



Washington City Council
Workshop Meeting Agenda
May 22, 2024

PUBLIC NOTICE is hereby given that the Washington City Council will hold a Public Electronic Workshop Meeting on **May 22, 2024 at 3:00 P.M.** hosted at Washington City Hall located at 111 North 100 East, Washington, Utah. The meeting will be broadcast via Youtube Live linked online at <https://washingtoncity.org/meetings>

1. Approval of the Agenda.
2. Closed Session
 - a. Character or professional competence of an individual.
3. Regional Reuse System Update. Morgan Drake
4. Conservation Update. Doug Bennett
5. Adjournment

POSTED on this 16th day of May 2024
Tara Pentz, City Recorder

In accordance with the Americans with Disabilities Act, Washington City will make reasonable accommodations to participate in the meeting. Requests for assistance can be made by calling the City Recorder at 656-6308 at least 24 hours in advance of the meeting to be held.



Regional Reuse System

Washington City Workshop

May 22, 2024

20-Year Water Supply Plan



Water
Conservation



Reuse Water



New Water
Supply
Development



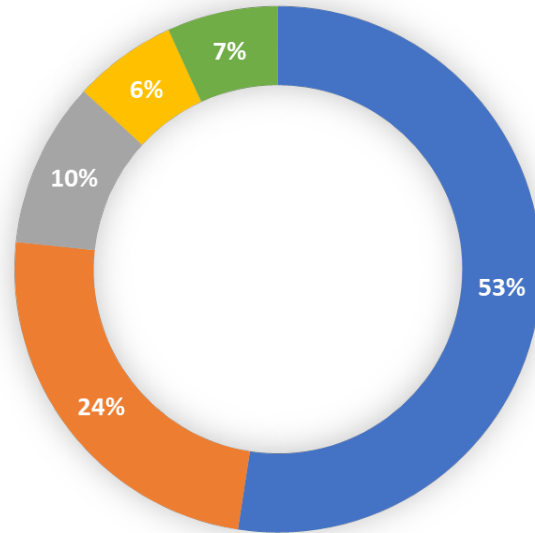
Municipal
Groundwater
Optimization



Agricultural
Conversion



Sources

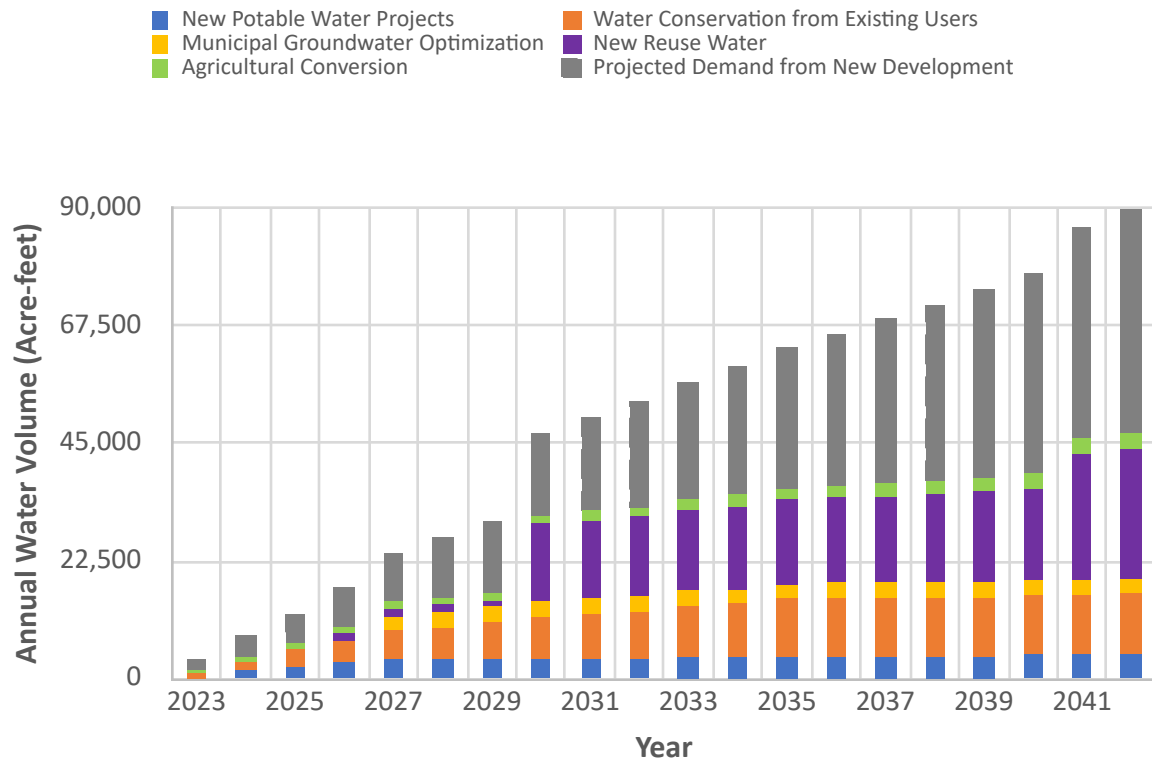


■ Reuse ■ Conservation ■ New Potable Projects ■ Groundwater Optimization ■ Ag Conversion

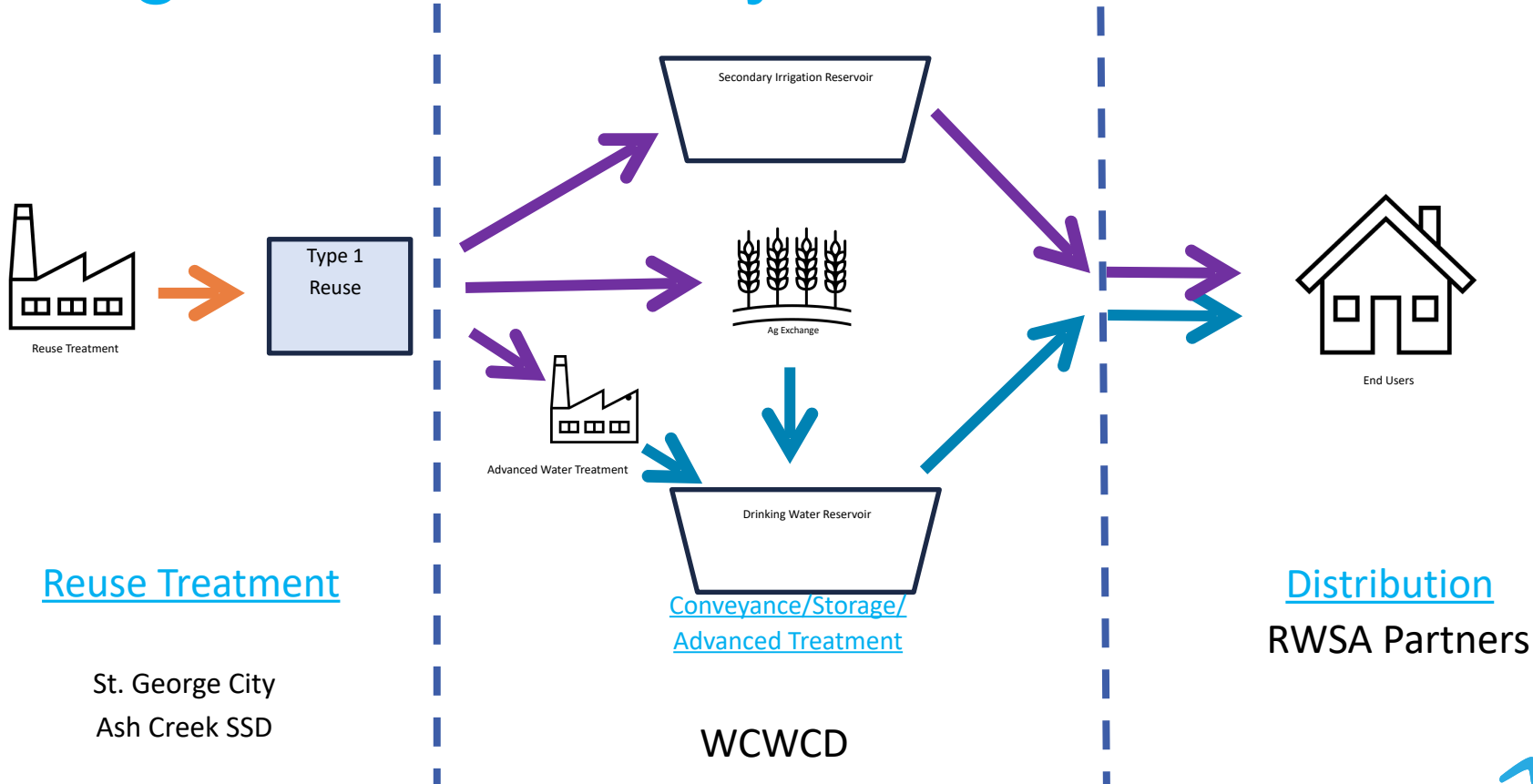


Yields

New Water Supplies	Estimated Annual Yield (AFY)
Conservation	11,421
Reuse	24,716
Potable Projects	4,787
Groundwater Optimization	3,000
Ag Conversion to M&I	3,216
Total New Water	47,141
Total Volume Required for 20-Year Growth	42,746
Water Supply Surplus	4,395

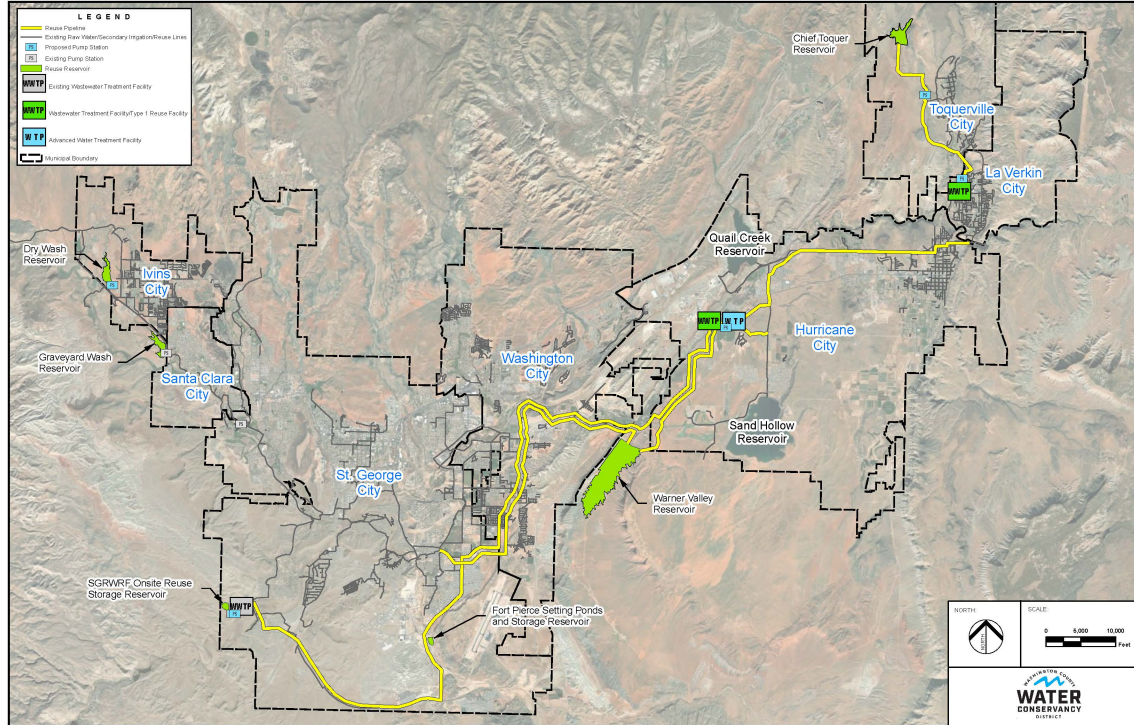


Regional Reuse System



Regional Reuse System

- Components
 - New and expanded treatment plants
 - 60 miles of pipeline
 - 4 new reservoirs
 - 5 pump stations
- Estimated 24,000 AFY
- Estimated \$1+ billion



Projects

Component Type	Component	Description	Owner
Treatment	SGRF Upgrade	Upgrade SGRF Type I technology to allow 14 MGD of capacity	St. George
	SGRF Expansion	Expand SGRF Type I facility capacity an additional 8 MGD (22 MGD total)	St. George
	SGRF Onsite Reuse Pond	Construct 100 acre-foot pond for treatment operational flexibility	St. George
	Ash Creek SSD Type I Reuse Facility	Construct Type I treatment components on future wastewater treatment plant for 7 MGD of capacity	Ash Creek SSD
	Confluence Park Reuse Facility	Construct decentralized wastewater treatment plant for 1.5 MGD of capacity expandable up to 3 MGD	Ash Creek SSD
	Advanced Water Treatment Facility	Treat SGRF and Ash Creek SSD Type I water for IPR for 7 MGD of capacity	Ash Creek SSD
	Potable Reuse Demonstration Facility	Construct 200 gpm demonstration facility of advanced water treatment and brine management processes	Ash Creek SSD
Conveyance	Reuse Forebay	Construct 150 acre-foot centralized Type I reuse storage reservoir	WCWCD
	SGRF to Reuse Forebay Pipeline	Convey reuse water to forebay, ~27 miles	WCWCD
	Reuse Forebay to Warner Valley Reservoir Pipeline	Convey Type I reuse water to Warner Valley Reservoir, ~4 miles	WCWCD
	Warner Valley Outlet Pipeline	Convey Type I reuse water from Warner Valley into RWSA Service Area, ~10 miles	WCWCD
	Reuse Forebay to Quail Creek Ag Exchange Pipeline	Convey Type I reuse water to Hurricane/La Verkin area for agricultural supply exchange, ~10 miles	WCWCD
	AWT to Quail Creek Pipeline	Convey IPR water to Quail Creek/Sand Hollow reservoirs, ~1 mile	WCWCD
	Chief Toquer to TSWS Pond Pipeline	Convey secondary water to TSWS pond, ~2 miles	WCWCD
	CPWRF to TSWS Pipeline	Convey Type I reuse water to TSWS pond, ~4 miles	WCWCD
	Fort Pearce Pond and Desilting Basins	Construct desilting facility and 250 acre-foot distribution storage reservoir	WCWCD
Storage	Dry Wash Reservoir	1,500 acre-foot secondary irrigation reservoir	WCWCD
	Graveyard Wash Reservoir	1,900 acre-foot secondary irrigation reservoir	St. George
	Chief Toquer Reservoir	3,700 acre-foot secondary irrigation reservoir	WCWCD
	Warner Valley Reservoir	Up to 55,000 acre-foot of secondary irrigation reuse water storage	WCWCD



Benefits



ENVIRONMENTALLY
SOUND



SAFE



RELIABLE



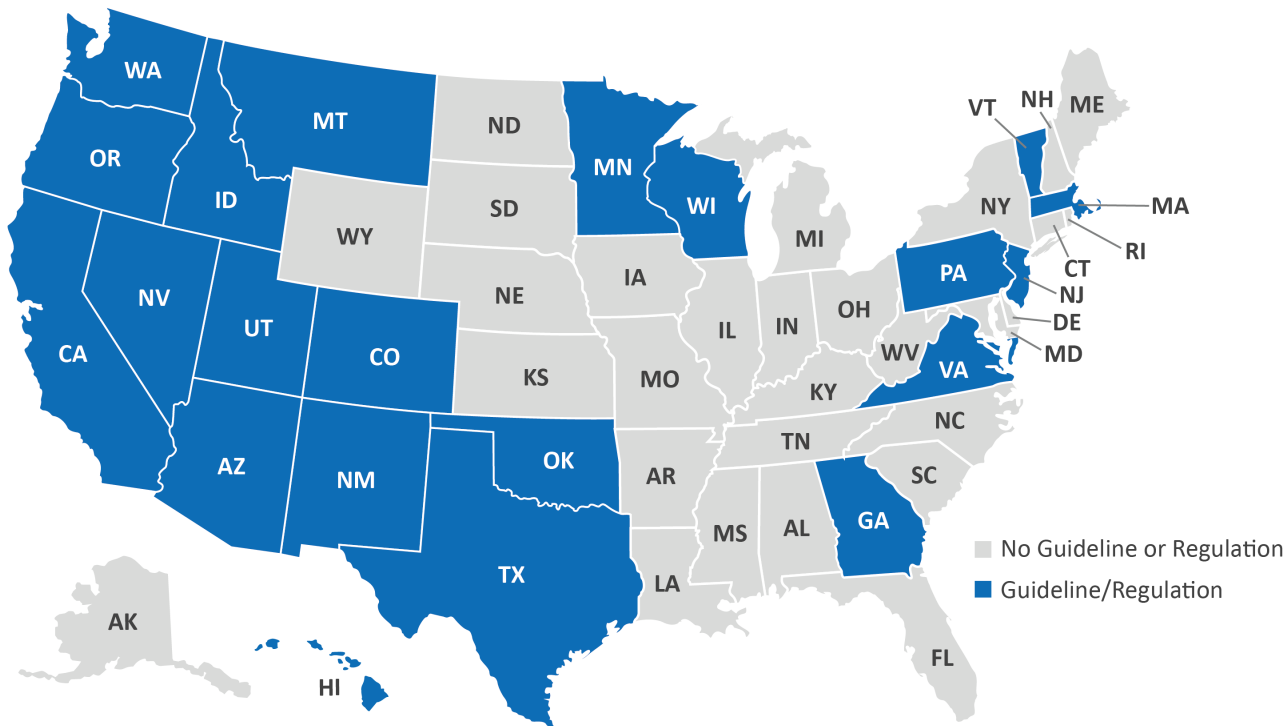
LOCALLY
CONTROLLED



DROUGHT
RESILIENT



States with Centralized Non-Potable Water Reuse Regulations or Guidelines



Date created: March 2023

This is a map of states with guidelines or regulations included in the REUSExplorer tool. Some states may permit reuse on a case-by-case basis and did not have enough information to include in the tool.



Funding

Amount	Reuse Component	Funding Agency
\$1.4 million	Regional Reuse System	Bureau of Reclamation
\$11.7 million	Chief Toquer Reservoir	Bureau of Reclamation
\$5 million	Ash Creek Project	Washington County
\$5 million	Chief Toquer Reservoir	Department of Water Quality (DWQ)
\$2.4 million	Dry Wash Reservoir	DWQ
\$1.9 million	Graveyard Wash Reservoir	DWQ
\$1.7 million	Confluence Park Water Reclamation Facility	DWQ
\$20.5 million (applied)	Regional Reuse System	Bureau of Reclamation





Conservation in Utah's Fastest Growing Region

Washington City Council | Doug Bennett | May 22, 2024

Tourism & Seasonal Homes

10

million
visitors
a year

20%

seasonal
Homes



20-Year Plan

Sources of New Water Supply



Water
Conservation



Reuse Water



New Water
Supply
Development



Municipal
Groundwater
Optimization



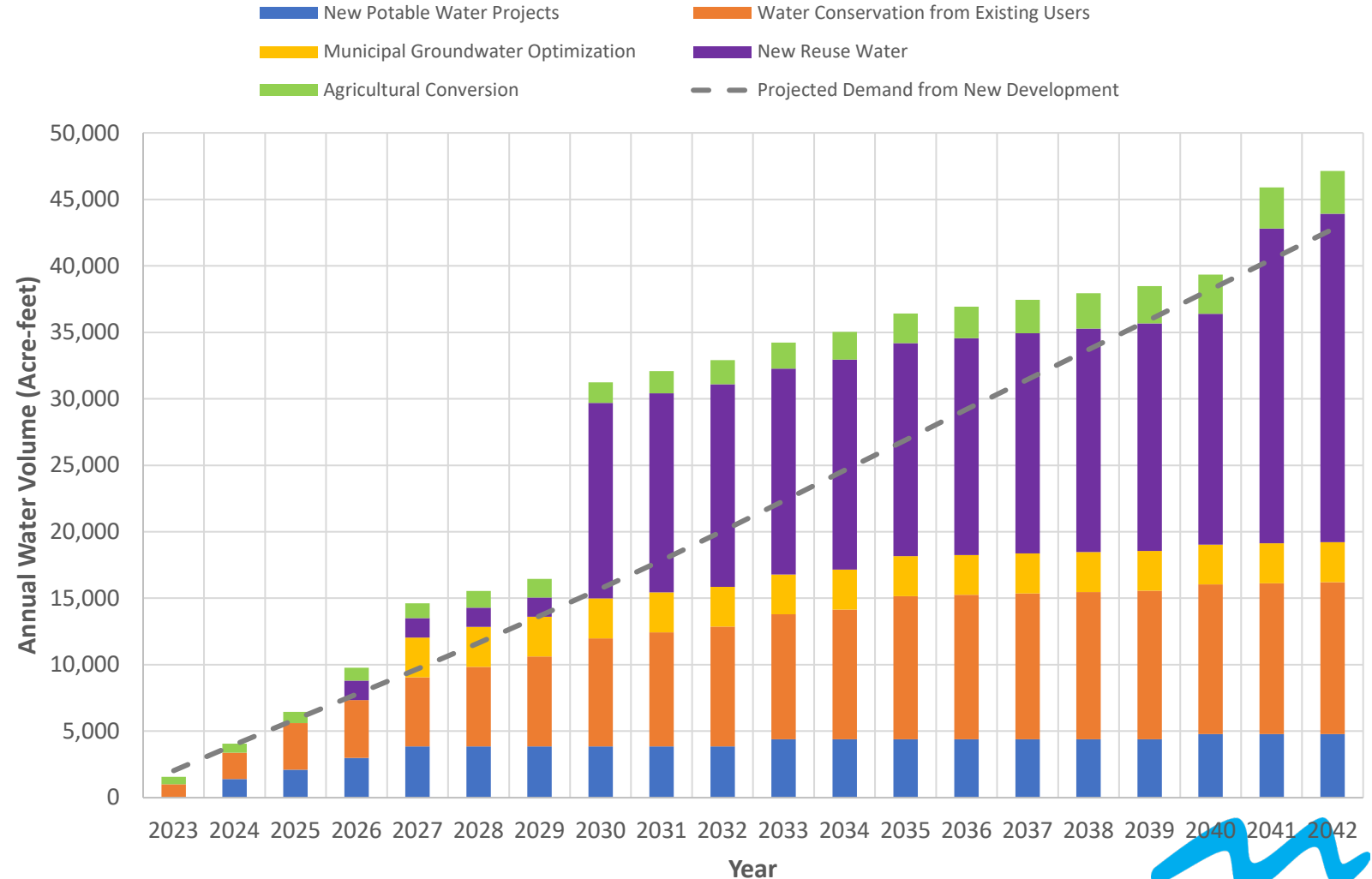
Agricultural
Conversion



Integrated 20-Year Supply Plan

New Water Supplies	Estimated Annual Yield (AFY)
Projected Water Conservation	11,421
New Reuse Water	24,716
New Potable Water Projects	4,787
Municipal Groundwater Optimization	3,000
Agricultural Conversion to M&I	3,216
Total New Water Developed	47,141
Total Volume Required for 20-Year Growth	42,746

20-Year Water Supply Plan



Primary Conservation Strategies



Rate signaling

Tiered rates with excess use surcharge



Regulation

Stringent Standards for New Development



Engagement

Transparent Water Billing

Demonstration Gardens & Training



Incentives

Lazy lawn retrofit

WaterSense Irrigation Controllers

High Efficiency Toilets



Aerial Vegetation Assessment



Conducted using infrared imagery and lidar.

- Can distinguish lawn, trees, shrubs

180-200 million square feet of lawn

- Uses almost half of the region's water supply.

Up to 40 percent estimated to be non-functional and available for conversion.

The 20-year supply plan calls for 58 million square feet of conversion.

More analysis underway.





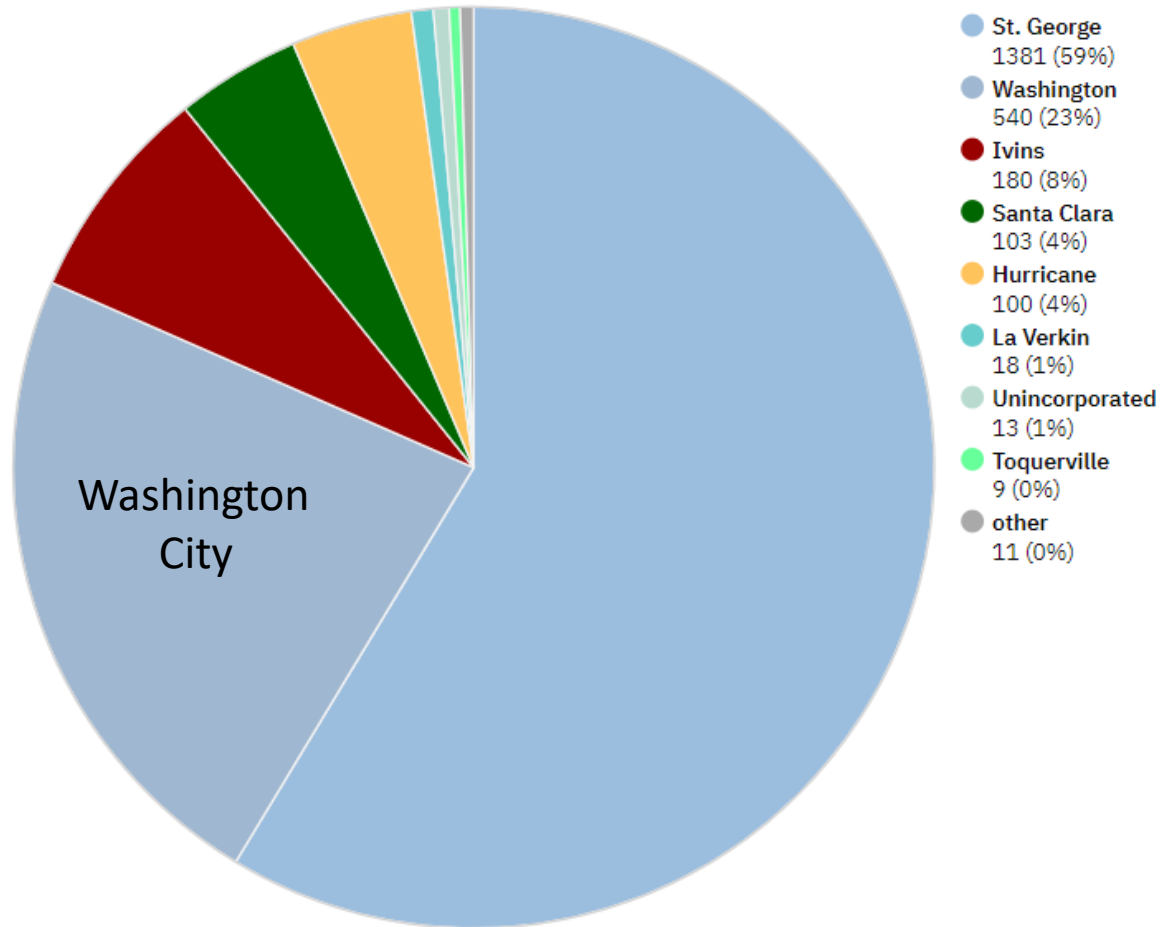
Water Efficient Landscape Program

- 2,267 applications received
- 1.4 million square feet of grass replaced (180 miles of sod)
- 65 million gallons saved annually
- Water development cost of \$14,000 per acre-foot.
- 7 percent of Utah's population, but 34 percent of program achievement statewide.

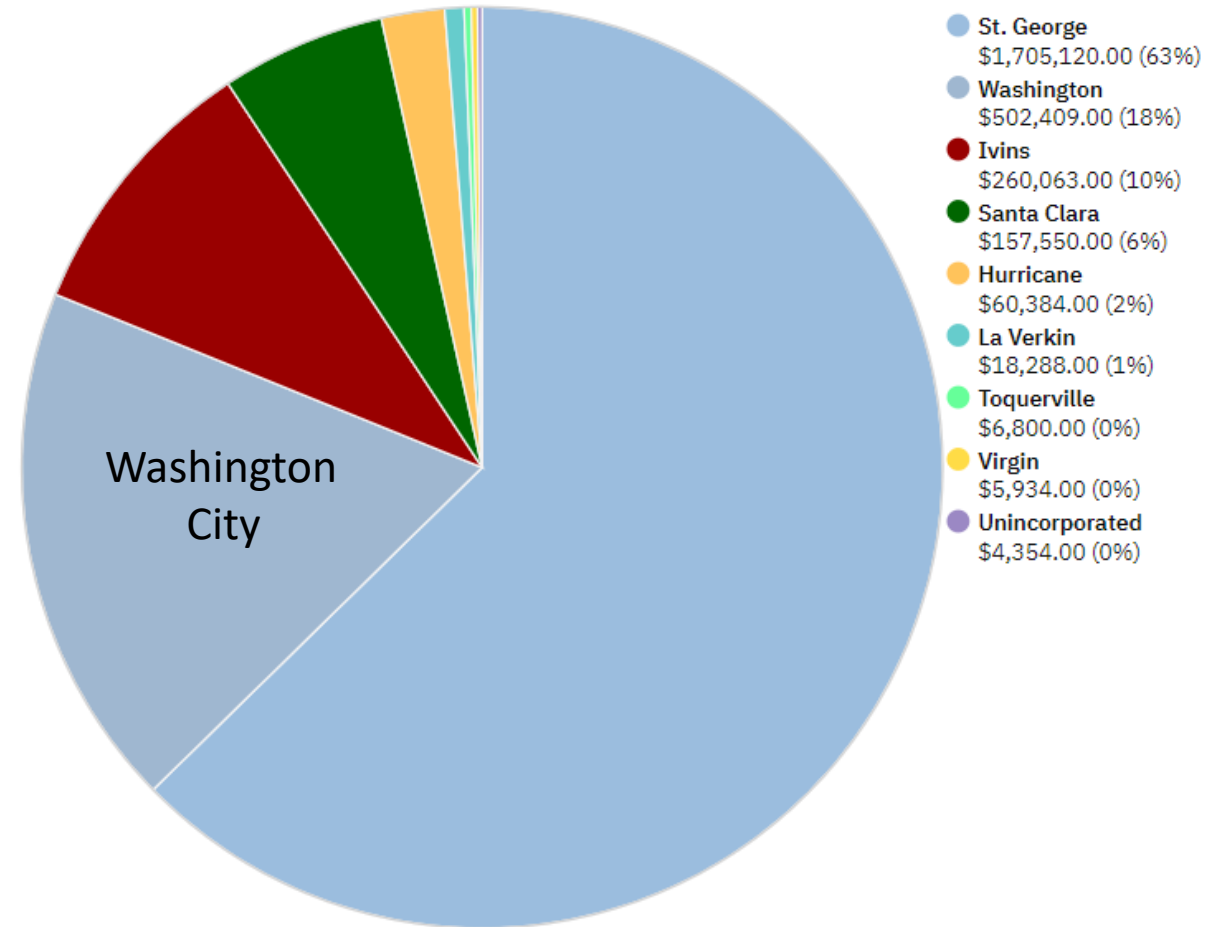


Participation by City

Applications per City



Amount Paid



A Leader in Utah's Water Conservation Efforts



HIGHEST REDUCTION IN PER CAPITA
WATER USE
MORE THAN 30%



HIGHEST PARTICIPATION IN
STATEWIDE GRASS REPLACEMENT
PROGRAM



HIGHEST STANDARDS FOR NEW
CONSTRUCTION





WCWCD.GOV
info@wcwcd.org

