Oro Valley Water Utility
Water Resource Planning

Presented to the Oro Valley Community Academy

Presented by:

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Oro Valley Water Utility Director

Town of Oro Valley

Presentation Outline

Town of Oro Valley

- 1- Acre/Ft. – 325,851 gallons (1 Acre/Ft. can serve about 3 SFR's for 1 year)
- Water Utility Mission & Commission
- Water Utility Yesterday & Today
- Water Utility Service Area, Assets & Organization
- Water Resource Utilization by Year
- Water Resource Conservation
- Water Shortage Preparedness
- Colorado River System
- Lower Basin Drought Contingency Plan
- OVWU Water Resource Utilization Model (For 2022)
- OVWU Water Resource Utilization (Past/Present/Future)
- Water Utility Looking Forward

Oro Valley Water Utility – The Mission & Commission

Town of Oro Valley

Mission

To maintain and acquire sufficient water resources to ensure the community has an adequate, safe and reliable water supply to sustain the Town's quality of life and support residential and economic development.

Commission

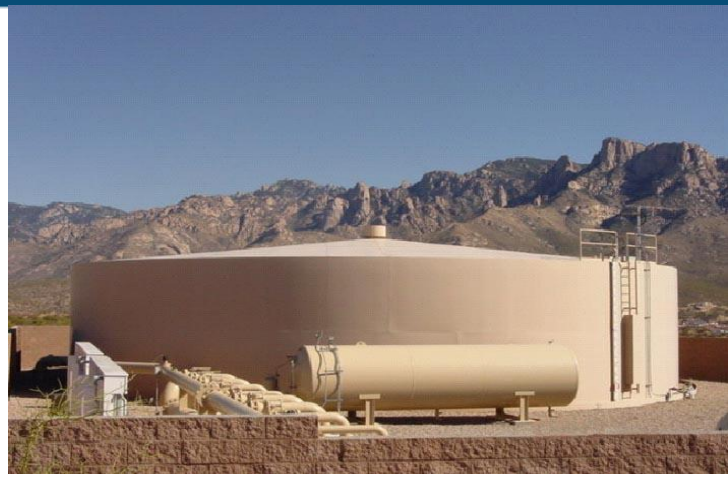
- Composed of seven members that serve terms of 3-years.
- Commissioners are selected to give a balanced representation of residential and commercial/turf interests served by the Utility.
- Makes recommendations on OVWU items that require Council action. Examples: Water code changes, Water rate changes, etc.
- Commission meets the second Monday of each month at 5 pm.

Oro Valley Water Utility - "Yesterday" & "Today"

Town of Oro Valley

OVWU Yesterday…

- 1996 - Town purchased 2 water companies
  - Canada Hills Water Company & Rancho Vistoso Water Company
  - 9,800 connections serving 26,000 residents
  - Solely dependent on groundwater as the only source of supply



OVWU Today…

- Successfully operated Enterprise fund of the Town for over 26 yrs.
- Has over 21,000 service connections serving over 47,000 residents
- Diverse water resource portfolio
  - Groundwater
  - CAP water - 2012
  - Reclaimed water -2005

Oro Valley Water Utility – Service Area & Assets

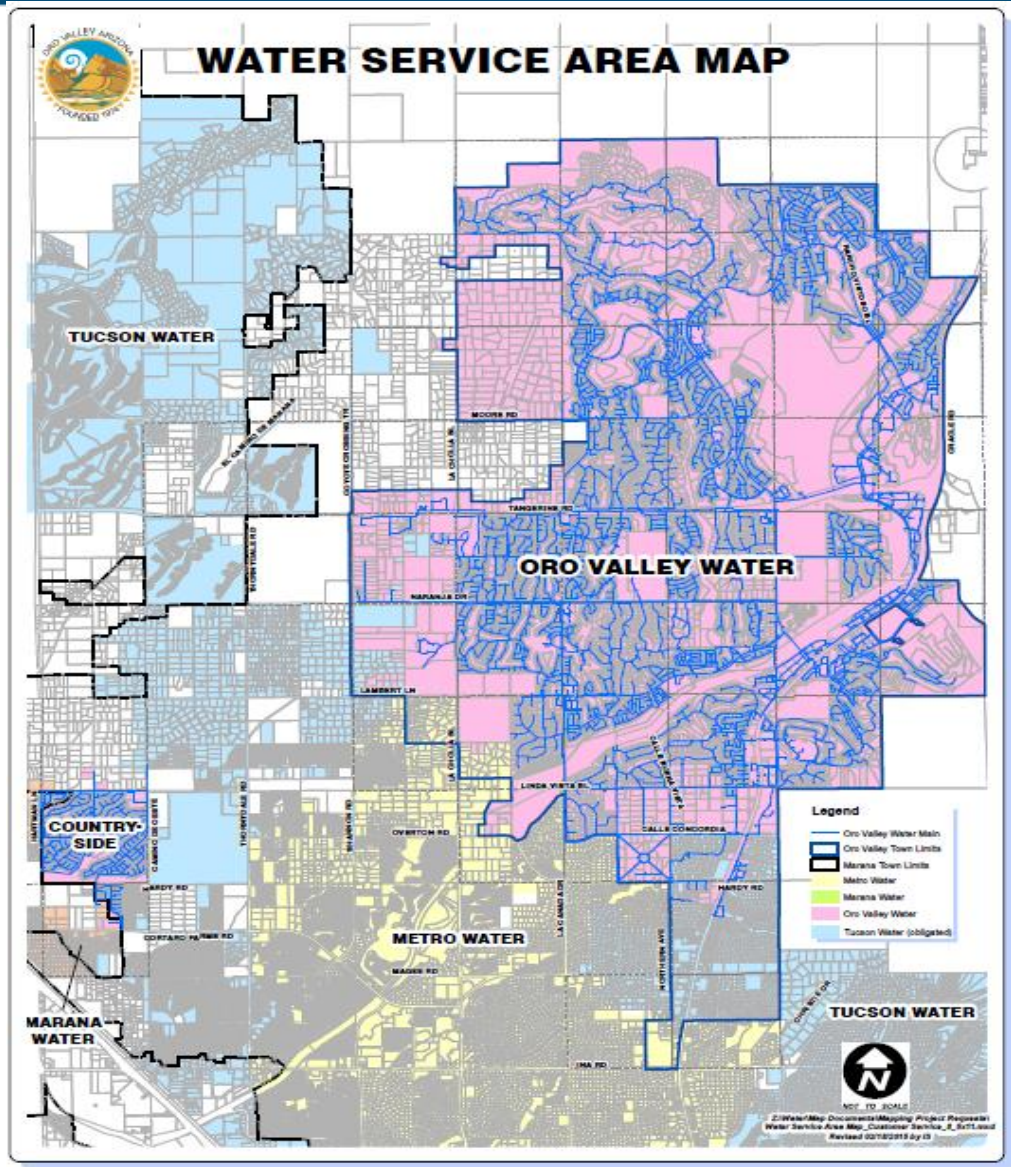
Town of Oro Valley

The Oro Valley Water Utility has …

- 2 service areas
- A service area of 33 Sq. miles
- 18 production wells
- 26 booster stations
- 12 reservoirs
- 381 miles of distribution mains
- 4 recovered CAP interconnects
- 2 water systems
  - Potable & Reclaimed

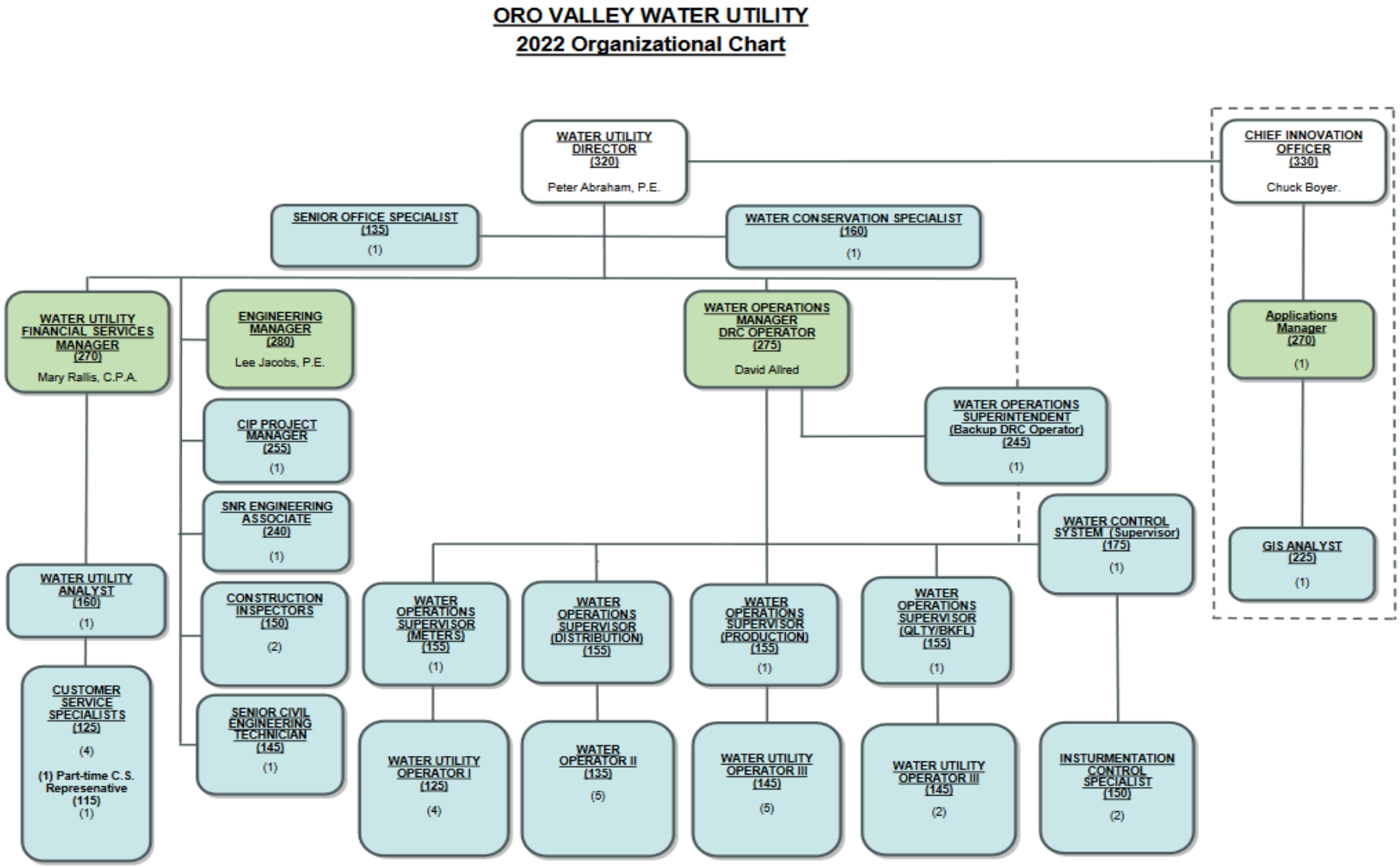
The Oro Valley Water Utility is…

- 2nd largest Municipal Water Service provider in Southern AZ
- Operated and maintained by a staff of 40 water professionals



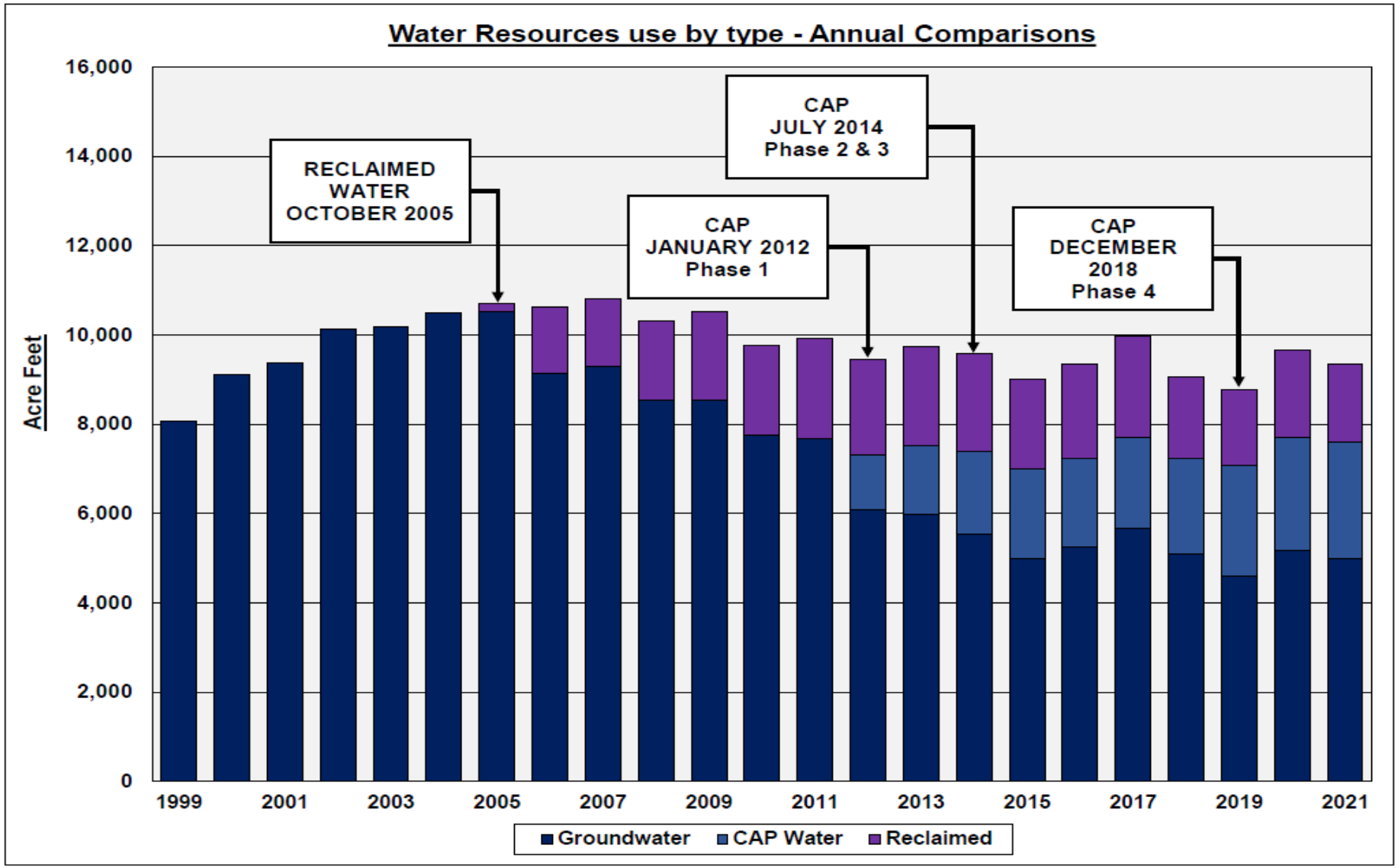
Oro Valley Water Utility – The Organization

Town of Oro Valley



OVWU Water Resources Utilization by Year

Town of Oro Valley

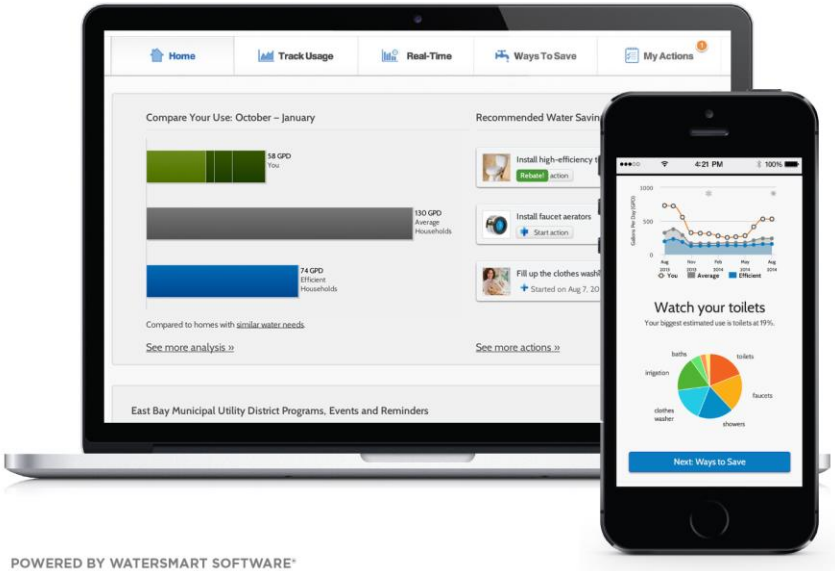


Water Resource Conservation

Town of Oro Valley

- Conservation tools
  - 1-full time water conservation specialist (outreach, education, water audits)
  - AMI metering system
  - Tiered commodity rate structure – "Conservation Pricing"
  - Utility partnership with "WaterSmart"

- "WaterSmart"
  - Customer self-service web portal
  - Track your daily water use
  - Compare your household water use to similar utility customers.
  - Set personal water alarms
  - Receive notifications when consumption exceeds user alarm thresholds



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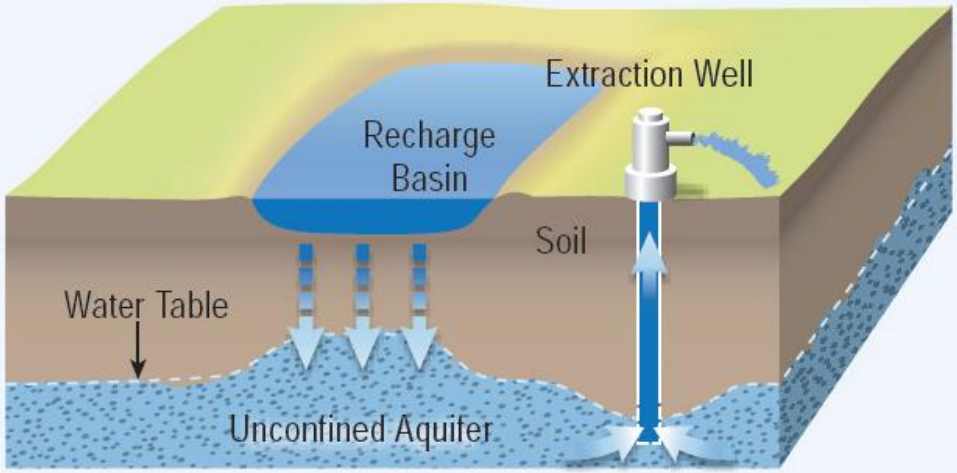
Water Shortage Preparedness – Recharge, Recovery & Storage

Town of Oro Valley

- CAP Recharge and recovery
  - CAP water delivered to nearby recharge basins
  - CAP water percolates through soil & recharges groundwater
  - Recovery wells pump recharged groundwater to service areas
  - Recharged groundwater not pumped accumulates in the form of LTSC

- Storage
  - For over a decade the OVWU has recharged groundwater in nearby aquifer storage facilities
  - OVWU has always recovered less water than stored annually
  - OVWU has accrued years of LTSC



Colorado River System

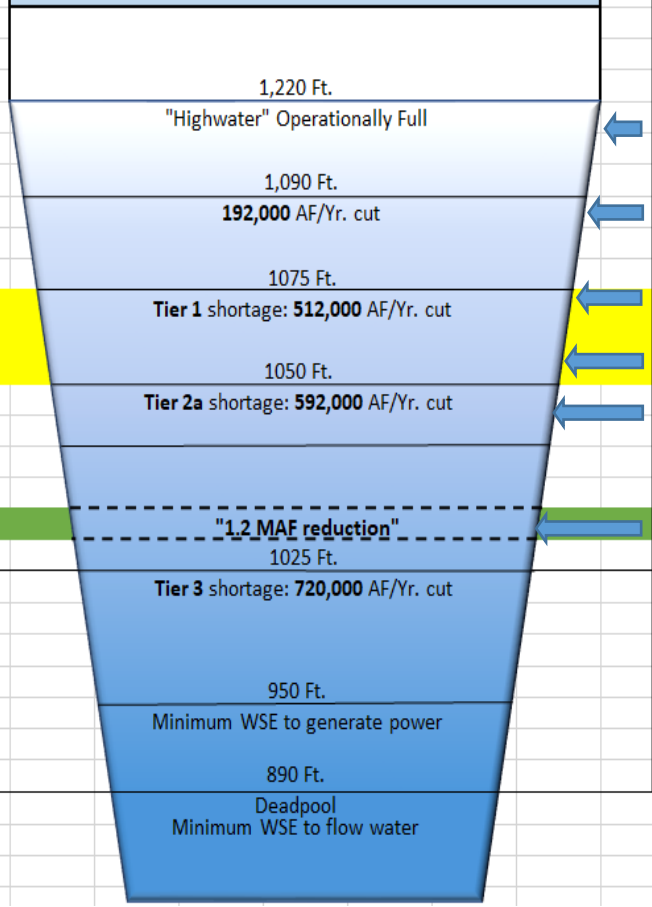
Town of Oro Valley

- Colorado River system is 1,450 miles long, Rocky Mountains to Gulf of California
- Provides water to seven US states & Mexico
- ***Upper Basin States:*** Colorado, New Mexico, Utah and Wyoming
- ***Lower Basin States:*** Arizona, California and Nevada
- 7.5 MAF/year for each
- Lower Basin Colorado River Allocations
  - California: 4.4 MAF/Yr.
  - Arizona: 2.8 MAF/Yr. (1.6 MAF/Yr. CAP)
  - Nevada: 0.3 MAF/Yr.
- Supplies water for 40 million people
- Annual delivery volumes to lower basin States determined by water surface elevations of Lake Mead
- In the midst of a 23-year drought

Lower Basin Drought Contingency Plan

Town of Oro Valley

CAP Priority Order
Unallocated Excess Water (Lowest Priority)
Agriculture Pool
NIA Agriculture
NIA Agriculture
M&I Pool (Highest Priority)

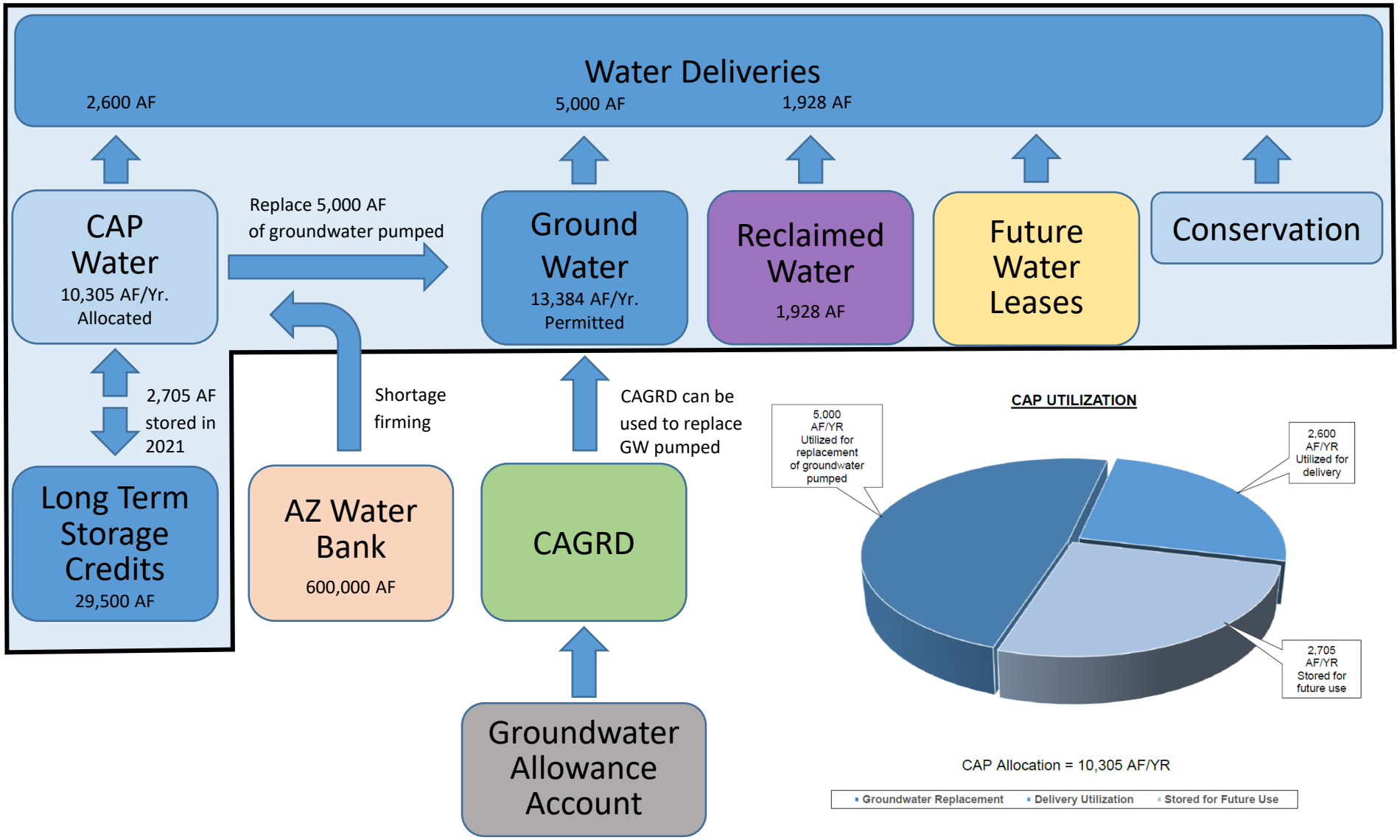


Lower Basin States Drought Contingency Plan							
Shortage Condition	Lake Mead WSE (ft.)	AZ Total Reduction (Acre-Ft.)	NV Total Reduction (Acre-Ft.)	CA Total Reduction (Acre-Ft.)	BOR Total Reduction (Acre-Ft.)	MX Total Reduction (Acre-Ft.)	River Total Reduction (Acre-Ft.)
None	>1090	None	None	None	None	None	None
Tier 0	> 1090 >1075	192K	8k	0	100K	41K	341K
Tier 1	> 1075 >1050	512K	21K	0	100K	80K	713K
Tier 2a	> 1050 > 1045	592	25K	0	100K	104K	821K
Tier 2b	> 1045 > 1040	640	27K	200k	100K	146K	1113K
Tier 2c	> 1040 > 1035	640	27K	250k	100K	154K	1171K
Tier 2d	> 1035 > 1030	640	27K	300k	100K	162K	1229K
Tier 2e	> 1030 > 1025	640	27K	350k	100K	171K	1288K
Tier 3	< 1025	720	30K	350k	100K	275K	1475K

- CAP priority system that governs CAP water deliveries in times of shortage
- OVWU CAP water allocation is part of the M&I Pool

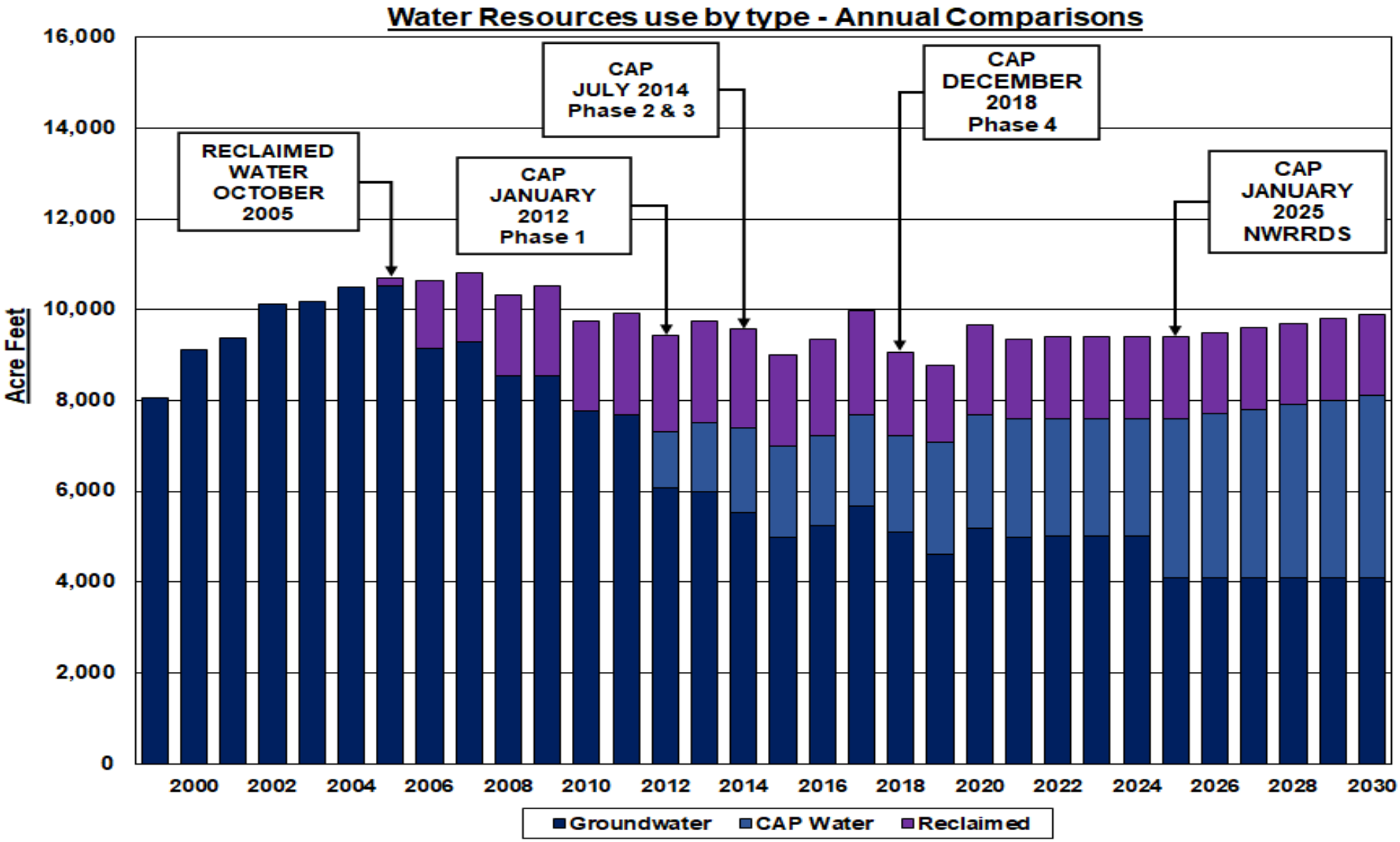
OVWU Water Resource Utilization Model (2021 Data)

Town of Oro Valley



OVWU Water Resources Utilization (Past/Present/Future)

Town of Oro Valley



OVWU Water Resource Utilization (Past/Present/Future)

Town of Oro Valley

YEAR	ACTUAL GROUNDWATER PRODUCTION (Acre-Ft)	PROJECTED GROUNDWATER PRODUCTION (Acre-Ft)	ACTUAL CAP PRODUCTION (Acre-Ft)	PROJECTED CAP PRODUCTION (Acre-Ft)	ACTUAL POTABLE DEMAND (Acre-Ft)	PROJECTED TOTAL POTABLE DEMAND (Acre-Ft)	ACTUAL RECLAIMED PRODUCTION (Acre-Ft)	PROJECTED RECLAIMED PRODUCTION (Acre-Ft)	ACTUAL TOTAL PRODUCTION (Acre-Ft)	PROJECTED TOTAL PRODUCTION (Acre-Ft)	ACTUAL SERVICE UNITS	PROJECTED SERVICE UNITS	ACTUAL BUILDOUT SERVICE UNITS	PROJECTED BUILDOUT SERVICE UNITS
1997	6601		-		6601		-		6601					
1998	6312		-		6312		-		6312					
1999	8059		-		8059		-		8059					
2000	9125		-		9125		-		9125					
2001	9462		-		9462		-		9462					
2002	10125		-		10125		-		10125					
2003	10284		-		10284		0		10284					
2004	10501		-		10501		0		10501					
2005	10519		-		10519		184		10703					
2006	9146		-		9146		1,497		10643					
2007	9291		-		9291		1,537		10828					
2008	8625		-		862[illegible]		1,764		10389					
2009	8595		-		859[illegible]		1,9[illegible]		[illegible]564					
2010	7680		-		768[illegible]		1,957		9637					
2011	7671		-		767[illegible]		2,[illegible]		9898					
2012	6161		1337		749[illegible]		[illegible]15		9613					
2013	6024		1594		761[illegible]		2,[illegible]		[illegible]42					
2014	5612		1858		7470		2,298		9768				4,131	4,131
2015	5000		2074		7074		2,111		9185		268	268	3,863	3,863
2016	5241		2000		7241		2,194		9435		295	250	3,568	3,613
2017	5573	5,321	2094	2,000	7666	7,321	2,321	2,300	9987	9,621	340	250	3,228	3,363
2018	5213	5,320	2098	2,100	7310	7,420	1,932	2,000	9243	9,420	331	309	2,897	3,054
2019	4596	4,936	2579	2,580	7175	7,516	1,740	1,800	8,915	9,316	264	301	2,633	2,753
2020	5176	5,084	2616	2,580	7792	7,664	2,033	1,800	9,825	9,464	273	461	2,360	2,292
2021	4997	5,201	2606	2,580	7603	7,781	1,751	1,800	9,354	9,581		367		1,925
2022		5,295		2,580		7,875		1,800		9,675		293		1,632
2023		5,356		2,580		7,936		1,800		9,736		192		1,440
2024		5,436		2,580		8,016		1,800		9,816		250		1,190
2025		4,530		3,570		8,100		1,800		9,900		260		930
2026		4,510		3,670		8,180		1,800		9,980		250		680
2027		4,493		3,770		8,263		1,800		10,063		260		420
2028		4,476		3,870		8,346		1,800		10,146		260		160
2029		4,459		3,970		8,429		1,800		10,229		260		-100
2030		4,443		4,070		8,513		1,800		10,313		263		-363

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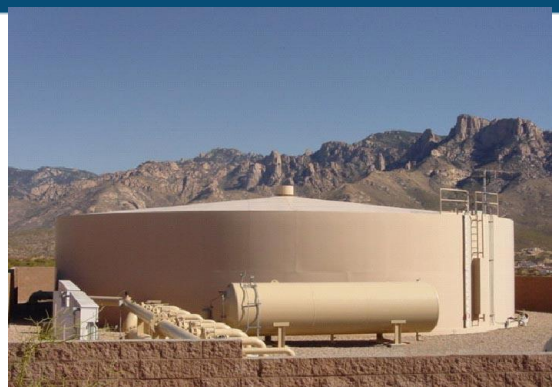
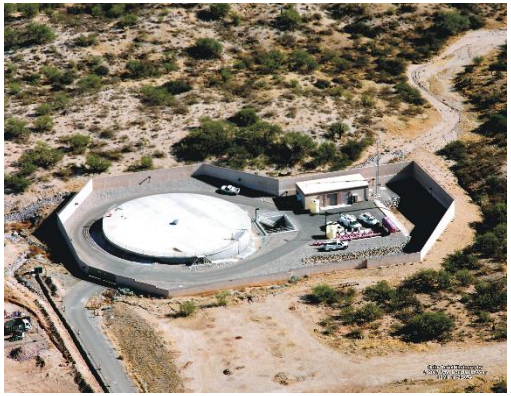
Water Utility Looking Forward

Town of Oro Valley

- With the support of the Community and Town Leadership the Water Utility will…
  - Continue it's 26-year tradition of successfully managing, growing and firming its water resource portfolio
  - Continue to work with water professionals and law-makers to reach consensus on sound water policies, regulations and management strategies
  - Continue to responsibly implement incremental rate adjustments as necessary to match the pace of increasing water resource costs
  - Continue to meet the water resource needs of the community

QUESTIONS

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