

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

March 10, 2014

Assured Water Supply Update for Metro Southwest-Diablo Village

Synopsis

The Board of Directors is requested to support having a Modification to its 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, which is required with Pomerol Land II, LLC, the owner/developers of Pomegranate Farms. Second, the approval of Resolution 2014-1 stating the District's request to have a Modification to its Designation of Assured Water Supply for Metro Southwest-Diablo Village. Finally, action to approve the Chair of the Board to sign the application to modify Metro Southwest-Diablo Village's Member Service Area Agreement with the Central Arizona Groundwater Replenishment District (CAGR).

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 (CAGR). A water provider with a DAWS is required to replenish all 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 CAGR replenish the mined groundwater; or 2) the water provider can recharge and recover its own CAP water; or 3) directly use treated CAP water.

The Arizona Department of Water Resources (ADWR) issued on February 21, 2014 a DAWS for Metro Southwest-Diablo Village. ADWR determined the District's DAWS application demonstrated proof of a membership contract with the CAGR to replenish any mined groundwater, proof of a physical quantity and quality of groundwater for 100 years, a comprehensive description of the utility's water conservation program, and the necessary financial capabilities.

A DAWS application is an estimate of current, issued, committed and future water demands in the service area and for 100 years beyond total service area build out. The District's DAWS has a build

out demand (current, committed and projected) within the existing Metro Southwest-Diablo Village service area of 2,725.81 acre-feet per year. The Pomegranate Farms development is a 586 acre parcel adjoining to District’s service area (Figure 1). The 586 acre development would increase the annual build out demand by 1,410.03 acre-feet. Therefore, the total demand for Metro Southwest-Diablo Village is 4,135.84 acre-feet per year.

A Hydrology report completed by the Sendero Pass owners was used to document that the Metro Southwest-Diablo Village 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. 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.

Table 1 shows that Metro Southwest-Diablo Village needs to build its water rights portfolio. The District was recommended by ADWR to receive a Non-Indian Agricultural CAP Water allocation of 299 acre-feet. ADWR limited applicants to only their projected water demands in Year 2020.

Table 1. District Water Rights Portfolio and Water Demands

Service Area	Build Out Demand (AF)	CAP Water (AF)	Effluent (AF)	Remediated Water (AF)
Southwest-Diablo	4,135.84	299	0*	0

*- effluent owned by Pima County

**- pending approval by U.S. Secretary of Interior

In the interim, the District must maintain its Member Service Area designation with 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 CAGR could be used to meet the District’s replenishment needs but at a more expensive cost.

The District could pursue a few options to have a Designation of AWS for Metro Southwest-Diablo Village without using groundwater as the supply. One is that the District could build and operate a

water treatment plant and continuously deliver 4,135.84 acre-feet of treated CAP water. However, the District does not have the land and capital funds at this time to build a treatment system and subsequent delivery system. Another option is that the District could contract with Tucson Water to recharge CAP water and have Tucson Water recover and deliver the stored CAP water. This 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 controls all effluent treated outside the Tucson metropolitan area at outlying County Water Reclamation Facilities. Alternatively, the District could store CAP water at Tucson recharge facilities (Table 2) and use District wells to recovery to avoid CAGRDR replenishment fees (Table 3).

Table 2. CAP Water and Recharge Costs

Year	2014	2015	2016	2017	2018
CAP Water Cost/AF + Tucson Water Recharge O&M Cost/AF	\$166	\$178	\$186	\$190	\$193

Table 3. CAGRDR Replenishment Fees

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

Therefore, membership with the CAGRDR could be an insurance policy if renewable supplies became unavailable. The modification cost of the CAGRDR member service area membership would be the application fee and an annual membership fee if no replenishment is required. Pomerol Land, LLC has agreed to pay for the DAWS (\$2,250) and MSA (\$5,000) modifications. 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 FY13/14 are \$548 per acre-foot and expected to rise to \$691 per acre-foot by FY17/18. In FY13/14 with a replenishment rate of \$548 acre-foot, the cost for replenishment services on 60 percent of the pumpage would be \$81,542. If full build out of 4,135.84 acre-feet occurred in FY17/18, the District would be obligated to replenish 100 percent of the pumpage and the cost would be \$2,857,865.

However, the CAGRDR 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 Metro-Southwest Diablo Village service area were declining 2.1 feet per year in 2011, but levels in 2013 were found rising at the average rate of 4.6 feet per year. Therefore, the District could store CAP water at Tucson Water's Southern Avra Valley Recharge and Recovery Project and use the two existing Metro Southwest-

Diablo Village supply wells (DV-1 and DV-2) for “recovering” CAP water to meet its water demands with a small risk of incurring CAGRDR replenishment costs.

Other AWS Application Elements

ADWR requires documentation that Metro Southwest-Diablo Village’s water conservation program meets ADWR’s requirements. The submittal also had an updated list of materials previously submitted to ADWR in past AWS applications that are also relevant to Metro Southwest-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 recent DAWS application noted that future capital improvements in the Metro Southwest-Diablo Village service area will be funded by agreements with developers, since only a small portion of the service area is “built-out”.

Next Steps

An Assured Water Supply agreement between the owners of Pomegranate Farms and the District is required by ADWR as part of the District’s DAWS modification application. Pomegranate Farms has groundwater rights issued by ADWR that must be pledged to the District for the District to obtain a DAWS and MSA modifications for the Pomegranate Farms portion of the Diablo service area (Figure 1). Also, the Metro Southwest-Diablo Village Hydrology Report demonstrates there exists sufficient physical availability of groundwater for 100 years. Thus, Pomerol Land II, LLC, the owner/developers of Pomegranate Farms, wants the District to submit a Modification of a Designation of Assured Water Supply application to the Arizona Department of Water Resources. Pomerol Land II, LLC has not indicated a date by which are they will begin marketing their development. Pomerol Land II, LLC first wants to amend with Pima County the development’s master plan.

The Pomergranate Farms Assured Water Supply Agreement is equivalent to the AWS Agreement approved with Title Security of Arizona for Tucson Mountain Ranch and Valencia Ranch development by the Board of Directors on June 10, 2013. Pomerol Land II, LLC requested retention of provisions deleted by Tucson Mountain Ranch and Valencia Ranch. Pomerol Land II, LLC also requested that the AWS Agreement included a deadline for when the District would submit the DAWS modification (6 months after execution). Staff estimates the DAWS modification application will only take 30 days to prepare because little has to be changed from the original DAWS application. Likewise, Pomerol Land II, LLC requested the agreement be valid for one year after the DAWS modification submittal. ADWR’s review and decision process for the current DAWS was 8 months. Again, staff does not believe the modification will take ADWR the full 12 months.

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

the General Manager to submit the DAWS modification application. Once the modification application is submitted, ADWR's review and approval process can be 8 to 12 months.

Concurrently, the District will be submitting an application to the CAGR to modify the member service area agreement for Metro Southwest-Diablo Village. CAGR then will put together a modified agreement that will be brought back to the Board of Directors for approval at a later meeting.

Staff will continue to coordinate with the Pomerol Land II, LLC 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 Pomegranate Farms Assured Water Supply Agreement between Pomerol Land II, LLC and the District.

It is also recommended that the Board of Directors approve Resolution 2014-1 authorizing the General Manager to submit a Modification of 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 the Chair of the Board to sign the application to modify the District's 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 Pomegranate Farms Assured Water Supply Agreement between Pomerol Land II, LLC and the District.

I move to approve Resolution 2014-1 authorizing the General Manager to submit to the Arizona Department of Water Resources a Modification of a Designation of Assured Water Supply application for Metro Southwest-Diablo Village.

I move to approve the Chair of the Board to sign the application to approve modifying the District's membership in the Central Arizona Groundwater Replenishment District for the Metro Southwest-Diablo Village service area.

Respectfully submitted,

Warren Tenney
Assistant General Manager

I concur with the recommendations.

Respectfully submitted,

Joseph Olsen, P.E.
General Manager