Arizona State Senate
Issue Paper

December 19, 2013

ARIZONA’S GROUNDWATER CODE: Central Arizona Groundwater Replenishment District

INTRODUCTION: GROUNDWATER MANAGEMENT CODE AND ASSURED WATER SUPPLY RULES

Any understanding of groundwater replenishment, or recharge, activities in Arizona invariably requires some background on the state’s Groundwater Management Code (Code) and its associated rules written to preserve Arizona groundwater supplies. The 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) in the state—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, and 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 AMAs. Current regulations require new subdivisions within AMAs 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 “assured water supply.” In order to obtain a certificate of assured water supply (Certificate) or designation of assured water supply (DAWS) from ADWR, an applicant has to 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 also prohibit new growth from relying solely on mined groundwater and instead require 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 and only if, the landowner or water provider enrolls its subdivision or service area as a member of the Central Arizona Groundwater Replenishment District (CAGRD). Membership in CAGRD satisfies the requirement of consistency with AMA management goals for the purpose of obtaining an assured water supply. The CAGRD is a division, or operating department, of the Central Arizona Water Conservation District (CAWCD).

**CENTRAL ARIZONA WATER CONSERVATION DISTRICT**

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 (See A.R.S. Title 48, Chapter 22). A tax-levying public improvement district of the state, the CAWCD 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, including repayment to the United States. Current law also authorizes CAWCD to issue revenue bonds up to $500 million to meet its obligations. CAWCD is governed by a Board of Directors that consists of 15 members who are elected by residents of the three counties.
CENTRAL ARIZONA GROUNDWATER REPLENISHMENT DISTRICT

In 1993, the Legislature expanded CAWCD authorities to include groundwater replenishment operations. These replenishment authorities are commonly referred to as CAGRD (A.R.S. Title 48, Chapter 22, Article 4). Membership in CAGRD is voluntary and limited to a city, town, water company, subdivision or homeowners’ association that is located in the Phoenix, Pinal or Tucson AMA. CAGRD enrolls those entities that have limited or no access to renewable water supplies, but are required to demonstrate an assured water supply, as mandated by the Code.

By enrolling in CAGRD, members agree to subject the land to replenishment assessments and fees, and CAGRD in turn promises to secure renewable water supplies to replace groundwater used by the member. CAGRD 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 CAGRD’s replenishment obligation. CAGRD is required to replenish that amount within a three-year time period. CAWCD currently operates six recharge 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.

CAGRD has two kinds of members: member lands and 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, CAGRD’s projected obligation is also subject to change. CAGRD 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 (See A.R.S. §§ 48-3774 and 48-3774.01 for statutory qualification and categories of member lands).

CAGRD PLAN OF OPERATION

Every ten years CAGRD is required by law to submit a Plan of Operation (Plan) to the ADWR Director, who determines if the Plan is consistent with AMA management goals (A.R.S. § 45-576.02, Subsection C). The Plan describes the activities that CAGRD 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 CAGRD to submit a revised Plan. CAGRD has one year to submit a revision to ADWR.

CAGRD FUNDING

By statute, CAGRD’s finances are segregated from CAWCD’s finances, and all costs incurred by CAGRD must be paid by
its membership. CAGRD categorizes its operating expenses into the following four groups: 1) **Water and Replenishment**, the estimated costs of acquiring, transporting and replenishing water supplies for the reporting year; 2) **Administrative**, the operating costs relating to salaries, benefits, overhead and special studies, among others; 3) **Replenishment Reserve**, the costs associated with establishing a reserve of long-term storage credits in each of the AMAs, as required under A.R.S. § 48-3772 (E); and, 4) **Infrastructure and Water Rights (IWR)**, those anticipated up-front costs of acquiring rights to renewable water supplies and developing the necessary infrastructure to perform replenishment activities. CAGRD is self-funded by the following fees and assessments levied on its membership:

- **Activation Fees**—Activation fees are a one-time fee collected on behalf of all subdivisions in both member lands and member service areas. The fee is based on the number of housing units in a subdivision and must be paid before the Arizona Department of Real Estate can issue a public report for the subdivision [A.R.S. § 48-3772 (A)(7)]. The fees must be used exclusively to help fund IWR expenses.

- **Enrollment Fees**—Member land enrollment fees are a one-time fee based on the number of housing units in a subdivision and are paid upon application for enrollment. A small portion of the revenues from member land enrollment fees is used to pay the administrative costs of CAGRD, but the majority is used to help fund IWR expenses. Member service area enrollment fees are a one-time fee paid upon application for enrollment. All revenues from the member service area enrollment fees are used to pay administrative costs of CAGRD.

- **Replenishment Assessments and Taxes**—Replenishment assessments are paid annually by member land homeowners and replenishment taxes are paid annually by member service area water providers, but both are based on a per-acre-foot charge levied against the actual volume of excess groundwater that is delivered to the member. A portion of these monies is used to fund all four categories of CAGRD expenses. Water and replenishment expenses, in particular, are wholly funded by these replenishment rates. Annual replenishment assessments and replenishment taxes must be levied on or before the third Monday in August of each year. Water providers serving member service areas must pay the replenishment tax by October 15. The replenishment assessments for homes located on member lands are collected by the county through the property tax system and transmitted to CAGRD.

- **Replenishment Reserve Fees**—Replenishment reserve fees are used to accrue long-term storage credits to establish and maintain a replenishment reserve in the AMA where the fee was levied (A.R.S. §§ 48-3774.01 and 48-3780.01). Like activation fees, reserve fees must be paid prior to the sale of the home.

- **Annual Membership Dues**—Annual membership dues for member lands are based on the total current and projected amount of water that CAGRD will be relied on to replenish for members lands, as provided in its current Plan. For member service areas, the dues are based on the total projected annual replenishment obligation for anticipated growth in the service area during the
effective period of the current Plan (A.R.S. § 48-3779). The annual membership dues cannot generate more than one-quarter of the total amount collected from all IWR revenue sources. The dues serve to provide a reliable revenue source that can assist in establishing credit worthiness for potential bonding and finds to secure water supplies and related infrastructure.
**ADDITIONAL RESOURCES**

- **Arizona Department of Water Resources**
  3550 N. Central Avenue, 2nd Floor
  Phoenix, Arizona 85012
  (602) 771-8487
  [www.azwater.gov](http://www.azwater.gov)

- **Assured and Adequate Water Supply Rules**

- **Central Arizona Water Conservation District**
  P.O. Box 43020
  Phoenix, AZ 85080-3020
  (623) 869-2333
  [www.cap-az.com](http://www.cap-az.com)

- **Central Arizona Groundwater Replenishment District**
  [www.cagrd.com](http://www.cagrd.com)

- **Arizona Revised Statutes, Title 48, Chapter 22**

  - “Arizona’s Groundwater Management Code: Lot Splits and Subdivisions”
    Senate Issue Brief
    [www.azleg.gov/briefs.asp](http://www.azleg.gov/briefs.asp)

  - “Arizona’s Groundwater Management Code: Active Management Areas”
    Senate Issue Brief
    [www.azleg.gov/briefs.asp](http://www.azleg.gov/briefs.asp)

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