



# CITY MANAGER'S REPORT


## AGENDA ITEM REQUEST

UTILITIES DEPARTMENT

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**DATE:** June 16, 2017

**TO:** Ed Lavallee, City Manager

**FROM:** Javier Vargas, Utilities Director 

**COUNCIL DATE:** July 11, 2017

**SUBJECT:** Water Treatment Plan RO Efficiency Study  
Black & Veatch WA No. 2016-01

**Background:**

The Water Treatment Plant RO Efficiency Study project involves a study of the technical, environmental and economic feasibility of increasing the water recovery efficiency of the reverse osmosis treatment process at the City of Venice's Water Treatment Plant.

The City of Venice owns and operates a 4.48 mgd brackish groundwater reverse osmosis water treatment plant. The water treatment plant produces a finished water product that meets or exceeds all state and federal drinking water requirements before pumping into the distribution system. The groundwater supply is permitted through the Southwest Florida Water Management District (SWFWMD) under permit number #20-005393.009. Special permit condition No. 25 requires the permittee to complete a detailed study regarding the technical, environmental, and economic feasibility of increasing the treatment plant's water recovery efficiency to the highest degree feasible; with a target efficiency of 75% or greater. The study must be completed and submitted to SWFWMD by the end of the permit duration on January 1, 2018.

The current RO system is designed with four skids, and each skid supports a single stage filtration process with 50% recovery of the feed water supply. The study will evaluate the feasibility of increasing the plant's recovery to 75% or greater, determine if improved efficiency will affect their National Pollution Discharge Elimination Permit (NPDES) for concentrate disposal, investigate the feasibility of deep well injection as a disposal option, and provide an opinion of costs and schedule for feasible options to increase efficiency.

By performing this required pilot study the City will be able to make better use of its current water supply. Increasing the recovery of the City's Reverse Osmosis system will allow the City to be able to reduce daily withdraws from its existing wellfield. This would help reduce the strain on the area's ground water supplies, save in electrical cost by decreasing the number of wells needed to run and provide a more efficient water treatment plant. Finally, this will allow the City to meet future supply needs without needing to increase groundwater withdrawals.

**Requested Action:**

We respectfully request council's permission to approve Black & Veatch Work Assignment No. 2016-01 – WTP RO Efficiency Study, not to exceed \$326,196.

**City Attorney Review:**

The City Attorney has reviewed this document and finds it to be acceptable.

**Risk Management Review:**

The Risk Manager has reviewed this document and finds no risk management objections.

**Funds Availability (account number):**

Based on council approval, funds are available in account number 421-1203-533.31-00.