



Arizona State Senate Issue Brief

August 3, 2018

Note to Reader:

The Senate Research Staff provides nonpartisan, objective legislative research, policy analysis and related assistance to the members of the Arizona State Senate. The *Research Briefs* series is intended to introduce a reader to various legislatively related issues and provide useful resources to assist the reader in learning more on a given topic. Because of frequent legislative and executive activity, topics may undergo frequent changes. Nothing in the Brief should be used to draw conclusions on the legality of an issue.

ARIZONA'S GROUNDWATER CODE: CENTRAL ARIZONA GROUNDWATER REPLENISHMENT DISTRICT

INTRODUCTION: GROUNDWATER MANAGEMENT CODE AND ASSURED WATER SUPPLY RULES

The Groundwater Management Code (Code) was enacted in 1980 to control severe groundwater depletion and to provide the means for allocating the state's groundwater resources effectively to meet future needs. The Arizona Department of Water Resources (ADWR) administers the Code.

As part of its management framework, the Code designates five Active Management Areas (AMAs) within Arizona—Phoenix, Prescott, Pinal, Santa Cruz, and Tucson—where there has been a heavy reliance on mined groundwater. Each AMA has developed management requirements relating to the pumping and use of groundwater, including a series of increased water conservation phases over the course of specified time periods. The Code establishes management goals for each AMA; the primary management goal is safe-yield by the year 2025 in the Phoenix, Prescott and Tucson AMAs. *Safe-yield* is the long-term balancing of groundwater withdrawals with the amount of water naturally and artificially recharged to AMA aquifers.

In addition to depletion of supplies, overdrafting groundwater from Arizona's aquifers can lead to compression of the aquifer's subsurface layers, which is referred to as subsidence. Once subsidence occurs, there is no way to restore the aquifer's natural geological structure, nor regain its water storing capacity.

Statewide groundwater management impacts growth and homebuilding in Arizona, especially for locations within an AMA. Current regulations require new subdivisions within an AMA to demonstrate to ADWR that there is a 100-year water supply available to serve the demands of the subdivision, which is known as an

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assured water supply. To obtain a certificate of assured water supply (Certificate) or designation of assured water supply (DAWS) from ADWR, an applicant must prove that there is enough water physically, legally and continuously available to serve the project or service area for the next 100 years. In addition, the applicant must demonstrate compliance with the following requirements: 1) the water source meets water quality standards; 2) the proposed use of water is consistent with conservation standards and management goals of the AMA; and 3) the financial capability to install the necessary water distribution and treatment facilities exists.

The assured water supply rules prohibit new growth from relying solely on mined groundwater, and instead requires reliance primarily on renewable water sources for purposes of an assured water supply. In Arizona, renewable water sources include, but are not limited to, reclaimed and treated water such as effluent and graywater, or surface water supplies such as Salt River Project water or the state's share of Colorado River water that is delivered through the 336-mile Central Arizona Project (CAP) aqueduct. ADWR analyzes whether the applicant has proven these criteria, and through issuance of a Certificate or DAWS, identifies the projected volume of groundwater that legally may be withdrawn.

A landowner or water provider in the Phoenix, Pinal or Tucson AMA who does not have access to renewable supplies but has physically available groundwater may obtain an assured water supply on the basis of groundwater if the landowner or water provider enrolls its subdivision or service area as a member of the Central Arizona Groundwater Replenishment District (CAGRDR). Membership in CAGRDR satisfies the requirement of consistency with AMA management goals for the purpose of obtaining an assured water supply. The CAGRDR is a division of the Central Arizona Water Conservation District (CAWCD).

CAWCD AND CAGRDR

CAWCD was established in 1971 as a means for Arizona to repay the federal government for the reimbursable costs of construction of the CAP aqueduct ([A.R.S. Title 48, Chapter 22](#)). CAWCD is a tax-levying public improvement district of the state, which manages and operates CAP to bring an average of 1.5 million acre-feet of water annually to Central Arizona. CAWCD levies an ad valorem tax against the assessed valuation of all taxable property within the boundaries of Maricopa, Pima and Pinal counties in order to pay its administrative costs and expenses, which includes repayment to the federal government. Current law authorizes CAWCD to issue revenue bonds up to \$500 million to meet its obligations. CAWCD is governed by a 15-member Board of Directors who are elected by residents of the three counties.

In 1993, the Legislature expanded CAWCD authorities to include groundwater replenishment operations through the creation of CAGRDR ([A.R.S. Title 48, Chapter 22, Article 4](#)). Membership in CAGRDR is voluntary and limited to a city, town, water company, subdivision or homeowners' association that is located within the Phoenix, Pinal or Tucson AMA. CAGRDR enrolls entities that are required by the Code to demonstrate an assured water supply, but have limited or no access to renewable water supplies.

By enrolling in CAGRDR, members agree to subject the land to replenishment assessments and fees, while CAGRDR is required to secure renewable water supplies to replace the groundwater used by the member. CAGRDR replenishes the actual volume of water pumped from the aquifer that exceeds the amount that is legally authorized to be withdrawn (referred to as *excess groundwater*) through a recharge facility or project. The volume of excess groundwater delivered to either the parcel of land or within the service area determines CAGRDR's replenishment obligation. CAGRDR is required to replenish that amount within a three-year time period.

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CAWCD has developed a total of seven recharge projects and currently operates six projects in the state. The Tucson AMA recharge facilities has a cumulative recharge capacity of 80,000 acre-feet per year, and the Phoenix AMA recharge facilities has a combined annual permitted capacity of 341,500 acre-feet per year. Arizona law requires the replenishment to occur in the same AMA from which the member's groundwater is withdrawn.

CAGRDR has two kinds of members: 1) member lands; and 2) member service areas. Generally, a member service area includes the entire water service area of a city, town or private water company. Because a water provider's service area boundaries can change, CAGRDR's projected obligation is also subject to change. CAGRDR lessens the impact of this uncertainty by utilizing information contained in the DAWs to project a member service area's maximum replenishment obligation. In comparison, member lands are individual subdivisions with defined boundaries that are served by water providers who have not obtained a DAWs for their service area (A.R.S. §§ [48-3774](#) and [48-3774.01](#)).

CAGRDR PLAN OF OPERATION

Every ten years, CAGRDR is required to submit a Plan of Operation (Plan) to the ADWR Director, who then determines if the Plan is consistent with AMA management goals ([A.R.S. § 45-576.02](#)). Each Plan must describe the activities that CAGRDR proposes to undertake in the three AMAs during the subsequent 100 years based on continued membership enrollment through the ten-year plan period. If at any time between the Plan's second and eighth year the ADWR Director determines the Plan is no longer consistent with an AMA's management goals, the ADWR Director can require CAGRDR to submit a revised Plan. CAGRDR has one year to submit a revision to ADWR.

CAGRDR FUNDING

Statute requires CAGRDR's finances to be separate from CAWCD's finances. All costs incurred by CAGRDR must be paid by its membership. CAGRDR categorizes its operating expenses into the following four groups: 1) Water and Replenishment, which includes the estimated costs of acquiring, transporting and replenishing water supplies for the reporting year; 2) Administrative, which includes the operating costs relating to salaries, benefits, overhead and special studies; 3) Replenishment Reserve, which includes the costs associated with establishing a reserve of long-term storage credits in each of the AMAs; and 4) Infrastructure and Water Rights, which includes the anticipated up-front costs of acquiring rights to renewable water supplies and developing the necessary infrastructure to perform replenishment activities. CAGRDR is self-funded by various fees and assessments levied on its membership.

Additional Resources

- Arizona Department of Water Resources
www.azwater.gov
- Assured and Adequate Water Supply Rules A.A.C. R12-15-701 through R12-15-730
http://www.azsos.gov/public_services/Title_12/12-15.htm
- Central Arizona Water Conservation District
www.cap-az.com
- Central Arizona Groundwater Replenishment District
www.cagrdr.com
- The Groundwater Management Code
[Arizona Revised Statutes, Title 45, Chapter 2](#)
- Multi-County Water Conservation Districts
[Arizona Revised Statutes, Title 48, Chapter 22](#)
- White Paper on CAGRDR Enrollment

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- Arizona Municipal Water Users Association
(2008)

[http://www.amwua.org/
pdfs/20080720_spsg_item3a.pdf](http://www.amwua.org/pdfs/20080720_spsg_item3a.pdf)