

Town of Marana - Water Department Update

The 2022 Council Retreat

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Water Director



March 11, 2022

Outline

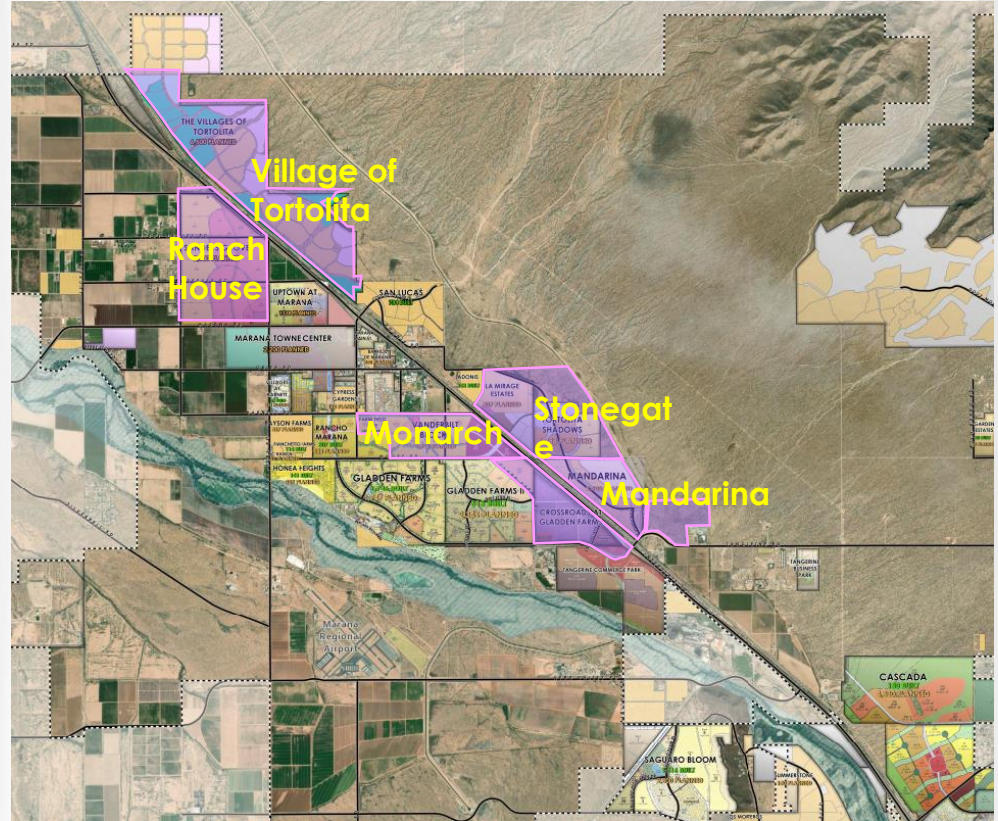
- **Projected Growth in Marana Water's Service Area**
- **Infrastructure Development**
- **Modification of DAWS /Integrated Water Resources Master Plan**
- **Non-Potable Water Ordinance**
- **Water Conservation Program**

Projected Growth in 10 Years and Build-out

Major Developments in Marana's Water Service Area:

1. Mandarinina- early phase: 1,342 lots; build out 2,500 lots
2. Mandarinina South (Chicken Ranch) – early phase: 110 lots; build out 750 lots
3. Stonegate - early phase: 1,000 lots; build out 3,138 lots
4. Village of Tortolita - early phase: 300 lots; build out 6,500 lots
5. Monarch - early phase: 1,000 lots; build out 2,200 lots
6. Crossroads - early phase: 290 acres; build out 336 acres
7. Ranch House -early phase: 700 lots; build out 2,500 lots
8. Others

Total of 14,469 new EDUs in ten years



Infrastructure Development

Water

Legend

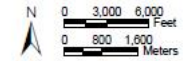
- Water Mains
- Marana Town Limits
- Streets
- Pressure Zone Boundary

Existing Water Plants



Proposed Infrastructure

- Well
- Reservoir
- Booster



MARANA WATER DEPARTMENT
2020 Infrastructure Improvement Plan

CAPITAL IMPROVEMENT PROJECTS
Figure 6



Water Infrastructure Projects- Schedule

Water Project Status - For Planning Only		FY22						FY23						FY24						FY25																								
Munis #	Projects in Planning	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
		WT048	NWRRDS Forbay Booster																																									
WT048	NWRRDS Partner Project- Transmission Main and Reservoir																																											
WT048	NWRRDS- Airport Well Connection to NWRRDS Pipeline																																											
WT046	Marana Park Reservoir																																											
WT047	Marana Park Well																																											
WT053	East Tangerine 16" Pipeline (Tangerine Road Widening)																																											
	Honea East Well																																											
	Heritage Park Water Plant (well, reservoir, and PS)																																											

Sewer Infrastructure Projects

Figure 9-1. 2022 – 2027 (5 Year) Capital Improvement Projects

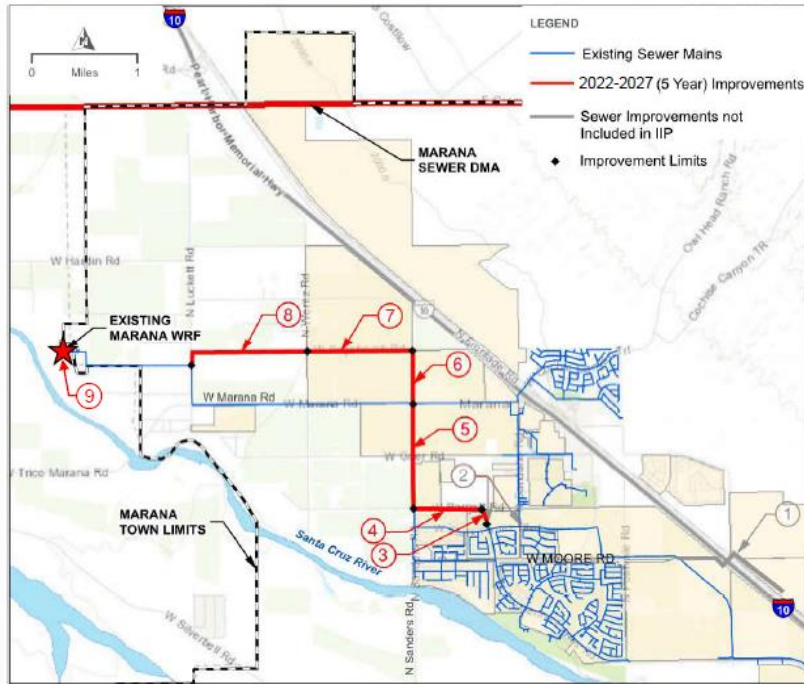


Figure 9-2. 2027 – 2032 (10 Year) Capital Improvement Projects



Sewer Infrastructure Projects- Schedule

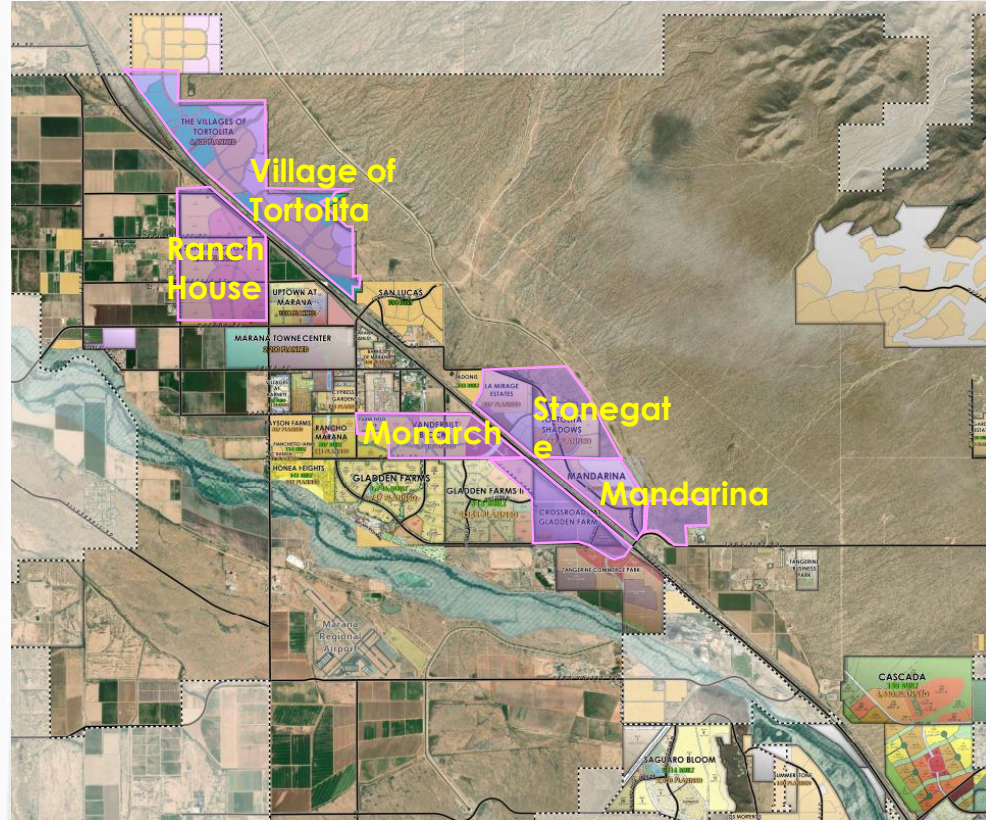
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WR021	North Marana Sewer Interceptor (Project 4-8)					Preliminary Design 15%		Procurement-Bid						DB-Detailed Design and Construction 24 Months ->																								

- **North Marana Sewer Project** – mostly 27", ~4 miles.
- **Additional projects are currently still been evaluated**

Modification of DAWS/ Integrated Water Resources Master Plan

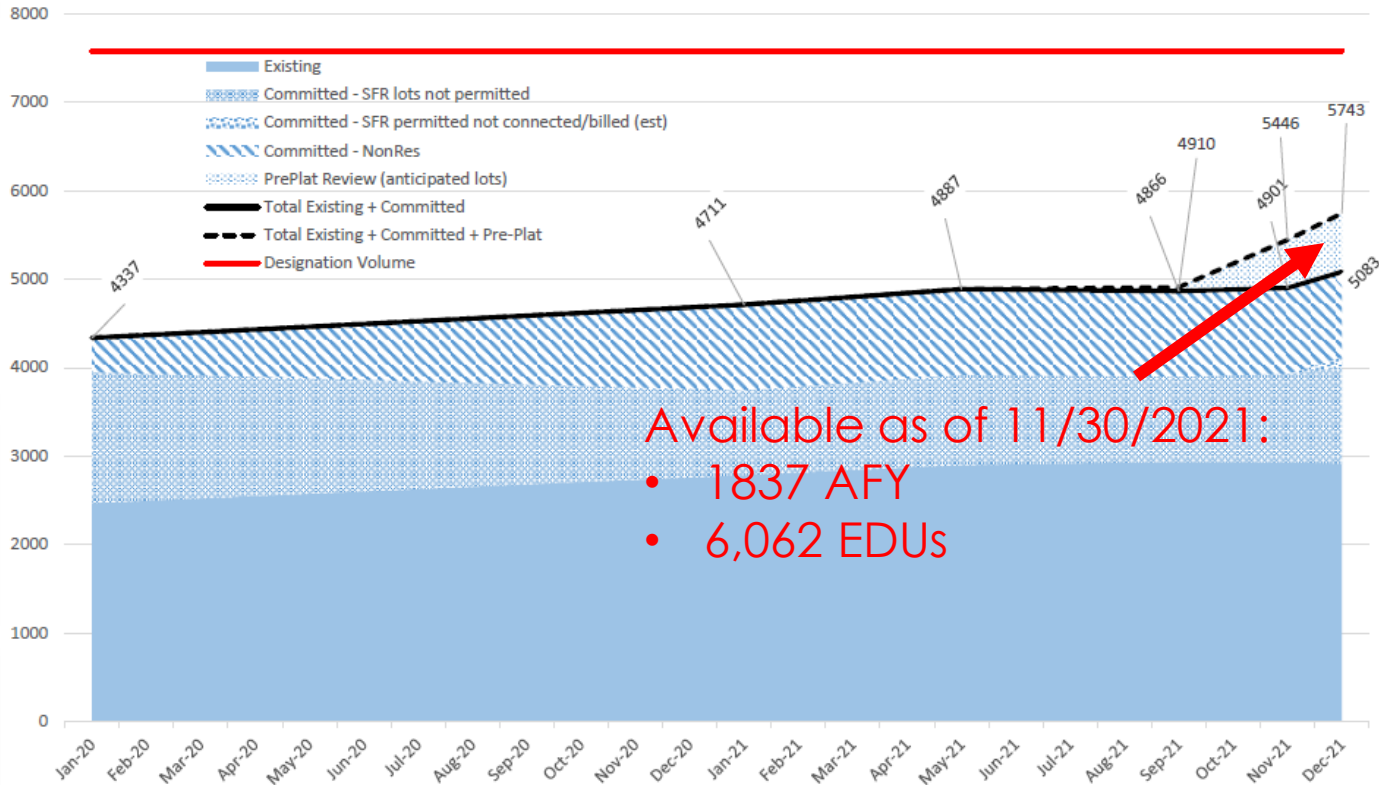
DAWS Modification

- Goal: To increase Town's Designation of Assured Water Supply from 7,580 AFY to 15,000 AFY to accommodate future growth likely to be committed in 10 years
- Consultant Team: Westland and Montgomery & Associates

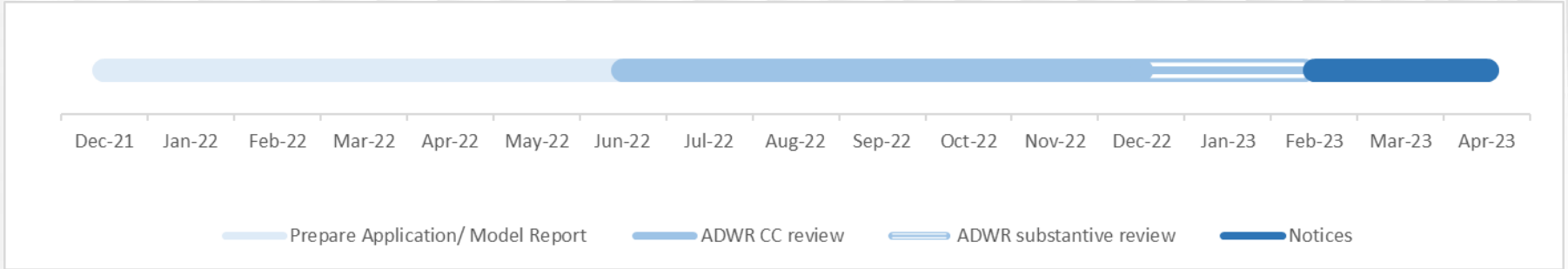


Available Water Resources – Nov. 30, 2021

Marana Water Service Area demands - Existing, Committed, Pre-Plat in Review (AFY)



DAWs Modification– Schedule



- Project Kick-Off: December 2021
- Pre-application Meeting with ADWR: Jan. 12, 2022
- 6 Months to Prepare the Application
- ADWR Review Timeframes - 210 Days + pause for substantive questions
- Final determination agreed / published → New DAWS

Integrated Water Resources Master Plan – Schedule

PROJECT ID	PROJECT / TASK DESCRIPTION	CONSULTANT / SUBS / PARTNERS		FY22							FY23							FY24					
				Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
WT056	INTEGRATED WATER RESOURCES MASTER PLAN	WestLand Resources	WL SUBS								1								2				3
	MODIFICATION OF DAWS		M&A	PREPARE AND SUBMIT APPLICATION TO MODIFY				APPLICATION REVIEW PERIOD (ADWR)							Notices / Final		Reporting						
	DROUGHT PREPAREDNESS PLAN			ESTABLISH SOW		REVISE EXISTING PLAN			IMPLEMENT REVISED PLAN -->					Reporting									
	CONSERVATION PLAN		AZPW, TBD	ESTABLISH SOW		REVIEW METHODS, TARGETS AND GOALS, PREPARE PLAN				IMPLEMENT REVISED PLAN -->			Reporting										
	SOURCE WATER PLAN		TBD	ESTABLISH SOW			REVIEW SOURCE WATER CONSIDERATIONS, PREPARE PLAN							Reporting									
	WATER RESOURCES TASK FORCE		WESTWATER, OUTSIDE COUNSEL	ESTABLISH SOW		REVIEW OPTIONS, PREPARE POLICY AND PURCHASE RECOMMENDATIONS							Reporting										
WT061	CITIZENS' WATER ACADEMY / ADWR GRANT	AZ PW	CAP, ADWR	HOLD INAUGURAL ACADEMY		DEVELOP CONSERVATION MATERIALS TO SUPPORT PLAN			HOLD ACADEMY #2		INFORM CONSERVATION PLAN AND FINAL RPT WT056			Reporting									
WT0XX	RENEWABLE WATER RESOURCES ACQUISITION	OUTSIDE COUNSEL / OTHER		PLANNING				ONGOING ACTIVITY TO ACQUIRE ADDITIONAL SUPPLIES FROM IMPACT FEE REVENUE -->							3								

- 1** COUNCIL PRESENTATION TO ADOPT DROUGHT PREPAREDNESS PLAN (+STATUS OF IWRMP)
- 2** COUNCIL PRESENTATION ON CONSERVATION PROGRAMMING (+STATUS OF IWRMP AND CWA)
- 3** COUNCIL PRESENTATION ON IWRMP FINAL REPORT, STATUS OF ACQUISITIONS

Renewable Water Resources Acquisition

- Task Force
 - Team
 - Water Department
 - Attorney's office + outside counsel
 - Manager's office (Assistant to the Town Manager)
 - Consultants: West Land Resources, West Water Research
 - Evaluate existing resources, future needs, potentially available supplies
 - Make policy and/or purchase recommendations to Council

Non-potable Water Ordinance

Background and Purpose

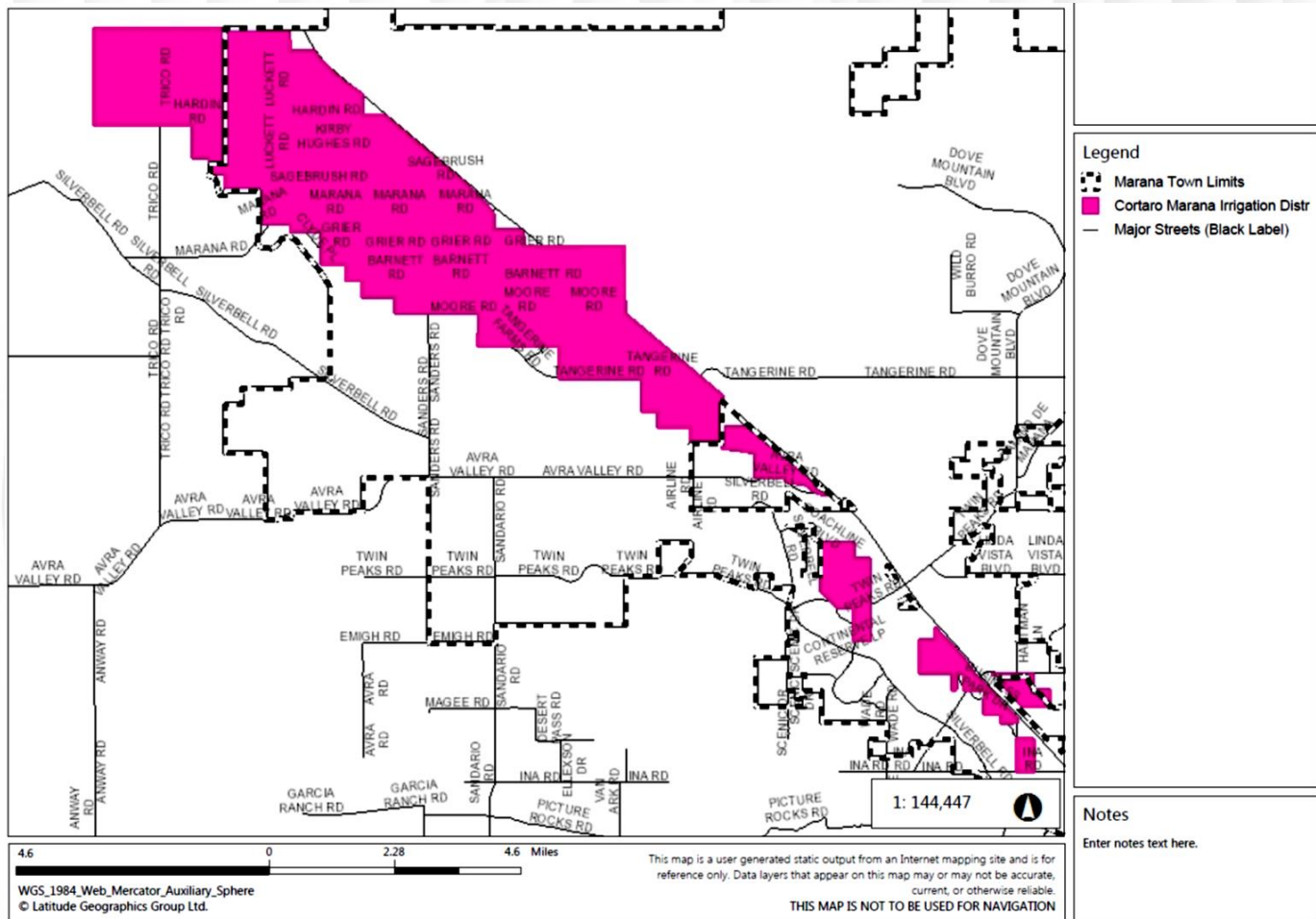
Background

- 2013 IGA transferred North Marana non-potable system to CMID
- Potable water is used for irrigation in most neighborhoods except for a few subdivisions
- No recharge credit is collected on irrigation water

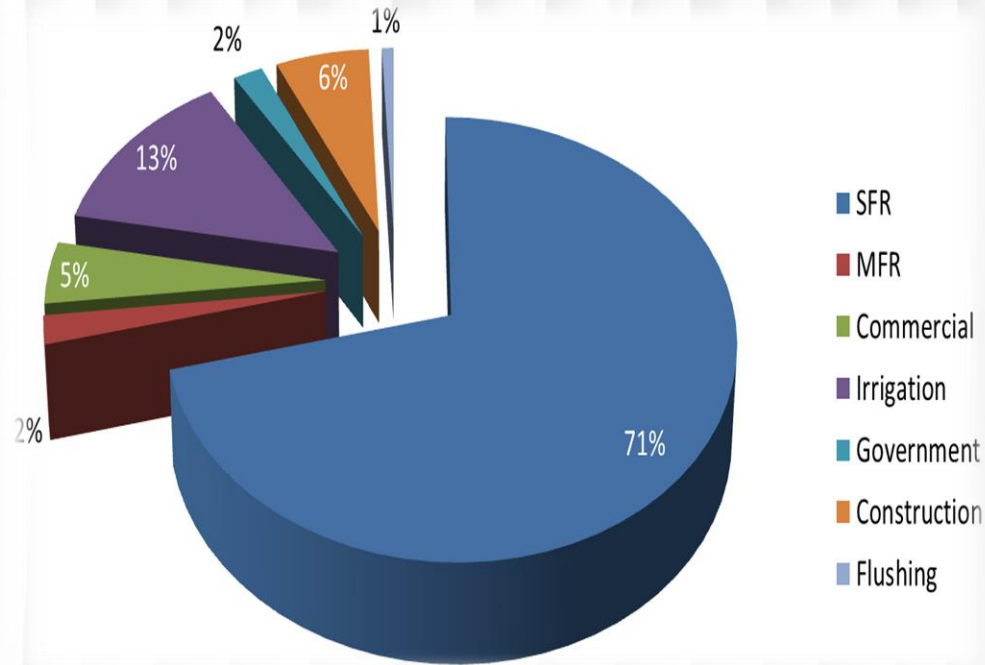
Purpose

- Maximize the use of renewable resources in Marana's current water portfolio
- Reduce the Town's potable water obligations for non-potable use
- Better utilize CMID's existing water rights to meeting the non-potable water demand in Marana

Cortaro-Marana Irrigation District Boundaries



Current Water Demand



10 Year Projected Water Demand in North Marana (Appx. CMID Service Area)

Service Type	1 to 5 year add'l demand (AFY)	6 to 10 year add'l demand (AFY)
SFR	657	1,477
Irrigation	120	270
Other	148	333
Total	925	2080

- Assumes current average use of 0.3 AFY per EDU and current distribution of water use
- Residential demand (demand per SFR / lot) as 71% of total water demand
- Irrigation demand as 13% of total water demand

390 AFY = 1,287 EDUs

Key Components to the Ordinance

- Irrigation meters for proposed project within CMID service area
 - Residential, Commercial, Industrial, and public projects
- Connection to non-potable water system is required as a condition of rezoning
- CMID may waive right to serve
- MOU between CMID and Marana Water
- Town Council may determine that the use of non-potable water is not necessary
- Prior to submitting a development plan, an applicant shall prepare a report containing:
 - Proposed non-potable water demand
 - Location of Non-Potable water infrastructure
 - Rezoning conditions or Council determination

Water Conservation

Citizens' Water Academy - Overview



- Partnered with Arizona Project WET and UA Cooperative Extension
- Six-week Program
- Covered Topics:
 - Marana Water Purpose and Goals
 - AMI meters & customer portal
 - Conservation
 - Central Arizona Project
 - State Agencies (ADWR / ADEQ)

Citizens' Water Academy - Feedback

- Feedback / recommendations from Academy*
 - Indoor/outdoor devices – e.g. on-demand water heater, washing machines, irrigation controllers, rain gutter covers
 - Indoor/outdoor practices – e.g. capture of shower water running to get hot, active/passive water harvesting techniques
 - Educate customers regarding Town code and best practices
 - Incentivize appliances (e.g. high efficiency washing machine)
 - Work with homebuilders
 - Avoid retrofitting issues
 - Provide information to homebuyers about water efficient practices of the home itself (as well as appliances)

Conservation Incentive Program Summary

Outdoor

- Xeriscape - e.g. Avondale, Chandler, Glendale, Peoria, Tempe
- Irrigation Controllers – e.g. Avondale, Chandler, Peoria, Tempe
- Turf/Pool Conversion - e.g. Avondale, Chandler, Mesa, Peoria, Scottsdale, Tempe
- Water Harvesting/Graywater - e.g. Tempe, Tucson, Metro Water
- Others – e.g. Glendale, Goodyear, Mesa, Scottsdale, Tempe, Tucson

Indoor

- Low Flow Plumbing - e.g. Avondale, Peoria, Scottsdale, Tempe, Tucson, Metro Water
- Washing Machine – e.g. Avondale, Tucson

Questions/Discussion



