Preparing for Utah’s Water Future

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Ron Thompson & Richard Bay
Prepare60 is the center established by Utah’s four largest water conservancy districts to protect what we have, use it wisely, and provide for the future.
Prepare60 Focus

Repair and replace aging infrastructure

Reduce water use; integrate new technology

Develop infrastructure to meet demand
Water System Basics

Where Does Utah’s Precipitation Go?

- Natural Environment/Groundwater Recharge: 88.7%
- Agricultural Depletions: 4.5%
- Municipal & Industrial (M&I) Depletions: 2.2%
- Wetlands/Reservoir Depletions: 3.8%
- Net Outflow (includes flow to GSL): 1.1%
- Potential Developable Supply: 0.8%

*Average annual precipitation is about 61 million acre-feet

Source: Utah Division of Water Resources
From Mountain Top to Kitchen Tap

It takes about 4 hours to treat your water to safe drinking standards.

There are 756 dams in Utah that are regulated by a state or federal agency.

Water travels an average of 100 miles to your Utah home.

There are 10,000 miles of large transmission pipelines in Utah.

The average age of a failing water main is 47 years old. Most of Utah’s water infrastructure is more than 50 years old.
Roles in Water Systems

- **Federal:** Primarily played a financing role in the past, but funding is dwindling.
- **State:** Primarily played a planning and regulatory role, must now fill financing gap.
- **Local:** Primary interface of water system for end users.
Water Use Data

- Need for accurate water use reports
- Reporting integrity and consistency
House Bill 303

Public Water Supplier (PWS) water use data reporting and minimum sizing requirements

• Types and number of PWS affected
• Required water use data
• Submitting and reporting the data
• Failure to report consequences
• How Division of Drinking Water (DDW) will process the data to set minimum sizing requirements
## Required Water Data

- Indoor and outdoor

- “Three most recent years of actual water use data” or based on alternatives specified in the statute

<table>
<thead>
<tr>
<th>Peak day source demand</th>
<th>Average annual demand</th>
<th>Number of retail ERCs</th>
<th>Quantity of non-revenue water</th>
<th>Other water use data type</th>
</tr>
</thead>
</table>
Funding 101

Essential Water Funding Tools

• Water Rates (or User Charges)

• Impact Fees

• Property Taxes
Funding 101

Water Rates:

• Fund ongoing operation, maintenance & replacement costs of the treatment & delivery of water to our taps

• Tied to current use (varies seasonally)

• By law, can only amount to costs to capture, treat, deliver, and conserve water
Impact Fees:

• One-time payments to fund new facilities & water sources for growth

• Typically paid when building permit issued

• Allow future water users to share costs of new infrastructure
Funding 101

Property Taxes:

• Determined by state law

• Allow future water users to pay capital costs of future infrastructure

• Provide stable revenue source to support financing for new water supply

Utah is one of 8 western states to use property tax for water infrastructure
Funding 101

**Public Good** benefits paid for by property taxes:

- Recreation
- Endangered Species
- Flood Protection
- Groundwater Protection
- Land Value
Financing

1903-2015 Financing Model
- Federal
- Cities & Metropolitan Water Districts
- Small Projects Revolving Loan Fund
- Water Conservancy Districts

2016-2060 Proposed Financing Model
- State Owned & Replacement Revolving Loan Fund
- Cities & Metropolitan Water Districts
- Small Projects Revolving Loan Fund
- Water Conservancy Districts

How much will be paid by the end water user?
ALL OF IT!
Long-Term Planning

Statewide Water Infrastructure Plan (SWIP) Identifies M&I water supply needs of cities, counties, districts, and state for the next 50 years

Total statewide need by 2060 $33 billion

- $18 billion Repair & Replacement
- $15 billion New Supply & Infrastructure
Long-Term Planning

Conservation is #1 priority

**Voluntary Conservation**
- This level uses water conservation education and outreach to change behavior. Efforts include:
  - Media campaigns and water use feedback
  - Tiered water use pricing
  - Metering of all water connections
  - Water-wise action rebates

**Managed Conservation**
- This level requires a new layer of government oversight to ensure further water use reductions. May include:
  - Aggressive water use pricing
  - Outdoor watering restrictions
  - Required indoor and outdoor water-efficiency improvements
  - Lawn removal programs

**Mandatory Conservation**
- This level is mostly mandated by government to ensure high-impact water conservation. Regulations could include:
  - Compulsory landscape requirements for all customer classes
  - Indoor use restrictions
  - Non-compliance fines for water waste
  - Water enforcement patrols penalizing violations
Long-Term Planning

Asset Management Plans
• Infrastructure Inventory
• Condition Assessment
• Project Replacement Plan
• Replacement Cost Estimates
• Financial Plan
# Asset Management Plans

## 2015 Report Card for Utah’s Infrastructure

<table>
<thead>
<tr>
<th>Category</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROADS</td>
<td>B+</td>
</tr>
<tr>
<td>BRIDGES</td>
<td>B+</td>
</tr>
<tr>
<td>TRANSIT</td>
<td>B+</td>
</tr>
<tr>
<td>DRINKING WATER &amp; SUPPLY</td>
<td>C</td>
</tr>
<tr>
<td>WASTEWATER &amp; STORMWATER</td>
<td>C+</td>
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<tr>
<td>DAMS</td>
<td>B-</td>
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<tr>
<td>CANALS</td>
<td>D+</td>
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<tr>
<td>LEVEES</td>
<td>D-</td>
</tr>
<tr>
<td>SOLID WASTE</td>
<td>B-</td>
</tr>
<tr>
<td>HAZARDOUS WASTE</td>
<td>C+</td>
</tr>
</tbody>
</table>
Asset Management Plans

Capital Asset Assessment, Maintenance, and Replacement Policy (enacted 2013)

Requires large water conservancy districts to:

• Adopt a capital asset assessment, maintenance, and replacement policy

• Submit a report of capital asset facilities to Division of Water Resources in 2017 and every five years thereafter

• Establish a multi-year plan with ongoing funding source to pay for assessing, maintaining, repairing, and replacing qualified capital assets.
Asset Management Plans

Infrastructure Inventory
Document asset details such as size, material, age, design, capacity, etc.
Asset Management Plans

Condition Assessment
Perform inspections to identify the current condition of the asset

Replacement Plan
Forecast the remaining service life and planned schedule for replacement
Asset Management Plans

Replacement Cost Estimates
Estimate replacement costs; index to year of planned replacement

Financial Plan
Establish a reserve fund and a sustainable source of funding
Questions?
We’re here for you!

www.prepare60.org

More water resource contacts on page 27 of Municipal Manual