



# CITY MANAGER'S REPORT


## AGENDA ITEM REQUEST

### UTILITIES DEPARTMENT

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**DATE:** November 21, 2017

**TO:** Ed Lavalley, ICMA-CM, MPA, City Manager

**FROM:** Javier Vargas, MPA, Utilities Director 

**COUNCIL DATE:** December 12, 2017

**SUBJECT:** **PURCHASE OF STAND BY GENERATORS  
LIFT STATIONS**

**Background:**

Severe tropical storms and hurricanes have the potential to cause a great deal of damage to water and wastewater utilities due to heavy rainfall, inland flooding, coastal storm surge and high winds. Typical impacts that may lead to service interruptions include the following:

- Pipe breaks due to washouts, up-rooted trees, etc., which could result in low water pressure or sewage spills throughout our service area.
- Loss of power and communication infrastructure due to high winds.
- Domestic wastewater overflows due to flooding and Inflow & Infiltration.

Hurricane Irma brought sustained winds of 70 miles per hour with much stronger gusts, storm surge between 1 to 3 feet and a total estimated rainfall of 8 inches, causing extensive damage to power lines resulting in power outages that lasted almost two weeks, uprooted trees causing water main breaks, and street flooding resulting in sewer overflows.

**Lift Stations Operations & Maintenance – Challenges & Response Activities**

The City owns and operates 86 lift stations. Eighty-one of those lift stations are monitored by the City's Supervisory Control and Data Acquisition [SCADA<sup>1</sup>] system which records operational data such as the number of pump starts and pump run time. As far as equipment utilized during emergencies, a total of eight lift stations including three Master Stations are equipped with a stationary backup generator. They are as follows: Master Lift Stations #7, #32 and #57 and Lift Stations #1, #2, #6, #34, #65.

We also have the following additional pieces of equipment:

- (3) Portable generators; 20 Kw, 100 Kw, and 140 Kw.
- (2) By-pass pumps; 4" and 6".
- (1) Vacuum truck to help empty some of the smaller stations to prevent domestic wastewater spills.

Hurricane Irma Report – After the storm moved through Venice on Monday 11<sup>th</sup>, we had approximately 35-40 lift stations without power, FPL was able to reduce this to about 27 lift stations by late Monday.

<sup>1</sup> SCADA refers to an industrial computer system that monitors and controls a process. In our case, SCADA monitors lift stations and other electrical equipment.

The lift station crew spent several days pumping down the remaining lift stations by rotating our 3 portable generators and also utilizing our 4" and 6" by pass pumps. FPL was finally able to restore power to all lift stations by Friday, the 22<sup>nd</sup>. Lift stations are extremely critical and need to remain operational in order to prevent wastewater spills. Therefore, the department identified at least four additional critical lift stations that require stationary backup power to help eliminate sanitary sewer overflows. The identified lift stations are #4 (Mantanzas St.), #8 (Country Club Way), #10 (Cherry St.), and #53 (Ridgewood Ave.).

With the addition of the four stationary and one portable generators the department will have a total of twelve stationary generators, four portable generators and three by-pass pumps for 86 lift stations. The Utilities Department will proactively increase the number of emergency back-up stationary generators in future years as part of its Capital Improvement Plan.

The generators are available to purchase through the Florida Sheriff Association Contract (FSA 17-VEH15.0 Specification #72) from Mid Florida Diesel.

**Requested Action:**

The Utilities Department requests Council's approval to purchase four stationary generators and one portable generator not to exceed \$167,879.00 through Mid Florida Diesel.

**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 421-1204-535.64-00.