City of GREENSBORO North Carolina

# T. Z. Osborne Water Reclamation Facility

## Aqua-Aerobic Diamond Cloth Filter Sole Source Purchase

February 18, 2015

# Diamond Cloth Filter Sole Source Purchase

## Background

- The six travelling bridge sand filters were installed in 1998 to provide tertiary treatment. In order to support the hydraulic expansion of the plant from 40 million gallons per day (MGD) to 56 MGD and to help meet current and future total phosphorus discharge limits, through the removal of total suspended solids, upgrades to the existing effluent filtration system are needed.

# Diamond Cloth Filter Sole Source Purchase

## Background

- As part of the preliminary design phase, three filter alternatives were evaluated by the Water Resources Department and the diamond cloth filter system manufactured by Aqua-Aerobic Systems provides the overall lowest cost alternative that meets the effluent treatment design criteria.

# Diamond Cloth Filter Sole Source Purchase

## Background

- The Diamond Cloth Filter system can treat twice as much wastewater in the same footprint of a conventional sand filter system and uses 3 to 5 times less backwash water. As a result the Diamond Cloth Filter system can be installed without having to build more concrete basins.
- The Diamond shape of the cloth filter enables the filter to use more surface area to filter the wastewater. The microfiber material used in the filter helps to trap any remaining solids that were not removed during the primary and secondary treatment process.

# Diamond Cloth Filter Sole Source Purchase

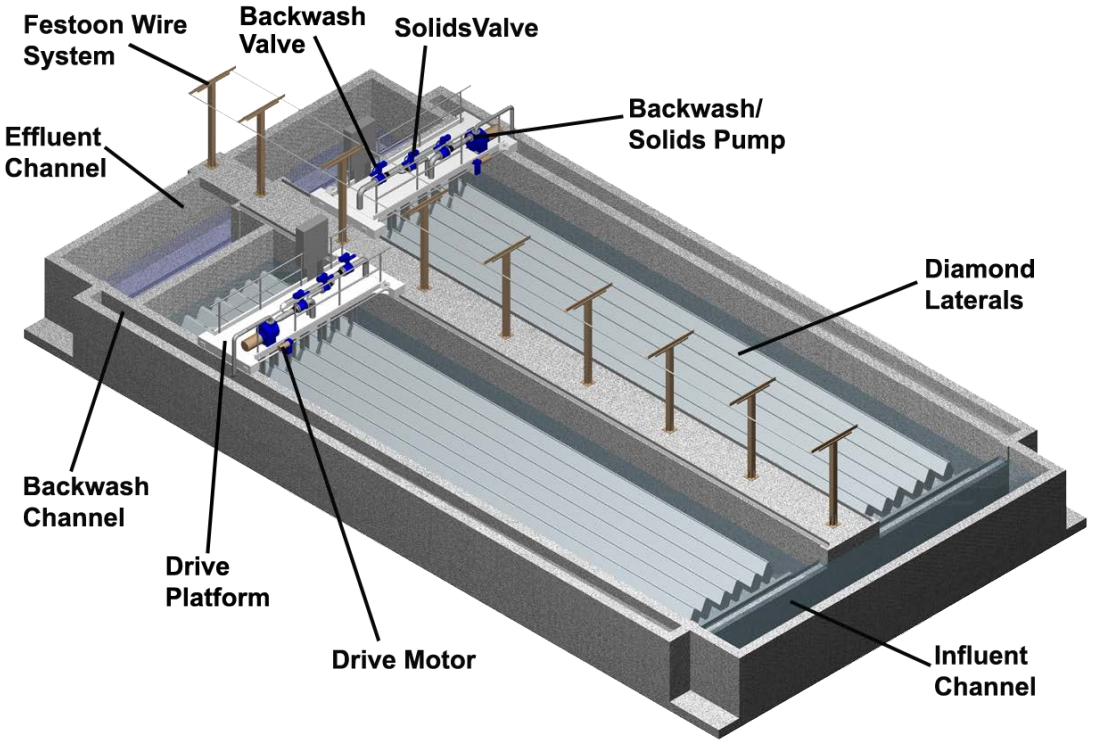
## Existing Sand Filters

# Diamond Cloth Filter Sole Source Purchase

## Proposed Diamond Cloth Filters

# Diamond Cloth Filter Sole Source Purchase

## Proposed Diamond Cloth Filters



# Diamond Cloth Filter Sole Source Purchase

**Action Requested:**

The Water Resources Department recommends and requests that City Council approve the sole source purchase of a diamond cloth filter system from Aqua-Aerobic Systems, Inc. in the amount of $5,766,728 and the associated budget adjustment.