



# Platte River Recovery Implementation Program

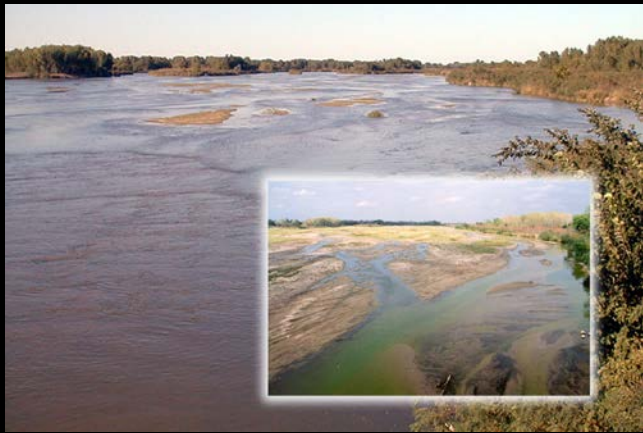
(PRRIP or Program)

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**Department of Natural Resources**



# Nebraska New Depletions Plan

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- A plan to prevent or offset depletions caused by new or expanded uses begun since July 1, 1997
- The responsibility for implementing this plan is shared between the state and the NRDs involved
- Split between uses before 2005 and post 2005

# Nebraska New Depletions Plan, New Surface Water Uses

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- To the extent that the Department of Natural Resources (DNR) has jurisdiction over new uses of surface water, new uses to be begun on or after January 1, 2006 will not be allowed by the department without offset.
- For new or expanded sandpits and other surface water bodies that do not require permits from DNR, the cumulative impact of all such uses will be estimated and will be offset.
- Nebraska has not permitted any new surface water storage reservoirs in the Platte River Basin upstream of the confluence of the Platte River with the Loup River since July 1, 1997 and currently has a moratorium on the issuance of any new surface water appropriations in that area.

# Nebraska New Depletions Plan, New Ground Water Uses



- To the extent that new uses of ground water require permits from NRDs, new and expanded groundwater uses begun on or after January 1, 2006 will not be allowed **unless** the adverse effects of those uses on state protected flows and on target flows will be offset
- Ground water uses are those that **(a)** are located within the North Platte, South Platte or the Platte River watershed in Nebraska and **(b)** are so located and constructed that if water were intentionally withdrawn for 40 years, the cumulative stream depletion to the North Platte, the South Platte, the Platte River or a base flow tributary thereto upstream of Chapman, NE would be greater than or equal to 28% of the total groundwater consumed as a result of the withdrawals from those wells. (28/40 Area)



# Nebraska New Depletions Plan, 1997 to 2005 Uses

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- These depletions to target flows or state protected flows need to be offset starting in 1/1/2009



# Implementation

## Tasks

(Irrigated Acres)

- ❑ Refine the COHYST models as needed
  - ✓ Peer Review Completed
  
- ❑ Determine the change in irrigated acreage (1997 to 2005)
  - ✓ Ground water irrigated land increased by 508,000 acres
  
- ❑ Determine the amount, timing and location of any depletions to the River
  - ✓ up to 30,000 acre-feet of depletion in 2009 and up to 40,000 acre-feet by 2019

# Implementation

## Tasks

## (Other Uses)

❑ Determine the change in average annual consumptive water use by municipalities, industries, rural domestic and other new water related activities (1997 to 2005)

❑ Increases in industrial use are still being determined

✓ The population increased by 7,600 resulting in an increased consumptive use of 900 acre-feet

✓ The number of cattle and hogs decreased significantly and poultry and horses increased, resulting in an overall decrease in consumptive use of 2,700 acre-feet



*Continued*

# Implementation

## (Defining Flows)

## Tasks

- Determine state-protected flows
- Develop a tracking system to route depletions downstream
- Quantify depletions to state-protected flows and/or target flows







# Implementation

## Tasks

(OA Plan and IMPs)

□ Working with basin NRDs and stakeholders adopt and implement a basin-wide plan for the OA Basin and individual integrated management plans

- Establish 2005 baselines for all water related activities
- Determine methods to measure changes in water consumption for all water related activities
- Determine best ways to offset depletions
- Secure funding for implementation
- By end of 2008 have sufficient offsets in place to offset depletions occurring at that time

# Potential Offsets

## Water Action Plan Projects

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- The portions of the yields from the Reconnaissance-Level Water Action Plan projects reserved by Nebraska for offset purposes:
  - CNPPID reregulating reservoir; 4,000 AF
  - Groundwater mound management, 4,600 AF
  - Dawson/Gothenburg Canal recharge; 800 AF
  - Power interference;

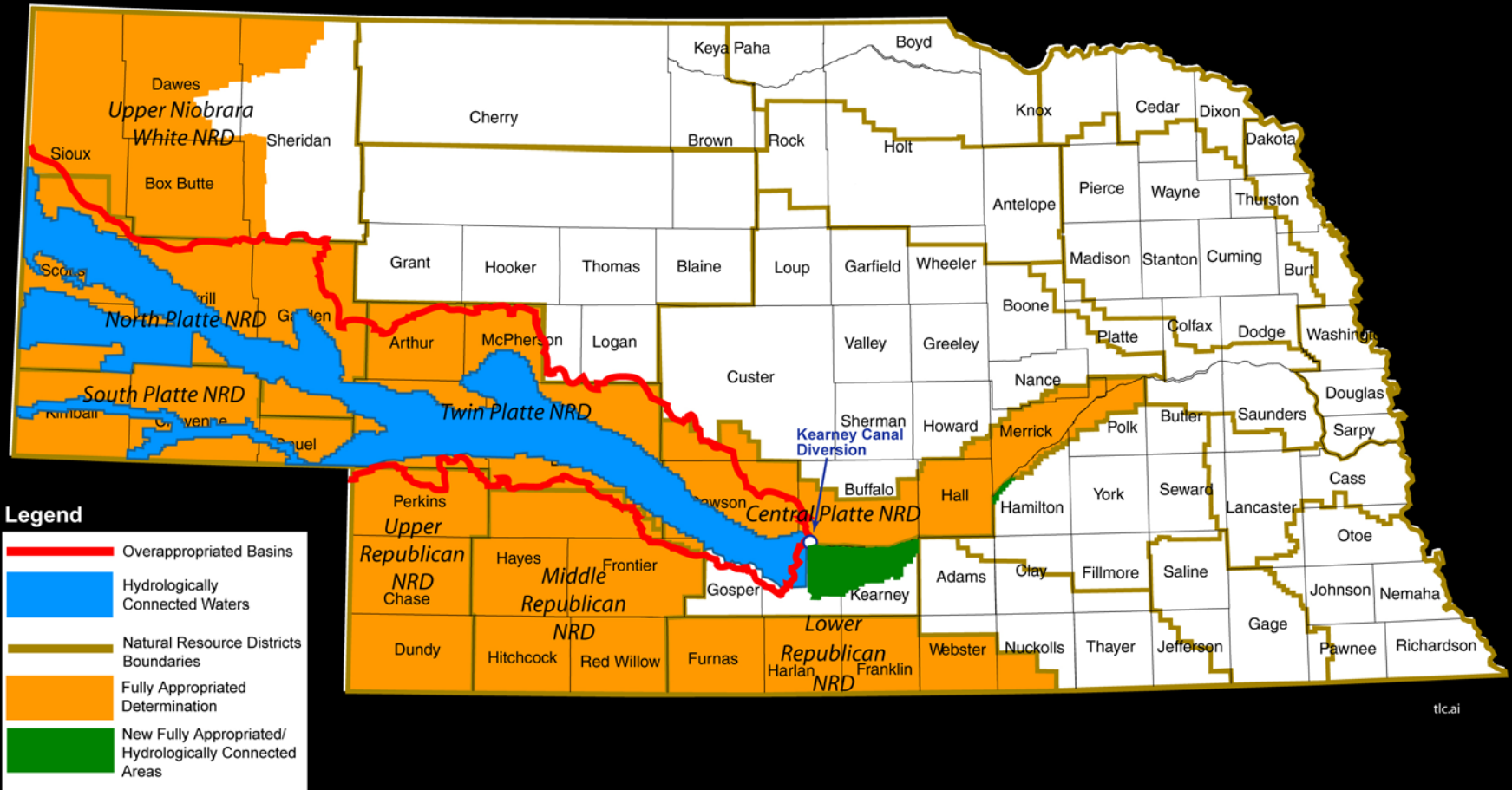
# Potential Offsets for Nebraska

## Other



- Water leasing and water right transfers
- Purchase of storage water from existing surface water storage projects
- Water management incentives such as, irrigation system conversions, changes in tillage practices, changes in cropping mix, and deficit irrigation
- New surface water storage projects
- Ground water recharge/retiming projects
- Pumping groundwater directly into a stream
- Converting from surface water to groundwater to eliminate a portion of the depletion or to change the timing of the depletion
- Retirement of or reduction in consumption by existing surface water and groundwater uses

# LB 962 - Fully Appropriated and Overappropriated Areas

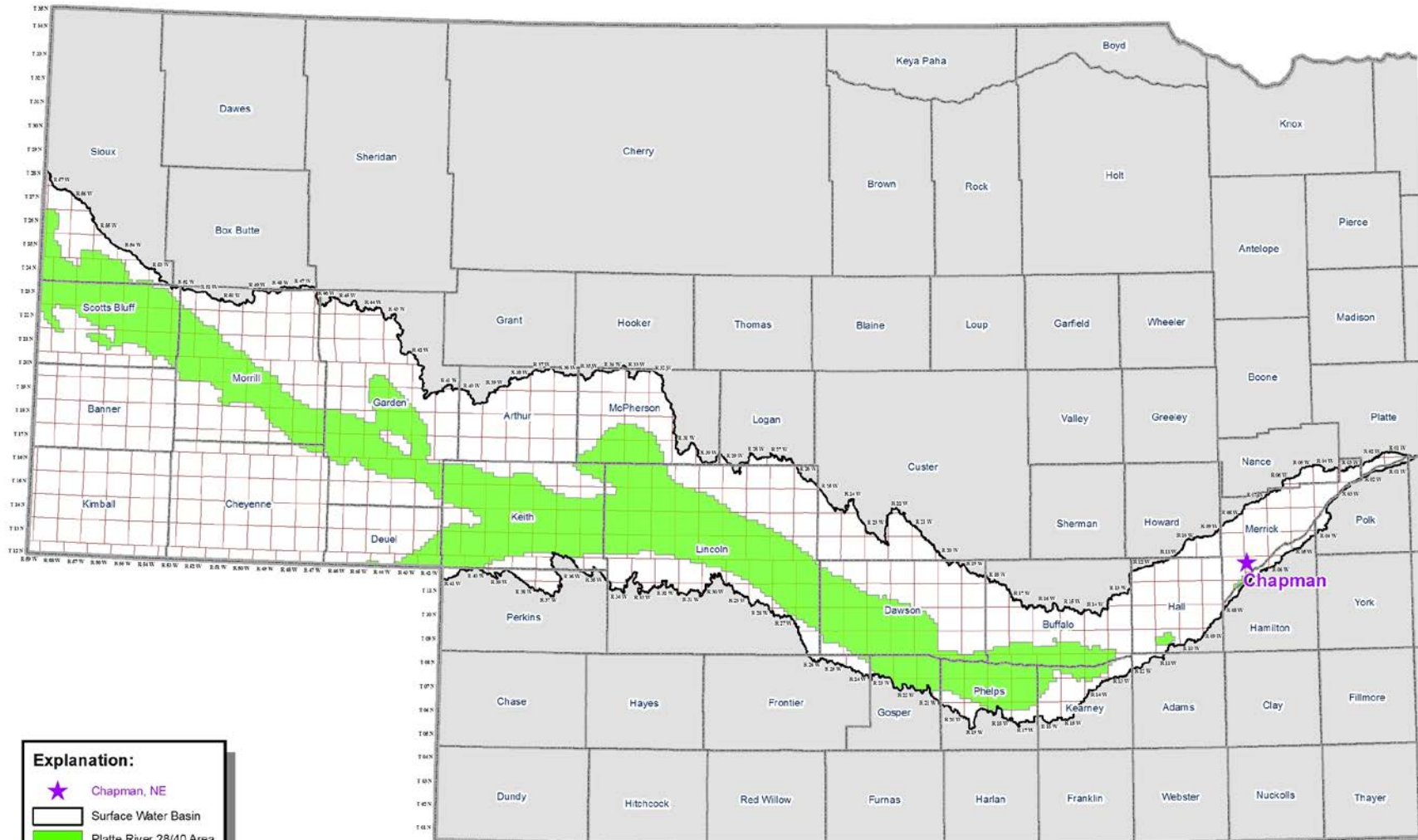


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April 21, 2006



# Surface Water Basin above Loup Confluence 28/40 Area to Chapman



Source Data: USGS/DNR, CoHyst and internal datasets compiled and maintained by DNR. Composed October 2007, Planning and Assistance Division, Jesse Bradley and Jennifer Schellpeper.

Disclaimer: The data herein, including but not limited to geographic data, tabular data, analytical data structures or files are provided "as is" without warranty of any kind. The 28/40 Area is subject to change as better data or information are developed.





# Comparison of New Depletion Plan to LB 962



- Much of what is required in Nebraska will also need to be done under the current statutes passed in 2004 as LB 962 even without the program
- Costs of offsetting are estimated at between \$54 million and \$102 million
- Total cost of offsetting Platte depletions under LB 962 by itself for the first 13 years is \$8-\$11.5 million less than under PRRIP



# Reflections

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- **Lots of challenges will be faced during implementation**
- **Success depends on funding and on the NRDs, DNR and the Basin Stakeholders making sincere efforts to achieve positive results**

# Questions??

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