

**Metropolitan Domestic Water Improvement District
Board of Directors Meeting**

June 10, 2013

Assured Water Supply Designation for Metro Southwest-Diablo Village

Synopsis

The Board of Directors is requested to support having a Designation of Assured Water Supply for Metro Southwest-Diablo Village, which will involve three actions of the Board.. First is the approval of an Assured Water Supply agreement is required between the owner of Tucson Mountain Ranch & Valencia Ranch, Second, the approval of Resolution 2013-5 stating the District's desire to have an Assured Water Supply Designation for Metro Southwest-Diablo Village. Finally, another resolution, Resolution 2013-6, needs to be approved for requesting Metro Southwest-Diablo Village to be a Member Service Area under the Central Arizona Groundwater Replenishment District (CAGRDR).

Background

A Designation of Assured Water Supply (DAWS) is required before any new development can occur within a service area, unless the municipal water provider instructs the developer to complete their own Certificate of Water Supply (CAWS) and apply for member lands (MLs) membership with the Central Arizona Groundwater Replenishment District (CAGRDR). A water provider with a DAWS is required to replenish all mined groundwater pumped within the entire service area. A water provider can accomplish this by one of three ways: 1) Either the water provider can join the Central Arizona Groundwater Replenishment District as a member service area (MSA) and have the CAGRDR replenish the mined groundwater; or 2) the water provider can recharge and recover its own CAP water; or 3) directly use treated CAP water.

For Metro Southwest-Diablo Village, a DAWS application requires proof of legal rights to renewable water (i.e., Central Arizona Project water, remediated water, and/or effluent) for replenishing any mined groundwater or a membership contract with the CAGRDR, proof of a physical quantity and quality of groundwater for 100 years, a five-year Capital Improvement Plan (CIP), a comprehensive description of the utility's water conservation program and the financial capabilities to complete the CIP.

Meetings with ADWR

In May 2012, the District had a pre-application meeting with the Arizona Department of Water Resources for a Designation of Assured Water Supply at Metro Southwest-Diablo Village. ADWR was in favor of the District's request to convert Certificates of Assured Water Supply issued to

developers of platted subdivisions to a Designation of Assured Water Supply under the District's control. The purpose of the DAWS is to eliminate annual CAGR member lands fees on Diablo Village customer property tax bills for CAP replenishment services by the Central Arizona Groundwater Replenishment District. Instead the District would recharge CAP water and obtain permits for its Diablo wells (DV-1 and DV-2) as recovery wells (Figures 1 and 2). These costs would be much lower than CAGR costs as has been demonstrated in Metro-Main. A developer seeking to buy adjacent parcels (Sendero Pass, Figure 3) to Metro Southwest-Diablo Village contacted the District shortly after the ADWR meeting and requested the opportunity to be served by the District, so the DAWS was suspended until a new meeting could be arranged with ADWR. District staff resumed the DAWS application process based on the encouraging discussion from the developer and ADWR at a DAWS meeting in August 2012.

A DAWS application requires an estimate of current, issued, committed and future water demands in the service area and for 100 years beyond total service area build out. Build out demand (current, issued, and committed) within the existing Metro Southwest-Diablo Village service area is 2,543.67 acre-feet per year. The Sendero Pass development is an 837 acre parcel adjacent to District's service area. The 837 acre development would increase the annual build out demand by 1,474.18 acre-feet. Additionally, the District included a small future demand of 126.15 acre-feet for any parcels needing water service on the eastern boundary of Diablo Village because of Tucson Water's service area policy. Therefore, the total demand for Metro Southwest-Diablo Village is 4,144 acre-feet per year.

A Hydrology report was completed by the Sendero Pass owners to document that if the Metro Southwest-Diablo service area meets the physical availability test for 100 years of continuous groundwater supply sufficient for a build out demand of 4,144 acre-feet per year. The groundwater model used by Clear Creek Associates for the physical availability test projected there would be sufficient groundwater for 100 years, so that the groundwater level would not drop 1,000 feet below land surface. The model results indicated the groundwater level after 100 years would not exceed 750 feet below land surface (Figure 4). ADWR reviewed the report and found the aquifer parameters used for the model were consistent with values in ADWR's groundwater model for the Tucson Active Management Area. Therefore, ADWR accepted the physical availability findings.

AWS Application – Renewable Supplies

The Assured Water Supply (AWS) Rules require a designated provider to replenish all mined groundwater, except four percent of the total pumpage to be replenished by renewable supplies (CAP water, effluent or remediated water). The District possesses an extensive water portfolio to meet its AWS replenishment obligations at Metro-Main and Metro-West but not for Metro Southwest-Diablo Village.

The Metro Southwest-Diablo Village needs to build its water resources portfolio; therefore, the District approved to apply for a Non-Indian Agricultural CAP Water allocation. In the interim, the District must seek a Member Service Area designation from the Central Arizona Groundwater Replenishment District. The CAGR member service area designation provides the District with

the assurance that if the District cannot access renewable supplies, then CAGRDR could be used to meet the District’s replenishment needs but at a more expensive cost.

A Designation of AWS for Metro Southwest-Diablo Village without using groundwater as the supply would require the District to build and operate a water treatment plant and continuously deliver 2,733.67 acre-feet of treated CAP water. However, the District does not have the land and capital funds to build a treatment system and subsequent delivery system. Alternatively, the District could contract with Tucson Water to recharge CAP water and have Tucson Water recover and deliver the stored CAP water. This option would require the District to pay for the storage and delivery costs and obtain a CAP water allocation for the service area. Tucson’s recovery cost would likely be higher than the District’s groundwater pumping cost. Other renewable supplies (effluent) from the Metro Southwest-Diablo Village service area do not exist because the customer’s effluent is owned by Pima County. Pima County owns all effluent treated outside the Tucson metropolitan area at outlying County Water Reclamation Facilities. The District could store CAP water at Tucson recharge facilities (Table 1) and use District wells to recovery to avoid CAGRDR replenishment fees (Table 2).

Table 1. CAP Water and Recharge Costs

| Year | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| CAP Water Cost/AF | \$137 | \$144 | \$166 | \$178 | \$186 | \$190 | \$193 |
| Recharge O&M Cost/AF | \$15.17 | \$15.63 | \$16.10 | \$16.58 | \$17.08 | \$17.59 | \$18.12 |
| Total/AF | \$152.17 | \$159.63 | \$182.10 | \$194.58 | \$203.08 | \$207.59 | \$211.12 |

Table 2. CAGRDR Replenishment Fees

| Year | FY12/13 | FY13/14 | FY14/15 | FY15/16 | FY16/17 | FY17/18 |
|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| CAGRDR Cost/AF | \$474 | \$548 | \$614 | \$686 | \$688 | \$691 |

Therefore, membership with the CAGRDR could be an insurance policy if renewable supplies became unavailable. The only cost of the CAGRDR member service area membership would be the application fee (\$5,000) and an annual membership fee if no replenishment is required. Membership approval is expected from CAGRDR because a sufficient volume and quality of groundwater for 100 years has been demonstrated for this service area.

CAGRDR membership can result in an annual cost to water providers if the water provider does not have the ability to independently replenish any groundwater used each year with renewable supplies. The replenishment charges by CAGRDR in FY12/13 are \$474 per acre-foot and expected to rise to \$691 per acre-foot by FY17/18. In FY12/13 with a replenishment rate of \$474 acre-foot, the cost for replenishment services on 60 percent of the pumpage would be \$70,676. If full build out of 2,733.67 acre-feet occurred in FY17/18, the District would be obligated to replenish 100 percent of the

pumpage and the cost would be \$1,888,966.

However, the CAGR and ADWR does allow water providers to conduct storage (replenishment) outside of their service area and recover their CAP credits by service area wells provided the groundwater levels in the service area do not decline on the average no more than 4 feet per year over a 5 year period. The Hydrologic Report found water levels in the Diablo Village service area were declining 2.1 feet per year in 2011, but levels in 2012 were found rising at the average rate of 4.2 feet per year. Therefore, Metro Southwest-Diablo Village could store CAP water and use the two existing supply wells (DV-1 and DV-2) for “recovering” CAP water to meet its water demands with a small risk of incurring CAGR replenishment costs, if a CAP supply exists.

Other AWS Application Elements

ADWR requires documentation that Diablo Village’s water conservation program meets ADWR’s requirements. District staff has updated its list of materials previously submitted to ADWR in past AWS applications that are also relevant to Diablo Village.

Lastly, the ADWR application requires documentation the District can financially meet its capital improvement obligations. In past applications, the District has included the most recent financial audit report and a description of the District’s revenue powers (water rates set by the Board of Directors and revenue bonds with voter approval). Additionally, the application will note that future capital improvements in the Diablo Village service area will be funded by agreements with developers, since only a small portion of the service area is built.

Next Steps

The Diablo Village Hydrology Report demonstrates there exists sufficient physical availability of groundwater for 100 years. Thus, the owner/developers of Tucson Mountain Ranch, Valencia Ranch and Sendero Pass want the District to submit an Assured Water Supply application to the Arizona Department of Water Resources as soon as possible. The Sendero Pass owners are planning to begin marketing their development in early 2015. However, an Assured Water Supply agreement between the owners of Pomegranate Farms, Tucson Mountain Ranch, and Valencia Ranch and the District are required by ADWR as part of the District’s DAWS application. Pomegranate Farms and Tucson Mountain Ranch & Valencia Ranch have groundwater rights issued by ADWR to two developers that must be pledged to the District for the District to obtain a DAWS for the portion of the Diablo service area that includes them (Figure 5). An AWS agreement for Tucson Mountain Ranch and Valencia Ranch was executed by the owner, but the Pomegranate Farms’ owner was not able to meet the District’s deadline because the property is in escrow. Staff informed the current Pomegranate Farms’ owner that if they decide or the new owners wants to execute an AWS agreement for 1,410.03 acre-feet at a later date, the DAWS and MSA could be both amended through the ADWR and CAGR, but at the owner’s expense (\$7,225.00).

Next, ADWR rules require that the District Board of Directors must approve a resolution authorizing

the General Manager to submit the AWS application. Once the AWS application is submitted to ADWR, ADWR's review and approval process can be 9 to 12 months.

Concurrently, State statutes require the Board of Directors approve a resolution for joining Metro Southwest-Diablo Village as a member service area with the CAGR. Additionally, statutes require the District to advertise the resolution once a week for two weeks in a publication of general circulation prior to signing the member service area contract with CAGR. Staff will complete the advertising requirement upon Board approval of the resolution and direction by CAGR staff. The contract will be scheduled for Board consideration when available from CAGR.

The application includes existing and proposed developments, such as Sendero Pass, Tucson Mountain Ranch and Valencia Ranch, but not Pomegranate Farms at this time.

Staff will continue coordinate with the Sendero Pass developer during their subdivision platting process with Pima County and draft water service agreements for Board review and approval.

The Board of Directors is requested to ask any questions members may have and discuss with staff any aspect of the DAWS process or the AWS agreement.

Staff Recommendations

It is recommended that the Board of Directors approve the Tucson Mountain Ranch & Valencia Ranch Assured Water Supply Agreement between Title Security as Trustee for Trusts 913 and 914, and the District.

It is also recommended that the Board of Directors approve Resolution 2013-5 authorizing the General Manager to submit a Designation of Assured Water Supply application for Metro Southwest-Diablo Village to the Arizona Department of Water Resources.

It is recommended that the Board of Directors approve Resolution 2013-6 approving membership in the Central Arizona Groundwater Replenishment District for the Metro Southwest-Diablo Village service area.

Suggested Motion

I move that the Board of Directors approve the Tucson Mountain Ranch & Valencia Ranch Assured Water Supply Agreement between Title Security as Trustee for Trusts 913 and 914 and the District.

I move to approve Resolution 2013-5 authorizing the General Manager to submit to the Arizona Department of Water Resources the Assured Water Supply application for Metro Southwest-Diablo Village.

I move to approve Resolution 2013-6 approving membership in the Central Arizona Groundwater Replenishment District for the Metro Southwest-Diablo Village service area.

Respectfully submitted,

I concur with staff's report.

Respectfully submitted,

Warren Tenney
Assistant General Manager

Mark R. Stratton, P.E.
General Manager