

A New Way Forward: Conjunctive Water Management

URNRD

State of the Basin Water Conference

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Outline

- What is Conjunctive Water Management (CWM)
- Where has CWM been implemented (CPNRD/
Dawson Co. Case Study)
- What opportunities exist in the Republican River
Basin?

Integrated Management

2004- Nebraska Legislature passed LB 962 to
balance groundwater/surface water uses

Integrated Management Plans: NRDs and
Nebraska Department of Natural Resources

Republican River Compact and FSS

2006- Nebraska, Colorado, Wyoming, U.S. FWS
Platte River Recovery Implementation Program



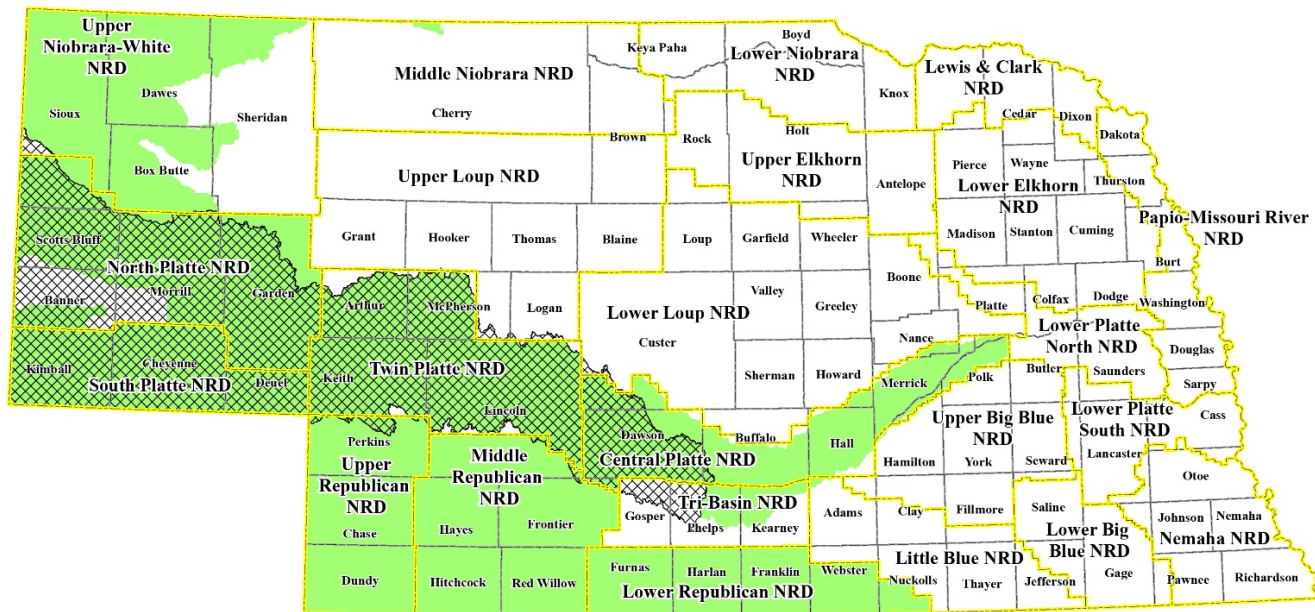


Map #3: Fully Appropriated and Overappropriated Surface Water in Nebraska

Determinations made by the Department of Natural Resources as of September 09, 2011



Planning & Assistance/Mapping Section



Fully Appropriated Surface Water
 Overappropriated Surface Water
 Natural Resources District (NRD) Boundaries
 County Boundaries

THIS MAP IS FOR GENERAL REFERENCE ONLY.
 Contact DNR for detailed information regarding specific location affected by these restrictions and any potential exceptions.

Map Produced by Daniel Kloch - September 2011
 Edited for Environment Test by Kevin J. Schwartzman, PG. - December 2011

What is CWM?

CWM is an adaptive process that utilizes the connection between surface 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.

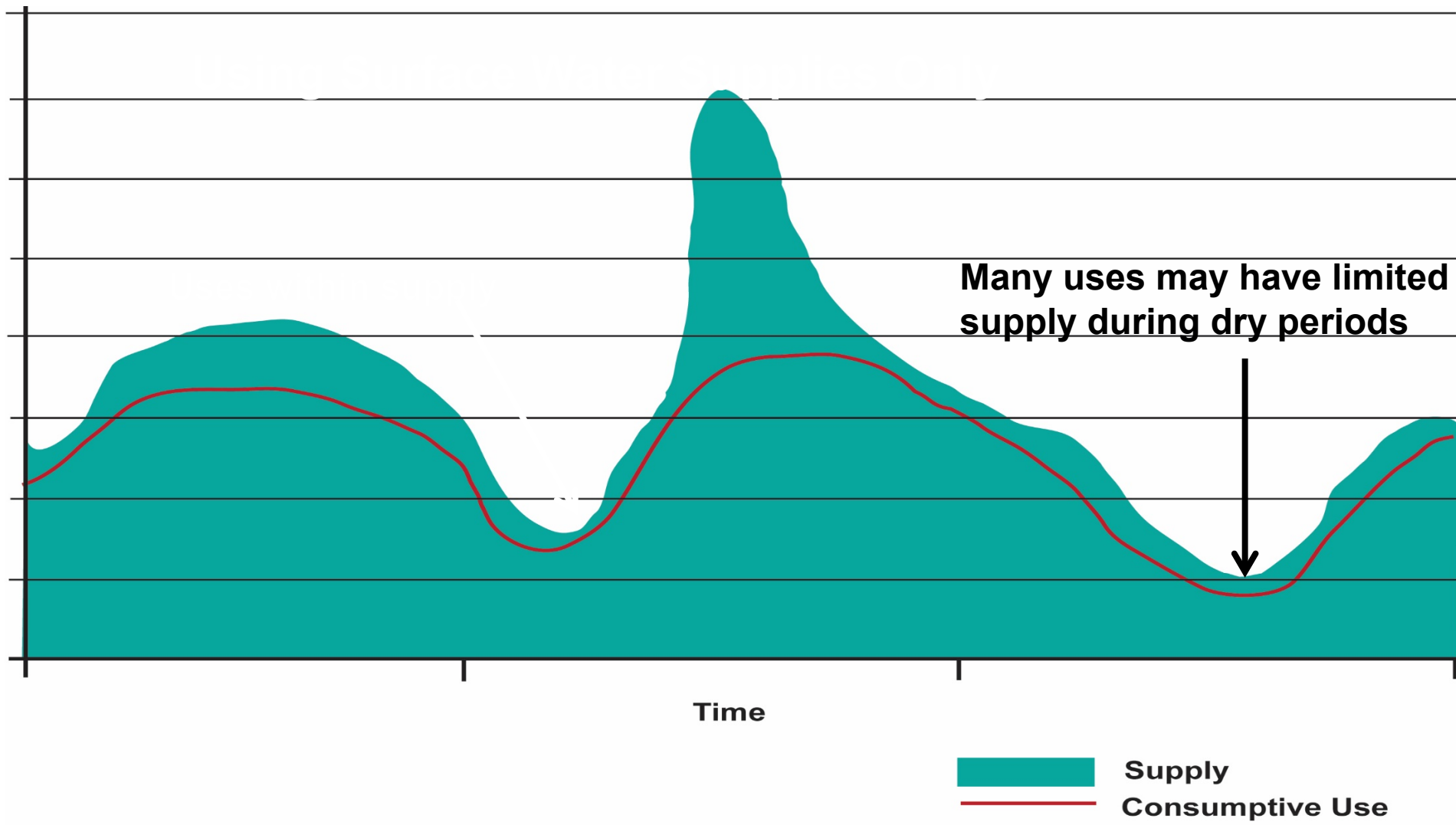
Components of CWM

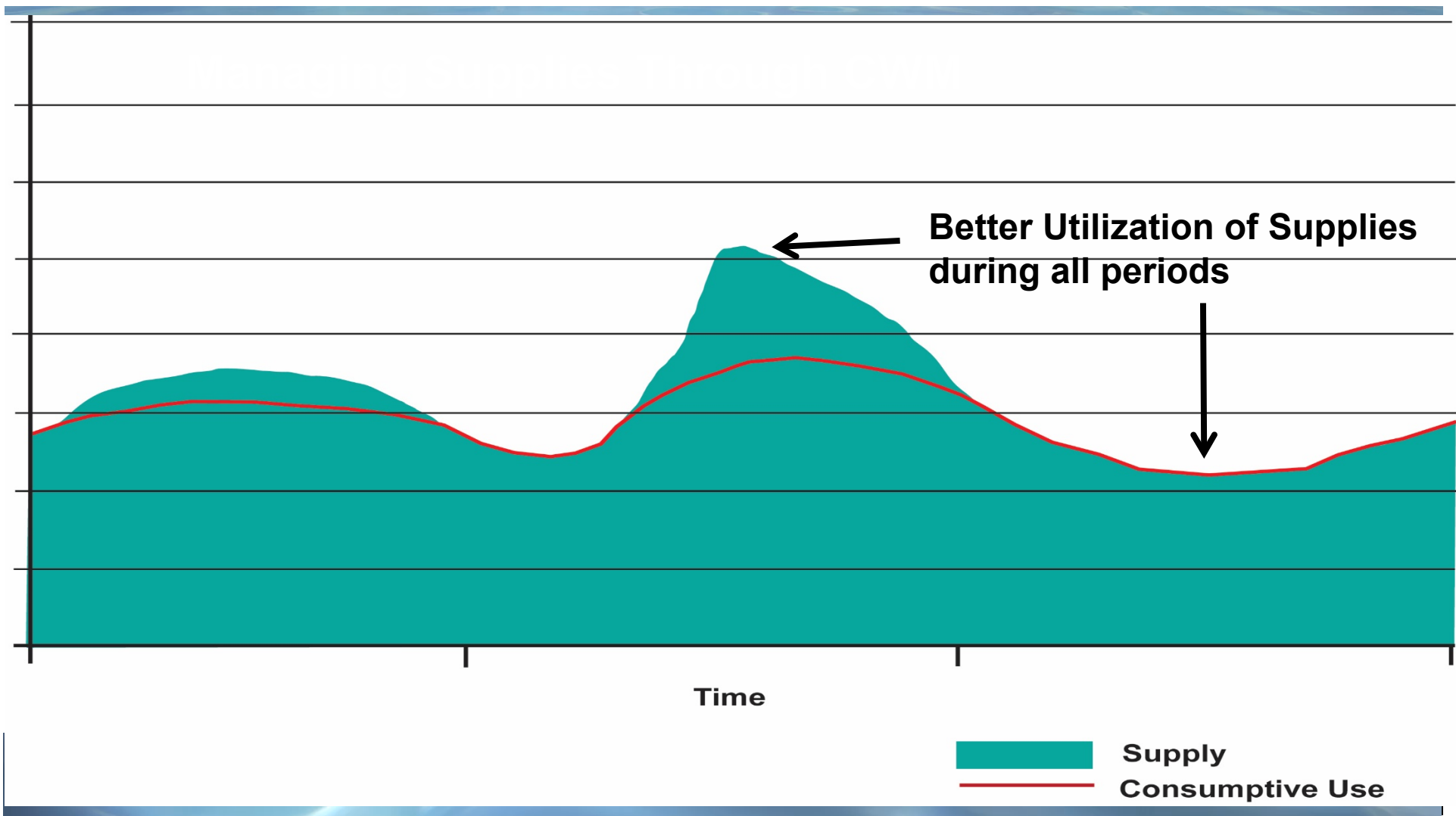
Although a specific project or program may be extremely complex, there are several components common to all conjunctive management projects.

- Diverting SW and Pumping GW
- Aquifer Recharge
- Management of Return Flows (Timing)
- Monitoring and Evaluation Program

Components of CWM

- CWM typically requires highly specialized tools to account for all hydrologic components.
- CWM requires ongoing monitoring to evaluate operations and allow water managers to respond to changes in groundwater, surface water, or environmental conditions that could violate management objectives or impact other water users.





Benefits

- Groundwater Recharge- Enhances surface/groundwater supplies, protects water quality.
- Excess Flows- Enhances streamflows through diversions & retiming.
- Optimization of Water Use- Works to utilize all available water supplies

Case Study: Central Platte NRD/Dawson County Canals

Goals of CWM in the Platte River Basin

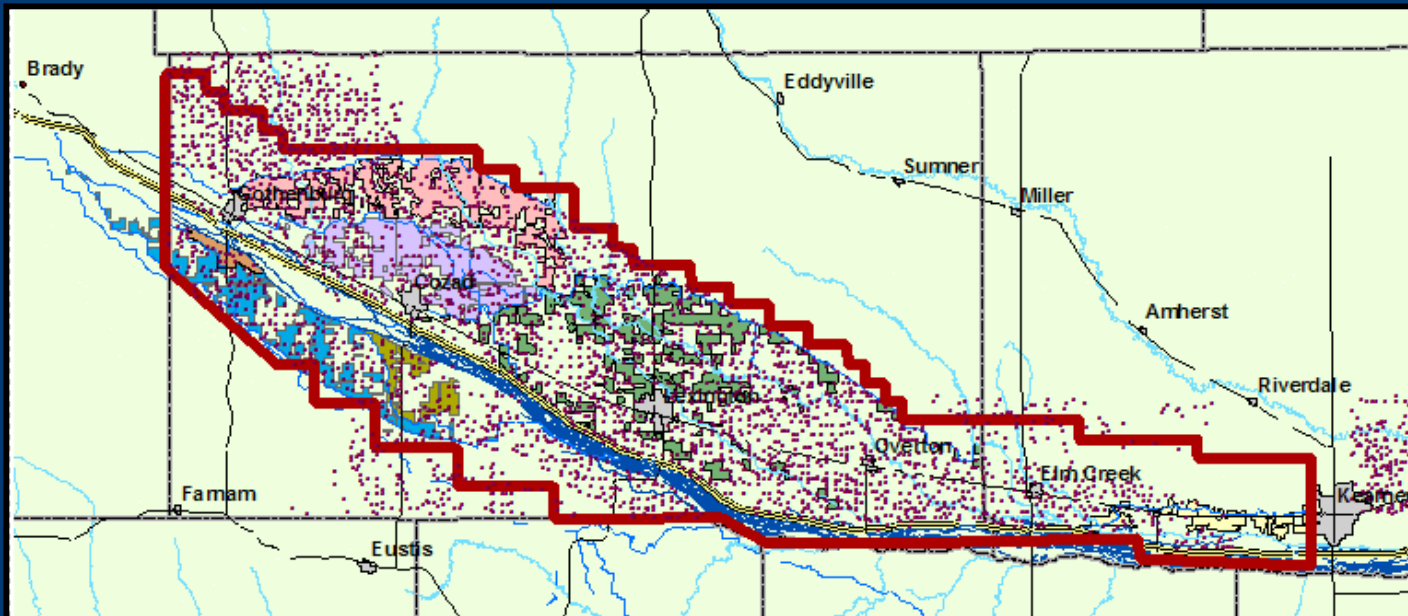
- Helps meet requirements of Platte River Recovery Implementation Program.
- Helps meet requirement to return over-appropriated area to fully appropriated.
- Protects surface water rights and associated infrastructure.

Benefits

- Provides groundwater recharge.
- Protects economy and tax base.
- Provides greater options in the future.



Dawson Co. Canals



Partnerships

To rehab surface water canals

Six Mile Canal

Cozad Ditch
Company

Thirty Mile
Irrigation District

Southside
Irrigation District

