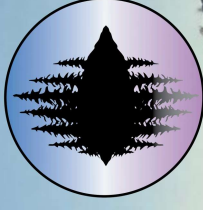


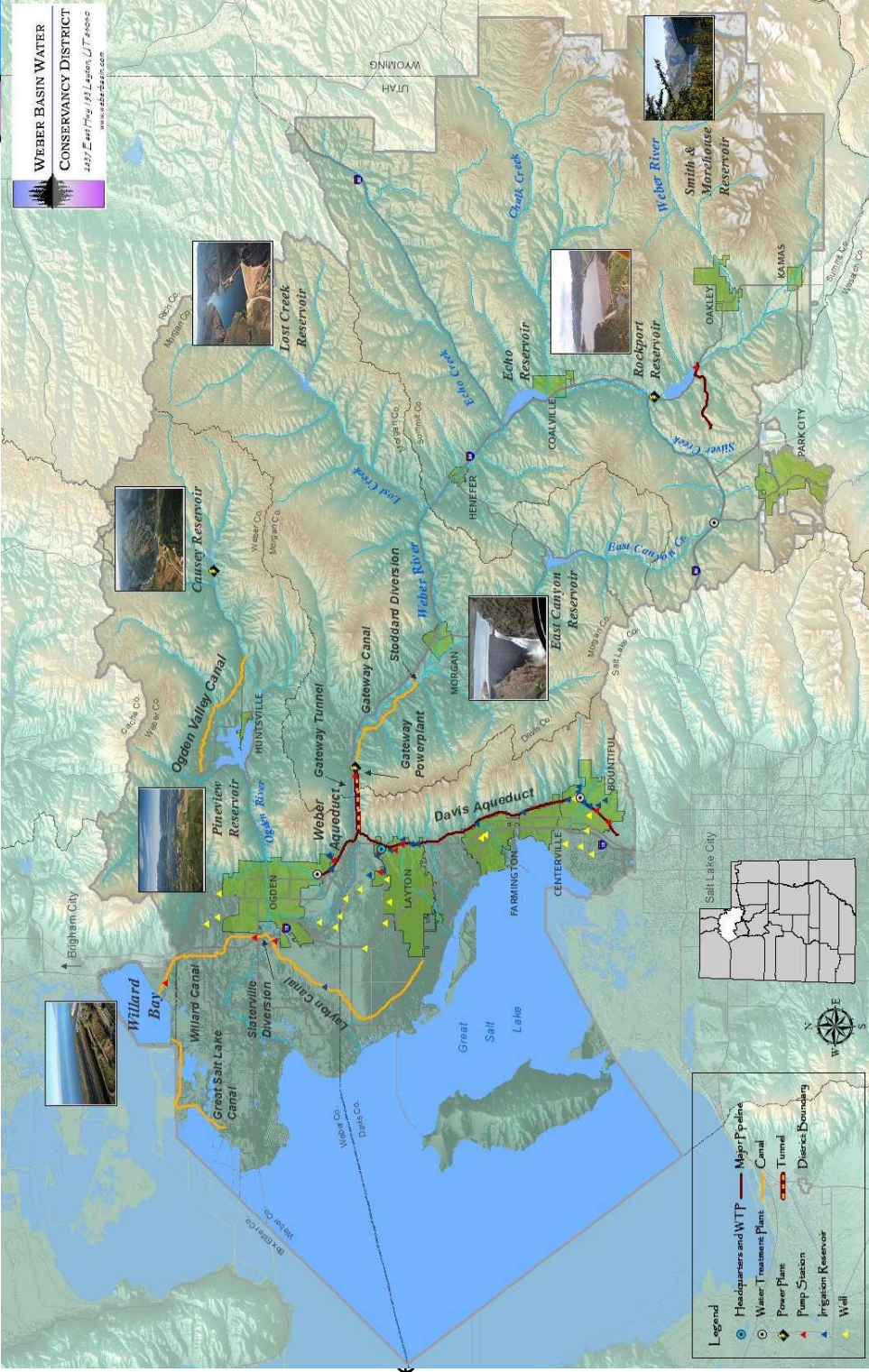
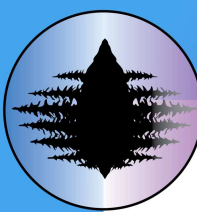
LAND USE AND WATER PLANNING



Change is the law of life. And those who look only
to the past or present are certain to miss the future.

John F. Kennedy





- 5 Counties
- 2,800 Square Miles
- 700,000 Residents
- 7 Dams
- 3 Power Plants
- 4 WTPs
- 500+ miles of Pipelines
- Largest contiguous secondary system in the nation

WBWCD Customers:

Irrigation

- Benchland Irrigation
- Bountiful Sub Water District
- Centerville Duel Creek
- Chalk Creek Irrigation
- CO-OP Farms Irrigation
- Croyden Irrigation
- Davis & Weber Counties Canal
- Downs Creek Irrigation
- East Porterville Irrigation
- East Wasnship/Gibbons & Pace
- Eden Irrigation
- Emmertsen Irrigation
- Felt, Peterson, Slater Irrigation
- Heights Creek Irrigation
- Hill AFB Golf Course
- Hill Field 193
- Hooper Irrigation
- Huntsville Irrigation
- Huntsville 50 Birch Irrigation
- Kays Creek Irrigation
- Kaysville Irrigation
- Kaysville Irrigation Park
- Layton Canal & Irrigation Co.
- Littleton-Milton Irrigation
- Middle Fork Irrigation
- Mountain Valley Canal Irrigation
- Mountain View Irrigation
- North Morgan Irrigation
- North Round Valley
- North Salt Lake (Foxboro)
- Oakridge County Club
- Ogden River Water Users Association
- Peterson Irrigation
- Pinnall Duck Club
- Roy Water Conservancy District
- Salmiho Irrigation
- So. Davis County Water Improvement District
- South Morgan Water Company
- South Ogden Conservancy District
- South Weber Water Improvement District
- Sun Hills Golf Course
- Syracuse City
- Umatan Mountain Streams
- Valley View Golf Course
- Warren Irrigation
- Weber Basin Job Corps
- Weber-Box Elder Conservancy District
- Weber Canal Company
- Welch Field Ditch
- West Bountiful Golf
- West Royville Irrigation
- West Wasnship Irrigation
- Wilson Irrigation

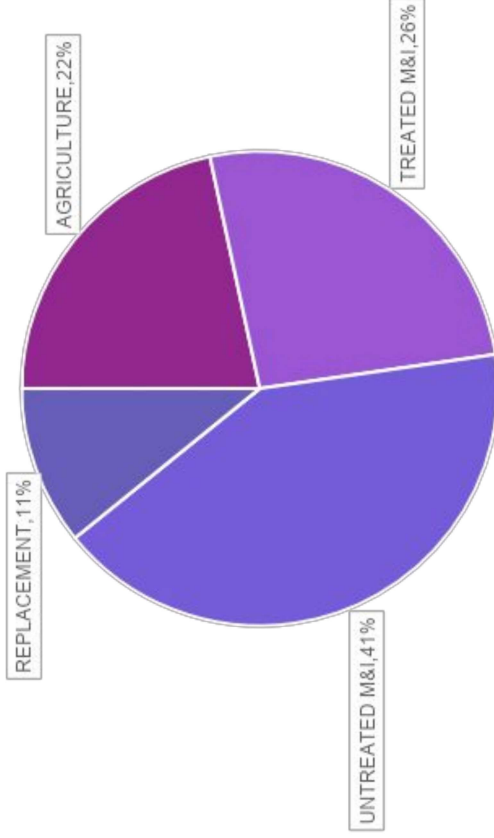
Untreated Water

- Big West Oil
- Cleveon, USA
- Great Salt Lake Minerals
- Mountain Regional SSD
- North Salt Lake City
- Ogden City
- Park City
- Parsons
- Summit Water Dist. Company
- Tesoro

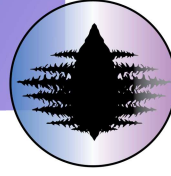
Treated Water

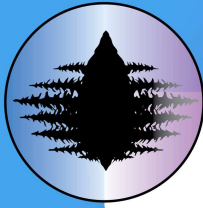
- Bountiful City
- Centerville City
- Cleveon, USA
- Clearfield City
- Clinton City
- Farmington City
- Fruit Heights City
- Geneva Rock
- Hill Air Force Base
- Kaysville City
- Layton City
- MDA-Flaming Hill
- Milton Hollow WID
- North Salt Lake City
- North Davis County WID
- South Weber City
- Sunset City
- Syracuse City
- Tesoro
- Wasatch Integrated Waste MGMT
- Webbs Canyon Water Company
- Weber Basin Job Corps
- West Bountiful City
- West Point City
- Woods Cross City
- Silverline
- Bona Vista Water Imp. Dist
- Great Salt Lake Minerals
- Hooper Water Imp. Dist
- MJK Fabrication
- Ogden City
- Pleasant View City
- Riverdale City
- Roy City
- South Ogden City
- Taylor-West Weber WID
- Utah Highlands WID
- Utah City
- Washington Terrace City
- Weber County-Molding
- West Warren-Narvon WID
- Western Basin Water Company
- Western Zirconium

DISTRICT CONTRACTS



■ AGRICULTURE ■ TREATED M&I ■ UNREATED M&I ■ REPLACEMENT





Recent Drought History

Weber Basin Recorded Storage History (acre-feet)

1971 - 2017

- Total Basin Capacity
- Total Basin Storage
- Total Basin Upstream Storage
- Willard Bay Storage

1977
Donk's Reservoir and storage in the Weber Basin drainage, 456,000 acre-feet (18.5 billion gallons) of water were stored in the basin, 100,000 acre-feet of that water was stored by all the City.

1988
Completed Smith and Newhouse Reservoir.

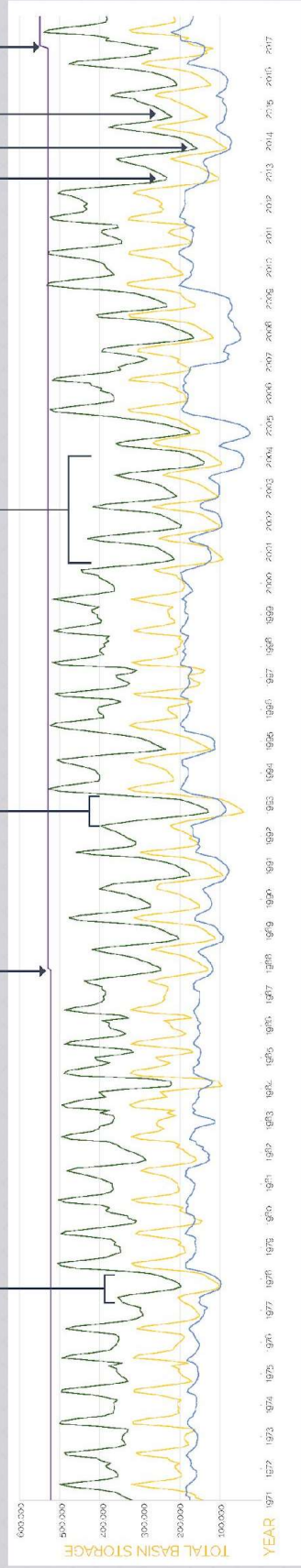
1992
Reservoir. Storage in the reservoirs increased to 1.1 billion acre-feet of water by September 1992.

2001 to 2004
Eight onliners. Willard Bay Reservoir and storage in the basin increased to 1.1 billion acre-feet of water.

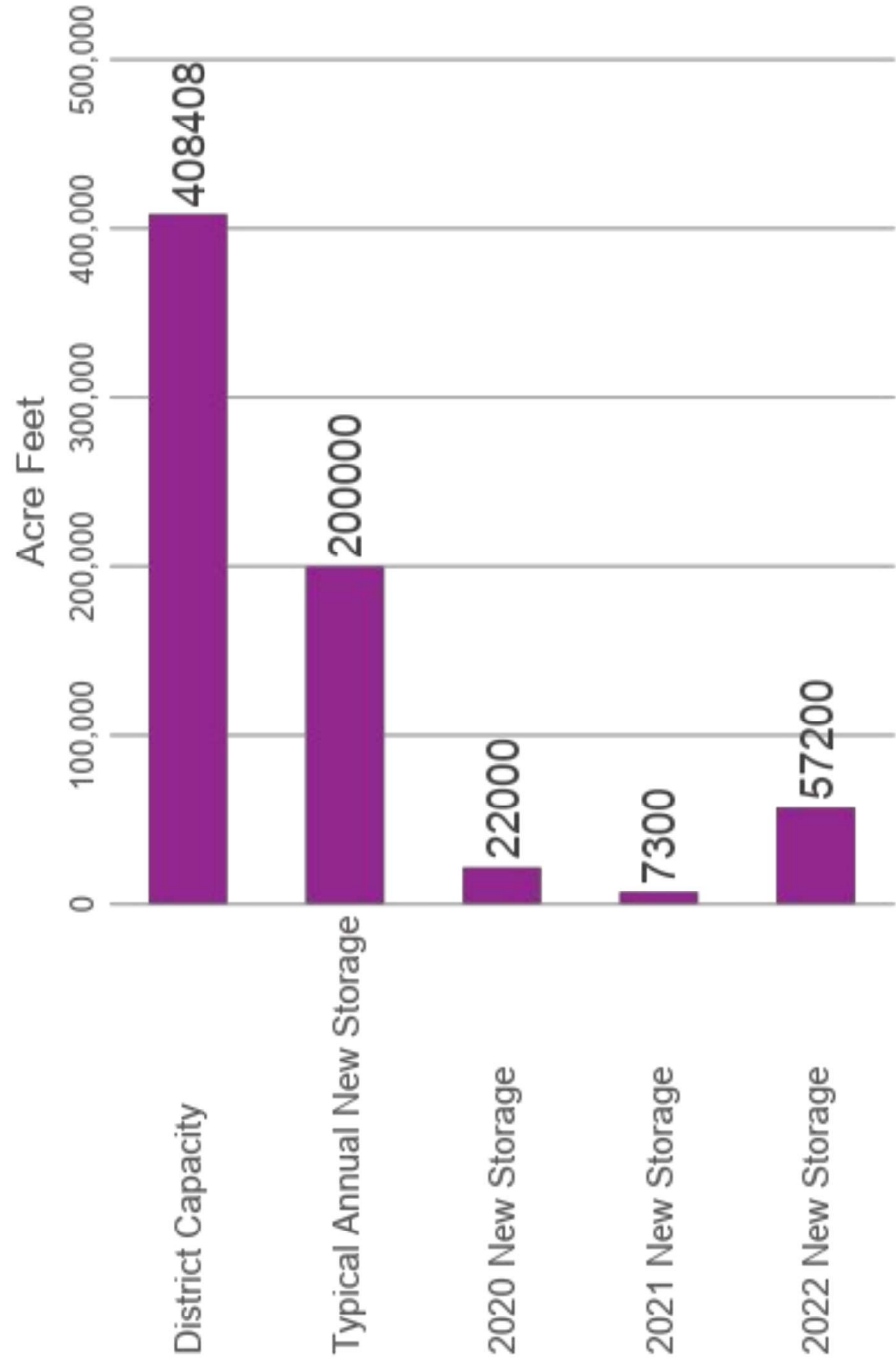
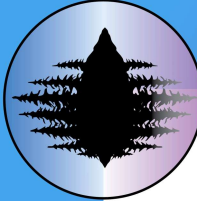
2013
Extreme low storage. Storage in the basin fell to 1.1 billion acre-feet of water by September 2013.

2015
Record low storage with 5MCF on Fall 1. Storage in the basin fell to 1.1 billion acre-feet of water by October 15.

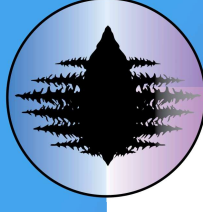
2017
Increased capacity of Willard Bay.



DISTRICT DROUGHT STORAGE LEVELS



Drought Level Triggers & Reduction



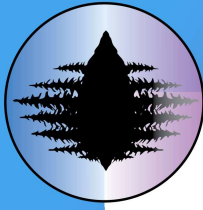
Targets

Developed with input from local cities, users, and other stakeholders

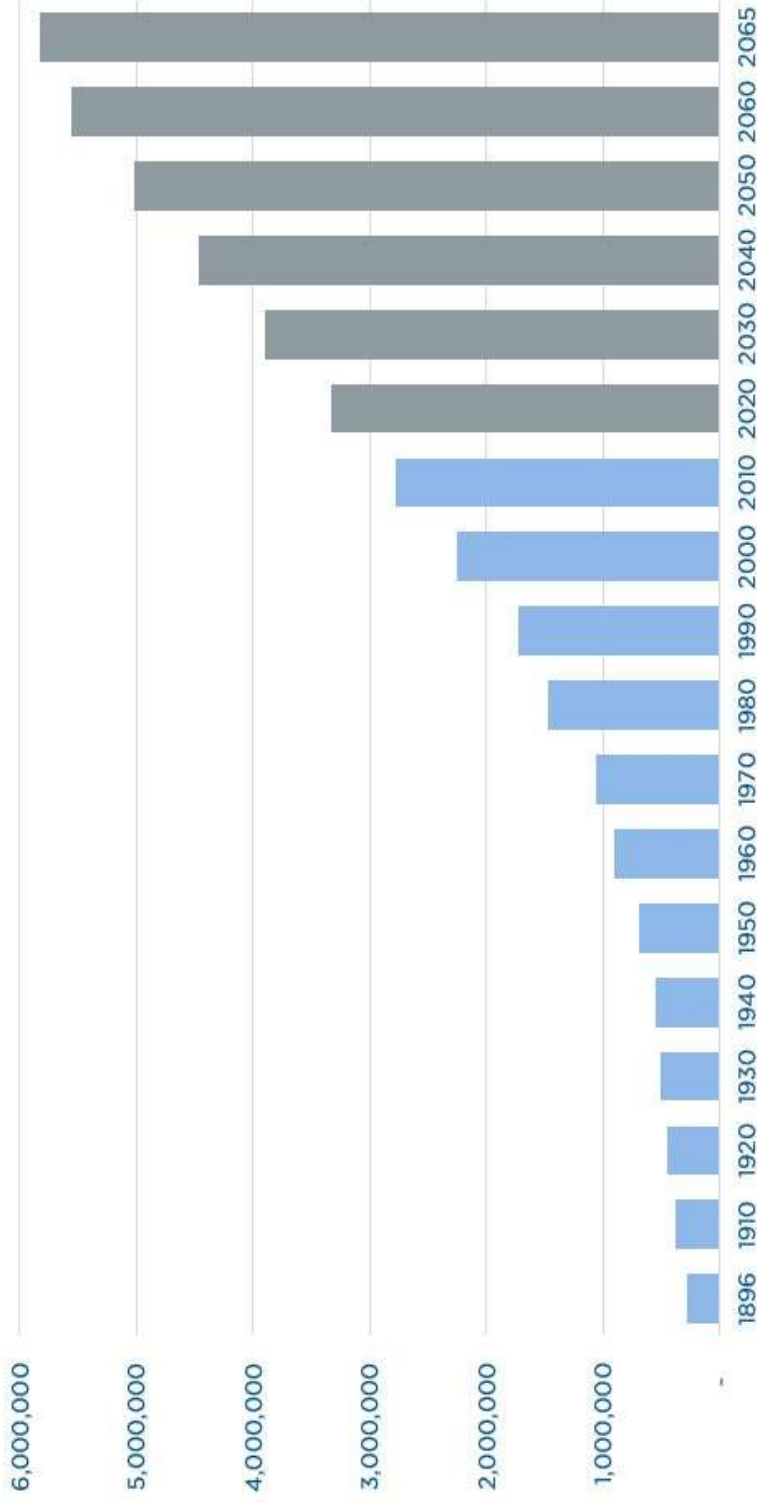
Response Level	Drought Levels		Drought Level Triggers				Total Year 2020 Demand Reduction (AF)	
	Water Shortage Description	Projected June 1st Total Basin Storage (AF)	Projected June 1st Total Upstream Basin Storage (AF)	Secondary Water	Agricultural Irrigation	M&I Culinary Outdoor Water		M&I Culinary Indoor Water
1	Normal	Greater than 380,000	Greater than 245,000	0%	0%	0%	0%	0
2	Advisory	Greater than 380,000	Greater than 245,000	10%	0%	10%	0%	15,000
2	Moderate	380,000 to 360,000	245,000 to 225,000	20%	20%	20%	5%	47,000
4	Severe	360,000 to 340,000	225,000 to 200,000	40%	30%	40%	10%	87,000
5	Extreme	340,000 to 280,000	200,000 to 160,000	60%	40%	60%	10%	123,000
6	Exceptional	Less than 280,000	Less than 160,000	95%	70%	95%	25%	206,000

2022 Criteria



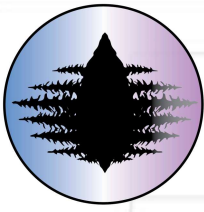


Utah's population growth



Sources: Governor's Office of Management and Budget and Kem C. Gardner Policy Institute

Weber Basin Area Wasatch Front Demand Projections



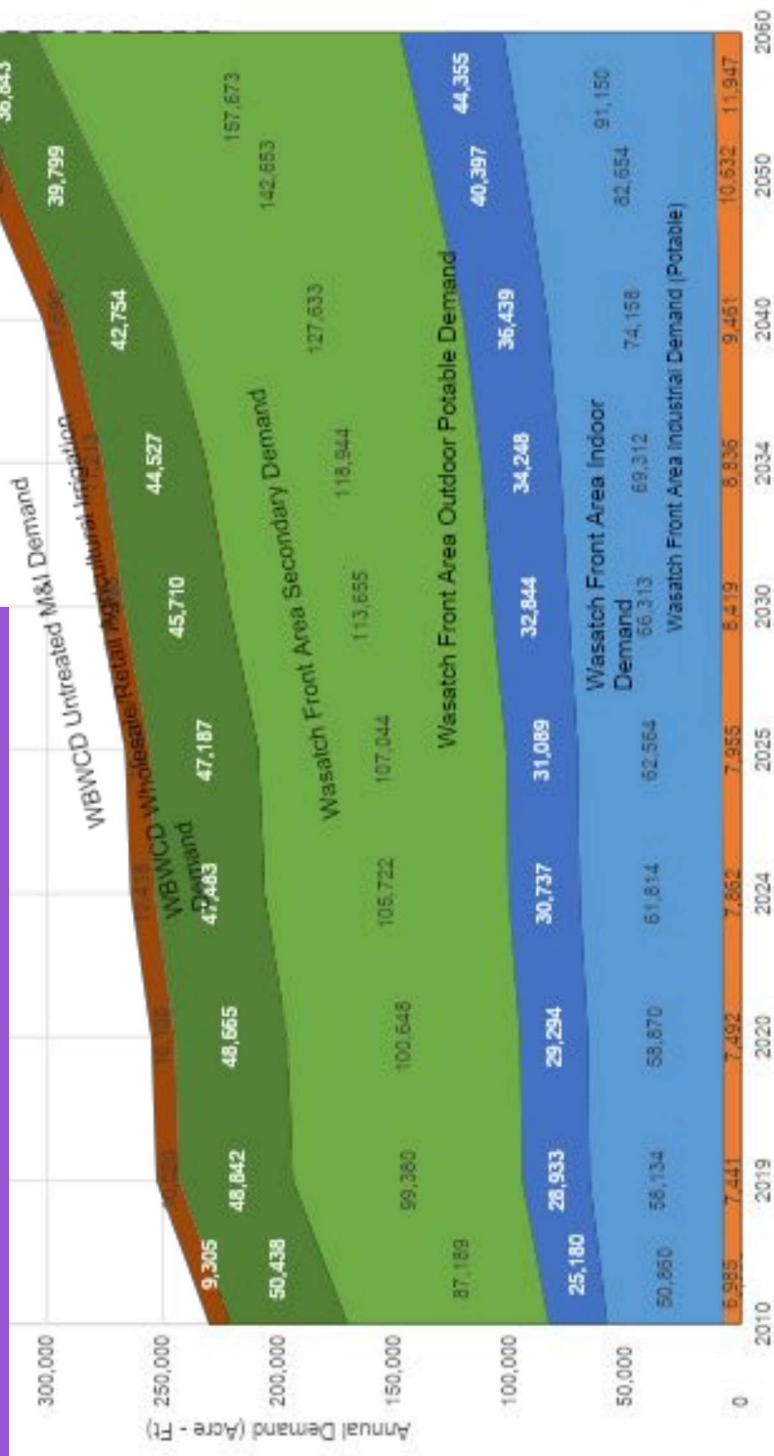
WASATCH FRONT DEMAND PROJECTIONS

Or “Why We Stress Conservation So Much”

Demand projections if we keep on with our current water use.

Projections with conservation goals

86,000 AF difference per year



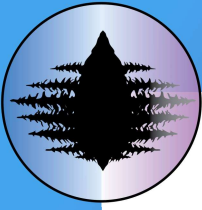


**ROCKPORT & LOST CREEK
RESERVOIRS – 84,620 AF**

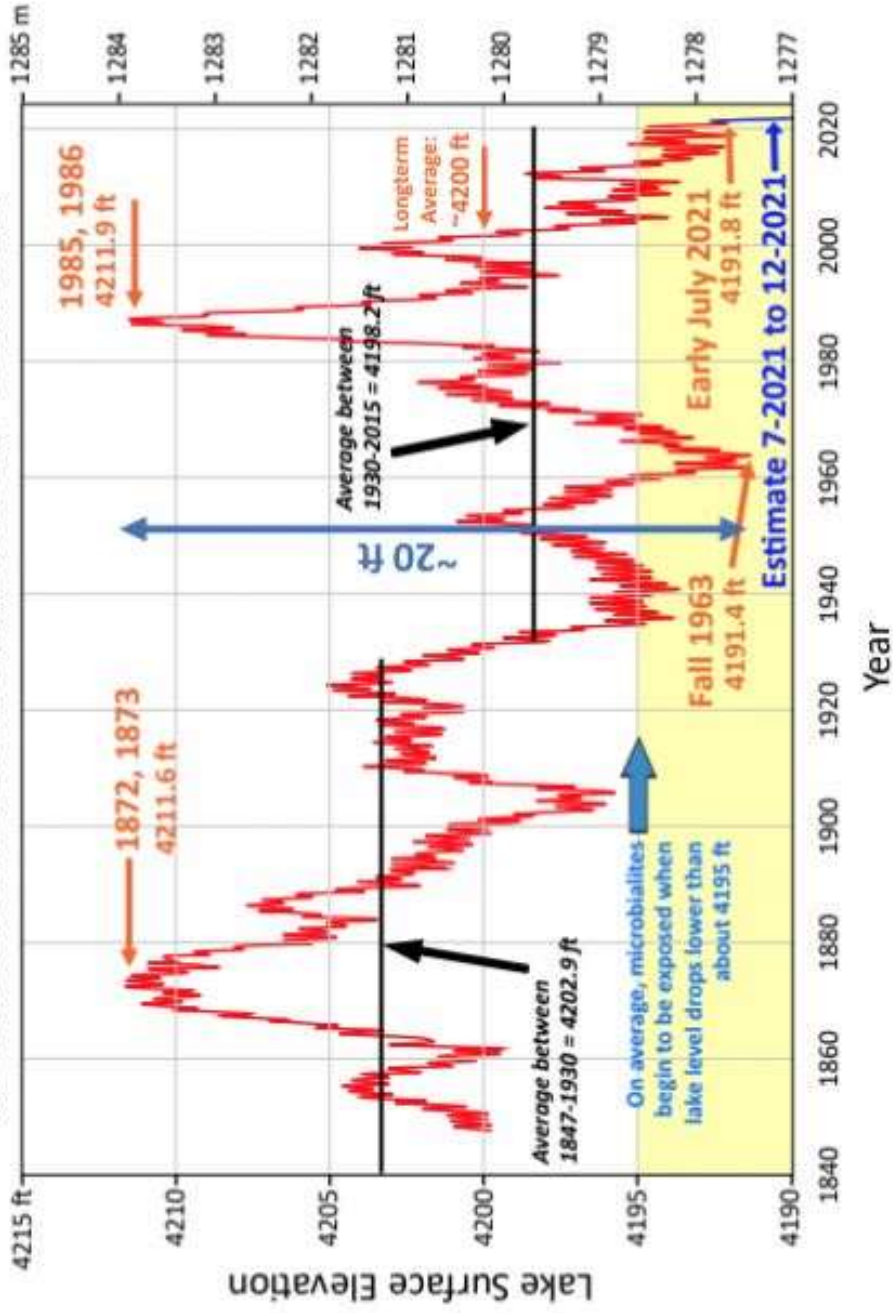


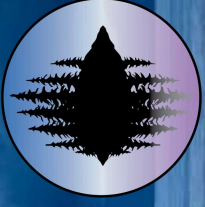
DROUGHT MANAGEMENT

- ❖ Contracts state: “During periods of water shortage, allocation of treated and untreated water for non-irrigation use shall have first priority.”
- ❖ Firming up of supplies
 - ❖ All future demand is M&I
 - ❖ Larger burden is placed on remaining agricultural customers



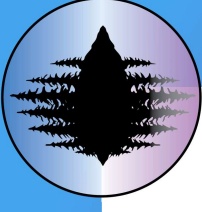
Historic Great Salt Lake Water Levels - South Arm





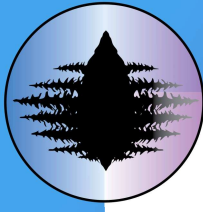
Great Salt Lake

- + Will drive future water policy for Utah
- + Water agencies very interested in its preservation



GOAL

- + ENSURE SUSTAINABLE USE OF THE PUBLIC'S WATER RESOURCES – BALANCE COMPETING INTERESTS
- + UNDERSTAND IMPACTS OF LAND USE JURISDICTION DECISION TO WATER INFRASTRUCTURE, SUPPLY AND DEMANDS
- + PLAN FOR FUTURE WATER SUPPLY AND DEMANDS
- + PROVIDE FOR ECONOMIC PROSPERITY AND HIGH QUALITY OF LIFE

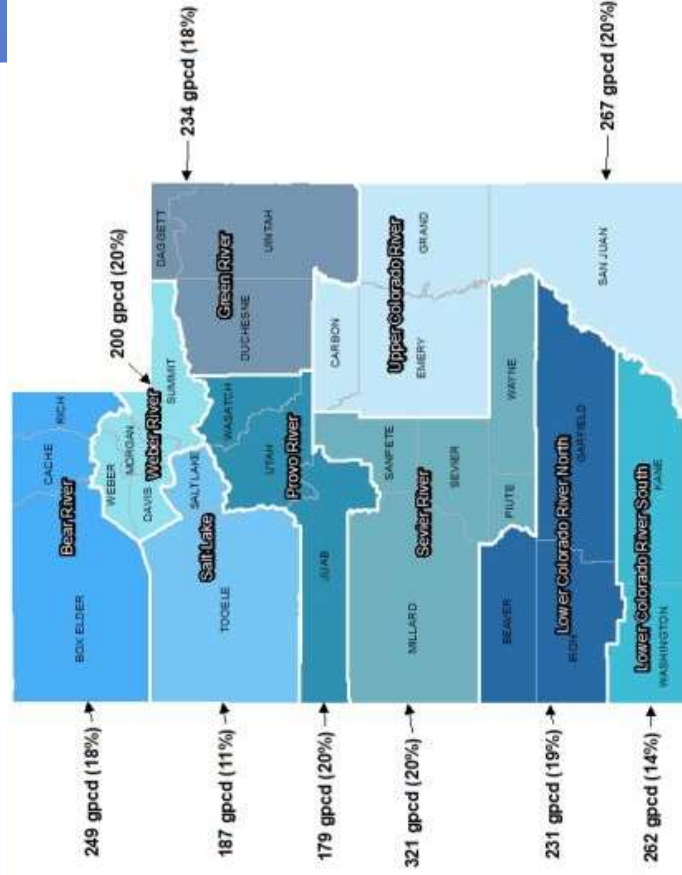


REGIONAL WATER CONSERVATION GOALS

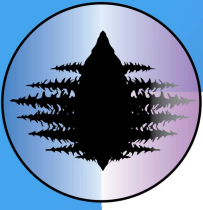
Proposed Regional M&I 2030 Water Conservation Goals and Future Goal Projections

Region	2015 Baseline (gpcd)	2030 Goal		2040 Projection		2065 Projection	
		Goal (gpcd)	Reduction from 2015	Projection (gpcd)	Reduction from 2015	Projection (gpcd)	Reduction from 2015
Bear River	304	249	18%	232	24%	219	28%
Green River	284	234	18%	225	21%	225	21%
Lower Colorado River North	284	231	19%	216	24%	205	28%
Lower Colorado River South	305	262	14%	247	19%	237	22%
Provo River	222	179	20%	162	27%	152	32%
Salt Lake	210	187	11%	178	15%	169	19%
Sevier River	400	321	20%	301	25%	302	24%
Upper Colorado River	333	267	20%	251	25%	248	25%
Weber River	250	200	20%	184	26%	175	30%
Statewide	240	202	16%	188	22%	179	26%

Note M&I = municipal and industrial; gpcd = gallons per capita per day based on permanent population. Reported per-capita use includes all residential, commercial, institutional, and industrial uses averaged over the permanent population in each region.

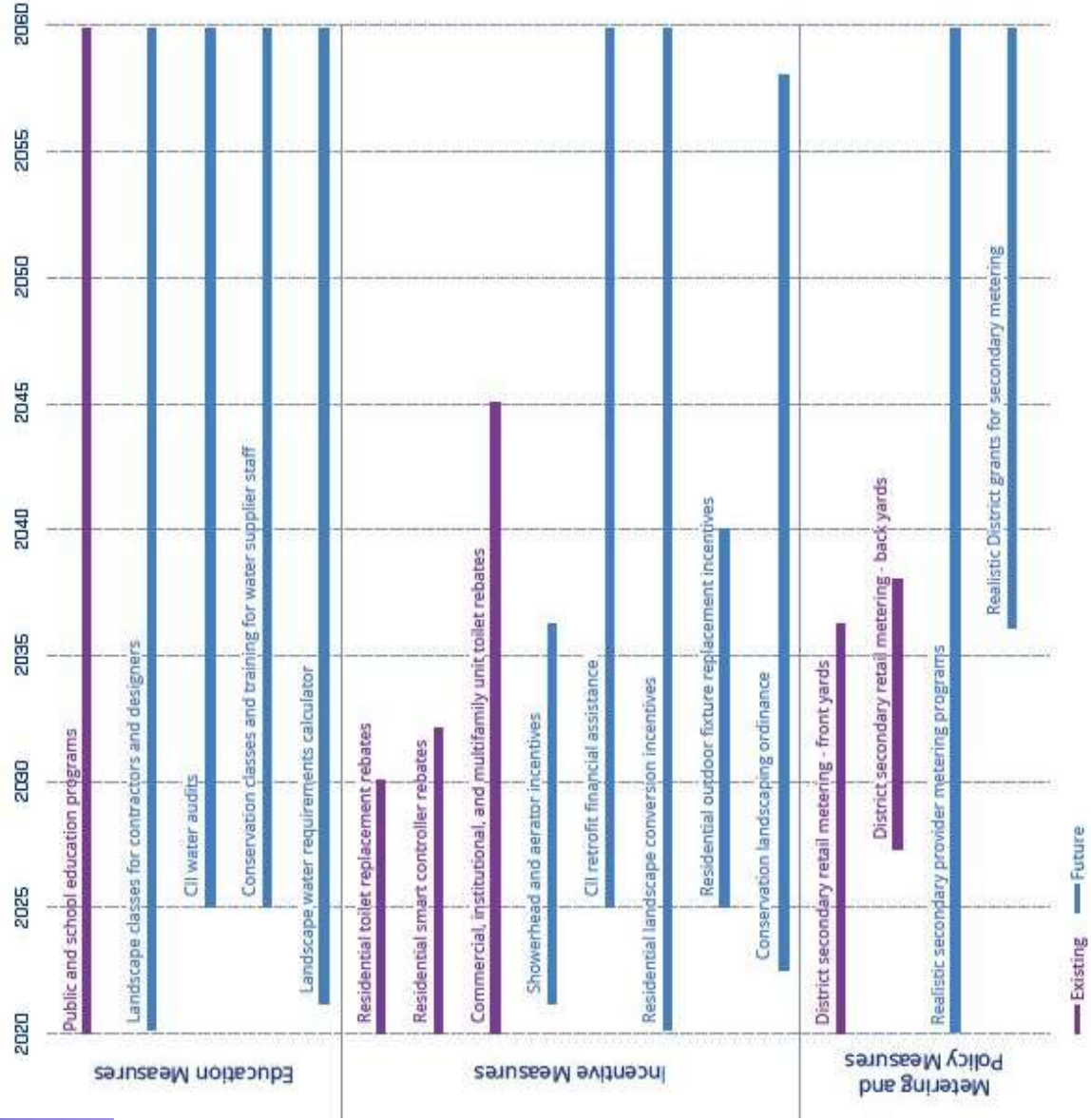
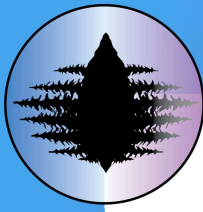


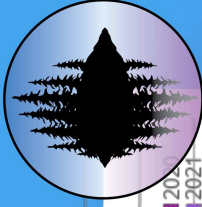
Proposed M&I Water Conservation Regions and 2030 Goals



DISTRICT PROGRAMS

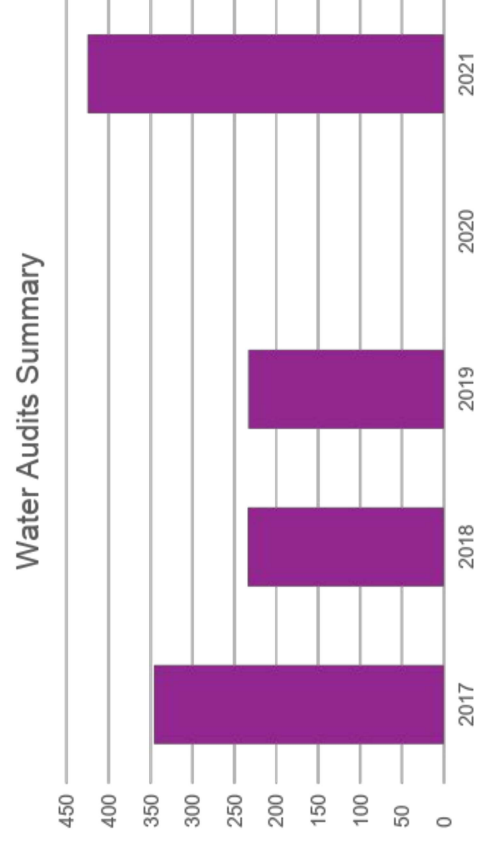
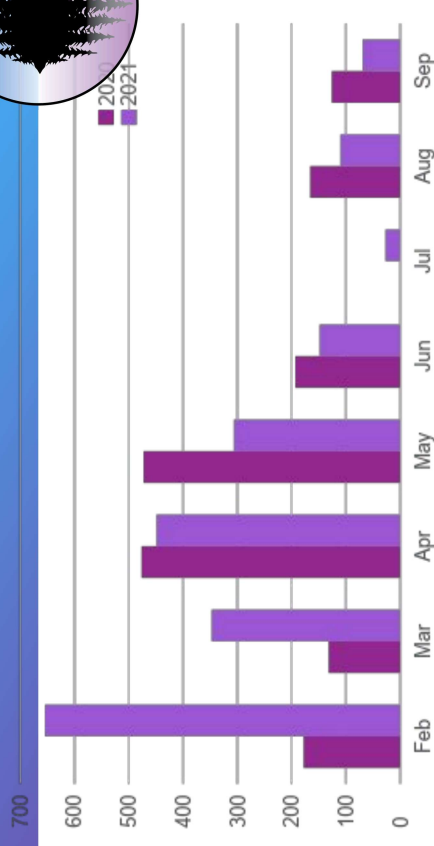
- + EDUCATION
- + INCENTIVES
- + METERING AND POLICY



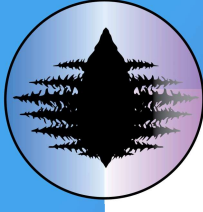


Education Measures

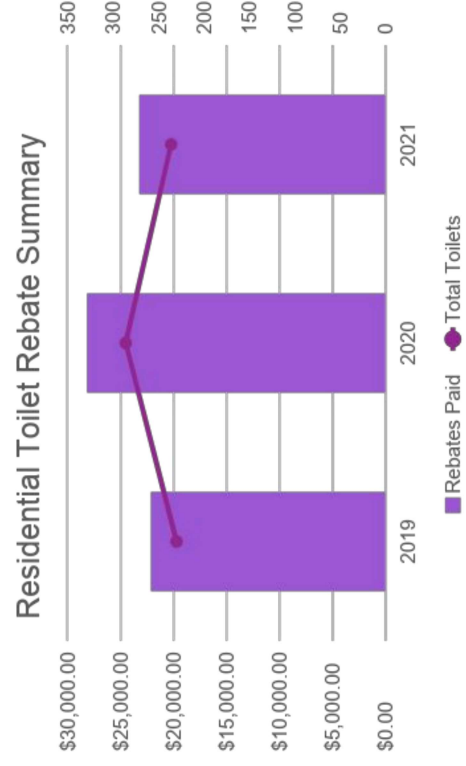
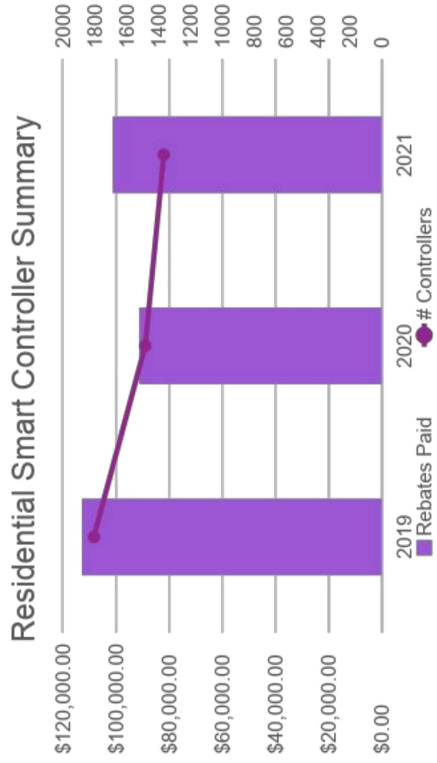
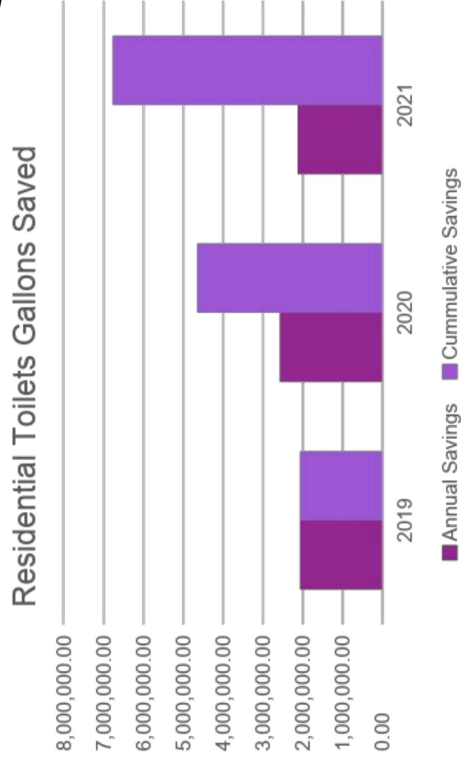
- + Public and School Education Programs
- + Annual Garden Fair
- + Landscape Classes for Contractors and Designers
- + QWEL
- + Water Loss Training
- + Water Audits
- + Online Classes
- + Billboards/Social Media



Incentive Measures

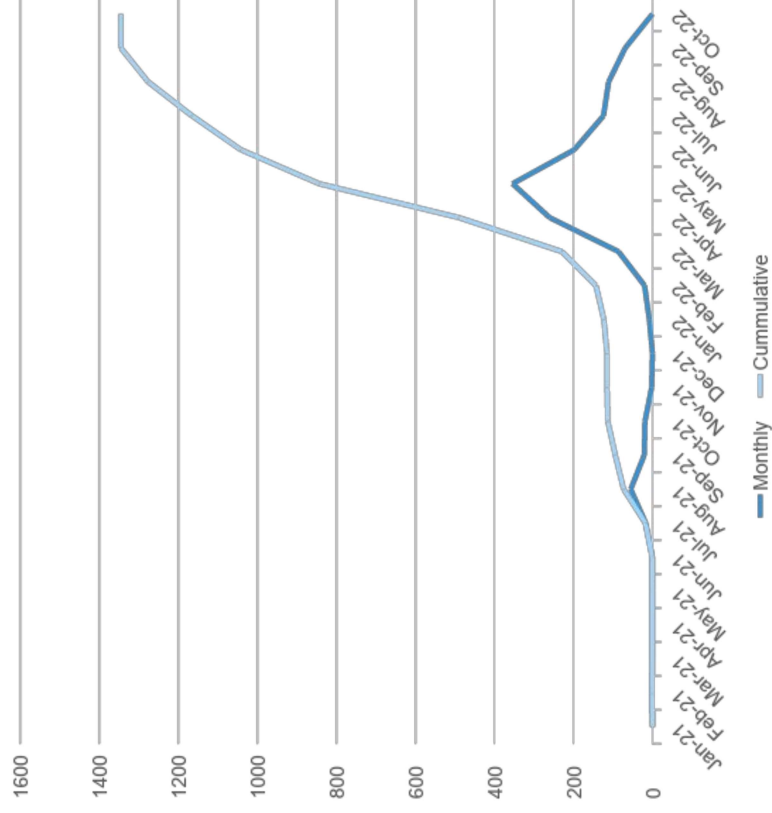


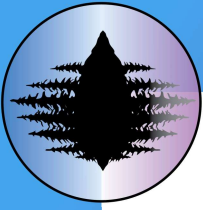
-
-
-
-
-



Turf Removal

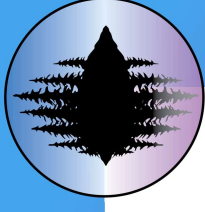
- Nearly 1400 applicants
- 676,000 sq. ft
- \$900,000 committed
- 650 completed
- Nearly \$400k paid





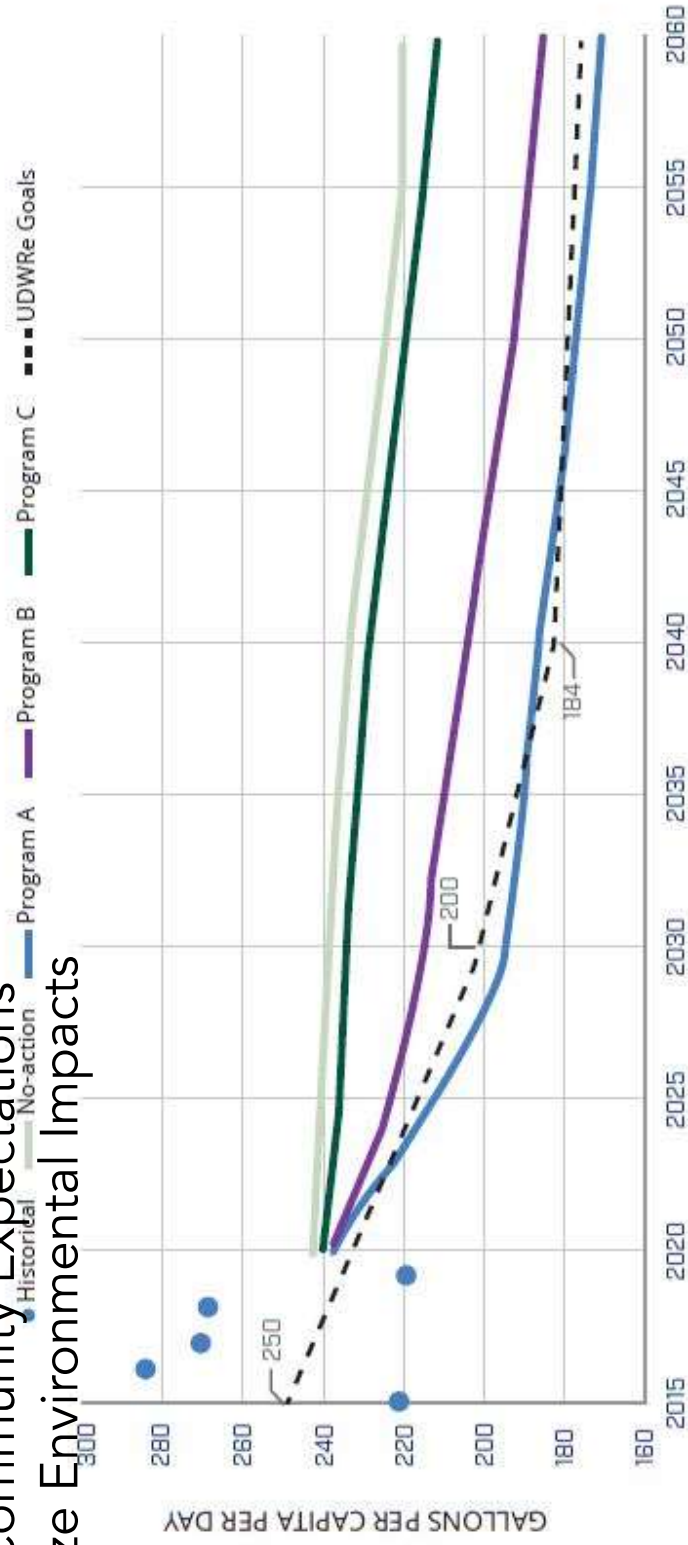
PLANNING FOR THE FUTURE

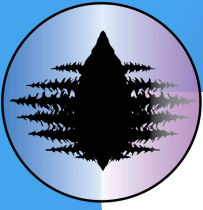
- + WATER CONSERVATION AND MANAGEMENT PLAN
- + DROUGHT CONTINGENCY PLAN
- + CLIMATE VULNERABILITY STUDY
- + SUPPLY AND DEMAND STUDY UPDATE
- + REGIONAL WATER CONSERVATION GOALS (STATE)



Water Conservation Management Plan

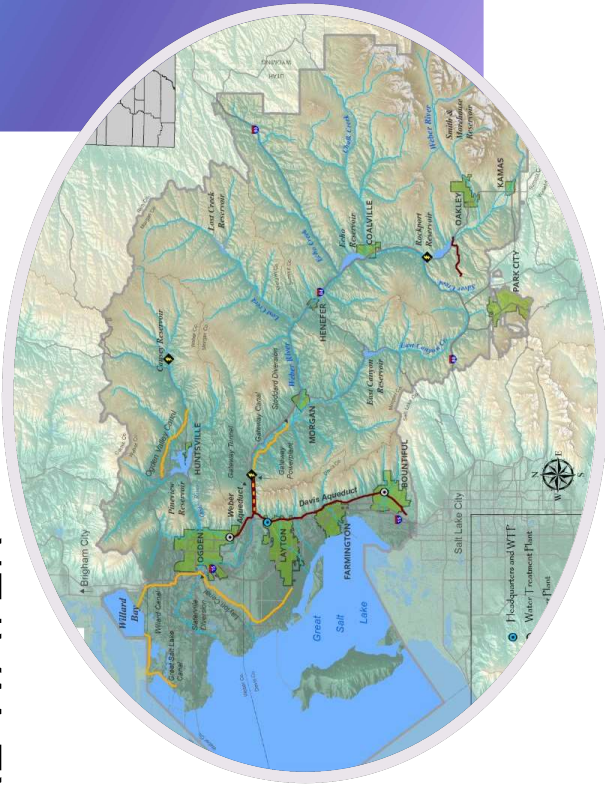
- District Mission
- Secure a Reliable Water Supply
- Manage Infrastructure Costs
- Serve Community Expectations
- Minimize Environmental Impacts

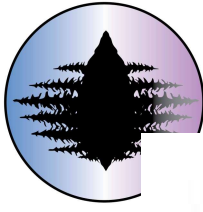




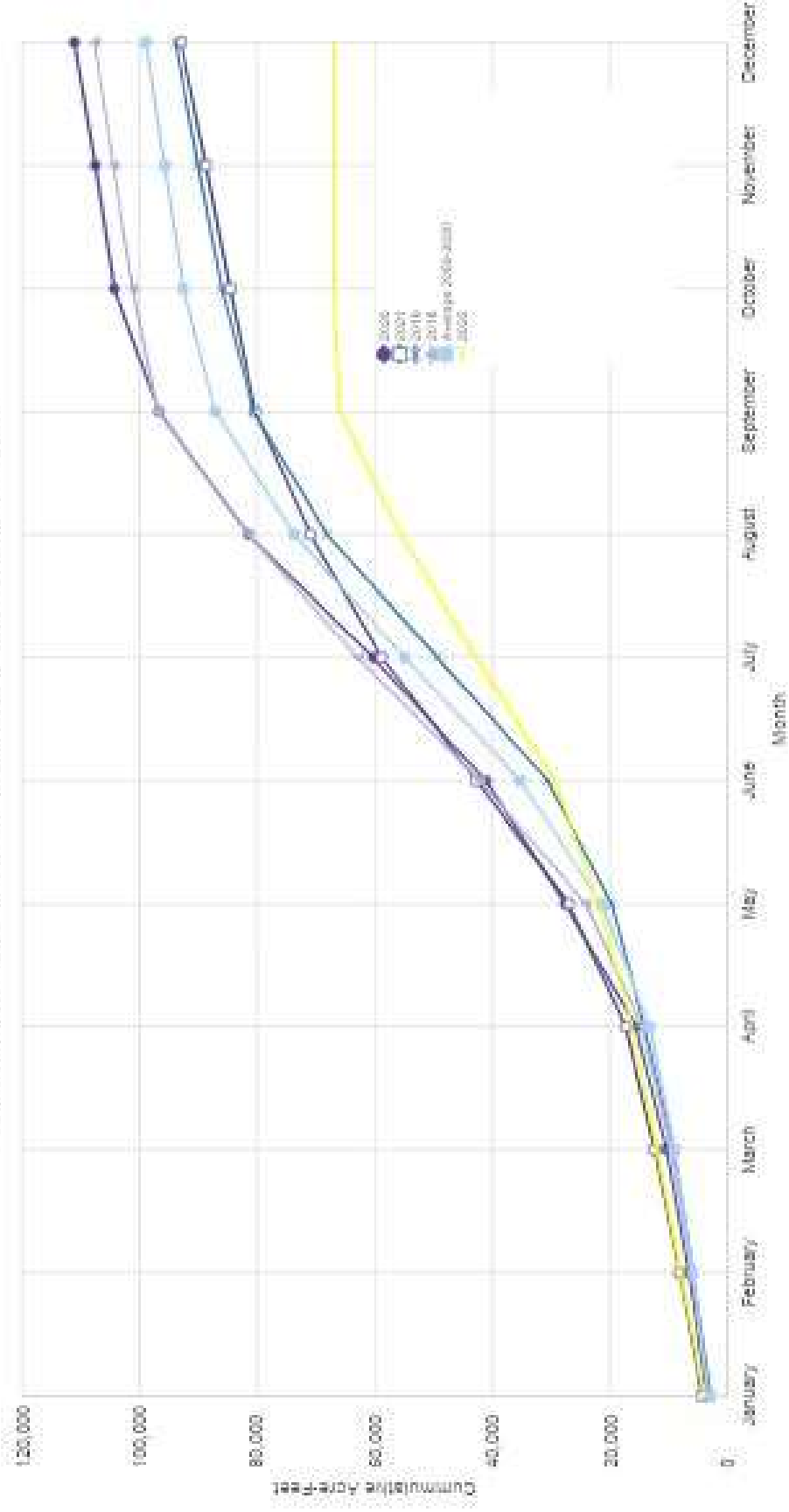
SUPPLY AND DEMAND STUDY

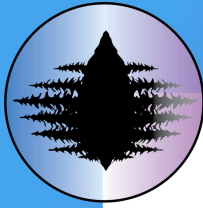
- + PROVIDE PLAN FOR MEETING FUTURE WATER DEMANDS
- + ANALYZE EXISTING WATER SUPPLIES
- + SCENARIO PLANNING FOR POPULATION GROWTH
CLIMATE VARIABILITY



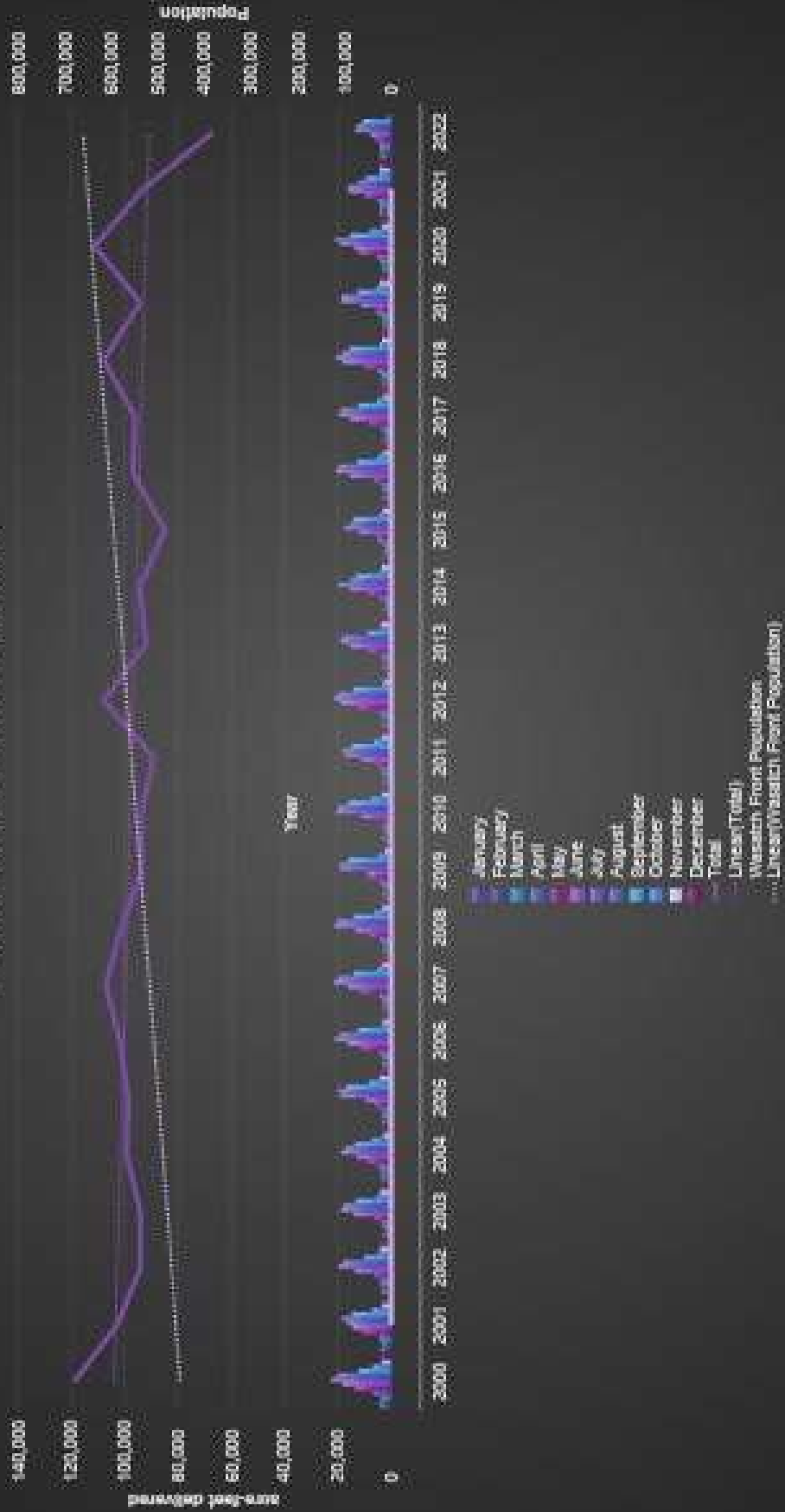


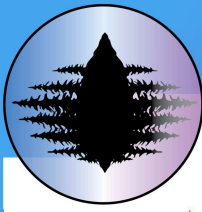
Cumulative Acre-Foot Total District Sources Wasatch Front





Tunnel and Groundwater Flows





Future Development

- + Conservation
- + Groundwater
- + ASR
- + Ag to M&I Conversion
- + Wastewater Reuse
- + Trans-basin Diversion

Figure ES-1 Wasatch Front Area Potable Demand vs Potable Supply

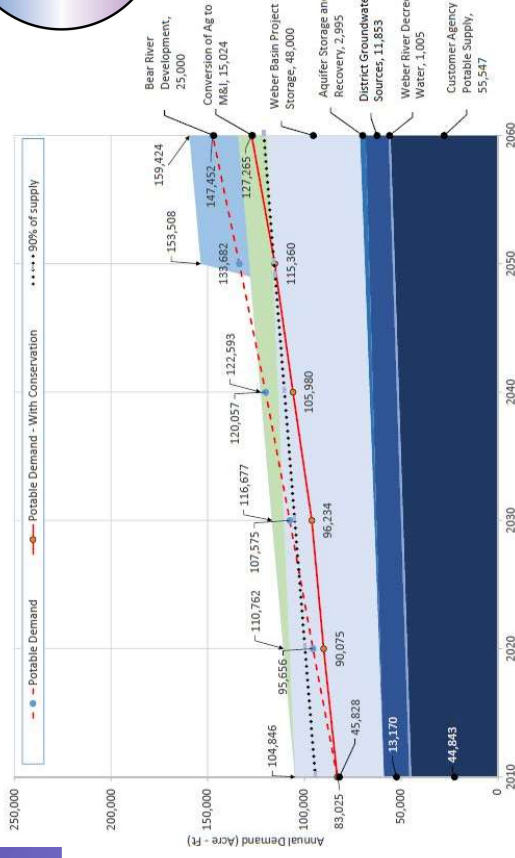


Figure 6-2 (Amended) Wasatch Front Area Secondary Demand vs Secondary Supply

