

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

Meeting Date:
December 15, 2015

Agenda Item Number: M-1

Agenda Item Type:
Information / Presentation

Agenda Item Scope:
Review / Discussion

Recommended Action:
Discussion

Department:
General Manager

Sponsor:
Paul Christian

Subject:
Manatee Bay and Monroe Park Sewer Service Study

Summary of Discussion:

Reviewed / Approved

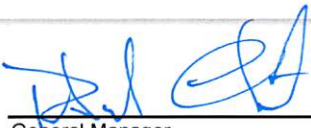
Financial Impact

Attachments

Operations: _____
Administration: _____
Finance: _____
District Counsel: _____
District Clerk: _____
Engineering: _____

\$ 1,999,193.00
Expense
Funding Source:
Assessment Revenue
Budgeted:
No

1. Memo
2. Assessment / Cons. Cost
3. Billing / Ops. Cost
4. Cost Breakdown Total
5. Cost Breakdown R-WWTP
6. Map

Approved By: 
General Manager

Date: 12/11/2015



Key Largo Wastewater Treatment District

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Memo

To: Key Largo Wastewater Treatment District Board of Commissioners

From: Paul Christian, General Manager

CC: Katherine Jackson, District Clerk

Date: December 11, 2015

Re: Manatee Bay and Monroe Park Sewer Service Study

Commissioners,

Per direction at the December 8th, 2015 Board of Commissioners meeting, Staff has reviewed the previously submitted construction and revenue information for providing service to the owners and businesses of Monroe Park and Manatee Bay.

The expected cost to provide a gravity collections system and upgraded regional wastewater treatment facility is approximately \$2M including acquisition of land.

Should the District impose the residence of Monroe Park the same assessment and rates for monthly billing as the rest of our service area, the *estimated* funding summary would be:

Design and Construction		Annual Operation	
Cost	\$ 1,999,193	Cost	\$ 160,312.65
Assessment Revenue	\$ 711,355	Service Revenue	\$ 87,984.84
Total (Net Other Sources)	(\$ 1,287,838)	Total (Net Operating Cost)	(\$ 72,327.81)

The assessment revenue is calculated by using a capacity cost of \$3,270 per EDU and a connection cost of \$2,500 per connection plus a \$1,465.20 per EDU charge for land acquisition. Monthly billing rates are calculated by multiplying \$33.60 per EDU as a base charge plus \$5.27 per 1,000 gallons of usage.

Respectfully Submitted,

Paul Christian
General Manager

Key Largo Wastewater Treatment District
 Estimate of Costs and Revenues
 Manatee Bay / Monroe Park

Estimate of Assessment Revenue

Development Name	Service Address	AK	RE	Connections to Gravity System	EDUs based on 2013- 2015 Water Usage	Total per Parcel Without Location Add-on	Total per Parcel With Location Add-on**
Manatee Bay Marine	99 Morris Ave	1709905	00573090-000000	1	4.3	\$16,561.00	\$22,861.37
Pirate Hat Marina	199 Morris Ave	1709654	00572820-000000	1	2.4	\$10,348.00	\$13,864.48
Pelican Cay Harbor Marina	299 Morris Ave	1709662	00572830-000000	1	6.3	\$23,101.00	\$32,331.77
MM 112 Marina/ Cross Key Marina	599 Morris Ave	1709671	00572840-000000	1	13.1	\$45,337.00	\$64,531.14
Manatee Cove	999 Morris Ave	Multiple (41)		1	41	\$3,330.98	\$4,796.18
Possible Non-Res - 900 Morris	900 Morris Ave	1709697	00572850-000100	1	3.1	\$12,637.00	\$17,179.12
SFR	Morris / Hazel	Multiple (18)		18	18	\$5,770.00	\$7,235.20
Non-Res Marina - 300 Morris	300 Morris Ave	1709891	00573080-000000	1	2.6	\$11,002.00	\$14,811.52
Manatee Bay Condo Club	100 Morris Lane	9035038	00573100-000100	1	45.7	\$151,939.00	\$218,898.71
Totals				26	136.5		
Assessed				\$2,500.00	\$3,270.00	\$5,770.00	\$7,235.20
Anticipated Assmt Revenue				\$65,000.00	\$446,355.00	\$511,355.00	\$711,355.00

Total Project Costs and Funding Sources

Total Project Funding Sources

Base Assessments	\$511,355.00	
Location Assessment Add-On	200,000.00	
		<u>\$711,355.00</u>

Total Project Costs

Total Construction Cost	\$1,635,630.00	
Design and Permitting	73,603.35	
Construction Phase Engineering Services	89,959.65	
Property Acquisition**	200,000.00	
		<u>\$1,999,193.00</u>

Outstanding Project Costs (Cash On-Hand, Grants, Other) -\$1,287,838.00

** Assumes property cost of \$200,000

Attachement 2

Key Largo Wastewater Treatment District
Estimate of Costs and Revenues
Manatee Bay / Monroe Park

Estimate of Annual Billing Revenues

Development Name	Service Address	AK	RE	Estimated Monthly Flow	EDUs based on 2013-2015 Water Usage	Estimated Monthly Bill
Manatee Bay Marine	99 Morris Ave	1709905	00573090-000000	22	4.3	\$260.42
Pirate Hat Marina	199 Morris Ave	1709654	00572820-000000	13	2.4	149.15
Pelican Cay Harbor Marina	299 Morris Ave	1709662	00572830-000000	32	6.3	\$380.32
MM 112 Marina/ Cross Key Marina	599 Morris Ave	1709671	00572840-000000	66	13.1	787.98
Manatee Cove	999 Morris Ave	Multiple (41)		103	41	\$46.84
Possible Non-Res - 900 Morris	900 Morris Ave	1709697	00572850-000100	16	3.1	188.48
SFR	Morris / Hazel	Multiple (18)		26	10	\$47.30
Non-Res Marina - 300 Morris	300 Morris Ave	1709891	00573080-000000	14	2.6	161.14
Manatee Bay Condo Club	100 Morris Lane	9035038	00573100-000100	229	45.7	\$2,742.35
Totals				521	136.5	
Billed Monthly				\$5.27	\$33.60	
Anticipated Billing Revenue (Monthly)				\$2,745.67	\$4,586.40	\$7,332.07
Anticipated Billing Revenue (Annually)				\$32,948.04	\$55,036.80	\$87,984.84

Total Anticipated Annual Revenues and Operating Costs

Anticipated Annual Revenues

Base Units (@ 33.60)	136.5 EDUs Billed	\$55,036.80	
Flow Charges (@ 5.27)	521k Gallons / Month	32,948.04	
			<u>\$87,984.84</u>

Anticipated Annual Operational Costs

Total Plant Operations	\$92,141.12	
Solids Operations	41,144.38	
Collection System Operations	27,027.15	
		<u>\$160,312.65</u>

Total Anticipated Annual Net Gain / Loss **-\$72,327.81**

Monroe Park Gravity System and BAT WWTP vs Pump to KLWTD Cost

#	Description	QTY	Unit	Unit Cost	Total W/O Going into Condos	Pump to KLWTD
1a	8" Gravity Main in Public R/W	2,220	LF	\$85.00	\$188,700.00	\$188,700.00
1b	8" Gravity Main in Manatee Bay Club Condo	2,152	LF	\$85.00		
1c	8" Gravity Main in Manatee Cove Condo	846	LF	\$85.00		
1d	8" Gravity Main in Pirate Hat Marina Condo	318	LF	\$85.00		
2a	Standard Manholes in Public R/W	11	EA	\$6,500.00	\$71,500.00	\$71,500.00
2b	Standard Manholes in Manatee Bay Club Condo	14	EA	\$6,500.00		
2c	Standard Manholes in Manatee Cove Condo	5	EA	\$6,500.00		
2d	Standard Manholes in Pirate Hat Marina Condo	1	EA	\$6,500.00		
3a	6" Laterals in Public R/W	725	LF	\$60.00	\$43,500.00	\$43,500.00
3b	6" Laterals in Manatee Bay Club Condo	1,000	LF	\$60.00		
3c	6" Laterals in Manatee Cove Condo	345	LF	\$60.00		
3d	6" Laterals in Pirate Hat Condo	400	LF	\$60.00		
4a	Cleanout Assemblies in Public R/W	27	EA	\$500.00	\$13,500.00	\$13,500.00
4b	Cleanout Assemblies in Manatee Club Condo	95	EA	\$500.00		
4c	Cleanout Assemblies in Manatee Cove Condo	39	EA	\$500.00		
4d	Cleanout Assemblies in Pirate Hat Marina Condo	8	EA	\$500.00		
5a	6' Diameter Duplex Lift Station, Low Pressure	1	EA	\$250,000.00	\$250,000.00	
5b	6' Diameter Duplex Lift Station, High Pressure	1	EA	\$300,000.00		\$300,000.00
6a	4" Force Main in Park	50	LF	\$65.00	\$3,250.00	\$3,250.00
6b	6" Force Main, US 1	32,660	LF	\$100.00		\$3,266,000.00
6c	6" HDD Channel Crossings	965	LF	\$150.00		\$144,750.00
7	30,000 GPD BAT WWTP	1	LS	\$852,025.00	\$852,025.00	
8a	Asphalt Patching in Public R/W	1,233	SY	\$35.00	\$43,155.00	\$43,155.00
8b	Asphalt Patching in Manatee Bay Club Condo	85	SY	\$35.00		
8c	Asphalt Patching in Manatee Cove Condo	470	SY	\$35.00		
8d	Asphalt Patching in Pirate Hat Marina Condo	0	SY	\$35.00		
8e	US 1 Asphalt Patch	2,041	SY	\$65.00		\$132,681.25
9	Startup, spares & tools	1	LOT	\$20,000.00	\$20,000.00	\$10,000.00
10	Liftstation and WWTP Land Acquisition	1	EA	\$150,000.00	\$150,000.00	
Total Construction Cost					\$1,635,630.00	\$4,217,036.25
Design and Permitting					\$73,603.35	\$189,766.63
Construction Phase Engineering Services					\$89,959.65	\$231,936.99
Project Total					\$1,799,193.00	\$4,638,739.88

Attachment 5

**Cost Breakdown Regional Wastewater Treatment Plant
Per Weiler's report dated 12/11/15**

30,000 GPD WWTP Estimate

Item No.	Description	Units	Qty	Unit Cost	Total Cost
1	WWTP				
1a	Foundation piles, 50'	EA	27	\$2,500.00	\$67,500.00
1b	Foundation Slab, 80' X 20'	SY	178	\$450.00	\$80,100.00
1c	Purchase and Field Erection of .03 MGD WWTP (estimate for RWL Water)	LS	1	\$400,000.00	\$400,000.00
1d	Field coating of RWL WWTP	LS	1	\$65,000.00	\$65,000.00
Subtotal WWTP					\$612,600.00

2	Elevated Equipment Pad				
2a	Foundation Piles, 25'	EA	6	\$1,500.00	\$9,000.00
2b	Sub-grade concrete load-spread pad, 12' X 8'	SY	11	\$350.00	\$3,850.00
2c	Elevated concrete platform, 12' X 8'	SY	11	\$450.00	\$4,950.00
2d	Equipment pads	SY	6	\$150.00	\$900.00
2e	Concrete landing for stairs	SY	2	\$350.00	\$700.00
2f	Handrails	LF	55	\$25.00	\$1,375.00
2g	Stairs	LS	1	\$2,500.00	\$2,500.00
2h	Mount Blowers	LS	1	\$4,500.00	\$4,500.00
2i	Mount Control Panels, Disconnects	LS	1	\$4,500.00	\$4,500.00
Subtotal Equipment Pad					\$32,275.00

3	Electrical				
3a	Power pole and pole-mount transformer	LS	1	\$7,500.00	\$7,500.00
3b	New 208V 3Φ electrid meter box and disconnect	LS	1	\$5,000.00	\$5,000.00
3c	Conduit and wiring to elevated equipment pad	LS	1	\$12,500.00	\$12,500.00
3d	Conduit and wiring to WWTP	LS	1	\$12,500.00	\$12,500.00
Subtotal Electrical					\$37,500.00

4	Chemical Feed System				
4a	Foundation Piles, 25'	EA	6	\$1,500.00	\$9,000.00
4b	Foundation slab, 15' X 15'	SY	25	\$450.00	\$11,250.00
4c	Chemical storage tanks with containment (Dumont provides free tanks)	EA	4	\$0.00	\$0.00
4d	Peristaltic chemical feed dual pump skids	EA	2	\$5,200.00	\$10,400.00
4e	Plumbing of chem tanks to skid	EA	4	\$1,500.00	\$6,000.00
4f	Plumbing from chem skids to tanks	LS	1	\$5,000.00	\$5,000.00
Subtotal Chemical Feed System					\$41,650.00

5	General				
5a	Demolition and removal of existing WWTP and equipmenet	LS	1	\$50,000.00	\$50,000.00
5b	Clearing, grubbing and soils prep	LS	1	\$5,000.00	\$5,000.00
5c	Grading for drainage and retention area	LS	1	\$15,000.00	\$15,000.00
5d	Restoration	LS	1	\$5,000.00	\$5,000.00
5e	Bonds & Insurance	LS	1	\$18,000.00	\$18,000.00
5f	Mobilization	LS	1	\$35,000.00	\$35,000.00
Subtotal General					\$128,000.00

Project Total \$852,025.00

Monroe Park / Manatee Bay

N Number of Proposed Connections Per Property

