# WATER UTILITY ANNUAL REPORT

## APRIL 2025

ORO VALLEY
ARIZONA

# TOWN OF ORO VALLEY
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**ABOUT THE WATER UTILITY COMMISSION**

The Oro Valley Water Utility Commission is appointed by the Oro Valley Mayor and Council (Mayor and Council). The Mayor and Council have jurisdiction over rates, fees and water management issues. In March of 1996, the Mayor and Council created the Oro Valley Water Utility Commission (commission) to act as their advisory body. Please refer to the Town Water Code, Article 15-4, on the Town website at http://www.codepublishing.com/AZ/OroValley/.

The Commission is composed of seven members that shall serve terms of three years. The Commissioners are selected to give a balanced representation of residential and commercial/turf interests served by the Utility.

The primary responsibility of the Commission is to review and make recommendations on Oro Valley Water Utility topics that require Mayor and Council action. These topics may include water system development, long-term water resource planning, rate adjustments, five-year capital improvement program, state and federal legislation regarding water related issues, expansion of service areas and water acquisitions. The commission also supports community programs and education related to the Oro Valley Water Utility.

The Commission welcomes the public to attend its meetings. The Commission meets the second Monday of each month, unless otherwise posted. All meetings are noticed on the Town's website at https://www.orovalleyaz.gov/Government/Departments/Town-Clerk/Meetings-and-Agendas.

In 2024, the Commission held 8 Water Utility Commission meetings and participated in one field trip. Work performed or reviewed by the Commission in 2024 included:

| Meeting Date | Action Item |
|---|---|
| January 8, 2024 | Election of Commission Chair and Vice Chair<br>Recommendation on Water Rates |
| February 12, 2024 | Update and Discussion on the AZ Growing Water Smart Retreat |
| March 11, 2024 | Recommendation for acceptance of the Annual Report |
| April 12, 2024 | Field Trip – Tour of Water Utility Infrastructure |
| May 13, 2024 | Update and Discussion on Water Resource Usage |
| August 12, 2024 | Water Utility Quarterly Reports |
| September 9, 2024 | Update and Discussion on OV Path Forward 10-Year Action Plan |
| October 14, 2024 | Update and Discussion on Joint Coordination Meeting with Central Arizona Project Staff |
| November 11, 2024 | Update and Discussion on CAP Water Supply |

Additional notable items on Commission agendas in 2024 include:

- Review and comment on Groundwater Metrics and Wellfield Condition
- Quarterly updates on Water Utility Financials, Water Operations, Capital Projects and Water Resource Utilization

Notable issues planned for commission review or action in 2025 include:

- Recommendation for acceptance of the Annual Report
- Recommendation for acceptance of the Water Rates (The Finance subcommittee will be eliminated to allow full participation of the entire Commission)
- Northwest Recharge, Recovery and Delivery System project (NWRRDS) review
- Review of Conservation and Water Quality programs
- Water resource usage (The Water Resources and Conservation Subcommittee will be eliminated to allow full participation by the Commission)
- Capital Improvement Projects
- Utility financial review
- Field trips/guest speakers TBD

**COMMITTEE REPORTS**

In accordance with the Town's Water code *Article 15-4-5 Committee Reports,* the Commission shall render to the Town Council an annual report on or before April 1st. This report is prepared by the Utility staff and reviewed by the commission for completeness and accuracy.

The Water Utility staff would like to thank the Commission for their detailed review and contributions to ensure the accuracy of this annual report.

# WATER UTILITY COMMISSION 2025

NIRANJAN VESCIO
CHAIR

TOM MAREK
VICE-CHAIR

GREG HITT
COMMISSIONER

JOE HORNAT
COMMISSIONER

ALAN FORREST
COMMISSIONER

MICHAEL SMEJKEL
COMMISSIONER

NOT
PICTURED

DAVID ATLER
COMMISSIONER

## EXECUTIVE SUMMARY

This section summarizes the activities of the Water Utility Commission, the Utility's operations, capital projects, water resource portfolio, and financial management.

## WATER RESOURCES HIGHLIGHTS

The Utility operates two water systems, the Oro Valley Water Service Area, and the Countryside Water Service Area. There are three sources of water supply: groundwater, Central Arizona Project water, and reclaimed water. Groundwater is pumped from the wells in the aquifer below the water service areas, blended with the Central Arizona Project water and then delivered through the potable drinking water distribution system. Reclaimed water is for non-potable uses and is predominantly used for irrigation of golf courses, parks and athletic fields. The potable drinking water system is completely isolated from the reclaimed water system. The following table **(Table 1)** shows the total water resource utilization for each source of supply.

**TABLE 1**

| Total Water Produced in 2024 (Acre-Feet) | | | |
|---|---|---|---|
| **Groundwater** | **CAP Water** | **Reclaimed Water** | **Total Water Produced** |
| 4,840 | 2,560 | 1,817 | 9,217 |

The Utility uses Central Arizona Project water in the following three ways:

1) Aquifer recharge and recovery for water delivery to the potable water systems in both Oro Valley and Countryside.
2) Aquifer recharge for replacement credit for water pumped from the Utility's wells.
3) Aquifer recharge in nearby recharge facilities for future use.

As of December 31, 2024, the Utility has accrued an estimated 37,408 acre-feet of long-term storage credits and has a Groundwater Allowance Account balance of approximately 19,500 acre-feet.

**CUSTOMER SERVICE HIGHLIGHTS**

At the end of June 2024, the Utility had 21,498 customer connections serving a population of approximately 49,000 residents in the service area. Utility water sales revenues totaled $16.2 million for fiscal year 2023-24.

**WATER CONSERVATION HIGHLIGHTS**

The Utility encourages water conservation by informing and educating customers. Specifically, in 2024, the following conservation efforts were accomplished:

- Third anniversary of the quarterly newsletter *Behind the Meter.*
- Over 9,000 automated alerts sent with water savings of over 16 million gallons.
- 50% of leaks confirmed by customers on WaterSmart were related to irrigation.

**WATER UTILITY OPERATIONS HIGHLIGHTS**

Water Operations are a 24-hour per day, seven days per week operation. Staff performed routine maintenance on all Production and Distribution facilities. In 2024, Water Operations completed the following:

- Security upgrades at water facilities which included badge access, automatic gate actuators and security cameras.
- Staff cross training – internal and external employees.
- Relocated Operations staff to single facility.
- Continuing Supervisory Control and Data Acquisition (SCADA) software upgrade to Ignition in partnership with ITD.
- Monitoring pumping water levels in all wells.

**WATER QUALITY HIGHLIGHTS**

In 2024, the Utility received 3,441 analytical results for required water sampling and operational data for the potable water system and met standards set by the US Environmental Protection Agency (EPA),) pursuant to the Safe Drinking Water Act (SDWA). The water systems are in compliance with the Arizona Department of Environmental Quality (ADEQ).

**FINANCIAL HIGHLIGHTS**

The Utility continues to be fiscally sound. The water rate study for FY 2025/26 resulted in a recommendation to increase the base rates and commodity rates for potable water customers. There will be no change to the potable Groundwater Preservation Fee. These proposed changes will result in a potable water monthly increase of $1.81 per month (or 3.6%) for a customer with a 5/8-inch meter using 7,000 gallons per month. Customers with a 5/8-inch

meter represent 84% of the total customer base and include residential, commercial and irrigation classifications with the majority being residential.

There are no proposed changes to the reclaimed base or commodity rates or fees. The proposed changes will be presented to the Town Council in June 2025 and, if adopted, the new potable water base and commodity rates would become effective in July 2025.

All current water rates, fees and charges, including impact fees, are available to view on the Town website at https://www.orovalleyaz.gov/government/departments/water-utility.

## INTRODUCTION

This report provides information to the Mayor and Council and the public on the annual work of the Water Utility Commission, and updated information on the Oro Valley Water Utility (Utility). The report outlines how the divisions within the Utility work together to provide the community with reliable and safe water supplies. Through partnerships with other professional water agencies, the Utility maintains water quality standards, protects the groundwater supply, and conducts long-term planning for water resources and capital infrastructure. The report details how the Utility maintains financial health through analyzing and initiating responsible water rates and through cost recovery for new development. This report provides information and details of activities for calendar year (CY) 2024 with additional financial information reported for the fiscal year (FY) ending June 30, 2024.

## WATER RESOURCES

The primary function of the Utility is the production and efficient use of available water resources that meet or exceed water quality standards. To ensure long-term sustainability, the Utility works closely with regional water providers, state agencies and the development community in planning for future water resource requirements. Utility staff closely monitor all water resources in the Utility's water portfolio. The water portfolio includes groundwater, Central Arizona Project (CAP) water entitlement, reclaimed water entitlement, long-term storage credits and groundwater allowance account credits.

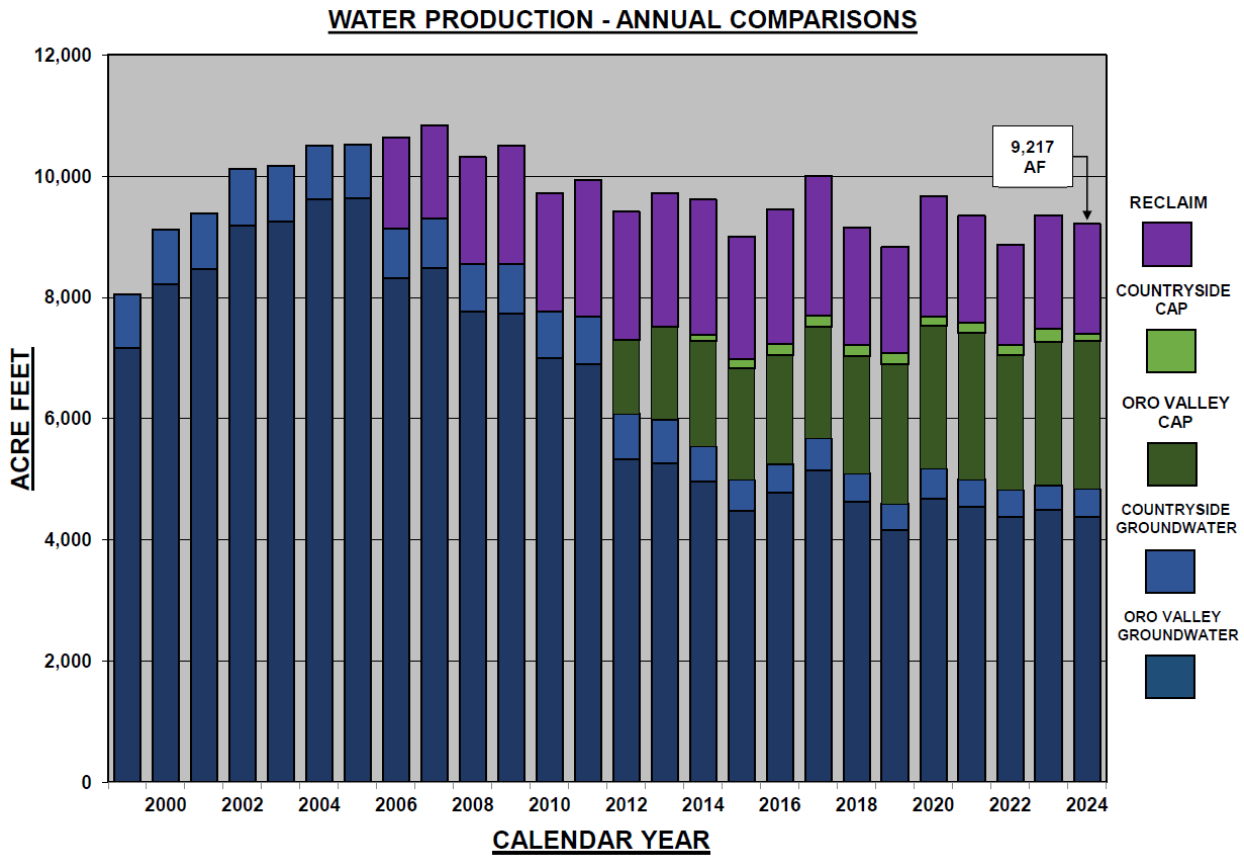
**Current Water Supply** includes groundwater, CAP water and reclaimed water. The Utility operates in two separate water service areas: the Oro Valley Water Service Area (OVWSA) and the Countryside Water Service Area (CSWSA). The CSWSA was acquired by the Town with the acquisition of the private water companies in 1996. This small satellite service area is located approximately two miles from the western boundary of the Town. Data from these two service areas is combined for regulatory reporting purposes. The following table **(Table 2)** provides the water production in acre feet (AF) for both service areas in 2024.

**TABLE 2**

| **Total Water Production in 2024** | | | |
|---|---|---|---|
| **Water Resources** | **OVWSA** | **CSWSA** | **Totals** |
| Groundwater | 4,383 AF | 457 AF | 4,840 AF |
| CAP Water | 2,443 AF | 117 AF | 2,560 AF |
| Reclaimed Water | 1,817 AF | ---- | 1,817 AF |
| **Total** | **8,643 AF** | **574 AF** | **9,217 AF** |

**Figure 1** shows total water production in each service area from 1999 through 2024. The components of total water production include 1) groundwater production 2) CAP water utilization and 3) reclaimed water utilization. The graph depicts the decrease in overall water production for 2024 as compared to 2023 as well as the dramatic decrease in groundwater utilization since 2005.

**FIGURE 1**




**Groundwater** remains the primary potable water resource for the Utility. In 2024, the Utility's 18 groundwater production wells produced 53 percent of the Utility's total water production.

**Table 3** highlights the production capacity in all wells, the storage capacity in all reservoirs and the average rise or decline in static water levels for the wells in both service areas at the end of CY 2024.

**TABLE 3**

| | Groundwater Production Capacity | Storage Capacity (Gallons) | Average Water Level +Rise/-Decline |
|---|---|---|---|
| OVWSA | 11.9MGD | 10.9 million | -.29 Feet |
| CSWSA | 2.2 MGD | .90 million | 2.28 Feet |

On an individual basis, groundwater level changes in 2024 for active wells varied from a rise of 4.33 feet to a decline of 6.09 feet. Details on static groundwater levels for individual wells may be found in **Appendix A**.

**Central Arizona Project (CAP) Water** is the Utility's only other potable water resource. In 2024, the Utility's four CAP wheeling locations delivered 27 percent of the Utility's total water production. The Utility delivers its entire annual CAP entitlement of 10,305 acre-feet to several recharge facilities in the Tucson Active Management Area. In 2024, the Utility purchased the entire allocation for use as follows:

1) Aquifer recharge and recovery for water delivery to the potable water systems in both Oro Valley and Countryside.
2) Aquifer recharge for replacement credit for water pumped from the Utility's wells.
3) Aquifer recharge in nearby recharge facilities for future use.

Oro Valley's CAP water that is recharged and recovered for delivery, is first delivered to Tucson Water's Central Avra Valley Storage and Recovery Project. The recharged CAP water is then recovered and delivered (wheeled) through the Tucson Water system to various connection points in the Oro Valley system for delivery to Utility customers.

The Utility has an Intergovernmental Agreement (IGA) with Tucson Water enabling the delivery of CAP water to customers through four connections to the Tucson Water system. There are three CAP water connection points in the OVWSA. One is located on Vista del Sol, north of Naranja Drive, a second connection is on Calle Buena Vista, south of Calle Concordia and a third is located near Oracle and Hardy. CAP water is also delivered to the CSWSA at a connection located on Camino de Oeste, just north of Linda Vista Blvd. The Utility delivered 2,560 acre-feet of CAP water in 2024 thus reducing its reliance on groundwater. CAP water deliveries and locations are shown in **Table 4**.

**TABLE 4**

| **CAP Water Deliveries in 2024** | |
|---|---|
| **Locations** | **Delivery** |
| Vista Del Sol (OVWSA) | 1,522 AF |
| Calle Buena Vista (OVWSA) | 445 AF |
| Oracle & Hardy (OVWSA) | 443 AF |
| Camino De Oeste (CSWSA) | 150 AF |
| **Total** | **2,560 AF** |

In calendar year 2017, the Town of Oro Valley, Metro Water and the Town of Marana began collaboration on the development of a unique IGA to construct a future project known as the Northwest Recharge, Recovery and Delivery System (NWRRDS). The IGA was unanimously approved by each governing body in March of 2017. This agreement provides another means for the Town to deliver CAP water to the Utility's service areas. The project is estimated to be completed in FY 2026 and will allow for the annual delivery of up to an additional 4,000 acre-feet of recovered CAP water.

The reservoirs on the Colorado River supply water to the CAP and other water projects in the lower basin states that include Arizona, California and Nevada. Additionally, these reservoirs provide required water deliveries to Mexico. A 27-year drought caused by reduced precipitation and snowpack in the upper basin has significantly lowered water levels in Lake Mead and Lake Powell. Over the past 27 years, water demand has exceeded available inflows for supply driving reservoir levels lower.

Reservoir levels determine supply availability in accordance with shortage sharing guidelines established in 2007 and amended in 2019. Beginning in 2018, The Arizona Department of Water Resources (ADWR) and CAP staff collaborated with CAP water users and the Lower Colorado River Basin states to finalize the Lower Basin States Drought Contingency Plan (LBDCP). The LBDCP modifies the 2007 shortage sharing guidelines so that curtailments in CAP deliveries happen sooner and are larger. The goal of this plan is to close the gap between the over-allocation of the river's natural replenishment capability and water deliveries, thus leaving enough water in Lake Mead to avoid drastic cuts to priority subcontract holders like Municipal and Industrial users. The LBDCP was approved by Governor Doug Ducey on January 31, 2019, and was later approved by the Federal Legislature and went into effect on January 1, 2020.

The LBDCP specifies what the curtailments are to each of the Lower Basin States depending on the water surface elevation of Lake Mead on January 1$^{st}$ of the given year.

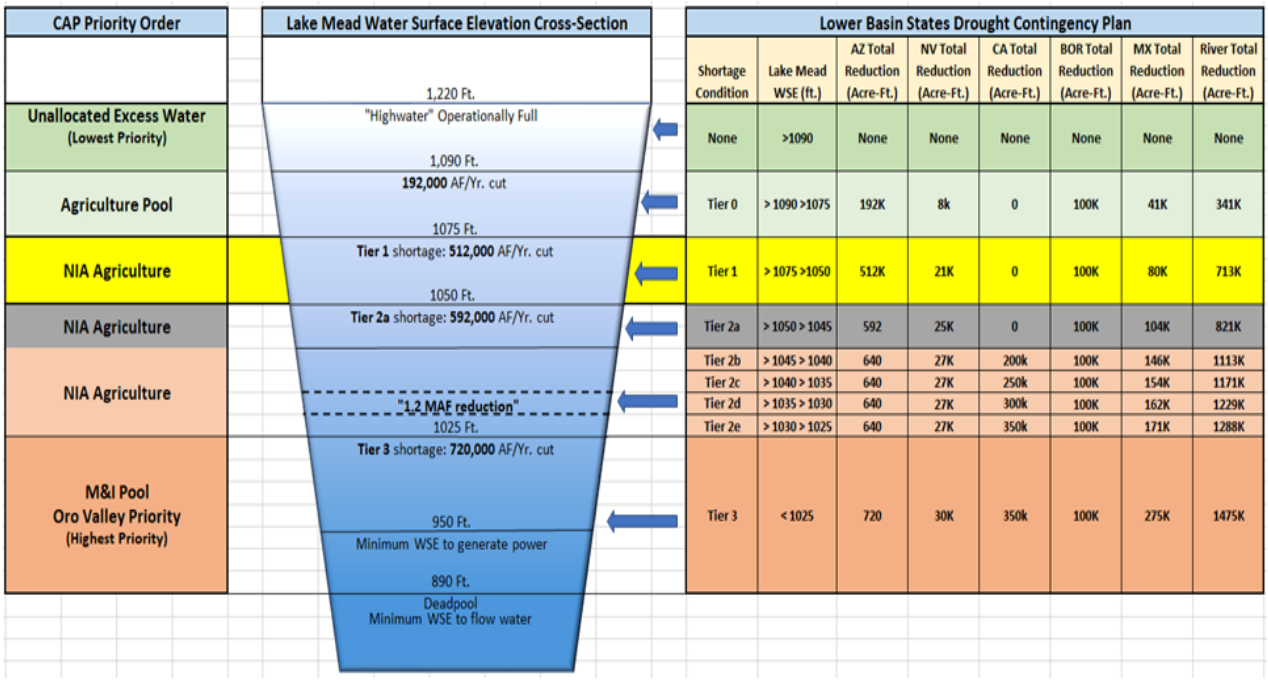
The Bureau of Reclamation (BOR) determined in 2024, that beginning in January of 2025, the BOR would declare the same Tier 1 water shortage as it was in 2023 for many Colorado River Water users, including Arizona. A Tier 1 water shortage reduces Arizona's Colorado River allocation by 30% but has no effect on Oro Valley's CAP allocation.

In March of 2024 Arizona, California, and Nevada (Lower Division States) submitted to the BOR the "Lower Basin Alternative" for the BOR to review. The Lower Basin Alternative is designed to provide for the sustainable management of the Colorado River system and its resources under a wide range of potential future system conditions due to ta changing climate. At the time of this report's creation the upper basin states have not indicated support of the Lower Division States Lower Basin Alternative plan and it is unclear how the BOR will view any plan to save the river that does not have the support of all the states involved.

The BOR needs to take decisive action. All Colorado River water users will need to commit to reductions. The sooner the river's demand is reduced to a sustainable level the sooner the river will be protected, benefiting everyone. For 2025, Oro Valley will not see any reduction in Colorado River Water deliveries, but we can expect a reduction in deliveries in future years. Fortunately, Southern Arizona water professionals have been planning for these challenging times for over 2 decades.

**Figure 2** shows the relationship between the CAP priority order, Lake Mead water surface elevation and the LBDCP. The area highlighted in yellow represents the current Tier 1 water shortage which results in a 512 acre-ft reduction in CAP deliveries for calendar year 2025.

**FIGURE 2**




| 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 |

The State of Arizona offers a level of protection from CAP curtailments for priority CAP users through the creation of the Arizona Water Banking Authority. The AWBA has been storing water underground for municipal and industrial water users for decades to guard against the impacts of CAP delivery curtailments. Over 600,000 acre-feet of water have been stored underground by the AWBA in the Tucson Active Management Area. This stored water will be made available to municipal water providers to mitigate curtailments of CAP water deliveries to municipal water users. In addition to the AWBA storing water, the Central Arizona Groundwater Replenishment District (CAGRD) has stored water for the future to replenish groundwater.

The Utility also continues to store a portion of its CAP water to increase its balance of long-term storage credits. This water is also available to mitigate curtailments of CAP water deliveries.

The above action plans combined with a diverse water resource portfolio reduces the chances of a water resource shortage when CAP water delivery curtailments occur. In addition, reducing demands through an increased focus on the efficient use of water resources will help to preserve water supplies for future uses.

**Reclaimed Water** is produced from wastewater effluent from the sanitary sewer system which is then treated for irrigation and other non-potable uses. In 2024, the Utility's reclaimed system produced 20 percent of the Utility's total water production.

Oro Valley owns all the effluent produced by its customers. The Utility has an IGA with Tucson Water to deliver reclaimed water to the OVWSA through their facility at Thornydale and Tangerine. From that location, the Utility independently operates the transmission and water distribution system that delivers the reclaimed water to reclaimed water customers in the OVWSA. No reclaimed water is delivered to the CSWSA.

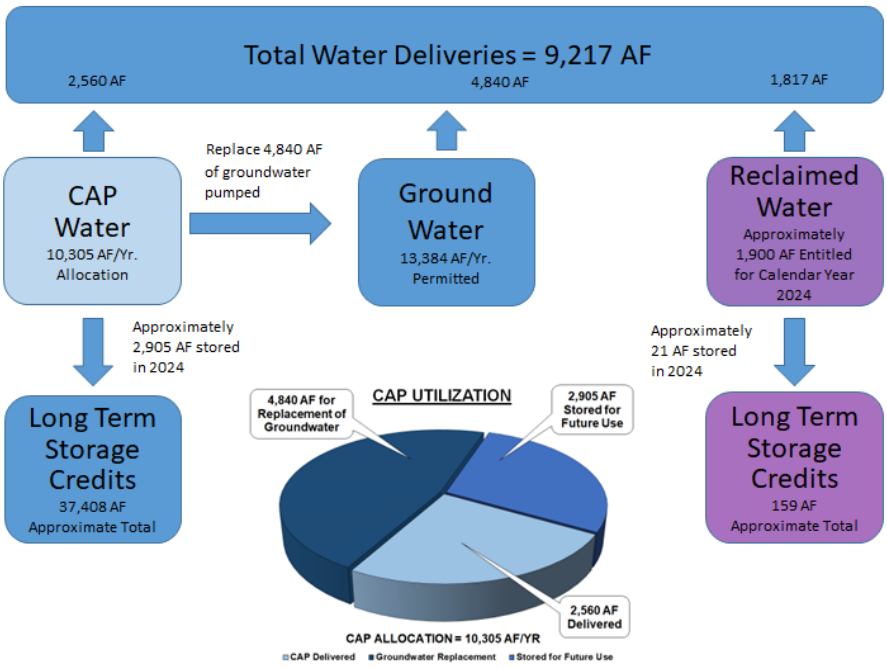
The Utility supplies reclaimed water for the irrigation of four 18-hole golf courses, the Naranja Park athletic fields and one elementary school athletic field. In 2024, 1,817 acre-feet of reclaimed water was delivered.

**REGULATORY**

The ADWR requires the Water Utility to replace all the groundwater pumped from wells owned and operated by the Utility. To comply with this requirement, every acre foot of groundwater pumped is replaced through annual aquifer recharge utilizing CAP water. The replacement of pumped groundwater can happen anywhere within the Tucson Active Management Area. Due to the lack of Utility-owned aquifer recharge facilities, the Utility recharges the aquifer outside of the service area to meet this requirement. Long-term storage credits can also be used to replace the groundwater pumped to maintain compliance with ADWR requirements.

**Figure 3** graphically shows how the Utility utilized water resources in 2024 as described in this **WATER RESOURCES** section.

**FIGURE 3**




**The Designation of Assured Water Supply (DAWS)** issued by the ADWR requires compliance with the Fourth Management Plan in the Tucson Active Management Area. In 2024, the Utility was in compliance with all requirements under the DAWS and fully expects to meet all requirements in 2025. The ADWR requires the Utility to submit water system information and water usage data in an annual report. The information provided includes service area boundaries, total water use, population, gallons per capita per day, recharge, recovery and system water loss.

Pursuant to the DAWS, the Utility has a right to pump a maximum of 13,384 acre-feet per year of groundwater.

**Long-Term Storage Credits** are earned when water is recharged and stored underground for more than one year. In 2024, the Utility purchased 10,305 acre-feet of CAP water for delivery to recharge facilities. Of that amount, approximately 2,500 acre-feet were not used for direct delivery or annual recovery; therefore, increasing the long-term storage credit balance. The water stored will be saved for future use. At the end of 2024, the Utility calculated that it had approximately 37,408 acre-feet in long-term storage credits.

**Table 5** shows the estimated water storage summary for the end of the 2024 calendar year. The ADWR will adjust the storage balance to account for recharge basin evaporation and aquifer losses. The final balance will be provided by the ADWR in October of 2025.

**TABLE 5**

| Water Storage Summary for Calendar Year 2024 (Acre Feet) | | | |
|---|---|---|---|
| **Groundwater Storage Facility** | **2024 CAP Delivery to Storage Facility** | **2024 CAP Recovery from Storage Facility** | **Storage Balance 12/31/24** |
| Kai Farms | 4,000 | 3,000 | 22,260 |
| Lower Santa Cruz | 2,805 | 1,838 | 10,542 |
| Pima Mine Road | --- | --- | 2,868 |
| Central Avra Valley | 3,500 | 2,560 | 1,600 |
| Effluent Storage | --- | --- | 138 |
| **Total** | **10,305** | **7,398** | **37,408** |

*Note: The 2024 CAP recovery from storage facility column (3rd column) represents the aggregate of CAP water either delivered to customers or used to replace the groundwater that was pumped.* ***The ADWR will adjust the storage balance to account for recharge basin evaporation and aquifer losses. The Storage balances provided are an approximation.***

**The Groundwater Allowance Account** identifies the amount of groundwater that can be pumped, if desired, and still be considered exempt from the state's requirement for replenishment in the Tucson Active Management Area. In general, the balance in the account may be used for any groundwater pumped from a well that has a five-year average annual decline greater than four feet or water pumped from a well that is not permitted as a recovery well. In 2023, the Utility did not use any credits from the Groundwater Allowance Account. All the Utility's wells are permitted as recovery wells; therefore, long-term storage credits were used to meet the replenishment requirements instead of using credits in the Groundwater Allowance Account. The balance in the Groundwater Allowance Account at the end of 2024 was 19,230 acre-feet.

## ENGINEERING AND PLANNING

The Engineering and Planning Division is responsible for planning and managing the design, construction, and inspection of new water infrastructure for the Town of Oro Valley, as well as providing engineering support to the Water Operations group.

Engineering and Planning is also responsible for managing and maintaining a Geographic Information System (GIS) database, consolidating well data for dashboard on all active and non-active wells, existing and new water system infrastructure. Maps produced by GIS staff facilitate Utility Operations, Planning and Engineering. Additionally, Engineering has spearheaded the design and parameters for the Water Utility's asset management system, Cartegraph, and building on existing databases to implement business intelligence and documenting the lifecycle of our water assets. Engineering continues to develop standardization across all the design work and expectations for future deliverables.

In 2024, the New Development Section within the Engineering and Planning Division completed the following:

- Reviewed and approved water improvement plans for 10 construction projects
- Approved plans and completed 11 as-built plans (CIP and New Development)

## CAPITAL PROJECTS

The Engineering and Planning Division manages the design and construction of capital projects identified in the Capital Improvement Program (CIP) and Annual Operating Budget. Engineering also reviews and approves new development engineering water plans for approval and construction. These projects are designed to improve the service and operational efficiency of the existing system. Some of the notable capital projects are described next.

**Northwest Recharge Recovery and Delivery System (NWRRDS):**
The Utility's largest CIP commitment in 2024 has been the NWRRDS project. In 2017, the governing bodies of the Town of Oro Valley, Metro Water, and the Town of Marana unanimously approved a 50-year Intergovernmental Agreement supporting regional water resource stability initiatives and aquifer preservation. The agreement provides a framework for the Town of Oro Valley, Metro Water, and the Town of Marana to partner in the design, construction, operation, and maintenance of the **partnered components of NWRRDS**. Oro Valley will also fund 100% of Oro Valley's **independent components of NWRRDS**.

**Figure 1** provides an image overview showing both the ***partnered*** and ***independent*** components of the NWRRDS project.

**Figure 1**

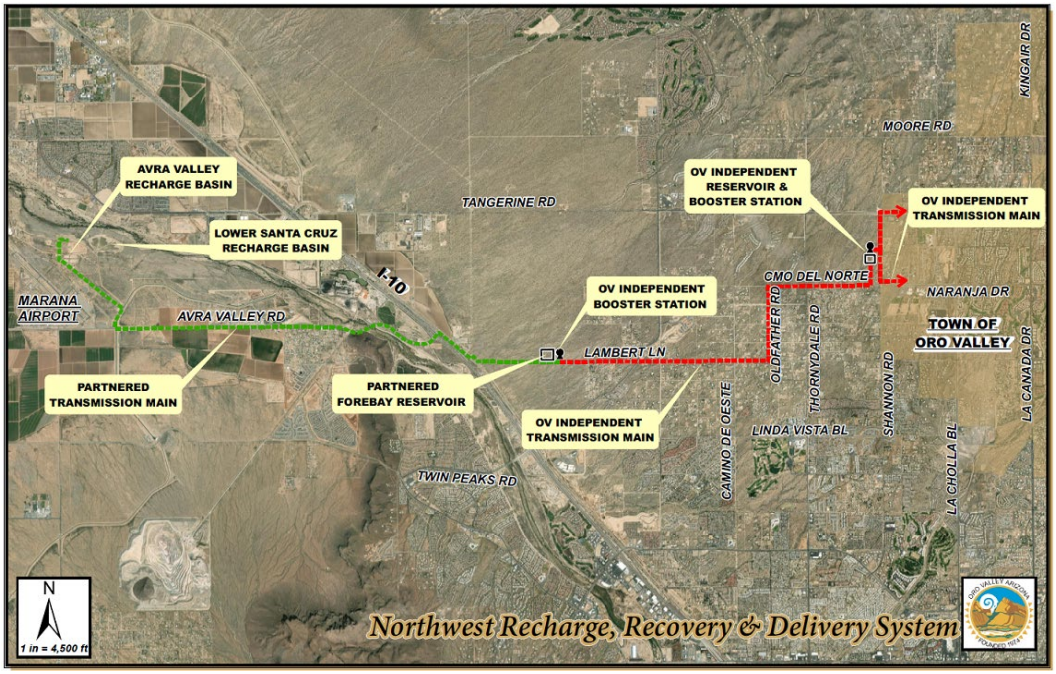
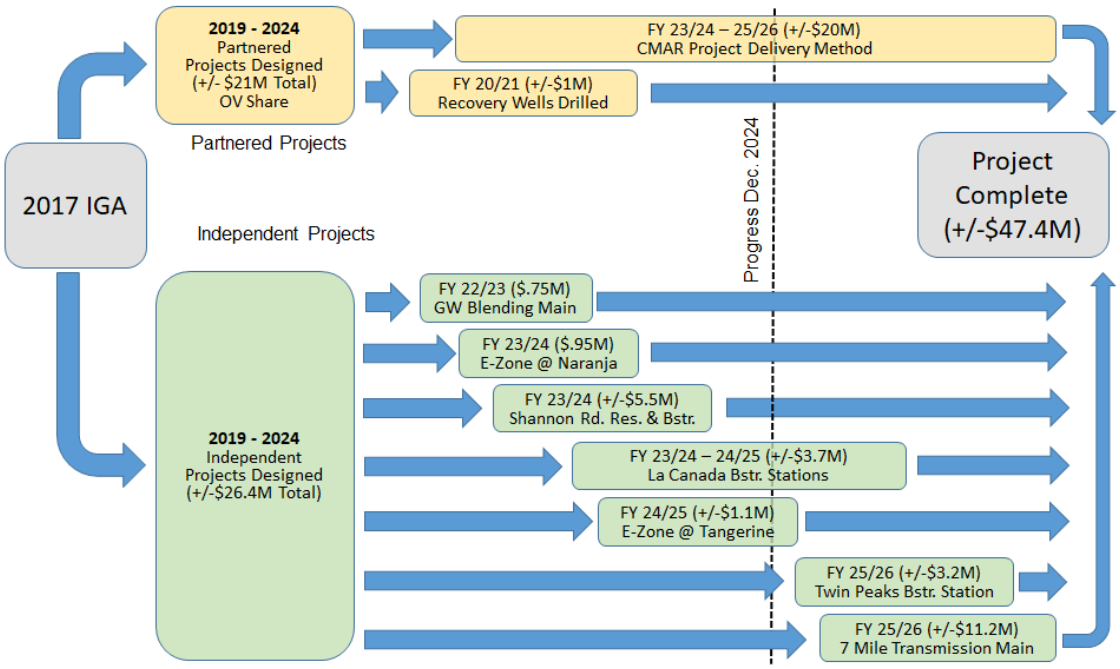


**Figure 2** provides a graphical representation showing both the ***partnered*** and ***Independent*** components of the NWRRDS projects and their respective relative timelines.

**Figure 2**



**NWRRDS Independent Shannon Road Forebay Reservoir and Booster Station Project:** This project was completed in 2024 and is located between the Lower Santa Cruz Aquifer recharge project and the Oro Valley Service Area. This project is an important asset that will allow for the delivery of up to an additional 4,000 Acre-Ft. per year of recovered Central Arizona Project water to the Utility's service area.

*Aerial view of the Shannon Road Forebay Reservoir & Booster Station project looking southeast towards Pusch Ridge in the Catalina Mountains*

*Aerial View of the Shannon Road Forebay Reservoir & Booster Station project looking north towards the Tortolita Mountains*

**NWRRDS Independent Groundwater Blending Main Project:** This project was completed in 2024. This project was designed to blend some of the Utility's service area groundwater with the future deliveries of additional Colorado River Water by way of the NWRRDS project to the Utility's service area.

*Pictured above is the project in progress (left) and once completed (right) of the Independent Groundwater Blending Main Project*

**NWRRDS Independent Shannon Road Booster Station Discharge Main to Naranja Rd. Project:** This project was completed in 2024. This discharge main construction project is one of two connections from the NWRRDS Independent Shannon Road Booster Station project to Oro Valley's main service area.


*View of the construction of the NWRRDS Independent Shannon Road Booster Station Discharge Main to Naranja Rd.*

**La Cañada “E” to “F”; and “E” to “G” Zone Booster Station Project:** The purpose of this project is to equip the La Canada reservoir with two booster stations to deliver NWRRDS water to pressure zones that previously were not receiving CAP water. Construction started in early 2024 and will continue through the first half of 2025.

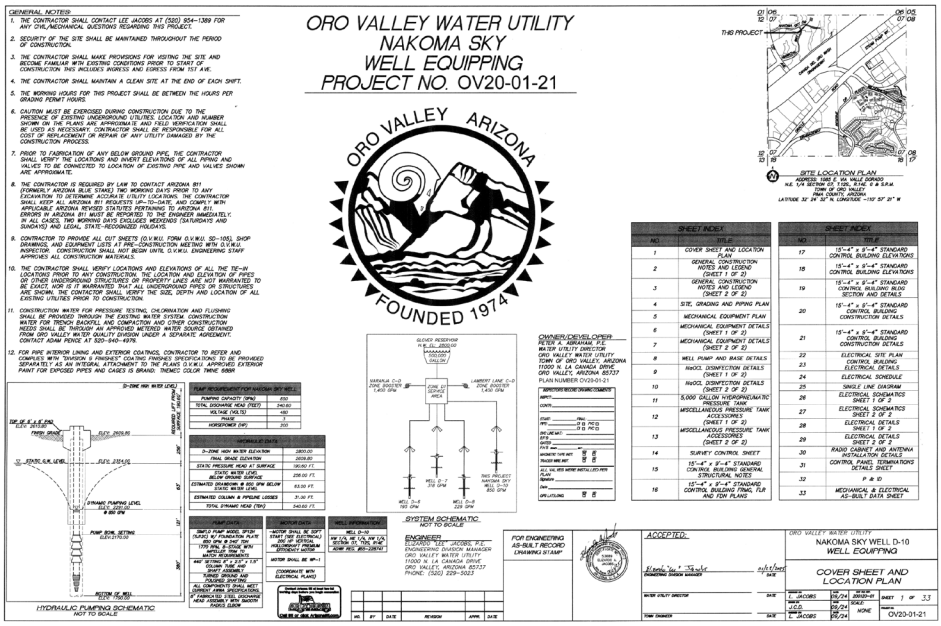
*The image above shows the conduit runs from the La Canada Booster Stations to the control building.*

*The image above shows the contractor staff fitting the discharge piping for one of the booster stations.*

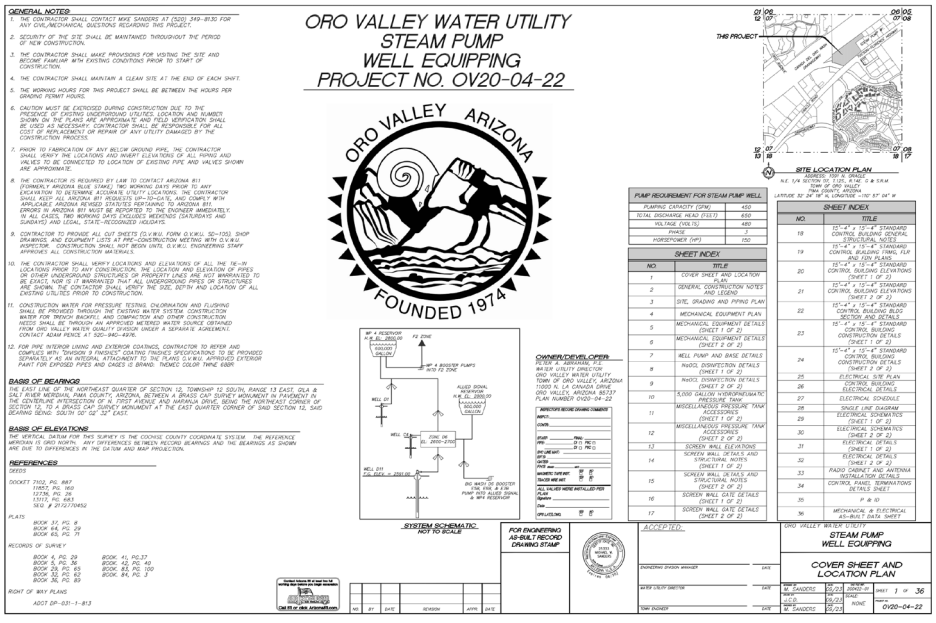
**Well E-2 Rehabilitation Project:** The Well rehabilitation work included pre and post video logs to assess the well's condition, along with down-hole survey. This work is followed by brushing and bailing of the well (or alternative method of well casing cleaning), repair of the well casing as required, header piping replacement and the installation of new oilers and pads if needed. Well E-2 will require a liner installation from 16" to 12" to stabilize well casing and formation around the well. No motor rehabilitation work was needed. The submersible pump and motor were changed from the vertical turbine.

*The photo above shows the completed rehabilitated of Well E-2. Work included well rehabilitation, new submersible pump, and discharge head*

**La Posada (Formerly known as Nakoma Sky) Well Design and Off-Site Electrical Work Project:** The Nakoma Sky offsite electrical and discharge piping from well site to distribution main was completed in 2024. Equipping of this well is slated for 2025.




**Steam Pump Well Design, Control Panel, and Off-Site Electrical Work Project:** The Steam Pump Station Control Panel, off site electrical and design was completed in 2024. Equipping of this well is slated for 2025.



**Palisades Transmission Main Extension Project:** This project was completed in 2024. The purpose of this project was to provide distribution main "looping" that aimed to improve water quality and system reliability in an area that was limited in its water distribution capability.

*The photo above shows the completed Palisades Main Extension Project*

**Countryside CAP Wheeling Station Upgrade Project:** This project was completed in 2024. The purpose of this project was to increase the CAP wheeling capacity of this infrastructure. The wheeling capacity was increased from 100 GPM to 300 GPM and is now delivering water into our Countryside Service Area at the rate of 300 GPM.

*The photo above shows the completed Countryside CAP Wheeling Station Upgrade*

**Rancho Vistoso Booster Station Upgrade Project:** This project was completed in 2024. The purpose of this project is to improve the existing pumping system to be a more efficient and reliable pumping system for delivering water to a closed pressure zone. This project is consistent with our goals of reducing energy consumption without sacrificing production and delivery of water.

*The photos above show the completed Rancho Vistoso Booster Station project*

**Big Wash Reservoir Rehabilitation Project:** This project was completed in 2024. The purpose of this project is to ensure the continuous and uninterrupted service of two reservoirs located at this site.

**Reservoir #1 (200,000-gallon reservoir):** The project addressed structural issues with the roof and rafters of the 200k gallon reservoir. Additional work included a larger ventilation port, safety rails and a larger access hatch.

**Reservoir #2 (150,000-gallon reservoir):** The projects addressed exterior coating issues with the application of a new exterior coating.

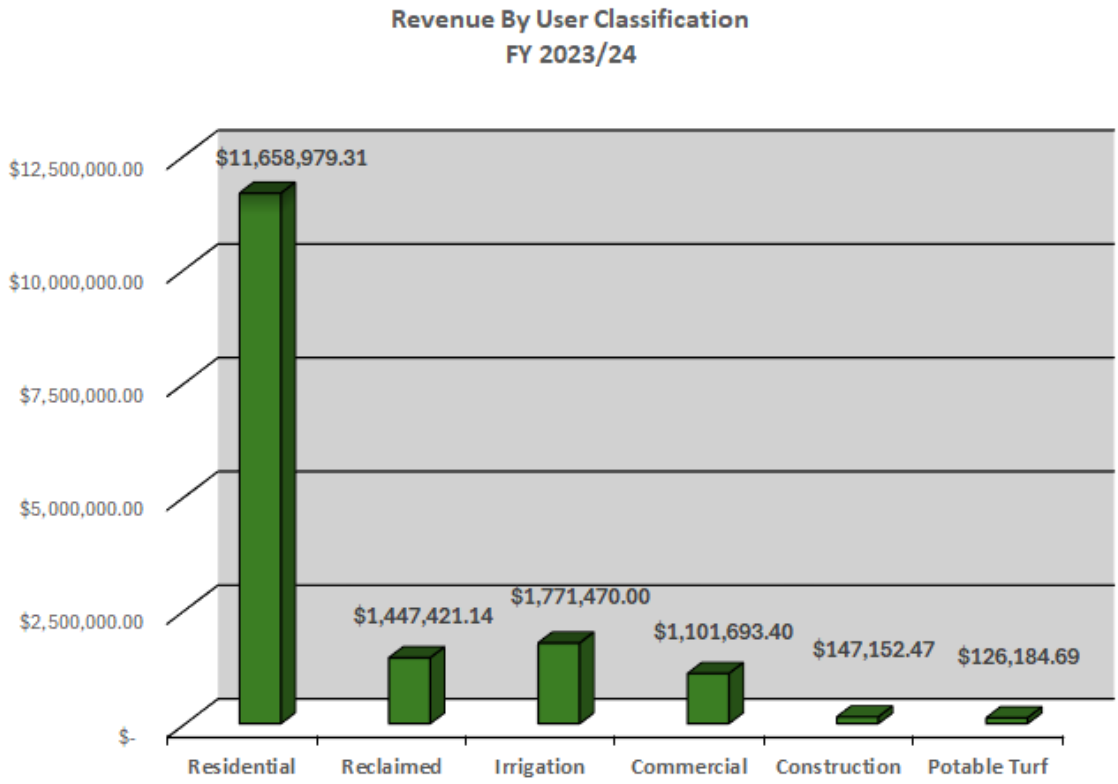
*The photo above shows the two Big Wash Reservoirs that were rehabilitated.*

**CUSTOMER SERVICE**

Customer Service is an integral element of the Utility, providing a full range of support to its customers. The Utility's 21,498 metered connections serve a combined population of approximately 49,000 for both water service areas. Customer Service responsibilities include preparing the monthly billing, processing cash receipts, preparing daily deposits, and processing new meter applications. Staff also manages new and closed accounts as customers move in and out of the water service areas.

Customer Service staff produced over 315,684 bills in FY 2023/24, generating $16,252,901 in water sales revenue. This revenue does not include sales taxes, Groundwater Preservation Fees, or service fees. Water sales revenue by user classification is illustrated in **Figure 2**.

**FIGURE 2**




The Utility has an IGA with Pima County Regional Wastewater Reclamation Department to provide their monthly sewer billing. In addition, the Utility provides monthly and quarterly billing for the Town's Stormwater Utility. In FY 2023/24, the Utility processed a total of $31,404,097 in payments for the Utility and the other two organizations as follows:

- Oro Valley Water Utility $ 19,784,581
- Pima County Wastewater Reclamation $ 10,098,554
- Town of Oro Valley Stormwater Utility $ 1,520,962

Total payments handled by the Oro Valley Water Utility are more than the water sales billed because the payments processed include sales taxes, Groundwater Preservation Fees, security deposits and other service fees charged by the Utility.

Of the above payments processed, payments made by credit card or electronically totaled $31.1 million, or 99%. These payment methods are more convenient for Water Utility customers and Customer Service staff. Payments are posted to customer accounts in a more timely and efficient manner. In addition, this reduces data entry errors and increases time available for staff to perform other job functions.

The Water Utility's Customer Information System (CIS) implemented last year has been a huge success with customers and staff. In addition to CIS, this software includes a mobile application for field staff and a customer portal. The customer portal allows customers to manage their account, review consumption information, make payments with several payment options, and a variety of other self-service features. In FY 2023/24, 10,941 or 51% of Water Utility customers registered for the customer portal.

WaterSmart is another customer portal that provides customers with the ability to monitor their own water use on an hourly, daily, weekly or monthly basis. They can also set their individual water use thresholds that will enable the technology to send them high water use alerts. Customer Service staff use the Utility's customer kiosk to assist customers with registering in WaterSmart and to teach them how to establish water use thresholds.

The major accomplishments by Customer Service staff in FY 2023/24 include the following:

- Produced over 315,684 water bills
- Registered 2,741 customer portal accounts for a total of 10,941
- Processed 198 new meter installation applications

Utility Statistics may be found in **Appendix C**.

**WATER CONSERVATION**

The Utility encourages water conservation by informing and educating customers. Specifically, in 2024, the following conservation efforts were accomplished:

- Third anniversary of the quarterly newsletter *Behind the Meter.*
- Over 9,000 automated alerts sent with water savings of over 16 million gallons.
- 50% of leaks confirmed by customers on WaterSmart were related to irrigation.
- 1,235 messages received from customers on the WaterSmart Portal.
- 21,207 leaks were detected by WaterSmart.
- 386 customer-initiated leak checks using the leak diagnosis and investigation tool in WaterSmart.
- 62 customers were assisted with Water Audits.
- 837 new customers registered with WaterSmart.
- 23,466 unique logins to WaterSmart.
- 78,472 High Use Notifications were sent to WaterSmart users.

*Examples of customer leaks found while assisting customers during water audits*

## OPERATIONS AND MAINTENANCE

All Production, Distribution and Meter Operations Personnel are certified operators licensed by the Arizona Department of Environmental Quality (ADEQ).

All Operations Personnel work together to address water system problems. On-call staff respond to water system problems 24 hours per day, seven days per week. This on-call staffing utilizes a tiered-level after-hours response protocol in accordance with the existing Emergency Response Plan.

### Water Production

Personnel are responsible for the operation and maintenance of wells, booster pumps, and reservoirs on the potable water system. In addition, Production Personnel are responsible for the booster pumps, metering stations, and the reservoir on the reclaimed water system. These systems are monitored with the use of Supervisory Control and Data Acquisition (SCADA) technology that is managed by the Water Control Systems Department. Production staff perform routine mechanical maintenance and assist with electrical maintenance at 45 production sites. They uphold operational balance for CAP Water delivery to the potable systems, maintain 21 disinfection injection pumps and disinfection residuals at injection points on the potable and reclaimed water delivery systems. Production staff also perform an annual groundwater level survey of static water levels in all wells.

The following are major activities and accomplishments of Water Production personnel in 2024:

- Operator III promoted from Distribution.
- The new Shannon Road Reservoir and Booster Site water facility now in operation.
- Cleaned and inspected 6 potable water reservoirs.
- Vertical turbine motor preventive maintenance program.
- Completed 2,925 potable and reclaimed water facility site checks.
- Measured and recorded static water levels of 32 active and deactivated wells quarterly.
- Performed 13 water storage tank overflows to achieve consistent production of exceptional water quality to our customers.
- Through the provision of continued training, diverse skillsets, and veteran operator knowledge; over 10 intricate projects/major repairs were able to be completed in-house

*Staff replacing horizontal booster pump (left). Staff installing well discharge pipe (right).*

**ADC Program**

Water Operations implemented the Arizona Department of Corrections (ADC) Inmate Work Program in August of 2022. This program's labor force completes the general facility maintenance, which provides Water Utility staff the time to perform advanced skilled tasks required to maintain a robust preventative maintenance program.

Below are the major accomplishments of the ADC Program in 2024:

- 8 operators continue ADC training-process for working with or around inmates.
- Cleaned 10 water facilities for vegetation abatement.
- Painted site walls and buildings, dug conduit trenches, and sealed cracks in paved facilities.

*ADC crews maintain sites such as the one pictured to the above. Sites are cleaned and restored on a regular schedule basis. Utilizing this program saves the Utility money, resulting in lower Utility rates for our customers.*

**Water Distribution**

Distribution Personnel are responsible for routine maintenance of all water distribution system components. This work includes the repair and installation of water mains and services, isolation valves, fire hydrants, pressure reducing valves, drain valve assemblies, and air relief valves. Water Distribution Operators additionally perform a variety of internal tasks that go beyond typical Water Utility maintenance. The tasks performed may include erosion repairs, grading, paving, concrete work, landscaping and various types of demolition, construction, and fabrication related activities. Staff also collaborate with the Water Engineering Staff to provide accurate as-built data for the GIS system, which ensures that assets remain current and are accurately depicted on system maps. Additionally, assets are tracked and updated using the Town's Asset Management Program. Distribution staff regularly establish and maintain professional relationships with contractors and vendors. These professional relationships are especially important when responding to emergencies, such as large water main breaks or other major repairs. The Utility's Distribution staff provides assistance and guidance to residential customers who have questions or concerns about their water.

The following are the major activities and accomplishments of Water Distribution staff in 2024:

- Completed 902 service orders including after-hour call outs and emergencies.
- Exercised 2,439 water system valves.
- Repaired 85 fire hydrants and replaced 2 fire hydrants.
- Performed 176 inspections on 43 pressure regulating valves (PRV).
- Responded to and repaired 4 water mainline breaks and 4 water service line leaks.
- Performed 3 Drain valve assembly (DVA) repairs.
- Performed 33 Air release valve (ARV) repairs.

An inventory of all facility assets may be found in **Appendix D**.

*Water Distribution staff replaced a 2" copper service line at Riverfront Park (left).*

*Water Distribution staff relocated an Air Release Valve (ARV) for the Hero's Memorial at Naranja Park (right).*

**Meter Operations**

Advanced Metering Infrastructure (AMI) is an integral part of the Oro Valley Water system. The advanced metering technology transformed how the Utility gathers water use data, how staff collaborates with customers, and improved water data management practices. The AMI system has improved customer service by providing historical, on-site water usage data to the customer to assist with the explanation of a problem, such as a water leak. This saves customers water, money, and promotes continued water conservation efforts. Utility staff has increased their technical knowledge and skills to provide this improved customer service feature. Staff uses analytical and critical thinking skills to analyze and troubleshoot complex metering problems and technical issues within the AMI system. Staff uses AMI network software, Meter Data Management software, field collection and meter reading hardware, GIS software and data collection software to manage water usage data and develop solutions to solve complex problems and mitigate water use issues that impact Utility customers.

The use of AMI technology also increases operational efficiency by eliminating the need for labor- intensive manual meter reading, as well as reducing travel time. By increasing operational efficiencies, meter operations staff can focus their time and capabilities on oversight of the AMI system and related software. This includes proactively monitoring and maintaining the AMI system, providing instruction and insight for electronic equipment installations, programming, maintenance, and repairs. Meter Operations Staff members focus their efforts on improving operational efficiencies to perform additional water system preventive maintenance and commercial meter testing.

Meter staff **bluestakes** underground water mains for all new and existing construction projects throughout the Town's water service area. Arizona law requires that all underground utilities be bluestaked prior to any excavation to ensure the safety and welfare of the community by protecting underground facilities from damage.

An inventory of all facility assets may be found in **Appendix D**.

The following are major activities and accomplishments of Water Meter personnel in 2024:

- Installed 166 meters for new developments.
- Replaced an estimate of 2,730 warranty residential meters.
- Repaired 36 angle meter stops.
- Completed 10,882 AZ811 utility locate requests.
- 1 Water Utility Operator I promoted to Utility Operator II.
- 2 new employees trained.
- Worked with Sensus to collaborate with Concord Utility Services to start a warranty meter changeout program in 2025.

*Meter Operations staff assisting Conservation efforts for the Sun City Garden Club (left).*

*Meter Operations staff replacing a commercial meter (right).*

**Water Control Systems**

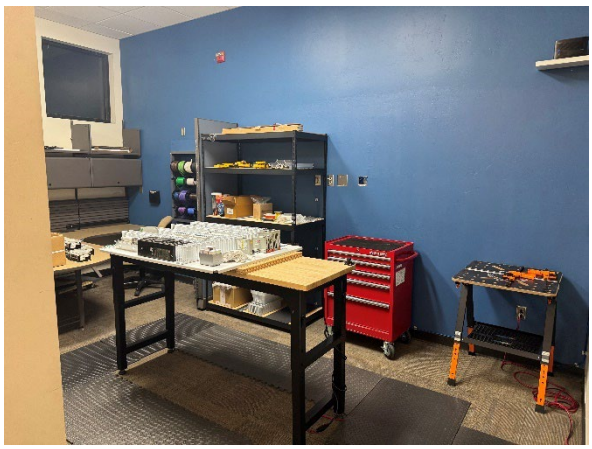
Personnel are responsible for the Supervisory Control and Data Acquisition (SCADA) system, facility instrumentation and controls, facility electrical equipment, telemetry radio systems, and programmable logic controllers (PLC).

Key functions of Water Control Systems include troubleshooting control system and electrical issues, equipment calibration, instrumentation and control upgrades for wells, pressure reducing valves, boosters, reservoirs, facility system security, and preventative maintenance for all instrumentation and electrical equipment.

Staff works with Water Utility Engineering Staff and Contractors reviewing capital projects and is responsible for all new instrumentation and control process start-ups for facilities.

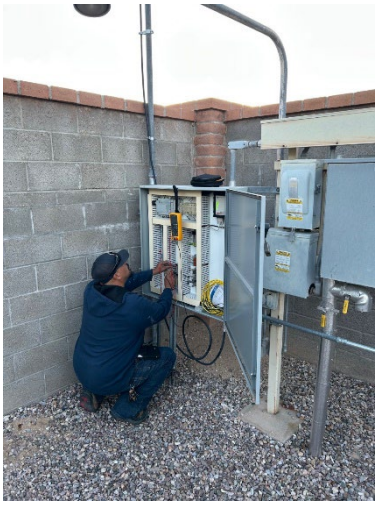
The following are major activities and accomplishments of Water Control systems personnel in 2024:

- Design three station control panels at two reservoirs and booster site.
- Fabrication of two station control panels at two reservoir sites.
- Upgraded air compressor control at two booster stations, two reclaim valve stations.
- Upgraded water level instrumentation at one reservoir, and two booster sites
- Upgraded potable SCADA radio system.
- Programmed two meter upgrades.
- Preventative maintenance program for electrical, instrumentation, and controls.
- Reviewed engineering plans for one booster site.
- Upgraded instrumentation at four well rehabilitation projects
- Installed uninterruptible power supplies at three reclaim valve stations, two wells and two reservoir sites.



*Water Control Systems staff new panel shop and construction of PLC panel(left).*

*Water Control Systems staff testing PLC panel power supply(right)*



**WATER QUALITY**

Water quality sampling and testing is essential to provide safe and reliable water. The Town's water system is in full compliance with all State and Federal regulations. The Utility is regulated by the Arizona Department of Environmental Quality (ADEQ) and works closely with the ADEQ to ensure all Federal and State standards are met. The Water Utility provides all required water quality testing results to the ADEQ as well. The website for the ADEQ is www.azdeq.gov.

In 2024, the Utility received 3,441 analytical results for required water sampling and operational data for the potable water system and met US Environmental Protection Agency's (EPA) Safe Drinking Water Act (SDWA) standards. Each year, the Utility collects hundreds of water samples from 15 point of entry sites, including groundwater wells, reservoirs, and pumping stations. The Utility also retrieves samples from 58 sampling stations as required by the ADEQ. These stations are located in neighborhoods that are specifically selected to represent the water quality delivered to the customers throughout the water distribution system. The Utility has an additional 101 sampling stations that can be used during emergencies, or to meet future testing requirements. Every three years, water samples are taken from 50 private residences within the water service areas to test for lead and copper. The most recent sampling was completed in June of 2022. The results met the EPA's SDWA standards for lead and copper. The Utility provides all water quality testing results to the ADEQ.

During 2024, the Utility collected 696 compliance samples for analysis of Total Coliform and E. Coli bacteria, in which the samples resulted negative for these contaminants. This is a direct result of a successful disinfection program through wellhead chlorination, effective system monitoring, proficient sampling methods and routine maintenance.

Testing includes water hardness, which is a measurement of the concentration of calcium and magnesium. During 2024, the hardness levels in Oro Valley ranged from 2.3 to 18.1 grains per gallon (39 ppm to 310 ppm). The Utility's water hardness ranges from soft to very hard with the majority of the water testing at moderately hard to hard. The water hardness varies depending on the volume of CAP water that is being blended at any given time in a specific pressure zone.

In 2024, due to proposed regulatory changes and requirements, the Utility continued preparation to phase in five proposed and pending EPA regulations related to monitoring rules:

- Fifth Unregulated Contaminant Monitoring Rule — 2023-2025
- Revised Long-Term Lead and Copper Rule — October 2024
- Perchlorate — TBD
- Strontium — TBD
- Chromium Total/Hexavalent Chromium — TBD

In 2024, the Utility will continue to phase in sampling and monitoring of new contaminants in accordance with SDWA regulatory requirements.

The Utility produced a 2023 Consumer Confidence Report for each water system in April of 2024. These reports are available electronically. The Utility notified customers via mail that the Consumer Confidence Report could be accessed on the Town's website. The 2024 Consumer Confidence Reports will be completed and available to consumers by June of 2025.

In addition to sampling the potable water system, water quality samples are routinely taken on the reclaimed water system for chlorine levels and turbidity to assure compliance with regulatory standards. All the ADEQ standards and regulations for reclaimed water were met in 2024.

In 2025 the Water Quality section of the Utility will continue implementation of SAMS Water. SAMS Water is a scheduling monitoring and analysis software tool that helps water systems comply with federal and state drinking water regulations. SAMS Water is an additional module added to the Cross Connection Module we are currently using.

**BACKFLOW PREVENTION**

Backflow prevention is an important component of water quality designed to protect the public water system. The purpose of this program is to keep the water supply safe from contaminants that could be introduced into the distribution system through backflow, back siphoning or back pressure from customer's plumbing systems or internal processes.

The Backflow Prevention Program is administered in accordance with the Town of Oro Valley Ordinance (O) 07-21, the ADEQ Arizona Administrative Code (A.A.C.) section R18-4-215, and the guidelines of the University of Southern California Foundation for Cross Connection Control and Hydraulic Research.

There are 1,595 backflow prevention assemblies in the program. The following are major activities and accomplishments of Water Quality personnel in 2024:

- Tested 244 backflow assemblies
- Repaired 14 in-ground and construction water backflow prevention assemblies
- Issued 39 permits for new and replacement backflow prevention assemblies
- Continue to use newly implemented cross connection control program software

*Staff repairing and testing Town of Oro Valley backflow prevention assembly. (left). Staff collecting compliance water samples (right).*

**SECURITY AND EMERGENCY RESPONSE**

Under current federal guidelines, Water Operations personnel are considered first responders. Though primarily mandated by state rules with public health responsibilities (Arizona Administrative Code Title 18), Water Operators also have a public safety responsibility relevant to the water systems they operate which includes support of firefighting tasks. Any water system security situations also directly involve water operations along with the Oro Valley Police Department as a first response action.

In 2020, Utility personnel, with the assistance of a security consultant were mainly focused on finalizing and submitting the Risk and Resilience Assessment Certifications for the America's Water Infrastructure Act (AWIA) of 2018. Certifications for the Oro Valley Water System and the Countryside Water System were submitted, and confirmation received, before the due date of 12/31/2020. Selective training will be conducted in Fall of 2025, and Water Utility staff will participate in an Emergency Simulation Tabletop Exercise. The training will be conducted in accordance with the guidelines from the Department of Homeland Security, Federal Emergency Management Agency, and the United States Environmental Protection Agency. The Utility continues to update the Emergency Response Plan and Business Continuity Plan on an annual basis and will continue to mitigate the elements defined in the vulnerability assessments, as well as those identified through the course of business.

Security features which include perimeter fencing, security walls, warning signage, motion sensors, and cameras at all active production facilities were inspected to maintain integrity. Hydrants throughout the system are protected by security locking systems.

The Utility is kept abreast of local, regional, and national security issues by the Water Information Sharing and Analysis Center (WaterISAC). WaterISAC has established secure and close contact with partners in government to access sensitive and classified security information. WaterISAC maintains two-way communication with the U.S. Department of Homeland Security, especially its National Cybersecurity and Communications Integration Center, the FBI, the U.S. Environmental Protection Agency, State Intelligence Fusion centers, and other Federal and State agencies.

The Utility is also a member of the Arizona Water/Wastewater Agency Response Network (AZWARN). Members of AZWARN agree to provide aid to other member utilities in the event of an emergency.

**FINANCIAL HIGHLIGHTS**

The Utility is financially sound and continues to manage its revenues, control expenses, and reduce debt. The Water Utility's outstanding revenue bonds have a rating of "AA+" from Standard and Poor's, and "AA" from Fitch Ratings. Ratings criteria include stable economic base, sufficient water supply for current and long-term needs, a manageable capital improvement plan, timely rate increases, maintaining adequate debt service coverage and cash reserve balances.

**Revenues and Expenses**

The Utility's revenue consists of potable and reclaimed water sales, Groundwater Preservation Fees, miscellaneous service fees and charges, Water Development Impact Fees, and interest income. The Utility has two funds:

- **The Operating Fund** is the primary fund for the Utility. Costs for the administration, operations, existing system improvements and debt service are managed in this fund. The sources of revenue are water sales, service-related charges, and Groundwater Preservation Fees (GPF). The GPF funds are dedicated to paying for debt or capital costs related to renewable water resources, renewable water supplies and costs to wheel CAP water to the Town.

- **The Water Resource and System Development Impact Fee Fund** (WRSDIF) provides funding for expansion related projects for new growth, development of renewable sources of water supply and infrastructure required for delivery of those resources. The source of revenue for this fund is impact fees collected at the time water meters are purchased.

**Table 6** below illustrates actual budgeted revenues for Fiscal Year 2023/24 for the Operating Fund and Water Resource and System Development Impact Fee Fund:

**TABLE 6**

| Revenue Source | Actual FY 2023/24 | Budget FY 2023/24 | Over / (Under) Budget | % Budget to Actual |
|---|---|---|---|---|
| **Potable Water Sales:** | | | | |
| Residential | $ 11,658,979 | $ 11,700,000 | $ (41,021) | 99.6% |
| Commercial | $ 1,101,693 | $ 1,080,000 | $ 21,693 | 102.0% |
| Irrigation | $ 1,771,471 | $ 1,600,000 | $ 171,471 | 110.7% |
| Turf | $ 126,185 | $ 86,000 | $ 40,185 | 146.7% |
| Construction | $ 147,152 | $ 215,000 | $ (67,848) | 68.4% |
| **Reclaimed Water Sales:** | | | | |
| Turf | $ 1,293,827 | $ 1,300,000 | $ (6,173) | 99.5% |
| Irrigation | $ 137,029 | $ 69,000 | $ 68,029 | 198.6% |
| Construction | $ 16,566 | $ 10,000 | $ 6,566 | 165.7% |
| **Subtotal Water Sales:** | **$ 16,252,902** | **$ 16,060,000** | **$ 192,902** | 101.2% |
| | | | | |
| **Fees, Charges, Misc. & Interest:** | | | | |
| Service Fees & Charges | $ 896,564 | $ 800,500 | $ 96,064 | 112.0% |
| Miscellaneous | $ 38,752 | $ - | $ 38,752 | 0.0% |
| Groundwater Preservation Fees | $ 2,391,910 | $ 2,400,000 | $ (8,090) | 99.7% |
| Impact Fees | $ 2,367,405 | $ 903,349 | $ 1,464,056 | 262.1% |
| Interest Income | $ 725,801 | $ 250,000 | $ 475,801 | 290.3% |
| **Subtotal Fees, Charges, Misc. & Interest:** | **$ 6,420,433** | **$ 4,353,849** | **$ 2,066,584** | **147.5%** |
| | | | | |
| **Total Revenues** | **$ 22,673,334** | **$ 20,413,849** | **$ 2,259,485** | **111.1%** |

Revenues collected from water sales exceeded the budget by $193,000 due to higher-than-normal irrigation consumption. Impact fee revenues exceeded budget by $1.5 million due to higher than anticipated meter sales.

**Table 7** below illustrates actual expenses for the Operating Fund and Water Resource and System Development Impact Fee Fund compared to budgeted expenses (excluding depreciation and amortization) for FY 2023/24:

**TABLE 7**

| Expenses | Actuals FY 2023/24 | Budget FY 2023/24 | Over / (Under) Budget | % Budget to Actual |
|---|---|---|---|---|
| Personnel | $ 3,616,586 | $ 3,870,809 | $ (254,223) | 93.4% |
| Operations and Maintenance | $ 10,202,526 | $ 11,365,507 | $ (1,162,981) | 89.8% |
| Capital Outlay | $ 13,664,018 | $ 14,179,792 | $ (515,775) | 96.4% |
| **Total expenses** | **$ 27,483,130** | **$ 29,416,108** | **$ (1,932,978)** | **93.9%** |

Personnel ended the year below budget due to vacancy savings in various divisions. Operations & Maintenance ended the year below budget due to cost savings in various divisions. Capital outlay was slightly below budget due to projects carried forward to the next fiscal year.

**Outstanding Debt**

**Table 8** is a summary of the outstanding debt (principal only) and the annual debt service payments (principal and interest) for all funds within the Utility:

**TABLE 8**

| Debt Service | Bond Series | Outstanding Debt At 6/30/24 | Debt Service Payment -Principal FY 2024/25 | Debt Service Payment-Interest FY 2024/25 | Interest Rate | Maturity |
|---|---|---|---|---|---|---|
| WIFA Loan-Sr. Lien-Operating | 2014 | $ 1,761,632 | $ 334,128 | $ 42,288 | 2.7% | 2028 |
| 2015 Excise Tax Bonds-Operating | 2015 | $ 295,020 | $ 146,520 | $ 4,236 | 2.3% | 2025 |
| 2017 Excise Tax Bonds-Operating | 2017 | $ 4,741,846 | $ 1,542,506 | $ 96,485 | 2.4% | 2026 |
| 2018 Excise Tax Bonds-Operating | 2018 | $ 4,437,000 | $ 387,000 | $ 128,154 | 3.0% | 2033 |
| Series 2021 Sr. Lien Bonds-Operating | 2021 | $ 1,271,727 | $ 260,445 | $ 13,977 | 1.5% | 2029 |
| Series 2021 Sr. Lien Bonds-GPF | 2021 | $ 2,179,671 | $ 446,389 | $ 23,956 | 1.5% | 2029 |
| Series 2021 Sr. Lien Bonds-WRSDIF | 2021 | $ 259,603 | $ 53,166 | $ 2,853 | 1.5% | 2029 |
| **TOTAL** | | **$ 14,946,498** | **$ 3,170,154** | **$ 311,949** | | |

New debt issuance in the amount of approximately $17 million will be issued in FY 2024/25. Repayment would be with funds from Groundwater Preservation Fees and Water Resources and System Development Impact Fees. Loan proceeds will be used for the Northwest Recharge, Recovery, and Delivery System (NWRRDS) project.

**Water Rates**

The functions and duties of the Water Utility Commission include annually reviewing and developing recommendations for water revenue requirements, water rates and fee structures. The commission evaluates staff recommendations based on an annual water rates analysis to ensure the recommendations meet Town policies and bond covenants. The Utility bases its financial analysis on the American Water Works Association Cash Needs Approach.

The water rate study for FY 2025/26 resulted in a recommendation to increase the base rates and commodity rates for potable water customers. There is no change to the potable Groundwater Preservation Fee. These proposed changes will result in a potable water monthly increase of $1.81 per month (or 3.6%) for a customer with a 5/8-inch meter using 7,000 gallons per month as compared to last year. Customers with a 5/8-inch meter represent 84% of the total customer base and include residential, commercial and irrigation classifications with the majority being residential. The proposed changes will be presented to the Town Council on June 4, 2025, and if adopted, the new potable water and potable groundwater preservation fee changes would become effective in July 2025.

All current water rates, fees and charges including impact fees are available to view on the Town website at https://www.orovalleyaz.gov/government/departments/water-utility

# TOWN OF ORO VALLEY
# WATER UTILITY

# 2025 ANNUAL REPORT

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# APPENDIX A

# STATIC GROUNDWATER LEVELS

## STATIC GROUNDWATER LEVELS

The Water Utility annually reports the static groundwater levels in all of the Utility's production wells to the Arizona Department of Water Resources (ADWR). Static water levels are measured in the following way. First, the pump is shut off for a minimum of 24-hours to allow the aquifer level to stabilize. Then, an electronic probe that is inserted into the well casing provides the operator with an audio tone once it is in contact with the groundwater. This reading is compared to the reading of the previous year. If the measurement is less than the year before, it indicates that the aquifer is recovering in that area. If the measurement is more than the year before, it indicates that the aquifer is being depleted in that area. The Utility's long-range goal is to have all wells show no change or indicate aquifer recovery.

The following table lists all production wells, the amount of groundwater pumped and the change in depth to groundwater between January of 2023 and 2024 for both the Countryside and Oro Valley Main Water Service areas. To provide context the amount of groundwater pumped and the change in depth to groundwater is also shown for years 2019, 2020, 2021, 2022, 2023, and 2024.

Drawdowns not highlighted indicate an aquifer drawdown while drawdowns highlighted in green indicate aquifer recovery.

**Oro Vally Water Service Area**

**Annual Acre-Feet Pumped and Annual Static Water Level (SWL) Change**

| Well ID | 2019 | | 2020 | | 2021 | | 2022 | | 2023 | | 2024 | | 2020-2024 5-YEAR AVERAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pumpage (Acre-Feet) | SWL Change (Feet) | Pumpage (Acre-Feet) | SWL Change (Feet) | Pumpage (Acre-Feet) | SWL Change (Feet) | Pumpage (Acre-Feet) | SWL Change (Feet) | Pumpage (Acre-Feet) | SWL Change (Feet) | Pumpage (Acre-Feet) | SWL Change (Feet) | SWL Change (Feet) |
| C-4 | 75 | **0.84** | 100 | -1.09 | 108 | -1.27 | 98 | -1.71 | 77 | **4.82** | 44 | **3.08** | **0.77** |
| C-5 | 155 | **0.17** | 167 | -2.00 | 274 | -2.22 | 241 | -0.81 | 606 | -7.43 | 280 | **3.75** | -1.74 |
| C-6 | 195 | **0.16** | 246 | -2.00 | 264 | -0.15 | 251 | -0.77 | 165 | -3.81 | 433 | -1.75 | -1.70 |
| C-8 | 127 | **5.94** | 243 | -9.09 | 365 | -4.40 | 365 | -1.13 | 231 | **2.35** | 277 | -4.40 | -3.33 |
| C-9 | 212 | -1.17 | 238 | -1.00 | 240 | -0.50 | 276 | **0.02** | 353 | -5.85 | 275 | **1.67** | -1.13 |
| D-1 | 208 | -1.58 | 195 | -2.59 | 208 | **0.58** | 153 | -0.08 | 122 | -3.08 | 172 | -0.09 | -1.05 |
| D-6 | 177 | -1.00 | 215 | -2.50 | 181 | -0.96 | 157 | **1.51** | 127 | -1.30 | 94 | **1.92** | -0.27 |
| D-7 | 143 | -0.66 | 288 | -6.84 | 308 | -2.08 | 259 | -4.24 | 257 | **7.74** | 143 | -4.25 | -1.93 |
| D-8 | 180 | -0.50 | 60 | **3.66** | 189 | -7.66 | 201 | -2.87 | 145 | **4.48** | 88 | -2.86 | -1.05 |
| D-9 | 410 | -4.42 | 318 | -0.42 | 244 | **2.83** | 116 | -3.73 | 256 | -1.60 | 273 | -0.58 | -0.70 |
| E-1B | 347 | -0.42 | 457 | -5.08 | 48 | **2.53** | 467 | -1.47 | 462 | -7.74 | 468 | **1.27** | -2.10 |
| E-2 | 325 | -6.75 | 399 | **0.24** | 391 | -1.98 | 366 | -1.16 | 54 | **5.82** | 163 | -6.09 | -0.63 |
| E-5B | 299 | -2.50 | 303 | **2.34** | 307 | -6.54 | 315 | -2.00 | 345 | **1.71** | 314 | -2.42 | -1.38 |
| E-6B | 454 | -1.67 | 602 | -4.00 | 560 | -0.62 | 386 | **0.89** | 488 | **0.07** | 569 | -0.17 | -0.77 |
| E-7B | 303 | **1.00** | 356 | -6.83 | 377 | -0.75 | 314 | **3.02** | 366 | -0.93 | 322 | **4.33** | -0.23 |
| F-1 | 506 | -0.92 | 487 | -4.17 | 479 | -0.77 | 420 | -3.07 | 468 | **0.46** | 471 | **2.00** | -1.11 |
| Average | | -0.84 | | -2.59 | | -1.50 | | -1.10 | | -0.27 | | -0.29 | -1.15 |
| Total | 4,117 | | 4,674 | | 4,544 | | 4,384 | | 4,522 | | 4,383 | | |

**Countryside Water Service Area**

**Annual Acre-Feet Pumped and Annual Static Water Level (SWL) Change**

| Well ID | 2019 | | 2020 | | 2021 | | 2022 | | 2023 | | 2024 | | 2020-2024 5-YEAR AVERAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pumpage (Acre-Feet) | SWL Change (Feet) | Pumpage (Acre-Feet) | SWL Change (Feet) | Pumpage (Acre-Feet) | SWL Change (Feet) | Pumpage (Acre-Feet) | SWL Change (Feet) | Pumpage (Acre-Feet) | SWL Change (Feet) | Pumpage (Acre-Feet) | SWL Change (Feet) | SWL Change (Feet) |
| CS-1 | 203 | **1.58** | 204 | -0.58 | 187 | **0.38** | 290 | -3.77 | 183 | -1.69 | 233 | **1.63** | -0.81 |
| CS-2 | 226 | **3.00** | 298 | -5.03 | 266 | **4.12** | 152 | -6.36 | 220 | -0.47 | 223 | **2.92** | -0.96 |
| Average | | 2.29 | | -2.81 | | 2.25 | | -5.07 | | -1.08 | | 2.28 | -0.89 |
| Total | 429 | | 502 | | 453 | | 442 | | 403 | | 456 | | |

# TOWN OF ORO VALLEY
# WATER UTILITY

# 2025 ANNUAL REPORT

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# APPENDIX B

# PROPOSED FIVE - YEAR
# CAPITAL IMPROVEMENT PROGRAM

B-1 Projects funded by the **Operating Fund**

B-2 NWRRDS Projects funded by the **Groundwater Preservation Fee**

B-2 NWRRDS Projects funded by the **Water Resource and System Development Impact Fee Fund**

B-3 Miscellaneous Growth-Related Projects funded by the **Water Resources and System Development Impact Fee Fund**

5-Year
Oro Valley Water Utility
Existing System Capital Projects

| Colors: | Study/Design/Permit | Construct | Purchases |
|---|---|---|---|

| Project No. | Project Name | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 | Totals Years 1-5 |
|---|---|---|---|---|---|---|---|
| | **Operating Fund Projects** | | | | | | |
| | **Wells** | | | | | | |
| 1 | Well Rehabilitaion | 220,000 | 220,000 | 220,000 | 220,000 | 220,000 | 1,100,000 |
| 2 | HP Tank Replacement | 170,000 | 170,000 | 170,000 | 170,000 | 190,000 | 870,000 |
| | **Subtotal** | **390,000** | **390,000** | **390,000** | **390,000** | **410,000** | **1,970,000** |
| | **Reservoirs** | | | | | | |
| 3 | Reservoir Relining | 200,000 | 200,000 | 200,000 | 400,000 | 400,000 | 1,400,000 |
| | **Subtotal** | **200,000** | **200,000** | **200,000** | **400,000** | **400,000** | **1,400,000** |
| | **Booster Stations** | | | | | | |
| 4 | Booster Rehab | 185,000 | 250,000 | 820,000 | 1,070,000 | 610,000 | 2,935,000 |
| 5 | HP Tank Replacement | 170,000 | 170,000 | 170,000 | 170,000 | 190,000 | 870,000 |
| | **Subtotal** | **355,000** | **420,000** | **990,000** | **1,240,000** | **800,000** | **3,805,000** |
| | **Mains** | | | | | | |
| | | | | | | | |
| | **Subtotal** | - | - | - | - | - | - |
| | **Buildings & Improvement** | | | | | | |
| | | | | | | | |
| | **Subtotal** | - | - | - | - | - | - |
| | | | | | | | |
| | **Total Capital Projects** | **945,000** | **1,010,000** | **1,580,000** | **2,030,000** | **1,610,000** | **7,175,000** |
| | **Meters & Equipment** | | | | | | |
| 6 | Water Meters - New Connections (Based on 210 meters per year) | 325,000 | 250,000 | 210,000 | 280,000 | 225,000 | 1,290,000 |
| 7 | Control Systems | 325,000 | 500,000 | 500,000 | 500,000 | 225,000 | 2,050,000 |
| | **Subtotal** | **650,000** | **750,000** | **710,000** | **780,000** | **450,000** | **3,340,000** |
| | **Vehicles** | | | | | | |
| 8 | Replacement Vehicles - Meter Operations | | | | 40,000 | | 40,000 |
| 9 | Replacement Vehicles - Distribution Operations | 70,000 | | 40,000 | | | 110,000 |
| 10 | Replacement Vehicles - Production Vehicles | | | 40,000 | | | 40,000 |
| 11 | New Vehicle - Water Control System Operations | | | | 40,000 | | 40,000 |
| 12 | Replacement Vehicles - Const Inspectors | | | | | | - |
| 13 | Replacement Vehicles - Water Quality | | 40,000 | | | 40,000 | 80,000 |
| 14 | ADC Truck / Trailer / Tools | | | | | | - |
| | **Subtotal** | **70,000** | **40,000** | **80,000** | **80,000** | **40,000** | **310,000** |
| | | | | | | | |
| | **Total for all projects** | **1,665,000** | **1,800,000** | **2,370,000** | **2,890,000** | **2,100,000** | **10,825,000** |

5-Year
Oro Valley Water Utility
Projects funded by Groundewater Preservation Fees (GPF)
NWRRRDS Projects - Existing Customer Related Projects - 40% of Total Costs

Colors: Study/Design/Permit | Construct | Purchases

NWRRDS Existing customer portion of projects paid for by Groundwater Preservation Fees

| Project No. | Project Name | Percent of Total | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 | Totals Years 1-5 |
|---|---|---|---|---|---|---|---|---|
| | **NWRRDS Partnered Projects** | | | | | | | |
| 1 | NWRRDS (Partnered) Well Equipping TRICO power to sites and associated tasks | 40% | 480,000 | | - | - | | 480,000 |
| 2 | NWRRDS (Partnered) Pipeline construction (Recovered Water & Transmission) | 40% | 2,440,000 | | - | - | - | 2,440,000 |
| 3 | NWRRDS (Partnered) Forebay Reservoir Construction | 40% | 1,200,000 | - | | | | 1,200,000 |
| | **Subtotal** | | **4,120,000** | - | - | - | - | **4,120,000** |
| | **NWRRDS Independent Projects** | | | | | | | |
| 4 | NWRRDS (Independent) Booster Station at Partnered Reservoir | 40% | 300,000 | | - | - | | 300,000 |
| 5 | NWRRDS (Independent) Pipeline from Partnered Reservoir to Shannon Rd. Reservoir | 40% | 2,880,000 | | - | - | - | 2,880,000 |
| | **Subtotal** | | **3,180,000** | - | - | - | - | **3,180,000** |
| | **Exisitng System Improvements for blending & distribuiton of NWRRDS water** | | | | | | | |
| | | 40% | | - | - | | | - |
| | | 40% | | - | - | | | - |
| | **Subtotal** | | | - | - | - | - | - |
| | | | | | | | | |
| | **Total for all projects** | | **7,300,000** | - | - | - | - | **7,300,000** |

5-Year
Oro Valley Water Utility
Projects funded by Water Resources and System Development Impact Fee Fund (WRSDIF Impact Fees)
NWRRRDS Projects - Growth Related Projects - 60% of Total Costs

Colors: Study/Design/Permit | Construct | Purchases

NWRRDS Growth related projects paid for by WRSDIF

| Project No. | Project Name | Percent of Total | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 | Totals Years 1-5 |
|---|---|---|---|---|---|---|---|---|
| | **NWRRDS Partnered Projects** | | | | | | | |
| 1 | NWRRDS (Partnered) Well Equipping TRICO power to sites and associated tasks | 60% | 720,000 | | | | | 720,000 |
| 2 | NWRRDS (Partnered) Pipeline construction (Recovered Water & Transmission) | 60% | 3,660,000 | | | | | 3,660,000 |
| 3 | NWRRDS (Partnered) Forebay Reservoir Construction | 60% | 1,800,000 | | | | | 1,800,000 |
| | **Subtotal** | | **6,180,000** | - | - | - | - | **6,180,000** |
| | **NWRRDS Independent Projects** | | | | | | | |
| 4 | NWRRDS (Independent) Booster Station at Partnered Reservoir | 60% | 450,000 | | - | - | | 450,000 |
| 5 | NWRRDS (Independent) Pipeline from Partnered Reservoir to Shannon Rd. Reservoir | 60% | 4,320,000 | | - | - | - | 4,320,000 |
| | **Subtotal** | | **4,770,000** | - | - | - | - | **4,770,000** |
| | **Exisitng System Improvements for blending & distribuiton of NWRRDS water** | | | | | | | |
| | | 60% | | - | - | | | - |
| | | 60% | | - | - | | | - |
| | **Subtotal** | | | - | - | - | - | - |
| | | | | | | | | |
| | **Total for all projects** | | **10,950,000** | - | - | - | - | **10,950,000** |

5 - Year
Oro Valley Water Utility
Projects funded by Water Resources and System Development Impact Fee Fund (WRSDIF Impact Fees)
Miscellaneous Growth Related Projects

Colors: Study/Design/Permit | Construct | Purchases

Miscellaneous Growth related projects paid for by WRSDIF

| Project No. | Project Name | Percent Growth | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | Totals Years 1-5 |
|---|---|---|---|---|---|---|---|---|
| | **Wells** | | | | | | | |
| 1 | Steam Pump D-Zone Well (Design/Permit/Drill/Equip) | 100% | 300,000 | | | | | 300,000 |
| 2 | La Posada Well (Design/Permit/Drill/Equip) | 100% | 300,000 | | | | | 300,000 |
| | **Subtotal** | | **600,000** | - | - | - | | **600,000** |
| | **Reservoirs** | | | | | | | |
| | | | | | | | | |
| | **Subtotal** | | - | - | - | - | | - |
| | **Booster Stations** | | | | | | | |
| 3 | La Canada Booster Station Expansion | 100% | 1,700,000 | | | | | 1,700,000 |
| | **Subtotal** | | **1,700,000** | - | - | - | | **1,700,000** |
| | **Mains** | | | | | | | |
| | | | | | | | | |
| | **Subtotal** | | - | - | - | - | | - |
| | **Buildings and Improvements** | | | | | | | |
| | | | | | | | | |
| | **Subtotal** | | - | - | - | - | | - |
| | **Total for all projects** | | **2,300,000** | - | - | - | - | **2,300,000** |

5-Year
Oro Valley Water Utility
Projects funded by Water Resources and System Development Impact Fee Fund (WRSDIF Impact Fees)
Miscellaneous Growth Related Projects

Colors: Study/Design/Permit | Construct | Purchases

Miscellaneous Growth related projects paid for by WRSDIF

| Project No. | Project Name | Percent Growth | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 | Totals Years 1-5 |
|---|---|---|---|---|---|---|---|---|
| | **Wells** | | | | | | | |
| 1 | Steam Pump D-Zone Well (Design/Permit/Drill/Equip) | 100% | 550,000 | | | | | 550,000 |
| 2 | La Posada Well (Design/Permit/Drill/Equip) | 100% | 600,000 | | | | | 600,000 |
| | **Subtotal** | | **1,150,000** | - | - | - | - | **1,150,000** |
| | **Reservoirs** | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | **Subtotal** | | - | - | - | - | - | - |
| | **Booster Stations** | | | | | | | |
| | | | | | | | | |
| | **Subtotal** | | - | - | - | - | - | - |
| | **Mains** | | | | | | | |
| | | | | | | | | |
| | **Subtotal** | | - | - | - | - | - | - |
| | | | | | | | | |
| | **Total for all projects** | | **1,150,000** | - | - | - | - | **1,150,000** |

# TOWN OF ORO VALLEY
# WATER UTILITY

# 2025 ANNUAL REPORT

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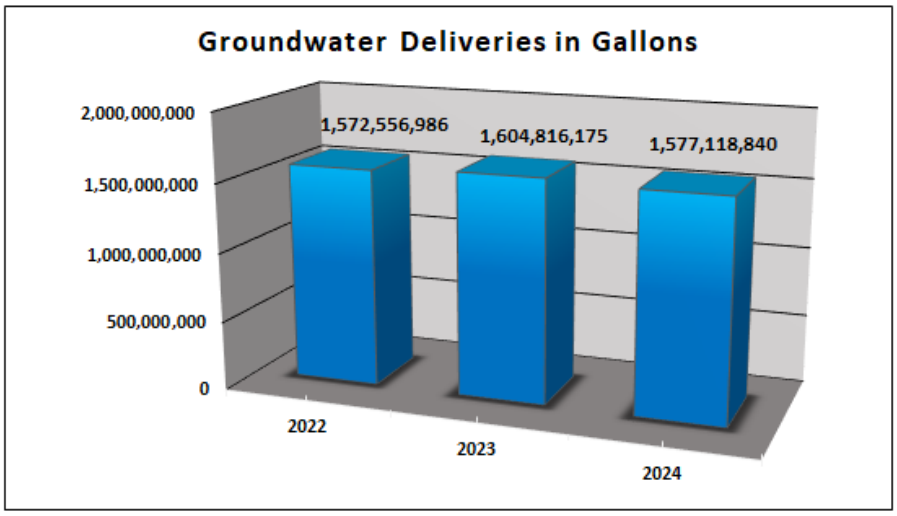
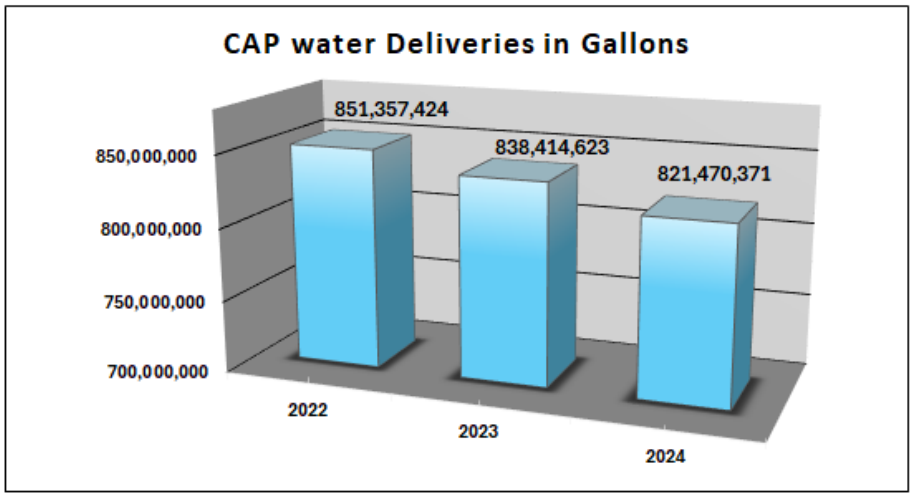
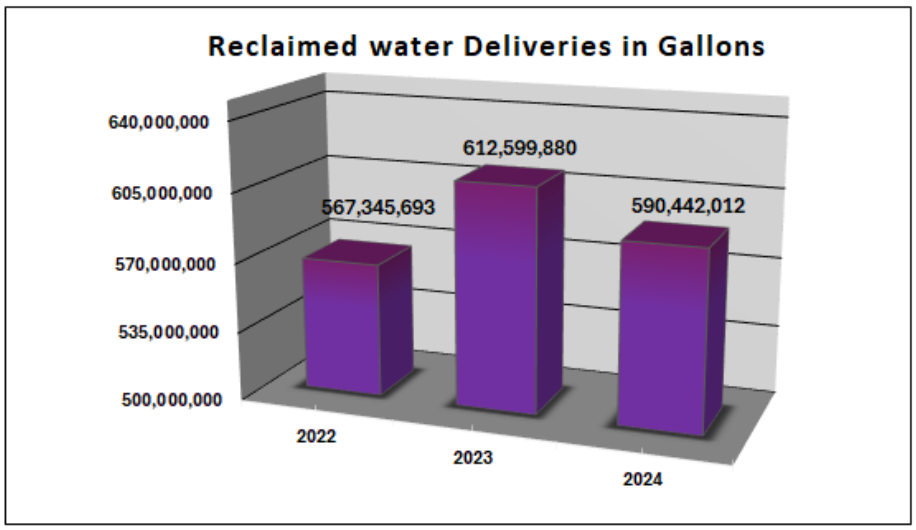
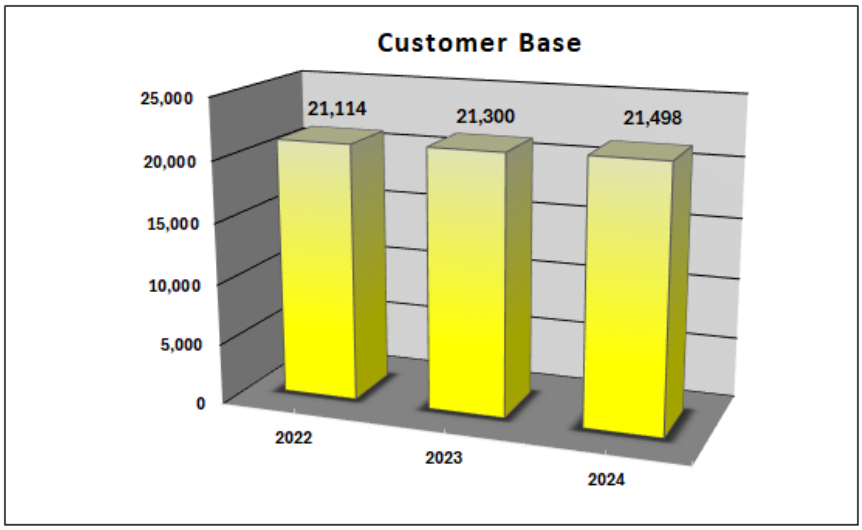
# APPENDIX C

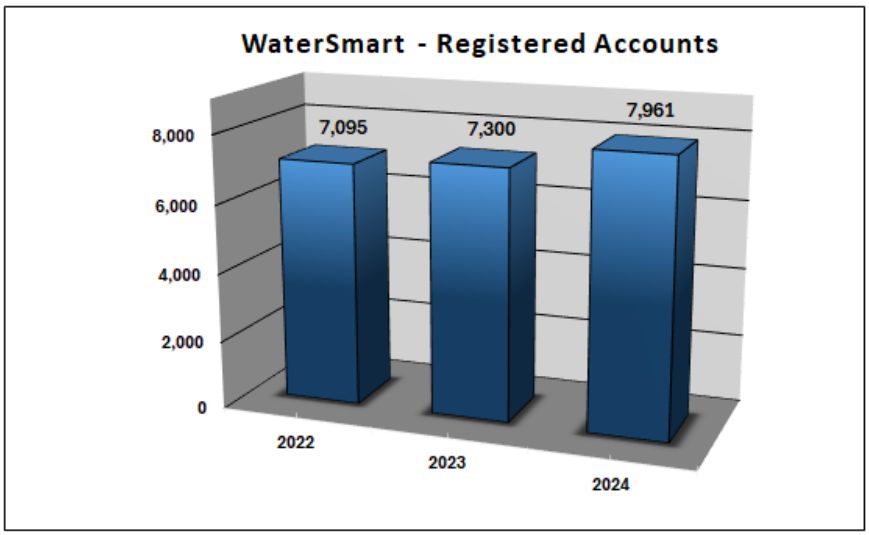
# UTILITY STATISTICS

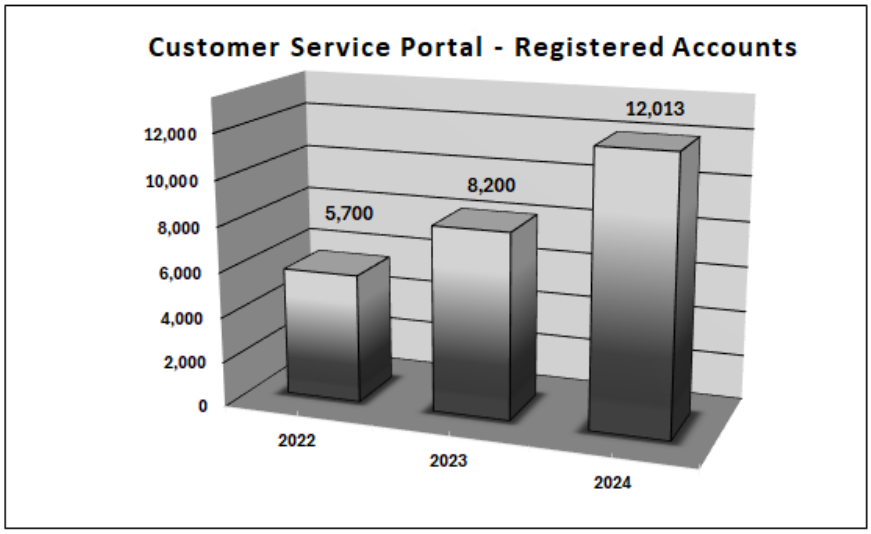

Groundwater Deliveries in Gallons
2,000,000,000
1,500,000,000
1,000,000,000
500,000,000
0
1,572,556,986
1,604,816,175
1,577,118,840
2022
2023
2024

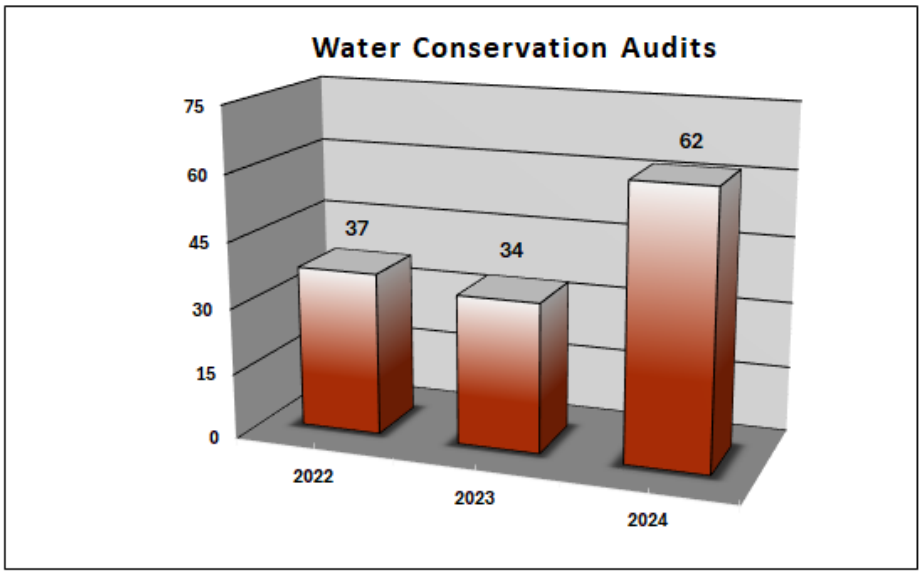

CAP water Deliveries in Gallons
850,000,000
800,000,000
750,000,000
700,000,000
851,357,424
838,414,623
821,470,371
2022
2023
2024

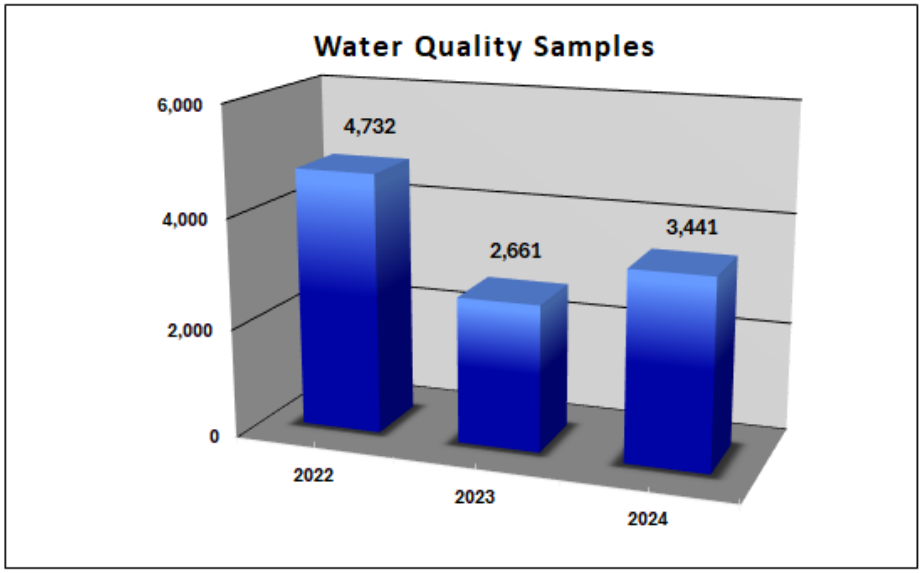

Reclaimed water Deliveries in Gallons
640,000,000
605,000,000
570,000,000
535,000,000
500,000,000
567,345,693
612,599,880
590,442,012
2022
2023
2024


Customer Base
25,000
20,000
15,000
10,000
5,000
0
21,114
21,300
21,498
2022
2023
2024


WaterSmart - Registered Accounts
8,000
6,000
4,000
2,000
0
7,095
7,300
7,961
2022
2023
2024


Customer Service Portal - Registered Accounts
12,000
10,000
8,000
6,000
4,000
2,000
0
5,700
8,200
12,013
2022
2023
2024


Water Conservation Audits
75
60
45
30
15
0
37
34
62
2022
2023
2024


Water Quality Samples
6,000
4,000
2,000
0
4,732
2,661
3,441
2022
2023
2024

# TOWN OF ORO VALLEY
# WATER UTILITY

# 2025 ANNUAL REPORT

## APPENDIX D

## ASSET INVENTORY

| Water Utility Capital Assets at 6/30/24 | | |
|---|---|---|
| **Potable Assets** | | **Value** |
| CAP Water Rights (allotment in acre feet) | 10,305 | $ 8,534,490 |
| Land | - | $ 2,189,864 |
| Wells (active & inactive) | 35 | $ 12,088,005 |
| Booster Stations (active & inactive) | 26 | $ 6,079,898 |
| Reservoir Capacity (million gallons) | 11 | $ 13,518,460 |
| Fire Hydrants | 2,534 | $ 3,922,333 |
| Meters | 21,498 | $ 9,179,780 |
| Services (Less Meters and Fire Hydrants) | 11,510 | $ 6,550,877 |
| Equipment | - | $ 3,017,865 |
| Structures | - | $ 1,998,819 |
| Vehicles | 38 | $ 2,233,549 |
| Telemetry | - | $ 451,416 |
| Buildings & Improvement | - | $ 677,611 |
| Water Mains (miles) | 376 | $ 73,373,595 |
| Construction in Progress | - | $ 22,968,118 |
| **Subtotal Value of Potable Assets** | | $ 166,784,680 |
| **Accumulated Depreciation** | | $ (61,421,743) |
| **Net Value of Potable Assets** | | **$105,362,936** |
| | | |
| **Reclaimed Assets** | | |
| Land | - | $ 220,796 |
| Telemetry | - | $ 29,654 |
| Booster Stations | 2 | $ 7,478,811 |
| Reservoir Capacity (million gallons) | 1 | $ 2,494,603 |
| Water mains (miles) | 14 | $ 14,762,599 |
| **Subtotal Value of Reclaimed Assets** | | $ 24,986,463 |
| **Accumulated Depreciation** | | $ (8,711,015) |
| **Net Value of Reclaimed Assets** | | **$ 16,275,448** |
| | | |
| **Total Value of Water Assets Net of** | | **$121,638,384** |

# TOWN OF ORO VALLEY
# WATER UTILITY

# 2025 ANNUAL REPORT

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# APPENDIX E

# ACRONYMS AND GLOSSARY

**GLOSSARY**

**Acre Foot** – The volume of water necessary to cover an area of one acre to the depth of one foot, 43,560 cubic feet. One acre foot is equal to 325,851 US gallons.

**Arizona Water/Wastewater Agency Response Network** – AzWARN is a statewide mutual assistance program between water and wastewater utilities. This volunteer-based network allows utilities to help one another in times of emergency. The foundation of the network is a signed mutual aid agreement between all participating utilities.

**Aquifer** – An underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, or silt) from which groundwater can be extracted using a water well.

**Bluestake** – When a utility company comes to the job site and locates and spray paints the ground to show where service is located underground.

**Central Arizona Groundwater Replenishment District (CAGRD)** – It was created in 1993 to replenish (or recharge) the amount of groundwater pumped or delivered to its members which exceeds their pumping limitations using any water source available except groundwater.

**Central Avra Valley Storage and Recovery Project** – An approved Underground Storage Facility operated by Tucson Water located in the Tucson Active Management Area located approximately one mile west of Sandario Road and just south of Mile Wide Road, in the Avra Valley, Pima County, Arizona.

**Colorado River Basin** – The drainage basin of the Colorado River is located in the southwestern United States and northwest Mexico. The 1,450 mile river drains an expansive, arid watershed that encompasses parts of six U.S. (Wyoming, Colorado, Utah, New Mexico, Arizona and California) and two Mexican states (Sonora and Baja). Rising in the central Rocky Mountains in the U.S., the river flows generally southwest across the Colorado Plateau and through the Grand Canyon before reaching Lake Mead on the Arizona–Nevada line, where it turns south toward the international border at Yuma, Arizona. After entering Mexico, the Colorado approaches the large Colorado River Delta where it naturally empties into the Gulf of California.

**Effluent** – Generally refers to wastewater that is treated and discharged to a natural water course. Oro Valley Water Utility's effluent is treated at facilities owned and operated by Pima County. This treated wastewater effluent is the source of Oro Valley's reclaimed water.

**Five Year Capital Improvement Plan** – A long-term plan for development of water related projects to develop and deliver water supply to our community. It includes existing system improvements and expansion related projects to meet future demands.

**Groundwater** – The water located in an aquifer beneath earth's surface in soil pore spaces and in the fractures of rock formations. The depth at which soil pore spaces or fractures and voids in rock become completely saturated with water is called the water table.

**Groundwater Extinguishment Credits** – Credits that are generated when a grandfathered groundwater right is extinguished or retired and never used again. The credits are issued as a certificate from the Arizona Department of Water Resources. Ownership of the credits can be transferred from the owner to another entity within the same Active Management Area.

**Kai Farms** – An approved Groundwater Savings Facility located at a farm near Redrock, Arizona that uses CAP water for irrigation.

**Lake Powell** – A water storage reservoir on the Colorado River near Page, Arizona with a capacity of 24.3 million acre feet. Glen Canyon Dam forms the lake and provides hydro-electric power.

**Lake Mead** – The largest water storage reservoir in the United States with a capacity of 25.9 million acre - feet. It is located on the Colorado River about 24 miles southeast of Las Vegas, Nevada. Hoover Dam forms the lake and provides hydro-electric power.

**Long-Term Groundwater Storage Credit** – A credit for storing CAP water or wastewater effluent that is accrued when this water is delivered to and recharged into an approved underground water storage facility. Once the water is recharged and stored and a deduction is taken for losses to the aquifer, it becomes a credit that can be used in the future either by direct delivery or used as credits to replace groundwater pumped from recovery wells.

**Lower Santa Cruz Replenishment Project** – An approved Underground Storage Facility operated by the Central Arizona Project located in the Tucson Active Management Area near Marana, Arizona.

**Northwest Recharge Recovery and Delivery System** – Partnership project between The Town of Oro Valley, Metro Water and Town of Marana to plan, design, construct and operate a recovery and delivery system to facilitate the delivery of recovered CAP water from the Lower Santa Cruz Recharge Project and the Avra Valley Recharge Project to each partner's respective service area.

**Pima Mine Road Recharge Project** – An approved Underground Storage Facility operated by the Central Arizona Project located in the Tucson Active Management Area near Sahuarita, Arizona.

**Recharge** – The replenishment of an aquifer's groundwater. An aquifer recharges water that percolates into the ground. Recharge takes advantage of water supplies available now and stores them for future use. Recharge also allows the slow introduction of new water supplies into our drinking water system by blending the new source with existing groundwater.

**Tucson Active Management Area** – One of five Active Management Areas in Arizona established under the 1980 Groundwater Code to manage groundwater usage through the Assured Water Supply Program.

**Turbidity** – Turbidity is the cloudiness or haziness of a fluid caused by large numbers of individual particles that are generally invisible to the naked eye similar to smoke in air.

**Zones** – A "zone", or "pressure zone" is defined as the area bounded by both a lower and upper elevation. Water service areas with elevation changes establish pressure zones to ensure that all customer's water pressure is within a prescribed pressure range regardless of the customers' service elevation.

**ACRONYMS**

| | |
|---|---|
| **ADEQ** | Arizona Department of Environmental Quality |
| **ADWR** | Arizona Department of Water Resources |
| **AF** | Acre Feet |
| **AMI** | Advanced Metering Infrastructure |
| **AWBA** | Arizona Water Banking Authority |
| **AZWARN** | Arizona Water and Wastewater Agency Response Network |
| **CAGRD** | Central Arizona Groundwater Replenishment District |
| **CAP** | Central Arizona Project |
| **CAVSRP** | Central Avra Valley Storage and Recovery Project |
| **CSWSA** | Countryside Water Service Area |
| **CY** | Calendar Year |
| **DAWS** | Designation of Assured Water Supply |
| **EPA** | Environmental Protection Agency |
| **ERP** | Emergency Response Plan |
| **FY** | Fiscal Year |
| **GIS** | Geographic Information System |
| **GPF** | Groundwater Preservation Fee |
| **IGA** | Intergovernmental Agreement |
| **MGD** | Million Gallons per Day |
| **NWRRDS** | Northwest Recharge and Recovery Delivery System |
| **OVWSA** | Oro Valley Water Service Area |
| **PDEQ** | Pima County Department of Environmental Quality |
| **SCADA** | Supervisory Control and Data Acquisition |
| **WRSDIF** | Water Resource and System Development Impact Fee Fund |