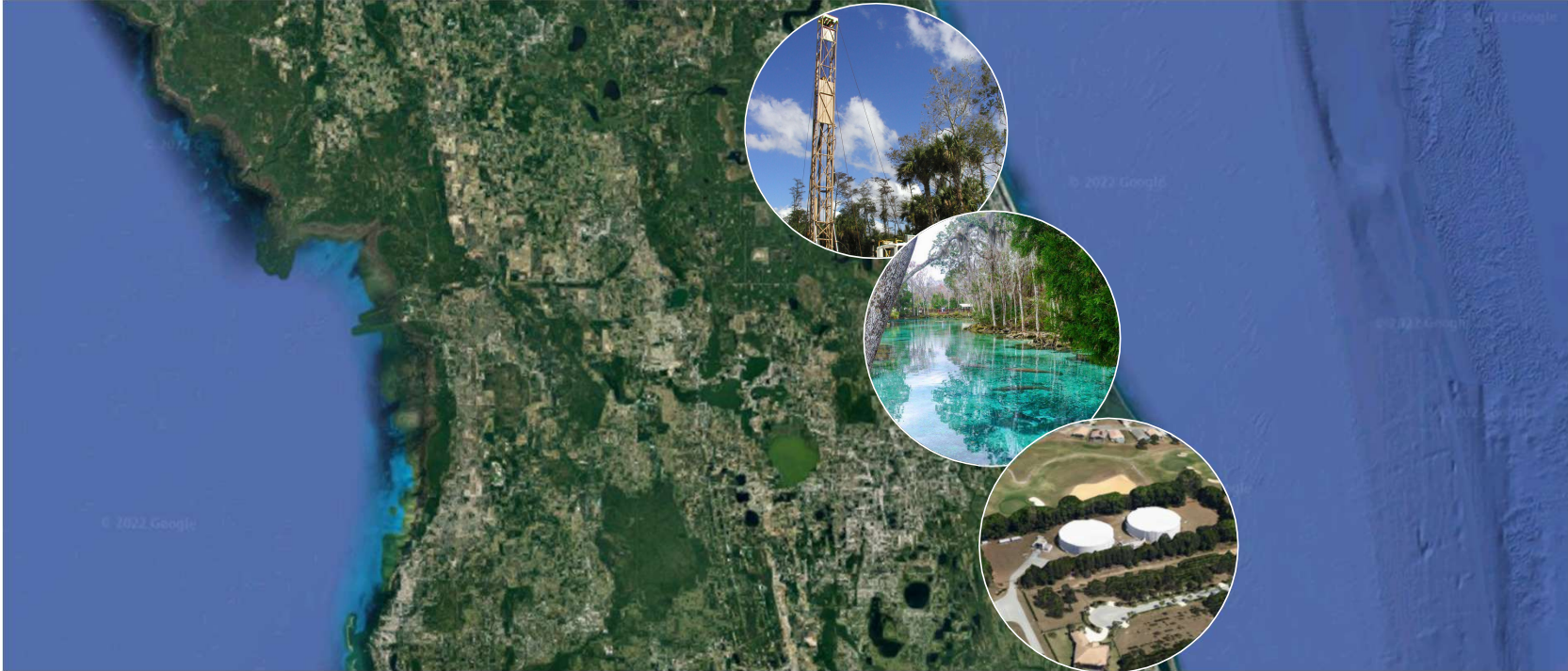


# Hazen



**WITHLACOOCHEE  
REGIONAL  
WATER  
SUPPLY  
AUTHORITY**

## 2024 Regional Water Supply Plan Update Status Report

January 24, 2024

## Presentation Overview

- Project Overview
- Population and Demand Projections
- Conservation Plan Update
- Water Assessments
- Water Supply and Treatment Options

# Project Overview

## Project Goals and Objectives

- **Goal**
  - Assist public utilities by identifying implementable water supply options and strategies to meet future demand.
- **Objectives**
  - Quantify public water supply demand
  - Assess water conservation and reuse potential
  - Identify water resources availability to meet demand
  - Evaluate economic constraints
- **Plan cooperatively funded by SWFWMD**
  - In support of 2025 RWSP for Northern Region



## Key Project Tasks

### Population and Demand Projections

- Update water demand projections through 2045

### Water Conservation and Reuse Evaluation

- Estimate conservation potential, reclaimed availability, potential offsets

### Source Water Assessments

- Evaluate and identify water resources available to meet demand

### Water Supply and Treatment Options

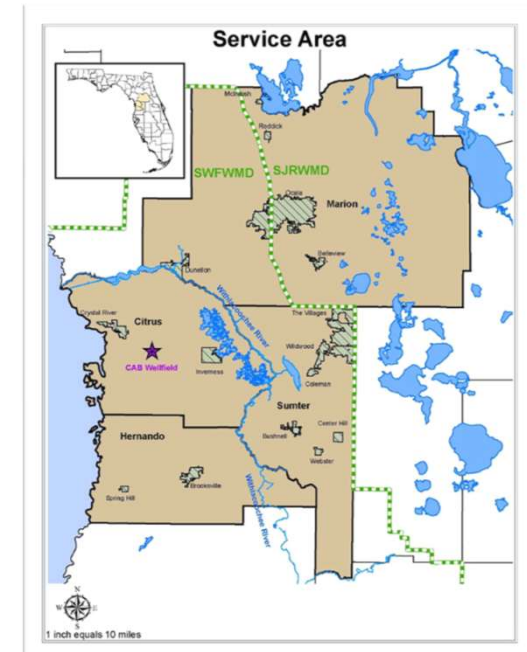
- Identify traditional/alternative supply availability and project options

### Organization, Funding, & Governance Recommendations

- Recommend Regional Governance Framework for WRWSA

### Regional Water Supply Plan

- Provides description of technical analyses and recommendations.



# Population and Demand Projections

**Draft**

# Projections Framework

- Forecasting framework
  - Population projection x GPCD
- Scenarios
  - District Projections
  - Utility Adjusted Projections
  - Weather Normalization
- Stakeholder collaboration
  - Input review (GPCD / population projections)
  - Review of existing / calibrated RWSP projections



## Water Use Sectors

Public Supply  
Agricultural  
Industrial/Commercial  
Institutional and Other  
Mining/Dewatering  
Power Generation  
Landscape/Recreation



## Geographic

Utility Systems  
PRISM Climate Grids



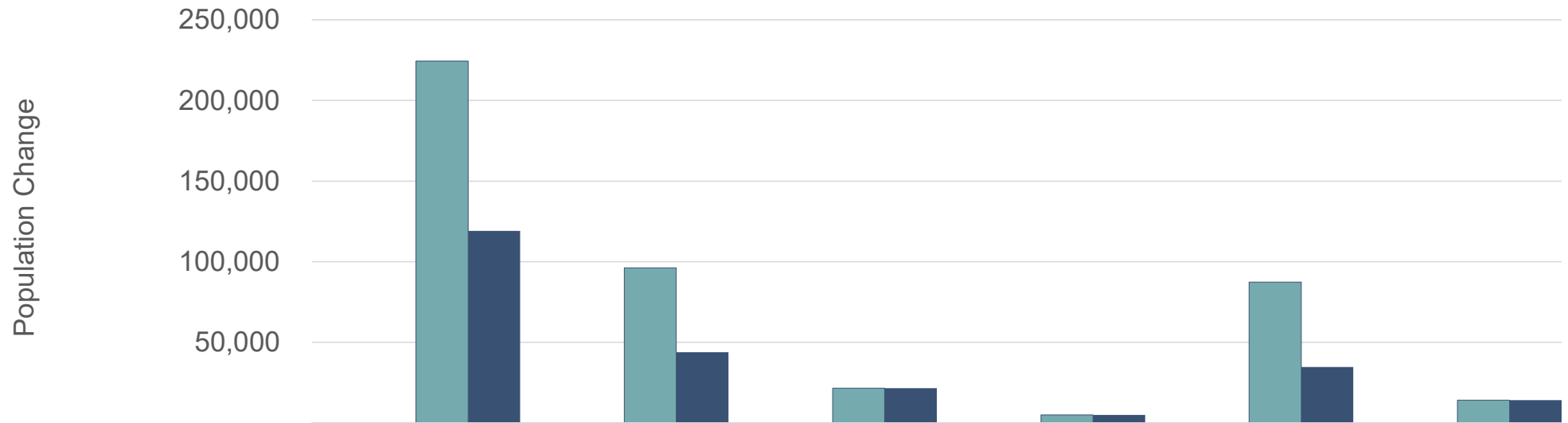
## Time

Monthly  
Annual

# Population Projection Scenarios

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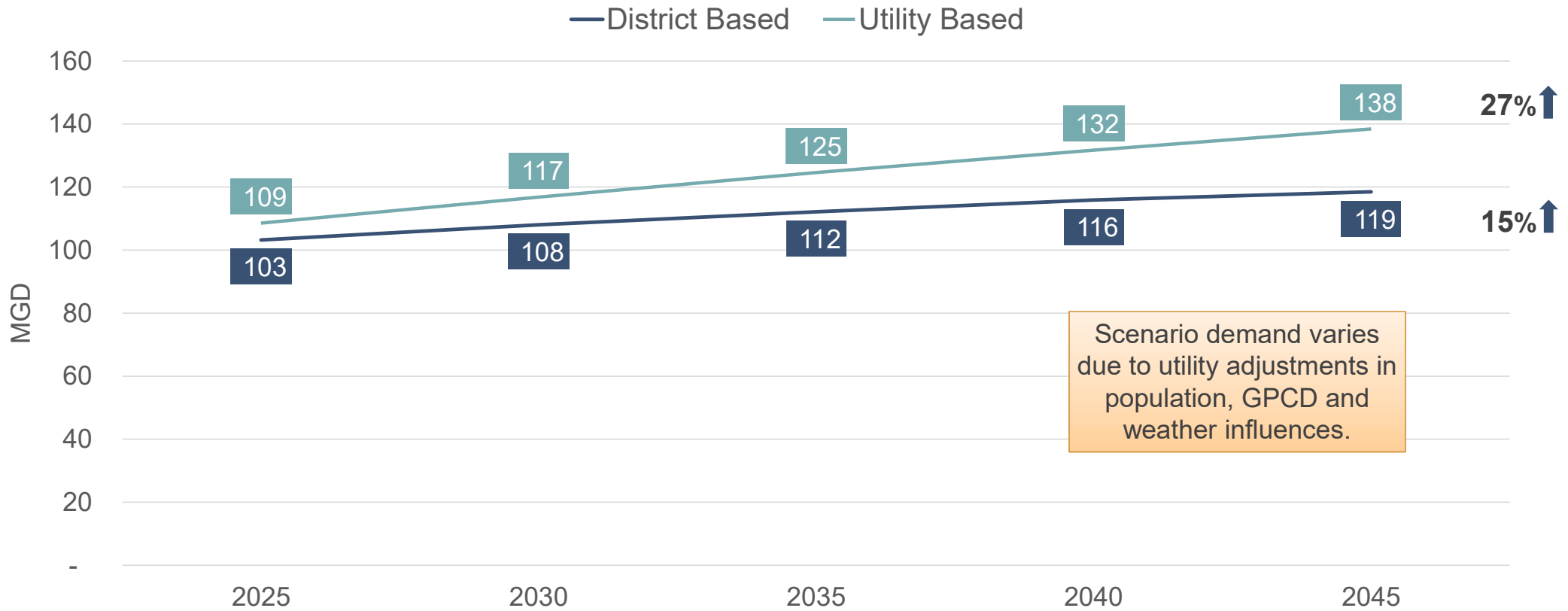
## 2025 to 2045 Change In Population



	WRWSA	Sumter	Marion (SWFWMD)	Marion (SJRWMD)	Hernando	Citrus
■ District Based Change	119,194	43,789	21,612	4,923	34,667	14,203
■ Utility Based Change	224,403	96,265	21,612	4,923	87,400	14,203
District Based % Change	17%	29%	25%	3%	19%	12%
Utility Based % Change	31%	54%	25%	3%	47%	12%

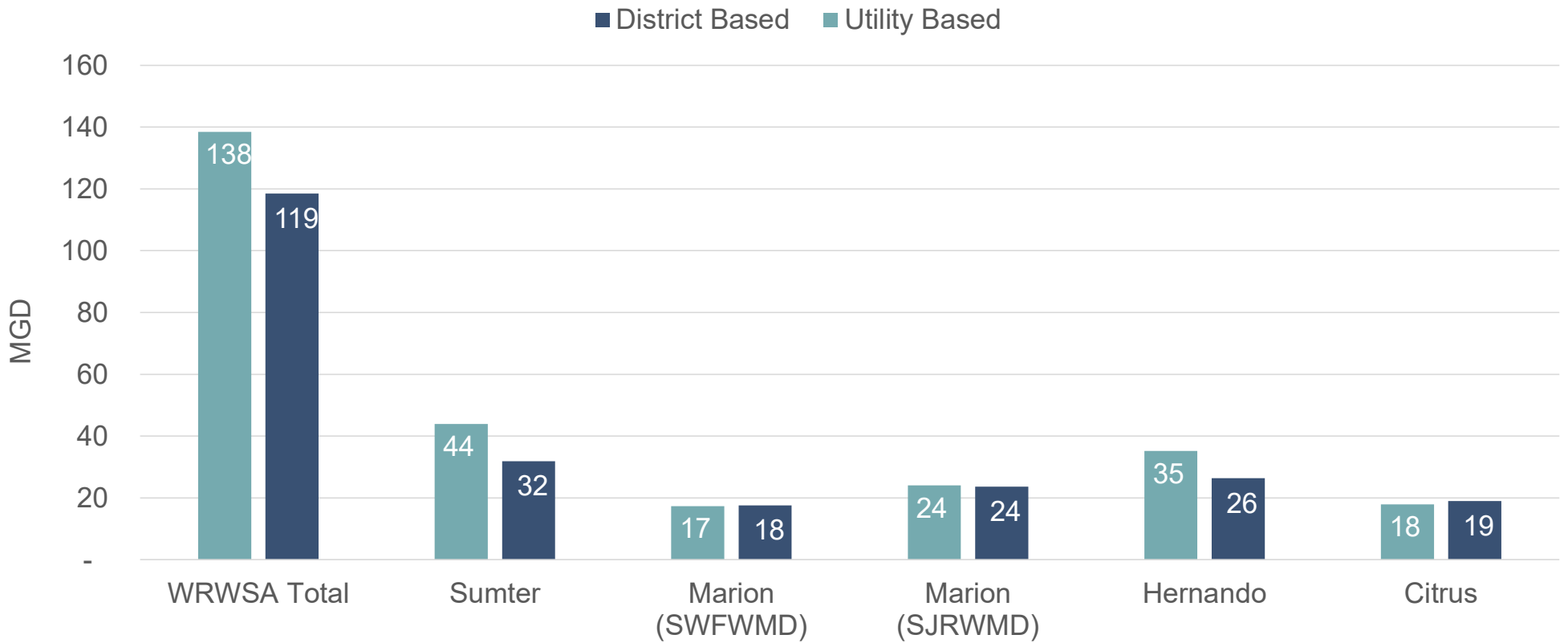
# Water Demand Projection Scenarios

Total Withdrawals - DRAFT



# Water Demand Projection Scenarios by County

Total Withdrawals - DRAFT



# Conservation Plan Update

## Conservation Plan Framework

### Objectives

- Build on regional success
- Extend existing supplies
- Maximize water use offsets

### Conservation Planning Committee (CPC)

- Citrus County
- Marion County
- Hernando County
- City of Ocala
- The Villages

#### Regional Water Demand Profile

- Establish distribution of fixture age/efficiency
- Estimate baseline and future passive savings

#### Identify Alternatives

- Evaluate market for conservation technologies
- Assess water savings potential

#### Evaluate Alternatives

- Conduct cost-benefit analysis
- Avoided capital/operational cost

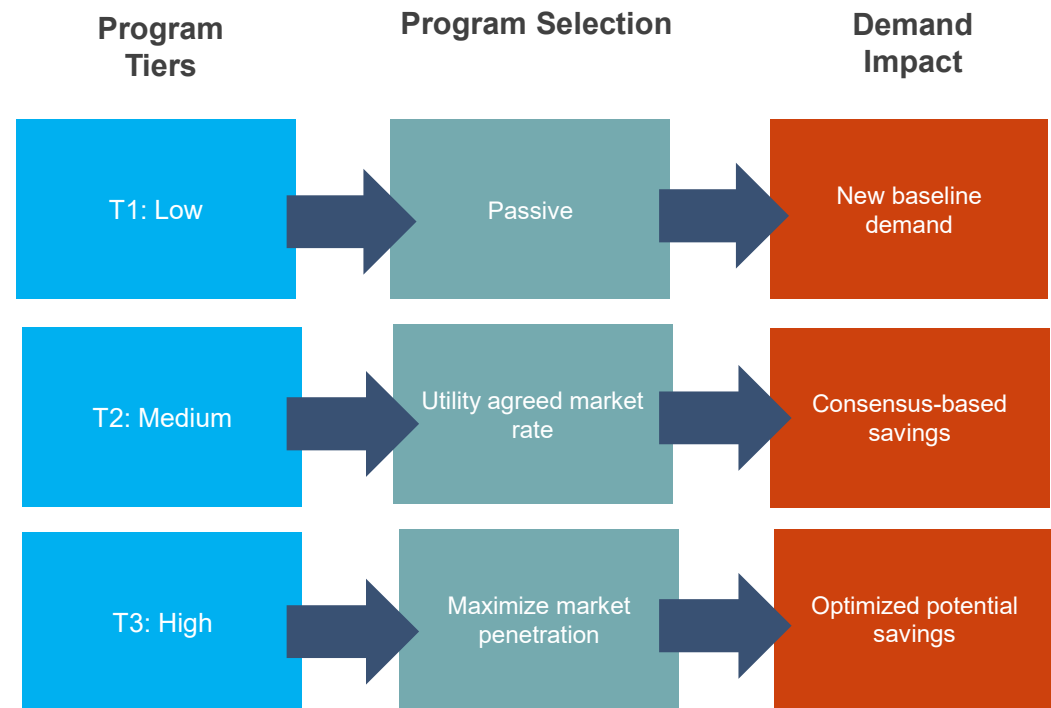
#### Program Recommendations

- Rank and recommend program packages
- Based on evaluation of water savings and financial benefits



# Conservation Plan Development (2025-2045)

- Worked closely w/utilities to establish program elements, assumptions and tiers
- Tier 1: Passive Conservation
  - EPA Energy Policy Act (EPACT)
  - Market changes (e.g. WaterSense)
- Tier 2: Existing and Proposed Conservation
  - Planned conservation elements for CPC utilities
- Tier 3: Regional Conservation by County
  - Planned conservation elements w/increased penetration regionwide



## Program Elements

- Proposed activity based primarily on existing CPC programs
- Most incentive values based on CPC utilities or SWFWMD defaults
- Indoor saving rates based on national averages (AWE tracking tool)
- Limited savings information available for most public outreach programs

End Use	User Type	2024 Activity	Incentive (\$/unit)	Expected Savings (gpd/unit)	Savings Life (Years)
Indoors	All Users	HET Replacement	100	27.8	25
		WaterSense Showerhead (<=1.8 gpm)	10	2.4	10
		Faucet Aerator Replacement	10	1.7	5
		Clothes Washer Rebate	75	13.7	12
Outdoors	High Users	High User Irrigation Evaluation	400	170	5
		High User Irrigation Evaluation w/Enhancement	400	197	5
		High User Irrigation Evaluation w/WaterSense Controller	400	355	10
		High User WaterSense Controller	350	297	10
	All Users	WaterSense Controller (Non-High User)	100	121	10
		SF Irrigation Nozzle Replacement	100	32	10
		Rain Sensor	50	35	3
		Rain Barrel	50	1.7	5
		Florida Friendly Yard Certification/Incentive	725	133	25
Public Outreach	All Users	Workshops	7	30	1
		PSA	Variable	NA	NA
		Exhibits	Variable	NA	NA
		Web page	Variable	NA	NA
		In-School Education	Variable	NA	NA

## Conservation Plan Development

- Developed timeseries of population and residential units (1990 – 2045)
  - Property Appraiser and District PSAR (utility supplied)
  - Informs estimation of passive and active savings potential
- Program savings and penetration rates applied to planned growth
  - Yields estimates of active savings and program costs over time
- Plan benefits
  - Refines demand projections to account for conservation (affects supply need)
  - Identifies collaboration opportunities between WRWSA, Districts and utilities
  - Provides WMD's w/savings rates and estimates of total savings potential
    - *Considerations for cooperative funding programs*

# Next Steps

## Next Steps

- Population and Demand Projections (February)
  - Finalize weather normalization, integrate non-public supply components and develop tech memo
- Water Conservation Plan and Reuse Evaluation (February)
  - Extend passive and active savings potential to other utilities in region
  - Finalize reuse estimates
- Source Water Assessments (February – April)
  - Central Spring Model expected to be finalized by end of January; meeting w/District in February
- Water Supply and Treatment Options (April – June)
- Next board update – May 2024

# Thank you! Questions?

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