Planning for Water Resilience

APA Utah Spring Conference
April 9, 2026

Chelsea Benjamin

Policy Advisor, Healthy Rivers at Western Resource Advocates

wra Western Resource Advocates

Today's Speakers

Hailey Kirlin

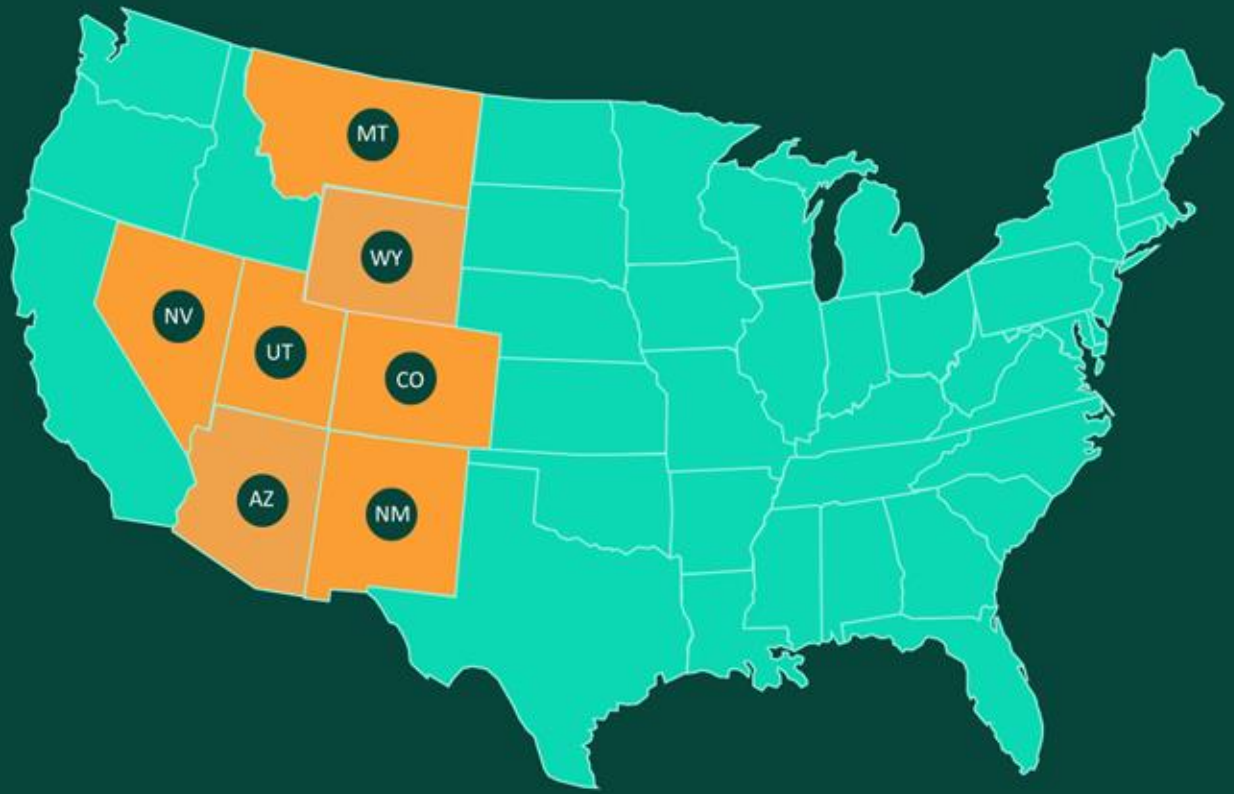
Environmental Scientist/Planner at Division of Water Resources

Megan Nick

Sustainability Analyst at Summit County

Melinda Greenwood

Community Development Director at Kaysville City



Western Resource Advocates

- Municipal Conservation
- State Policy
- Integrated Water and Land Use Planning
- Landscape Code Policy
- Research & Reports
- Engaging Communities

WRA works across seven states in the **Interior West** to **protect our climate**, land, air, and water.

wra

SB110: Water as Part of General Plan

- Adopted in 2022
- Requiring cities and counties to include a water element in their general plan by Dec. 31, 2025
- Required communities to:
  - Reduce water demand
  - Gather data from water providers
  - Reduce water waste

WATER CONSERVATION MEASURES

EXPANDED TURF BUYBACK PROGRAM

Outdoor water use makes up 60% of our municipal and industrial use.

60%

Expanded turf removal programs show we are serious about water conservation.

STATEWIDE INSTALLATION OF SECONDARY WATER METERS

1/3 of Utah uses secondary or untreated water. Systems with meters have saved between 20% and 30%.

Very few of these connections are metered.

You can't manage what you don't measure.

INTEGRATED LAND USE AND WATER PLANNING

Land and water use planning are currently done separately.

Adopting water efficiency standards is proactive and more cost effective than future turf replacement.

AGRICULTURAL OPTIMIZATION

Agriculture accounts for approximately 75% of Utah's water use.

75%

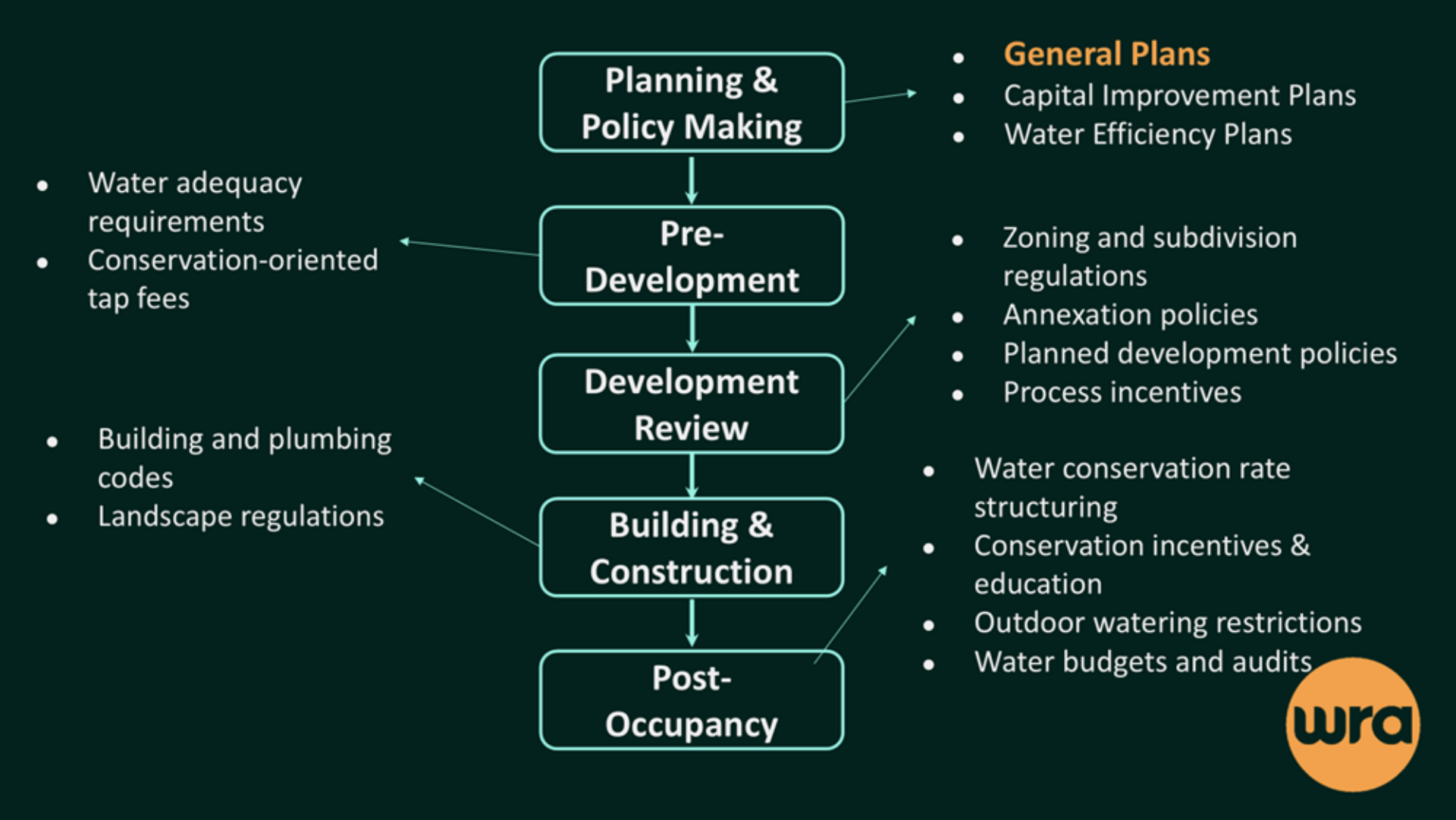
Investment in agricultural optimization will create supply flexibility, benefits for farmers and improve water quantity and quality.

VISIT DROUGHT.UTAH.GOV TODAY

Why integrate water and land use planning?

- Empowers communities to improve water efficiency at their own direction
- Increases resiliency to ongoing and future drought
- Increasing support in Utah
  - Growing Water Smart Program


Photo credit: Aaron Fortin, Utah State University


Planning & Policy Making
General Plans
Capital Improvement Plans
Water Efficiency Plans
Pre-Development
Water adequacy requirements
Conservation-oriented tap fees
Development Review
Zoning and subdivision regulations
Annexation policies
Planned development policies
Process incentives
Building & Construction
Building and plumbing codes
Landscape regulations
Post-Occupancy
Water conservation rate structuring
Conservation incentives & education
Outdoor watering restrictions
Water budgets and audits
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Summit County Water Elements Project

- ~100hrs of pro bono technical assistance from WRA to support Growing Water Smart alumni communities
- WRA worked with staff to draft Water Elements for the county's General Plans (Snyderville Basin & Eastern Summit)

Incorporating Water into Comprehensive Planning

A Manual for Land Use Planners in the Colorado River Basin

ERIN RUGLAND

CENTER FOR LAND AND WATER POLICY

HOME BOARD INTERSTATE STREAMS DIVISION SECTIONS WATER DATA PROJECTS NEWS CONTACT US

Water use and preservation element

Most municipalities (Utah Code 10-9a-403) and all counties (Utah Code 17-27a-401) must develop a water use and preservation element that is integrated with their general plan by December 31, 2025. The Division of Water Resources is excited to support communities in this endeavor.

Legislative requirements, impacted communities, outreach material, helpful programs and planning team contact information can be found below.

South Jordan, Utah (Photo courtesy of Cindy Costa)

Legislative requirements | Communities and plans | **Outreach materials** | Partners and programs

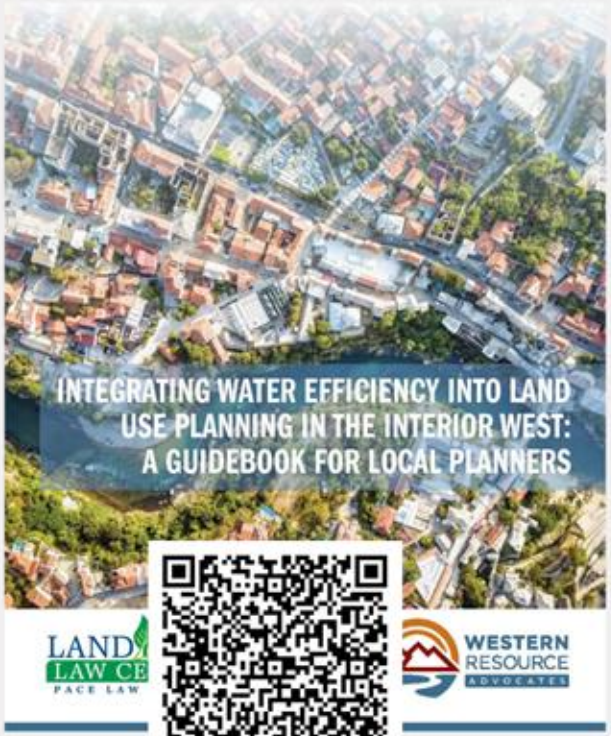
Outreach materials

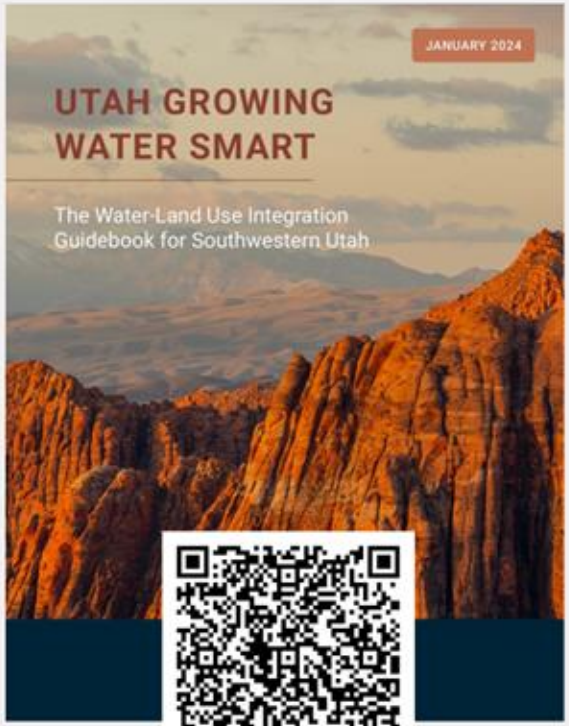
The Division of Water Resources has created the following materials for communities to follow in integrating their water and land planning.

- Integrating water and land planning overview: quick summary of required elements.
- City water element checklist: all requirements for city water elements.
- County water element checklist: all requirements for county water elements.
- Integration guide: a how-to document for communities integrating their water and land planning.
- Examples guide: examples from communities across the Intermountain West and Southwest that fit legislative requirements.

Planners looking to estimate water demand based on land use types and development densities should follow this guide on creating a water budget with Equivalent Residential Units (ERUs). View guide as text.

Water and Land Use Planning Resources






Thank You!
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EMAIL: Chelsea.Benjamin@westernresources.org
WEBSITE: WESTERNRESOURCEADVOCATES.ORG

An Analysis of 62 General Plan Water Elements in Utah

Statistics on common elements across the four main legislative components

We received 88% of required city plans

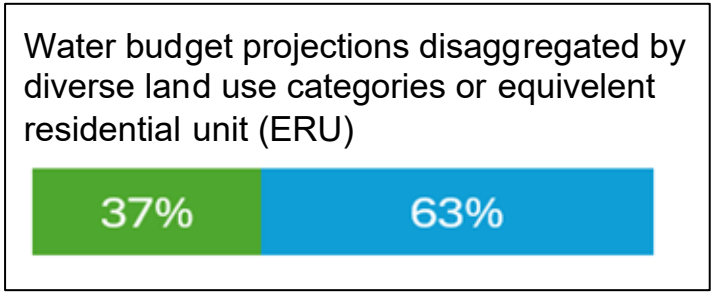
We received 62% of required county plans

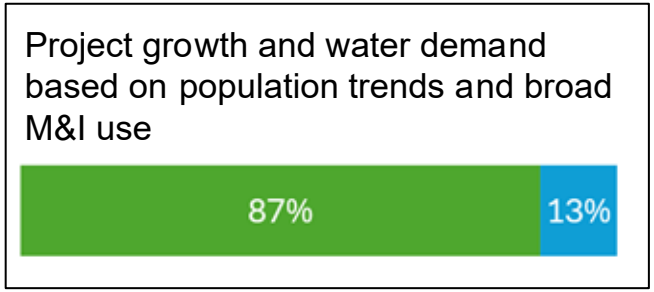
Hailey Kirlin, Division of Water Resources

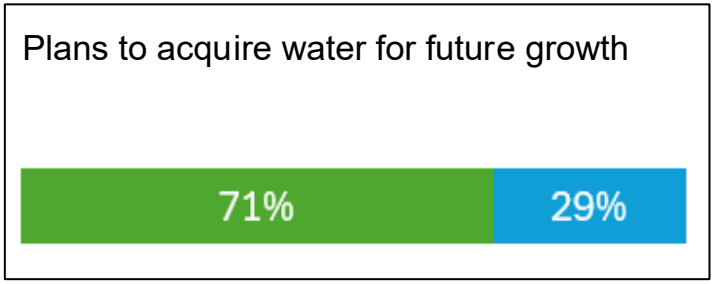
Contact: CityCountyPlanning@utah.gov

For more information, visit Water.utah.gov/water-general-plan

1. The effect of permitted development or patterns of development on water demand



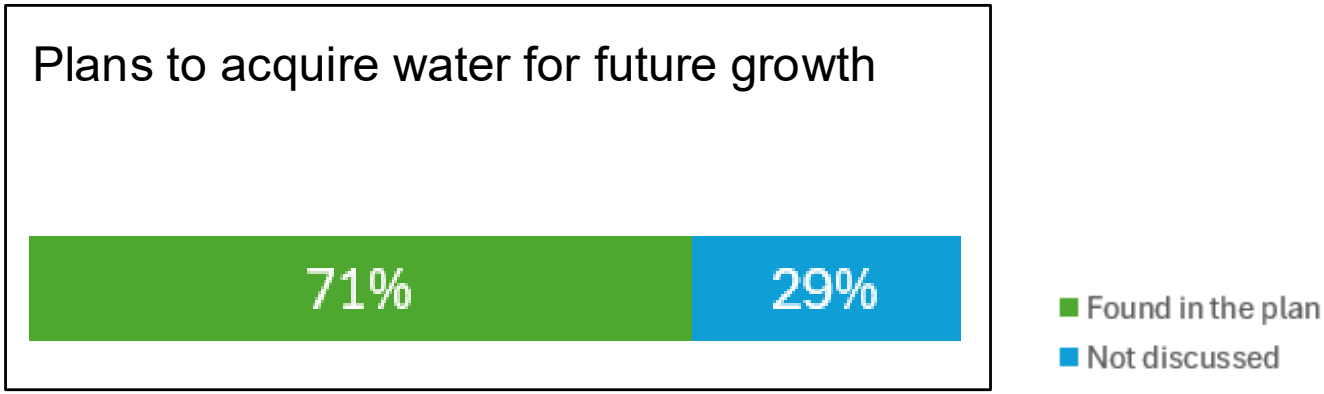




Found in the plan

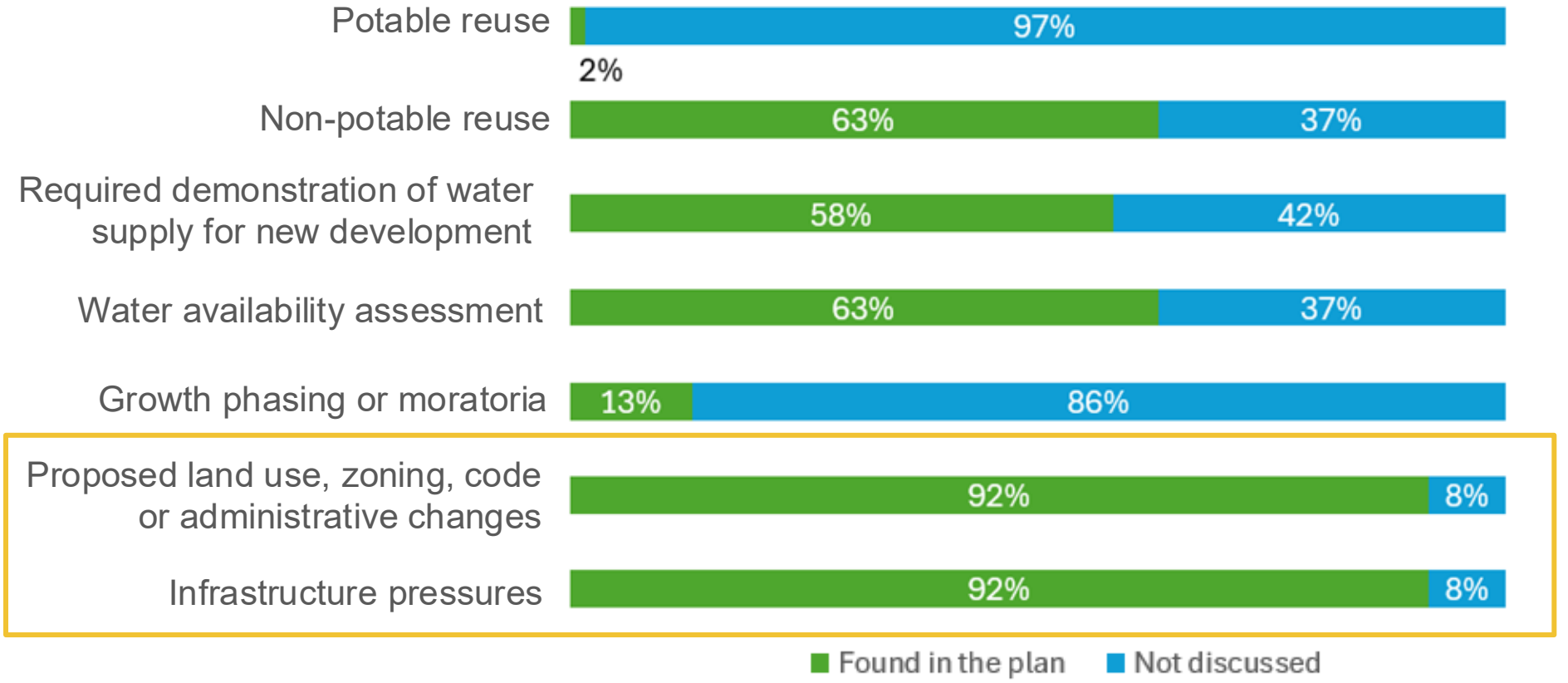
Not discussed

The water budget. Planners created various analyses of water supply, demand projections, and acquisition planning, **highlighting the need for scenario planning based on new wet-water availability**.

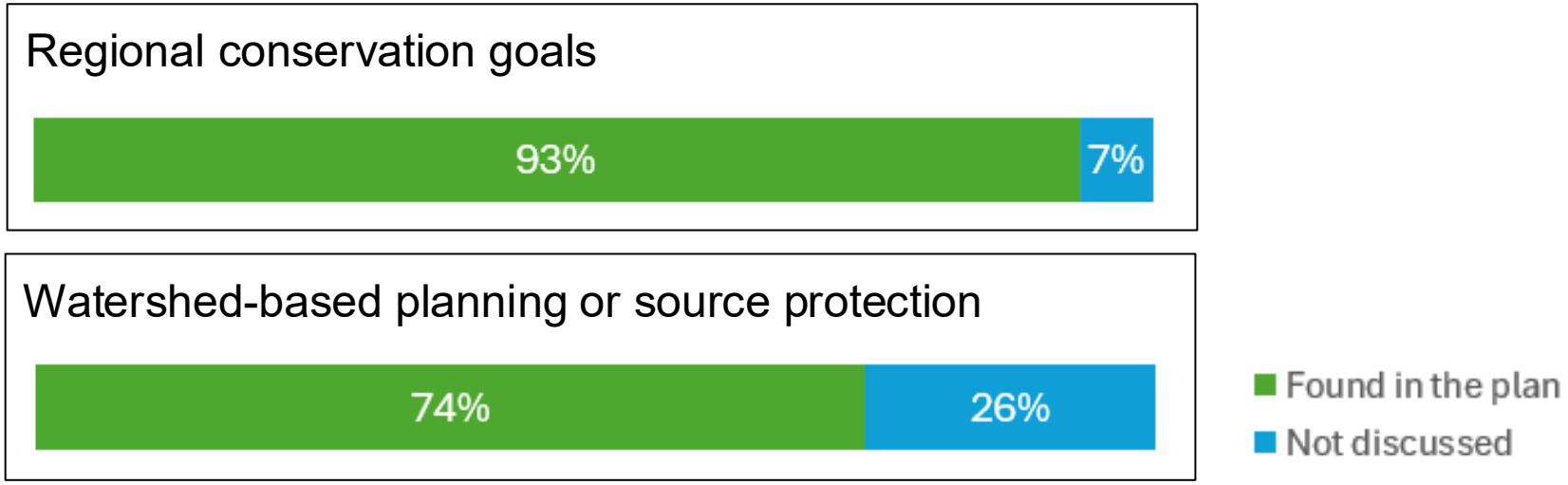


Would your plans change if you knew neighboring cities and counties were also planning to acquire additional wet water to support growth?

1. The effect of permitted development or patterns of development on water demand



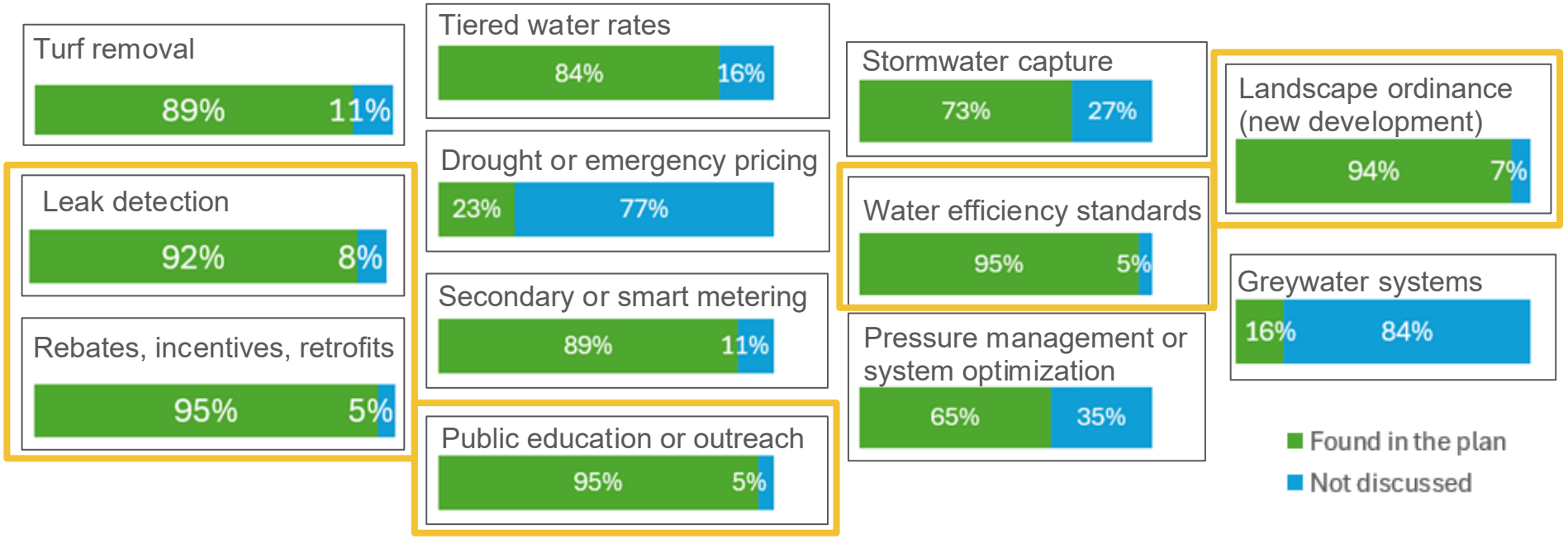
2 & 3. Methods of reducing water demand for existing and future development



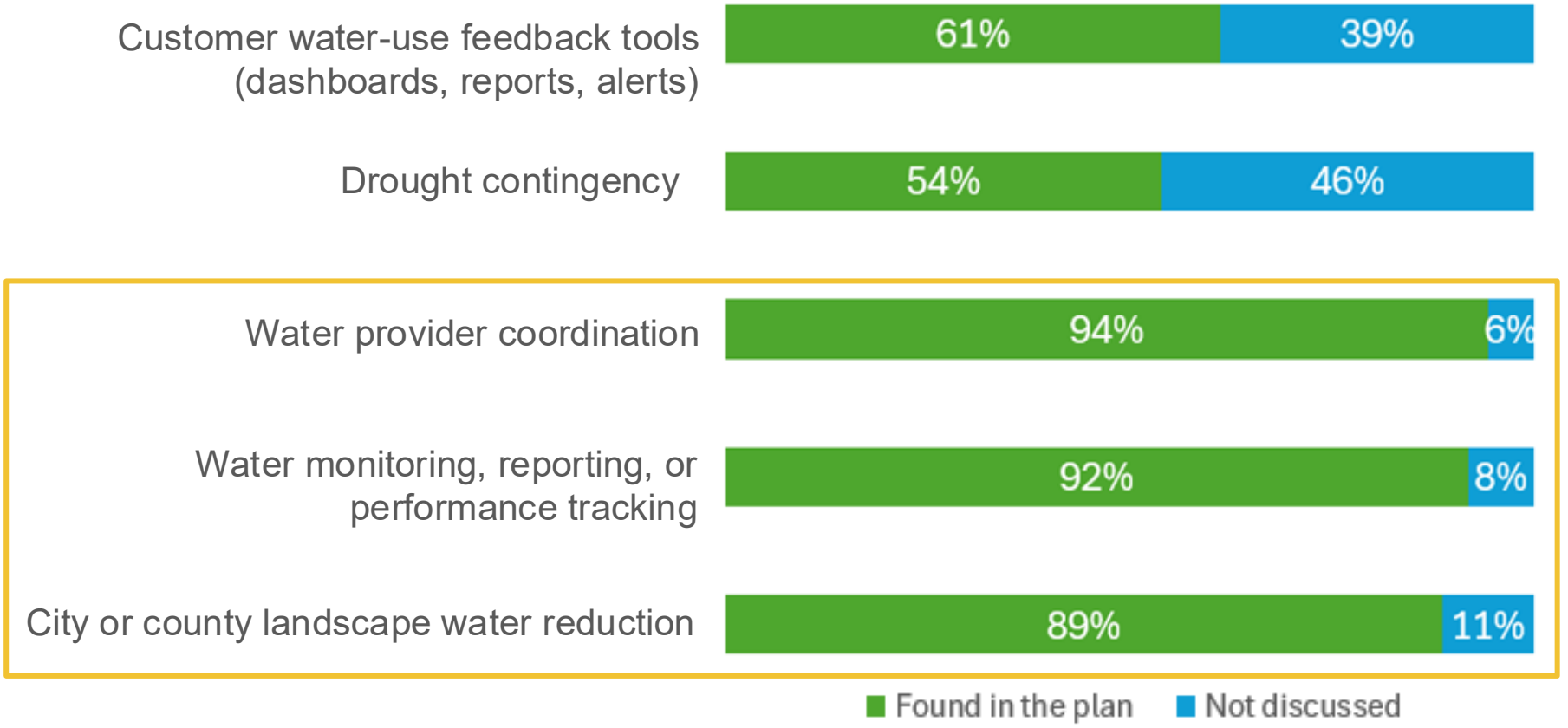
A regional understanding. Regional conservation and watershed planning represent one of the highest percentage of discussion across all analyzed plans, serving as a foundational standard for city and county water planning

2 & 3. Methods of reducing water demand for existing and future development

Existing development ⟷ Future development



4. Water preservation efforts for city and county operations



What's next?

Plan updates

- Secondary metering 2030
  - Data from metering will better inform water budgets

Ongoing coordination and education

- Program report with policy and education recommendations (summer 2026)
- Watershed Councils
  - More active in cities, counties - AOGs, APA, ULCT, UAC
- Growing Water Smart Workshops

Contact: CityCountyPlanning@utah.gov
For more information, visit Water.utah.gov/water-general-plan

We are open to review plans, collaborate, and facilitate meetings at any time.

As plans are implemented or water use shifts, please reach out if you need help amending plans.

Contact: CityCountyPlanning@utah.gov

For more information, visit Water.utah.gov/water-general-plan

Summit County Water Element

Context and Current Conditions

Snyderville Basin

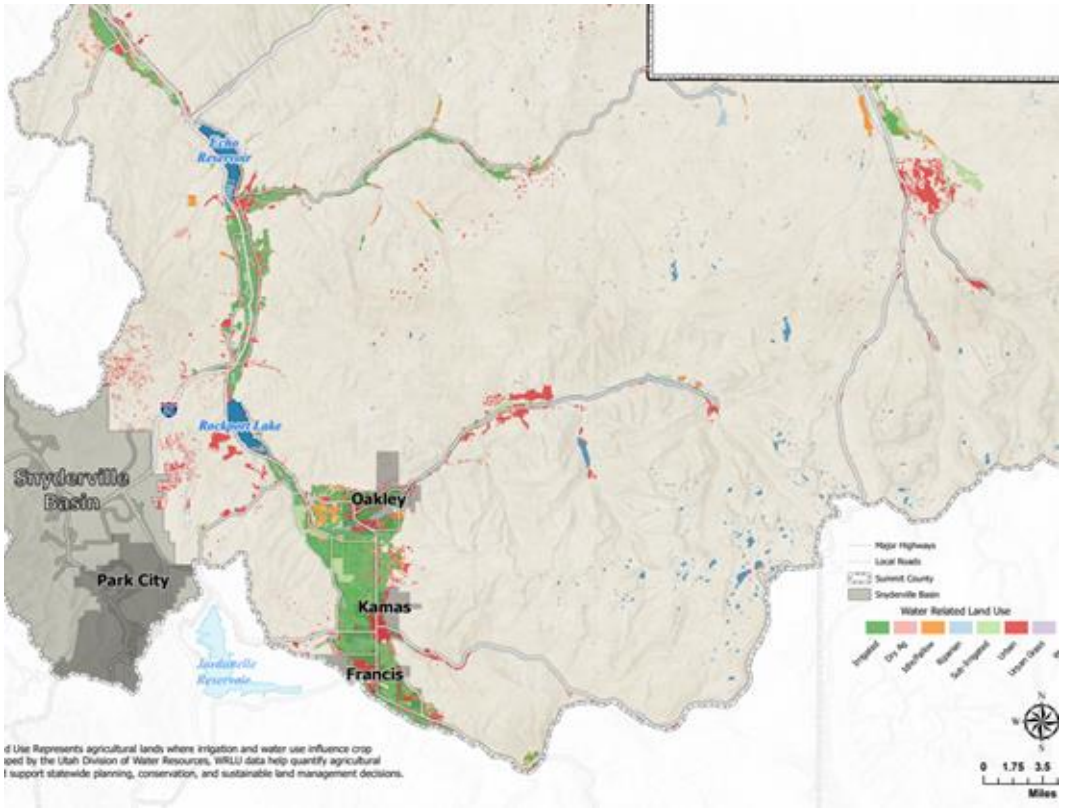
- 6 public water providers serving 35,699 people
- Current Demand = 12,528 ac-ft/yr (5-year avg.)
- Available Supply =12,484 to 12,777 ac-ft/yr (2020 estimates)
- Water concurrency since 2016

Eastern Summit County

- 24 public water providers serving 11,011 people
  - Anywhere from 2 to 773 connections
- Several providers indicated no significant changes anticipated in future water demand or already at capacity

Requirement Challenges

- Limited staff capacity to adequately address all requirements
- Lack of available data for smaller water providers and private wells
  - Inconsistent data formats and discrepancies between what providers filled out in the survey compared to what they reported to DWR
  - Over 70 listed irrigation and canal companies in the county
- Conflicting state legislation surrounding water concurrency



Key Takeaways

Considerations

- Future water security depends on:
  - Conservation
  - Land use decisions
  - Multi-year drought conditions
  - Coordinated efforts
- Existing conservation work provides a starting point for more effective collaboration and partnerships
- **Long-term efficiencies are essential to improve water resilience**

Concerns

- Current infrastructure and system capacity compared to projected growth
- Public health concerns of lower water quality for private wells as groundwater levels drop
- Building moratoriums and water trucking as recent examples of water providers taking extraordinary measures to meet capacity challenges

Opportunities

- Provides a path forward for the county to take a more active role in water conservation
- Greater internal coordination and clarity of roles and responsibilities across county departments
- Supports more cohesion between the county and water providers
- **New partnerships** and longer-term collaboration with entities we have not previously engaged with

Weber Basin Water Conservancy District

STATE U | Extension UtahStateUniversity

Swaner Preserve & EcoCenter
UtahStateUniversity

UACD
Utah Association of Conservation Districts

UDAF

Next Steps

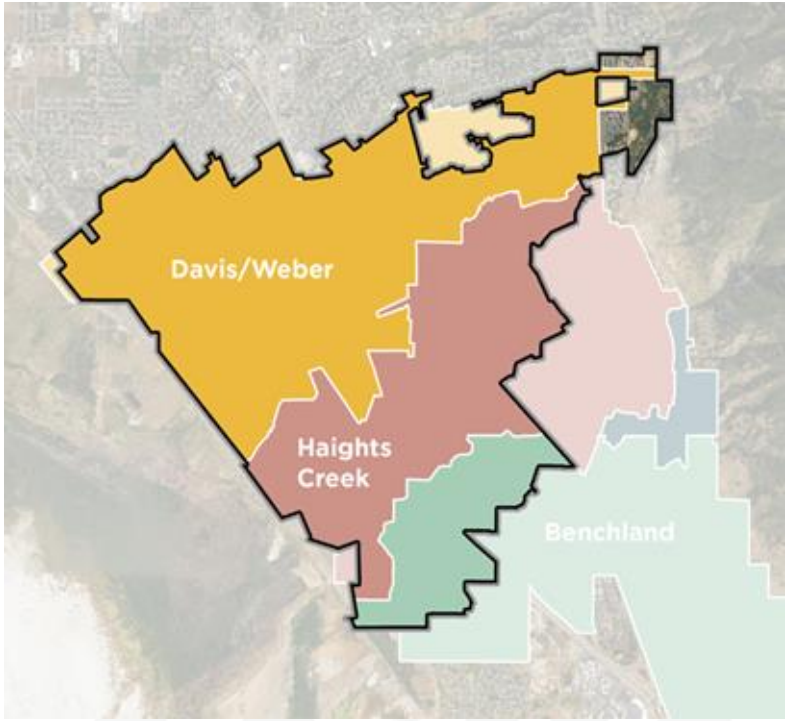
- Establish a plan for implementation
  - Prioritize projects based on impact, community needs, and anticipated legislation
    - Ex: Water-wise landscaping ordinance for Eastern Summit County
  - Consider establishing a Conservation Committee
  - Building partnerships for conservation programming, communications, etc.
  - Regular review of goals, priorities, strategies
- Possible improvements or tweaks to the chapter during General Plan reviews this year

KAYSVILLE CITY

- Davis County
- 11 square miles
- ~33,400 population
- Culinary water distributor
- Not a secondary water provider
- 2024 usage: 2,258 Ac-ft
- 95% of water connections are residential (8,988)
- 80% water usage is outdoors

Opportunities & Challenges

- Well-timed with culinary water conservation plan due to the state
- Grant from State - $15,000
- Public involvement
- Limited examples from other entities
- City only controls culinary water
- Limited data on secondary water usage
- Secondary water service boundaries both inside and outside of city limits
- Technical information to understand and communicate



Chapter 6: Kaysville Water Use and Preservation

Effect of Development Patterns on Water Demand & Infrastructure

Goal 1: Align future land use with sustainable water demand

Methods to Reduce Demand for Future Development

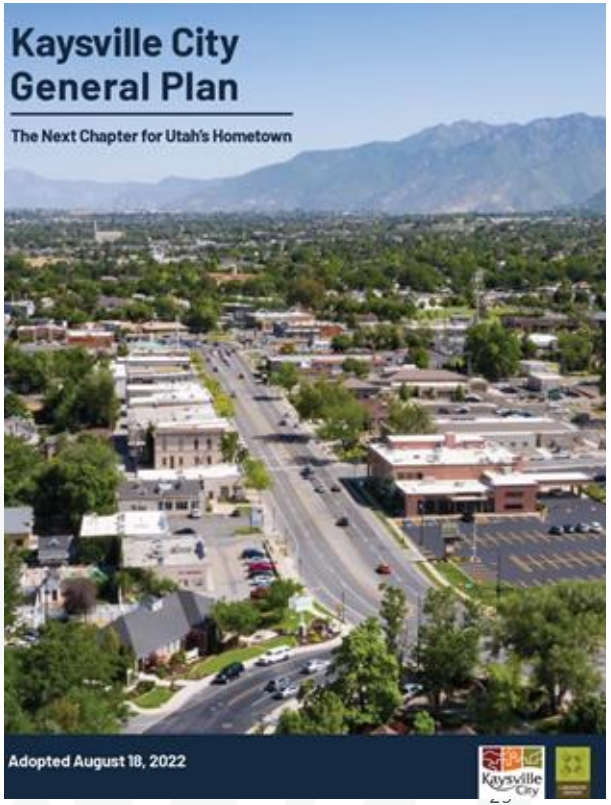
Goal 2: Further Kaysville's efforts in the 2025 Water Conservation Plan

Methods to Reduce Demand for Existing Development

Goal 3: Further Kaysville's efforts in the 2025 Water Conservation Plan

Opportunities to Modify City Operations to Reduce Waste

Goal 4: Further Kaysville's efforts in the 2025 Water Conservation Plan



Planning in Action – Zone & Utilization Tool

Zone	Water Use (kGAL0)/Acre	ERCs/Acre
Light Agricultural	2	.3
Heavy Agricultural	1	.1
Central Commercial	45	6.1
General Commercial	33	3.8
Health Care	36	5.1
Light Industrial	8	1.1
Professional Business	13	1.8
Public Use	4	.5
Single Family (>=10,000 SF)	11	1.5
Single Family (>=14,000 SF)	9	1.6
Single Family (>=20,000 SF)	11	1.5
Single Family (>=6,000 SF)	45	2.5
Single Family (>=8,000 SF)	17	2.5
Single Family (>=12,000 SF)	9	1.3

Planning in Action – Staff Report

iv. **Chapter 6: Kaysville Water Use & Preservation**

The Utah State Legislature recently passed legislation that required cities to adopt provisions into their general plans that address water conservation and water availability. Pursuant to that requirement, on December 18, 2025, the City Council amended the 2022 General Plan by adopting Chapter 6: Kaysville Water Use & Preservation, which goes into effect on Friday, January 2, 2026. Based on this new chapter, staff has provided the following assessment of culinary water usage in relation to level of service (LOS) and equivalent residential connections (ERC) and availability of water for the rezone application. When analyzing the City's water capacity, the contracts held with Weber Basin Water Conservancy District (WBWCD) for water are listed in acre feet, so this section will convert ERCs from gallons to acre-feet (AF).

Goal 1 of Chapter 6 states the City will **"Align future land use with sustainable water demand"** and:

- *"Use ERC-based water demand estimates for major plan amendments and rezonings, especially for large greenfield and higher-intensity infill projects."*
- *"Incorporate water demand and LOS checks into staff reports for significant development proposals (e.g., annexations, large subdivisions)."*

The remainder of this section details the water availability analysis and fulfills the goals and objectives outlined above. Data from the Public Works Department indicates that one equivalent residential connection (ERC)—representing a single-family home—uses an average of 7,100 gallons of culinary water per month. The Symphony project proposes 46 single-family dwellings, which would result in an estimated annual usage of 3,919,200 gallons of water. Since one acre-foot (AF) of water equates to 325,851 gallons, 46 ERCs equate to approximately 12.02 AF per year. The City contracts for culinary water with WBWCD via a primary contract for 2,786 AF and a secondary contract for an additional 286 AF. A final contract allows Kaysville to exchange water rights, providing another 400 AF of capacity. In total, the City has 3,186 AF of water contracted with WBWCD. A five-year history of total consumption shows that the highest usage occurred in 2020 (2,783.33 AF) and the lowest in 2023 (2,145.13 AF). The average annual consumption over this five-year period is 2,436.15 AF.

Table 2 below summarizes the last five years of deliveries from WBWCD, broken out by month.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual in Acre Feet
2024	177	182.02	204.88	159.89	202.63	215.27	286.43	199.4	291.83	208.04	181.06	177.26	2,485.71
2023	149.43	134.98	146.78	144.93	210.39	186.49	225.96	212.69	177.65	195.04	167.51	193.28	2,145.13
2022	188.03	183.6	203.05	183.53	222.89	197.5	193.17	219.34	179.1	226.84	172.97	151.15	2,321.17
2021	205.32	178.45	210.44	212.96	206.78	251.14	219.2	202.51	209.57	187.7	187.64	173.72	2,445.43
2020	206.54	193.59	190.67	202.21	243.24	259.08	279.81	294.84	246.32	242.16	230.94	193.93	2,783.33

Table 2 – Weber Basin Water Conservancy District Deliveries

With the current contractual annual water allocation at 3,186 acre feet, and this proposed development requiring an estimated 12.02 acre feet, the culinary water needs for this development will be met and do not exceed our contractual availability.

Culinary Water Availability (AF) Based on Annual Usage	
Contracted Water	3,186.00
5-Year Use Average	2,436.15
Horizon East Estimated Use	12.02
Remaining Capacity	**737.83**

The City has adequate culinary water capacity to support this rezone application.

After a comprehensive review of the 2022 General Plan, the proposed rezone for Symphony Homes is supported by the guiding principles, goals, objectives and implementation measures of the 2022 General Plan.

Pro Tips

- Timing
- Staffing and resources
- Tool will work when the rezone isn't varied
- There is always a work around
- Keep adapting and learning
- Relationships are important

KAYSVILLE CITY

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Community Development Director

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Discussion