



Association of Metropolitan Water Agencies
2015 Platinum Award for Utility Excellence



Part I – Utility Profile

The City of Scottsdale Water Resources Division – Scottsdale Water – has been providing quality drinking water and advanced reclamation services to Scottsdale businesses and residents for over 40 years.

In 2014, Scottsdale Water delivered an average of 67 million gallons of potable water a day to its customers through over 2,000 miles of water pipes and mains, 14 pressure zones and 10,000 fire hydrants. Scottsdale’s reclamation system has approximately 1,400 miles of sewer collection lines and over 40 lift stations.

Scottsdale Water service area covers 185 square miles with over 88,000 active water accounts, about 90 percent of which are residential accounts, and approximately 80,000 active sewer accounts. Scottsdale is a long narrow city, stretching 32 miles from south to north with an elevation change of over 3,700 feet.

Located in the Sonoran Desert, Scottsdale, Ariz. has a very arid climate, averaging less than seven inches of rainfall annually. It has a population of 225,000 with an average household income over \$100,000. Tourism – including golf and luxury resorts – is a significant economic driver, contributing over \$4 billion a year to the Scottsdale economy.

Prior to the mid 1980s, Scottsdale relied almost entirely on groundwater for its water supply. Today, about 90 percent of its drinking water comes from two renewable surface water sources: the Central Arizona Project, which delivers water from the Colorado River, and the Salt River Project, which brings water from the Salt and Verde rivers.

Salt River Project water is treated at the Chaparral Water Treatment Plant, online since 2006 and designed to treat up to 27 million gallons of water per day. Colorado River water is treated at the city’s CAP Water Treatment Plant at the Water Campus in north Scottsdale and can treat up to 70 million gallons of water per day.

Scottsdale Water operates two traditional reclamation facilities that treat up to a combined 23 million gallons of wastewater daily. Scottsdale also operates the Advanced Water Treatment facility, a state-of-the-art indirect potable reuse facility that utilizes microfiltration, reverse osmosis, ozonation and ultraviolet technology to produce up to 20 million gallons a day of highly treated recycled water that exceeds drinking water standards. This water can be pumped into the aquifer via any combination of 63 vadose zone recharge wells in one of the nation’s first and largest indirect potable recharge programs, and can be delivered to any one of 23 golf courses through the Reclaimed Water Distribution System – a complex system of pipelines and booster pump stations funded through a long-term, public-private partnership.

The division is a water provider and is a financially self-supporting municipal utility with an annual budget of approximately \$163.4 million. It is managed by an executive director, who reports to the city manager. City council guides the division’s authority and responsibility through resolutions and ordinances.

In 2014, Scottsdale Water assumed watershed protection responsibilities when the stormwater quality program was moved from the city’s Planning Division to the Water Quality Department within Scottsdale Water. The stormwater quality program has one of the biggest impacts on watershed protection within the Scottsdale municipal boundaries.

Part II – Scottsdale Water Vision

Water Sustainability through Stewardship, Innovation and People

Scottsdale Water's vision is more than a statement in a planning document; it is who they are as a utility and what they work to achieve every day. Scottsdale Water constantly communicates its vision to both its employees and its customers. The vision appears on all division communications, including collateral and display boards, customer notifications, presentations and handouts, internal communications, business cards, letterheads and email signatures. Scottsdale Water is committed to ensuring its product, its services and its culture exemplify its vision.



Vision poster series adorns the entry to all Scottsdale Water facilities and is the centerpiece for trade show and display booths.



Recruitment fliers share the Scottsdale Water vision at industry and academic career fairs.

Conservation giveaway examples:
Jar Grip and Mouse Pad



Conservation Office van takes the Scottsdale Water vision to schools, workshops, home irrigation audits and community events.

Part III – Keys to Management Success and Attributes of Effectively Managed Utilities

Attribute 1: Strategic Business Planning

Scottsdale Water has a long history of thinking and acting strategically with its water resources. Scottsdale was the first Arizona water utility to implement indirect potable reuse with its Advanced Water Treatment (AWT) facility located at its award-winning Water Campus. Scottsdale was also the first Arizona water utility to implement a true water campus that has a 70 million gallon per day (mgd) water treatment plant, a 20 mgd water reclamation facility, a 20 mgd advanced water treatment facility, a groundwater recharge facility and a state-of-the-art water quality laboratory.

The Scottsdale Water Campus provides reclaimed water to 23 golf courses, enabling Scottsdale to support its flourishing golf and tourism industry with a sustainable water supply. Additionally, when the reclaimed water is not being used for irrigation it is being treated and recharged back into the ground. Through Scottsdale Water's innovative actions, Scottsdale has been able to achieve safe yield – withdrawing less groundwater than it recharges – since 2006.

Scottsdale has traditionally implemented its strategic planning within its integrated master planning process. The master plans were implemented on a five-year cycle and helped guide Scottsdale Water through some periods of dramatic growth. Since 2004, Scottsdale has added nearly 7,000 new residents.

In addition to its five-year master planning efforts, in 2011 Scottsdale Water implemented a five-year strategic plan that focused on improving infrastructure management, workforce planning and financial planning. Based on this plan, Scottsdale Water implemented a water resources optimization program through which over \$400,000 in operating and overtime expenses were avoided in 2013 alone.

In 2014, the city implemented the Effective Utility Management process as an additional tool for strategic planning and continual improvement. As part of this process, three Effective Utility Management (EUM) attributes are identified for improvement annually and action plans are implemented to improve the organization.

Through its strategic planning, Scottsdale Water aims to continue to exemplify its vision of “Water sustainability through stewardship, innovation and people.”

Attribute 2: Measurement

Scottsdale Water utilizes a number of performance measures in its decision making processes. Operations data and system performance measures from all of the division's utility systems (potable water, wastewater, recycled water and irrigation water) are reported out to division staff on a daily, monthly and annual basis. Information includes water production from each supply source, deliveries by type of supply, aquifer recharge volumes and primary reservoir levels. This information drives system operational decisions to affect aquifer sustainability goals (Safe Yield), production forecasting and system water age.

Key Performance Indicators (KPI) across all operating and business disciplines are tracked, measured and reported monthly to the division management team. Examples of the data included in the monthly KPI reports are provided in the table below.

Key Performance Measure	Measured by	Purpose
Percentage of calls handled and resolved immediately by staff in a single phone call.	Customer Service/Administration	Customer service/Customer satisfaction
Drinking water compliance rate	Water Quality	Customer service/Operating performance
Superfund Compliance Rate	Water Quality	Customer service/Operating performance
Industrial user compliance rate with discharge permits	Water Quality	Customer service/Operating performance
Non-revenue water percentage	Water Planning and Engineering	Infrastructure reliability/Supply sustainability
Number of free residential audits performed by water conservation staff.	Water Planning and Engineering	Customer service/Customer satisfaction
Percentage of workshop participants who attended a landscape workshop and rated the program as “Excellent” or “Good” in a feedback survey.	Water Planning and Engineering	Customer service/Customer satisfaction

Number of elementary students who participated in a water conservation educational workshop.	Water Planning and Engineering	Customer service/Customer satisfaction
Average day sewage collected and treated (in million gallons)	Water Reclamation	Infrastructure reliability/Operating performance
Miles of sewer lines cleaned annually	Water Reclamation	Infrastructure reliability/Asset management
Miles of sewer mains videoed annually	Water Reclamation	Infrastructure reliability/Asset management
Operational cost of sewage collected and treated (per thousand gallons) by facility	Water Reclamation/Financial Services	Financial viability/Stewardship
Number of manholes treated for vermin/vectors	Water Reclamation	Customer service/Operating performance
Number of odor complaints	Water Reclamation/Customer Service	Customer service/Operating performance
Number of sanitary sewer overflows per year (per 100 miles)	Water Reclamation	Infrastructure reliability/Asset management
Percentage of total completed planned/preventative maintenance activities on water systems.	Utilities Maintenance	Infrastructure reliability/Asset management
Percentage of total completed planned/preventative maintenance activities on wastewater systems.	Utilities Maintenance	Infrastructure reliability/Asset management
Vehicle accidents per million miles (per calendar year) or vehicle accident rate	Safety/Security/Risk Management	Safety
Number of workplace incidents, injuries and illnesses per calendar year, per 100 employees	Safety/Security/Risk Management	Safety
Average day drinking water production (in million gallons).	Water Services	Infrastructure reliability/ Operating performance
Peak day drinking water production (in million gallons).	Water Services	Infrastructure reliability/ Operating performance
Number of water meters replaced system-wide.	Water Services	Infrastructure reliability/Supply sustainability
Main breaks	Water Services	Infrastructure reliability/Asset management
Operational cost to treat and deliver water (per thousand gallons) by facility.	Water Services/Financial Services	Financial viability/Stewardship
Expenditures by Fund	Financial Services	Financial viability/Stewardship
Expenditures by Type (Personnel, Chemicals, Power, Contractual Services, Commodities)	Financial Services	Financial viability/Stewardship
Revenue by Fund	Financial Services	Financial viability/Stewardship
Volume of water recharged above volume of groundwater pumped.	Systems Efficiency and Technology	Supply sustainability/ Operational resiliency
Water supply usage rate by type (Groundwater, remediated water, various surface water sources, reclaimed water).	Systems Efficiency and Technology	Supply sustainability/ Operational resiliency

Many of the aforementioned indicators have associated quarterly and annual performance goals. Progress in achieving those goals is reported to the city executive team and the city council on a quarterly basis.

Attribute 3: Continual Improvement Management Framework

Scottsdale Water has incorporated continual improvement management into everyday operations through three specific programs – leadership engagement, after action reviews and Effective Utility Management.

In the first program, leadership engagement, the Scottsdale Water leadership team from the executive director through the line supervisors is encouraged and directed to be engaged with the workforce to find areas to improve efficiency and effectiveness. Leadership engagement is accomplished through leadership development programs, an active suggestion box program, all-hands meetings, a lead operator forum and day-to-day leadership. The core principle of leadership is to create an environment where the workforce feels free to express their concerns and ideas in positive and meaningful ways. It is through this feedback from the workforce that continual improvement can occur.

The second continual improvement program is the after action review process. An after action review (AAR) is a quick and simple tool that enables a workgroup, section, department or entire utility operation to review situations, incidents, training events and even programs to ensure the organization is on a continuous improvement path.

After action reviews have been used by the United States military for over 30 years and have been instrumental in ensuring that the U.S. military remains the preeminent military force in the world today. In the same way, operational AARs can be used to evaluate water and wastewater operations to improve performance and avoid duplicate errors. The time involved is minimal, as little as 30 to 40 minutes, depending on the process.

The key to a successful AAR is the spirit in which it is given; specifically a spirit of team work that involves open and candid dialogue with the event participants. It is not designed to be a punitive forum, but a neutral one with the sole goal of improving process and performance. Scottsdale Water began implementing AARs in 2013 and has seen dramatic improvements in processes through the correction of systemic mistakes.

The third program is Effective Utility Management as developed and published in *Effective Utility Management, A Primer for Water and Wastewater Utilities* (June 2008 by AMWA, EPA, APWA, AWWA, NAWC, NACWA and WEF). Scottsdale Water's management team goes through the Effective Utility Management (EUM) process annually and selects up to three EUM attributes to focus on improving during the next fiscal year.

During FY 2014/2015, the management team addressed the following EUM attributes and accomplished the associated process and service improvements:

EUM attribute: Employee and Leadership Development

- Created the Apprentice Program in water and wastewater treatment
- Significantly expanded recruiting program

EUM attribute: Operational Resiliency

- Enhanced employee professional networking to improve and promote cross training
- Expanded SCADA communications planning
- Expanded emergency operations exercises and preparedness
- Initiated quarterly Operational Workshops focused on operational resiliency

EUM attribute: Infrastructure Stability

- Implemented an electrical equipment assessment program
- Initiated a Technology Master Plan to be integrated into the structure of the recently completed integrated water and wastewater master plans

The Scottsdale Water management team meets bimonthly to assess progress on these programs and initiatives. As part of this process, the team reassessed each of the ten EUM attributes to select a new set of attributes for improvement in FY 2015/2016. The chosen attributes and related initiatives and programs that will be developed are as follows:

EUM attribute: Operational Resiliency

- Identify specific work areas for the potential of improving bench strength
- Launch a Scottsdale Water employee safety campaign
- Update Information Access System with current as-builts for each facility
- Evaluate the centralization approach of some work groups such as maintenance and electrical

EUM attribute: Stakeholder Understanding and Support/Customer Satisfaction

- Create a Scottsdale Water Citizens Academy
- Upgrade Water Campus grounds appearance
- Identify customer complaint trends
- Implement "Comment Cards" concept across division
- Increase electronic outreach to citizens

EUM attribute: Operational Optimization

- Evaluate and optimize pumping control scenarios for pumpback system
- Develop a Chemical Cost Matrix for use in identifying savings
- Develop an Electrical Cost Matrix to identify opportunities to reduce energy demand

Attribute 4: Product Quality

Scottsdale Water incorporates the most advanced treatment technologies and processes available in the water and wastewater treatment industry to produce potable and highly treated recycled water on a daily basis that is in full compliance with regulatory requirements and public health and environmental needs, while regularly exceeding the service expectations of our customers.

Potable Water

Scottsdale Water's primary source of potable water delivery originates from one of two surface water treatment facilities: the 70 mgd Central Arizona Project Water Treatment Plant (CAP WTP) and the 30 mgd Chaparral Water Treatment Plant. In recent years, each of these facilities has implemented expansions of capacity and new technology.

The CAP WTP receives water from the Colorado River and incorporates a recently completed 20 mgd of membrane ultrafiltration blended with 50 mgd of conventional water treatment processes. Water is further treated with granular activated carbon (GAC) treatment for taste and odor control, along with total organic carbon reduction for the control of disinfection by-products. This facility is one of the largest in the country to implement membrane treatment and dissolved air floatation pretreatment. The 4-million-plus pounds of GAC is also one of the largest such systems in the country for the control of disinfection by-products.

The 30 mgd Chaparral WTP receives water from the Salt and Verde rivers of Arizona. This facility has been in operation since 2006 and incorporates 100 percent ultrafiltration membranes and GAC treatment. It is the largest potable water membrane facility in Arizona.

Recently Scottsdale Water investigated options to increase the efficiency of the membrane system and pilot tested Aluminum Chlorohydrate (ACH) versus the previously used coagulant ferric sulfate. ACH proved to be a more effective coagulant to support the membrane system. As such, a full-scale pilot was implemented and a conversion of coagulants was approved and implemented in 2014. Upgraded control strategies were also implemented to improve the efficiency of the membrane system.

Treated Effluent

The Scottsdale Water Campus is one of the largest and most sophisticated indirect potable reuse facilities in the world and has been an industry leader in this realm since the facility began operation in October of 1998 as a zero discharge facility. The facility has two distinct components: the Water Reclamation Plant (WRP), which currently has the ability to produce 20 mgd of tertiary effluent, and the Advanced Water Treatment (AWT) facility, which has the capacity to further treat over 20 mgd of effluent for aquifer recharge via 63 vadose recharge wells.

The AWT utilizes microfiltration and reverse osmosis for treatment prior to recharge. In its original construction, the AWT had a production capacity of 14 mgd of highly treated, RO-permeate recycled water.

While the AWT was state-of-the-art and produced water that exceeded current regulatory requirements for open access irrigation and groundwater recharge, the city identified two issues that necessitated additional treatment technology and capacity:

1. Future regulatory expectations for a variety of emerging Compounds of Potential Concern (CPC) in the groundwater recharge, and
2. A desire from the city's primary recycled water customers, 23 golf courses in north Scottsdale, to reduce the sodium levels in the finished water to less than 125 milligrams per liter (mg/l), which equated to more than a 50 percent reduction in what was currently being delivered in treated tertiary effluent.

These issues culminated in a recommendation for additional treatment capacity and the expansion of the Water Campus AWT Facility to its current 20.6 mgd capacity, completed in 2014.

Groundwater Recharge

The AWT expansion project increased the reliable capacity of the AWT from 14 to 20.6 mgd and included the implementation of an advanced oxidation process (AOP) to address CPCs. The AOP implements a stepped chloramination disinfection process, ozonation and ultraviolet photolysis. The membrane filtration expansion component of the project included reverse osmosis and an entirely new ultrafiltration system.

The city evaluated, sampled for and analyzed a variety of CPCs that could possibly be controlled through the implementation of new technologies or operational practices. Ozone and ozone/hydrogen peroxide (H₂O₂) pilot tests were conducted to understand the impact of these chemical oxidation processes on the reduction of CPCs.

In addition to ozonation and free chlorine contact time, UV photolysis was investigated. Research and investigation during the conceptual design phase recommended the inclusion of a high-intensity UV system. With the addition of ozone and UV photolysis to AWT treatment, Scottsdale Water has significantly reduced the presence of CPCs in recharge water.

Reclaimed Water Distribution System

While these components in themselves were very complicated, the truly unique aspects of the AWT expansion project are in the AOP implementation and the unique public-private partnership between the city and its primary reuse customers, the 23 golf courses needing to reduce the sodium levels in their tertiary effluent.

The public-private partnership has its roots in the early 1990s when Scottsdale formed a partnership with private developers to provide non-potable water to several golf courses located in north Scottsdale with the goal of eliminating the reliance on groundwater to irrigate golf courses within city limits. This partnership, known as the Reclaimed Water Distribution System (RWDS), has grown over the years and now consists of a 14-mile delivery system including pipes, pump stations and other facilities.

Concurrent to the city's master planning efforts, an RWDS Water Quality Study was conducted and funded by the golf course and examined in more detail the amount of total dissolved solids (TDS) and sodium concentration in the non-potable water they received. The study concluded the primary concern for the RWDS users was sodium levels. Elevated sodium levels make turf germination and sustained growth challenging under Scottsdale's warm and arid conditions.

There are two primary causes for the high TDS concentration in the city's wastewater and reclaimed water: the majority of Scottsdale's potable water is treated CAP water, which is considered by customers to be relatively hard water, and many residents and businesses use water-softening devices that contribute high amounts of sodium to the wastewater stream. It's estimated that over 80 percent of customers in north Scottsdale use water softeners.

City staff met with golf course superintendents, general managers and owners to hear their perspectives firsthand and discuss solutions to reduce the sodium levels in the RWDS. The most cost-effective solution to reduce sodium levels to an acceptable level (<125 mg/l) was to utilize a portion of treated water from the AWT, which contains virtually no sodium, and blend it with water from the WRP. While a technical solution was identified by staff and RWDS users, it was a long way from a formal agreement to implement the solution. A direct approach to this solution would have a substantial impact to Scottsdale residents. The AWT was originally designed strictly for recharge efforts and there was no infrastructure in place to allow blending of the two water sources.

Over a two-year period, city staff met with RWDS representatives to determine how their portion of the project could be financed by the individual golf courses. It was agreed that both the city and RWDS users would contribute financially to the AWT expansion project to improve water quality being delivered to golf courses. This agreement does not impact city water and sewer rate customers.

In return, the RWDS users requested Scottsdale implement water quality standards for the irrigation water and provide penalties if the standards are not met. The city implemented these standards and a schedule of penalties, which the RWDS users unanimously supported. As an added benefit to the city, the increased capacity of the AWT provides for additional groundwater recharge supplies in the colder months when golf course demand is lower.

The Scottsdale city council approved the RWDS agreements that established cooperative financing and water quality standards on April 1, 2008. The agreements resulted in an overall capital contribution of approximately \$22 million along with a rate structure that covers the operation and maintenance of the AWT product water attributed to the blended water source delivered through the RWDS.

In conjunction with the AWT expansion project Scottsdale began delivering a blended water source of tertiary effluent, Reverse Osmosis permeate and raw CAP water to the RWDS users that meets the sodium requirement not to exceed 125 mg/l on a continuous basis.

With the sodium dilemma facing the golf course owners, the city was challenged to find a solution that not only benefited the RWDS users, but to ensure that the cost of any improvement would not affect Scottsdale rate customers. As a result the RWDS users and the city have a unique public-private partnership that not only reduces reliance on groundwater, but provides a beneficial use of “wastewater” and fosters open communication between city staff and each of the RWDS users.

Water Quality Education

In 2014, as part of a larger education and outreach campaign, Scottsdale Water launched a Water Quality Campaign aimed at educating customers about the value and quality of its drinking water. The centerpiece of the campaign will be a water trailer that will deliver refrigerated Scottsdale Water to large city and community events, promoting the use of reusable, sustainable water bottles with ice-cold, delicious Scottsdale Water. The trailer and associated marketing collateral is currently in development.

As a leader in indirect potable reuse, Scottsdale Water is always working to actively communicate the importance of recycled water as a sustainable water source. It hosts approximately 20 tours of the Advanced Water Treatment facility annually, hosting industry professionals, students and government officials from around the globe. Scottsdale Water was recently chosen to be one of ten global case studies featured in the Global Connections Map – an online educational tool produced by the WaterReuse Foundation and the Australian Water Recycling Centre of Excellence showcasing the world’s leading water reuse projects.

Attribute 5: Customer Satisfaction

In late 2013, Scottsdale Water commissioned a customer satisfaction survey to test attitudes toward water service and quality in the city. The first question of the survey asked the respondents to rate the quality of their drinking water service. Only 60 percent of respondents replied positively. The final question included a detailed statement about the hundreds of water quality tests performed on tap water daily, the economic value of the tap water delivered and Scottsdale’s achievements in assuring a sustainable long-term water supply, and then asked again for the respondents to rate the quality of their water service. After being briefly educated about Scottsdale Water, the positive responses increased nearly 20 percent, with the net positive to net negative doubling. The change in attitude was most pronounced among residents under 40.

This dramatic shift in customer satisfaction about the quality of water service after just minimal education indicated that more extensive, sustained customer education could have a significant positive impact on customer perception of and support for the water utility. In response to the study, the division committed to developing and launching a community education and outreach campaign in 2014.

In studying the market research survey and developing the plan, it became clear that while Scottsdale operates extraordinarily complex and advanced drinking and recycled water systems, it lacks an identity as a customer-centric utility provider. Water and sewer service is viewed as an expectation, not a commodity, with customers lacking even a basic understanding of the quality of the product and services provided through the rates they pay.

The education and outreach campaign identified four primary strategies and related tactics for enhancing communication about the value of water and more accurately portraying itself as the provider of this essential commodity. The cornerstone of the campaign was to establish the City of Scottsdale Water Resources Division as a full-service, trusted water utility (as opposed to a complex, bureaucratic government department) by adopting a simpler, more relatable brand identity.

The brand moniker “Scottsdale Water” was adopted and marketing collateral and a logo created. Scottsdale Water is straightforward and descriptive and conveys the division as a utility provider without diminishing its connection to the city of Scottsdale.

Another key aspect of Scottsdale Water’s ongoing commitment to customer satisfaction is the division’s exemplary customer service department. Scottsdale Water front-line call takers assist an average of 2,000 customers each month with a wide variety of water and sewer related inquiries, questions and concerns. Using an extensive set of SOPs that are routinely reviewed and updated, 85 percent of customer calls are resolved through the initial phone call.

Customer service representatives assist customers with water leaks, sewer odors, sewer backup, high/low pressure, sewer roaches, bees, manhole covers, temporary meters, fire hydrant leaks, fire hydrant painting, permanent meters sets, backflow, load counts and water hauling.

Attribute 6: Employee and Leadership Development

Scottsdale Water values its employees and challenges them to constantly improve how it does business. The division is committed to its employees and provides ongoing support through training, career development and communication.

Training

Scottsdale Water is committed to fostering a well-trained, dedicated work force that understands the water industry and is dedicated to continual process and service improvement.

- Upon initial employment, all Scottsdale Water operations employees partake in a 60-hour new employee orientation, which includes technical and safety training as required by both OSHA and division policy.
- Vehicular operators participate in defensive driving annually utilizing the vehicles they drive in the field.
- All heavy equipment operators participate in and must be certified by the Scottsdale Water Heavy Equipment Operator Program. This in-house program brings in certified equipment operators to provide onsite operations training and testing on the division's equipment.
- Management, with employee input, conducts reviews of all Standard Operating Procedures and Job Safety Analyses for field and plant employees annually in January. Those documents are originally introduced in the original 60-hour orientation and reviewed with employees annually.
- Scottsdale Water has also invested in advanced computer-based safety and regulatory compliance training through J. J. Keller Inc. to enhance classroom and hands-on field and plant training.

Career Development

- Scottsdale Water urges all hourly, non-exempt certified operators to participate in its Operator Certification Incentive Program, which encourages operators to achieve and maintain Arizona Department of Environmental Quality certifications above those required by their job descriptions. Operators can qualify for annual bonuses up to \$1,600 based on certification level.
- Through its strategic planning process, Scottsdale Water established three different programs – cross training, mentoring and shadowing – that provide employees the opportunity to explore options for future career development and help the division develop a list of employees interested in moving to other jobs as openings become available.
- As part of the division management's 2014 Effective Utility Management process, Scottsdale Water created a formal, two-year apprentice program that provides a combination of hands-on and classroom training to prepare water professionals for a meaningful and challenging career. It encompasses classroom and skills-based training and goals that must be achieved by program completion. Apprentices earn 18 hours of college credits – paid by Scottsdale Water – in both water and wastewater disciplines. The application process was extremely competitive, with over 100 applications received for two positions.

Internal Communication

Scottsdale Water is committed to its vision of *Water sustainability through stewardship, innovation and people*. It manages a robust internal communication program to ensure a knowledgeable and engaged workforce. The program includes quarterly division newsletters, all-division biannual meetings, lead operator forums between division director and operations leaders, bimonthly safety meetings and anonymous suggestion boxes placed at multiple facilities.

Attribute 7: Operation Optimization

In 2010, Scottsdale Water launched an operations optimization project to implement a new organizational structure, business processes and technology to bring all utility operations together under one holistic system of operation.

Three main goals were created for Scottsdale's Optimization Program:

1. Effectively monitor, evaluate and coordinate the various utility operating systems.
2. Maximize system effectiveness through efficient cost saving operations.
3. Enhance water and wastewater service reliability.

Scottsdale Water took a business approach to optimizing its systems and adopted Lean principles to map out organizational and business processes to eliminate redundancy and highlight areas to streamline. Twenty-seven separate processes were mapped and evaluated to improve the business of producing, delivering, collecting and treating water and wastewater. Technology components were identified to aid in data compilation and accessibility, further enhancing overall utility operations. These early efforts helped Scottsdale begin to identify and eliminate departmental silos and move forward with a more collaborative approach toward operations.

A critical aspect for the implementation and sustainability of the optimization concept was creation of the Operations Planner and Scheduler (OPS) and System Operations (SO) functions. The OPS oversees all the utilities, resolves various issues from a systems perspective and creates optimal operating plans on both a daily and annual basis. The SO executes the plan, monitors system performance and provides feedback to the OPS.

Planning and coordination of operations is centralized and integrates all systems. This enables optimal systems operations. New OPS and SO organizational functions were created, with no increase in division staff count.

Another key component in the operational planning process was the formation of the weekly Operations Planning and Scheduling meeting, which includes representation from all functional areas of the utility. These meetings allow previously disparate work areas to regularly discuss system operations. Annual and daily operating plans are formulated, discussed and revised to maximize resources, ensure system resiliency and minimize operating costs.

Through development and revision of these operating plans, infrastructure availability is coordinated with major capital plans and scheduled maintenance activities, and incorporated into both annual and daily operating plans. Water supply availability and infrastructure use are coordinated to increase underground storage of water, leverage regional partnerships to reduce operating costs and project supply blends for irrigation uses upon which irrigation rates are forecasted. This forum allows for increased knowledge sharing and retention and results in a holistic team atmosphere throughout the utility.

To effectively monitor system operations, a centralized operations control room was developed for the System Operations function. The system operators monitor, evaluate and coordinate system operations 24/7/365. All system alarms and events are received, triaged and effectively responded to by the systems operators. (Previously alarms were sent out via auto dialers to multiple staff.) This change in alarm management resulted in faster field response times to main breaks and other situations and eliminated the redundancy of multiple crews responding to the same alarm, ultimately resulting in a 32 percent reduction in the number of overtime hours associated with crews being dispatched to issues in the field.

By streamlining operations and maximizing available resources, an additional 37,000 acre-feet of water (or more than 12 billion gallons) has been recharged underground in just the last two years. Underground storage is preferred to minimize high evaporation losses in our arid environment. This stored water can be used in the future to meet customer needs during drought or other supply shortages, thereby enhancing service resiliency and reliability to utility customers. Through better coordination of these recharge activities with regional partners, Scottsdale Water was able to initiate cost savings of approximately \$300,000 associated with this water storage activity.

Coordinated system operations has enabled Scottsdale Water to meet its internal performance goal of system-wide disinfection-by-product concentration of less than 80 percent of the regulatory limit. This was achieved through improved management of available water supplies, targeted granular activated carbon use and reduction of system water age through efficient reservoir management while maintaining fire flow capacity requirements.

By taking this holistic approach, the optimization program provides a win-win situation for both customers and employees. For customers, the efficiencies created from these efforts has kept costs for quality and reliable water and wastewater services at an affordable price, despite annual increases in chemicals, electricity and new regulatory requirements. For employees, the optimization program has improved performance and enhanced their career development by providing training and advancement opportunities in new technology and efficiency procedures.

Attribute 8: Financial Liability

As an enterprise fund of the City of Scottsdale, Scottsdale Water is maintained and operated as a self-supporting fund, similar to a private business that assesses rates, fees and charges to cover all costs of operations, maintenance, and capital expansion, replacement and rehabilitation.

Annually, Scottsdale Water finance staff prepares multiyear financial forecasts, budgets and rate design analysis, reports monthly to management, and makes budgets to actual variances and justifications available to the public.

Bond Credit Rating

In October 2014, Standard & Poor's Rating Services affirmed the AAA long-term rating on Scottsdale's water and wastewater revenue bonds, which has been maintained since 2007. In reaffirming its highest bond rating, S&P noted Scottsdale's strong service area economy, stable and diverse customer base, diverse water supply portfolio, sufficient system capacity, very strong historical and projected debt service coverage levels and a strong liquidity position. Additionally, in February 2014, Fitch Ratings affirmed its AAA rating and noted Scottsdale Water's continued stability. Fitch and Moody's rating agencies have rated Scottsdale Water's revenue bonds AAA and Aaa, respectively, since 2010.

Scottsdale Water's annual debt service (ADS) coverage averaged 2.6x over the past five years. Fiscal 2014 finished with ADS coverage of 2.5x. Liquidity, as of fiscal year end 2014, measured by days of operating cash held in unrestricted reserves, was a very strong 240 days, with the system's five-year average 204 days. Projections provided by management demonstrate continued stability in ADS coverage and cash balances.

Long-term debt per customer was \$200 as of fiscal year end 2014. The system's five-year capital improvement plan for fiscal 2015-2019 included approximately \$135 million in capital projects.

Water Rates

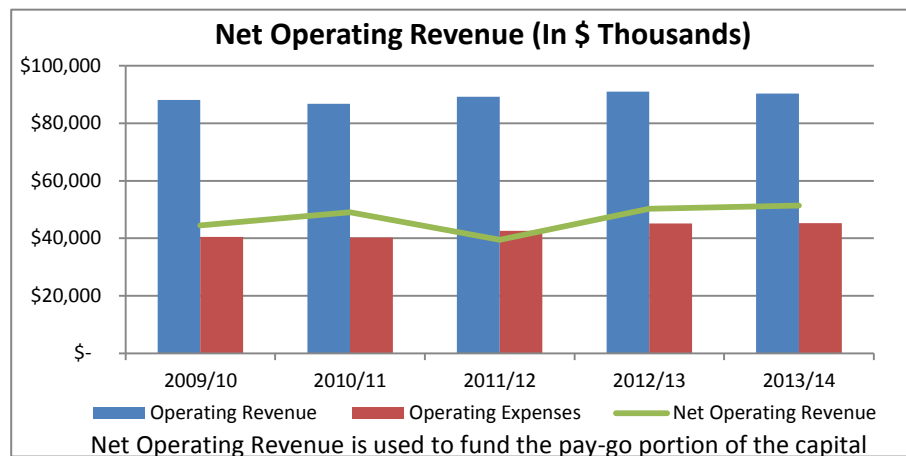
Scottsdale Water's rate setting process aligns rates with local practices and objectives, encourages conservation and strives to achieve a stable and predictable revenue stream. Due to statewide economic pressures, water rates were held flat between fiscal years 2009 and 2012. Water rates were restructured in fiscal year 2013 to expand the number of usage-based tiers and recalibrated in fiscal years 2014 and 2015, which resulted in minor rate decreases. Scottsdale Water plans to adjust water rates in fiscal years 2016 through 2019 to generate between 1.5 and 2 percent of additional water rate revenue annually.

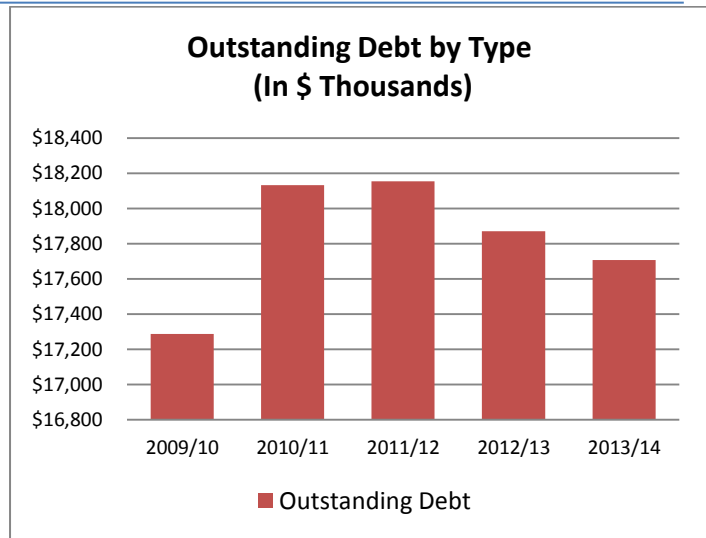
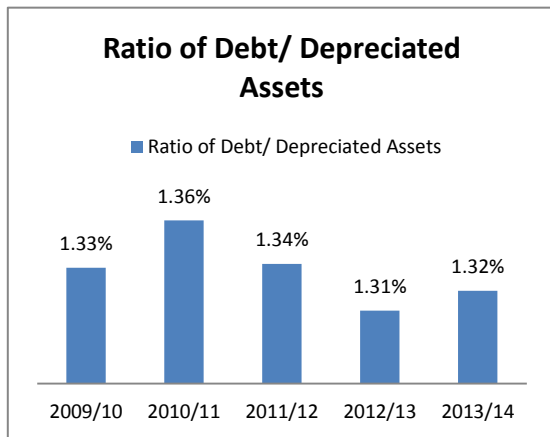
The water rate structure includes a flat monthly service charge, based on water meter size, and five usage-based commodity tiers. Assuming 8,000 gallons of monthly water usage, water charges total \$36.80 for a one-inch meter, single-family residential customer. In total, nearly 25 percent of Scottsdale Water's revenue is generated from the flat monthly service charge, while water sales (commodity tiers) and miscellaneous charges account for 75 percent.

Scottsdale Water's rate proposals are thoroughly vetted by utility staff, city treasure's staff, the city manager and the mayor and city council. The public is encouraged to participate in discussions and is provided opportunities at public hearings or one-on-one meetings with any of the city's staff and elected officials.

Financial Planning

Annually, Scottsdale Water prepares a short- and medium-range financial plan for the current year plus a rolling 20 years. The plan includes revenue forecasts, including rate adjustments, and operating expenses and capital expenditure forecasts, including escalation factors. Significant emphasis is placed on the first five years while the remaining years are used to determine the preliminary timing for capital efforts, preliminary timing and amount of long-term debt needs and annual rate increases that will maintain a strategy of small but consistent increases to guarantee the fund is fully self-supporting.





Attribute 9: Infrastructure Stability

Water Resources Planning and Engineering provides leadership and management of all Scottsdale Water programs to ensure the drinking water and water reclamation systems are planned, engineered and designed in agreement with the city's General Plan and ensures that all rates and fees are set prudently.

Both short- and long-term Capital Improvement Plans (CIPs) are developed to manage and predict annual capital needs in a way that offers predictability and stabilized water and sewer rates for our customers.

Asset Management System

As Scottsdale's water resources infrastructure matures, fewer needed CIP projects are driven by growth and expansion. Rather, an increasing proportion of capital needs is driven by asset rehabilitation and replacement. To respond to this need, Scottsdale Water made a significant investment to develop an Asset Management Program (AMP) that employs a database to predict the future rehabilitation or full replacement year for assets that have reached the end of their useful service lives.

The primary goal of the AMP is to efficiently manage the division's capital assets from installation to end of service life. There are over 5,000 assets currently documented in the AMP database. Not only is the database a critical tool in assessing the condition of water and wastewater infrastructure, but it also allows staff to run reports that summarize projected year-by-year asset replacements. Through these reports, staff can better plan rehabilitation and replacement efforts to result in more stable year-over-year costs rather than addressing needs as they arise, which can lead to erratic and unpredictable cash flow needs.

The asset management database employed by Scottsdale Water was finalized in 2008 and is a hands-on tool that is continually updated and revised to reflect new infrastructure built or to reflect the improved condition of assets that undergo rehabilitation. In addition to the condition of an asset, estimated replacement costs are also recorded. Having cost information attached to assets allows staff to run reports to determine replacement costs for that item, for a whole facility, or even for all facilities for a given year.

Sewage Collection System Rehabilitation

Scottsdale Water owns and operates over 1,400 miles of sewage collection piping and system. The collection system features pipes, manholes, lift stations and force mains. The Scottsdale Water CIP features capital for annual rehabilitation of this extensive system. Scottsdale Water recently initiated a multiyear sewer condition assessment program where selected sewer lines will undergo internal imaging and assessment. Scores will be applied to each sewer line based on the National Association of Sewer Service Companies (NASSCO), and pipe and manhole repairs and replacements will be prioritized based on industry standardized scoring. Pipes identified for rehabilitation will undergo cured in place lining, patching or full replacement.

As part of the Scottsdale Water sewer collection system assessment program, each sewer segment that is imaged for defects becomes linked to the city's GIS system. As images or video is collected for specified sewer pipe reaches, the images are automatically linked to those same pipe in the GIS system, so a user can click on a pipe and not only view attributes such as pipe diameter and material type, but see the interior sewer imaging as well.

As part of the collection system assessment, all sewage lift stations have also been examined and assessed for rehabilitation. Lift station rehabilitation identified in the current capital improvement program includes pump replacement, valve and flow meter replacement, structural and coating rehabilitation and other miscellaneous improvements that have been prioritized and programmed for improvement.

Potable Water Storage Reservoirs – Condition Assessment Program

Scottsdale Water utilizes over 40 reservoirs/tanks as part of the potable water treatment and distribution system throughout the city. It is important that these concrete and steel structures are properly maintained to prevent service disruptions. In 2014, Scottsdale Water commenced a multiyear reservoir assessment program aimed at identifying reservoirs requiring internal and external rehabilitation to ensure continuous service and extend useful service life for these assets.

This program began with the detailed inspection and assessment of five reservoirs known to have limited defects in need of addressing. With the help of the selected consulting engineering team, detailed rehabilitation remedies were developed and are currently being put into action. Identified improvements include replacement of corroded structural members, replacement of corroded air vents, sandblasting of blemished steel, and re-coating of steel surfaces. Once these deficiencies are addressed, the rehabilitated storage tanks will be put back into service with a restored useful service life. As this first group of storage tanks is rehabilitated, Scottsdale Water staff is working to identify the next group of tanks to undergo a detailed condition assessment. With this approach, Scottsdale Water aims to maintain a continuous assessment cycle to limit the amount of time between inspections or rehabilitation efforts for any water storage reservoir.

Electrical Infrastructure

From a long-range planning standpoint, Scottsdale Water is programming funds to complete a systemwide Electrical Master Plan. The intent of the project is to identify the modifications required to meet increased system demands and establish redundancy to achieve an acceptable operational risk. Begun prior to this larger planning effort, Scottsdale Water is also currently working with our electric utility, Arizona Public Service, to upsize a vital power feed to the Water Campus from 600 amps to 1200 amps.

In addition to planned electrical infrastructure improvements, staff and contract labor have been collaborating on preventative maintenance (PM) efforts focused on the maintenance scheduling of equipment in the electrical distribution system. These efforts improve system reliability and safety.

To further enhance safety, Scottsdale Water is conducting an 18-month Arc Flash Program. Through this program, contracted teams perform inventory and condition assessments of electrical gear and identify equipment in need of rehabilitation or replacement. A detailed asset inventory will be developed and imported into Scottsdale Water's asset management database, which will in turn automatically update replacement dates for electrical assets. The Arc Flash program also includes general electrical training for maintenance staff and higher level training for electricians. Additionally, Personal Protective Equipment (PPE) recommendations will be developed and equipment hazard ratings will be identified to clearly establish PPE requirements for staff who work with electrical infrastructure.

AMI/AMR Technology Implementation Plan

Scottsdale has over 89,000 water meters with about 27,000 currently fitted with Automated Meter Reader or Advanced Meter Information technology. All of the city's manually read services will be converted to AMR or AMI by 2022 by adding Electronic Reading Technology (ERT) to young meters or installing new meters with internal ERTs.

The pace of this timetable can be met with the current staff of meter changers and the transitioned replacement rate makes staffing and capital budgeting fairly uniform, not requiring a large capital investment in any one year. From a workforce standpoint, the gradual reduction in required meter readers can be accommodated through both natural attrition and cross-training within the division.

Scottsdale Water's target replacement age for meters and ERTs is 15 years. In 2023 the oldest AMR equipped meters will be that age, allowing for a continuous use of meter change-outs. Scottsdale uses AMI in the flatter and more densely populated southern area of the city. AMR is used in the hilly neighborhoods, which in general are managed by HOAs that do not favor the introduction of AMI communication towers. The selected ERT accommodates both AMI and AMR.

Attribute 10: Operational Resiliency

Scottsdale Water uses a multidimensional approach to address operational resiliency across all divisions within Scottsdale Water. A key element for organizational success is a highly trained workforce that is well prepared in emergency response.

Safety and security of the Scottsdale's water systems has always been and will continue to be a priority. In 1999, Scottsdale Water implemented an Emergency Management Toolbox (EMT), which has proven to be an invaluable resource for all employees in responding to man-made and natural disasters.

Within the EMT are emergency response plans for the work groups of Water Service, Reclamation, Technology, Optimization, Water Quality, Engineering, Conservation, Administration and Finance. Also included within the EMT framework are the resources of the Continuity of Operations Plan, Evacuation Plans, Security Policies and Procedures, Emergency Operations Center (EOC), Critical Vendor List, Critical Care Facility locations and contacts, Scottsdale Water emergency contact information (Call Trees) and Mutual Aid information.

The entire contents of the EMT are reviewed and updated on a semiannual basis with the emergency contact information updated quarterly. Scottsdale Water also uses an outside consultant firm to assist in updating the EMT and facilitating tabletop, functional and full-scale exercises for all Scottsdale Water employees annually. Scottsdale also coordinates emergency response exercises with AZWARN and statewide utility agencies, which further enhances mutual aid support.

Timely and accurate information is critical during any crisis event. Scottsdale Water uses a relatively new technology messaging system to contact all employees regardless of time of day with emergency information. All employees receive the same information, which is transmitted instantly with the click of the mouse.

In an on-going effort to improve processes, sustainability and reduce operational risk, Scottsdale Water uses an After Action Report (AAR) method to evaluate post emergencies and near misses. This is completed with all employees directly or in-directly involved to capture the incident and develop time bound action items as needed to be implemented to avoid or be better prepared for future events of the same relative nature.

Scottsdale Water holds routine information meetings to share knowledge across the various work groups in the division. This results in a better understanding of the challenges for each service area and provides better communication within Scottsdale Water emergency responses.

Scottsdale Water design standards for supplies, water/wastewater treatment plants, and pump stations are done so with consideration for a level of zero service outages. This includes standby power for critical facilities using a diverse and reliable mix of emergency fuel supply.

Both the water and wastewater operations groups use an in-house custom built work order system. This system is very robust and dynamic which tracks both reactive and proactive work tasks. Tolerance levels are pre-set and closely monitored through various reports and issues can be easily identified and addressed.

Attribute 11: Community Sustainability

Water Conservation

Water is a precious resource in the desert. With less than seven inches of rainfall per year, it is essential that Scottsdale Water is not only stewards of its water supplies, but that it commits to educating and empowering its customers to use water as wisely as possible.

Education

The Scottsdale Water Conservation Office is committed to changing water use behaviors through education. Water conservation specialists work with residents, businesses, traditional and social media, schools, HOAs and community groups to provide all levels of educational resources, including:

- School programs – Providing teachers and scout leaders free water educational resources including Project Wet Interactive Water Education Presentations and grade-appropriate water education booklets and games.
- Landscape workshop series – Offered free to residents in the spring and fall, workshops are conducted by horticulturists and irrigation specialists and cover topics from edible gardening to irrigation design and maintenance.
- New homeowner outreach – Water conservation information packets that include several desert plant care publications and resources are sent to all new homeowners upon beginning water service.
- Community events and science fairs – Conservation specialists distribute literature and both fun and practical giveaways at over 20 community events annually.

Outdoor Watering Assistance

Approximately 70 percent of residential water use in Scottsdale is used outdoors. Helping customers use water wisely outdoors is a critical part of the Scottsdale Water's conservation program. Conservation specialists work closely with HOAs and multifamily community managers to optimize their landscaping programs, the first step of which is preparing and advising on a detailed water budget.

In addition to multiple how-to videos and publications, Scottsdale Water offers single-family, residential homeowners a one-time free irrigation audit. During the audits, which take approximately two hours, an irrigation specialist will provide the homeowner with instructions on how to program the controller, how often to water the landscape and how to prevent and repair irrigation problems.

Rebates

Scottsdale offers multiple rebates to incentivize efficient water use both inside and outside the home. Rebates cover both residential and non-residential customers and provide a credit on the customers' water bills according to the type of rebate. Rebates are available for purchasing water-conserving toilets and showerheads, installing a water-saving hot water recirculation system or a new, qualified irrigation timer, and for removing turf and replacing it with low-water use landscaping.

Scottsdale's source water is considered hard and it is estimated approximately 80 percent of homes in north Scottsdale use salt-based water softeners, which are not water efficient and introduce extremely high amounts of salt into the wastewater. In 2014, Scottsdale developed a pilot rebate program to incentivize water softener removal as a means of addressing the salinity levels entering the Scottsdale wastewater stream. The program, which consists of three rebates – water softener removal, water softener replacement and water softener portable exchange – is the first rebate program in Arizona aimed at salt reduction.

Tiered Water Consumption Rates

Scottsdale Water has a tiered rate structure under which the price customers pay for water increases as the volume consumed increases. This provides a pricing incentive for customers to use water more efficiently since higher-volume usage, usually associated with using treated drinking water for extensive outdoor watering, is charged at a higher rate.

In 2014, Scottsdale upgraded its utility billing processes, which ultimately gave Scottsdale Water greater input on the content displayed on the bills and provided the opportunity to highlight the tiered structure. All bills now show the rate structure on the back of the bill and the individual customer data on the front of the bill specifies exactly how much water the customer used at each pricing tier -- showing how much they need to reduce their water use to get down to the lower tiers.

Safe Yield

Scottsdale is located within the Phoenix Active Management Area (AMA), which is a determination created by the Arizona Department of Water Resources in response to the 1980 Groundwater Management Act (GMA). The GMA established safe yield as a goal to be reached in the Phoenix AMA by 2025, where groundwater replenishment equals groundwater pumped. Scottsdale reached safe yield in its service area in 2006 through multiple strategies, which

included reducing the reliance on groundwater, increasing the use of renewable water supplies and increasing the amount of recharge occurring within the service area.

Scottsdale has also been aggressively recharging its unused allocation of CAP water at facilities located within the same sub-basin as Scottsdale, the East Salt River Valley Sub-basin, to earn long-term storage credits that can be used in the future to offset groundwater pumping during times of surface water supply shortages.

North Indian Bend Wash Superfund Cleanup

In 1981, groundwater contaminated from industrial chemicals, primarily trichloroethylene (TCE), was discovered in the southern part of Scottsdale. Investigation revealed that the contamination was the result of past improper chemical disposal by several industrial companies in the area.

The U.S. Environmental Protection Agency (EPA) placed the contaminated aquifer on the National Priority List and declared it the North Indian Bend Wash (NIBW) Superfund Site. The EPA identified the parties potentially responsible for causing the contamination and determined that a long-term cleanup effort would be required to both restore the availability of safe, quality drinking water and to ultimately eliminate the underground contamination plume.

As part of the clean-up remedy, the potentially responsible parties – led by Motorola Solutions – built the Central Groundwater Treatment Facility (CGTF) in 1995 and the NIBW Granular Activated Carbon Treatment Facility (NGTF) in 2012. Scottsdale Water owns and operates the CGTF, operates the NGTF on behalf of Motorola Solutions, and is obligated to deliver the water from both facilities to customers. The water produced by both plants meets or surpasses all federal and state standards for safe and healthy drinking water. The facilities remove TCE from the water to a level that is considered non-detect (less than 0.5 parts per billion), which is far below the EPA standard of 5 parts per billion.

It's estimated that the cleanup will take approximately 60 more years. Large portions of the groundwater plume cleanup should be completed before that time. In March 2013, the EPA announced that the upper aquifer plume has decreased in size by 84 percent, and the total mass of contaminants in the upper aquifer groundwater has decreased by over 97 percent. Because the upper aquifer is almost restored, 25 NIBW upper aquifer monitoring wells were closed in 2013. Clean-up will continue in the middle and lower aquifers until they reach the same level of clean-up. This is still estimated to take 60 years.

Stormwater Protection

In 2014, the stormwater quality responsibilities for the City of Scottsdale were moved from the Planning Division to the Water Quality Department within Scottsdale Water. The stormwater quality program has one of the biggest impacts on watershed protection within the Scottsdale municipal boundaries. Scottsdale Water staff have been able to respond quicker to reports of illicit discharges, stop poor practices at businesses that use power washing into a storm drain to keep their property clean, inspect and educate businesses on Best Management Practices on the storage and disposal of pollutants, and initiate the formation of a Low Impact Development (LID) team to study ways that the city can implement LID to minimize run-off.

On a statewide focus, the city has been a supporter of the Four Forest Initiative that urges federal lawmakers to restore the state's overgrown forests to prevent devastating fires in Arizona watersheds. Two catastrophic fires have occurred in adjoining forests in the last decade. The result has been years of increased run-off with significantly higher pollutant loading. Proactive protection of the forests in the watershed that brings precious surface water to the desert is crucial for source water sustainability.

Scottsdale Xeriscape Garden: Demonstrating the Beauty of Saving Water

In 2012, Scottsdale Water opened the Scottsdale Xeriscape Garden at Chaparral Park. The 5.5 acre demonstration garden provides an educational resource where growing regionally appropriate plants also grows public awareness to reduce outdoor water use, fosters development of sustainable landscaping and enlists community participation to conserve water resources for the future.

The garden, which is a National Wildlife Federation Certified Wildlife Habitat, conceals a buried 5.5 million gallon reservoir from the adjacent Chaparral WTP and showcases over 7,000 plants and 200 species. Through signage and an interactive plant guide, park visitors can learn about low-water use plants and trees, water harvesting and other tips for caring for desert landscape.

Attribute 12: Water Resources Adequacy

Scottsdale has a diversified water supply portfolio ensuring adequate supplies to meet current and future demands and is consistent with the Groundwater Management Act-mandated Assured Water Supply regulations. Scottsdale's renewable and sustainable surface water supplies consist of Colorado River water delivered by the CAP canal, and Salt and Verde river water delivered through SRP.

Scottsdale's original CAP subcontract, dated 1984, gave Scottsdale an allocation of 19,700 acre feet per year of CAP water. Since that time, the city has aggressively pursued the acquisition of additional CAP supplies and Indian leases, and today holds the third largest municipal CAP allocation in the state, over 81,000 acre-feet per year. Scottsdale Water fully utilizes its CAP allocation by recharging the unused portion, about 20 percent, to offset future groundwater pumping and earn long-term storage credits. CAP water can be used throughout the service area. The SRP water supply provides 3 acre-feet per acre of land, based upon the number of acres within SRP's service area in Scottsdale.

Scottsdale Water also has a robust supply of recycled water, which is an important component of the water portfolio, and has implemented strategies to enable the local use and recharge of its recycled water. Scottsdale has been a leader in the utilization of reclaimed water for over two decades.

Attribute 13: Stakeholder Understanding and Support

Scottsdale Water has multiple stakeholder groups that are consulted on a range of initiatives.

Water Issues Subcommittee

This committee of the city council is made up of three seated council members. The committee meetings are open to the public and interested citizens are invited to participate. The format of the meetings generally has Scottsdale Water representatives bringing issues before the committee for input prior to presentation to the full council. Citizens have an opportunity to be involved in the discussions as the setting is more casual than full council meetings. The committee meets on an as needed basis. Topics before the committee have included acquisition of a private system within municipal boundaries, water and sewer rates and water and sewer ordinance changes.

Environmental Quality Advisory Board

The Environmental Quality Advisory Board provides guidance on the prioritization of future environmental activities and recommends environmental policies to the city council. This board is comprised of a group of citizens that are appointed by the city council and meets monthly. Scottsdale Water takes all issues that have an environmental impact before the board for input prior to finalizing what will be taken to the full council.

Community Involvement and Outreach

Scottsdale Water has always taken an active role in the community. Outreach specialists from the conservation and stormwater offices attend at least 20 community events annually and manage active in-classroom education programs. Representatives from multiple Scottsdale Water departments also attend science fairs and host school and industry groups for facility tours at the Water Campus.

As part of the ongoing education and outreach campaign, Scottsdale Water has become much more involved with formal Home Owners Associations (HOAs) in recent years. Scottsdale is home to many highly organized, professionally managed HOAs. These entities host large community events, have an active online following and routinely publish high-quality publications with significant distributions. Scottsdale Water has standing invitations to all of the major HOA festivals and contributes a bylined article to 15 publications with a print circulation to over 50,000 homes.

While Scottsdale Water is increasing its proactive communication and community education, it is still active in and available for community events and public meetings with citizens on an as needed basis. These meetings are generally held with a small portion of the service area about a specific issue. Meetings have been held for groups as small as residents on one street, an entire development or up to an entire section of the Scottsdale Water service area. Topics have included upcoming construction, sewer odor complaints, water metering, infrastructure needs and improvements and stormwater protection.