

# Water Strategy Advisory Team

## Update to the Water Development Commission

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Governor's Office

# Water Strategy Advisory Team members include:

- Legislators
- Water Districts
- Agriculture
- Academics
- State Agencies
- Local Water Managers
- Water Conservation Professionals
- Environmental Advocates
- Water Lawyers
- Scientists



The Water Strategy Advisory Team has two purposes:

- 1) Provide input on water issues to the Your Utah Your Future initiative.
- 2) Develop recommendations for a 50-Year Utah Water Strategy.

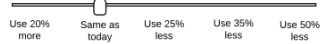
# Water

Utah is one of the driest states in the nation. Our water is precious, and developing new supplies could cost billions of dollars over the next 35 years. By 2050 we will add another 2.5 million people to our population. If we want our children, grandchildren, and new neighbors to be able to live here with us, we need to plan now. There are multiple methods Utah could use to assure water for our growing population: wise conservation practices, small municipal projects such as developing local springs and wells, larger projects such as the Bear River Project and Lake Powell Pipeline. Pipeline to divert water from interstate rivers, shifting water from agriculture to urban use, or some combination of all of these options. This exercise can help us understand some of the tradeoffs of choices we make.

Create your vision for Utah in 2050 by making different choices below. You can see some of the resulting impacts on our water supply in the outcomes. Learn more about the impacts by selecting the ? icon. When you're done exploring different choices, select the options you think are best and press "Continue."

## OUR CHOICES

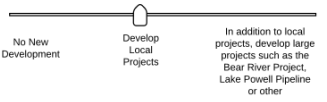
? Should we reduce our demand for water by reducing how much water we use in our homes and on our yards?



? The water outcomes in this activity assume that we will take into account the likely effects of climate change as we plan for the future.

If you want to see the effect of not doing this click here.

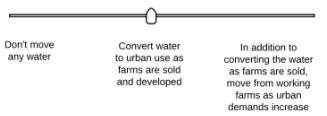
? What additional water supply projects should we build?



? How much treated water from wastewater plants should be reused for urban purposes such as commercial and industrial applications, or outdoor landscaping?



? How much water do we move from agriculture to urban use?

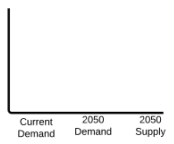


? How do we prioritize the health of the natural environment in relation to the need for additional water supplies?

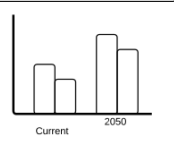


## WATER OUTCOMES IN 2050

### Water Supply and Demand



### Agriculture Production



### Cost



### Drought Resilience



### Healthy Natural Environment

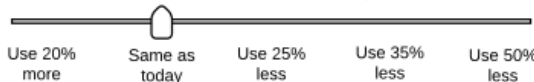


SUBMIT MY CHOICES AND CONTINUE

## OUR CHOICES



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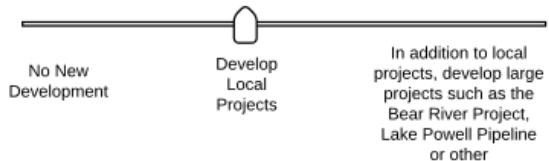


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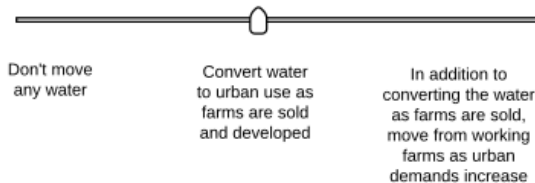
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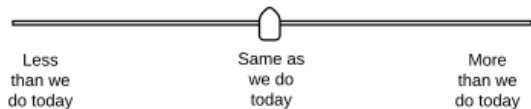
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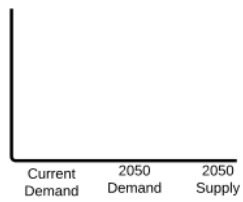


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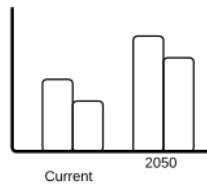


## WATER OUTCOMES IN 2050

### Water Supply and Demand



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### Cost



### Drought Resilience



### Healthy Natural Environment



Baseline assumptions are current facts or reasonable expectations for 2060. Policy questions are expressions of what Utah will need to address in order to create meaningful policy. The issues further define the policy questions.

**Summary of the State Water Strategy Advisory Team baseline assumptions, policy questions, issues, and methods**

Policy questions are color coded into different topics. Baseline assumptions and issues are color coded to reflect which policy question(s) they relate to.

Baseline Assumptions	Policy Questions	Issues
Utah values a vibrant economy. The State's economic viability is dependent upon, and constrained by, viable water resources		What should we do, if anything, to assure sufficient land and water for food production?
There is an energy/water nexus	How will we allocate water supplies among competing and ever increasing demands?	In what ways will weather and climate variations influence water allocation decisions?
Utahns value the role of water in the State's natural environment		What should we do to preserve natural systems in the face of increasing water demands?
Water is a finite and variable resource that is affected by short and long term climate impacts		What processes will stakeholders use to identify and implement any needed changes to water allocation (water rights) laws?
The prior appropriation system will continue to play a central role in Utah water law as it evolves		How can institutions that allocate water better collaborate?
The public welfare/interest will take on greater significance.	How will we provide sufficient water for a rapidly growing population?	What opportunities exist for conservation and what are the consequences of increased conservation?
Wise and efficient use of water will be necessary		How do we incentivize conservation among various water users?
Interstate conflicts over water will increase		By what means do we define "conservation" and establish the desired levels of water conservation?
The free market will continue to play a key role in water allocation		How will we plan and fund new water infrastructure over the next 40 years?
Utah agriculture matters	How will we fund maintenance and replacement of existing water infrastructure over the next 40 years?	How do we finance debt for new infrastructure?
Utah's population will double by approximately 2060		What roles will technology play in addressing Utah's future water needs?
Technology will continue to change and evolve.		How do we encourage technological innovation and encourage implementation of improved technologies?
Existing water infrastructure is wearing out and will require ongoing maintenance, repair, replacement, and expansion		How do we optimize our water resources/supplies that sustain the economy and quality of life for Utah citizens?
Developing new water supplies will have both economic and environmental impacts/consequences	How do we establish and ensure water quality standards?	What processes will stakeholders use to identify and implement any needed changes to water quality laws?
The cost of water will continue to increase		
Federal funding and policy regulations will change		
Water quality is important		

Methods Suggested by Advisory Team Members

**Conservation and Efficiency**

1. Provide efficiency incentives to agriculture, such as promoting higher yielding crops, allowing operations to expand with saved water, or allowing agricultural interests to sell or lease conserved water.
2. Price water to reflect its actual cost and to incentivize conservation and efficiency.
3. Restructure our system to remove disincentives to conserve.
4. Meter all uses
5. Encourage cities to enact conservation landscape ordinances.
6. Employ new technologies; with required rapid adoption in some instances
7. Our water laws need to be revised to make conservation a viable option. This may require modifications on the rules about protecting return flows against any reduction, modification of forfeiture rules to allow water banking without risk of losing the water right for non-use, and redefining what constitutes a beneficial use of water to allow allocations to new and perhaps non-economic uses.
8. Direct more funds towards research, science and technology that will yield improved irrigation practices in the desert - both for agriculture and Municipal use.
9. Focus incentive programs, such as rebates and subsidies, on outdoor water use.
10. Implement water reuse
11. Reduce/eliminate subsidies
12. Make delivery systems more efficient to conserve water all along the pipeline/canal
13. Make water use numbers available through transparent reporting systems
14. Provide low-cost, low-interest loan alternatives for conversion to more efficient systems.
15. Make rates lower for recycled/reuse water to encourage secondary system development.
16. Use a public process to determine which productive lands should be preserved for agriculture and move development to areas that have historically not been used for food production.
17. Encourage small farming, urban farming
18. Replenish ground water in high water years
19. Preserve agriculture through conservation easement, open lands preservation.
20. Offer farmers incentives to grow other than alfalfa so the diversity of food supply for the future can be provided
21. Create financing and partnerships to enable the farmers who control 80% of our water to help fund conservation measures.
22. Accelerate adoption of new technologies
23. Audit current systems to identify and minimize system losses through leaks.
24. Develop a water banking system.

**New Infrastructure**

1. The cost of new infrastructure should be borne by water users, with possible exceptions for small communities where that is not feasible and some subsidy may be necessary. There may be a State role in assisting with bonding, etc.
2. Funding options for new infrastructure construction: property taxes, bond when necessary, form public/private partnerships, State appropriations, and impact fees
3. Develop the remaining state allocations of interstate rivers - Bear River and Colorado River - with a focus on municipal and industrial uses
4. Market conditions and existing law have provided a good basis for water development. Let market drive the process.
5. Rates/user fees, includes tiered rates (make them reflect the true cost)
6. The Bureau of Reclamation needs a renewed funding mechanism for new development in the west
7. Governmental entities also need to be charged for their water usage
8. Base funding for infrastructure on per capita water use, adjusted by area of state. Public water suppliers will have to pay more for new infrastructure if their users are not conserving.
9. Limit urban sprawl
10. Promote aquifer storage and recovery
11. Expand existing reservoirs before building new ones
12. Develop reuse facilities
13. Focus on off-stream reservoirs
14. Explore high-elevation storage to reduce evaporation and increase flexibility
15. Improve watersheds to better capture and store runoff.

**Water Quality**

1. Preserve wetlands
2. Preserve and enhance the ability to establish in-stream flows to mitigate the effects of increasing pollution
3. Create a water hierarchy approach - fit for purpose i.e. all water does not need to be culinary quality
4. Invest in controlling non-point source pollution through regulation and incentives
5. establish scientifically justifiable allowable levels of pollutants to create baseline qualities that need to be met
6. Industries and others who treat water should be given adequate opportunities to give input and determine water quality standards. Decision makers must turn to the experts in various industries
7. Spend more money on enforcement
8. Creating water quality markets in which users can buy and sell the right to discharge into waters
9. Restore riparian areas where possible, use natural systems as water cleansers

**Allocation**

1. Make the allocation process and laws more transparent, flexible, and repeatable.
2. Allocation of water should not be left entirely to the free market, because there are public goods involved (e.g., producing food) that will be lost due to a "tragedy of the commons."
3. Protecting in-stream flows for environment and recreation should be facilitated.
4. Limit large industries that use larger quantities of water
5. Eliminate allocations that are not associated with beneficial use
6. Use the current water code to allocate limited water supplies.
7. We need to carefully consider marketing some of Utah's water to out of state users. Leasing water to Las Vegas would provide a massive financial benefit to the state that could be put towards education, and environmental benefits for leaving water in the streams in intermediate reaches.
8. Co-managed systems. Need an organization on a local level to prioritize the needs and manage the resource to meet those needs.
9. Provide greater authority to the state engineer through an established governing board to consider forfeiture
10. Establish an advisory committee to recommend changes to the legislature for improvement needs
11. Change legislation to allow for ecological water rights to exist as a defined beneficial use with parity of other uses
12. The right should be considered more like a property right that could be transferred or sold like a commodity, thereby preserving the ability of a right holder not to lose his asset without compensation
13. For ag, consider allowing banking water for future use similar to public water suppliers
14. The state water plan should identify a target amount of water for agriculture during each decade in the coming 50 years.
15. Encourage agri-business for food production
16. Consider water demand in corporate recruitment efforts.

**Education**

1. The state-wide water conservation education campaign should be continued, strengthened and enlarged.
2. Educate the general public so that they understand the importance of conservation, the need for prioritization of uses, and the true cost of water.
3. Educate the decision makers so that their decisions are made based on sound science and an understanding of economic impacts.

**Existing Infrastructure**

1. The cost of maintaining and upgrading existing infrastructure is borne by existing water users, with possible exceptions for small communities where that is not feasible and some subsidy may be necessary.
2. Funding options for operation, maintenance, and repair of existing infrastructure: property taxes, bonding, form public/private partnerships, State appropriations, and impact fees.





Questions?