Republican River Basin Update

January 19, 2016
Outline

- Three-states discussions
- IMP modifications
- Forecast (2016)
Three-States Discussions

- October 2015 Meeting
  - Work-Plan for Long-term Agreement
  - Draft Bostwick Irrigation Districts MOA changes

- November 2015 Meeting
  - Draft Bostwick Irrigation Districts MOA changes
  - Discussion with Bostwick Irrigation Districts
  - Adoption of amended resolution
IMP Modifications

Why the IMP Modifications?

- United States Supreme Court ruling changed methods for accounting for groundwater depletions
- Recent agreements with Kansas provide augmentation crediting and more flexible delivery
IMP Modifications
What Was Modified?

- Inclusion of definitions of key terms
- Improved clarification of Compliance Standards
- GW controls for regulatory backstop
- SW controls for Compact water administration
- Monitoring section for additional updates and management action steps
- Modification process improvements
IMP Modifications
Compliance Standards and Controls

- The Compliance Standards are **unchanged**
- Greater definition of the Compliance Standard purpose is incorporated
- GW Controls include new regulatory backstop (**Option 2**)
- SW Controls include new control aimed at greater flexibility in water administration (**Reduce** the need for Compact water administration)
IMP Modifications

New Forecast Approach

- December 31\textsuperscript{st} Compact Call Forecast Volume (method largely unchanged)
- June 1\textsuperscript{st} KBID water supply target (40,000 ac-ft)
- October 1\textsuperscript{st} Compact Compliance Volume
- December 31\textsuperscript{st} Actual Compact Compliance Volume
- Carry-forward of “credits/debits” for each NRD
# 2016 Dry-Year Forecast

<table>
<thead>
<tr>
<th>Year</th>
<th>Item</th>
<th>Information Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forecast Year T + 1 (Coming Irrigation Season)</td>
<td>Groundwater Consumptive Use and Imported Water Supply Credit</td>
<td>Average values for T = 0 and T - 1</td>
</tr>
</tbody>
</table>
| | Surface Water Consumptive Use | Colorado: Average of T – 1 and T – 2 use  
Kansas: + (.1858 x HCL content) + 9,575  
Nebraska: - (4x10^{-7}) x (NE lake volume)^2  
+ (0.52) x (NE lake volume) - 42,000 |
| | Streamflow | (5-year average of state line flows) x 0.41  
+ 0.23 x HCL content - 27,450 |

**Estimated 2016 Basin-Wide Balance of approximately -35,300AF**
Guide Rock Annual Balances

<table>
<thead>
<tr>
<th>Year</th>
<th>Guide Rock</th>
</tr>
</thead>
<tbody>
<tr>
<td>T = 0</td>
<td>-11,100</td>
</tr>
<tr>
<td>(2015)</td>
<td>(preliminary)</td>
</tr>
<tr>
<td>T = + 1</td>
<td>-35,300</td>
</tr>
<tr>
<td>(2016)</td>
<td>(forecast)</td>
</tr>
<tr>
<td>Forecast Balance</td>
<td>-46,400</td>
</tr>
</tbody>
</table>
# NRD Annual Balances (2015-2016)

<table>
<thead>
<tr>
<th>Year</th>
<th>LRNRD</th>
<th>MRNRD</th>
<th>URNRD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015 (Preliminary)</td>
<td>-8,700</td>
<td>-3,300</td>
<td>900</td>
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<tr>
<td>2016 (Forecast)</td>
<td>-8,200</td>
<td>-8,500</td>
<td>-18,600</td>
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<tr>
<td>2-Year Balance</td>
<td>-16,900</td>
<td>-11,800</td>
<td>-17,700</td>
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<tr>
<td>Management Actions</td>
<td>10,900</td>
<td>7,600</td>
<td>11,500</td>
</tr>
<tr>
<td>Prior to June 1st</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Thank you

Questions?