

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

**May 10, 2021**

**Approval of Bids for Granular Activated Carbon (GAC)  
Replacement at the South Shannon Facility**

**Synopsis**

The Board of Directors is requested to approve the bids submitted for the replacement of the Granular Activated Carbon (GAC) at the South Shannon facility in Fiscal Year 2022.

**Background**

The District, in conjunction with the Arizona Department of Environmental Quality (ADEQ), constructed a GAC treatment system at the South Shannon facility to remove volatile organic compounds (VOCs) from the groundwater. The GAC system is comprised of two vessels set in series. Each vessel contains 20,000 pounds of burnt coconut shell GAC. The well pushes water through the carbon bed from the top down. As the water flows through the bed, the VOCs attach to the GAC. The GAC in the lead vessel adsorbs as much of the VOCs as it can before breakthrough occurs. Breakthrough is when small amounts of the constituent being treated start to be detected after the lead treatment vessel. The levels will increase as more of the GAC is used to the point where the VOC will pass through as if there was no treatment in place.

As of August 2017, ADEQ requested that the operation methodology of the GAC system be modified so that a GAC change out does not occur until a regulated VOC is detected at 50 percent of the published maximum contaminant level (MCL). Since the two vessels are in series, the lag vessel will continue to remove the majority of the VOCs. Not all VOCs respond to GAC treatment the same way allowing some to pass through the treatment faster than others. Operating the treatment system using the 50 percent criteria does allow some VOCs (well below the MCL) to be delivered.

**Issues**

It is anticipated that there will be two to three carbon change outs during Fiscal Year 2022; however, the number of change outs will vary depending on the gallons treated and the VOC levels in the raw water. ADEQ reimburses the District for the GAC change outs. In order to expedite the process, without having the system shut down for extended periods of time, the District requested quotes that would be valid from July 1, 2021 thru June 30, 2022.

A request for sealed bids was sent to vendors who had expressed interest or submitted proposals in the past. A public notice was also placed in the Daily Territorial on March 23, 2021 and ran for four consecutive publications. Sealed bids were due on April 15, 2021. Due to COVID-19, all bids

were received by email. Bidders were asked to put "GAC Bid" in the subject line of their email. Emails were not opened until 2:00 p.m. on the bid opening date. Staff established a GoToMeeting session to allow remote access to the bid opening. Two vendors submitted bids. The vendors submitting bids were: Carbon Activated Corp. and Calgon Carbon. Carbon Activated Corp. was the low bidder with a price of \$1.195 per pound or \$23,900 per change out. Calgon Carbon provided a bid of \$1.79 per pound or \$35,800 per change out using an exchange method. Calgon did not comply with the bid specifications to provide virgin GAC.

The intent of this bid is to handle the carbon change outs similar to other annual quotes obtained by the Utility Division. No specific award was intended to be made other than approval of pricing. The District's Job Order Agreement will be used with the approved bids. The purpose of no single award is to provide an alternate if the lowest bidder cannot perform the service. Since the GAC is manufactured overseas, events can occur that inhibit service; the District has experienced this issue in the past. Although Calgon's bid does not fully meet the specification, staff believes it is appropriate to approve their pricing in the event the other vendors cannot provide the service.

### **Recommendation**

It is recommended that the Board of Directors approve the bids submitted and authorize staff to enter into the Job Order Agreements as appropriate with the vendors submitting the bids. It is also recommended that the Board authorize the General Manager to approve each GAC change-out to the lowest available bidder, as needed.

### **Suggested Motion**

I move to approve the bids submitted and authorize staff to enter into the Job Order Agreements as appropriate with the vendors submitting bids. It is also recommended that the Board authorize the General Manager to approve each GAC change-out to the lowest available bidder, as needed.

Respectfully Submitted,

Steven D. Shepard  
Utility Superintendent

I concur with the above recommendation.  
Respectfully submitted,

Joseph Olsen, P.E.  
General Manager