



# Water Issues Overview

February 22, 2022

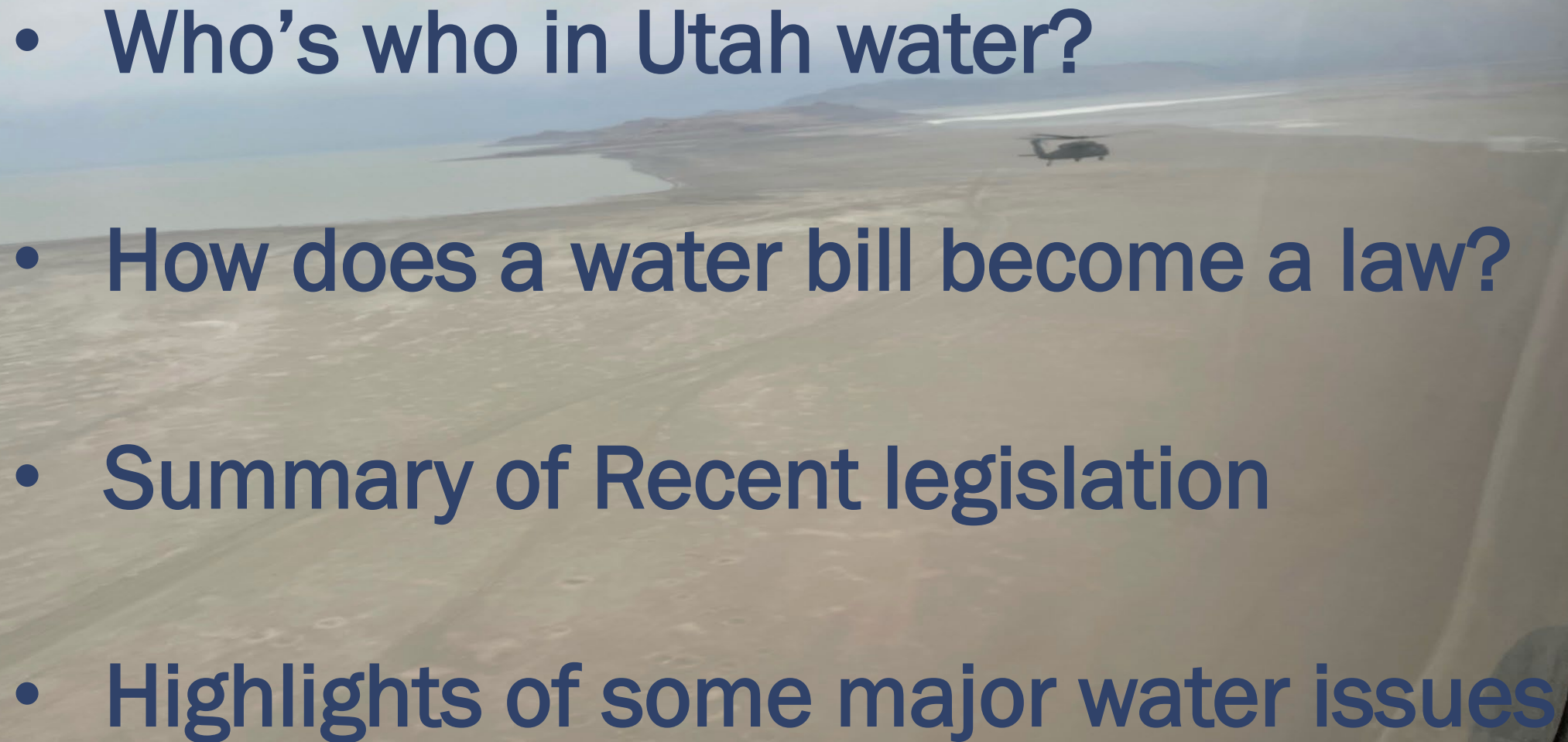
**OFFICE OF LEGISLATIVE RESEARCH  
AND GENERAL COUNSEL**

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Nathan Brady, Alan Houston,  
Patricia Owen



# What We'll Cover Today

- 
- Who's who in Utah water?
  - How does a water bill become a law?
  - Summary of Recent legislation
  - Highlights of some major water issues

# Who's Who in Utah Water ?



**Legislative**



**Executive**



**Non-  
governmental**



**Local water  
entities**



# Executive Branch Agencies



UTAH DEPARTMENT of  
**ENVIRONMENTAL  
QUALITY**



# Department of Natural Resources

## Brian Steed, Executive Director



### Division of Water Resources

- Candice Hasenyager, Director
- Planning, conserving, developing and protecting water resources

### Division of Water Rights

- Theresa Wilhelmsen, State Engineer
- Charged with the appropriation and distribution of the state's water resources



# Department of Natural Resources

## Multiple Use/Purpose of Lands Held

### Division of State Parks

Jeff Rasmussen, Director

- Boating, Ice Fishing, Fishing, Hiking (Watersheds)
- May acquire real property

### Division of Wildlife Resources

Justin “J” Shirley, Director

- Oversees fish and game
- Wildlife – big game, trout, waterfowl, fisheries, wildlife habitat

### Division of Oil Gas and Mining

John Baza, Director

- Regulated activities can impact water resources

### Division of Recreation

- Oversees motorized and non-motorized recreation in the state
- Authorized to acquire and hold real property

### Division of Forestry, Fire, and State Lands

Jamie Barnes, Director

- Manages Bear Lake, Utah Lake, the Great Salt Lake, Bear River, Colorado River, Green River, Jordan River, and other state lands.

### Utah Geological Survey

Bill Keach, State Geologist

- Water surveys, ground water studies, groundwater wetlands program, wetlands mapping, geothermal hydrology

# Utah Department of Environmental Quality

## Kim Shelley, Director



### Division of Drinking Water

Tim Davis, Director

- Implements the rules and regulations related to the design and operation of drinking water systems.

### Division of Water Quality

Erica Gaddis, Director

- Develop the water quality policies and regulations (nutrient pollution levels, groundwater protection, monitoring, stormwater, wastewater).

# Department of Agriculture and Food

## Craig Buttars, Commissioner



Agriculture accounts for roughly 80% of water use in Utah

- Air spray v. down spray v. flood irrigation
- The type of crops produced
  - Alfalfa is the thirstiest crop, using up to 24 inches of water from April to August
  - Alfalfa is the single largest crop in the state





# Non-Governmental and Local Entities

Prepare60

Water conservancy districts (wholesalers)

Counties and municipalities (suppliers)

Rural Water Association of Utah

Utah Rivers Council

Utah water users

Friends of the Great Salt lake

Audubon

Nature Conservancy



# Legislative Entities

- **Policy development (Generally May through November)**
  - Legislative Water Development Commission
    - (Rep. Ferry and Sen. Hinkins)
  - Natural Resources, Agriculture, and Environment Interim Committee
    - (Rep. Stratton and Sen. Sandall)
- **Enactment (general legislative session)**
  - House Natural Resources Standing Committee
    - (Rep. Stratton and Rep. Kohler)
  - Senate Natural Resources Standing Committee
    - (Sen. Sandall)



# The Water Bill Process

## “Friends Don’t Let Friends Run Water Bills”



- **Water bills are complicated**  
(we’ll get into this more next year)
- **The issues are sensitive**  
Protect your water rights against any intrusions  
This is generational



# NAE Interim Committee vs. Water Development Commission

- Natural Resources, Agriculture, and Environment Interim Committee
- Legislative Water Development Commission (73-27-102)
  - Created in 2000 and subject to sunset review (through 2031)
  - Five members of the Senate and eight members of the House
  - An unspecified number of non-voting members who represent water entities and have expertise in water issues
  - Can open committee bill files, add committee notes, and make recommendations to the NAE Interim Committee



# Legislative Water Development Commission Duties

- (1) The commission shall consider and make recommendations to the Legislature and governor on the following issues:**
- **(a) how the water needs of the state's growing agricultural, municipal, and industrial sectors will be met;**
  - **(b) what the impact of federal regulations and legislation will be on the ability of the state to manage and develop its compacted water rights;**
  - **(c) how the state will fund water projects;**
  - **(d) whether the state should become an owner and operator of water projects;**
  - **(e) how the state will encourage the implementation of water conservation programs; and**
  - **(f) other water issues of statewide importance.**





# One More Water Issues Group

**NAE Interim  
Committee**

**Legislative  
Water  
Development  
Commission**

**Water Task  
Force**



# Water Task Force

- **Created by the Executive Branch around 1992**
- **No members who are Legislators**
- **Chaired by the directors of DNR, DAF, and DEQ**
- **Task Force members include water issue experts**
- **A valuable resource for Legislators to bring draft legislation for review and comment**
- **Cannot open bill files or add committee notes**
- **Decisions/Recommendations are not binding**



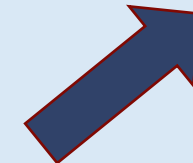
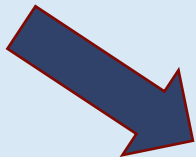
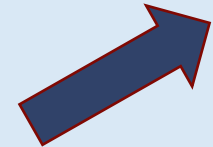
# Water Bills Process

**Water Task Force**  
Get the non-governmental  
water experts to help  
develop the policy

**Legislative Water  
Development  
Commission**  
Legislative Committee  
to review water issues  
and legislation

**House or Senate  
Standing Committees**

**NAE Interim  
Committee**





# Water Issues Studied During 2021 Interim Period

- Drought and water supply
- Conservation efforts
- Declining water levels of the Great Salt Lake
- Water rates
- Colorado river water stakeholders
- Utah Lake Authority
- Lake Powell and Bear River diversion projects
- Agricultural water optimization



# Recent Legislation - 2021 and 2020

## 2021 Enacted Legislation:

- **HB 297 Colorado River Amendments (Wilson)**
- **HCR 1 Concurrent Resolution Encouraging a Balanced Approach to the Release of Water from Flaming Gorge (Chew)**
- **SB 199 Water Amendments (McKell)**
- **SB 225 Navajo Water Rights Negotiation (Hinkins)**
- **SJR 14 Joint Resolution on Settlement of Federal Reserved Water Right Claims (Hinkins)**

## 2020 Enacted Legislation:

- **HB 39 Agricultural Water Optimization Task Force Amendments (Snider)**
- **HB 40 Water Loss Accounting (Ballard)**
- **HB 41 State Water Policy Amendments (Stratton)**
- **HB 166 Watershed Councils (Hawkes)**
- **HCR 22 Concurrent Resolution Concerning the Protection, Development, and Beneficial Use of Utah's Colorado River Compact Allocation (Last)**
- **HJR 3 Proposal to Amend Utah Constitution – Water Resources of Municipalities (Stratton)**
- **SB 26 Water Banking Amendments (Iwamoto)**
- **SB 51 Secondary Water Requirements (Anderegg)**





# 2022 General Session Bills

- **HB 33 Instream Water Flow Amendments (Ferry)**
- **HB 37 State Water Policy Amendments (Stratton)**
- **HB 121 Water Conservation Modifications (Spendlove)**
- **HB 131 Watershed Restoration Initiative (Bennion)**
- **HB 168 Preferences of Water Rights Amendments (Albrecht)**
- **HB 242 Secondary Water Metering Amendments (V. Peterson)**
- **HB 282 Water Wise Landscaping Amendments (Wilcox)**
- **HB 377 Water Rights Adjudication (Kohler)**
- **HB 410 Great Salt Lake Watershed Enhancement (Wilson)**
- **HB 429 Great Salt Lake Amendments (Miles)**
- **SB 73 Flow Rates or Quantity for Plumbing Fixtures (Iwamoto)**
- **SB 89 Water Amendments (Iwamoto)**
- **SB 110 Water as Part of General Plan (McKell)**

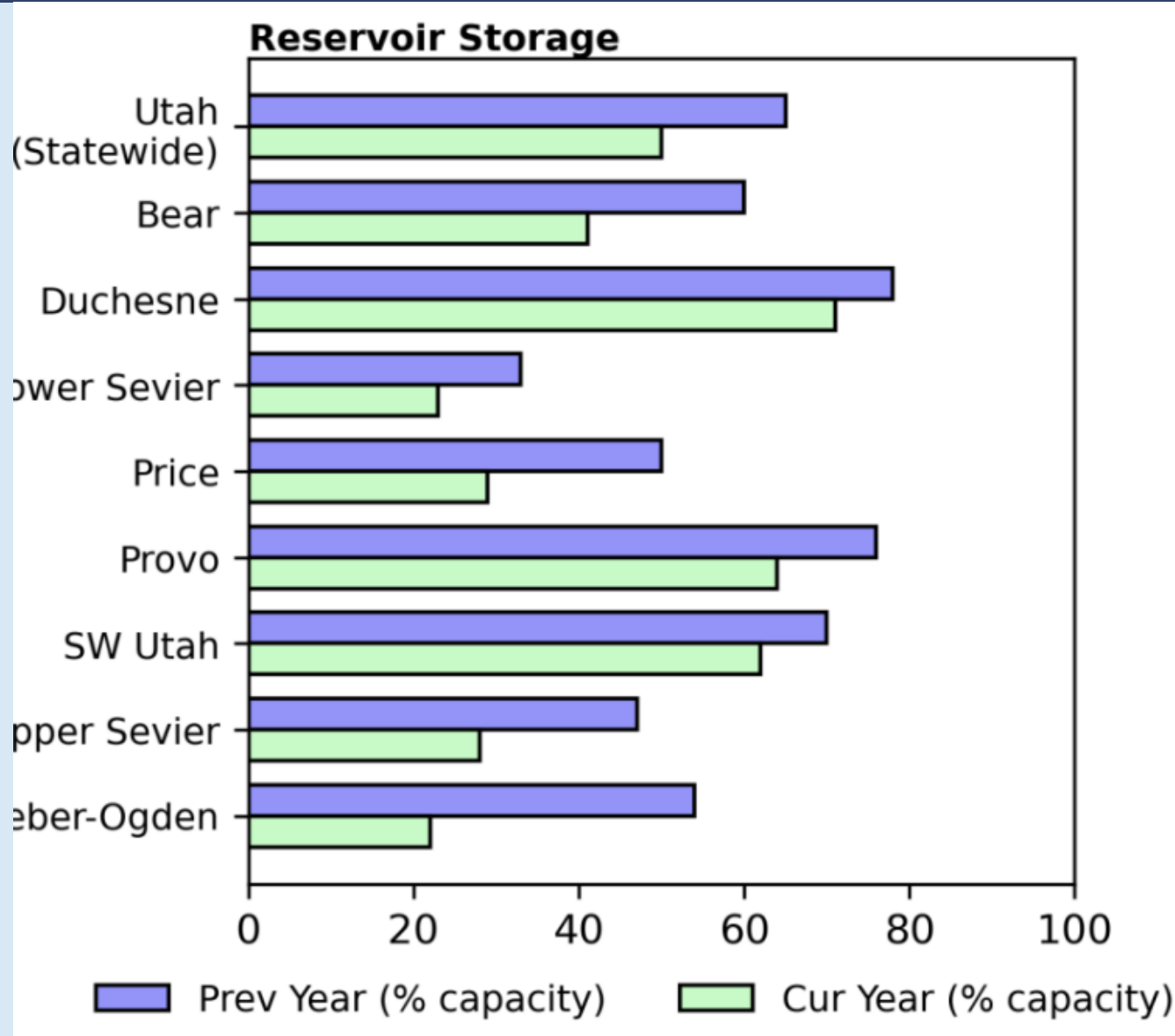


# Water Supply for the Next Year



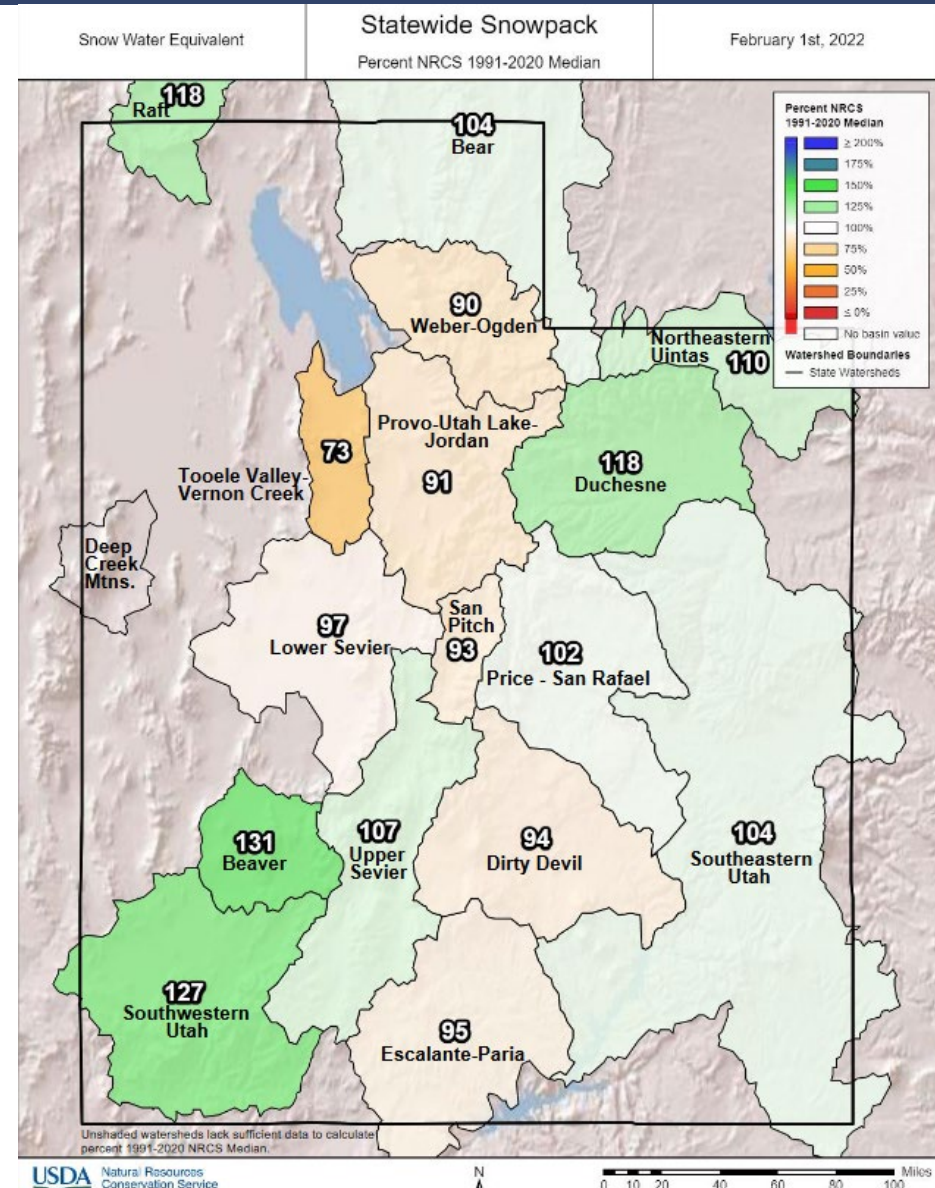
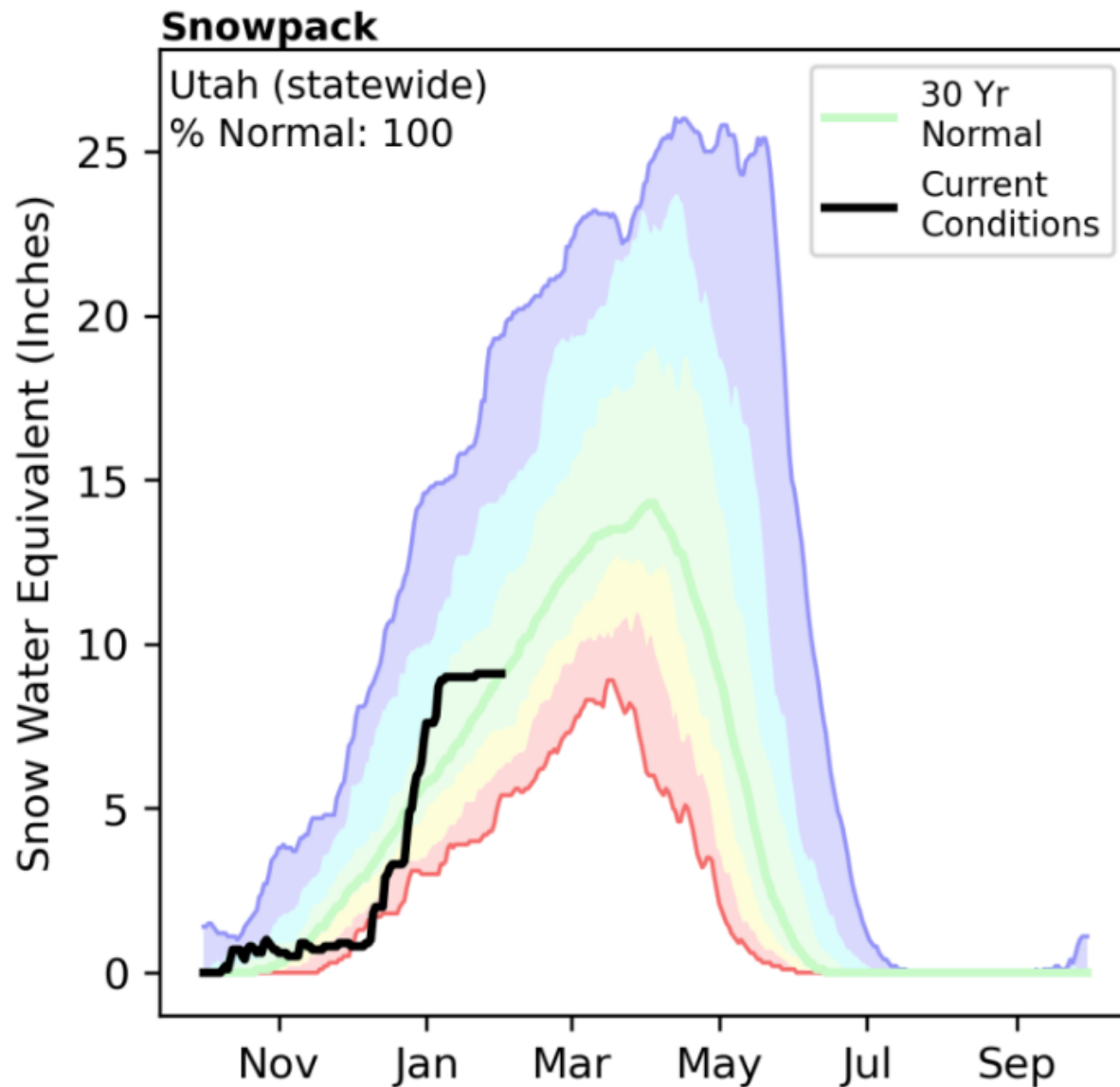
- **Current Reservoir Levels**
- **Precipitation/Snow Pack**
- **Soil Moisture**
  - Fall precipitation and groundwater use
- **Rate of Spring Snow Melt**
  - Rising spring temperatures/earlier melt
- **Per Capita Use Rate/Need**
  - Population Growth

# Current Reservoir Levels



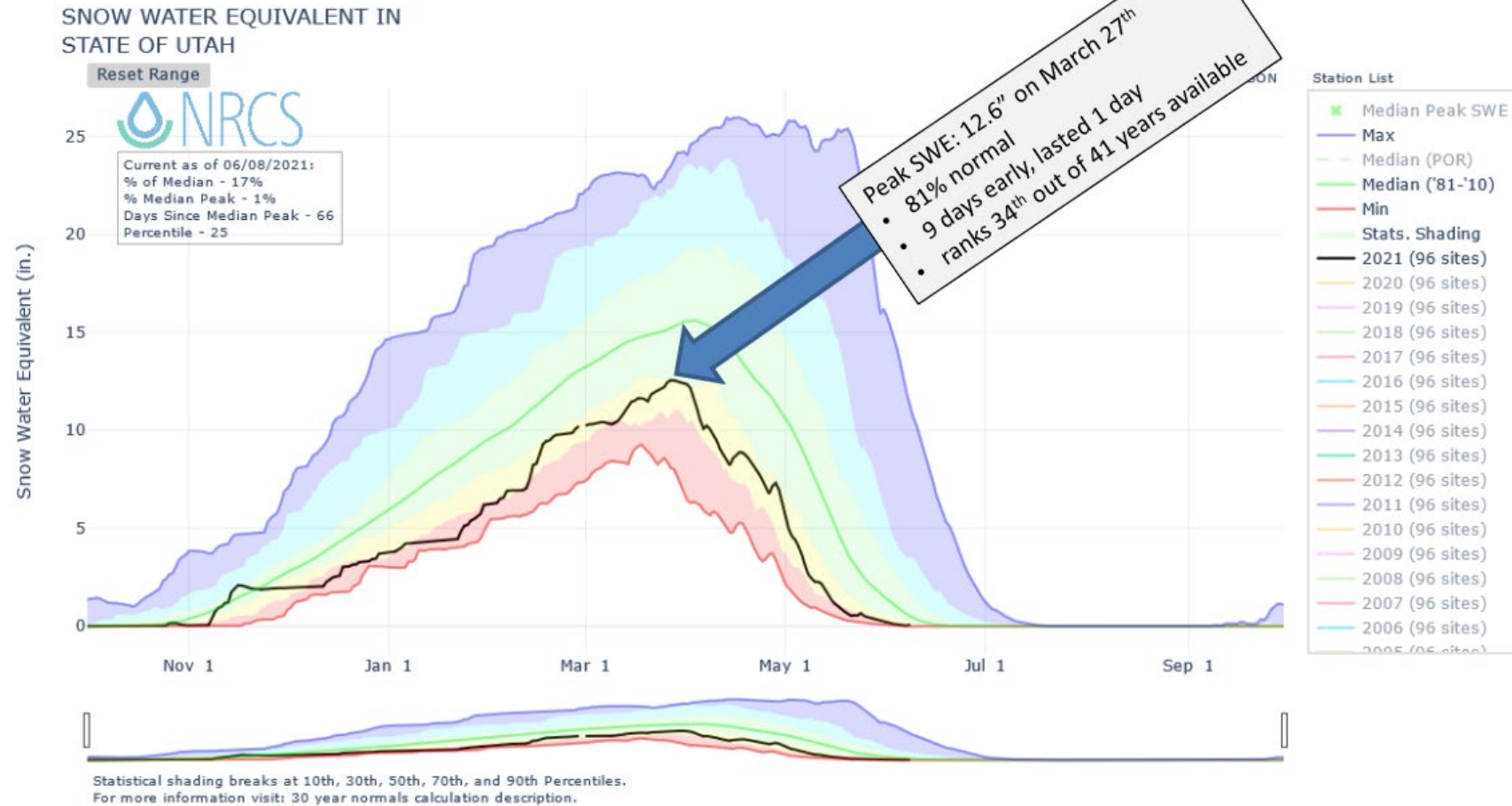


# Precipitation/Snow Pack



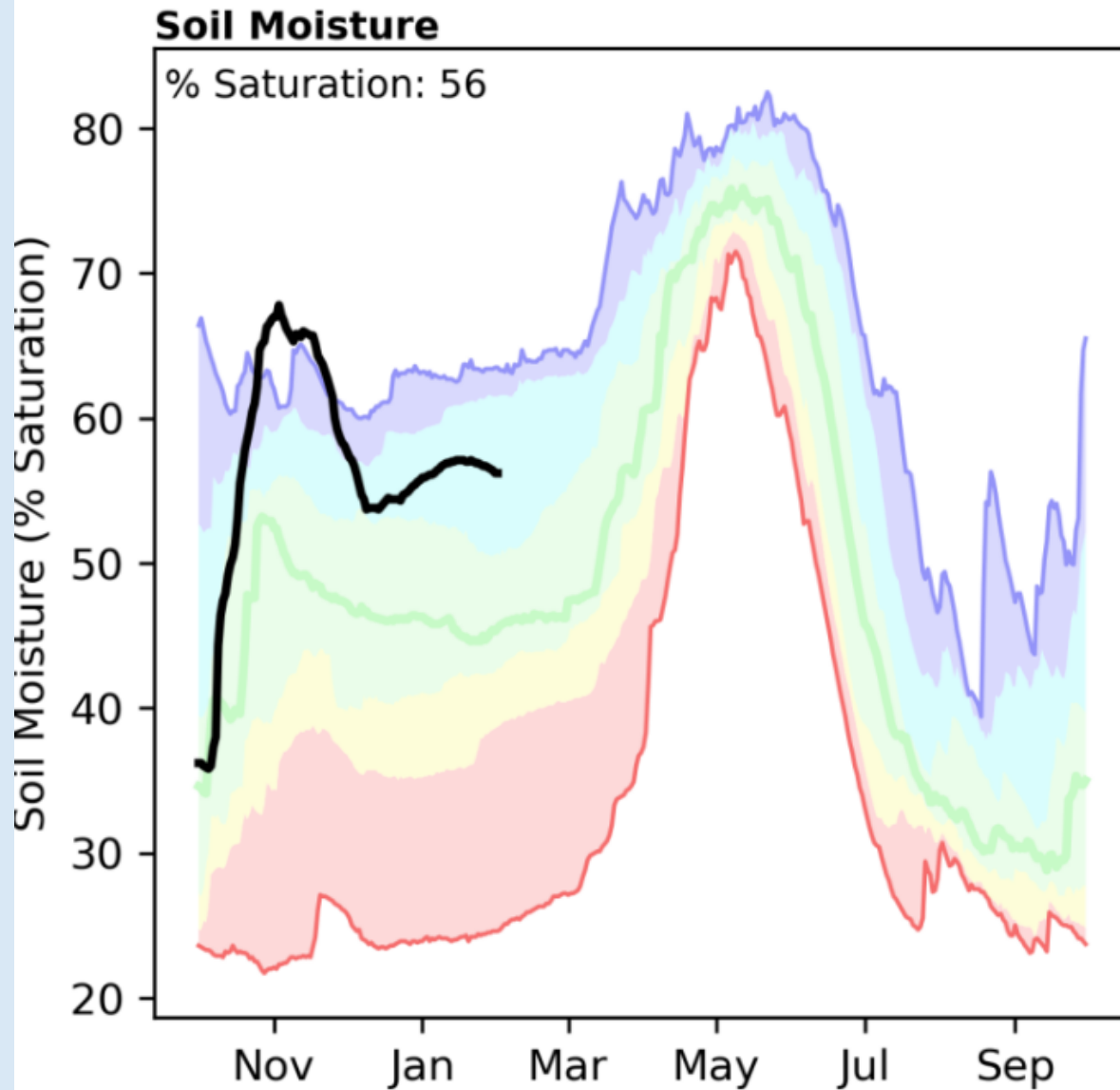
# Rate of Snow Melt

## Snow water equivalent (SWE)



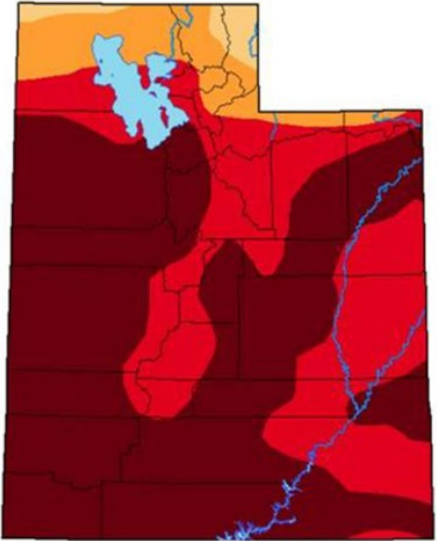


# Soil Moisture

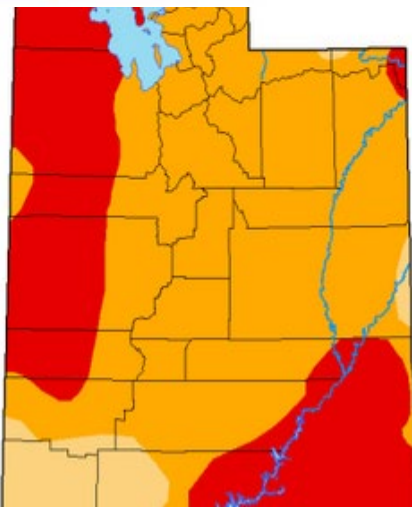


# Drought – May 2021 to current

U.S. Drought Monitor  
Utah



January 11, 2022  
(Released Thursday, Jan. 13, 2022)  
Valid 7 a.m. EST



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Richard Tinker  
CPC/NOAA/NWS/NCEP



Information from the Division of water Resources:

- 37 of Utah's largest 45 reservoirs are below 55% capacity. Overall statewide storage is at 49%. At this time, last year, reservoirs were at 62%.
- Soil moisture is 16% above median for this date.
- 2020 was the driest year on record and one of the hottest.
- Record dry soils soaked up what little runoff we had from decreased snowpacks.
- Water providers report that we should have enough water for 2022, but another drought year would deplete any reserves and jeopardize water availability in 2023.



# Conservation Efforts

- **Most activities aimed at conserving water are happening at the local level**
- **Cities and municipalities – modifying ordinances to address landscaping**
- **Water providers are implementing programs to educate and incentivize water conservation and discourage water waste**
- **State efforts include:**
  - **Building codes amended to require water efficient fixtures in new construction**
  - **Secondary water metering**
  - **Discussions regarding non-functional turf, watering zone requirements, prohibiting local ordinances that discourage conservation**
  - **Water user reduction goals, incentives**



# Per Capita Use Rates

## Did Utahns Really Conserve Water in 2021?

- Layton city's culinary water consumption in August 2020 was 752 million gallons. In August of this year, it sat at 485 million gallons. Layton spokesman Steve Garside said August is typically the city's highest water consumption month all year. "We have been pleasantly surprised and obviously pleased with the results."
- The conversion to a "smart" irrigation controller system by the University of Utah a couple of years ago has led to a sustained reduction in water consumption at the campus of 20%.
- Salt Lake City's water delivery has been shaved by 20% compared to the last three years' average.
- The Jordan Valley Water Conservancy District has also seen a drop in water consumption this summer of 20% and interest in its Flip Your Strip program has shot up by 194% over last year. Landscape consultation is up 112% over last year.

# Customer Rates and Per Capita Use

Google Home | Utah Legislature Office 365 Legislative Login

## Utah residents use the most water of any Western state. They also pay some of the lowest water rates.

Utahns fund water infrastructure through property taxes, which critics say disincentivizes conservation.



(Francisco Kjolseth | The Salt Lake Tribune) Sprinklers run at Reservoir Park in the middle of the afternoon heat during peak evaporation times on Monday afternoon, July 19, 2021, near the University of Utah campus.





# Water Rates/Per Capita Use

According to the SL Trib article:

- Utah has the highest per capita municipal water use in the United States
- This is a result of the low water rates that Utahns pay
  - Property taxes subsidize water costs and create artificially low operations costs
  - Most people don't know that their property taxes subsidize the water they consume, they just see a lower utilities bill.
  - On the one hand: eliminating the property tax would reflect the true cost to the consumer for the water they consume, while providing an economic incentive to conserve water.
  - On the other hand: eliminating the property tax for water costs could double the water bills of most families, potentially negatively impacting the economically challenged families while benefiting owners of undeveloped lands



# Factors in the Cost of Water

- The cost of water in Utah is directly impacted by:
  - Climate – water storage in the snowpack
  - Geography – proximity to the mountains/source
  - Water quality – clean snow melt, ground filtered
  - Type of delivery system – gravity fed systems
  - Energy costs – energy is cheaper
  - Funding from federal, state, and private entities
  - Our systems are already paid off

# Agriculture Water Optimization



- **Ag water optimization task force (2018 – HB 381)**

- Study and make recommendations for how the state could 1) Optimize ag water supply and use, and 2) improve the quantification of ag water use.
- Conclusions:
  - Utah must adapt to address acute drought and chronic water supply challenges.
  - Tools are available to incentivize agricultural water optimization and resiliency.
  - Utah must invest now to preserve agriculture in Utah and enable projected growth.



# Water Diversion Projects

- **Lake Powell pipeline**
  - Currently still in the preliminary phases, undergoing environmental review
  - Several audits by the legislature and scrutiny from outside groups
- **Bear River Project**
  - The legislature completed a study on the costs last year



# Colorado River Authority

- **Established in 2021(HB 297)**
- **Six members comprised of representatives of counties, water district service areas, and one member appointed by the governor.**
- **Purpose: to protect, conserve, use, and develop Utah's share of the Colorado river system. The authority may develop a management plan to ensure that Utah can develop and live within the state's apportionment of the Colorado river system.**
- **\$9 million one-time, non-lapsing appropriation and \$600,000 ongoing, annually**





# Water Policy Questions

- 2013 state water strategy advisory team
  - 11 key policy questions
    - What is the role of water conservation and efficiency in Utah?
    - How will diverted water supplies be developed to meet competing and increasing demands?
    - How does Utah provide water for ag and food production with increasing demand?
    - What should we do to preserve natural systems in the face of increasing demand?
    - How do we protect and sustain the quality of Utah's water?
    - How will Utah plan for, adequately fund, and use innovative solutions to maintain, replace, and redesign existing infrastructure and build new water infrastructure over the next 50 years?
    - In what ways will weather and changing climate impact future water supply and demand?
    - How do we optimize our water resources to sustain life and economy?
    - What is the framework for Utah water law and policy and how will it be modernized?
    - What is the role of policymakers at all levels of government?
    - What roles will science, technology, and innovation play in our future water needs?





# Other Great Resources

- **Utah's Land, Water, and Air Report**– USU Institute for land, water, and air
  - <https://www.usu.edu/ilwa/files/report-2021.pdf>
- **Water Resources Plan** – Just released
  - <https://water.utah.gov/wp-content/uploads/2022/01/Water-Resources-Plan-Single-Page-Layout.pdf>
- **Utah's regional M&I water conservation goals (2019)**
  - <https://conserwater.utah.gov/wp-content/uploads/2021/05/Regional-Water-Conservation-Goals-Report-Final.pdf>
- **The cost of water in Utah – DNR**
  - [https://water.utah.gov/wp-content/uploads/2019/01/The-Cost-of-Water-in-Utah\\_2010.pdf](https://water.utah.gov/wp-content/uploads/2019/01/The-Cost-of-Water-in-Utah_2010.pdf)
- **USU Center for Water Efficient Landscaping**
  - Podcasts, seminars, published articles about water conservation through landscaping
- **Utah's Coordinated Action Plan for Water**
  - Investing in Infrastructure – released in January
  - [https://gopb.utah.gov/wp-content/uploads/2022/01/2022\\_01\\_12-Plan-for-Coordinated-Water-Action-Chapter-1.pdf](https://gopb.utah.gov/wp-content/uploads/2022/01/2022_01_12-Plan-for-Coordinated-Water-Action-Chapter-1.pdf)



# Governor's Water Action Plan

The 2021 Drinking Water Infrastructure Survey identified an additional \$1.8 billion in infrastructure needs over the next few years.

## **Action Plan**

Previous water planning efforts have identified over 200 unique recommendations to better secure Utah's water future. The intent of this

report is to identify specific actions that Utah's executive branch can undertake immediately to help move some of these many recommendations forward.

The state has identified five key priority actions, and associated implementation steps, to address Utah's water infrastructure needs.

**ACTION 1** Create a framework to assist local governments and agricultural water providers in data collection and analysis, prioritization of needs, access to funding, and asset management planning.

**ACTION 2** Develop a series of needs assessments for local-scale water systems across the state, including both municipal and agricultural systems.

**ACTION 3** Continue to be a matching partner in funding the state's water infrastructure needs as the state grows, and assess the evaluation criteria to ensure these state grant and loan programs are advancing the state's priorities, including conservation.

**ACTION 4** Streamline project approvals, rules, and regulations to encourage innovation in Utah's water management such as aquifer storage and recovery (ASR), water reuse, desalinization, green infrastructure, new storage, and public-private partnerships.

**ACTION 5** Invest in research, data collection, and operator training to ensure the state's water infrastructure benefits from the most accurate information and best practices.



**QUESTIONS ?**