Utilizing Reclamation’s Federal Reservoirs

Aaron Thompson, Area Manager
Nebraska Kansas Area Office
About Reclamation

• Agency with the Department of the Interior
• The Reclamation Act of June 17, 1902
  – … “construction and maintenance of irrigation works …”
Reclamation’s Five Regions

Pacific Northwest
Mid-Pacific
Lower Colorado
Upper Colorado
Great Plains

The Reclamation States and Regions
Great Plains Region

Administrative Areas
Republican River History

- 1930’s Drought
- 1935 Flood
- Peak flow at Cambridge 280,000 cfs
- Republican Valley Conservation Association
Federal Studies

• Bureau of Reclamation Studies
• Corps of Engineers Studies
• Department of Agriculture Study
Republican River Compact

Fed’s needed Compact to continue
1st try not approved by US
2nd try approved after participation by US
Approved and Signed 12-31-42
Ratified by States
Approved by Congress and made effective
May 26, 1943
Reclamation Projects administered by NKAO

Pick-Sloan Missouri River Basin Units
- Frenchman Cambridge Division
- Bostwick Division
- Glen Elder Unit
- Cedar Bluff Unit
- Webster Unit
- Kirwin Unit
- Almena Unit
- Armel Unit (Bonny Dam)
- Ainsworth Unit
- North Loup Division

Works Project Administration Program
- Mirage Flats Project
Reserved vs Transferred Works

• 11 - Reserved (multipurpose) Facilities
  – Reclamation is responsible for O&M of Dam
  – Beneficiaries (ie: Districts, M&I, State) pay percentage of O&M

4 - Transferred (single purpose)
  – O&M responsibility is transferred to Irrigation Districts
  – O&M Cost is 100% covered by the District

• Bostwick Division Districts also pay a percentage of Harlan County Lake O&M cost
Reclamation Water Rights

• Section 8 of 1902 Reclamation Act
  – Reclamation is required to conform with state law and ensure that water rights are acquired for each of its projects

• Storage Rights
  – Entitles Reclamation to store water from specific streams

• Storage Use Rights
  – Provides the right to apply storage water on project lands to supplement natural flow rights
Reclamation Water Rights

- Water must be physically and legally available
- Use will not adversely affect prior existing water rights
- In order to receive Reclamation Project water, a contract with Reclamation must be in place.
Reclamation Water Contracts

- **NE Irrigation Districts**
  - Mirage Flats
  - Ainsworth
  - Twin Loups
  - Frenchman - Cambridge
  - Frenchman Valley
  - H&RW
  - Bostwick in NE

- **KS Irrigation Districts**
  - KS Bostwick
  - Almena
  - Kirwin
  - Webster
  - Glen Elder

- **Others**
  - Municipal - Norton, Beloit, Russell, Mitchell County Co. RWD
  - State of KS
  - State of CO
Using Reclamation’s Reservoirs to Ensure Basin Sustainability

• Reservoir provide improved management and flexibility of Basin’s water supplies
  – Water Supplies for Irrigation Districts
  – Compact Compliance

• Excess Capacity
  – Space Available for temporary storage of Compact Water
# CURRENT RESERVOIR STORAGE

As of November 30, 2015

<table>
<thead>
<tr>
<th>Reservoir Name</th>
<th>Full Pool Storage Content (AF)</th>
<th>Current Storage Content (AF)</th>
<th>Percent of Full</th>
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<tbody>
<tr>
<td>SWANSON</td>
<td>110,175</td>
<td>41,260</td>
<td>37</td>
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<tr>
<td>ENDERS</td>
<td>42,910</td>
<td>9,979</td>
<td>23</td>
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<tr>
<td>HUGH BUTLER</td>
<td>36,224</td>
<td>12,541</td>
<td>35</td>
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<tr>
<td>HARRY STRUNK</td>
<td>34,647</td>
<td>34,267</td>
<td>99*</td>
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<tr>
<td>HARLAN COUNTY</td>
<td>314,111</td>
<td>156,122</td>
<td>50</td>
</tr>
</tbody>
</table>

* Currently Releasing 118 cfs to the river.
Republican River Basin Study

- Nebraska, Kansas, Colorado, and Reclamation

- Developed Hydrologic Modeling
  - Integrated GW and SW models

- Sub-basin models will work in conjunction to model the Republican River Basin

- Future Tool for evaluating alternatives