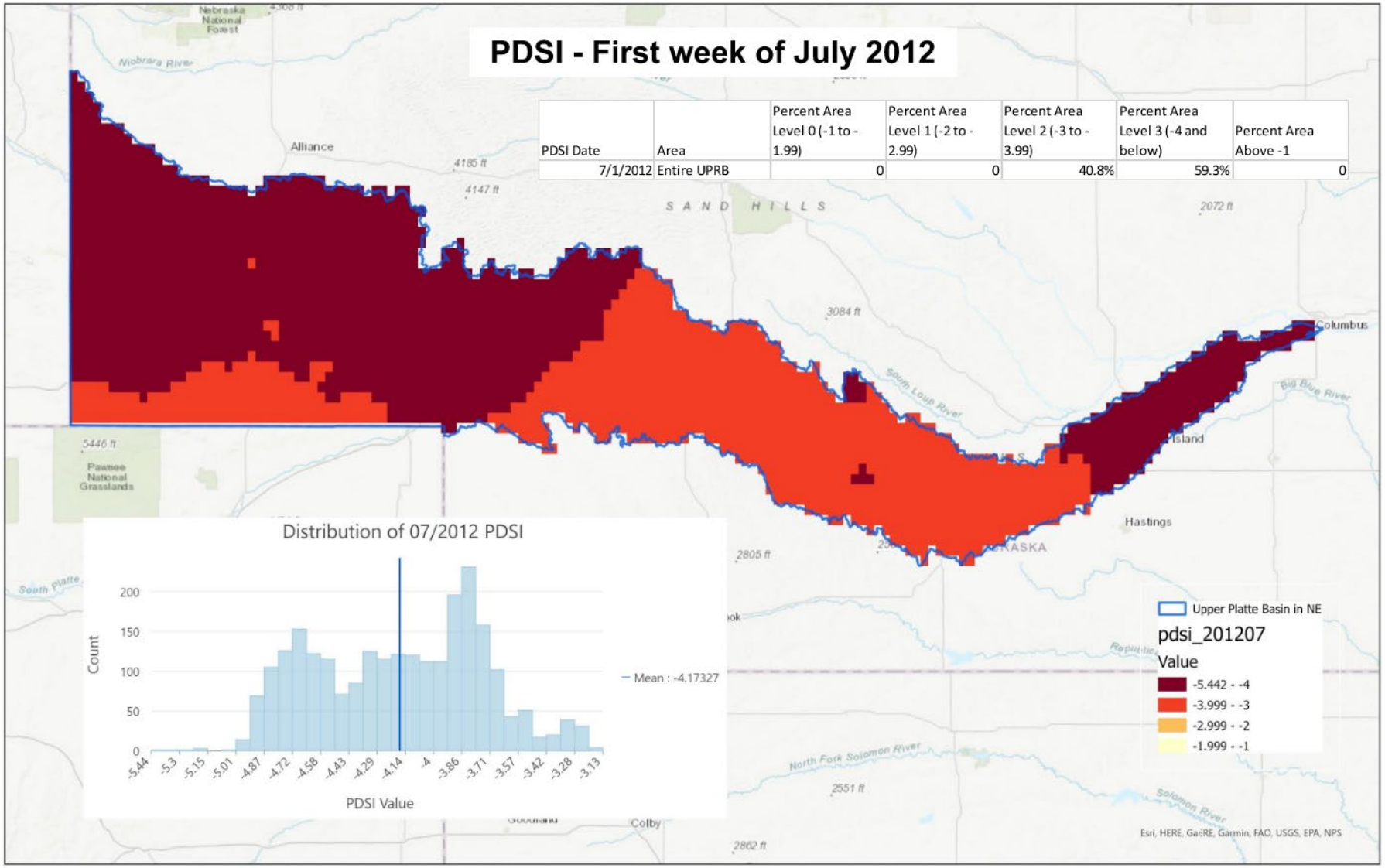
1. Agriculture
2. Environmental
3. Energy and Socio-Economic
4. Recreation
5. Municipal/Industrial

# BOR Requirements & Basin-Wide Plan Requirements

| | USBR WaterSMART Agreement | Upper Platte Basin-Wide Plan | Found In DCP |
|---|---|---|---|
| **Drought Monitoring** | 5.2.1 Drought monitoring: process for monitoring near and long-term water availability and a framework for predicting probability of future droughts or confirming an existing drought. | Action Item 1.3.4.1: Develop a Basin drought monitoring protocol for defining and determining drought conditions. | **Section 4.0:** Pages 59–88<br><br>&<br><br>**Section 6.0:** Pages 116–123 |

- Key indicators that would be monitored:
  - PDSI
  - EDDI
  - SPEI
  - PRRIP Hydrologic Condition Index
  - Upper Platte Reservoir and Lake McConaughy Storage
- Temporal coverage for short- and long-term droughts
- Geographic coverage for the Basin upstream of Nebraska (reservoir and snowpack conditions)

# Example of Drought Warning Trigger



# BOR Requirements & Basin-Wide Plan Requirements

| | USBR WaterSMART Agreement | Upper Platte Basin-Wide Plan | Found In DCP |
|---|---|---|---|
| **Mitigation and Response Actions** | 5.2.3 Mitigation actions<br><br>5.2.4 Response action<br><br>Identify, evaluate, and prioritize mitigation & response actions and activities that can be implemented during drought to decrease the severity of drought impacts. | Action Item 1.3.4.2: Identify potential basin-wide mitigation and response actions<br><br>Each NRD will develop individual drought contingency plans. The responsibility for implementation of those activities will lie with each District. | **Section 5.0:** Pages 86–115 |

- Most effective potential Drought Mitigation Actions, based on Stakeholder Input:
  - Groundwater Recharge
  - Irrigation Efficiency
  - Additional SW Delivery and Storage
  - Commingled Irrigation
- Most effective potential Drought Response Actions, based on Stakeholder Input:
  - Irrigation Scheduling and GW Controls
  - Water Use Restrictions
  - Improve Efficiency of Water Delivery
  - Coordination of Disaster Relief

CPNRD Central Platte Natural Resources District · North Platte Natural Resources District · South Platte Natural Resources District · Tri Basin Natural Resources District · Twin Platte Natural Resources District · Nebraska Department of Natural Resources · Bureau of Reclamation

# Triggers and Actions (Drought Watch)

Occurs when conditions are favorable for a drought to start.

| Drought Watch Conditions | Internal Communications | External Communications |
|---|---|---|
| **Trend of above normal evaporative demand or below average precipitation** | • POAC Meetings<br>  •Discuss the need for any communications or meetings<br>• Gather additional data from stakeholders | • Drought monitoring dashboard<br>  • Social media posts referencing the dashboard for more information |
| **Potential decreased crop yields and increased irrigation** | • Email monitoring reports sent by NeDNR<br>• Teleconferences<br>• Review ongoing drought mitigation actions and potential response actions | • Social media posts pointing to dashboard for reference<br>• Updates on local NRD/municipality websites regarding conditions in their area |
| **Summer flows and Reservoir Storage below normal** | • Each member prepares communication tree of municipalities, emergency managers, and emergency responders | • Education campaign (via existing NRD or UNL education events or email blasts) |

# Triggers and Actions (Drought Warning)

Issued during drought when there is high confidence that an impact has occurred or will soon occur.

| Drought Warning Conditions | Internal Communications | External Communications |
|---|---|---|
| **Severe drought (PDSI<-3.0) for 50% of Area Throughout the Year** | • Share and review drought response actions at regularly scheduled POAC Meeting, discuss public-facing options<br>• Schedule supplemental POAC meetings, as needed<br>• Determine when to “activate” communication tree contacts | • Press releases<br>• Social media<br>• NeDNR Website updates<br>• Updates on local NRD/municipality websites |
| **Summer flows and reservoir storage well below normal** | • Schedule supplemental POAC meetings, as needed<br>• Inform communication tree contacts of any additional public outreach | • Updates continue on local NRD/municipality websites<br>• Email blasts to stakeholders will be used as an education campaign<br>• Public meetings will be held, as needed |