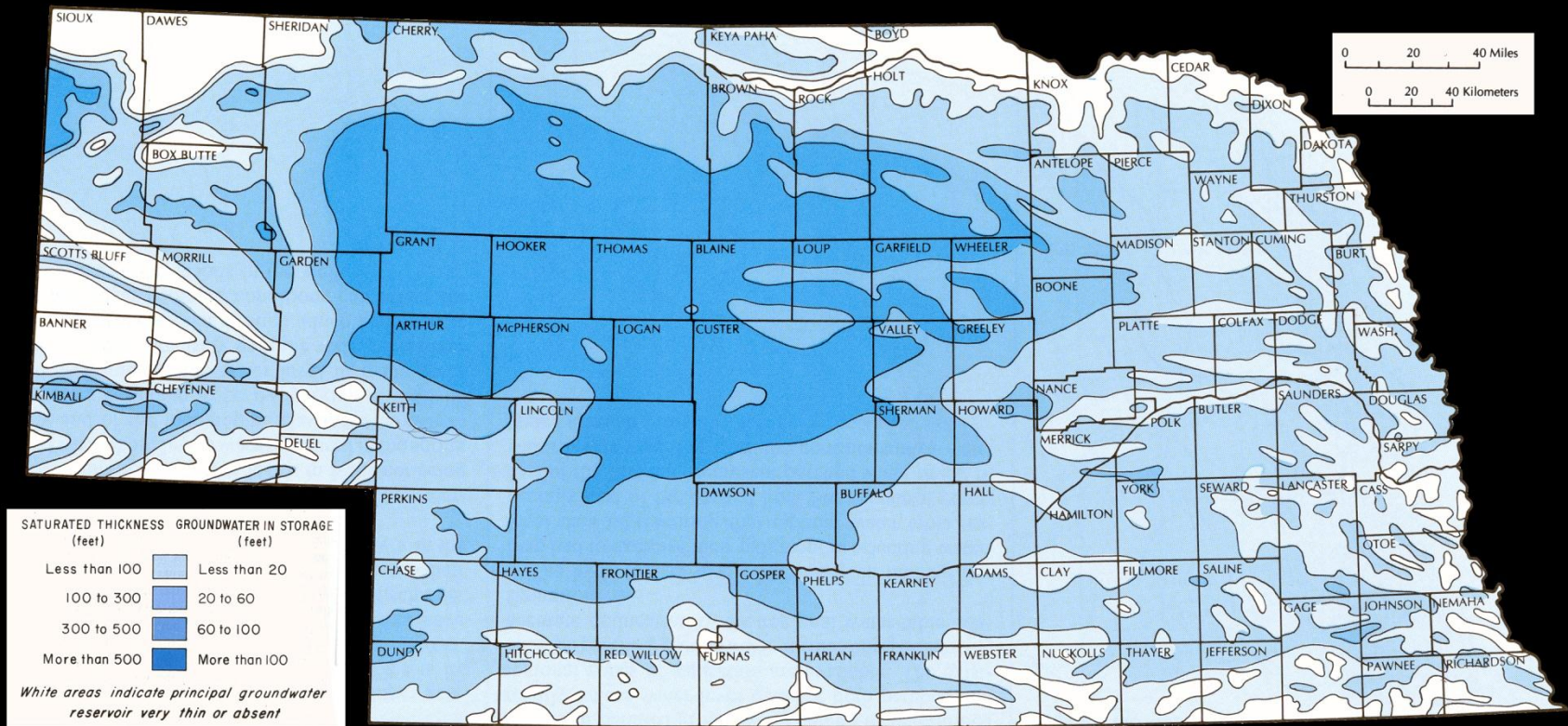


Saturated Thickness

Saturated Thickness of the Principal Groundwater Reservoir



Source: Conservation and Survey Division
University of Nebraska-Lincoln

Average Annual Discharge of Streams and Major Reservoirs



Average Annual Precipitation
86,000,000 acre-feet

Average Annual Streamflow
In = 1,000,000 acre-feet
Out = 7,100,000 acre-feet

River Discharge indicated by line width

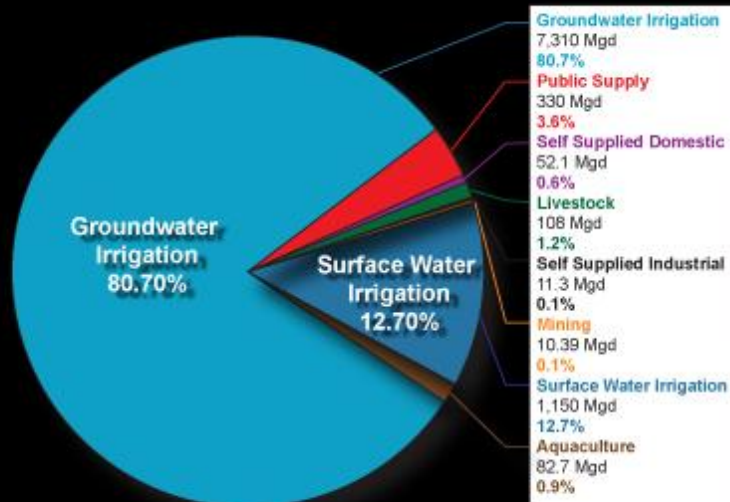
Nebraska Total Water Withdrawals-2005



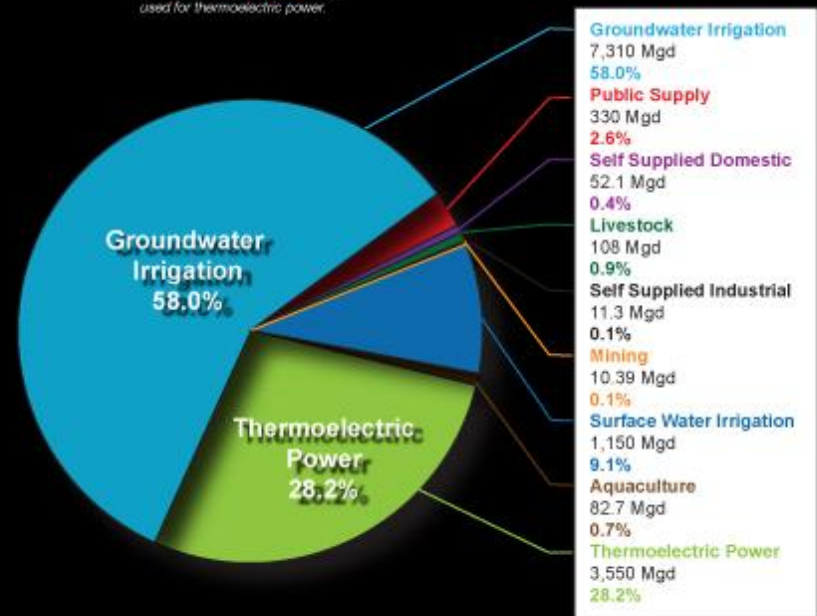
Estimated Total Water Withdrawals

by water use category for the year 2005

The pie chart above represents total water use **excluding** water used for hydroelectric power. Most water for thermoelectric power is released back into the streams and rivers if was removed from for power generation and cooling purposes



The pie chart of the left represents total water use **including** water used for thermoelectric power.



Irrigation



- **8.56 Million Irrigated Acres – Highest in U.S.**
- **4th in U.S. in Volume of Water Applied**
- **3 out of 8 Cropland Acres in Nebraska are Irrigated**
- **15% of the Nations Irrigated Acreage**
- **80% Sprinkler Application with 98% of Sprinkler via Center Pivot**

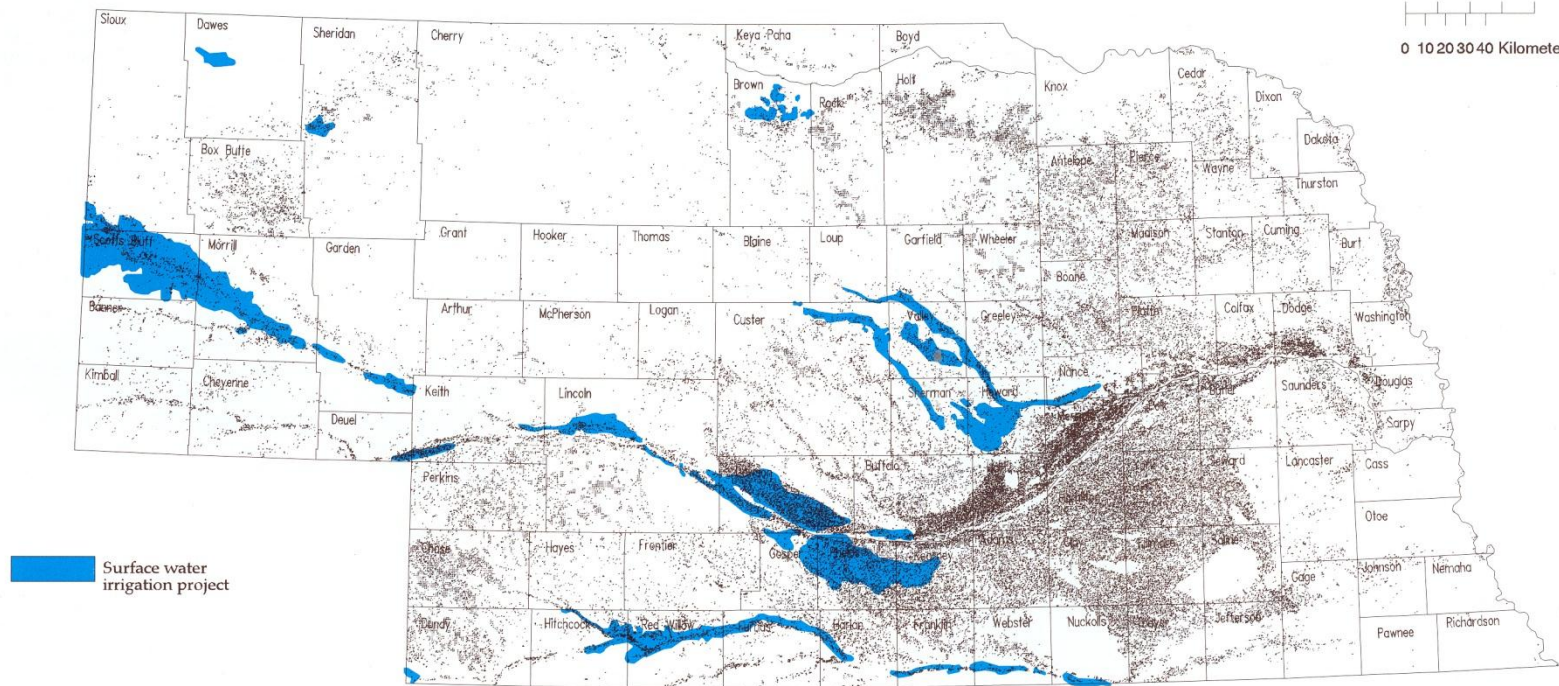
(2007 U.S. Census of Agriculture and UNL Dept. of Ag. Economics Nebraska Irrigation Fact Sheet)

Nebraska Streams and Reservoirs



Nebraska Irrigation Wells and Irrigation Projects

0 10 20 30 40 Miles
0 10 20 30 40 Kilometers



Surface-water Irrigation Projects and Registered Irrigation Wells

Source: Figure 15, The Groundwater Atlas of Nebraska, Conservation and Survey Division Institute of Ag and Natural Resources UN-L

Nebraska Water Resources Infrastructure Includes



- **96,000 Irrigation Wells**
- **1,325 Public Water Systems Supplying About 80% of Nebraska's Population**
- **4,704 Miles of Irrigation/Power Canals**
- **66 Dams of Over 1,000 acre feet of Normal Storage in Dams Inventory**
- **3.5 Million acre feet in Storage Available in Reservoirs**

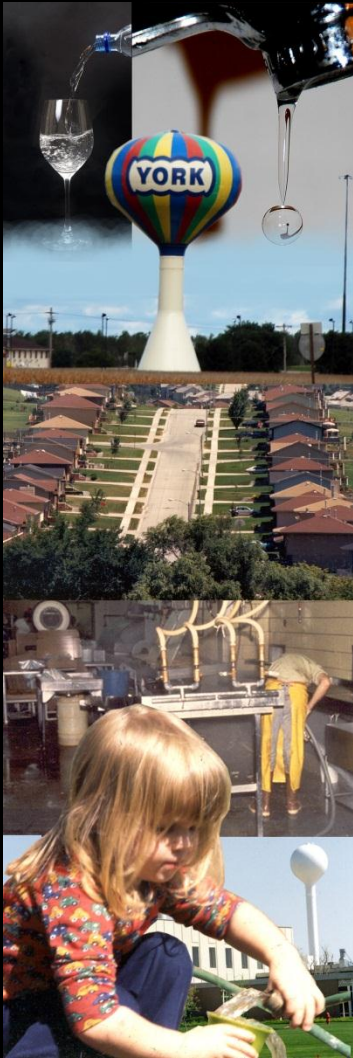
Nebraska Water Resources Infrastructure Includes

continued



- **Other Small Dams/Impoundments**
- **Levees and Channel Improvements**
- **Related Power Infrastructure**
- **Storm Water/Wastewater**
- **Private Domestic Wells**
- **Stream Gages**

Municipal Water/Public Supplies/ Rural Self Supplied



- **Municipal Supplies Primarily from Groundwater (except for portion of Omaha area)**
- **State Drinking Water Revolving Fund**
- **Rural Water Systems**
- **Rural Self-Supplied**
- **Drought Impacts – 81 public systems restricted water use in August 2012 (26 for water levels, 7 for infrastructure, and 48 for conservation)**

Nebraska Institutional Organizations Relevant to Water Infrastructure



- **Natural Resources Districts**
- **Department of Natural Resources**
- **Department of Environmental Quality**
- **Nebraska Health and Human Services System**
- **Nebraska Environmental Trust**
- **Irrigation Districts and Public Power and Irrigation Districts**
- **Cities and Counties**
- **Federal Agencies**

Natural Resources Districts Boundaries



Nebraska Integrated Management Funding Related Studies/Legislation



- **LB 962 (2004) Provided Process to Address Integrated Management of Surface Water and Groundwater**
- **LR 314 (2011) Funding for Water Management**
- **LR 229 (2011) Provided for Water Resources Cash Fund Funding and Nebraska Environmental Trust Funding**

Nebraska Water Resources Infrastructure Funding Mechanisms



- **Water Resources Cash Fund**
- **Nebraska Environmental Trust**
- **Nebraska Resources Development Fund**
- **Small Watershed Fund**
- **Local Property Tax**
- **Occupation Tax**
- **Federal Funding**
- **Joint Efforts**

Nebraska Water Infrastructure Funding Needs



**Funding
Needs**

- **Integrated Water Management Planning**
- **Platte River Recovery Implementation Program**
- **Conjunctive Management Projects as Means of Optimizing Supplies in areas with Water Use Shortages/Restrictions**

Nebraska Water Infrastructure Funding Needs

continued



**Funding
Needs**

- **Drinking Water Needs**
- **Maintenance of Existing Facilities**
- **Studies**
- **Flood Control, Recreation,
Stormwater, Environmental,
Others**

LR 314 Estimates of NRD Water Project Needs and Costs



**NRD Water
Project**

Current State Funding



Current
State
Funding

- **Water Resources Cash Fund** - \$3.3 million per year for 3 years to aid management actions taken to reduce consumptive use of water or to enhance streamflows or groundwater recharge in fully or overappropriated basins or basins bound by compact, decree, or agreement.

Current State Funding

continued



**Current
State
Funding**

- **Nebraska Environmental Trust** - \$3.3 million per year for 3 years.
- **Nebraska Resources Development Fund** - \$3.14 million (2012).
*(Since Creation in 1974 has approved 71 projects). Funding % -
State NRDF 42% (\$104 million),
Federal 32%,
Local 26%.*

Approximate Current Water Quantity Infrastructure Funding



Infrastructure

Water Resources Cash Fund

\$3.30 Million

Nebraska Environmental Trust

\$3.30 Million

Nebraska Resources Development Fund

\$3.14 Million

Small Watershed Fund

State Drinking Water Revolving Fund

Stormwater

Approximate Current Water Quantity Infrastructure Funding

continued



Related Expenditures

Nebraska Soil and Water Conservation Fund

\$2.32 Million

Interrelated Water Management Plan
Program Fund

\$.50 Million

State Water Planning, Studies and Some
Operations
(Discuss)

Natural Resources District (NRD) Funds



NRD Funds

- **NRD Personal Property Tax** - NRDs Total Personal Property Tax Request for FY 10-11 was \$55.4 million. (Actual Total Disbursements for that year were \$104.7 million. The portion of those amounts dedicated to infrastructure is undetermined).

(Note: Includes Groundwater Management Activities Levy in some Districts)

Natural Resources District Funds

continued



**NRD
Funds**

- **Occupation Tax -**
About \$10.9 million FY07-08
through March 28, 2011.
*(Purchase or lease of water or
augmentation of flows in areas with
integrated management plans
meeting specific requirements)*
- **Use of Other Funding Sources**

Integrated Water Management Projects



**Other
Funds**

- **Irrigated Land Retirement –
PBHEP, CREP, EQIP, NRD
Programs**
- **2011 Groundwater Recharge
Demo in Platte Basin**
- **Other Recharge / Leasing Efforts
Currently Underway in Platte**
- **J-2 Reregulation Reservoir in
Platte**
- **Other Projects**

Integrated Water Management Projects

continued



**Other
Funds**

- **NRD Efforts**
- **NRDF Projects Underway (Lower Turkey Creek, Buck and Duck Creek, Pigeon-Jones Creek, Upper Prairie, Western Sarpy County Levee, and Lake Wanahoo)**

Thank You

