Executive Summary

Utahns are willing to use substantially less water per capita and do not want municipal/industrial water to come at the expense of food production.

• **Current circumstances:**
  - Utah is one of the driest states in the country.
  - There are competing uses for Utah’s limited water supply: agriculture, residences, businesses, habitat, recreation, energy production, etc.

• **Survey findings:**
  - Water is one of the top concerns for Utahns as we grow.
  - Eighty-five percent of Utahns want to reduce per capita water use by 2050, with an average preference of 23% reduction in today’s outdoor, indoor, and industrial use.
  - To do that, Utahns are willing to:
    - Have less grass in our yards and parks and install efficient watering systems (e.g., drip systems)
    - Continue market trends that are shifting to smaller yards
  - Utahns do not want to take water from agriculture for municipal/industrial use but are willing to build large water projects if they are needed to accommodate growth even as we conserve.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>2</td>
</tr>
<tr>
<td>Water Action Team Background</td>
<td>4</td>
</tr>
<tr>
<td>Water Action Team Members</td>
<td>5</td>
</tr>
<tr>
<td>YUYF Survey Background</td>
<td>6</td>
</tr>
<tr>
<td>Survey Methodology</td>
<td>12</td>
</tr>
<tr>
<td>Utah Water Values</td>
<td>21</td>
</tr>
<tr>
<td><strong>YUYF Scenarios on Water</strong></td>
<td>23</td>
</tr>
<tr>
<td><strong>YUYF Water Results</strong></td>
<td>33</td>
</tr>
<tr>
<td>Supporting Results</td>
<td>40</td>
</tr>
<tr>
<td>You May Still Take the Survey</td>
<td>42</td>
</tr>
</tbody>
</table>
The state water strategy advisory team worked for 18 months to create scenarios for the future of water in Utah.

Envision Utah and Governor Herbert invited water experts from across the state to join the Your Utah, Your Future action team for this topic. The team has 43 members from the legislature, industry, local businesses and government, advocacy groups, research institutions, and other organizations. The action team is facilitated by Envision Utah.

The study concluded that Utahns want to ensure there is an adequate supply of clean, affordable water for a variety of needs (agriculture, population growth, environment, etc.).

The action team worked for 18 months to research and model what Utah’s water future could be like in 2050 under various assumptions. They created five scenarios based on different strategies and outcomes for water supply and quality. The public’s responses in the Your Utah, Your Future survey will help the the action team articulate a vision for Utah’s water future.
Water Action Team Members

Action team members were selected by Governor Gary Herbert and Envision Utah to represent a spectrum of experience and political persuasions. All action team members were invited to participate by Governor Herbert.

- Tage Flint, Weber Basin Water Conservancy District*
- Warren Peterson, Farmland Reserve Inc.*
- Tim Hawkes, Trout Unlimited*
- Richard Bay, Jordan Valley Water Conservancy District
- Eric Millis, Utah Division of Water Resources
- Steve Clyde, Clyde Snow Attorneys at Law
- Kent Jones, State Engineer
- Jane Whalen, Citizens for Dixie's Future
- Voneene Jorgensen, Bear River Water Conservancy District
- Bob Fotheringham, Cache County Water Manager
- Sterling Brown, Utah Farm Bureau
- Steve Erickson, Great Basin Water Network
- Ralph Okerlund, State Senator
- Keith Grover, State Representative
- Scott Jenkins, State Senator
- Joel Briscoe, State Representative
- Ron Thompson, Washington County Water Conservancy District
- Walt Baker, Utah Division of Water Quality
- Leland Myers, Central Davis County Sewer District
- Todd Brightwell, EDCU
- Todd Bingham, Utah Manufacturers' Association
- Joan DeGiorgio, The Nature Conservancy Utah Chapter
- Jody Williams, Holland and Hart
- Charley Bullets, Piute Tribe
- Joanna Endter-Wada, Utah State University
- Dan McCool, University of Utah
- JT Martin, IWM Intergrated
- Mark Sovine, Grand County Water & Sewer District
- Brad Peterson, Utah Governor's Office of Outdoor Recreation
- Keith Denos, Provo River Water Users Association
- Dale Pierson, Rural Water Association of Utah
- Robert Gillies, State Climatologist
- Stephanie Duer, Salt Lake City Public Utilities
- Lynn de Freitas, Friends of Great Salt Lake
- Wayne Pullan, Bureau of Reclamation
- Shane Pace, Sandy City Public Utilities
- Jodi Hoffmann, Utah League of Cities and Towns
- Gene Shawcroft, Central Utah Water Conservancy District
- Ken Bousfield, Utah Department of Environmental Quality
- Tom Berggren, Jones Waldo
- Steve Schnoor, Rio Tinto
- Gawain Snow, Uintah Water Conservancy District
- June Pace, Dammeron Valley Water Works

*Action Team Co-Chair
Projections show that Utah’s population will nearly double by the year 2050. The *Your Utah, Your Future* survey was designed for Utahns to create a vision for the State of Utah for the next 35 years.

Envision Utah performed a values study to understand *what* Utahns care about regarding the future and *why* those issues are personally important to them. The study identified eleven key issues: agriculture, air quality, recreation, disaster resilience, public lands, transportation and communities, housing and cost of living, education, energy, jobs and economy, and water.

Four-hundred Utah experts worked in eight task forces to identify Utah’s choices for each of the 11 topics. The information and options in the survey were the direct findings of these taskforces.

The *Your Utah, Your Future* survey was designed to prioritize issues and their associated outcomes in order to make strategic decisions for Utah’s future. Nearly 53,000 people weighed in on the future that they want to create in 2050.
The Challenge:
By 2050, Utah’s population will nearly double in size. Utah will not.

Today there are 2,900,000 people in Utah.

By 2050 there will be 5,400,000 people in Utah.
The *Your Utah, Your Future* survey asked Utahns to indicate their choices for Utah’s Future on 11 specific issues.
Survey participants then chose between five overall scenarios for Utah’s future, with each overall scenario proposing a set of choices for the 11 specific issues.
Our goal was for 50,000 Utahns to take the *Your Utah, Your Future* survey about their desires for the future for Utah.

**Goal** 50,000 Respondents

**Actual** 52,845 Respondents
The *Your Utah, Your Future* survey garnered more public participation than any such project ever has.

The original *Envision Utah 1999 survey* held the record for many years with 17,500 public responses.
Survey Methodology
Utahns were invited to participate in two parts of the survey. In the first part:

Survey participants chose among five overall scenarios for Utah’s future.

Each overall scenario was made up of a set of choices on 11 different topics.
Participants compared the different options within each topic and selected their preferred scenarios for that specific topic.

They were provided with in-depth information and background data for each of the topics and choices.
After making selections for each of the 11 topics, participants could study a summary comparison chart and vote on their preferred overall scenario.
In the second part of the survey, Utahns participated in more traditional survey exercises.

Prioritizing Issues

Weighing Outcome Preference

Indicating Tradeoff Willingness

Together, the results of parts one and two of the survey allow a sophisticated analysis of what Utahns want, why they want it, and what they’re willing to do to achieve their goals.
Detailed Survey Methodology

Each part of the survey had different goals and provided important information.

**Process**

1. **SCENARIO SELECTIONS**
   - Issue "Favoriting"
   - Scenario Vote

   **Goals**
   1. Educate Utahns on the key issues facing the state
   2. Quantify preferences for issue-specific outcomes
   3. Identify areas of consensus and disagreement across issues
   4. Quantify preferences for defined scenarios

2. **TRADE-OFF SURVEY**
   - Issue Prioritization
   - Importance of Outcomes
   - Trade-off Willingness

   **Goals**
   1. Force Utahns to prioritize importance / level of concern for all issues
   2. Quantify importance of outcomes related to specific issues
   3. Assess willingness to make trade-offs in order to reach desired outcomes
A random sample survey of Utahns was used to cross-check outreach results.

**OUTREACH SAMPLE**
Utahns that heard about the survey through Envision Utah’s outreach efforts and went to the website to vote

- School outreach
- Digital media
- Partner organization emails and posts
- Radio advertisements
- News coverage

**Total participants: 52,845**

**RANDOM SAMPLE**
A statistically representative sample of Utahns randomly sampled to participate in the survey

- Direct email
- Physical mail (postcard invitations)
- Phone recruiting

**Total participants: 1,264**
Survey Participation

All Participants participated in Part One

Outreach Participants had the option to participate in Part Two

All Random Sample Participants participated in Part Two
Outreach and Random Sample participant responses were very much aligned across issues and preferences.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Variance Across Most Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Favoriting”</td>
<td>+/- 3%</td>
</tr>
<tr>
<td>Scenario Vote</td>
<td>+/- 4%</td>
</tr>
<tr>
<td>Issue Prioritization</td>
<td>+/- 1.2%</td>
</tr>
<tr>
<td>Importance of Outcomes</td>
<td>+/- 2%</td>
</tr>
<tr>
<td>Trade-off Willingness</td>
<td>+/- 7%</td>
</tr>
</tbody>
</table>

“We can conclude that the results represent the desires and opinions of Utahns.”

“Results were obtained via the largest public outreach effort in the history of Utah, resulting in public input from more than 50,000 people; an effort that was cross-checked with a random sample of 1,264 Utahns, and overseen by Dan Jones & Associates.”

—Cicero; Dan Jones & Associates
Envision Utah performed a values study in 2014 to understand what Utahns care most about regarding the future. The study found that having **sufficient water** to grow our food, communities, and economy and having **clean water** for healthy living and to protect the environment are both very important for Utahns.
Utahns want plentiful, readily available, and affordable water for food production, community growth, and economic development. They also want clean water to support nature and be good stewards of the environment.
In the *Your Utah, Your Future* survey, Utahns were given information about Utah’s water today and five different scenarios for what our water usage and sources could be like in 2050 depending on the choices we make.
Utah’s Water Today

- Utahns are concerned about having an adequate supply of water for the future.
- Yards are usually 90+% turf with some shrubs and perennials.
- We will likely need to increase municipal & industrial supply to meet future needs.
Questions Concerning the Future of Water

- Where will additional water come from to accommodate the state’s growth?
  - Will we build new water projects to meet future demand?
  - Will we use less water per person in our homes, yards, and businesses?
  - Will we move water from agriculture to homes and businesses?
- How much water will there be for wildlife and recreation?
- Will we have an emergency buffer in the event of a drought?
- How will we ensure there is enough water beyond 2050?
Assumptions for All Scenarios

- Each scenario presented to the public assumes that we will develop adequate supply for the next generation.
- Sego Lily is the lone exception; projections indicate southwest Utah will run out of water by around 2045 under this scenario even if all of the agricultural water in Kane and Washington Counties is moved to urban uses.
- Each scenario includes the same regional growth assumptions.
Allosaurus Scenario

- Water use **25% less than today** per person in homes, businesses, parks, etc.
- Maximum **30% of landscaping is grass**
- To supply water to our growing population:
  - We build local water projects (wells, tanks, treatment plants, pipelines, efficiency improvements, etc.).
  - We also **build** both the Lake Powell Pipeline to serve southwestern Utah, and the Bear River Project to serve the Wasatch Front. All or portions of the Bear River Project may be **delayed** until closer to 2050, though the Lake Powell Pipeline may still be required in the near term.
  - A significant amount of our water also comes from **agricultural lands** that are replaced by homes and businesses as our communities grow and by purchasing more water from working farms, **putting those farms out of production**.
Bonneville Trout Scenario

- Water use per person *same as today* in homes, businesses, parks, etc.
- Our landscaping looks same as today
- To supply water to our growing population:
  - We build local water projects (wells, tanks, treatment plants, pipelines, efficiency improvements, etc.).
  - In the near term, we also build both the Lake Powell Pipeline to serve southwestern Utah and the Bear River Project to serve the Wasatch Front.
  - A significant amount of our water also comes from agricultural lands that are replaced by homes and businesses as our communities grow.

* Projects such as wells, tanks, and treatment plants
Seagull Scenario

- Water use **15% less than today** per person in homes, businesses, parks, etc.
- Maximum **50% of landscaping is grass**
- To supply water to our growing population:
  - We build local water projects (wells, tanks, treatment plants, pipelines, efficiency improvements, etc.).
  - We also build the **Lake Powell Pipeline** to serve southwestern Utah and the **Bear River Project** to serve the Wasatch Front.
  - A significant amount of our water also comes from agricultural lands that are replaced by homes and businesses as our communities grow.

*Projects such as wells, tanks, and treatment plants*
Scenario Strategies

Sego Lily Scenario

- Water **use 40% less than today** per person in homes, businesses, parks, etc.
- Almost **no grass in landscaping**
- To supply water to our growing population:
  - We build local water projects (wells, tanks, treatment plants, pipelines, efficiency improvements, etc.).
  - We **do not need to build the Bear River Project** to serve the Wasatch Front **before 2050**.
  - We **do not build the Lake Powell Pipeline**, meaning that **southwestern Utah may not have sufficient water supply** beyond 2045 even as water is taken from all the farms in the area.
  - A significant amount of our **water comes from agricultural lands** that are replaced by homes and businesses as our communities grow. We also buy more water from working farms, **putting those farms out of production**.

![Bar chart showing distribution of water usage]

*Projects such as wells, tanks, and treatment plants*
• Water use **25% less than today** per person in homes, businesses, parks, etc.
• Maximum **30% of landscaping is grass**
• To supply water to our growing population:
  • We build local water projects (wells, tanks, treatment plants, pipelines, efficiency improvements, etc.).
  • We also **build** both the Lake Powell Pipeline to serve southwestern Utah and the Bear River Project to serve the Wasatch Front. All or portions of the Bear River Project may be delayed for a decade or more, though the Lake Powell Pipeline may still be required in the near term.
  • As homes and business replace agricultural lands, the **water from those farms** is moved to other farmlands.
Change in Typical Landscapes

Bonneville Trout

Seagull

Quaking Aspen

Allosaurus

Sego Lily
Water Survey Results
In the 2014 values study, Utahns ranked all 11 issues as being important to Utah’s future. The 2015 survey used a sophisticated technique to force a “weighting” of the issues, providing a wider gradation of concern.

Source: Survey – Keeping in mind that between now and the year 2050, Utah will almost double in population, please consider how important each of the following issues is to you. Considering only these four issues, which is the Most Important and which is the Least Important as you think about Utah’s future?
Results of the random sample survey prioritized air quality over water.

Source: Survey – Keeping in mind that between now and the year 2050, Utah will almost double in population, please consider how important each of the following issues is to you. Considering only these four issues, which is the Most Important and which is the Least Important as you think about Utah’s future?
88% say per person water use should decrease

The average preference among Utahns is to reduce use by 23%

The scenario that does not take water from agriculture is preferred more than any other
Why Utahns Want to Conserve Water:
Utahns want to ensure there is plenty of water for agriculture and wildlife. They are less concerned about water for their yards.

Importance of Outcomes
Average % Allocated

- Ensuring there is plenty of water for farms and food production: 30%
- Ensuring there’s plenty of water in our streams and lakes for wildlife: 24%
- Ensuring there’s plenty of water in our streams and lakes for recreation: 13%
- Limiting how much we need to spend maintaining our yards: 12%
- Minimizing how much we need to spend on water infrastructure (pipes, reservoirs, etc.): 10%
- Ensuring we have sufficient grass and other greenery in our yards, parks, and other landscaping: 8%
- Ensuring we have large yards: 3%

Source: Survey – Please indicate each outcome’s relative importance by allocating 100 points across all outcomes. The more points you allocate to a given outcome, the more important it is to you to achieve that outcome.
YOUR UTAH. YOUR FUTURE.

Source: Survey – Please indicate your willingness to make each trade-off in order to focus on water conservation in Utah. Outcomes:

• Less spending on water storage and conveyance
• Less need to move water from agriculture and natural environment to municipal and industrial uses

What Utahns are willing to do:

To conserve water, Utahns are very willing to spend money to change their landscaping and irrigation systems, have less grass and plant more drought tolerant vegetation, and shift to smaller yards.

Willingness to Make Tradeoffs
% Level of Willingness, n=4,913

We will have to spend money on changing and maintaining our landscaping and irrigation systems (e.g., installing and maintaining drip irrigation systems)

- Not At All Willing: 4%
- Somewhat Willing: 7%
- Very Willing: 26%
- Somewhat Willing: 26%
- Very Willing: 37%

In our yards, parks, and other landscaping, we will have less grass and other vegetation that uses a lot of water.

- Not At All Willing: 5%
- Somewhat Willing: 10%
- Very Willing: 25%
- Somewhat Willing: 22%
- Very Willing: 37%

Our homes will need to have smaller yards.

- Not At All Willing: 10%
- Somewhat Willing: 13%
- Very Willing: 25%
- Somewhat Willing: 18%
- Very Willing: 33%

Source: Dan Jones & Associates

OUTREACH
n = 52,845
The Utah legislature has approved the construction of a pipeline (known as the “Lake Powell Pipeline”) moving water from the Colorado River to southwest Utah. Below are opposing views of the pipeline:

Mr. Smith believes:
The Lake Powell Pipeline should be built because:

• If the pipeline is not built, it would not be possible to accommodate the St. George area’s projected growth beyond 2040–45, even if grass is removed from every yard and every irrigated farm in the area is taken out of production to move water to urban uses
• It is important to claim Utah’s full allocation of the Colorado River, which has been divided among several states, to prevent another state from claiming the water

Mr. Jones believes:
The Lake Powell Pipeline should not be built because:

• The cost is too high (approximately $1 billion, which would likely be financed in part by the state and repaid by local water fees)
• The pipeline would have environmental impacts to the Colorado River system downstream from Lake Powell

Do you agree with Smith or Jones?
In addition to the specific results from water questions, results from other topics show strong support for outcomes or strategies that would retain water in agricultural use.
Utahns are very willing to use less water on their lawns and spend money on infrastructure to avoid taking water from agriculture.

Source: Survey – Please indicate your willingness to make each trade-off in order to secure and expand agriculture in Utah.
The Survey is still available!

Visit envisionutah.net to view the choices for water and each of the 11 topics in the Your Utah, Your Future survey.