



# City of Delray Beach

100 N.W. 1st Avenue  
Delray Beach, FL 33444

## Legislation Text

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File #: 17-111, Version: 1

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**TO:** Mayor and Commissioners  
**FROM:** John Morgan, Director of Environmental Services  
**THROUGH:** Chief Neal de Jesus, Interim City Manager  
**DATE:** February 7, 2017

AMENDMENT NO.1 TO SERVICE AUTHORIZATION NO. 12-21 TO KIMLEY HORN AND ASSOCIATES, INC. FOR ASSISTANCE WITH RESOLVING THE CHLORINE RESIDUAL DEPLETION IN THE WATER DISTRIBUTION SYSTEM.

**Recommended Action:**

Motion to Approve Amendment No.1 to Service Authorization No. 12-21 with Kimley Horn and Associates, Inc. in the amount not-to-exceed \$34,702.00, to provide additional professional engineering services for treatment process changes to resolve the chlorine residual depletion issues experienced in the water distribution system.

**Background:**

On May 17, 2016, City Commission approved Service Authorization No. 12-21 with Kimley Horn and Associates, Inc. (KHA) in an amount not-to-exceed \$123,269, for services in performing an analysis and study of the water distribution system to address the chlorine residual depletion.

Services provided by (KHA) included evaluation of the existing distribution system's hydraulics, as well as the existing chlorine and ammonia injection facilities, and recommendations to resolve the issues. This included thoroughly evaluating and examining the injection systems for flow rates and location of injection of specific type of chemicals, updating the water model for running scenarios to determine areas of water age, bench testing and analysis of the formation of disinfection by-products as it relates to free chlorine in order to maintain compliance with regulated limits, conducting trial runs of the hydraulic modeling utilizing anticipated enhancements, and an analysis of the use and operations of the remote chlorine booster stations.

A preliminary analysis revealed that controlling the ammonia would be the first step towards providing resolution to the chlorine residual depletion issue. This amendment will expand and refine services by the consultant for reducing the free ammonia at the point-of-entry into the system (at the Water Treatment Plant), as well as evaluating the operations of the existing re-chlorination stations for effectiveness, and suggest improvements as necessary. The consultant will also investigate available instruments with associated costs for continuously measuring free ammonia and total chlorine, and assist with conducting follow up water quality testing and evaluation after installation. In addition, conduct testing to determine the specific concentration and species of disinfection byproducts (DBPs) within the system, assist staff in the water quality testing at the water storage facilities to evaluate water turnover, and facilitate meetings between City staff and Palm Beach County Health Department to discuss modifications to the treatment process and related permitting for prompt compliance with the recent consent order.

KHA submitted a proposal in a not-to-exceed amount of \$34,702 for the additional services cited above relating to resolving the chlorine residual depletion.

This recommendation complies with the City Code of Ordinances, Section 36.06 (A)(2), "*Within Scope of Work*".

**City Attorney Review:**

Approved as to form and legal sufficiency.

**Finance Department Review:**

Finance recommends approval.

**Funding Source:**

Funding is available from account number 442-5178-536.31-90 (Water/Sewer Renewal and Replacement Fund: Other Professional Services).

**Timing of Request:**

Authorization to proceed with this additional scope of work is critical for meeting water quality standards per regulatory requirements and consent order.