



Logan River Observatory



image via Snowbird Resort



image via Western River Expeditions





Gov. Herbert declares drought emergency for all of Utah

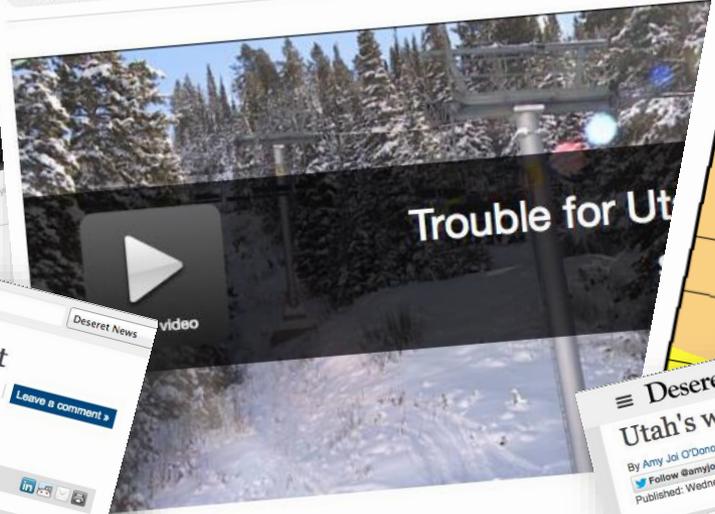


FOX 13 SALT LAKE CITY NEWS ON-AIR GOOD DAY UTAH TRAFFIC CONTESTS CONTACT

Scientists predict global warming will end Utah's ski industry

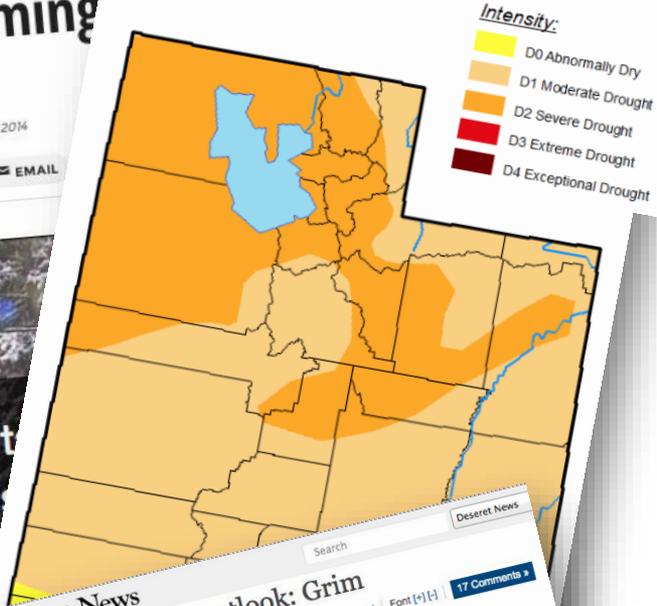
POSTED 10:46 PM, NOVEMBER 4, 2014, BY ASHTON GOODPELL. UPDATED AT 10:48 PM, NOVEMBER 4, 2014

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Trouble for Utah

U.S. Drought Monitor Utah



Deseret News

Utah water year off to a lackluster start

By Amy Jai O'Donoghue, Deseret News
Published: Wednesday, Nov. 5 2014 12:55 p.m. MST
Updated: 6 hours ago

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Snow falls in the mountains Sunday, Nov. 2, 2014, in Big Cottonwood Canyon.
Scott G Winterston, Deseret News



UTAH — The greatest snow on earth could be in danger, an environmental advocate and writer who spoke to students a Tuesday about the effects climate change will have on snow.

By the end of the century, some scientists predict Utah will not be a ski destination, because global warming will prevent snow from falling.

Deseret News

Utah's water supply outlook: Grim

By Amy Jai O'Donoghue, Deseret News
Published: Wednesday, March 6 2013 4:45 p.m. MST

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Ron Johnson fly fishes on the Middle Provo River Tuesday, March 5, 2013.
Jeffrey D. Allred, Deseret News



SALT LAKE CITY — February snowfall failed to show up in the mountains of northern Utah and the snowpack accumulated so far this season actually diminished in most basins throughout the state.

"Snow accumulation just didn't happen," said Randy Julander, Utah Snow Survey supervisor with the U.S. Natural Resources Conservation Service. "In fact, we're going the wrong direction."

Although storm systems dumped a lot of snow in the valleys this past winter, the mountain snowpack across the state is just 80 percent of average, according to the agency's latest numbers. And with the passage of each winter, Julander said it is just going to get worse.

Utah is getting warmer and drier spring. ... 60 percent.

SALT LAKE CITY — Utah's unusually wet summer did not maintain any staying power into fall, with the state picking up just 20 percent of the average precipitation during the first full month of the new water year.

October turned out to be among the driest and warmest recorded at Salt Lake City International Airport, and some areas — such as Tooele County — received just 3 percent of average precipitation.

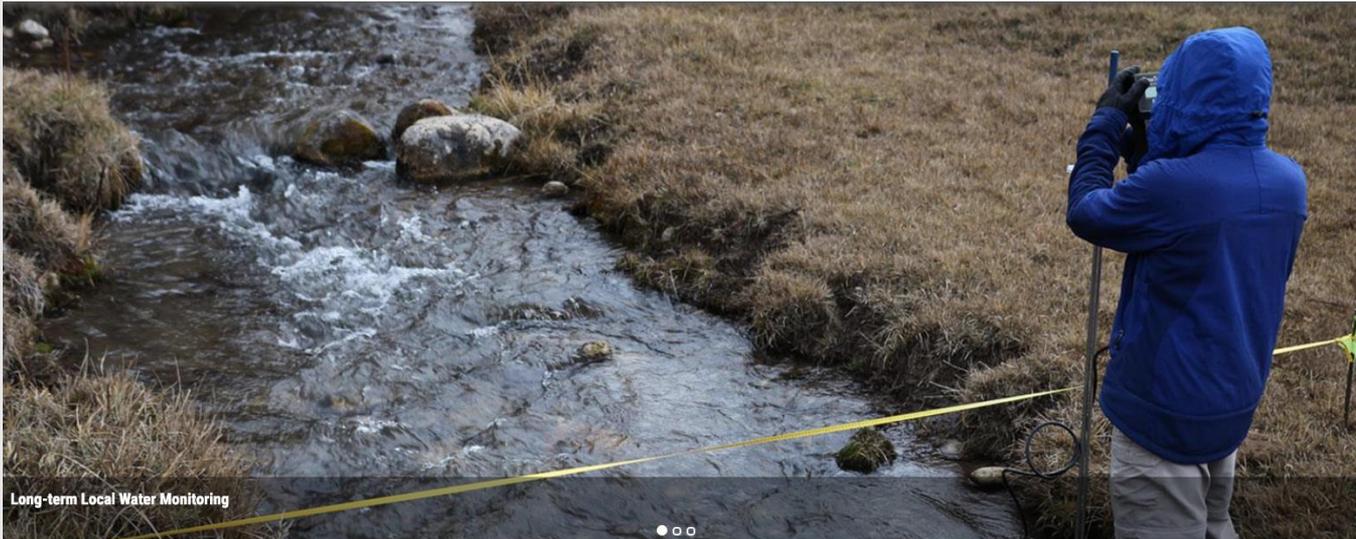
The good news, according to the latest Utah Water and Climate report released Wednesday, is that hydrologically speaking, the state is not in that bad of condition — at least not yet.

Stream flows are near or above normal, and soil moisture is well above average.



Logan River Observatory

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Long-term Hydrologic Monitoring

Collecting and sharing data to inform policy and management decisions to address water related problems



Sites & Infrastructure



Free Public Data



Research



Educational Resources

In Partnership With

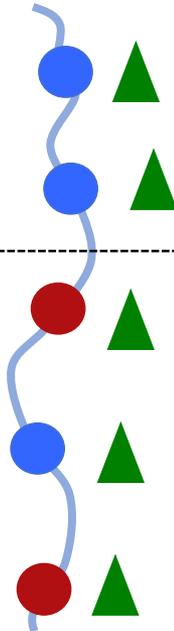




Mountain to Valley Transition



-  Fundamental Aquatic Sites
-  Enhanced Aquatic Sites
-  Climate/Terrestrial Sites



Logan River Observatory

Monitoring Locations

Legend

State Boundary

Monitoring Sites

Weather

Canal

Diversion

Spring

Storm sewer

Stream

Watershed Boundary

Water Bodies

Major Roads

Major Roads

Stream Feature Type

Connector

Canal or Ditch

Pipeline

Stream or River

Artificial Path

0 1.25 2.5 5 Miles

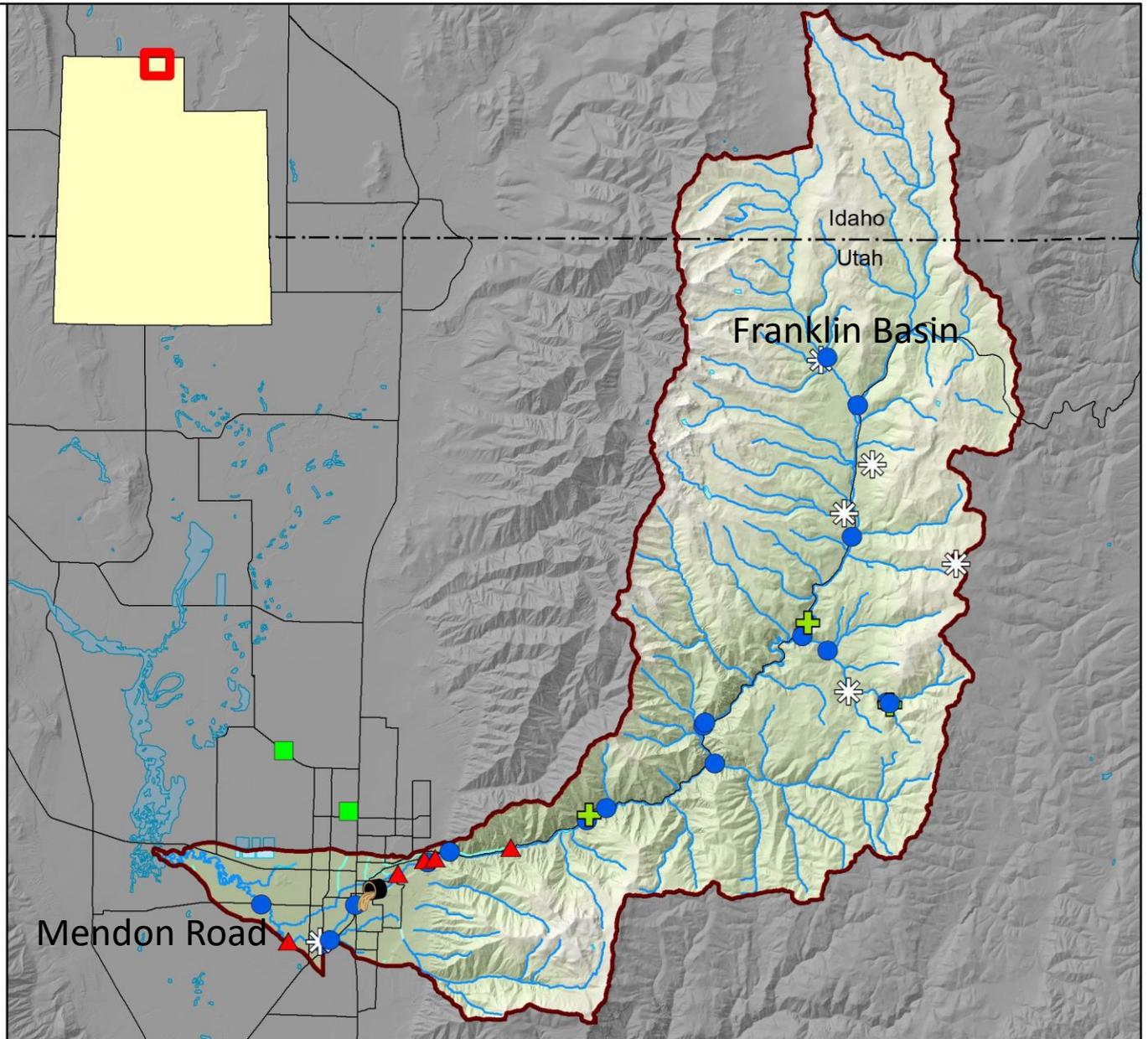




image via Stokes Nature Center

Information

- Water resource decisions and policies
- Tourism and recreation

Education

- K-12 STEM
- University lab and classroom
- Community involvement

Understanding

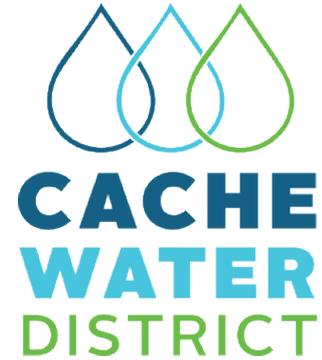
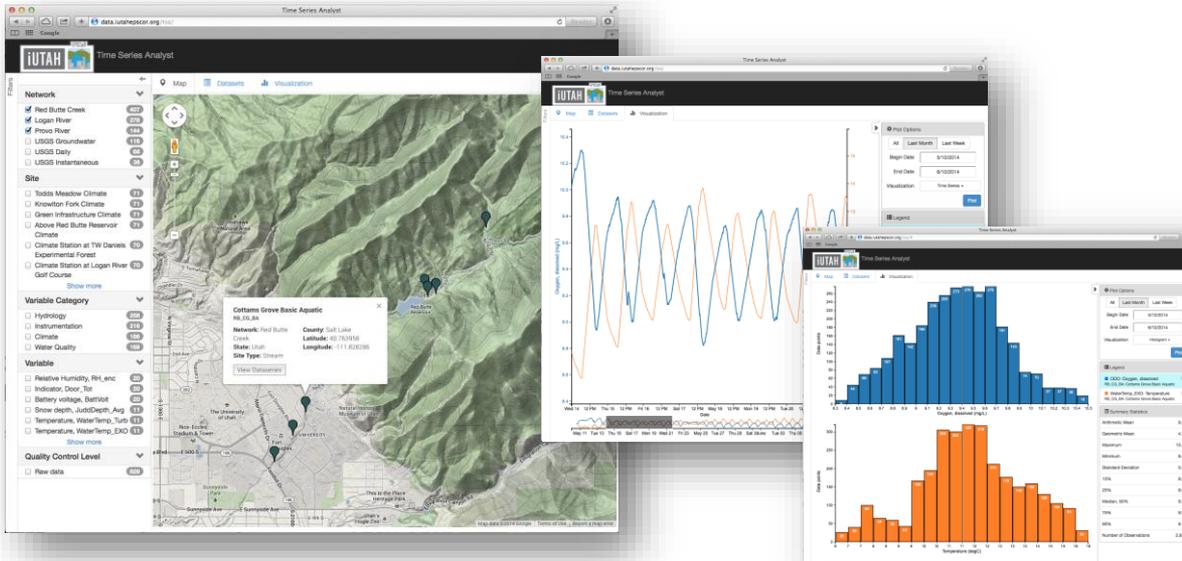
- Stormwater
- Drinking water
- Water supply
- Urbanization

Important Locally 



Transferable Statewide 

Information: Water Resource Decisions and Policies



“One of the weaknesses that we as a city face is having good quality data to evaluate water quality impacts. The advantage of collaborating with (the Logan River Observatory) is that they provide us with a data management source for collecting data, including quality control. Then they store and warehouse it, so that it is not just available to Logan City, but also to all of the irrigation and canal companies, state agencies, the EPA, and researchers who are concerned about water quality.”

*Lance Houser
Former Assistant Engineer
City of Logan*



UTAH DEPARTMENT of
ENVIRONMENTAL QUALITY
**WATER
QUALITY**



WATER RESOURCES

Information: Tourism and Recreation

TUTAH Modeling and Data Federation
Innovative Urban Transforms and Adaptable Hydro-sustainability

Home Development Data About

Logan River at the Utah Water Research Laboratory west bridge

Site Code: UR_WaterLab_AA	Local Projection: None
Latitude: 41.739034	State: Utah
Longitude: -111.795742	County: Cache
Lat/Long Datum: WGS84	Comments: None
Elevation: 1414.0	Watershed: Logan
Local X: None	Site Type: Stream
Local Y: None	

Multiple instruments are used to collect data.

Most Recent Instantaneous Measurements
Data update time: 2014-06-25 11:45:00, past 24 hours shown.

Temperature Water_Tot_Avg: 10.620 degC	Specific Conductance Non-Red: 318.300 uS/cm	pH: 8.460 pH
Oxygen_dissolved: 9.830 mg/L	Oxygen_dissolved percent of saturation: 88.500 % Sat	Turbidity Turbidity: 1.490 NTU
Blue-green algae Cyanobacteria_Photograph: -0.030 RFU	Chlorophyll Fluorescence Chlorophyll: -0.090 RFU	Colored Dissolved Organic Matter Color: 0.940 (GU)
Gage height: 55.280		

The data presented here are provisional and subject to revision.

Climate Station at Franklin Basin

Site Code: LR_FB_C	Local Projection: None
Latitude: 41.949815	State: Utah
Longitude: -111.581352	County: Cache
Lat/Long Datum: WGS84	Comments: None
Elevation: 2109.52	Watershed: Logan
Local X: None	Site Type: Atmosphere
Local Y: None	

Multiple instruments are used to collect data.

Most Recent Instantaneous Measurements
Data update time: 2014-11-06 13:00:00, past 24 hours shown.

The data presented here are provisional and subject to revision.

Standard Variables

Temperature AirTemp_ST110_Avg: 12.950 degC	Barometric pressure BP_Avg: 79.780 kPa	Relative Humidity RH: 23.230 %
Temperature, dew point DewPt_Avg: -7.900 degC	Vapor pressure VaporPress_Avg: 0.338 kPa	Snow depth JustDepth_Avg: 19.070 cm
Precipitation Precip_Tot_Avg: 72.900 cm	Radiation, incoming PAR_PAR_Avg: 669.700 umol/m^2 s	Radiation, outgoing PAR_PAR_OC_Avg: 42.140 umol/m^2 s

Wind Speed and Wind Direction (km/h): Avg & Max

image by John Zsiray, Herald Journal



image via Utah.com

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image by John Zsiray, Herald Journal

Education



STREAM MONITORING DATA

Utah State University
Water Quality Extension
10/15/19



WHY MONITOR WATER QUALITY?

We need clean, healthy water for people, agriculture, recreation, and the environment. But so do our fish! Can you influence the water quality in the lakes and streams Utah Water Watch monitors? Monitor this site in partnership with water quality monitoring, water quality monitoring Utah's aquatic resources.

1 WATER TEMPERATURE
Warmer water holds less dissolved oxygen. High temperatures can also stress aquatic life. High water temperatures can also increase the rate of algae growth, which can block sunlight and reduce oxygen levels.

2 DISSOLVED OXYGEN
Dissolved oxygen is the amount of oxygen in the water that is available to fish and other aquatic life. Low oxygen levels can stress and even kill fish.

3 TOTAL DISSOLVED SOLIDS
Total dissolved solids (TDS) are the amount of dissolved substances in the water. High TDS can affect the taste and odor of water and can be harmful to aquatic life.



Important Locally 



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Education



Understanding

Important Locally 



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image By Chris Luecke via News Deeply

Understanding



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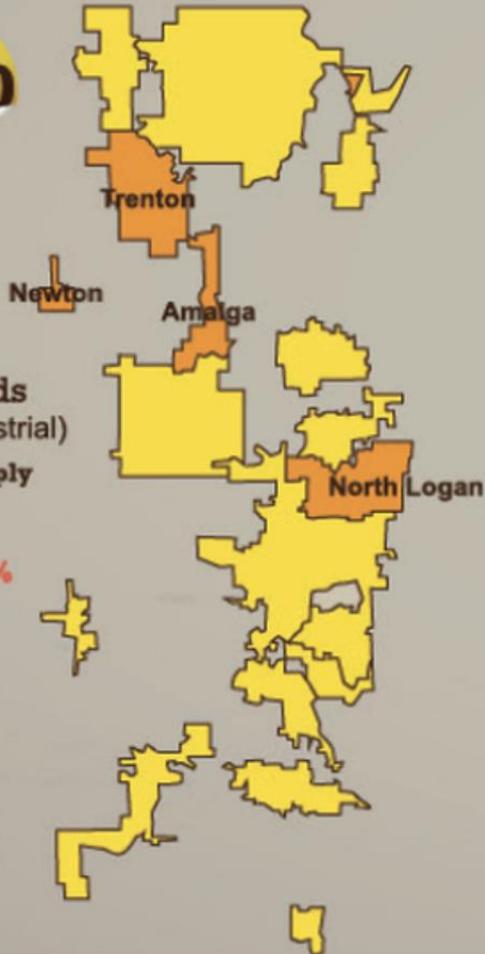
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Four municipal systems are currently approaching annual water shortages.

2010



Water Demands
(Municipal & Industrial)

% of Available Supply

Less Than 75%

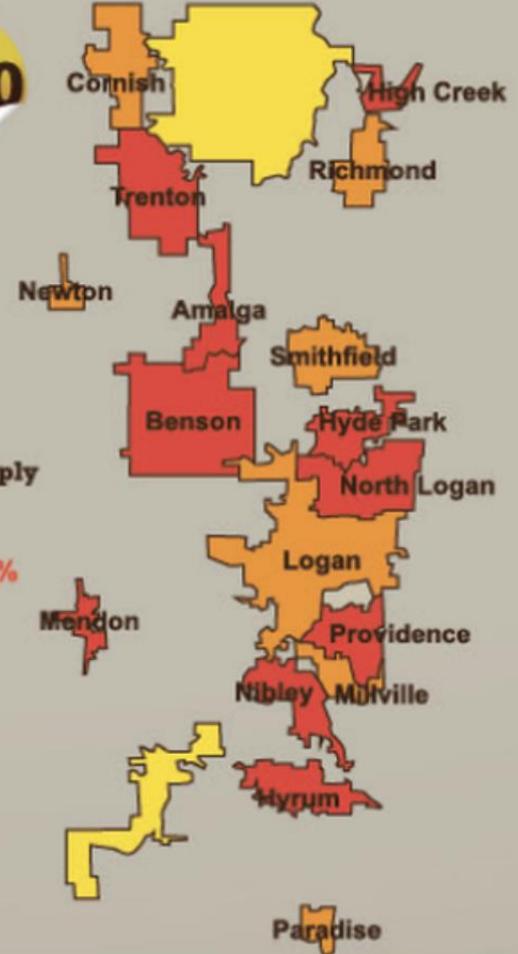
75%-100%

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 utilities should monitor their systems to account for seasonal demand peaks and shortages.

Half of the municipal systems will have shortages by 2040.

2040



% of Available Supply

Less Than 75%

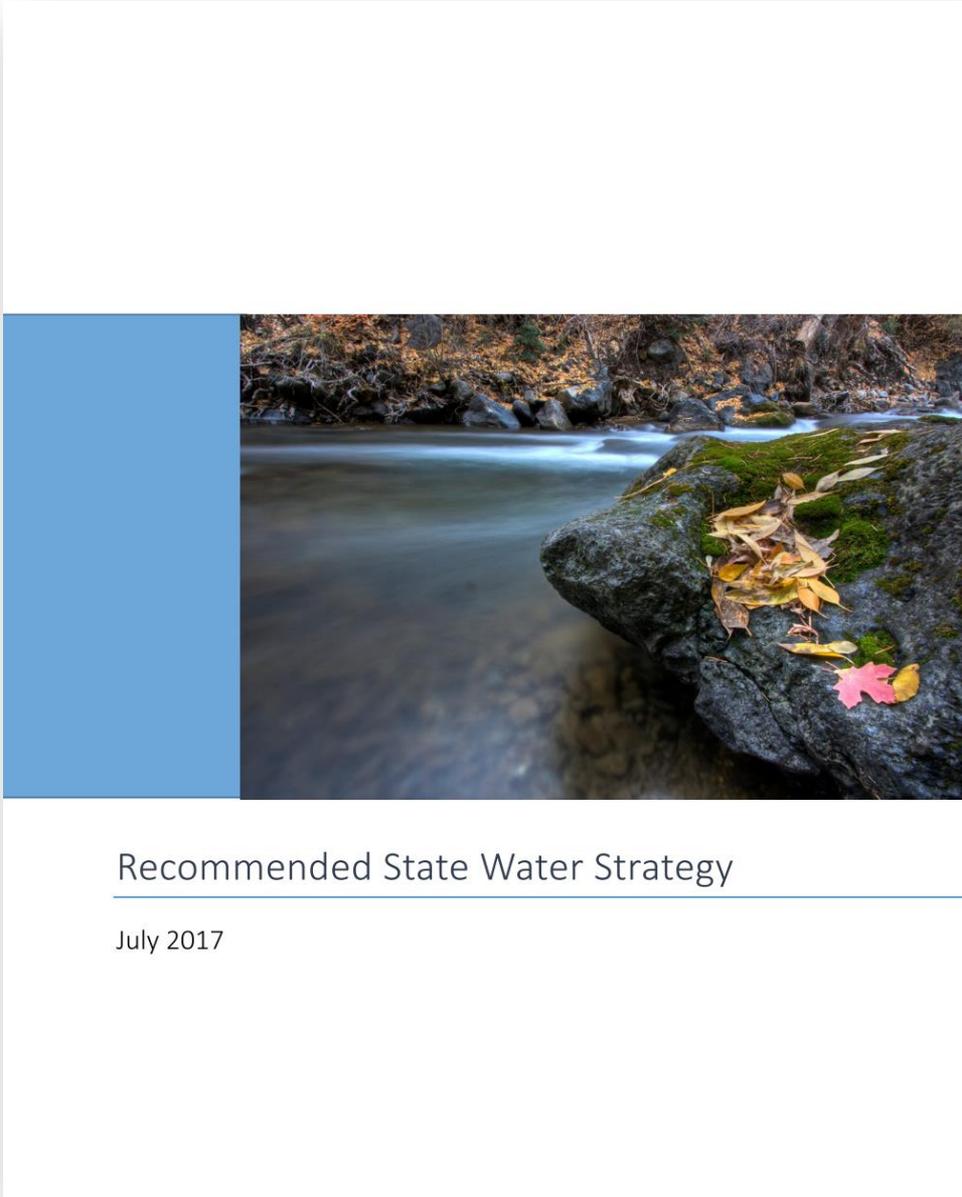
75%-100%

Greater Than 100%

Important Locally 



Transferable Statewide



Recommended State Water Strategy

July 2017

- Providing adequate water for agricultural and municipal uses
- Preserving natural systems in the face of competing demands
- Protecting and sustaining the quality of Utah water
- Understanding the linkages between a changing climate and Utah's water supply
- Using science, technology, and innovation to address Utah's water needs