

# Key Largo Wastewater Treatment District Board of Commissioners Meeting Agenda Item Summary

Meeting Date:  
February 5, 2019

Agenda Item Number: G-1

Agenda Item Type:  
Information / Presentation

Agenda Item Scope:  
Review / Discussion

Recommended Action:  
Discussion

Department:  
General Manager

Sponsor:  
Peter Rosasco

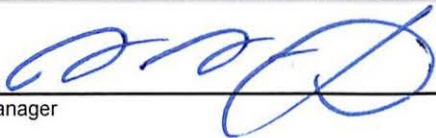
Subject:  
**December 2018 Monthly Report**

Summary of Discussion:

Department heads will present their section of the Monthly Report.

<u>Reviewed / Approved</u>	<u>Financial Impact</u>	<u>Attachments</u>
Operations: _____	\$	Monthly Report
Customer Service: _____		
Finance: _____	Funding Source:	
District Counsel: _____		
District Clerk: _____	Budgeted:	
Engineering: _____	N/A	

Approved By: \_\_\_\_\_  
General Manager



Date: 1-31-19



# December 2018 Monthly Report



Key Largo Wastewater Treatment District

103355 Overseas Highway

Tel: (305)451-4019

# Operations

The wastewater treatment plant processed an average of 1.71 million gallons of influent per day (MGD) and zero plant related odor complaints were received.

Restoration of the headworks influent channels is complete. Headworks is back in standard operating mode and no longer running in bypass mode.

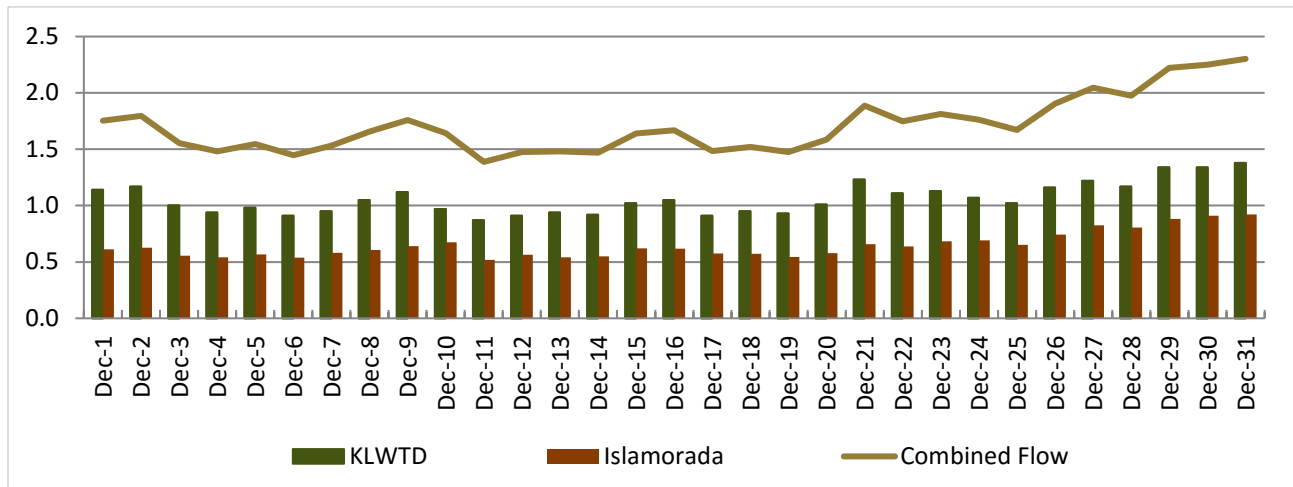
## Effluent Quality Reports

Determines the quality of discharge from the wastewater treatment plant.

Effluent Quality Report	AWT Limit Annual Average	November 2018 Plant Performance
CBOD5 (Carbonaceous Biochemical Oxygen Demand)	5	1.3
TSS (Total Suspended Solids)	5	0.3
TN (Total Nitrogen)	3	1.20
TP (Total Phosphorous)	1	0.28

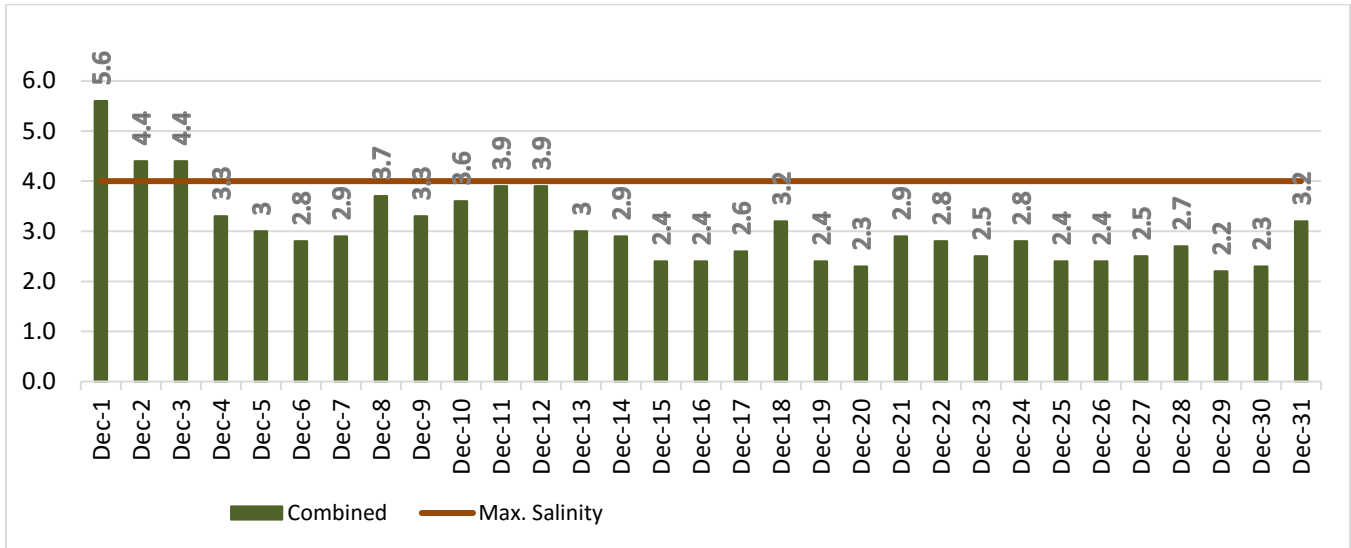
## Current Flow (MGD)

The total flow of influent through the wastewater treatment plant each day.



### Composite Daily Peak Salinity (PPT)

The daily peak salinity for the current month.

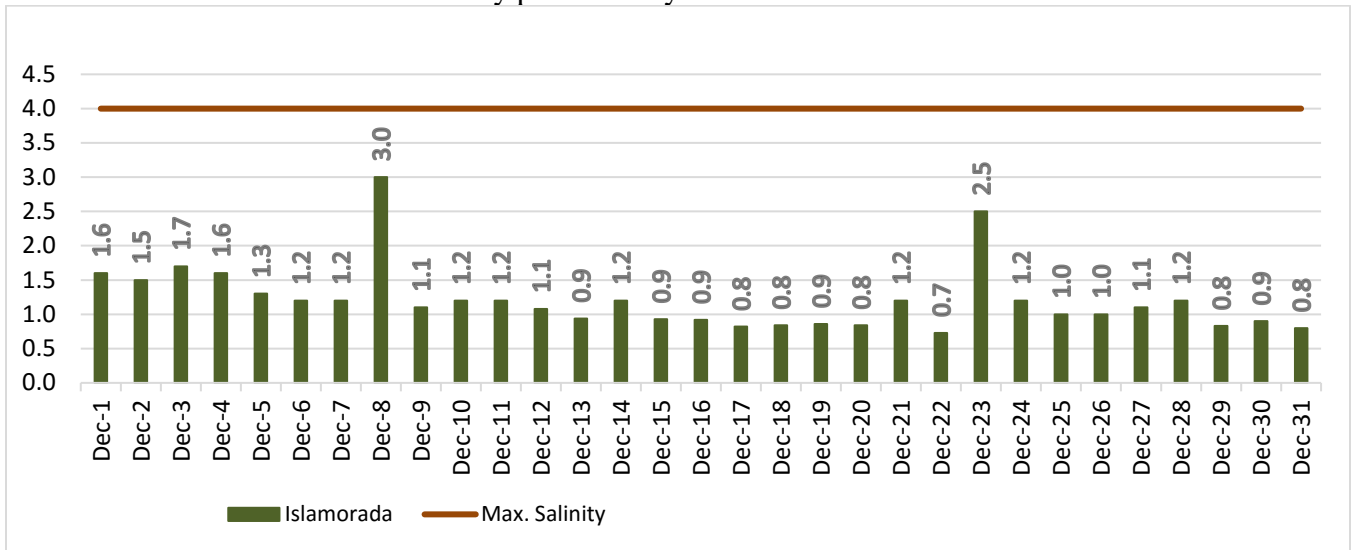


\* Higher than average salinity levels are due to two cracked pits that are scheduled to be replaced and extremely high tides.

## Islamorada

### Islamorada Daily Peak Salinity (PPT)

The daily peak salinity for the current month.



Average Daily Flow	Monthly Peak Salinity	Days over 4.0 PPT Salinity
0.637 Million Gallons per Day	3.0 Parts per Thousand	0

# Wastewater Field Operations

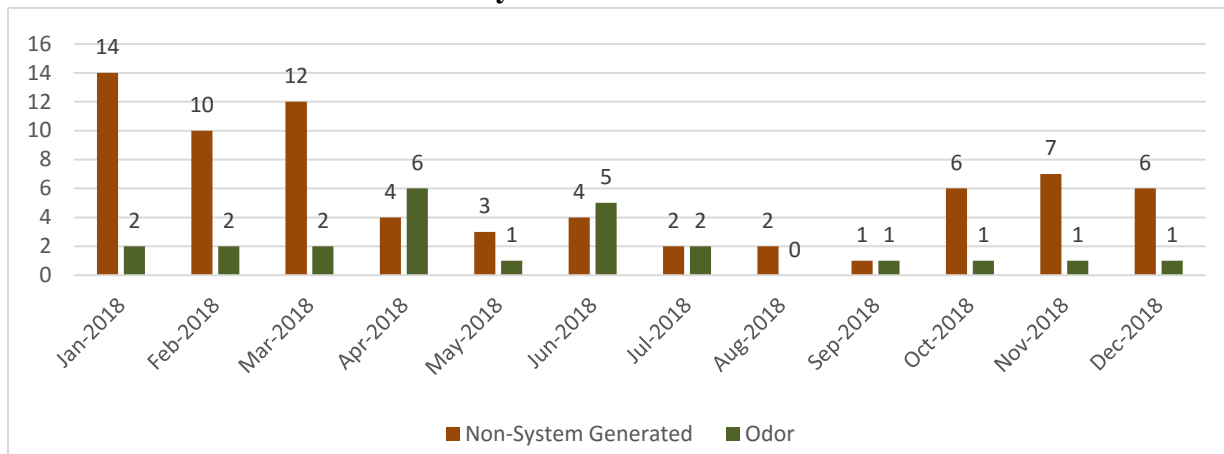
There was a total of 47 service calls for the current month. Of these, 40 were system generated, mostly by low vacuum detection at a vacuum station. These system generated service calls caused no damage and had no effect on the District’s customers. The problems were corrected quickly by the field staff. The remaining 7 service calls are as follows:

Date	Address	Incident	Response
December 8	88 Marina Ave.	Customer called stating our system was making noise all night.	Noise was vacuum from system. KLWTD system working properly.
December 11	67 Coral Dr.	Customer called stating sewer was backing up in shower and toilets.	KLWTD system was working properly, issue on homeowner side.
December 14	150 Lorelane Pl.	Customer called about a depression in the ground, worried about a possible underground leak.	Was not a KLWTD issue.
December 19	1507 Shaw Dr.	Customer called stating home was backing up.	KLWTD system was working properly. Homeowners 4" service line was broken on their side.
December 20	710 Barcelona Dr.	Customer called stating sewer was backing up in shower and toilets.	KLWTD system was working properly.
December 27	33 Lake Shores Dr.	Customer called stating sewer was backing up in the house.	KLWTD system was working properly.

## Odor Related Service Calls

Date	Address	Incident	Response
December 31	3 Janet Pl.	Customer called about an odor and gurgling sound from our system.	Hose in pit needed to be replaced.

## Non-System Generated Calls



# Maintenance

## Vacuum Pump Motor Condition Test

An insulation measurement is performed to ensure the vacuum pump motors used in our vacuum system stay up and running. With semi-annual tests and historical data we can keep track of equipment statuses over time to potentially predict a failure in advance.

The wire insulation coating inside motors deteriorates over time with normal wear and tear. When the insulation deteriorates past a set value, current will leak into parts of the motor it shouldn't causing motor failure. If caught in time, a motor with deteriorated insulation can be dipped and baked to restore its winding insulation.



Good Condition
Showing Wear
Needs Repair

Vacuum Station A				
Pump #	Amps	Volts	Insulation Resistance (M Ohms)	Motor Temperature °F
#1	28.3/ 27/ 28	285/ 284/ 286	500/ 550/ 550	122°
#2	30.7/ 29/ 30.9	285/ 284/ 285	500/ 550/ 550	130°
#3	30.2/ 28.2/ 30.3	285/ 284/ 286	500/ 550/ 550	127°
#4	32.5/ 29.6/ 32.5	285/ 284/ 286	500/ 550/ 550	125°
#5	32.6/ 30.7/ 31.7	284/ 283/ 285	500/ 550/ 550	125°

Vacuum Station D				
Pump #	Amps	Volts	Insulation Resistance (M Ohms)	Motor Temperature °F
#1	30.7/ 30.6/ 32.2	284/ 287/ 287	270/ 277/ 277	137°
#2	30/ 30/ 31.6	283/ 287/ 286	136/ 143/ 155	133°
#3	28.8/ 28.7/ 30.7	282/ 287/ 285	123/ 130/ 145	129°
#4	29.6/ 29.5/ 31.7	282/ 287/ 285	167/ 179/ 203	132°
#5	30/ 31.2/ 30.6	283/ 287/ 286	425/ 433/ 438	130°

<b>Vacuum Station E</b>				
<b>Pump #</b>	<b>Amps</b>	<b>Volts</b>	<b>Insulation Resistance (M Ohms)</b>	<b>Motor Temperature °F</b>
#1	31.1/ 30.6/ 29.8	281/ 281/ 280	550/ 550/ 550	120°
#2	30.8/ 33.1/ 30.6	280/ 281/ 280	420/ 424/ 420	124°
#3	31.9/ 33.3/ 30.6	278/ 279/ 278	550/ 550/ 550	128°
#4	30.6/ 33.1/ 31.3	278/ 279/ 278	550/ 550/ 550	130°
#5	32.3 33.5/ 30	280/ 281/ 280	550/ 550/ 550	135°

<b>Vacuum Station F</b>				
<b>Pump #</b>	<b>Amps</b>	<b>Volts</b>	<b>Insulation Resistance (M Ohms)</b>	<b>Motor Temperature °F</b>
#1	11.0/ 9.9/ 10.5	124/ 123/ 124	550/ 550/ 550	112°

<b>Vacuum Station G</b>				
<b>Pump #</b>	<b>Amps</b>	<b>Volts</b>	<b>Insulation Resistance (M Ohms)</b>	<b>Motor Temperature °F</b>
#1	33.2/ 29.2/ 29.1	287/ 283/ 284	550/ 550/ 550	108°
#2	32.2/ 29.2/ 29.4	286/ 282/ 283	550/ 550/ 550	116°
#3	32.1/ 27.5/ 30.1	287/ 283/ 284	550/ 550/ 550	123°
#4	33.2/ 30.5/ 29.7	287/ 283/ 284	550/ 550/ 550	127°
#5	33/ 29/ 30.9	288/ 284/ 285	550/ 550/ 550	119°

<b>Vacuum Station I</b>				
<b>Pump #</b>	<b>Amps</b>	<b>Volts</b>	<b>Insulation Resistance (M Ohms)</b>	<b>Motor Temperature °F</b>
#1	27.9/ 30.9/ 31	279/ 281/ 285	550/ 550/ 550	105°
#2	28.8/ 31.2/ 30.8	280/ 281/ 285	550/ 550/ 550	115°
#3	29.8/ 32.3/ 32	280/ 281/ 285	550/ 550/ 550	118°
#4	29.6/ 32/ 32.6	280/ 281/ 285	550/ 550/ 550	116°
#5	29.4/ 31.7/ 31.6	279/ 281/ 285	550/ 550/ 550	110°

<b>Vacuum Station JK</b>				
<b>Pump #</b>	<b>Amps</b>	<b>Volts</b>	<b>Insulation Resistance (M Ohms)</b>	<b>Motor Temperature °F</b>
#1	28.3/ 27/ 28	285/ 284/ 286	550/ 550/ 550	122°
#2	30.7/ 29/ 30.9	285/ 284/ 285	550/ 550/ 550	117°
#3	30.2/ 28.2/ 30.3	285/ 284/ 286	550/ 550/ 550	117°
#4	32.5/ 29.6/ 32.5	285/ 284/ 286	550/ 550/ 550	118°
#5	32.6/ 30.7/ 31.7	284 283/ 285	550/ 550/ 550	116°

\*Resistance measurement shows insulation integrity

# Construction

## Current Construction Projects

Project	Contract Amount	Contract Start	Contract Total Paid to Date	Contract Balance Remaining
<b>Solar Arrays</b>	\$366,600.00	7/31/18	\$146,640.00	\$189,960.00
<p>The Solar Arrays project includes solar panels over the disinfection basin and on the roof of the Operations Building. During the month of December, SALT placed the pallets of materials on the roof of the Operations Building and installed temporary safety railing around the perimeter of the roof. All of the roof mounting brackets were installed and all but 13 of the solar panels were installed. The inverters were installed, and the solar panels were wired to the inverters. The solar panels for the disinfection basin are stored on site.</p>				
<b>Capital Upgrades Reynolds Contract</b>	\$1,115,955.78	8/13/18	\$226,754.30	\$889,201.48
<b>Owner Direct Purchase Items (Original Contract)</b>	\$218,472.90	N/A	\$172,527.90	\$45,945.00
<b>Owner Direct Purchase of Screening Box</b>	\$29,955.00	N/A	\$27,443.50	\$2,511.50
<p>Reynolds Construction of Florida LLC continued working on the headworks bypass portion of the Capital Upgrades Project in December. The concrete supports and the piping for the horizontal run of 18” ductile iron pipe was completed in December. The automatic spiral screens were removed from the influent channels and the channels were abrasive blasted to clean concrete. The areas of deteriorated concrete were removed, and repairs were made with a fast-curing epoxy grout. The entire channel was coated with a surfacing epoxy and then coated with a hydrogen sulfide resistant coating. As of the end of December, the following equipment had been purchased by the District: The manual screening box, the process water pumping system skid, piping and fittings.</p> <p>The Capital Upgrade project consists of four separate scopes of work that are described below.</p>				
<b><u>Scope 1</u></b> Headworks Bypass Piping	Allocation of Reynolds Contract Price \$791,910.65	This project consists of 18” ductile iron pipe and fittings, electrically actuated 18” valves, replacement of corroded metallic conduit on the headworks and cleaning, concrete repairs and re-coating of the influent channels.		
<b><u>Scope 2</u></b> Process Water Pumping System	Allocation of Reynolds Contract Price \$125,743.24	The process water pumping system consists of four variable speed water pumps to provide treated effluent for use as seal water, chemical mixing water, centrifuge wash water and general wash-down water around the plant. This system replaces a single pump system with bladder tanks.		

Project scope continued on next page.



<p><b>Scope 3</b> Bridge to SBR #3</p>	<p>Allocation of Reynolds Contract Price \$26,399.93</p>	<p>The bridge to SBR #3 includes a walkway, handrails and support columns to bridge the gap between the 3<sup>rd</sup> floor exterior walkway of the Operation Building and SBR #3. The bridge will allow for improved access to SBR #3.</p>
<p><b>Scope 4</b> Filter Booster Pump Upgrades</p>	<p>Allocation of Reynolds Contract Price \$171,901.96</p>	<p>The filter booster pump upgrade includes removal of one 30 HP pump and replacement with a 14 HP pump, removal of the local control panel and replacement of all conduit and wiring between the pump station and the Operations Building. The project also includes re-programming to improve operator control of the pumping system.</p>

**Upcoming Construction Projects**

Project	Estimate	Status
<p><b>Disinfection Basin Repairs and Modifications</b></p>	<p>\$344,928.00</p>	<p>The Disinfection Basin Repairs and Modifications Request for Proposals was published in October. Reynolds Construction LLC was the sole bidder. The project was awarded at the January 22nd meeting after value engineering negotiations. The base bid scope of work and the overflow piping portion of the additive alternate scope of work will be performed.</p>
<p><b>Steel Storage Building</b></p>	<p>\$175,250.00</p>	<p>The Field Operations department has included a steel storage building in its capital budget for FY 19. The proposed building would be approximately 37' X 25' and would be tall enough to drive a forklift into. The building is proposed to be at the WWTP site adjacent to the Vacuum Station E building. It is anticipated that this item will be discussed in February and may be authorized by the Board to be advertised.</p>

**IT**

**Active IT Projects**

Project	Description
<p><b>Continuing Database Services RFQ</b></p>	<p>RFQ to develop, build and support database modules that will facilitate the District's operations was advertised for proposals on May 9, 2018. Deadline to submit proposals was July 16, 2018. Three proposals were received and evaluated by a 5 person committee. There was a public meeting on August 28, 2018 to announce the results. This project was presented to the Board on October 2, 2018 and January 8, 2019. One vendor is currently being negotiated with by GM and IT Consultant.</p>
<p><b>Vac Station I Security Cameras</b></p>	<p>We are starting to install the security camera system at Vac Station I. This is the last vac station that needs cameras installed. The cameras were finished being installed in January.</p>
<p><b>KLWTD Website</b></p>	<p>We started looking for a vendor to redesign and rebuild our website. The main focus of this project to make our website ADA compliant while not losing any functionality. This project was presented and approved by the Board in January.</p>

# Customer Service

**Customer Service Call-Ins**

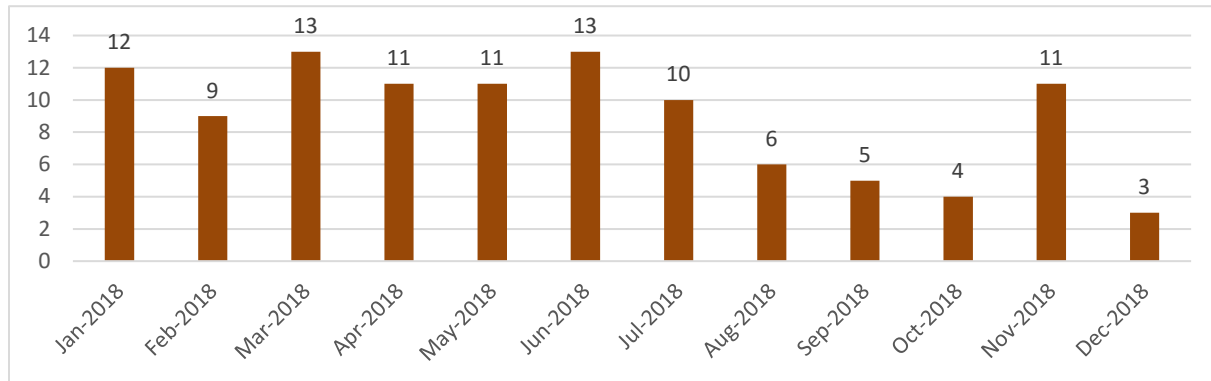
	Total
Approval to Proceed	14
Code Compliance	1
Collections	10
Demo	3
Locates	2
MOD Call	3
Odor	1
Tie-Ins	4
<b>Total</b>	<b>38</b>

**Code Enforcement**

	December 2018	Current Total
Agenda	0	0
Grant	0	2
Deferred	0	1
In Contract	0	13
Final Notice	0	0
Door Hanger	0	1
<b>Code Enforcement</b>	<b>0</b>	<b>47</b>

\*Code Enforcement files are taken to the Monroe County Code Enforcement Department the last week of the month.

**Number of Tie-Ins**



# Budget & Finance

## Current Debt Status

<b>SRF Loan – KLNC01P</b>	\$14,839,281.71
<b>SRF Bonded Loan - KLNC 464010</b>	\$7,409,122.60
<b>BB&amp;T 2013 Bond</b>	\$6,332,843.07
<b>BB&amp;T 2014 Bond</b>	\$6,333,879.42
<b>Current Balance of all loans:</b>	<b>\$34,915,126.80</b>

## Cash Flow

	Deposits	Withdrawals
<b>Wastewater Billing Deposits</b>	\$757,659.72	
<b>Assessment Revenue Received</b> (Non-Ad Valorem & SDC Prepayments)	\$1,696,120.08	
<b>Islamorada Revenue</b>	\$93,139.50	
<b>Interest Income</b>	\$4,316.34	
<b>District Expenditures</b>		\$936,112.32
<b>Payroll</b>		\$108,971.11
<b>Total</b>	<b>\$2,551,235.64</b>	<b>\$1,045,083.43</b>

**FKAA Wastewater Revenue Statistics**

<b>Date</b>	<b>Number of Customers Billed</b>	<b>\$ WW Rev. Received During Month</b>	<b>Date</b>	<b>Number of Customers Billed</b>	<b>\$ WW Rev. Received During Month</b>
<b>Jan. 2017</b>	9,431	708,225.79	<b>Jan. 2018</b>	9,746 9075 Residential 671 Non-Res	\$700,383.90
<b>Feb. 2017</b>	9,422	\$701,345.66	<b>Feb. 2018</b>	9,748 9082 Residential 666 Non-Res	\$731,836.88
<b>March 2017</b>	9,469	\$770,909.62	<b>March 2018</b>	9,760 9094 Residential 666 Non-Res	\$841,530.30
<b>April 2017</b>	9,455	\$721,011.82	<b>April 2018</b>	9,792 9122 Residential 670 Non-Res	\$750,841.91
<b>May 2017</b>	9,479	\$707,089.63	<b>May 2018</b>	9,822 8974 Residential 848 Non-Res	\$716,326.84
<b>June 2017</b>	9,498	\$757,922.07	<b>June 2018</b>	9,785 8935 Residential 850 Non-Res	\$739,474.29
<b>July 2017</b>	9,494	\$715,129.80	<b>July 2018</b>	9,736 8888 Residential 848 Non-Res	\$725,237.60
<b>Aug. 2017</b>	9,511	\$710,629.16	<b>Aug. 2018</b>	9,744 8897 Residential 847 Non-Res	\$762,732.81
<b>Sept. 2017</b>	9,676	\$726,024.58	<b>Sept. 2018</b>	9,746 8901 Residential 845 Non-Res	\$708,046.38
<b>Oct. 2017</b>	9,817	\$687,892.06	<b>Oct. 2018</b>	9,740 8891 Residential 849 Non-Res	\$559,228.99
<b>Nov. 2017</b>	9,756 9087 Residential 669 Non-Res	\$679,991.13	<b>Nov. 2018</b>	Billing report not received as of 1/29/19	\$682,580.47
<b>Dec. 2017</b>	9,738 9071 Residential 667 Non-Res	\$690,237.59	<b>Dec. 2018</b>	Billing report not received as of 1/29/19	\$757,659.72