

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

**May 14, 2018**

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

**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.

**Background**

The District, in conjunction with Arizona Department of Environmental Quality (ADEQ), constructed a GAC treatment system at South Shannon to remove volatile organic compounds (VOCs) from the groundwater. The GAC system is composed 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 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.

Since the installation of the GAC system, the District had been scheduling a GAC change out once breakthrough of a regulated VOC was detected between the lead and lag vessels. ADEQ reimburses the District for the cost of the GAC change outs. As of August 2017, ADEQ has 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 contaminate level (MCL) after the lead vessel. Since the two vessels are in series, the lag vessel will continue to remove the majority of the VOCs though not all VOCs respond to the GAC the same way allowing some to pass through the treatment faster than others.

**Issues**

With the change in treatment process requested by ADEQ, it is anticipated that there will be two to three carbon change outs during Fiscal Year 2019; however, the number of change outs will vary depending on the gallons treated and the VOCs levels in the raw water. 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, 2018 thru June 30, 2019.

A request for sealed bids were sent to vendors who had expressed interest or submitted proposals in the past. A public notice was also placed in the Daily Territorial on April 2, 2018 and ran for four consecutive publications. Sealed bids were due on April 25, 2018.

Two vendors submitted bids: Carbon Activated Corp. and Prominent Systems Inc. Carbon Activated Corp. was the low bidder with a price of \$1.05 per pound or \$21,000 per change out. Prominent Systems Inc. provided a bid price of \$1.65 per pound or \$33,000.00 per change out. All bidders included taxes, delivery, installation, and disposal in their bids.

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. Staff is requesting approval of the pricing submitted by Carbon Activated Corp. and Prominent Systems. 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.

### **Recommendation**

It is recommended that the Board of Directors approve the bids submitted and authorize staff to enter into the Job Order Agreement with Carbon Activated Corp. and Prominent Systems. 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 Agreement with Carbon Activated Corp. and Prominent Systems and to authorize the General Manager to approve each GAC change-out to the lowest available bidder, as needed.

Respectfully submitted,

Steve D. Shepard  
Utility Superintendent

I concur with the above recommendation.

Respectfully submitted,

Joseph Olsen, P.E.  
General Manager