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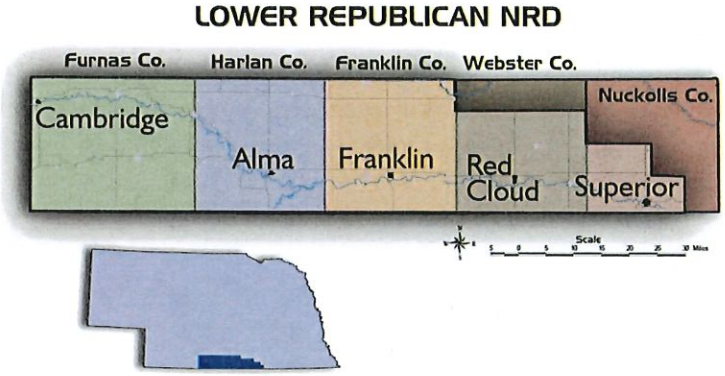

GROUNDWATER STATUS

The Lower Republican NRD has been designated as fully appropriated; however, the settlement agreement reached between the states of Nebraska, Kansas, and Colorado has prompted the LRNRD to implement a number of Groundwater Management Controls. The controls implemented have been for the preservation and conservation of groundwater and for compact compliance.

ACTION STEPS

- December 9, 2002—Moratorium on New Wells
- December 31, 2004—Moratorium on New Acres
- December 31, 2004—Acres Certified (Total Irrigated Acres 325,876)
- April 1, 2005—Metering of all groundwater wells
- June 24, 2005—Integrated Management Plan
  - Allocations:
    - West of Hwy 183 = 36 inches for 3 years / East of Hwy 183 = 33 inches for 3 years
- February 29, 2008—Integrated Management Plan
  - Allocations: 45 inches for 5 years District Wide
- October 1, 2011—Integrated Management Plan
  - Allocations: 45 inches for 5 years District Wide
- 2013—NCORPE Augmentation Project
  - Retirement of nearly 15,000 irrigated acres
  - Ability to augment streamflow to ensure Compact Compliance
- January 15, 2016—Integrated Management Plan
  - Allocations: 45 inches for 5 years District Wide
- January 1, 2018—13" Hard Cap during Compact Call years

In 2013, the Lower Republican NRD partnered with the Middle Republican, Upper Republican, and Twin Platte NRD's to purchase a 19,500-acre farm south of North Platte on the watershed boundary of the Platte and Republican basins. An Interlocal Agreement was signed between the Districts and a new entity was formed, NCORPE, the Nebraska Cooperative Republican Platte Enhancement Project. Nearly 15,000 acres on the farm have been retired from irrigation. Water is pumped south to the Republican and north to the Platte River for augmentation purposes. This enhances stream flow and supports Nebraska's obligations with the Republican River Compact and the Platte River over appropriated offsets.

We have promoted the use of soil moisture sensor technology heavily for the past four years and presently have moisture sensors installed on over 160,000 acres. This technology allows the irrigator to water only when the crop needs it, not when his neighbor is watering or when it looks like it needs it. Soil moisture sensors have been proven to lower water usage by 1 to 2 inches per acre per year. It is estimated that the sensors are lowering water usage in the Lower Republican NRD by as much as 26,000 acre-feet per year.

WATER USAGE	
2003 = 13.03 inches per acre	2012 = 11.52 inches per acre
2004 = 11.24 inches per acre	2013 = 8.45 inches per acre
2005 = 7.17 inches per acre	2014 = 5.65 inches per acre
2006 = 7.58 inches per acre	2015 = 7.30 inches per acre
2007 = 6.11 inches per acre	2016 = 7.99 inches per acre
2008 = 5.25 inches per acre	2017 = 6.46 inches per acre
2009 = 5.92 inches per acre	2018 = 4.86 inches per acre
2010 = 4.44 inches per acre	2019 = 3.73 inches per acre
2011 = 5.46 inches per acre	

The Lower Republican NRD has been actively involved in promoting and implementing several conservation programs aimed at improving irrigation efficiency and lowering our overall use of groundwater.

Conservation Programs and Acres Involved

EQIP Irrigated to Dryland—1,102 acres
CREP—6,140.49 acres
AWEP—418 acres
Exempt—3589.15 acres

11,249.64 acres permanently or temporarily retired since 2005. This represents over 5% of the total irrigated acres in the LRNRD.

FUTURE

LRNRD is actively pursuing projects to assist with our obligations under the IMP that support Interstate Compact Compliance. The LRNRD active efforts include; conjunctive management, interbasin diversion, retirement of irrigated acres, irrigation efficiency improvements, allocation monitoring and modeling. During the last two years the LRNRD has received nearly 3 million dollars in grants to support these existing and future management actions.