



Interoffice Memorandum

March 29, 2022

TO: Mayor Jerry L. Demings
-AND-
County Commissioners

FROM:  Carrie Mathes, CFCM, NIGP-CPP, CPPO, C.P.M., Manager II,
Procurement Division

CONTACT: Michael Hudkins, Manager II, Water Reclamation Division
407-254-9685

SUBJECT: Ratification of Emergency Purchase Order M107099, Purchase of Aeration Grid

ACTION REQUESTED:

Ratification of Emergency Purchase Order M107099, Purchase of Aeration Grid, with Xylem Water Solutions USA, Inc., in the not-to-exceed amount of \$335,000.

PROCUREMENT:

This purchase order will provide a direct replacement of the existing South Water Reclamation Facility (SWRF) southwest aeration basin aeration grid to maintain a precise air header pressure.

FUNDING:

Funding is available in the account number 4420-038-1555-0046-6310.

APPROVALS:

The Water Reclamation Division concurs with this recommendation.

REMARKS:

Staff has verified that Xylem Water Solutions USA, Inc. is the only authorized Sanitaire products in Orange County, Florida. This project is to perform emergency work to replace the concrete coating and aeration grid system in the 20.5 million gallons a day (MGD) southwest aeration basin including removing any material accumulated in the basin to access the coating and aeration grid. This work is time sensitive as this basin represents 35% of the SWRF's 56 MGD firm capacity.

The County will purchase the new sanitaire aeration piping and hardware to be installed by the contractor. The existing blower system is designed around the existing aeration piping and the piping must be replaced in kind.

The SWRF southwest basin accounts for 35% of the facility's treatment capacity and is vital to meeting the utility's regulatory requirements. Due to the described failures the basin is currently operating at less than 50% capacity. Failure to perform this work in an expedited fashion risks environmental impacts, enforcement penalties, as well as public health concerns.

Staff conducted a price analysis and determined that the price per diffuser on average is slightly less than contracted rates with Collier County, Loudoun County, VA, Reedy Creek Improvement District, City of Canton, GA, City of Aurora, OH, City of San Diego, CA, and the Brooksville-Tampa Bay Regional Airport. The average rate per diffuser is \$37.13 and our cost will be \$35.78. Price has been determined reasonable and consistent.

An air diffuser or membrane diffuser is an aeration device typically in the shape of a disc, tube or plate, which is used to transfer air and with that oxygen into the sewage. Oxygen is required by microorganisms/bacteria residents in the water to break down the pollutants.

At SWRF, there are air blowers, main header pipes, sub header pipes, and diffusers. The calculation of cost per diffuser is used due to the vast difference in size and configuration of different treatment processes. The diffusers disperse fine bubbles into the process small enough for microorganisms to respire.