Balancing Water Supply and Use

Republican River Basin-Wide Plan
December 2017 Stakeholder Meeting
Republican River Basin Computed Beneficial Consumptive Use (CBCU)

Average (1995-2016)
- 196,871 (67%)
- 66,015 (23%)
- 28,606 (10%)

Remaining Supply
SW CBCU
GW CBCU

Annual


Thousand Acre-Feet

0 100 200 300 400 500
10% Reduction in Streamflow Depletions
Example A

Highest Single Year Streamflow Depletion

- Highest Single Year Depletions (222,154 af)
- 10% Reduction in Depletions (199,939 af)
- Compact Accounting Groundwater CBCU (Depletions)
10% Reduction in Streamflow Depletions
Example B

1998-2002 Average Streamflow Depletions

- 1998-2002 Average Depletions (193,255 af)
- 10% Reduction of 1998-2002 Average Depletions (173,930 af)
- Compact Accounting Groundwater CBCU (Depletions)
10% Reduction in Streamflow Depletions
Example C

1993-2004 Average Streamflow Depletions

- 1993-2004 Average Depletions (193,190 af)
- 10% Reduction in 1993-2004 Average Depletions (172,971 af)
- Compact Accounting Groundwater CBCU (Depletions)
Groundwater Pumping Volumes and Depletions for the URNRD

- Pumping Volume (acre-feet)
- Depletion Volume (acre-feet)

Graph showing the pumping and depletion volumes from 2002 to 2016. The graph includes the following lines:

- 80% 1998-2002 Average Pumping
- Annual Pumping
- 12-year Average Groundwater Depletion
Groundwater Pumping Volumes and Depletions for the MRNRD

- **Pumping Volume** (acre-feet)
- **Depletion Volume** (acre-feet)

- **80% 1998-2002 Average Pumping**
- **Annual Pumping**
- **12-year Average Groundwater Depletion**

Graph showing the annual pumping and depletion volumes from 2002 to 2016.
Groundwater Pumping Volumes and Depletions for the LRNRD

80% 1998-2002 Average Pumping
12-year Average Groundwater Depletion
Map of Potentially Irrigated Land
Water Use by Area

Distribution of Irrigated Lands

<table>
<thead>
<tr>
<th>Type of Use</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundwater Only</td>
<td></td>
</tr>
<tr>
<td>Commingled Only</td>
<td></td>
</tr>
<tr>
<td>Surface Water Only</td>
<td></td>
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</tbody>
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- **Surface Water Basin**
- **Hydrologically Connected**
- **Rapid Response**
Surface Water Field Deliveries for Federal Canals

Nebraska Total Farm Field Delivery Data - Surface Water

Graph showing the volume (af) of surface water field deliveries from 1995 to 2016. The volume ranges from 0 to 100,000 af, with peaks in delivery occurring in various years as indicated by the bar graph.
Groundwater Pumping

Total Groundwater Pumping for Republican NRDs Within the RRCA Model Area, 1995-2016

Years

Volume (af)