

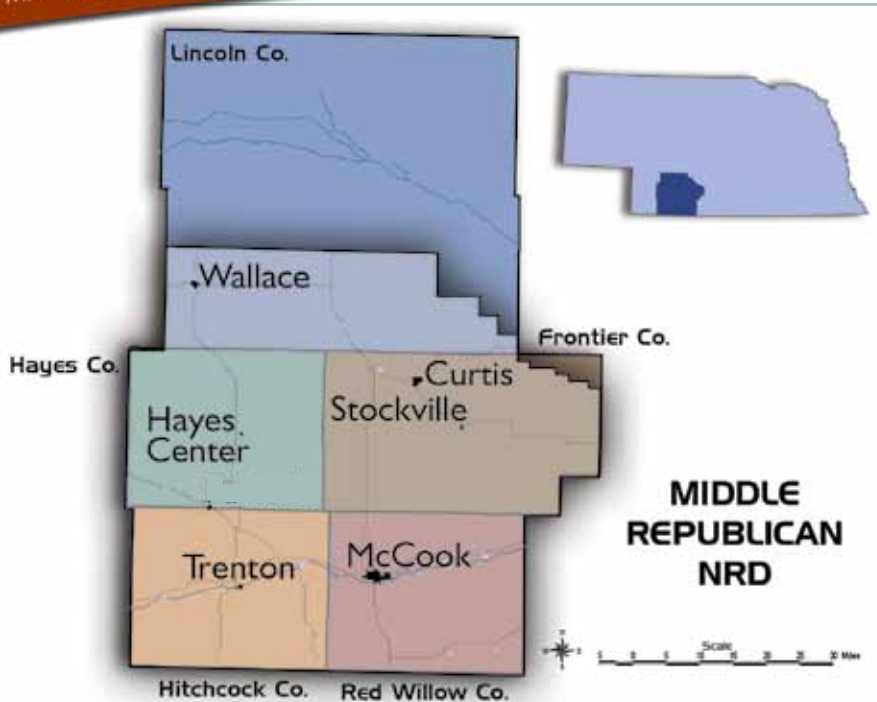
# KNOW YOUR NRD



**MIDDLE REPUBLICAN**  
Natural Resources District  
Curtis, NE

Nebraska's Natural Resources Districts  
Making the Good Life Better Since 1972

2011



## Middle Republican NRD QUICK FACTS:

*Managing and conserving water while supporting the economy in Southwest Nebraska*

- The land area of the MRNRD covers 3,843 square miles or 2,459,520 acres.
- 52% is rangeland while 46% is considered cropland.
- 2957 acres have been retired from irrigation permanently since 2006.
- 20,048 trees were planted for wildlife and soil conservation in 2011.
- The District controls and maintains 34 flood control structures.

Protecting Lives

Protecting Property

Protecting the Future

### Managing the Quality and Quantity of Ground Water

The Middle Republican NRD is working year round to protect and monitor the quality of our ground water so residents of the District can have a safe and secure water supply. Your NRD...

- ◆ Protects ground water as a drinking source for over 19,000 people living in the Middle Republican Natural Resources District.
- ◆ Protects surface and ground water quality by working with landowners to properly seal abandoned irrigation wells.
- ◆ Inspects 1/3 of all irrigation wells each year to insure safe operations of their chemigation systems.
- ◆ Protects drinking water supplies by collecting and testing water samples for Nitrates from strategically located wells.
- ◆ Measures ground water levels at 126 observations wells located throughout the District in early Spring and Fall of each year.
- ◆ Annually reads all metered wells at the end of the irrigation season to ensure irrigators are staying within their allotment of ground water use.

### Plan & Policy to Protect the Future of Ground water

To Protect the future of ground water and to assist the State with compliance of the Republican River Compact, an *Integrated Management Plan* was created. The plan includes...

- ◆ Incentive programs for landowners to reduce irrigated acres.
- ◆ No new ground water uses permitted.
- ◆ Irrigation use levels are maintained at a sustainable level.
- ◆ Ground water use for irrigation is monitored to achieve 20% reduction from historical pumping volumes.

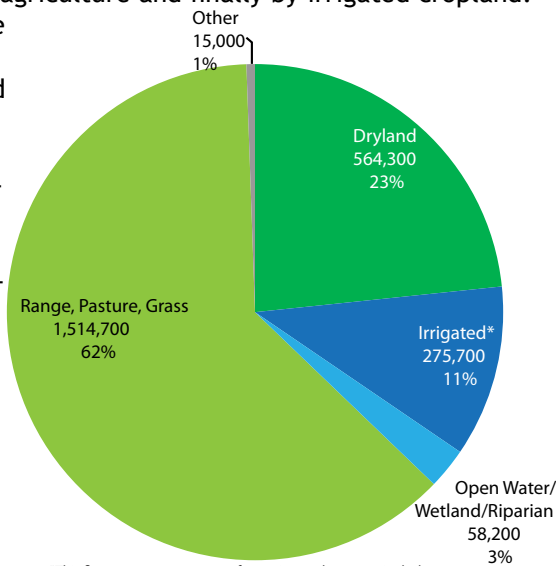
## Water Balance Study

A 15 month basin wide study, which began in 2010, evaluates water budgets both within the District and across the Nebraska portion of the Basin. The study shows that the single largest land uses are range, pasture and grassland followed by dryland agriculture and finally by irrigated cropland. The single largest consumptive use of water is from range/pasture/grass (58.6%) followed by dryland crops (15.6%), irrigated crops (15.6), and just under 6% comes from evaporation from open water, wetlands and riparian systems.

The study notes that precipitation and consumption are by far the largest components of the water balance.

One observation from the study is that during years when increases in aquifer storage occurred, the increases generally corresponded to episodes of high precipitation.

This Study will be used by the District to develop, refine and support informed water management decisions and to set long term water management goals across the district and the basin.



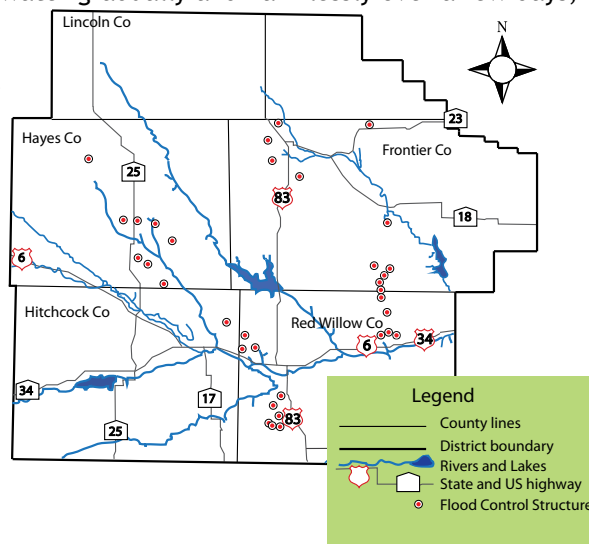
\*This figure represents 2005 information and may not include up to 40,000 surface water irrigated acres.

## Flood Control Program

The district monitors and maintains 34 flood control structures that were constructed in the 60s and 70s with funding through the Watershed Protection and Flood Prevention Act. These funds authorized the NRCS to provide assistance with the planning and installation. The structures were designed to hold back water during heavy rain events within the District's drainage system and then release the water gradually and harmlessly over a few days, relieving the pressure on the local river system.

These structures have prevented flood damage across the District. Just in Hayes County, these structures helped prevent \$576,000 in flood damages this Spring and Summer.

Benefits include significant savings in soil erosion, water conservation, road and bridge damage reduction, wetland/upland wildlife habitat creation and most importantly, saving lives and property.



The map above shows the locations of the District's 34 flood control structures.

## NRD Programs

- Soil Conservation
- Cost Share Assistance
  - Well Abandonment
  - Terrace Enlargements
  - Wildlife Habitat
- Flood Control
- Tree Planting
- Wildlife
- Education

Nebraska's Natural Resources Districts were created in 1972 with the purpose of conservation and preservation of our natural resources. With this in mind, the MRNRD is involved in many programs relating back to the responsibilities the Nebraska State Legislature charged NRD's with in 1972.

To achieve those responsibilities, the District works closely with several other federal, state, and local agencies, clubs and organizations to carry out its programs and responsibilities.

Find out more about Nebraska's NRDs at

