# CACHE COUNTY
## WATER MASTER PLAN

**Cache County's water future depends on citizens taking action now.**

## What Can We do?

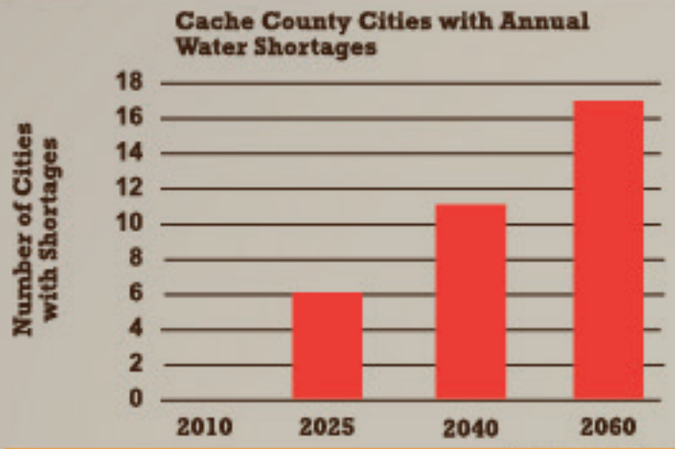
- Conserve existing water resources
- Protect Bear River water allocation and other water resources
- Improve regional water management
- Preserve the environment that Cache County residents enjoy
- Maintain and improve water infrastructure

Cache County Historical Timeline

**1860** Early Claims

**1904-1927** Power Development

# Water development in Cache County is vital to meet needs.

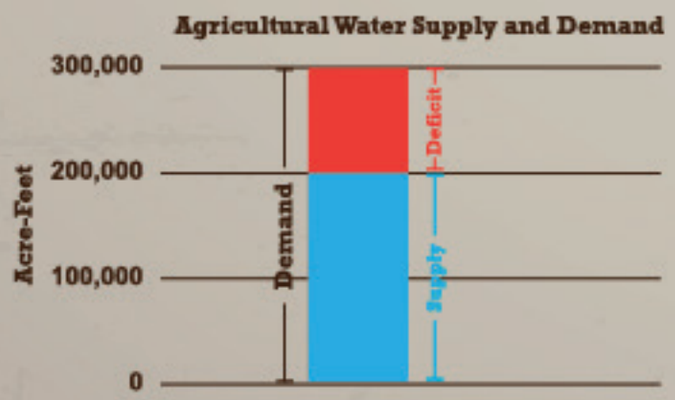



## Municipal (Drinking Water)

More drinking water supply is needed to support future growth and to preserve agricultural lands.

## Environmental

Water plays a major role in shaping the environment. Environmental water demands need to be evaluated and quantified.

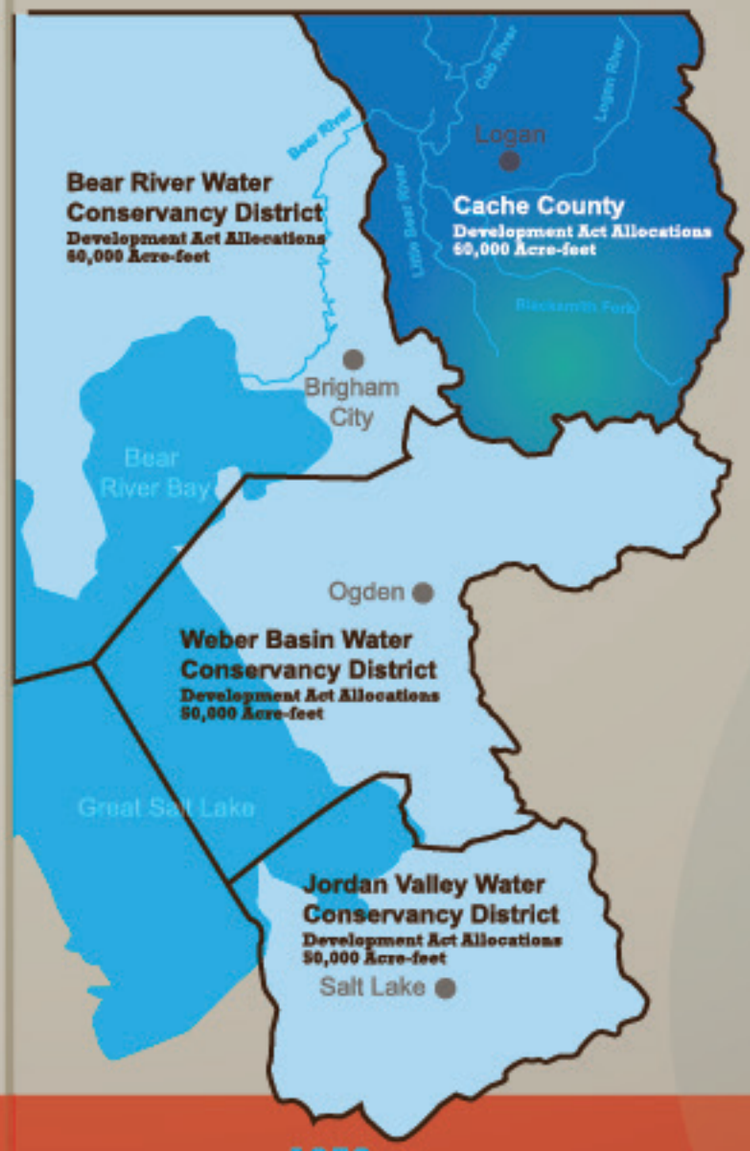



## Agricultural

Many farmers need additional water storage now in order to meet their late summer needs.

# Bear River Water Development

The Bear River water resource, which includes the many rivers that drain to the Bear River, is one of the last major undeveloped rivers in the state. **The Bear River Development Act,** created in 1991, identifies that a total of 220,000 acre feet of Bear River water will be developed in Utah through the **creation of additional water storage.** Conceptual planning is being completed now for Bear River development along the Wasatch Front.

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**1912 - 1919** Irrigation Contracts

**1920** Dietrich Decree

**1922** Kimball Decree

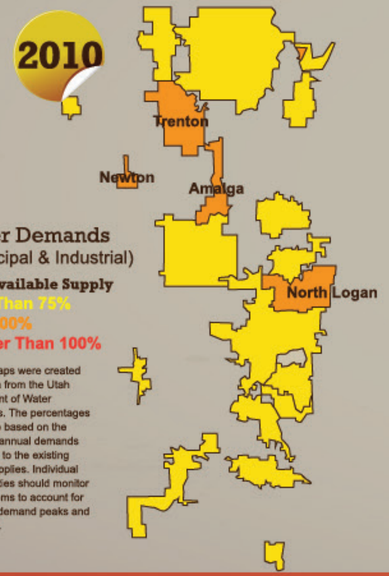
**1958** Bear River Compact

**1966 - Present** Potential Reservoir Site Studies

CACHE COUNTY WATER MASTER PLAN

# Without Additional Conservation Or Development Of New Water Sources

Four municipal systems are currently approaching annual water shortages.

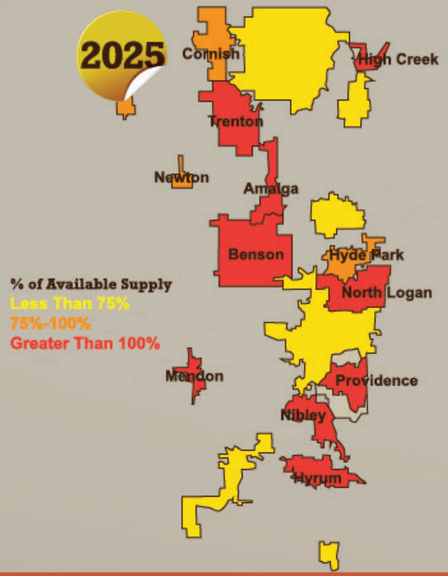



Water Demands
(Municipal & Industrial)

**% of Available Supply**
Less Than 75%
75%-100%
Greater Than 100%

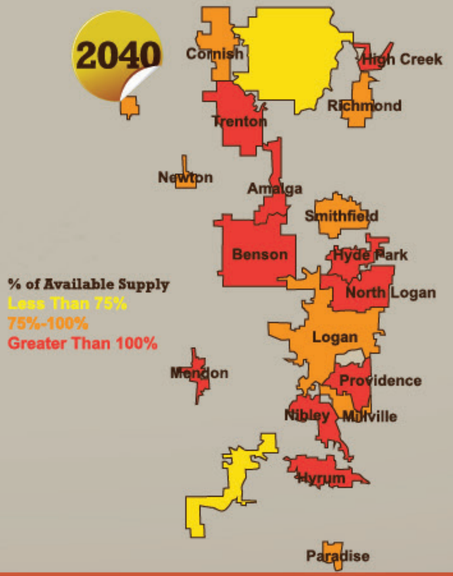
*These maps were created using data from the Utah Department of Water Resources. The percentages shown are based on the projected annual demands compared to the existing annual supplies. Individual water entities should monitor their systems to account for seasonal demand peaks and shortages.

Six municipal systems in the county will have annual water shortages by 2025.




**% of Available Supply**
Less Than 75%
75%-100%
Greater Than 100%

Half of the municipal systems will have shortages by 2040.




**% of Available Supply**
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**% of Available Supply**
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**1980** Bear River Compact Amended

**1989** Subsequent Storage Contract

**1990** Modeling of the Bear River

**1991** Bear River Water Development Act

**1995** Bear Lake Water Settlement Agreement

**1999** Cache County Ground Water Management Plan

**2012** Supply and Demand Data from DWRe

**2013** Master Plan Report to County Council

CACHE COUNTY
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# Water Master Plan And Management System That Empowers

## Public Process


**March 8:** Bear River Small Pumpers Meeting

**March 28:** Presentation at Utah Mini Water Users Conference

**April 30:** Started Stakeholder Interviews
Over 40 interviews conducted, including representatives of drinking water systems, Division of Water Rights, Pacificorp, conservancy districts, river commissioners, Bear River Bird Refuge, The Nature Conservancy, and county and state representatives.

**May 29:** Report to Joint Council (Logan City, Cache County)

**June 4:** Irrigation Stakeholder Workshop

**July 10:** Report to County Council

**July 18:** Steering Committee Meeting #1
39 participants

**October 25:** Steering Committee Meeting #2
45 participants

**November 7&12:** USU Staff Input Meetings

**December 11:** Report to County Council


**January 16:** Steering Committee Meeting #3
40 participants

**February 12:** Report to County Council

**April 4:** Presentation at Utah Mini Water Users Conference

**March 6:** Bear River Small Pumpers Meeting

**April 24:** Steering Committee Meeting #4
Review Draft Master plan

**May 11:** Meeting with Mayors of Cache County

**May 28:** Present findings to Cache County Council

**August:** Final Report
Stakeholder input given through the process outlined above was used to help create objective criteria to evaluate a number of future projects, and then to evaluate what management system should be in place to implement the selected projects.

## Projects Evaluation

### Water Conservation Public Education
Campaign to reduce water use in the county by 25% by year 2060. Efforts may include holding large water user workshops to promote conservation.
- Saves 8,400 acre feet of water per year by 2025 and 21,000 acre feet by 2060
- Conserves energy

### District Organization
Meet with county and city leaders and local state representatives to present findings of the master plan and present options to form a district. May also include open houses, and town hall meetings find out concerns.
- Educates and builds consensus
- Identifies desired framework for regional water management

### Aquifer Storage and Recovery
ASR stores excess spring runoff water in the ground to be removed for use during dry periods.
- Protects allocated Bear River development water (5,000 to 20,000 acre feet)
- Supplements ground water
- Provides additional water supply for many communities and irrigators
- Increased flows in streams during periods of low summer flow

### Environmental Water Demands Prioritization
Prioritize environmental water demands.
- Helps to preserve and prioritize critical areas
- Helps maintain or improve wildlife habitat

### Reservoir Development
Build above ground reservoirs to store excess spring runoff water. Reservoirs are used to meet late season irrigation needs for areas that are currently irrigated, environmental needs and future drinking water needs.
- Uses and protects allocated Bear River development water (Up to 60,000 acre feet)
- Provides additional water supply for many communities and irrigators
- Increased late summer flows for habitat in rivers downstream of the reservoirs

### Bank Water Rights
A water bank is an institution or part of an institution with a goal to move water to where it is needed most within a given region. For example, in Cache County agricultural land is being developed. Once a piece of agricultural property is developed, less water is needed to meet the demands of that land. The unused water runs down the rivers and out of the County. The rights to that water could be banked for another water user in the County to buy or lease.
- Protects Bear River allocation rights
- Keeps existing water rights for use in Cache County
- Maintains future supply of water rights for Cache County residents
- Makes the water market more transparent and open to citizens use

### Secondary Water
Install pressure irrigation pipes from existing canals to homes that are using drinking water for the watering of yards. Promote secondary water systems for areas that are developed in the future.
- Allows for existing drinking water systems to serve future growth

### Canal Rehabilitation
Line, pipe, or restore prioritized segments of existing canals each year.
- Benefits many water entities
- Creates more efficient delivery of water to irrigators

## Evaluation of Management Systems

Achieves Objective
- ○ Effective
- ◑ More Effective
- ● Very Effective

| | Continue with Current System (Water Manager) | Water Manager with more Resources (Additional funds and staff for projects) | Special Service District | Water Conservancy District |
|---|---|---|---|---|
| **Water Supply** Protect Bear River allocation | ○ | ◑ | ◑ | ● |
| **Governance** Represent all County water users | ○ | ○ | ◑ | ● |
| **Implementation** Promote collaboration | ○ | ◑ | ● | ● |
| **Environment** Maintain or improve environmental quality | ○ | ◑ | ● | ● |

**A Water Conservancy District:**

Promotes water conservation

Provides representation for both irrigators and drinking water users

Provides a stronger voice for Cache County on water legislation issues

Provides a funding source to plan for and help complete regional water projects

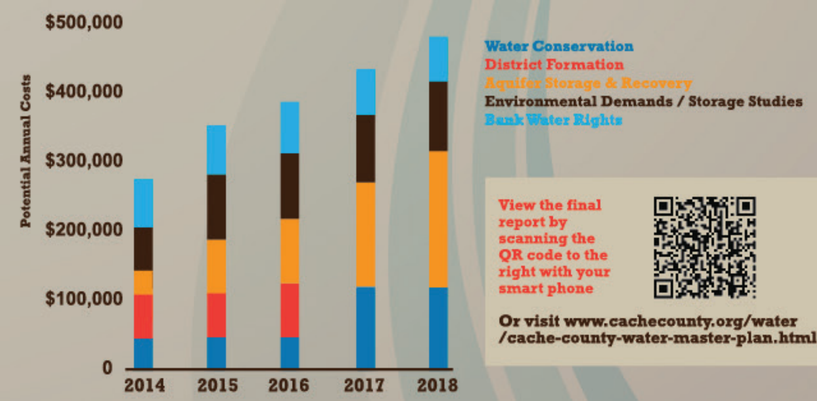
Allows individual communities and irrigation companies to manage their own water systems

Provides a local governing water board that is 100% focused on water issues

The **BOTTOM LINE**

## We Must Act Now

Over the Next 5 Years We Must:
- Conserve water
- Form a district
- Develop and protect our Bear River Allocation through:
  - Aquifer Storage and Recovery projects
  - Evaluation of the environmental water demands
  - Evaluation of future storage sites
- Bank water rights




View the final report by scanning the QR code to the right with your smart phone

Or visit www.cachecounty.org/water/cache-county-water-master-plan.html

**2014 - 2016** Public Education Campaign to Conserve Water and Form a District

**2014 - 2040** Aquifer Storage and Recovery Studies and Development

**2014 - 2016** Environmental Water Demands Study

**2014 Forward** Bank Water Rights

**2014 - 2060** Reservoir Studies and Development

**2017 Forward** Implement a Water Management Structure

**2020 - 2060** Canal Rehabilitation Program

**2020 - 2060** Construct Secondary Water Systems


"It has been a great learning experience for me; and, if the plan is widely distributed, can help others to better understand the history and complexity of this critical resource."

**- Joan Degiorgio**
**The Nature Conservancy, Northern Mountains Regional Director**

"The master plan process was good because it allowed every community to have a voice on water issues and needs facing us in the future."

**- Marla Trowbridge**
**Trenton Town Council**

"In addition to conserving energy, Utah must also conserve our precious water."

**- Governor Gary Herbert**
**2013 State of the State speech**

"This plan brought together representatives from all water users to discuss the importance of water conservation, water wise landscaping, efficient water use, and to bring to the forefront the fact that water is not an inexhaustible commodity. Proper planning and educating all users is one of the most important keys."

**- Jim Gass**
**Smithfield City Manager**

"I was impressed with the process associated with the County Water Master Plan. This process brought municipalities together with the individuals operating and maintaining the waterways throughout the Logan and Cache County area. Water in the valley is a valuable resource and in working together we are able to find ways to better utilize and protect this natural resource."

**- Colleen Gnehm**
**Logan River Water Commissioner**


THE LANGDON GROUP