Integrated Water Management and Basin-wide Planning

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Tim Freed Sr., MS, Integrated Management Coordinator
Jesse Bradley, PG, Natural Resources Program Director
Overview

- Background
- Integrated Management Plans (IMPs)
- Basin-wide Plans (BWPs)
- Data and Charts (INSIGHT Web Tool)
Background
Background

- Prior to 2004, integrated management processes underway for some NRDs
- Difficult issues for groundwater and surface water required complex management then and in the future
- 2002 - LB1003 was passed creating the Water Policy Task Force
Background

- Water Policy Task Force - Balancing water uses and supplies - sought to ensure
  - economic viability
  - social and environmental health
  - safety and welfare of the state
- LB962 (2004) - Legally acknowledged hydrologically connected ground and surface waters
- IMPs (FA/OA) and Basin-wide Plans (OA)
Integrated Management Plans

• For the required IMPs
  • Allowed a process for both the NRD and NDNR to work together in developing IMPs
  • Objective being the balance of supply and uses in the fully or over-appropriated areas
Integrated Management Plans

- LB 764 (2010)-inclusion of voluntary IMP process
- Voluntary IMP overarching objective
  - Achieve and sustain a balance between water uses and water supplies for the long term
- Protect existing water uses
- Proactive approach to water management
  - If FA designation occurs in future, the Department and NRD may amend the IMP
Basin-wide Plan Planning

- LB962 also required a BWP if two or more NRDs are within an overappropriated area within the same basin
- This does not apply to the Niobrara Basin - Voluntary BWP
- Same Goal
  - achieve and sustain long-term balance between water uses and supplies.

The Niobrara River Basin and sub-basins
What is a Basin-wide Plan?

- Pro-active approach to address opportunities & issues
- Combines surface and groundwater management
- Jointly developed between local NRDs and DNR
- Basin-wide, systematic approach
- Flexible—Adaptive Management
Advantages to Basin Wide Planning

- Framework for consistent Basin goals & objectives
- Addresses connectivity between NRDs
- Projects—do not have to stop at NRD boundaries
- Monitoring—Agreed upon tools and Dissemination of data
- Would not require NRD to have IMP to participate
## Differences: IMP and Basin-Wide Plans

<table>
<thead>
<tr>
<th>IMP</th>
<th>Basin-Wide</th>
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<tr>
<td>• 1 NRD &amp; DNR</td>
<td>• Basin NRDs &amp; DNR</td>
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<tr>
<td>• Specific goals/objectives tailored to each NRD</td>
<td>• General framework</td>
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<td>• Specific controls—may differ between NRDs</td>
<td>• Consistent goals/objectives</td>
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<td>• Ability to establish more certainty for future water management</td>
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Individual IMPs & Basin-Wide Plans

- Consistent goals & Objectives
- Communication
- Actions affect other NRDs
- Facilitate water transfers/water banking
- Consistent reporting
- Data information exchange
The INSIGHT Web Tool
Basin Charts and Data
Water Uses

Chart: Average Total Demand by Category

- **Hydropower**: 252,176 Acre Feet (60%)
- **Annual**: Total: 1,514,440 Acre Feet
- **June - August**: Total: 419,074 Acre Feet
- **September - May**: Total: 1,095,366 Acre Feet

Nature and Extent of Use

The "Nature and Extent of Use" tab provides the user with information on the general distribution of water demands for a given basin. This tab provides information on the source that supplies water demands (i.e., aquifer/groundwater pumping or stream/surface water diversion) and the sector that uses the water (i.e., municipal, industrial, irrigation). This tab also includes information on the distribution of irrigated acreage including breakdowns of acres irrigated by surface water, groundwater, and combined.

The charts found in this tab include:
1. long-term average total demand by category for the basin
2. irrigated acres for the basin by source (i.e., surface water, groundwater, and combined) over the year.
Water Balance - Near Term
## Downloaded Data

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Basin-Wide Planning

• General framework
• Consistent goals/objectives
• Balance of water supplies and uses
• Ability to establish more certainty for future water management
Tim Freed Sr., M.S.
Integrated Water Management Coordinator
Nebraska Department of Natural Resources