

Foreword

Since 1999, the Southern Arizona Water Users Association (SAWUA) has operated as a voluntary nonprofit association organized to discuss, analyze and recommend ways to preserve and enhance the quality and quantity of Southern Arizona's water resources. SAWUA works to determine and encourage the most effective management of the region's sustainable supplies of water. Accordingly, SAWUA's primary task is to have an active presence and participation in the development of legislation, policies and rules affecting water users.

This legislative briefing document is intended to provide Legislators and legislative staff with an overview of water policy issues that impact Southern Arizona. This briefing is designed to provide a concise reference to those issues.

SAWUA remains available to provide additional information on these issues as well as any other water-related legislation of mutual concern or interest.

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Membership Organizations

Avra Water Co-op Inc.

The Avra Water Co-op is a nonprofit, community owned water provider located west of the Tucson Mountains, near the Saguaro National Park. With approximately 2,600 service connections within unincorporated areas of Pima County known as Picture Rocks, Avra uses approximately 800 acre-feet of groundwater per year. Water is pumped from the Avra Valley Aquifer, created by



mountain runoff and stormwater infiltration.

Aerial view of the CAVSARP Recharge Facilities, Tucson Water.

BKW Farms Inc.

BKW Farms Inc. is a third-generation family farm in Marana that grows USDA Certified Organic heritage grains and mushrooms. As the Wong family has made sustainable agriculture practices a top priority, the farm converted to irrigation with Central Arizona Project (CAP) in the mid-1990s and has not pumped groundwater since. Additionally, BKW Farms Inc. assists in the operation of three Underground Savings Facilities.



Community Water Company of Green Valley

The Community Water Company of Green Valley is a nonprofit established in 1975 by water users in the Green

Valley Area. The Company's mission is to reliably deliver drinking water while maintaining a sustainable supply to its residential and commercial population of over 24,000.

Farmers Investment Co

The Farmers Investment Company (FICO) owns and operates one of the world's largest integrated pecan farming and processing facilities, Green Valley Pecan. In addition to its focus on environmental stewardship, FICO operates a retail pecan store and a water utility called the Farmers Water Co (FWC). FWC currently serves quality water to about 3,200 customers but will serve over 15,000 when the buildouts of Master Planned Communities are completed. In addition to the economic development, these communities will utilize less water than agricultural efforts. Additional efforts to enhance water efficiency include transitioning from flood to sprinkler irrigation and utilizing renewable CAP water in the groundwater savings facility.





Flowing Wells Irrigation District

The Flowing Wells Irrigation District (FWID) is a municipal water provider that has served

communities on the north side of the Tucson metropolitan area since 1922. With over 3,500 service connections, FWID supplies quality water for about 16,000 individuals and businesses for domestic use and fire protection.



Romero Road Mainline Replacement Project.



Green Valley Domestic Water Improvement District

The Green Valley Water District was established in 2002 when residents came together to purchase an

existing water company from the property developer in pursuit of local control. With over 4,500 residential water service connections, approximately 100 commercial connections and three golf courses, the wells produce just under one million gallons of water per day on average. The Green Valley Water District is dedicated to providing high-quality water and excellent customer service while prioritizing environmental conservation.





Kai Farms

Kai Farms has been family owned and operated since 1938 and is located primarily in the Tucson Active

Management Area. The majority of water for the farms is received from the CAP through Groundwater Savings Facilities and the balance is pumped from the ground. Kai Farms produces cotton, pecans, alfalfa and small grains. The cotton goes on to be processed at the family-owned Trico Gin.

METRO WATER DISTRICT

Metro Water District

The Metro Water District (the District) serves nearly 60,000 customers primarily in unincorporated areas

of Pima County. Formed via voter initiative in 1992, the District is the largest Domestic Water Improvement District in Arizona. In addition to providing safe and reliable water services the District boasts a diverse renewable water portfolio that includes an annual allocation of 13,460 acre-feet of CAP water. The District is currently investing approximately \$44 million in critical infrastructure to recover renewable water resources and reduce reliance on groundwater pumping.



Metro Water District, in partnership with the Town of Marana and Town of Oro Valley, are working towards construction of the Northwest Recharge Recovery and Delivery System (NWR-RDS) to better utilize renewable water supplies to meet customer's needs. As part of the project, three large capacity production wells were recently drilled (pictured). The production wells will recover CAP water stored underground at recharge facilities in Avra Valley and deliver the water into each of the partner's service areas to reduce the amount of groundwater that is currently pumped to meet customer demands.



Pima County Regional Wastewater Reclamation Department

Reclamation Department The Pima County Regional Wastewater Reclamation Department protects public health, safety and the environment by providing and maintaining sanitary sewer systems and seven water reclamation facilities to over 285,000 customers throughout Pima County. In collaboration with regional water providers, the Department recycles Arizona's most precious resource, water, allowing it to be utilized in a myriad of ways such as parks and golf courses, wildlife habitats, dust control and long-term storage in underground aguifers. This practice allows groundwater to be saved for drinking.



Aerial view of the Agua Nueva Wastewater Reclamation Facility looking north.

SAHUARITA Sahuarita Water Company



The Sahuarita Water Company (SWC) is a privately-owned water utility that provides water service to the master-planned communities of

Rancho Sahuarita and Rancho Resort, both within the Town of Sahuarita. With approximately 6,200 connections serving over 17,000 individuals, the SWC relies on groundwater to supply residential and commercial.



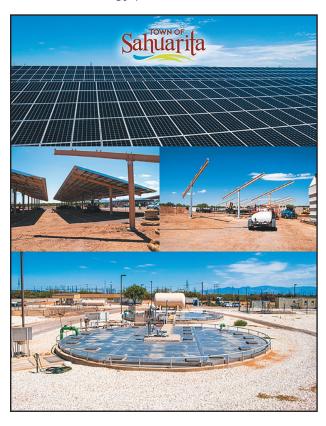




Sahuarita Water Reclamation Facility

The Sahuarita Water Reclamation Facility (SWRF) is a state-of-the-art facility that employs the latest technology to filter reclaimed water to supplement

groundwater supplies. The SWRF not only maintains the facility and its over 50 miles of pipeline, but they have also prioritized sustainable growth by installing solar to reduce electricity demands. In turn, this effort reduces the rates for customers and expands the community's renewable energy portfolio.



The Town of Sahuarita Water Reclamation Facility – Solon Solar Project is part of the Town's efforts to implement energy saving strategies while utilizing renewable energy sources, such as solar, to minimize operation and maintenance costs.



Town of Marana Water Department

The Town of Marana Water Department (Marana MARANA AZ Water) provides water services to less than one-half of Marana residents, with over 8,900 households and

businesses connected in seven separate water systems, and water reclamation services to almost 5,000 customers. The Town is one of Arizona's fastest-growing municipalities. In 2020 Marana's population was estimated to be over 50,000 and is anticipated to reach 75,000 by 2040. The majority of this growth is anticipated to rely on Marana Water for water and wastewater service. Marana Water strives to manage water resources in a cost-effective and responsible manner to sustain growth in an environmentally friendly manner.



Marana Water Reclamation Facility.





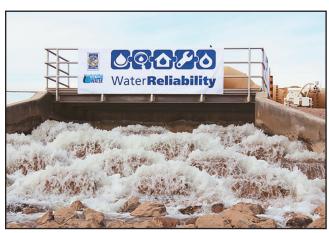


The Town of Oro Valley Water Utility

The Town of Oro Valley Water Utility is a municipal water service provider serving a community of approximately 45,000 residents by way of the Utility's

nearly 21,000 residential and commercial service connections. Oro Valley Water Utility's mission is to maintain and acquire sufficient water resources to ensure the community has adequate water supply to sustain the Town's quality of life and support residential and commercial development. The Utility's service area is located primarily within the corporate limits of the Town of Oro Valley. The Utility has a resource portfolio of 60% groundwater, 20% CAP and 20% reclaimed water, but continues to invest in infrastructure to decrease groundwater reliance.

TUCSON Tucson Water
WATER
Tucson Water is the largest water utility in Southern Arizona, serving more than 700,000 people with safe and reliable water service for over 100 years. A department of the City of Tucson, Tucson Water is a national leader in water conservation and efficiency, a steward of one of the first and largest reclaimed water systems in Arizona and a pioneer in recharge and recovery of surface water for long-term water reliability.



Recharging CAP water in the Tucson Water CAVSARP Recharge Project.

Water Policies of Interest to Southern Arizona

Arizona Reconsultation Committee

The Arizona Drought Contingency Plan Steering Committee was formed in 2018. The team, which consists of approximately 40 water professionals, was tasked with identifying proactive measures that will mitigate the potential for catastrophic shortage declarations in the Colorado River system. The Arizona Department of Water Resources and Central Arizona Water Conservation District led a committee to create the Drought Contingency Plan (DCP). This historic effort modified the Interim Guidelines for Lower Basin Shortages that had been established in 2007, effectively staving off deeper shortage declarations.

While the DCP was a significant achievement to support the health and viability of the Colorado River System, new guidelines for the long-term management of the Colorado River system will need to be negotiated before the end of 2026, when the Interim Guidelines expire. The Colorado River Basin States, which includes Colorado, Utah, New Mexico, Wyoming and Arizona, will coordinate extensively for the development of those new guidelines. The process will take many years and require multiple levels of discussion and negotiation among stakeholders.

Building on the successes of the DCP process, the DCP Steering Committee was reformed as the Arizona Reconsultation Committee (ARC) in July of 2020 and has been tasked with advocating for Arizona's perspective in these discussions.

SAWUA fully supports the ARC's mission and is proud to share that three of its members/agencies are serving the state in this important undertaking. SAWUA's voice will provide both a uniquely Southern Arizona perspective and a pragmatic statewide view on water policy for the agricultural and municipal sectors.





Basin Study

SAWUA has partnered with the U.S. Bureau of Reclamation and other stakeholders to share costs and expertise for the Lower Santa Cruz River Basin Study (LSCR), which was established to make a technical assessment of the future of water supply in the area. The mission is to evaluate the impact of varying demand growth and climate change scenarios on the Tucson Active Management Area's (AMA) groundwater through 2060. The Study will identify areas of the AMA where demand and supply imbalances are projected to cause unsustainable impacts to groundwater levels and develop strategic options to address the impacts.

The study looks at six scenarios with cumulative risks to groundwater. Modest population growth coupled with a stabilization in worldwide greenhouse gas emissions through 2050, followed by a decline after 2050, represents the least risk scenario. Rapid outward population growth coupled with a "business as usual" approach with continued increasing worldwide greenhouse gas emissions will result in a worst-case scenario. These comparisons will provide local communities with valuable tools to guide their decisions on infrastructure investment and economic development policies.

CAP System Use Agreement

In February 2017, the U.S. Bureau of Reclamation and the Central Arizona Water Conservation District (CAWCD) signed the historic System Use Agreement for use of the Central Arizona Project (CAP) canal. SAWUA supports the full utilization of this agreement to facilitate wheeling, firming and exchanges within the system. *Wheeling* refers to the use of the CAP canals to transport water. *Firming* is the use of stored water to increase CAP supplied during times of shortage and *Exchanges* are lawful swaps of CAP water with alternate supplies. Establishing this overall framework has allowed CAP infrastructure to be used in more efficient and innovative manners. One such example is the Inter-AMA Firming agreements between the City of Phoenix and SAWUA members. The ability to creatively move Colorado River



water and recovered groundwater through the CAP canal will be instrumental in mitigating water shortages and economic impacts to Central and Southern Arizona in the future.

Governor's Water Augmentation, Innovation and Conservation Council

SAWUA and several of its members are participants of the Governor's Water Augmentation, Innovation and Conservation Council (GWAICC). In January 2019, Governor Doug Ducey signed an Executive Order establishing the GWAICC, which continues and expands upon his 2015 Governor's Water Augmentation Council (GWAC). The focus of GWAICC is to understand water challenges in Arizona, current and future, as well as identify potential water policies that would strengthen Arizona's position in statewide water resource management. The GWAICC has four areas of focus with established committees: Desalination Committee, Long Term Water Augmentation Committee, Non-AMA Groundwater Committee and the Post 2025 AMAs Committee. With approximately 40 appointed stakeholders from the business community, agriculture, local government, the State Legislature and more, the GWAICC is well equipped for such a monumental undertaking.

Water Quality

SAWUA is devoted to ensuring that Arizona has safe, high-quality water for drinking, agriculture, the environment and industrial usage. Managing the standards that govern the quality of Arizona's water supply, whether ground or surface water, is critical for the safety of its citizens. Further, as water is a precious resource, it is equally important to ensure that the state's limited supplies are used efficiently and effectively. Environmental regulations that protect the quality of Arizona's water supply will ensure that the standard of living remains high today and far into the future. SAWUA is proactive with regards to environmental water protection activities across the state. Emerging contaminants such as 1,4-dioxane and PFAS compounds will demand solutions for water users in the Tucson basin and across the state.





Water Policy Glossary

Acre-foot: A measurement of water quantity equal to 325,851 gallons, which is enough to cover one acre of land one foot deep.

Active Management Area (AMA): A region designated for state regulation by the Groundwater Management Act of 1980. There are five regions in the state, including the Tucson Active Management Area, where groundwater use is regulated through a series of successfully more stringent management plans. The goal in the Tucson Active Management Area is to reach safe yield by 2025. The other AMAs are Phoenix, Pinal, Prescott and Santa Cruz.

American Water Works Association (AWWA): AWWA is an international, nonprofit, scientific and educational society dedicated to ensuring safe and clean water. They published a highly regarded journal and lead the industry in lobbying and education.

Aquifer: An underground layer of permeable rock, sediment or soil that yields water.

Area of Hydrologic Impact (AHI): The area affected by a recharge project, generally within a one-mile radius of the project.

Arizona Corporation Commission (ACC): The state agency responsible for the oversight of corporations, including private water companies.

Arizona Dept. of Environmental Quality (ADEQ): The state agency responsible for the oversight, regulation and enforcement of many aspects of the water industry including water quality and operator certification.

Arizona Reconsultation Committee (ARC): Arizona has reconvened the Arizona DCP Steering Committee and renamed it the Arizona Reconsultation Committee. The 2007 Shortage Sharing Guidelines and DCP will expire on Dec. 31, 2025 and new operating rules will need to be put into place. ARC provides a venue for developing and sharing stakeholder perspectives for the new operating rules to be developed.

Arizona v California Decree: In this landmark Supreme Court decision and subsequent decree of 1964, Arizona's claim to a 2.8 MAF/yr entitlement from the mainstem of the Colorado River was established.

Arizona Water Banking Authority (AWBA): The AWBA was established in 1996 to increase use of the state's Colorado River entitlement and develop long-term storage credits for the state. The stores, or "banks", can be used in times of shortage to firm water supplies for Arizona.

Assured Water Supply (AWS): A designation given to water providers or subdividers who can show that they have enough water to sustain projected use for 100 years.

Aqueduct: A man-made channel that conveys water from one place to another.

AWS Rule: ADWR rule that requires a 100-year water supply for any new subdivision and restricts the use of mined groundwater within an AMA.

AZ Water Association: formerly known as the Arizona Water Pollution Control Association, AZ Water is a 501(c)(3) nonprofit educational organization founded in 1928 with a membership of 2,700 water/wastewater professionals dedicated to preserving and enhancing Arizona's water environment

Bureau of Reclamation (BOR): The BOR is a division of the US federal government led by the Secretary of the Interior.

Best Management Practice (BMP): BMP is a practice, or combination of practices, that is determined to be effective and practicable (including technological, economic and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals.





Central Arizona Groundwater Replenishment District (CAGRD):

In 1993, the Arizona State legislature created a groundwater replenishment authority to be operated by the Central Arizona Water Conservation District (CAWCD) throughout its three-county service area. This replenishment authority of CAWCD is commonly referred to as the Central Arizona Groundwater Replenishment District (CAGRD). The purpose of the CAGRD is to provide a mechanism for landowners and water providers to demonstrate an assured water supply under the new Assured Water Supply Rules ("AWS Rules") which became effective in 1995.

Central Arizona Project (CAP): The CAP is a 330-mile system of pump stations and concrete-lined canals that bring Colorado River water to Central and Southern Arizona. CAP is governed by an elected board that must oversee the operation of the system and meet the federal repayment obligations.

Central Arizona Water Conservation District (CAWCD): The CAWCD is a multi-county water district (Maricopa, Pima and Pinal counties) formed to manage the Central Arizona Project (CAP) and to repay the federal government for costs of constructing the CAP. The CAWCD is also responsible for planning and implementing projects to supply its district with water. It operates the Central Arizona Groundwater Replenishment District (CAGRD) and several recharge facilities.

Certificate of Assured Water Supply: A permit that must be issued by the ADWR for a development if it is determined that there is AWS for the development.

Colorado River Water Users Association (CRWUA): The CRWUA is a nonprofit, nonpartisan, organization formed to plan, study, formulate and advise on ways to protect the interests of all who utilize Colorado River Water.

Desalination: Desalination is the process of removing salt from sea water or brackish water for use.

Designation of Assured Water Supply: A permit issued by the ADWR for a municipal provider if it is determined that there is an AWS for the territory.

Drought Contingency Plan (DCP): With a nearly two-decadelong drought, Arizona and six other western states were asked to formulate a plan to conserve water in Lake Mead. A group of 40 stakeholders worked together to form the DCP and pass enabling legislation in 2018.

Effluent: Wastewater that has received at least secondary treatment.

Exempt Well: A well with a maximum pumping capacity of not more than 35 gallons per minute, which is used to withdraw water for non-irrigation purposes.

Gallons Per Capita Per Day (GPCD): The average quantity of water each person uses in one day.

Gila River Indian Community (GRIC): The GRIC traces its roots back to the Hohokam, prehistoric Native American people who lived and farmed along the Gila River Basin centuries ago. Composed of two tribes, the Maricopa and the Pima, GRIC is located in southcentral Arizona.

Grandfathered Right (GFR): A right to withdraw and use groundwater within an AMA based on the fact of lawful withdrawals and use prior to the AMA's designation. These rights include Irrigation Grandfathered Rights, Type 1 non-irrigation Grandfathered Rights and Type 2 Non-Irrigation Grandfathered Rights.

Graywater: Used water from residential bathroom sinks, showers, tubs and washing machines. Use of gray water for outdoor watering is permitted if criteria to protect health are met. Sewage is not graywater; it is an example of blackwater.





Groundwater: Water under the surface of the Earth, regardless of the geologic structure in which it is standing or moving. Groundwater does not include water flowing in underground streams with ascertainable beds and banks.

Groundwater Management Act (GMA): The GMA is monumental legislation that was enacted in 1980 by the Arizona State Legislature to address the state's groundwater overdraft problem and ensure water supplies for future generations.

In Lieu Water: Water that is delivered to a groundwater savings facility and that is used in an AMA or INA by the recipient on a gallon for gallon substitute basis for groundwater that otherwise would have been pumped from within an AMA or IMA.

Irrigation District: A political subdivision established as a special taxing district for either agricultural improvement or irrigation and conservation purposes.

Irrigation Non-Expansion Area (INA): A geographical area that has been designated as having insufficient groundwater to provide a reasonably safe supply for the irrigation of the cultivated lands at the current rate of withdrawal. Within INAs, new agricultural use of land occurring on land that was not irrigated in the five years preceding the designations prohibited with a few exceptions for substitution or transfer.

Long Term Storage Credit: A long term storage credit is water that is recharged and kept underground to be recovered at a later time.

Colorado River Basin: The Colorado River is divided in to the Upper and Lower Basin. Lower Basin States include: Arizona, California and Nevada. Upper Basin states include: Colorado, Utah, New Mexico and Wyoming.

Management Plan: A plan for an AMA that contains regulatory programs defined to assist AMAs in achieving their water goals. The plan must be updated every decade.

Member Land: An individual subdivision that has been enrolled as a member of the CAGRD. This is allowed when (1) its owner records covenants running with the land that include the land in the CAGRD and subject the land to the replenishment assessment, and (2) the municipal provider that supplies the subdivision records a covenant agreeing to submit annually to the CAGRD the water delivery information necessary to calculate the replenishment assessment for each tax parcel.

Member Service Area: A designated water provider (a city, town, or water company) that has enrolled its entire service area as a member of CAGRD. This is accomplished when1) it adopts a resolution that declares its service area and all extensions thereof to be in the CAGRD, 2) an agreement is executed by and between CAWCD and the city, town or water company, and 3) the city, town or water company receives a designation from the Arizona Department of Water Resources.

Municipal Provider: A city, town, private water company, domestic water improvement district or irrigation district that supplies water for municipal use.

Non-Exempt Well: A well in an AMA generally drilled by a municipal provider with a maximum pumping capacity of more than 35 gallons per minute which is used to withdraw groundwater for non-irrigation purposes.

Non-Per Capita Conservation Program: A voluntary alternative municipal program that requires providers to implement reasonable conservation measures relating to interior and exterior water use as well as an educational water conservation program. In order to qualify for entrance into the program, the provider is required to either 1) belong to a groundwater replenishment district, 2) reduce groundwater pumping consistent with AWS Rules or 3) eliminate mined groundwater use.





Private Water Company (PWC): The ACC regulates Privatelyowned municipal water providers. PWC's are organized as either for-profit systems managed by investors or nonprofits managed by member boards.

Recharge: The replenishment of the groundwater through natural or artificial means. Direct recharge can be accomplished via surface basins, streambeds or injection wells. Indirect or in-lieu recharge occurs when another water supply, such as CAP water, is utilized instead of ground water, thereby saving the groundwater for use at a later time.

Reservoir: A reservoir is a man-made body of that that is used to store water for future uses.

Reclaimed Water: Wastewater that has been treated for reuse. Typically, a separate water system conveys the reclaimed water to parks, golf courses, industrial sites and the like.

Renewable Water Supply: Supplies that are more quickly replenished than groundwater, which in many cases can be impossible to replenish.

Rural Management Area (RMA): A proposal that would allow county boards of supervisors (BOS) outside of active management areas (AMA) to designate groundwater basins or sub-basins to be at risk if they meet certain criteria. An RMA would allow the ADWR to monitor groundwater levels in the area and require meters on wells.

Safe Yield: A water management goal that attempts to achieve and maintain a long-term balance between the annual amount of groundwater withdrawn in an AMA and the annual amount of natural and artificial recharge in the AMA.

Type 1 Non-Irrigation Grandfathered Rights: A Type 1 non-irrigation grandfathered right is associated with land permanently retired from farming and converted to a non-irrigation use. This right may only be sold or leased only with the land. These rights are established based on a maximum of three acre-feet per acre of retired irrigated land and generally are used for industrial purposes.



Type 2 Non-Irrigation Grandfathered Rights: A Type 2 non-irrigation grandfathered right generally can be used for any non-irrigation purpose. The right is issued based on groundwater non-irrigation uses from 1975-1980. These rights can be sold or leased separately from the land within the same AMA and most often are used for industrial purposes. They generally are required to follow the conservation requirements associated with the industrial conservation programs in the management plans for each AMA.

US - Mexico Water Treaty of 1944: This historic treaty allocated 1.5-million acre-feet of Colorado River water per year to Mexico.

Water Conservation Alliance of Southern Arizona (CASA): A nonprofit organization made up of several southern Arizona water providers dedicated to the conservation of water and public education for their customers.

Water Infrastructure Finance Authority of Arizona (WIFA): WIFA is an independent agency of the State of Arizona that is authorized to finance the construction, rehabilitation and improvement of drinking water, wastewater, reclamation and other water facility projects. WIFA has invested over \$2 billion in Arizona's water infrastructure and currently has over 40 projects in construction.

Water Resources Research Center (WRRC): The University of Arizona's Water Resource Research Center promotes understanding of critical state and regional water management policy through research, community standards and public education.

Western Coalition of Arid States (WESTCAS): WESTCAS is dedicated to encouraging the development of water programs and regulations that assure adequate supplies of high-quality water for those living in the arid regions while protecting the environment.

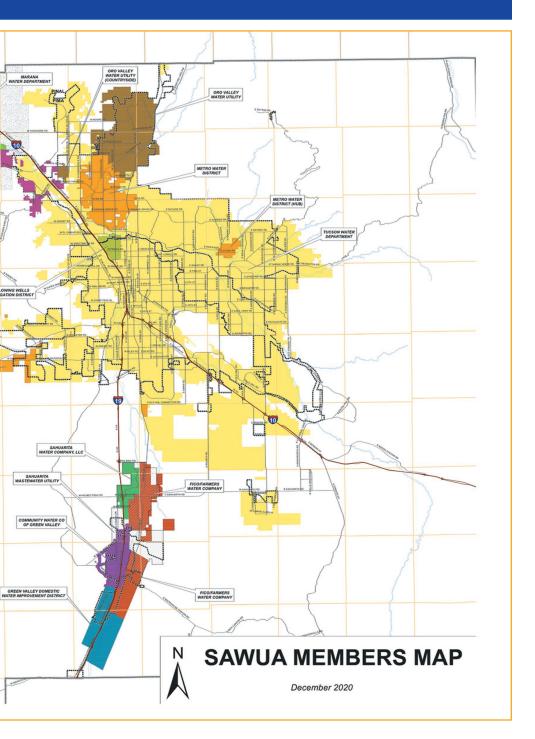
Wheeling: Using a second party's conveyance system to move a volume of water from one location to another.





Territory

MEMBERSHIP BKW FARMS Avra Water Coop **BKW Farms** Community Water Co of Green Valley FICO/Farmers MARANA DMA WITHIN PIMA COUNTY Water Company Flowing Wells **Irrigation District** AVRA WATER Green Valley **Domestic Water** Improvement District Kai Farms Marana Water Department METRO WATER DISTRICT SOUTHWES Metro Water District Oro Valley Water Utility Pima County Regional Wastewater Reclamation Department Marana DMA within Pima County Sahuarita Water Company, LLC Sahuarita Wastewater Utility **Tucson Water** Department









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