

Water System and Supply Strategic Planning

May 13, 2024



Overview

- 2024 Water Year in Review
- Demand Projections
- Current Supply
- Planned Short-Term Supply
- Long-Term Supply Opportunities
- Moving Forward
- Future Council Actions

2024 Water Year in Review

- Water environment
 - Historic drought
 - Continued permit restriction with consistent supply curtailment as in 2023
 - Water consumption monitoring daily - historic consumption
- Presented Update on Water Use and Restrictions in February 2024
 - Drought Status
 - Water Availability
 - Areawide Drought Conditions
 - Water Conservation Measures

2024 Approach

- Designed and implemented Amended Stage 3 Restrictions achieved necessary 30% reduction through:
- Community Education
 - Closely monitoring and reporting water demand
 - Communicating progress and compliance weekly
 - Signage
 - Press coverage
- Enforcement
 - 2,500 hours of water patrol
- Acquired additional water supply
 - 3-year Interlocal agreement with San Marcos EAA capacity executed.

2024 Approach

- Reorganization to create standalone Water Utilities Department
- Initiated Cost-of-Service Study – conservation-focus
- Landscaping code amendment focused on commercial properties
- Building department implemented new method to test plumbing fixtures in new builds
- Strategically-planned approach to water conservation was successful
 - Sustained reductions in water system demand
 - Complied with contractual commitments with the City of San Marcos

Planning for Next Steps - Needs

- Water model refinement and finalization
 - Projection of future demand based on development patterns
- Short-term water supply issues
- Comprehensive water plan to guide:
 - Short term plan through 2028
 - 50-year Long Range Water Master Plan
- Infrastructure System Improvements
 - Short-term improvements
 - Long-term improvement
- Water System Capital Program development

Current Supply

- Current Water Supply:
 - Barton Springs/Edwards Aquifer Conservation District (BSEACD) - Well 4
 - Edwards Aquifer Authority (EAA) - Wells 1, 2, 3 & 5
 - Guadalupe-Blanco River Authority (GBRA) - Surface Water Lehman & Yarrington

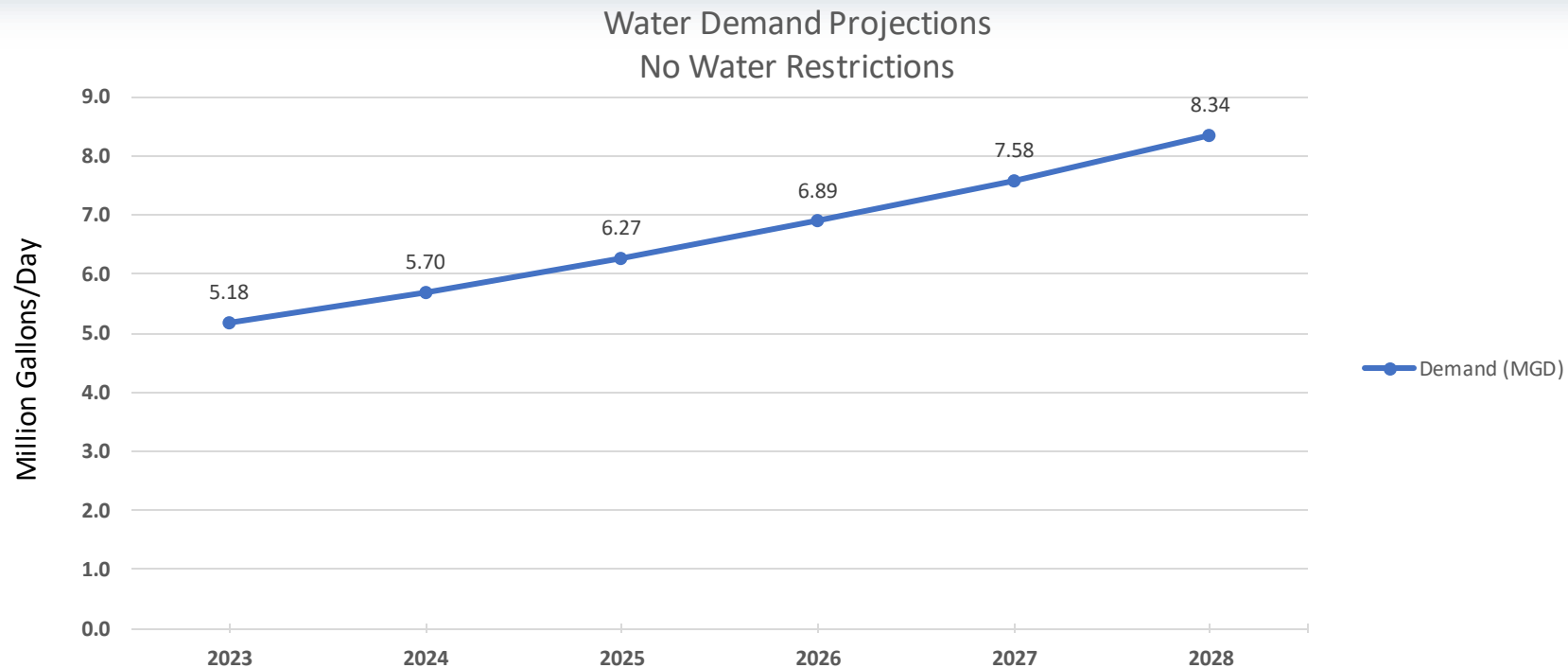
Max Restrictions 1,846,269,643	5.06 MGD
Average with restrictions 1,969,227,976	5.40 MGD
No restrictions 2,113,769,943	5.79 MGD

Demand Projections

- 2023 Demand:
 - 4.09 MGD average
- Historical Population Data
- 2024 – 2028 projections
 - Conservative
 - 10% annual growth
 - Used in model

Year	Population	% Growth
2015	34,413	5.3%
2016	36,500	6.1%
2017	38,800	6.3%
2018	41,100	5.9%
2019	43,850	6.7%
2020	47,220	7.7%
2021	50,150	6.2%
2022	52,500	4.7%
2023	55,600	5.9%
2024	58,450	5.1%

Demand Projections



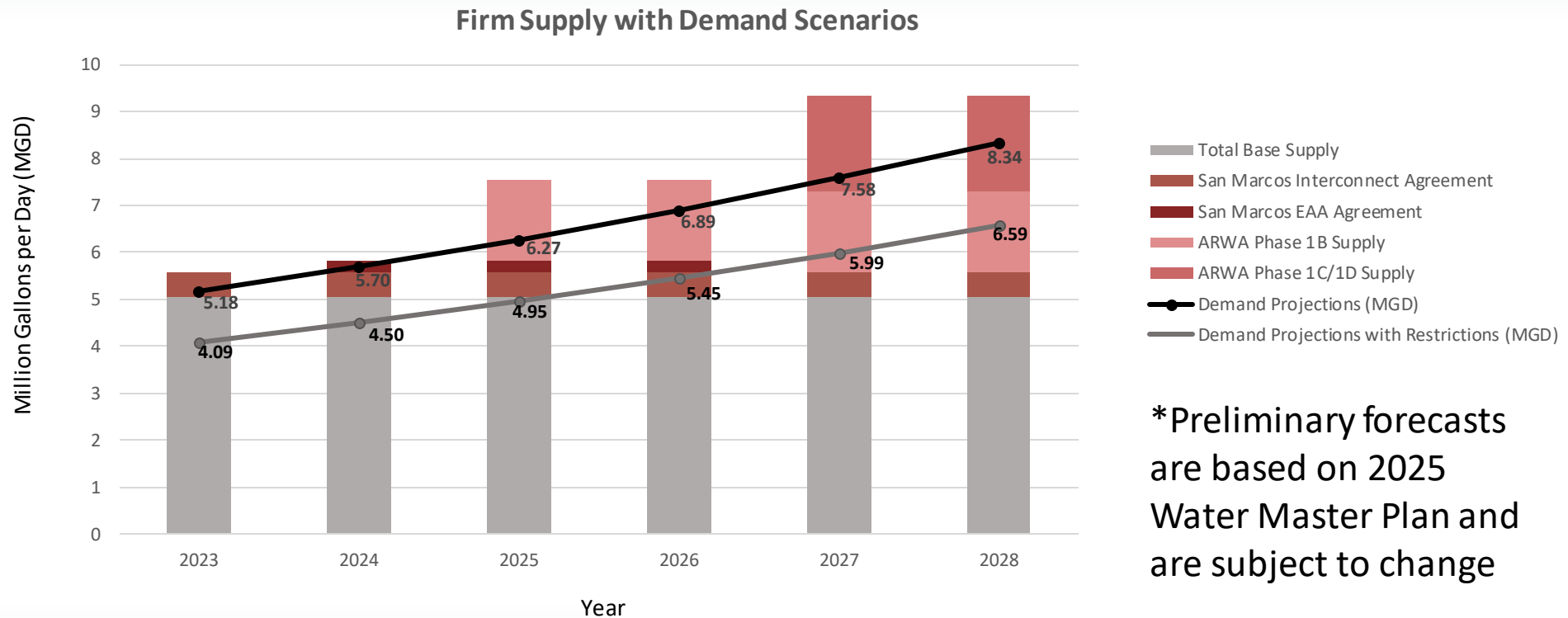
Planned Short-Term Supply

- City of San Marcos Emergency Interconnect
- City of San Marcos EAA ILA
- ARWA Phase 1B Supply
- ARWA Phase 1C/1D Supply
- Additional water supply coordination with City of San Marcos/ARWA partners

Supply Source	Supply (MGD)	Timing
Existing Supply Total	5.4	-
Existing City of San Marcos Emergency Interconnect	0.5	In Place
San Marcos EAA Lease Agreement	0.25*	2024 - 2026
ARWA Phase 1B Supply	1.73	February 2025
ARWA Phase 1C/1D Supply	2.04	March 2027

*44% reduction applied to represent firm capacity

Planned Short-Term Supply



*Preliminary forecasts are based on 2025 Water Master Plan and are subject to change

ARWA Program Summary

- Alliance Regional Water Authority (ARWA) Summary

	Year Online	ARWA Total (MGD)	Kyle's Cumulative Share (MGD)
Phase 1B	2025	6.13	1.73
Phase 1C/D	2028	13.38	3.77
Phase 2	2040	31.33	8.83

- Opportunities exist for increases in shares for Phase 1C/D and Phase 2, if needed
- Kyle to take a leadership role in Phase 1C/D and Phase 2
- Phase 1B delivered in February 2025

Long-Term Supply Opportunities

- Alliance Regional Water Authority Phase 2
 - 30 MGD to ARWA entities – percentage allocation up for discussion
- Additional GBRA supply
 - Water Secure Initiative - Plans for water supply and ASR
- Indirect/Direct Potable Reuse
 - Possibility to nearly double current water supply
 - Wastewater Treatment Solutions
- Expanded Reclaimed Water System
 - Identify locations and areas with most impact, including construction water
- Continued Coordination with Area Partners

Moving Forward

- Continue to monitor and adjust water restrictions through 2025 based on demand, agreements, and water suppliers' conservation
 - Demand is only slightly below supply for 2024 and 2025
 - BSEACD currently in Stage II
 - EAA Stage 3 – 35% reduction on the permit
 - GBRA Stage 2 – 10% voluntary reduction on the permit
 - Continued drought conditions expected through 2024
- Identification and implementation of short-term system improvement solutions
- Continued participation in ARWA and leadership of Phase 1C/1D Project

Projects to meet future demands

- Water Master Plan – Complete early 2025
 - Develop demand projections through buildout
 - Develop future water supply needs for purpose of water supply acquisition planning for the next 50 years
 - Identify water system improvement needs
- Update Drought Contingency Plan
- Short term water system improvements
- Capital Program Projects
 - Estimated \$100M to \$200M in improvements (water treatment, infrastructure, and wastewater treatment)
- Landscaping Code Amendments – required v. voluntary and residential focus
- Cost of Service Study – conservation-based rate schedule
- Impact fee update – reflective of projects in the master plan
- Building Standards - economic development projects

Thank You

- Questions?

