

Groundwater Pumping

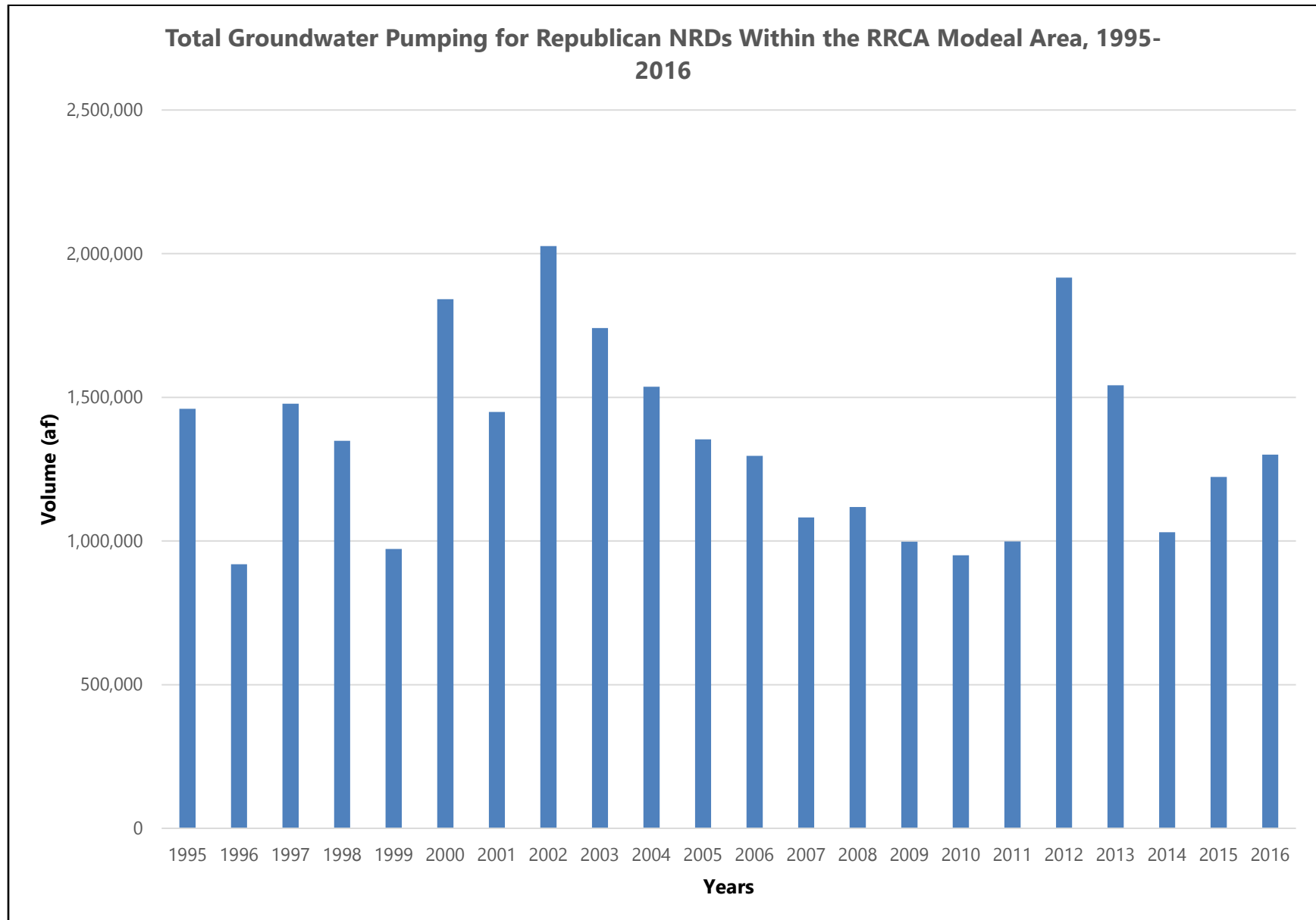
REVISED Nebraska Groundwater Pumping within RRCA Model Area*, 1995-2016												
Irrigated Land (Acres), Groundwater Delivered Volume (Acre-Feet), and Groundwater Delivered Depth (Inches)												
Year	Lower Republican NRD			Middle Republican NRD			Upper Republican NRD			Tri-Basin NRD		
	Acres	Volume (af)	Depth (inches)	Acres	Volume (af)	Depth (inches)	Acres	Volume (af)	Depth (inches)	Acres	Volume (af)	Depth (inches)
1995	203,983	249,119	14.7	202,362	284,375	16.9	374,614	441,287	14.1	430,103	485,407	13.5
1996	211,297	127,519	7.2	221,062	179,270	9.7	384,799	330,387	10.3	445,551	282,095	7.6
1997	232,677	240,735	12.4	225,927	292,620	15.5	377,170	491,457	15.6	448,273	452,737	12.1
1998	230,269	197,549	10.3	228,717	301,782	15.8	371,596	505,327	16.3	443,469	344,124	9.3
1999	227,927	156,517	8.2	225,629	140,110	7.5	369,037	382,146	12.4	452,326	293,184	7.8
2000	242,107	266,859	13.2	234,864	384,430	19.6	384,013	665,401	20.8	468,982	524,633	13.4
2001	244,238	240,168	11.8	252,340	311,893	14.8	443,499	487,376	13.2	504,160	409,482	9.7
2002	248,125	361,231	17.5	250,497	429,943	20.6	444,395	671,787	18.1	508,899	563,289	13.3
2003	271,259	297,408	13.2	249,254	354,368	17.1	451,349	563,098	15.0	512,339	526,492	12.3
2004	292,301	274,497	11.3	259,286	317,211	14.7	442,214	467,943	12.7	526,729	477,480	10.9
2005	280,511	243,064	10.4	240,972	248,029	12.4	474,419	428,712	10.8	531,545	434,215	9.8
2006	300,824	197,251	7.9	279,264	254,588	10.9	459,350	429,825	11.2	544,454	414,616	9.1
2007	294,939	160,799	6.5	272,855	196,339	8.6	427,766	394,653	11.1	533,468	329,972	7.4
2008	287,889	134,654	5.6	270,925	208,653	9.2	428,996	428,993	12	526,358	346,300	7.9
2009	284,869	152,664	6.4	269,470	197,536	8.8	438,380	335,369	9.2	527,574	311,768	7.1
2010	285,970	113,310	4.8	270,325	194,434	8.6	427,460	381,172	10.7	528,959	261,475	5.9
2011	292,499	138,529	5.7	273,114	208,993	9.2	428,468	356,449	10.0	531,016	294,239	6.6
2012	291,780	289,851	11.9	276,443	411,115	17.8	426,358	672,499	18.9	532,142	542,753	12.2
2013	293,571	214,599	8.8	278,358	251,299	10.8	426,346	493,799	13.9	535,171	582,159	13.1
2014***	294,734	136,642	5.6	255,346	213,265	10.0	421,582	389,268	11.1	464,398	291,695	7.5
2015	284,236	177,667	7.5	256,557	219,535	10.3	424,672	433,345	12.2	468,200	392,450	10.1
2016	283,982	196,761	8.3	256,525	235,676	11.0	424,672	390,485	11.0	468,200	477,625	12.2

*There is some additional groundwater pumping within the Nebraska portion of the model area that takes place outside these four NRDs.

**Dashed horizontal lines (—) represent the methodology changes summarized on page 3 of this handout. The change in acre values between 2013 and 2014 is a result of a change in the methodology used to calculate groundwater acres for the RRCA data exchange: for 2013 and earlier, commingled acres were counted as groundwater acres; for 2014 and later, commingled acres not certified as "groundwater only" were counted as surface water acres.

***The previously reported acres and volumes for 2014 (June 2017 version of this handout) were based on preliminary data and were in error. All data, including the volume and depth data for all years, have been corrected and now represent the finalized data utilized by the RRCA model, and the handout has also been expanded to include 2015-2016 data. Corrected data are highlighted in yellow.

Groundwater Pumping



Groundwater Pumping

RRCA GW Acre and Pumping Calculation Source List

Pre-2001: NASS acreage for each county was distributed using the DNR registered wells. Power records were used to calculate pumping.

2001-2005: Upper Republican NRD certified acres and well meters were used for acre and pumping calculation for that NRD. All other NRDS and "other" areas continued to use the pre-2001 methodology.

2006-2013: Upper, Middle, Lower, and Tri-basin NRDs now used the certified acres and well meter volumes for calculations within those areas. "Other" areas outside of those NRDs continue to use the old methodology. Power records were used to estimate pumping volumes for all areas outside of the in-basin portions of the four NRDs. For 2013 and earlier, commingled acres were counted as groundwater acres.

Note: 2007 NASS acreage was used for all years (2007-2013) for the "other" areas

2014-present: Upper, Middle, Lower, and Tri-basin methodology largely stays the same. The acreage in the landuse spatial dataset is now adjusted to match the tabular certified acres. "Other" areas are now calculated using the COHYST derived land use acres. Commingled acres not certified as "groundwater only" are now counted as surface water acres.

Groundwater acres are used in the model only for the purpose of estimating recharge.