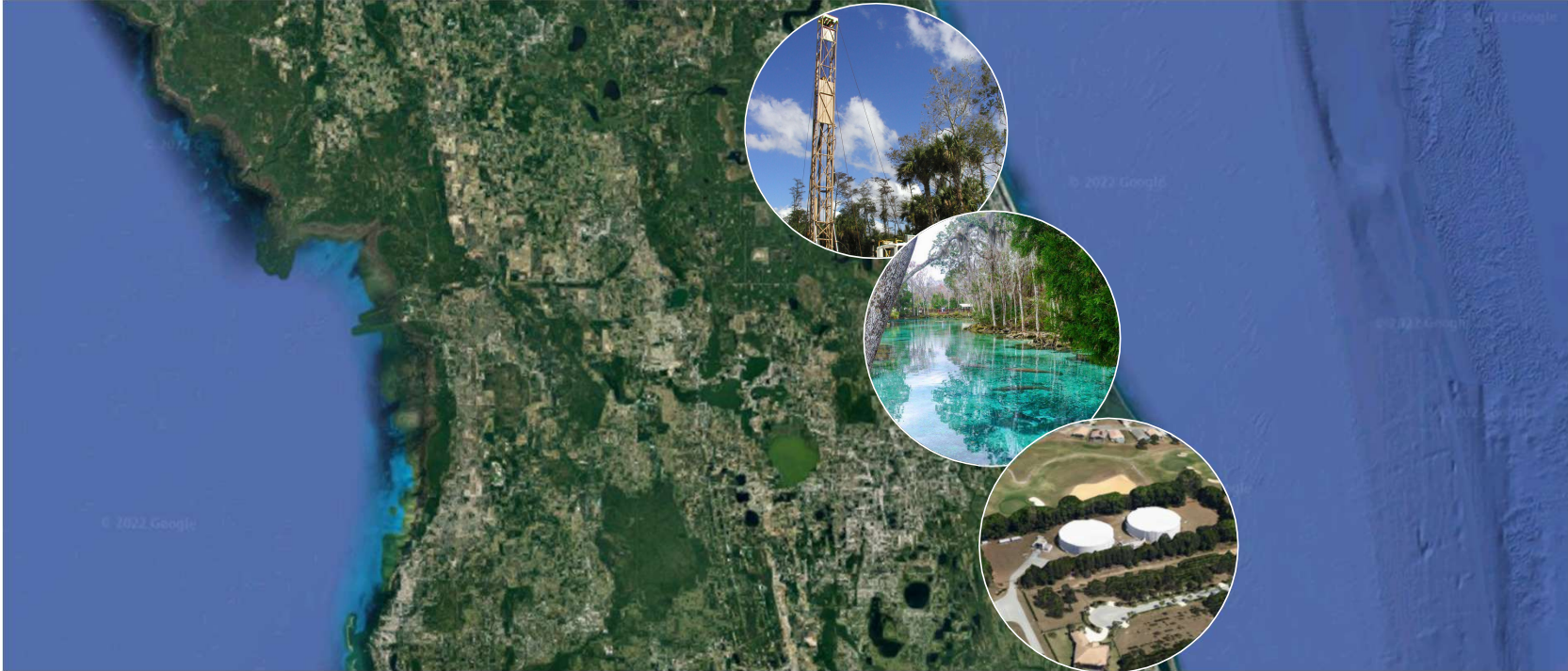


Hazen



**WITHLACOOCHEE
REGIONAL
WATER
SUPPLY
AUTHORITY**

2024 Regional Water Supply Plan Update Status Report

May 15, 2024

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

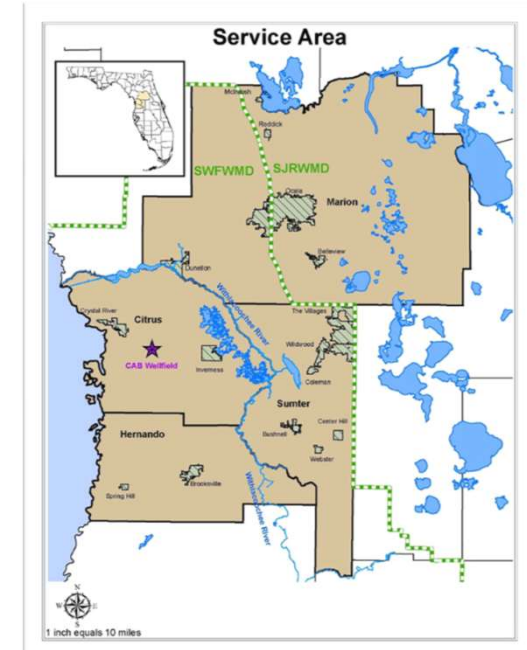
- Identify traditional/alternative supply availability and project options

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

Demand Projection, Water Conservation and Reuse Evaluation Updates

- Demand Projection Updates
 - **District completed revisions to population and demand projects in March 2024 (month end)**
 - *Added three (3) new permits*
 - *Modified and/or consolidated fourteen (14) others*
 - **District modifications reviewed and integrated into WRWSA projections**
 - *Reflect utility defined adjustments to population and/ or GPCD based on local planning*
- Water Conservation and Reuse Evaluation Updates
 - **Integrating revised projections and revising savings estimates.**
 - **Extending passive and active savings potential to other utilities in region**
 - **Integrating revised projections into reuse projection methodology.**

Projections Framework

- Forecasting framework
 - Population projection x GPCD
- Scenarios
 - District Projections
 - Utility Adjusted Projections
- 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

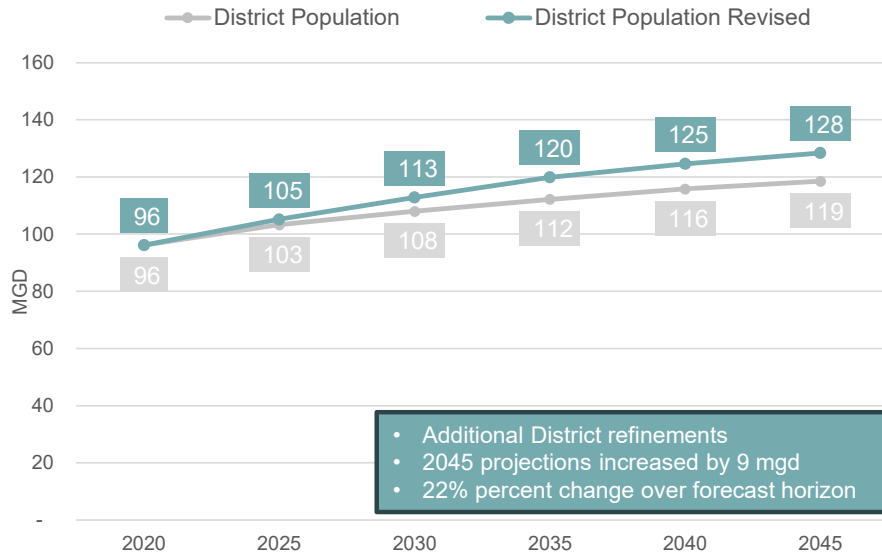
Utility Systems
PRISM Climate Grids



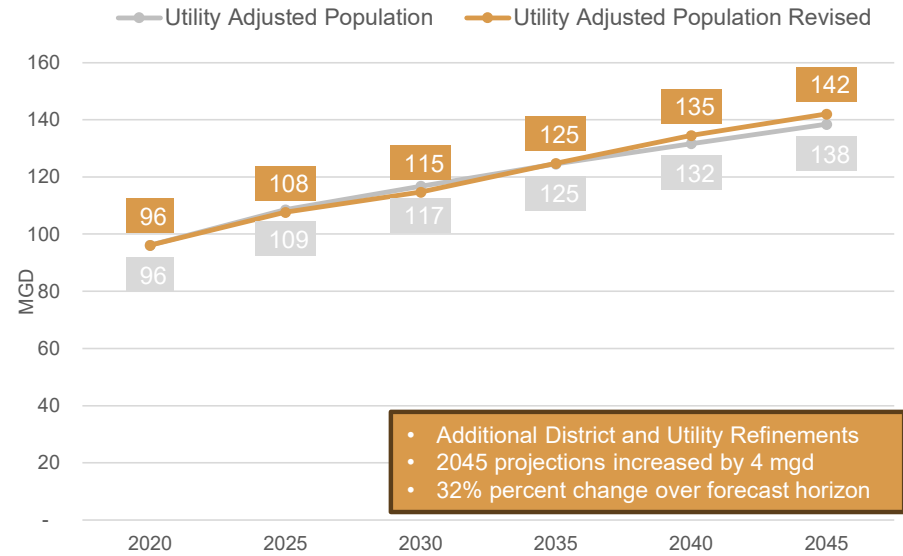
Time

Monthly
Annual

Water Demand Projection Scenarios – May 2024 Revisions



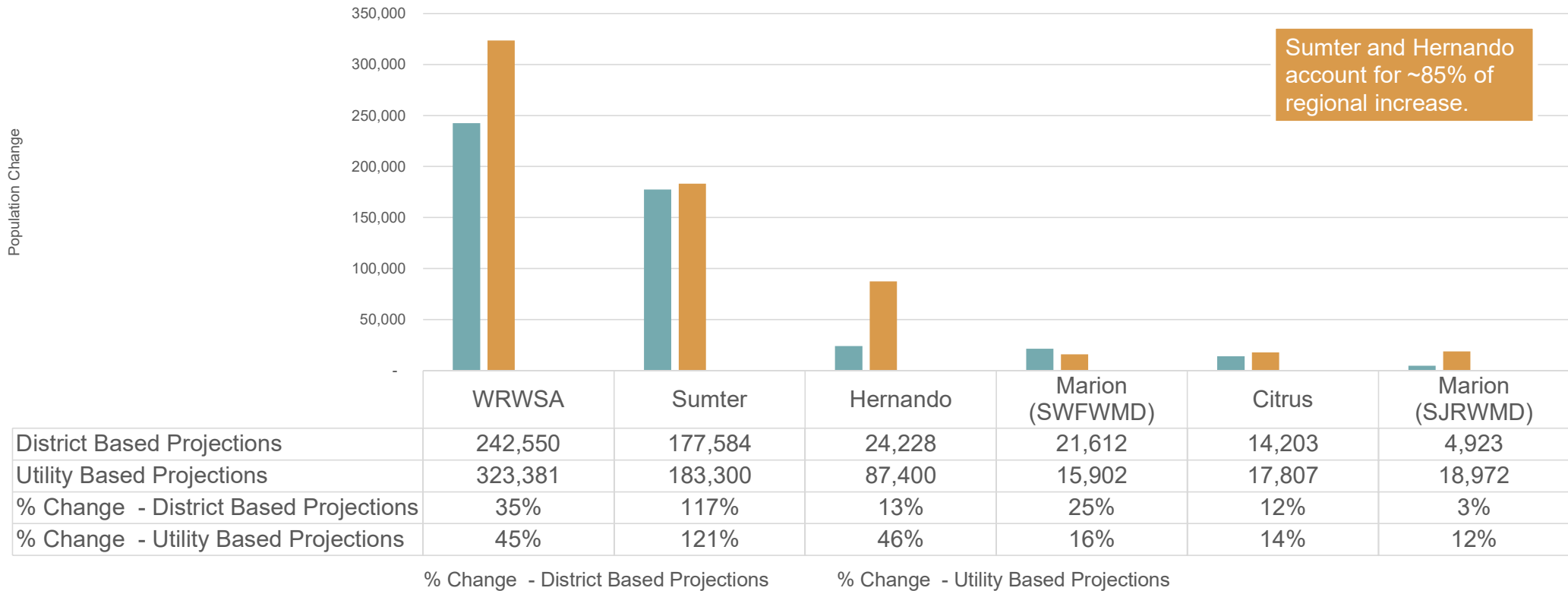
District Total Public Supply Projections



WRWSA Total Public Supply Projections

Population Projection Scenarios – Population Increase

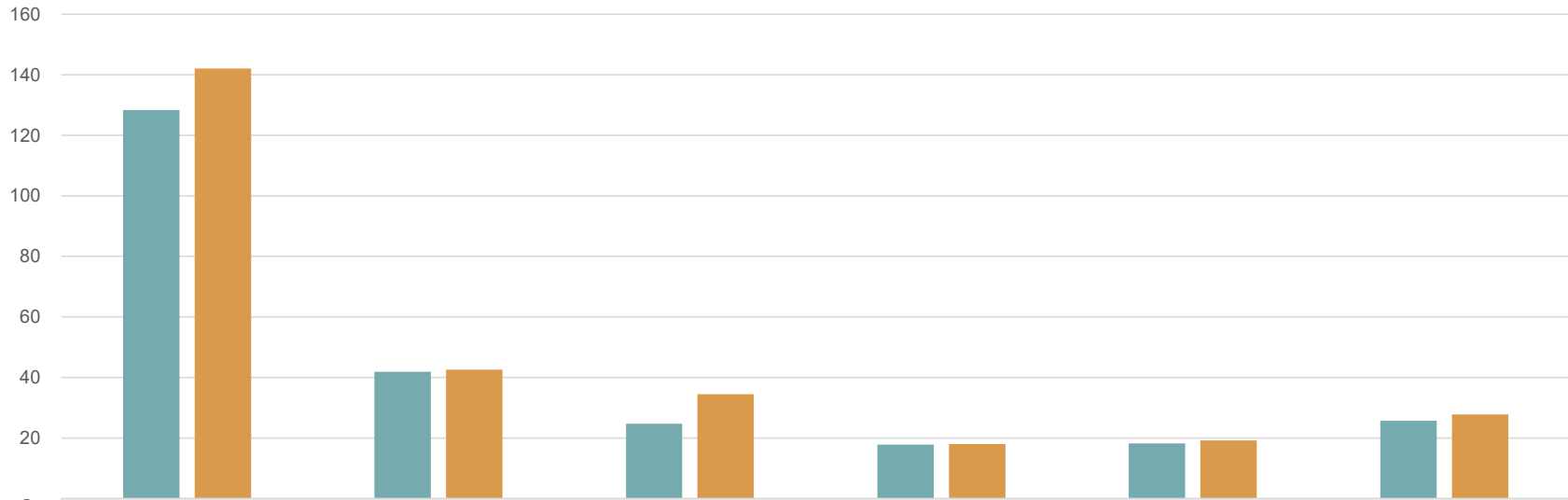
2025 to 2045 Change in Population



Water Demand Projection Scenarios by County (2045) – Total Demand

2045 Public Supply Water Demand Projections

■ Demand - District Based ■ Demand - Utility Based



	WRWSA	Sumter	Hernando	Marion (SWFWMD)	Citrus	Marion (SJRWMD)
■ Demand - District Based	128	42	25	18	18	26
■ Demand - Utility Based	142	43	34	18	19	28

Next Steps

- Water Conservation Plan and Reuse Evaluation (June)
 - Integrating revised projections and revising savings estimates.
 - Extend passive and active savings potential to other utilities in region
 - Integrating revised projections into reuse projection methodology.
- Source Water Assessments (June - July)
 - District recalibrating Central Spring Model. Expected to be completed by end of May.
- Water Supply and Treatment Options (July - Sept)
- Next board update – July 2024

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

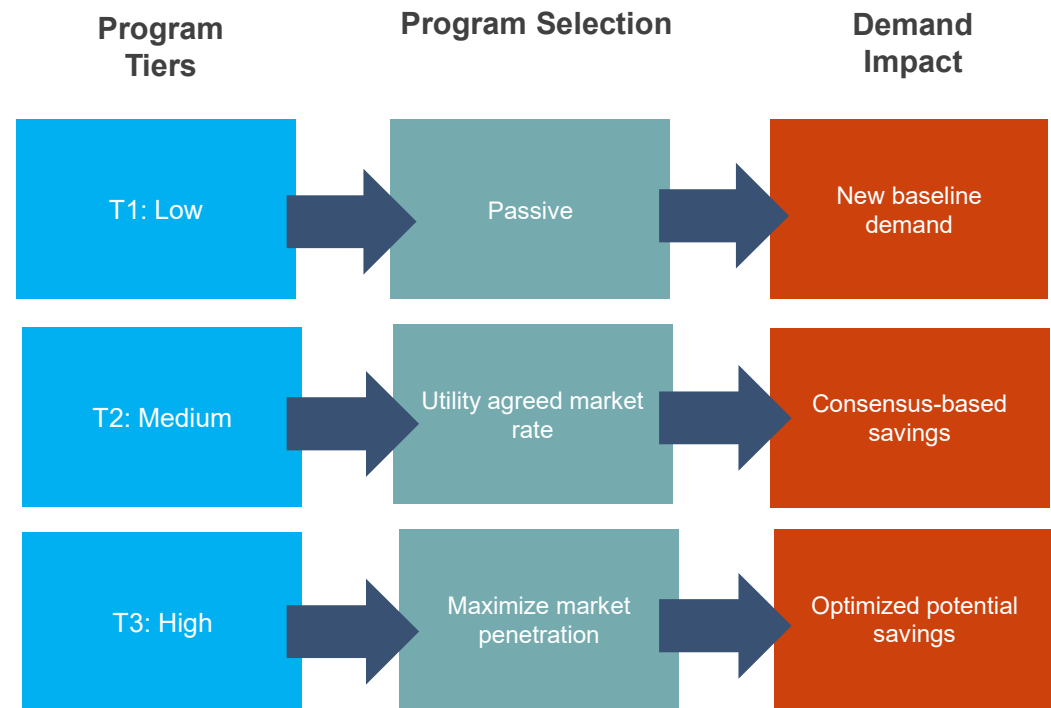
- EPA Energy Policy Act (EPACT)
- Market changes (e.g. WaterSense)

- 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*

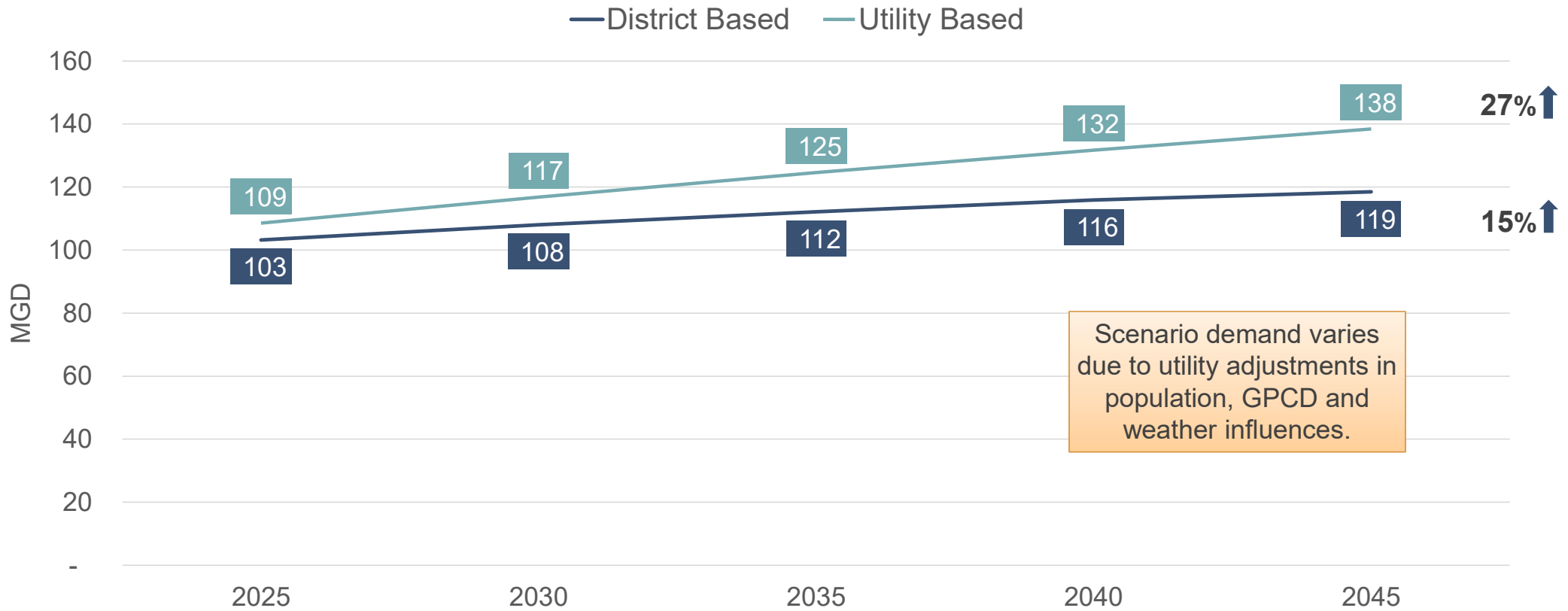
Next Steps

Thank you! Questions?

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Water Demand Projection Scenarios

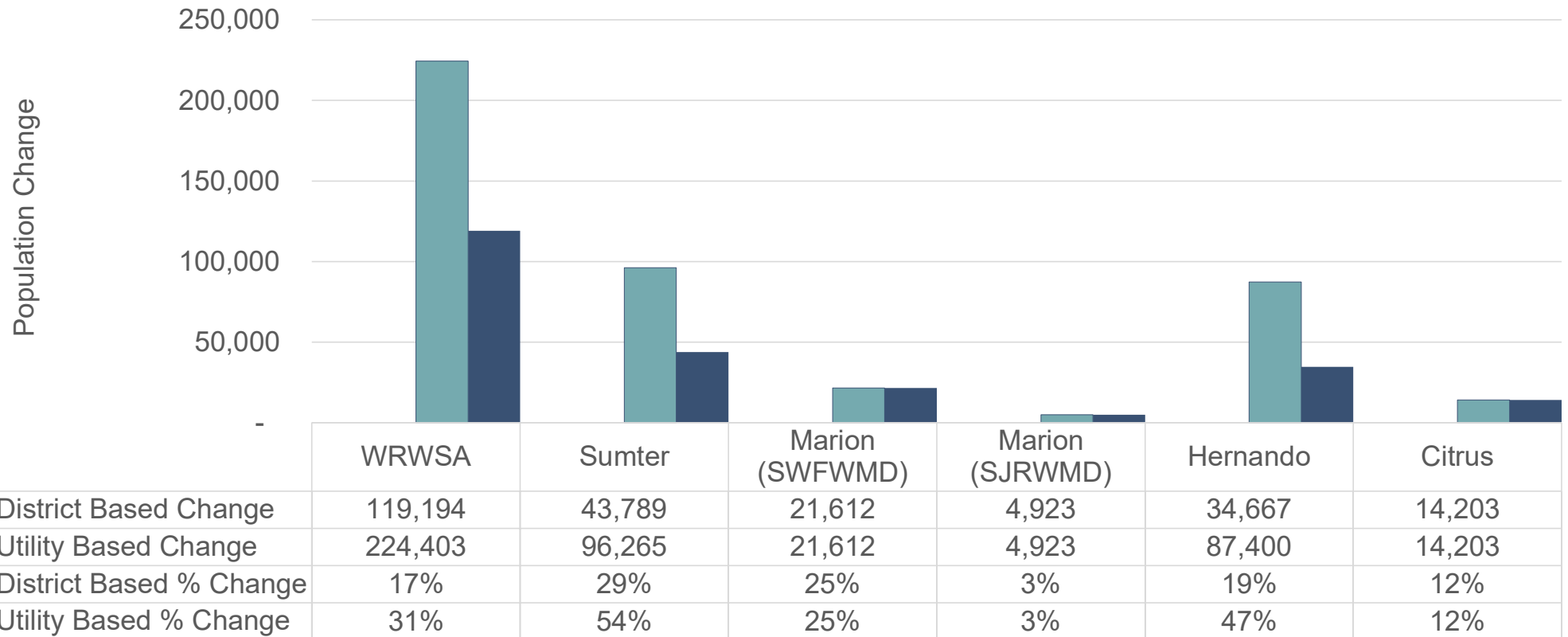
Total Withdrawals - DRAFT



Population Projection Scenarios

DRAFT

2025 to 2045 Change In Population



Water Demand Projection Scenarios by County (2045)

Total Withdrawals - DRAFT

