

# North Port Utilities

Neighborhood Expansion

Vacuum Station Property



# North Port Utilities

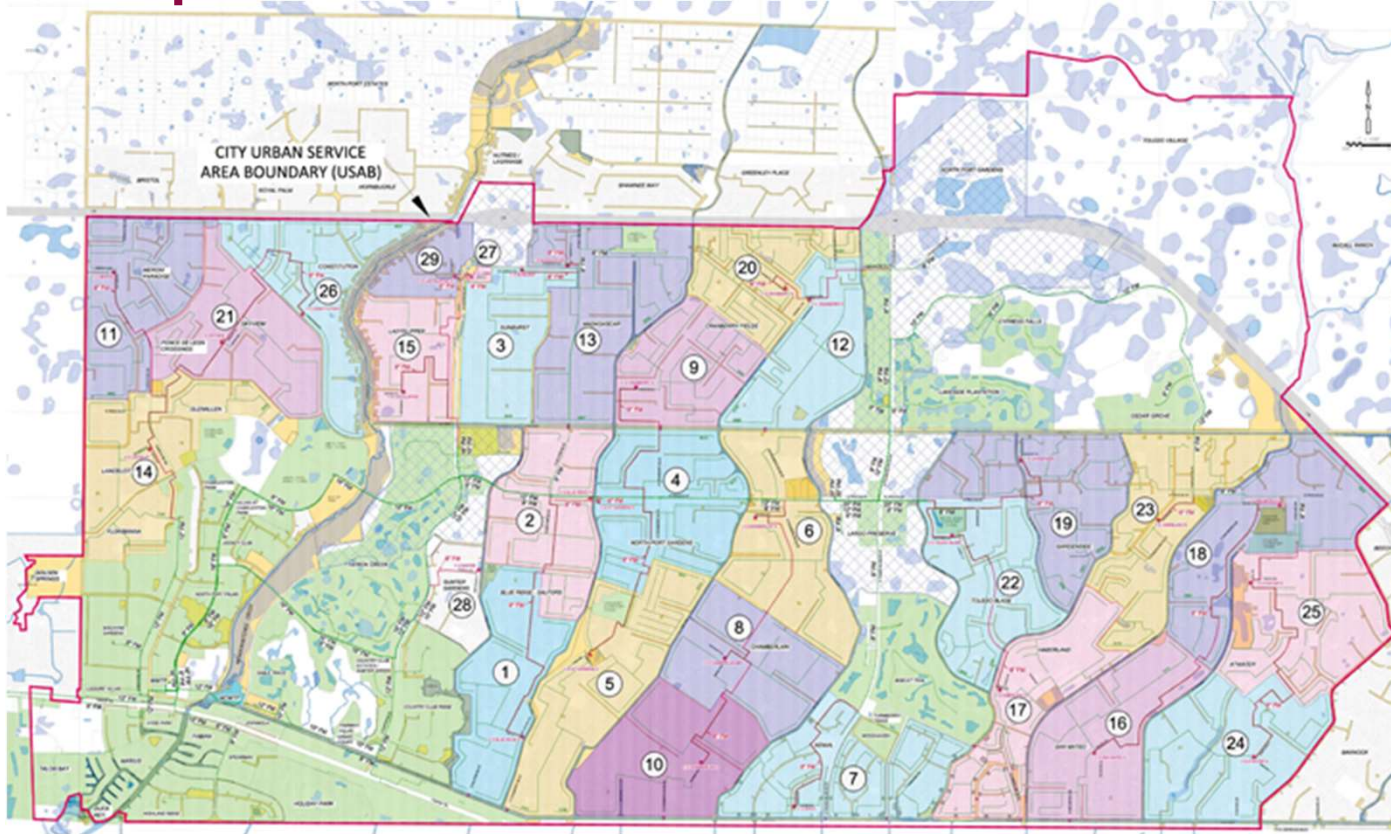
## Master Plan Project Timeline



- December 2020 - Commission approved to move forward with the design of the water/wastewater expansion master plan.
- May 2021 - Utilities received approval from Commission to move forward with the design of Phase I, Blueridge/Salford North.
- December 2021 - Commission determined a maximum cost per existing homeowner of \$5,235 (or current capacity fees and meter fee) to connect to water/wastewater.
- Staff was tasked to establish/modify the ordinance, finance/prepayment options, and a hardship program.
- Upon approval and procurement of the vacuum station property, the design of Phase I can be completed and put out for bid. (Approximately 12 months after property purchase, 3-4 months for bid submissions and award.)

# North Port Utilities

## Municipal Water & Wastewater Master Plan



Phase I  
Blue Ridge-Salford North



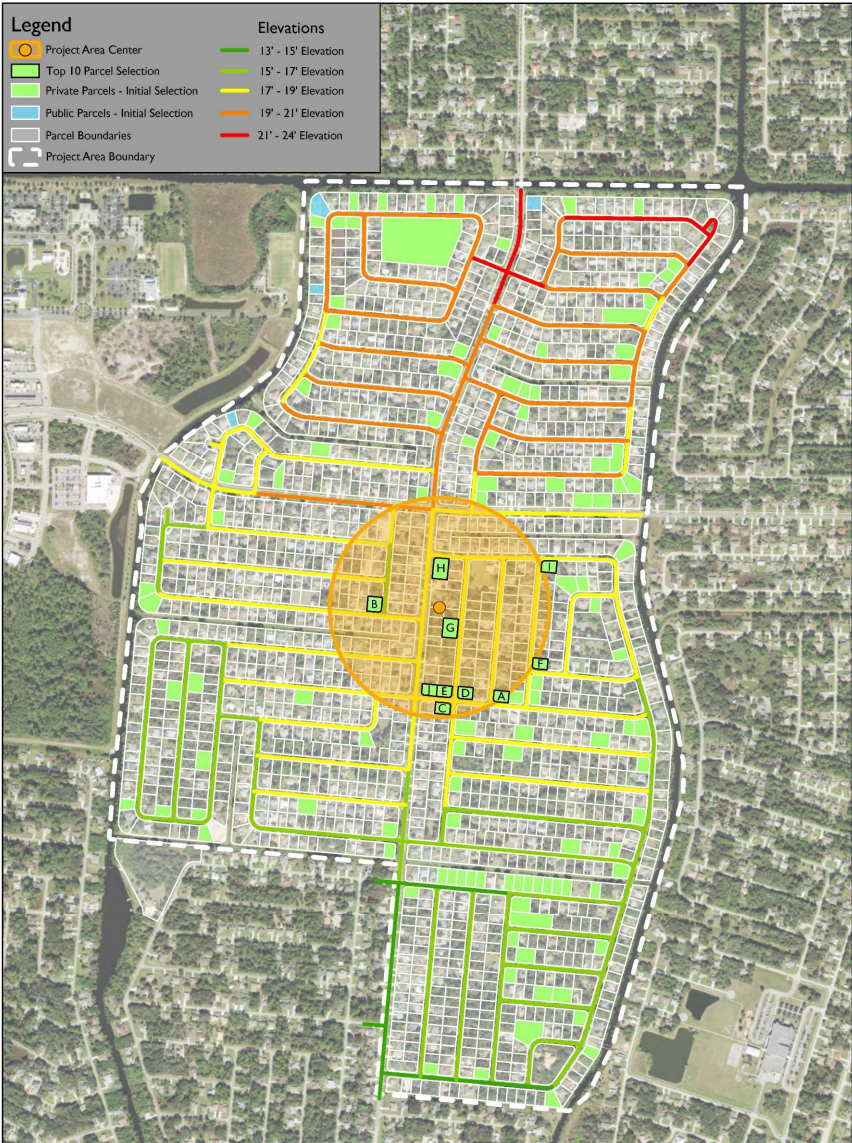
Utilities has developed a long-term master plan for city water and wastewater services throughout the city. The first area identified is the Blue Ridge-Salford North area which is currently under design for city water and wastewater.

[www.CityOfNorthPort.com/WastewaterExpansion](http://www.CityOfNorthPort.com/WastewaterExpansion)

# North Port Utilities

## Vacuum Station Property Acquisition

- 1570 Total Lots
- 558 Currently Vacant
- 10 Parcels out of 558 identified as potential vacuum station locations



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## Vacuum Station Property Acquisition

Parcel	Engineering Score	Weighted Score	Total Score	Rank
G	6	62	68	1
C	4	58	62	2
E	4	56	60	3
D	5	53	58	4
H	7	44	51	5



# North Port Utilities

- Nov 2021 Final Parcel Selection memo received from Kimley Horn
- Nov 2021 Received approval to move forward with negotiation for parcel acquisition
- Dec 2021 Contacted AAG regarding Land Acquisition Services to help with purchase of land
- Jan 2022 Purchase Order for AAG generated
- Feb 2022 Began negotiations with owner of Parcel C
- Mar 2022 AAG and staff developed agreement



# North Port Utilities

## Municipal Water & Wastewater Expansion Recommended Funding Plan

Funding Source	Prior Years										Total
	Funding	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	
Surtax	\$ 2,080,541	\$ 1,303,300	\$ 329,400	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 21,213,241
Utilities Funds				\$ 500,000	\$ 1,000,000	\$ 1,500,000	\$ 2,000,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 12,500,000
Totals											\$ 33,713,241

- \$28.5M - First Sewershed costs estimated at \$28.5 M (based on historical)
- Even assuming an 18% increase, the first Sewershed could still be completed by 2031 based on the recommended funding plan.
- Utilities Funds are intended to come from new construction paying the Line Extension Fee.
- Alternatively, if debt funding is pursued, construction could be drastically accelerated with repayment pledged by these revenues.



# North Port Utilities

## Ordinance Status- (In Legal Review)

- Changing from front footage to Per ERC fee
- Revise Water Line Extension Fee
- Implement Wastewater Line Extension Fee
- Implement 30 year maximum connection payment agreement
- Implement septic tank construction credit
- Clarify new customers must pay the full cost of all fees at time of construction
- Developers will pay proportionate share of cost of grant-funded line extension infrastructure as a Contribution-in-Aid-of-Construction per Developer Agreement
- Developed properties in the Neighborhood Expansion area able to get the Early Connection Incentive (i.e.-pay \$0.00 for Line Extension Fees if they agree to connect in advance of construction proceeding past their property)
- Customer Hardship Program

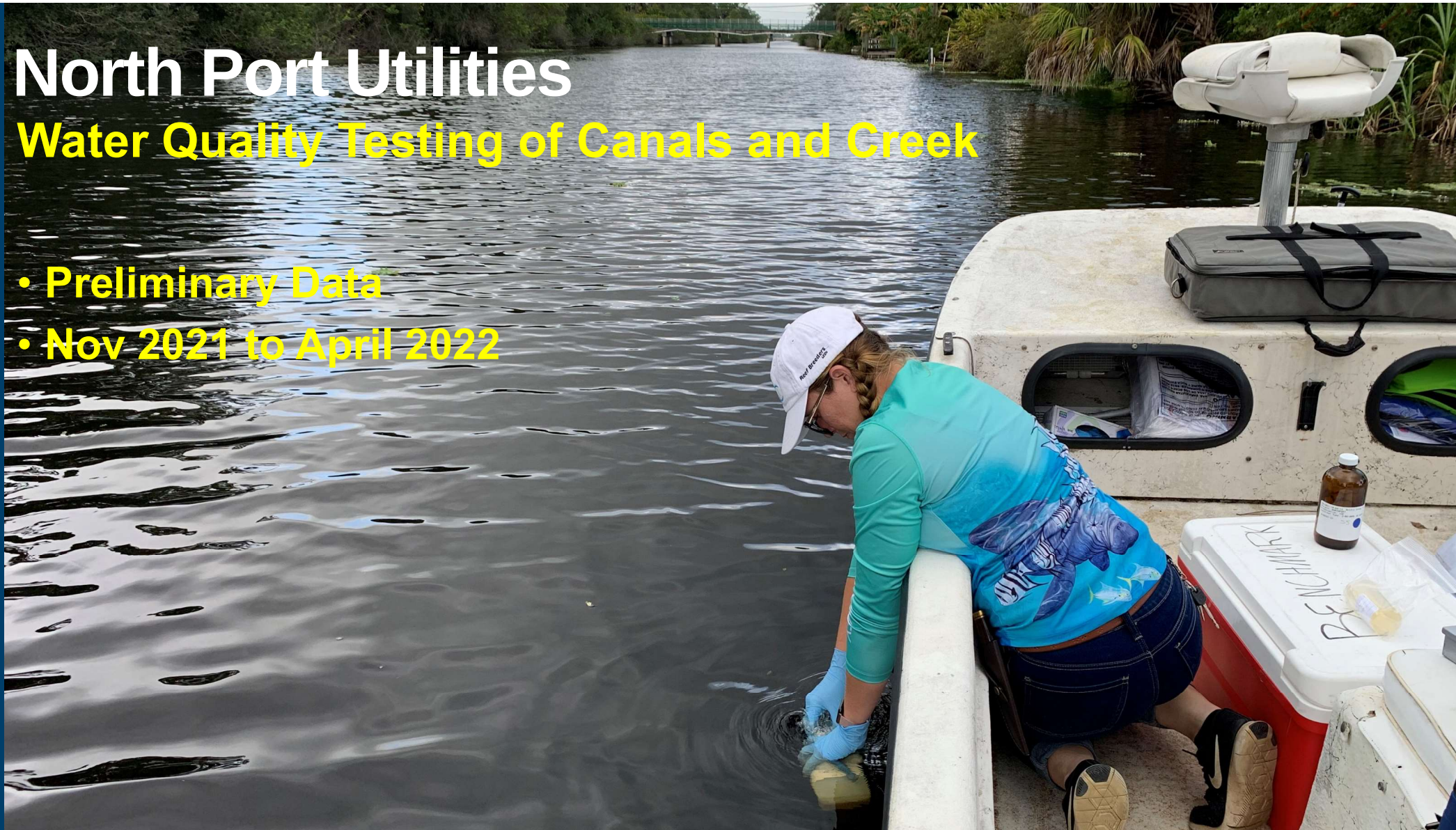


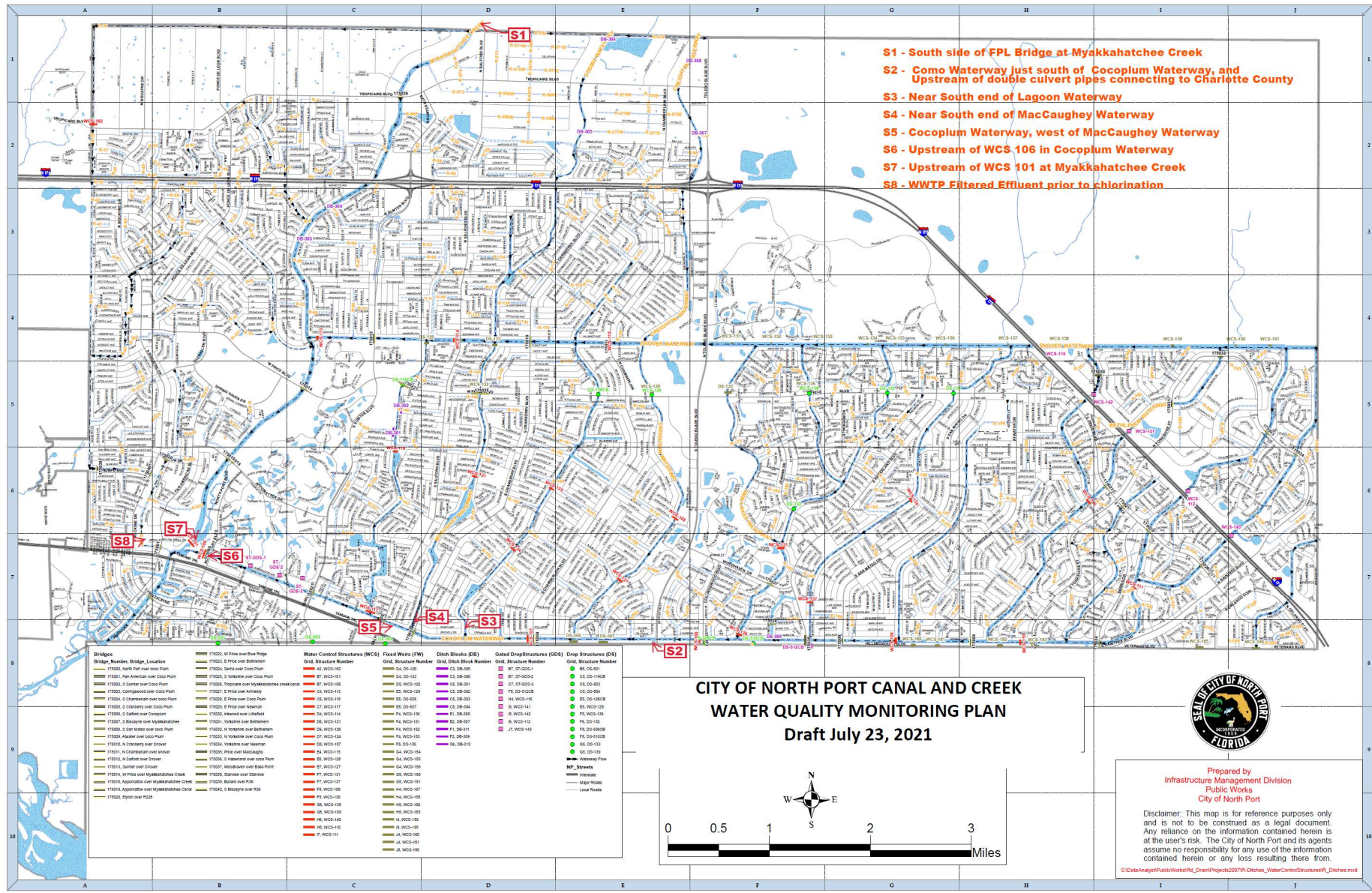


# North Port Utilities

## Water Quality Testing of Canals and Creek

- Preliminary Data
- Nov 2021 to April 2022

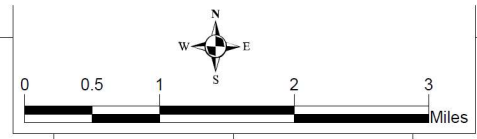




- S1 - South side of FPL Bridge at Myakkahatchee Creek**
- S2 - Como Waterway just south of Cocoplum Waterway, and Upstream of double culvert pipes connecting to Charlotte County**
- S3 - Near South end of Lagoon Waterway**
- S4 - Near South end of MacCaughey Waterway**
- S5 - Cocoplum Waterway, west of MacCaughey Waterway**
- S6 - Upstream of WCS-106 in Cocoplum Waterway**
- S7 - Upstream of WCS 101 at Myakkahatchee Creek**
- S8 - WWTP Filtered Effluent prior to chlorination**

Bridges		Water Control Structures (WCS)		Fixed Weirs (FW)		Ditch Blocks (DB)		Gated Drop Structures (GDS)		Drop Structures (DS)	
Bridge Number	Bridge Location	Grid Structure Number	Grid Structure Number	Grid Structure Number	Grid Structure Number	Grid Structure Number	Grid Structure Number	Grid Structure Number	Grid Structure Number	Grid Structure Number	Grid Structure Number
17300	North Port over Coco Plum	A2, WCS-102	17302, W Prince over Blue Ridge	DA, DS-102	DA, DS-102	DL, DS-102	DL, DS-102	DL, DS-102	DL, DS-102	DL, DS-102	DL, DS-102
17301	North Port over Coco Plum	EA, WCS-101	17303, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17302	E Prince over Coco Plum	EA, WCS-101	17304, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17303	Compass over Coco Plum	EA, WCS-101	17305, E Prince over Coco Plum	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17304	Compass over Coco Plum	EA, WCS-101	17306, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17305	Compass over Coco Plum	EA, WCS-101	17307, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17306	Compass over Coco Plum	EA, WCS-101	17308, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17307	Compass over Coco Plum	EA, WCS-101	17309, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17308	Compass over Coco Plum	EA, WCS-101	17310, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17309	Compass over Coco Plum	EA, WCS-101	17311, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17310	Compass over Coco Plum	EA, WCS-101	17312, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17311	Compass over Coco Plum	EA, WCS-101	17313, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17312	Compass over Coco Plum	EA, WCS-101	17314, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17313	Compass over Coco Plum	EA, WCS-101	17315, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17314	Compass over Coco Plum	EA, WCS-101	17316, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17315	Compass over Coco Plum	EA, WCS-101	17317, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17316	Compass over Coco Plum	EA, WCS-101	17318, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17317	Compass over Coco Plum	EA, WCS-101	17319, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17318	Compass over Coco Plum	EA, WCS-101	17320, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17319	Compass over Coco Plum	EA, WCS-101	17321, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101
17320	Compass over Coco Plum	EA, WCS-101	17322, E Prince over Anway	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101	EA, DS-101

**CITY OF NORTH PORT CANAL AND CREEK  
WATER QUALITY MONITORING PLAN  
Draft July 23, 2021**



Prepared by  
Infrastructure Management Division  
Public Works  
City of North Port

Disclaimer: This map is for reference purposes only and is not to be construed as a legal document. Any reliance on the information contained herein is at the user's risk. The City of North Port and its agents assume no responsibility for any use of the information contained herein or any loss resulting there from.

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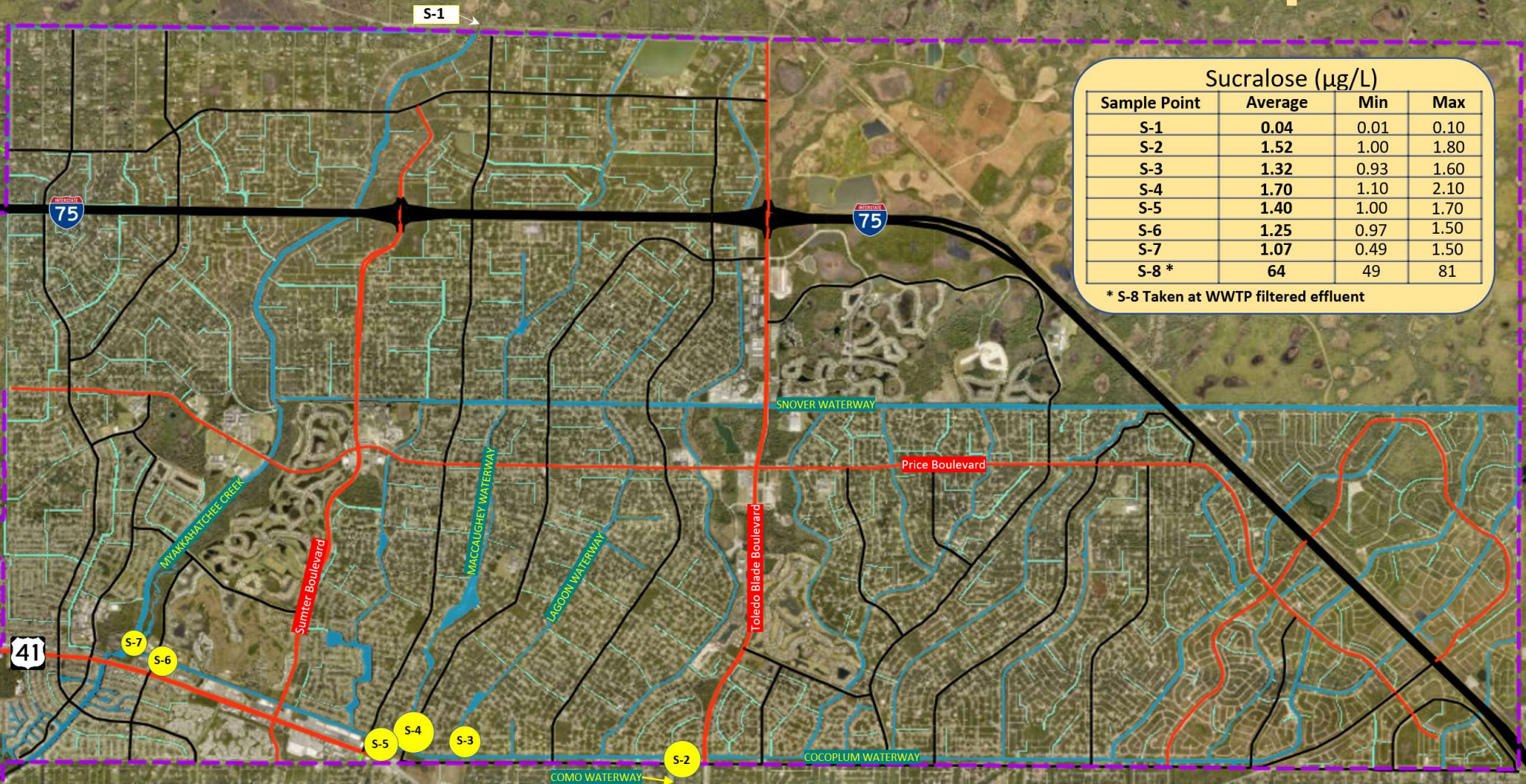
## Canal Creek Water Quality Sampling Program

Commission approved on July 27, 2021, a one-year sampling program.

Parameter	Rationale	Sampling Frequency	Sampling Locations
Ammonia as N	Nutrient pollutant.	1 grab sample per month	S1 through S7
Nitrate, Nitrite as N	Nutrient pollutant.	1 grab sample per month	S1 through S7
Total Kjeldahl Nitrogen as N	Nutrient pollutant.	1 grab sample per month	S1 through S7
Total Nitrogen as N	Nutrient pollutant.	1 grab sample per month	S1 through S7
Ortho Phosphorus as P	Nutrient pollutant.	1 grab sample per month	S1 through S7
Total Phosphorus as P	Nutrient pollutant.	1 grab sample per month	S1 through S7
Chlorophyll a - Pheo Corrected	Indicator of nutrient pollution.	1 grab sample per month	S1 through S7
Escherichia Coli Bacteria (E. Coli)	Bacteria from humans and other warm-blooded animals.	1 grab sample per month	S1 through S6
<b>Sucralose</b>	<b>Sucralose is a tracer that can indicate possible leaching from septic systems</b>	<b>1 grab sample per month</b>	<b>S1 through S7 and S8</b>
Biological oxygen Demand (BOD <sub>5</sub> )	Elevated levels of BOD <sub>5</sub> can indicate possible leaching from septic systems	1 grab sample per month	S1 through S7
Total Copper, Total Zinc	NPDES permit requirement.	Quarterly grab sample	S6 and S7
Total Hardness (mg/L as CaCO <sub>3</sub> )	Needed to calculate the allowable total copper and total zinc concentration	Quarterly grab sample	S6 and S7
Turbidity	Will fluctuate with weather, flow turbulence, any upstream erosion, and any abnormal conditions.	1 grab sample per month	S1 through S7

# Canal Creek Water Quality Results Nov 2021 to April 2022

## Sucralose



Sucralose ( $\mu\text{g/L}$ )			
Sample Point	Average	Min	Max
S-1	0.04	0.01	0.10
S-2	1.52	1.00	1.80
S-3	1.32	0.93	1.60
S-4	1.70	1.10	2.10
S-5	1.40	1.00	1.70
S-6	1.25	0.97	1.50
S-7	1.07	0.49	1.50
S-8 *	64	49	81

\* S-8 Taken at WWTP filtered effluent

## Use of Sucralose as Tracer of leakage from Septic Systems

- [Sucralose](#) is an artificial sweetener commonly known as Splenda, and used as a sugar substitute in products e.g. candy, breakfast bars, coffee pods, and soft drinks.
- Sucralose is man-made, is slowly degraded in nature. It decompose at temperatures  $>246$  °F.
- Only about 2% to 8% of sucralose ingested is absorbed and metabolized in the body. Rest is eliminated in the urine in sewage.
- Sucralose is a good tracer that can indicate leaching from septic systems into the surface waters.

# North Port Utilities

## Next Steps (Dates are Approximate)

- ❖ CIP funding will be reflected in the Commission workshops in June 2022
- ❖ Ordinance likely to be presented before Commission in July 2022
- ❖ Contingent upon approval and procurement of the vacuum station property  
~June/July 2022
  - ❖ Design of Phase I can be completed and put out for bid ~ 12 months after property purchase ~June/July 2023
  - ❖ 3-4 months for bid submissions and award ~Oct/Nov 2023
  - ❖ Construction ~ Spring 2025
- ❖ Beginning 2023 Budget Year – Purchase of five (5) properties for vacuum station sites recommended in next year’s CIP with continued purchases until properties are owned in each of the 29 sewersheds.

