



Finance / Boards / Charter Review Committee

Wednesday, September 30, 2020, 10:00 AM
City Hall, Council Chambers
116 First Street, Neptune Beach, Florida 32266

**THE COMMITTEE MEETING WILL ALSO BE HELD
VIA COMMUNICATIONS MEDIA TECHNOLOGY
USING THE GO TO WEBINAR PLATFORM**

Agenda

1. Call to Order
2. Old Business
3. New Business
 - a. Clean Water State Revolving Fund Request for Inclusion - Wastewater System Improvements, Planning and Design
4. Future Business
5. Public Comments
6. Adjournment

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*Council Members in attendance at the Committee Meeting may include:

Chair: Councilor Scott Wiley

Mayor Elaine Brown
Vice Mayor Fred Jones
Councilor Kerry Chin
Councilor Josh Messinger

INSTRUCTIONS FOR THE SEPTEMBER 30, 2020 FINANCE/CHARTER AND BOARD REVIEW COMMITTEE MEETING

This committee meeting will be conducted in Council Chambers with social distancing guidelines being observed. There is also the option of participating virtually as permitted by Governor Executive Order No. 20-69 extended by Executive Order 20-112, 20-123, 20-139, 20-150, 20-179, and 20-193.

The City has adopted Emergency Rules Regarding to COVID-19 to Govern the Operation of Meetings of the City Council and Board of the City of Neptune Beach. Such rules are available from the City Clerk.

You may register to attend the GoToWebinar and view the meeting on your computer or dial in and listen on your telephone by visiting the following link:

<https://attendee.gotowebinar.com/register/4876288299565427983>

TO USE YOUR COMPUTER'S AUDIO:

When the webinar begins, you will be connected to audio using your computer's microphone and speakers (VoIP).

--OR--

TO USE YOUR TELEPHONE:

If you prefer to use your phone, you must select "Use Telephone" after joining the webinar and call in using the numbers below.

United States: +1 (562) 247-8422

Access Code: 933-896-021

Webinar ID: 675-646-835

Attendees joining via computer/smart device can refer to instructions below on how to join the webinar at : <https://support.goto.com/webinar/how-to-join-attendees>

Members of the public may provide written comments in the following manner prior to the meeting.

1. Email to the City Clerk, clerk@nbfl.us, prior to the committee meeting at 10:00 a.m.
2. Fill out the speaker request form located at: <https://www.ci.neptune-beach.fl.us/home/webforms/request-address-council>

Registered webinar participants can also share comments live during the committee meeting, You must request to do this using the "raise your hand" feature during "Public Comment" portion of the committee meeting.

For questions or additional information, please contact the City Clerk's office at (904) 270-2400, ext. 30

In accordance with the Americans with Disabilities Act and Section 286.26, Florida Statutes, persons with disabilities needing special accommodation, including hearing assistance, to participate in this meeting should contact the City Clerk's Office no later than 48 hours prior to the meeting.

**City of
Neptune Beach
Public Services**

2010 Forest Ave • Neptune Beach, Florida 32266 (904) 270-2423 •
FAX (904) 270-2418



September ___, 2020

Tim Banks
Program Administrator
Clean Water State Revolving Fund
Florida Department of Environmental Regulation
Division of Water Restoration Assistance
3900 Commonwealth Boulevard – MS 3505
Tallahassee, FL 32399-3600

**RE: Wastewater System Improvements, Planning and Design
City of Neptune Beach, Duval County
FL0020427**

Dear Mr. Banks:

The City of Neptune Beach is submitting the enclosed CWSRF Request for Inclusion (RFI) for Planning and Design of necessary improvements to the City's Wastewater Treatment and Collection system. The City is currently under a Consent Order for exceedances of the Total Nitrogen TMDL effluent limitation and has hired a consulting engineer to assist the City in preparing a Wastewater Facilities Plan to address the long range wastewater system needs. In addition, the City has excessive I/I, resulting in more than doubling of plant flows during high rainfall periods.

The Wastewater Facilities Plan will be completed in December 2020. The proposed Planning and Design items submitted for the CWSRF Request for Inclusion are based on the preliminary findings of the Wastewater Facilities Plan.

Project Information with a background and description of the wastewater system needs is provided as an attachment to this letter. The Planning and Design work submitted in this RFI is for (1) WWTF design, (2) Sewer System Evaluation Survey, (3) initial mitigation measures (find and fix program), and (4) surveying for proposed collection system projects.

Thank you for your consideration of this CWSRF Request for Inclusion. Please feel free to contact me if you have any questions.

Sincerely,

Stefen Wynn
City Manager

SW/DB
Enclosures



Florida Department of Environmental Protection

REQUEST FOR INCLUSION ON THE CWSRF PRIORITY LIST

Clean Water State Revolving Fund Loan Program
3900 Commonwealth Blvd., MS 3505, Tallahassee, FL 32399-3000

Process to receive a State Revolving Fund (SRF) Loan. The Request for Inclusion (RFI) form, 62-503.900(1), lets us know that you are interested in obtaining a SRF loan. Each RFI will be assigned a project engineer to assist you throughout the SRF funding process.

Project Number:

(Filled in by DEP)

Type of loan applying for: Planning Inflow/Infiltration Rehabilitation Design Construction

1. Applicant's Name and Address Project

Sponsor:

Contact Person:

(street address)

(city)

(county)

(state)

(zip code)

(telephone)

(ext.)

(FAX)

(email address)

Contact Person Address (if different):

(street address)

(city)

(state)

(zip code)

2. Name and Address of Applicant's Consultant (if any).

Firm:

Contact Person:

(street address)

(city)

(state)

(zip code)

(telephone)

(ext.)

(FAX)

(email address)

3. Certification by Authorized Representative: I certify that this form and attachments have been completed by me or at my direction and that the information presented herein is, to the best of my knowledge, accurate.

(email address)

(date)

(name, typed)

(title)

(signature)

4. Eligible Projects.

- a. Stormwater management facilities, such as detention/retention facilities, treatment facilities, etc. sponsored by a local government (eligible under Section 212 of the amended Clean Water Act).
- b. Wastewater management facilities, such as sewers, pump stations, treatment plants, reuse facilities, sludge facilities, etc. sponsored by a local government (eligible under Section 212 of the amended Clean Water Act).
- c. Nonpoint source pollution control best management practices for agriculture, silvaculture, on-site treatment and disposal, wetlands, mining, marinas, brownfields or groundwater protection sponsored by any entity (eligible under Section 319 or 320 of the amended Clean Water Act).

5. Project Information (Please attach).

Describe the project, its location, the scope, why it's needed and the environmental benefit.

Attach maps showing system boundaries, existing and proposed service area, and project area.

6. Estimated Costs (Clean Water Act Section 212, 319, and 320).

- a. Planning and/or SSES _____
- b. Design _____
- c. Special Studies _____
- d. *Eligible Land _____
- e. Construction, Equipment, Materials, Demolition and Related Procurement _____
- f. Construction Contingency (10% of Item e) _____
- g. Technical Services during Construction _____
- h. Sum of Items a. through g. _____

*Funding shall be limited to the fair market value of the acreage of land necessary for and integral to the treatment process, including the zone of discharge. If additional land is purchased, the eligible amount shall be the acreage of land necessary for treatment divided by the total area purchased times the purchase price.

7. Project Schedule.

(Month and Year)

- Submit the planning or SSES documentation _____
- Submit the design documents, obtain permits, and acquire sites (as necessary) _____
- Start activity (such as construction or non-structural best management practice) _____
- Complete activity (such as construction or non-structural best management practice) _____

8. Population

- Population served by the system _____
- Population to be served by the project _____

9. Project Priority

- a. Baseline Priority Categorization.

Identify the category score(s) and construction costs(s) for which the project qualifies. The baseline priority score (BPS) shall be determined by prorating each component.

Project Component	Priority Points	Component Construction Cost
1. Eliminate a documented acute or chronic public health hazard. Examples: Elimination of failing septic tanks or failing package plants or elimination of sanitary sewer overflows.	500 points	_____
2. Implement a project included in, or to be implemented as a direct result of, an adopted Basin Management Action Plan or a Reasonable Assurance Plan approved pursuant to section 403.067, F.S.	450 points	_____
3. Protect surface or ground water by reducing a documented source of pollution, pollution reductions necessary to meet regulatory requirements, or repairs by local governments or on-site system management entities, under section 319 of the Act, that correct septic tank failures in springsheds of first-magnitude springs.	400 points	_____
4. Address a compliance problem documented in an enforcement action where the Department has issued a notice of violation or entered into a consent order with the project sponsor.	375 points	_____
5. Meet the criteria for Innovative/Alternative; correct excessive inflow/infiltration, scheduled rehabilitation, replacement; repair described in an approved asset management plan; or reuse that replaces an existing or proposed demand on a water supply.	350 points	_____
6. Planning and design loans and rehabilitation, replacement or repair not included in an approved asset management plan.	340 points	_____
7. Projects that construct other reclaimed water systems or residuals reuse that do not meet the criteria of component 5. above.	300 points	_____
8. Ensure compliance with other enforceable standards or requirements.	200 points	_____
9. Timely submitted projects that otherwise meet the requirements of the Act.	100 points	_____

b. Restoration and Protection of Special Water Bodies.

In order to qualify for a base score multiplier, identify which of the water bodies listed below that the project will assist in restoring or protecting and reference the location in existing documentation where substantiating information may be found or attach other such substantiating information. If none are selected, the multiplier equals 1.0. If one or more are selected, the multiplier is 1.2.

A priority water body identified in an adopted Surface Water Improvement and Management (SWIM) Plan.

A water body classified as Outstanding Florida Waters.

A water body classified as Wild and Scenic Rivers.

A water body located in a priority watershed established under the Unified Watershed Assessment Program.

c. Projects that document any of the following shall have bonus points added to the priority score after the adjustment under paragraph (a) above, as indicated.

1. Elimination of Ocean Outfalls

15 points

2. Projects that demonstrate consistency with a Water Resource Management plan

15 points

Return the completed form to the State Revolving Fund Program, 3900 Commonwealth Blvd., MS 3505, Tallahassee, Florida, 32399-3000. The form may be scanned and emailed to SRF_Reporting@dep.state.fl.us or may be sent by FAX to (850) 245-2857.

Project Information

City of Neptune Beach

The City of Neptune Beach wastewater collection system and treatment facility serves the citizens and businesses within the city limits, approximately 2.5 square miles. The treated effluent from the plant is disposed through an effluent force main (shared by the cities of Jacksonville Beach and Atlantic Beach) to the Lower St. Johns River, near the mouth of the river at Shermans Point. The receiving stream is classified as Class III Marine Waters, WBID 2213A-within the National Preserve.

The City has hired a consulting engineer through the RFP Process to assist with the long range planning of needed improvements for the wastewater system. The consultant is working with City staff to complete a Wastewater Facilities Plan that will meet the requirements of the State Revolving Fund (SRF) program guidelines. This plan along with the public participation process is expected to be complete by December 2020

Background

Currently, the WWTF is under a FDEP Consent Order for exceedances of the Total Nitrogen TMDL effluent limitation. The WWTF experienced problems meeting the TMDL limitations because of high flows and sand and grit build-up in the IFAS treatment basin. Essentially, the WWTF is comprised of two treatment plants with one treatment plant (Treatment Plant #1) providing advanced treatment with nitrogen removal through an Integrated Fixed-Film Activated Sludge (IFAS) MLE process and the other treatment plant (Treatment Plant #2) providing secondary treatment in a package plant using extended aeration. The IFAS plant has a rated capacity of 0.8 MGD and the extended aeration plant has a rated capacity of 0.235 MGD for a combined permitted capacity of 1.035 MGD.

The City Took the IFAS plant off-line in March 2020 and removed the sand and grit that was impacting the aeration transfer. The City had to wait until the dry season, when there was less likelihood of I/I causing flow spikes to the plant, and rapidly take the IFAS tank out of service and remove the grit that was impairing treatment and causing the nitrogen limits to exceed the TMDL. Subsequent to the grit removal, the permitted nitrogen limits are being achieved. However, additional redundancy and backup capacity is recommended for the advanced treatment Plant #1.

In addition, the WWTF has aging and limited infrastructure in terms of the electrical power available. The entire plant electrical system needs to be upgraded .

Infiltration and Inflow

Excessive I/I flow to the plant is intensifying the problems that led to the Consent Order conditions. During high rainfall periods the wastewater flow to the WWTF more than doubles, exceeding the permitted capacity of 1.035 MGD. These I/I incidents also create conditions that make the City vulnerable to sewer overflows.

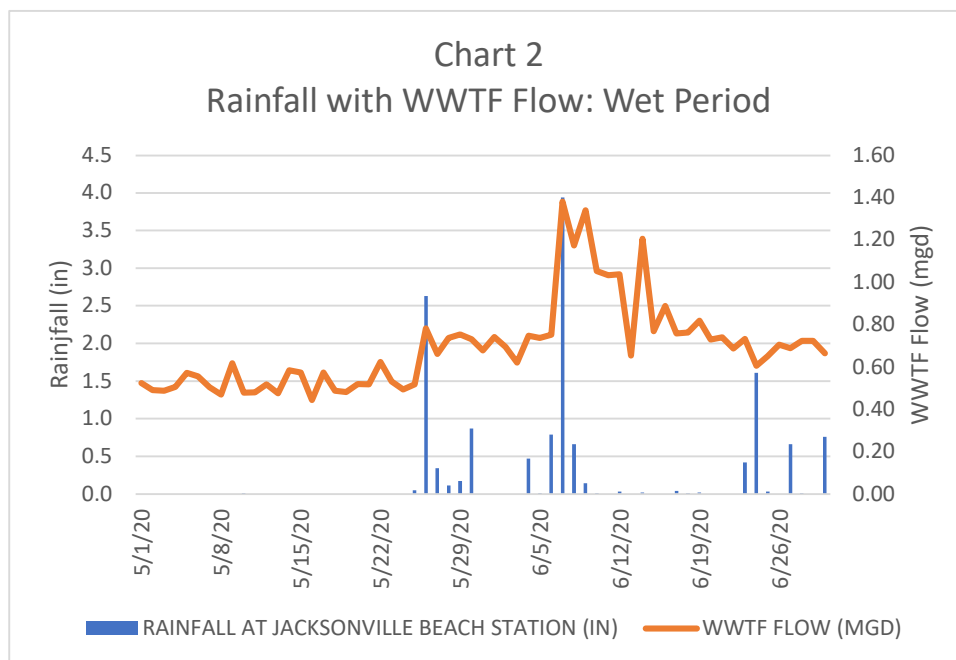
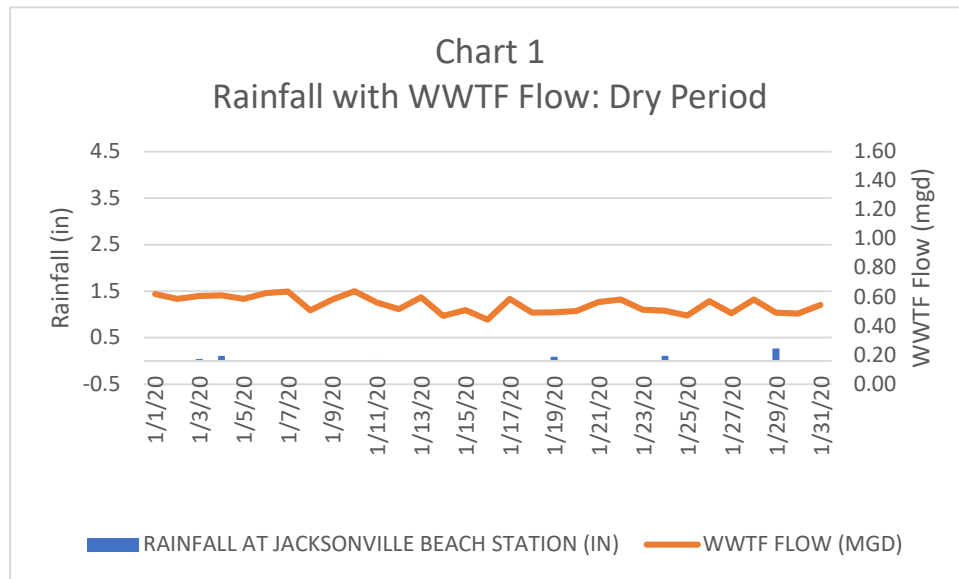
The overall extent of I/I was quantified in 3 ways:

- 1) Wastewater treatment facility flow variations during dry weather month vs. wet weather month
- 2) Wastewater treatment facility inflow per equivalent residential connection (ERC)
- 3) Pump station pumping rate variations during dry weather month vs. wet weather month

As shown in the following sections, each method of evaluation demonstrated a significantly high measure of I/I in the wastewater collection system.

Wastewater Treatment Facility Flow Variations

Charts 1 and 2 show the Neptune Beach WWTF flows with rainfall during the dry period of January 2020 and the wet period of June 2020. As shown on these charts, the flow is relatively constant during periods of no rainfall or very low rainfall. When the rainfall increases, the plant flows more than double. This is disruptive to WWTF operation, especially considering that the WWTF has a surface water discharge.



Wastewater Treatment Facility Inflow per ERC

Table 1 provides the current equivalent ERCs for the Neptune Beach wastewater customers. These equivalent ERCs represent active customers only, vacant customers were not included.

Table 1						
EQUIVALENT RESIDENTIAL CONNECTIONS FOR SEWER FROM BILLING DEPARTMENT METER COUNTS						
	3/4 inch	1 inch	1.5 inch	2 inch	4 inch	Total
EQUIVALENT ERCs FOR METER SIZE	1	2	5	8	25	
Residential Water	3271	114	17			3402
Residential Sewer	3052	92	1			3145
Commercial Water	168	62	24	30	5	289
Commercial Water no Sewer	2			1		3
Commercial Sewer	166	62	24	29	5	286
Total Residential and Commercial Sewer	3218	154	25	29	5	3431
Equivalent ERCs	3218	308	125	232	125	4008

At a WWTF Average Day Flow of 585,000 gpd for July 2019 through June 2020, the corresponding flow per equivalent ERC was 585,000 gpd / 4008 ERCs = 146 gpd/ERC. In contrast, the Maximum Month flow for the same period, which occurred during the high rainfall month of June 2020, was 827,000 gpd, resulting in a flow per equivalent ERC of 206 gpd/ERC. This represents a significant ERC flow occurring during a high rainfall month.

Lift Station Pumping Rate Variations During Wet Weather

Pumping rate variations to individual lift stations between dry months and wet months provide an indication of I/I for specific areas of the City. Table 2 shows the pumping rate to each lift station during January 2019, a dry month, and June 2020. In addition, the Maximum Day Flow for each pump station is shown. The Jacksonville Beach NOAA Weather Station recorded a 4-inch rainfall on June 7, 2020, which corresponds to the Maximum Day Flow on almost every lift station on June 8, 2020.

Table 2							
Dry Month and Wet Month Lift Station Pumping Rates							
Lift Station	Pumping Rate (gpd)				Max Day	Avg Flow % Increase	Max Flow % Increase
	Avg Jan 2020	Max Day Jan 2020	Avg June 2020	Max Day June 2020			
1 Fl Blvd	337,000	426,000	458,207	648,000	8-Jun	36.0%	52.1%
1a 1st St	9,380	13,200	13,117	19,200	14-Jun	39.8%	45.5%
2 Bay	13,240	18,000	33,393	75,600	8-Jun	152.2%	320.0%
3 Oceanwood	12,288	16,560	25,324	46,200	10-Jun	106.1%	179.0%
4 Lighty Lane	9,700	13,200	20,379	39,000	8-Jun	110.1%	195.5%
5 5th St	25,200	46,200	29,400	45,000	8-Jun	16.7%	-2.6%
6 Fletcher	11,980	15,000	13,634	27,600	8-Jun	13.8%	84.0%
7 Bal Harbour	4,876	6,463	13,177	51,702	8-Jun	170.2%	700.0%
8 Leeward Landing	15,060	18,901	23,548	46,948	8-Jun	56.4%	148.4%
9 Penman Terrace	12,240	17,400	18,579	27,600	8-Jun	51.8%	58.6%
10 Summer Sands	10,724	13,740	13,661	20,280	8-Jun	27.4%	47.6%
11 Emma	1,939	2,938	1,803	2,938	8-Jun	-7.0%	0.0%
12 Tara	2,845	4,878	3,175	4,878	17-Jun	11.6%	0.0%
TOTAL	463,627		664,224			43.3%	

As shown on Table 2, almost all lift station pumping rates increased significantly for both Average Day Flow conditions and Maximum Day Flow conditions.

Cost of Infiltration and Inflow

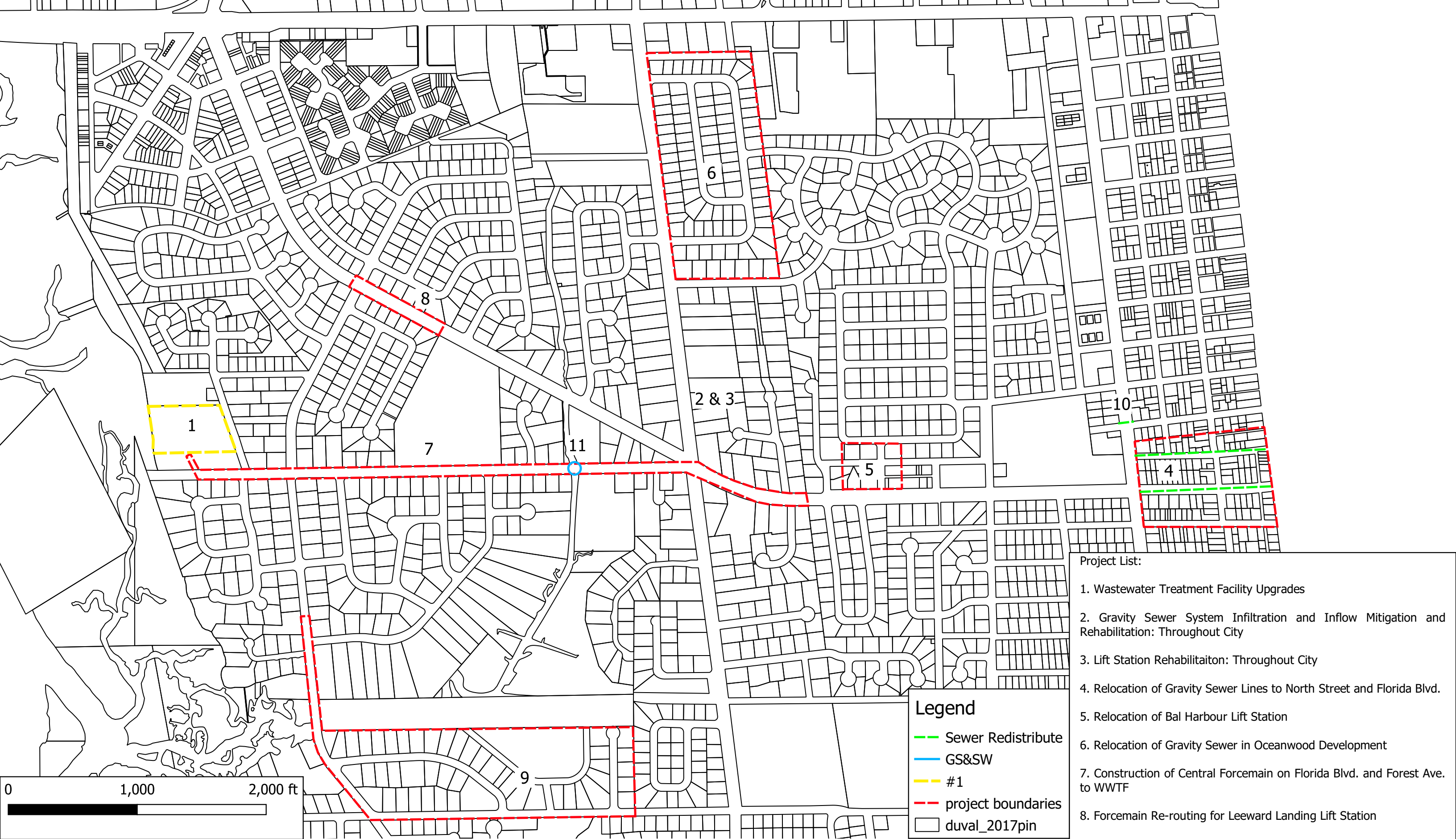
Cost for wastewater collection and treatment per thousand gallons for the City of Neptune Beach can be estimated by using the City's wastewater budget and quantity of wastewater collected and treated. The City of Neptune Beach budget for Sewer Services and Construction for Fiscal Year 2019 was \$2,380,099. The annual average day flow at the Wastewater Treatment Facility reported on July 2020 was 0.590 mgd. The equivalent cost per thousand gallons for the City of Neptune Beach is \$11.05 ($\$2,380,099 / (590 \text{ thousand gallons} \times 365 \text{ days})$).

The cost to the City of additional flow caused by I/I can be estimated by comparing the flows on a high rainfall month versus a dry month. In the past year the highest rainfall month was June 2020, resulting in a plant monthly ADF of 0.827 mgd, a total flow of 24.81 million gallons for the month. The lowest rainfall month was January 2020, resulting in a plant monthly ADF of 0.548 mgd, a total flow of 16.99 million gallons for the month. At a cost of \$11.05 / thousand gallons, this additional flow during the high rainfall month results in additional treatment cost to the City for one month of \$86,400.

Wastewater Facilities Plan

The City is completing a Wastewater Facilities Plan to meet the Wastewater Utility Service needs for the 20-yr planning period. This Facilities Plan is being funded by the City and includes the WWTF improvements as well as the collection system improvements. The Wastewater Facilities Plan will be completed in December 2020. Preliminary planning, design and construction projects and costs in the Facilities Plan are shown on Table 3. These projects are shown on Exhibit 1 and described in the following section.

Table 3		
Proposed Planning, Design and Construction Projects and Costs		
Facilities Plan Project	Wastewater Treatment and Collection System Improvements	Budget Costs
<i>Planning and Design</i>		
	Wastewater Treatment Facility: Surveys, Soils/Geotechnical Reports, Biddable Engineering Drawings, Technical Specifications, FDEP Permit, Site Certification	\$416,000
	Sewer System Evaluation Survey: Smoke Testing, Cleaning and Televising, Midnight Investigation and Manhole Inspections	\$784,000
	Find and fix work to be completed during the smoke testing include Manhole inflow dishes and Cleanout Plugs Where Needed.	\$38,200
	Surveying for Collection System Projects 4,5,6,7,8,9,10 below	\$363,200
	Planning and Design Total	\$1,601,400
<i>Construction</i>		
1	Wastewater Treatment Facility Upgrades	\$5,460,400
2	Gravity Sewer System Infiltration and Inflow Mitigation and Rehabilitation	\$2,871,800
3	Lift Station Rehabilitation	\$2,357,500
4	Relocation of Gravity Sewer Lines to North Street and Florida Blvd	\$602,100
5	Relocation of Bal Harbour Lift Station	\$391,800
6	Relocation of Gravity Sewer in Oceanwood Development	\$1,517,600
7	Construction of Central Force Main on Florida Blvd. and Forest Avenue to WWTF	\$877,500
8	Force Main Re-routing for Leeward Landing Lift Station	\$73,600
9	Wastewater Collection and Treatment for 2 Neighborhoods on Septic Systems	\$421,400
10	Gravity Sewer Line Across Third Street	\$34,000
11	Remediate Gravity Sewer Conflict with Storm Sewer on Forest Ave.	\$1,382,100
	Construction Subtotal	\$15,916,200
	10% Construction Contingencies (unknown / unforeseen events)	\$1,591,600
	Construction Bidding and Award	\$5,000
	Construction Technical Services during Construction for WWTF Construction	\$75,000
	Grant / Loan Administration	\$159,200
	Construction Total	\$17,747,000
TOTAL PLANNING AND CONSTRUCTION		\$19,348,400



- Project List:
1. Wastewater Treatment Facility Upgrades
 2. Gravity Sewer System Infiltration and Inflow Mitigation and Rehabilitation: Throughout City
 3. Lift Station Rehabilitaiton: Throughout City
 4. Relocation of Gravity Sewer Lines to North Street and Florida Blvd.
 5. Relocation of Bal Harbour Lift Station
 6. Relocation of Gravity Sewer in Oceanwood Development
 7. Construction of Central Forcemain on Florida Blvd. and Forest Ave. to WWTF
 8. Forcemain Re-routing for Leeward Landing Lift Station
 9. Wastewater Collection and Treatment for 2 Neighborhoods on Septic Systems
 10. Gravity Sewer Line Across Third Street
 11. Remediate Gravity Sewer Conflict With Storm Sewer on Forest Ave.

Legend

- Sewer Redistribute
- GS&SW
- #1
- project boundaries
- duval_2017pin

Exhibit 1
City of Neptune Beach Wastewater Project Map

1) Wastewater Treatment Facility Upgrades

Proposed WWTF improvements based on the work already completed for the Wastewater Facilities Plan include addition of a new IFAS Stabilization Tank and a new Clarifier, converting a tank to an Anoxic Tank, converting a Digester to a Contact Tank and converting another tank to a Digester with floating aerators. Design documents for these improvements now need to be completed including Surveys, Soils/Geotechnical Reports, Biddable Engineering Drawings, Technical Specifications, FDEP Permit, and Site Certification. Cost for preparation of these documents is being submitted as part of this RFI application.

2) Gravity Sewer System Infiltration and Inflow Mitigation and Rehabilitation

The City of Neptune Beach is experiencing very high Infiltration and Inflow (I/I), which is responsible for sewer overflows and disrupting the WWTF operation and treatment. Some remedial work on areas of the collection system has been completed. This work included pipe bursting as well as pipe and manhole replacement on approximately 24% of the system. In addition, wastewater flows in the City have been rerouted to reduce pressure on overtaxed areas. Even with these extensive improvements, I/I is still a major impact.

For this project, the SSES results will be used to do targeted rehabilitation for high I/I sources. It is initially assumed that this will require lining 30% of the sewers that have not already been pipe burst or replaced and that 50% of the manholes that have not already been rehabilitated or replaced will require cementitious lining and 5% will require fiberglass lining. The results of the SSES will provide more detailed information on the percentage of the system in need of rehabilitation and the costs of this project will be adjusted accordingly.

3) Lift Station Rehabilitation

The City has 13 Lift Stations that need repair and rehabilitation. In addition, the buildings housing the lift stations need to be rehabilitated and are an eye-sore for the City. These lift stations should be converted to submersible stations that would have less maintenance as well as less noise for the neighborhoods closely surrounding them. This project would provide for repair and rehabilitation of 12 Lift Stations and major repairs and rehabilitation of 1 Lift Station (Lighty Lane Lift Station).

4) Relocation of Gravity Sewer Lines to North Street and Florida Blvd

In the area of North Street and Florida Blvd., east of Third Street, there are 6-inch sewer lines behind homes without access for City Maintenance. There are no City easements for the lines leaving it almost impossible for the City to perform maintenance and repair to prevent potential sewer breaks and overflows. This project would replace the existing sewer lines with new 8-inch gravity sewers in the roadway.

5) Relocation of Bal Harbour Lift Station

The Bal Harbour Lift Station is currently located between residential properties with very limited access for City maintenance crews for repairs. This Lift Station is also experiencing very high I/I, with the average day flow increasing from 4,880 gpd Average Day Flow in a dry month to 13,180 gpd in a high rainfall month, almost tripling. Consequently, need for maintenance in this challenging location and opportunity for overflows at the pump station in resident's back yards is especially problematic. This project would relocate the Lift Station and provide a connection between the existing location and the proposed location by directionally drilling the new gravity sewer line.

6) Relocation of Gravity Sewer in Oceanwood Development

The Oceanwood neighborhood is experiencing especially high I/I. The lift station serving that neighborhood almost triples its flow during high rainfall periods, from a Maximum Day Flow of 16,560 gpd in a dry month to 46,200 gpd in a high rainfall month. In addition, the sewer lines in this neighborhood are in back yards, between houses, restricting access for maintenance and repairs. This project would replace the existing sewer lines and manholes with new 8-inch gravity sewers and manholes in the roadways.

7) Construction of Central Force Main on Florida Blvd and Forest Avenue to WWTF

The City's Master Lift Station (aka Florida Blvd) serves the beaches and downtown district and it discharges into a gravity interceptor main on Florida Blvd that flows to the WWTF. This gravity interceptor receives flow from most of the city residents and is at capacity. During severe storm events, the interceptor is surcharges and resulted in sewage overflows.

It is proposed to build a 12-inch forcemain along Florida Blvd and Forest Avenue to the WWTP and to manifold the three lift stations including Florida Blvd, Bal Harbor and Bay St. and to pump directly to the WWTF thereby by-passing the overloaded gravity interceptor.

8) Force Main Re-routing for Leeward Landing Lift Station

This project will re-route the flow from the Leeward Landing Lift station away from the overloaded gravity interceptor on Forrest Ave and to allow this sewage to flow to the City's other interceptor sewer that is not current

9) Wastewater Collection and Treatment for 2 Neighborhoods on Septic Systems

The City of Neptune Beach is essentially built out with utility service available to all the residents. There are two neighborhoods in the southern edge of the City that are still on septic systems. These are in the drainage area and close proximity to Hopkins Creek, which has had excessive fecal coliform problems. Providing sewer service to these neighborhoods would help alleviate a public health concern for Hopkins Creek and the Intracoastal Waterway in that area. This project would provide a gravity sewer system for these neighborhoods.

10) Gravity Sewer Line Across Third Street

A significant portion of the Service Area served by the Florida Blvd. Lift Station is from the area east of Third Street. The sewage flow from this station represented approximately 70% of the total flow from all the City's lift stations during both dry and wet months this past year. Third Street is a high traffic volume road, running north and south through the City. There is only one sewer line crossing under Third Street conveying the sewage from the eastern portion of the City to the Florida Blvd. Lift Station and this sewer is at over 80% capacity.

If there were any breaks or blockages in that gravity sewer line running under Third Street, sewage could not be conveyed away from a large portion of the City resulting in potentially, numerous sewer overflows. Consequently, an additional gravity sewer crossing under Third Street is recommended to provide redundancy and alleviate the flow on the existing sewer line crossing at Third Street.

11) Remediate Gravity Sewer Conflict with Storm Sewer on Forest Ave.

There is a conflict between a gravity sewer and stormwater drainage where Forest Ave. crosses Hopkins Creek. The gravity sewer conflict impedes the flow of water in Hopkins Creek with is the major drainage tributary for the City. The purpose of the project is to improve drainage through Hopkins Creek.