Balancing Water Supply and Use

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

Annual

Remaining Supply
SW CBCU
GW CBCU

Average (1995-2016)
28,606 10%
66,015 23%
196,871 67%
Map of Potentially Irrigated Land

Distribution of Irrigated Lands and Hydrologically Connected Areas in the Republican River Basin (Draft)

NEBRASKA
DEPT. OF NATURAL RESOURCES

Irrigation Type
- GW Only Irrigated
- SW Only Irrigated
- Commingled Only
- Rapid Response

Hydrologic Connectivity Area
- Area Outside 10/50*
- Hydrologically Connected (10/50*)
- Lake
- Stream

<table>
<thead>
<tr>
<th>Irrigation Type</th>
<th>Hydrologic Connectivity Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>GW Only Irrigated</td>
<td>Area Outside 10/50*</td>
</tr>
<tr>
<td>SW Only Irrigated</td>
<td>Hydrologically Connected (10/50*)</td>
</tr>
<tr>
<td>Commingled Only</td>
<td>Rapid Response (10/5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Area</th>
<th>GW Only Acres</th>
<th>Commingled Only Acres</th>
<th>SW Only Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Basin</td>
<td>1,173,885</td>
<td>48,609</td>
<td>62,770</td>
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<tr>
<td>Hydrologically Connected (10/50)</td>
<td>673,144</td>
<td>47,798</td>
<td>59,210</td>
<td></td>
</tr>
<tr>
<td>Rapid Response (10/5)</td>
<td>186,698</td>
<td>33,344</td>
<td>41,179</td>
<td></td>
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</tbody>
</table>

*10/50 and 10/5 areas are the areas where a well pumped over 50 or 5 years, respectively, results in a stream depletion of at least 10% of water pumped.
Water Use by Area

Distribution of Irrigated Lands

- **Surface Water Basin**
- **Hydrologically Connected**
- **Rapid Response**

- **Groundwater Only**
- **Commingled Only**
- **Surface Water Only**

<table>
<thead>
<tr>
<th>Type of Use</th>
<th>Acres</th>
</tr>
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<tr>
<td>Groundwater Only</td>
<td></td>
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<td>Surface Water Only</td>
<td></td>
</tr>
</tbody>
</table>
Surface Water Diversions

Nebraska Total* Surface Water Diverted Volume

Volume (af)

Years

Surface Water Field Deliveries for Federal Canals

Nebraska Total Farm Field Delivery Data- Surface Water
Nebraska Surface Water Small Pumper and Non-Federal Canal Volume Summary Data

Year: 1995-2016

- Small Pumpers
- Non-Federal Canals

Surface Water Small Pumper and Non-Federal Canal Volume (Acre-Feet)
Groundwater Pumping Volumes for the URNRD

Pumping Volume (acre-feet)

- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016

- 80% 1998-2002 Average Pumping
- Annual Pumping
Groundwater Pumping Volumes for the MRNRD

Pumping Volume (acre-feet)


80% 1998-2002 Average Pumping

Annual Pumping
Groundwater Pumping Volumes for the LRNRD

- Annual Pumping
- 80% 1998-2002 Average Pumping