U19NEP
The Neighborhood Expansion Project

January 14, 2019

- Who? – Entire City affected by environmental impacts of a concentration of septic tanks.
- What? – Replace septic and well with City water and wastewater service within the Urban Service Boundary Area (and provide service availability to undeveloped lots).
- Where? – A portion of the Madagascar Zone 28.1 area selected for expansion.
- When? – Design FY18-19 and FY19-20; construction FY20-21 and FY21-22.
- Why? – A concentration of septic tanks can cause contamination of surface and groundwater resources, leading to public health and pollution problems.
- How? – Utilize surtax dollars to finance neighborhood water and wastewater expansion.

Who?

All of the current and future residents of the City of North Port and the downstream regional partners are impacted by surface water and ground water quality.

Environmental impacts of septic tanks for small 80’X125’ lots can cause contamination of surface water and groundwater resources which impacts all types of animal, human, plant and aquatic life.

Other municipalities such as Cape Coral, Charlotte County, Port St. Lucie, Weeki Wachee, and Sarasota County have undertaken similar endeavors.

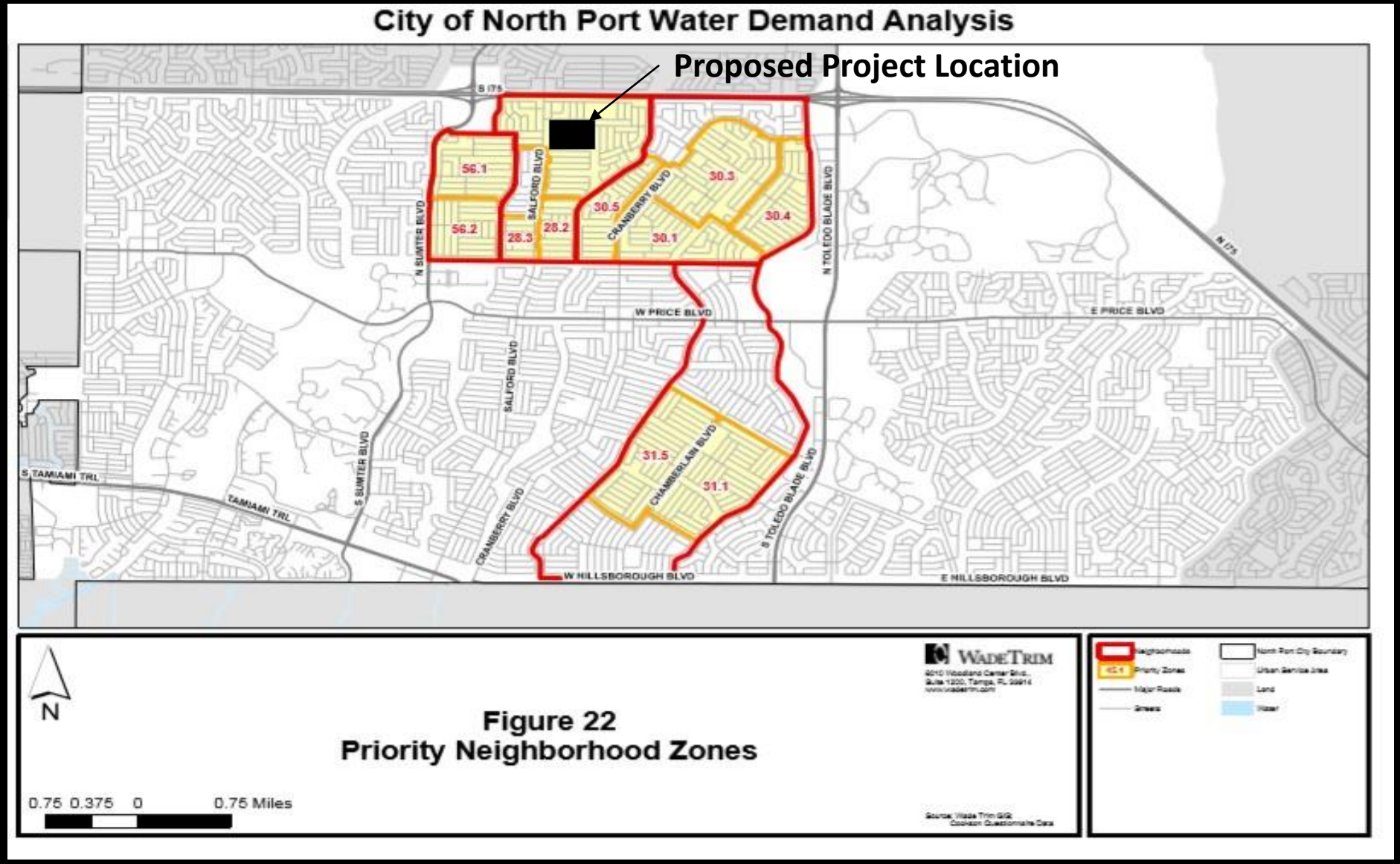
What? - Project Purpose

The purpose of the Neighborhood Expansion project is to meet the City's Strategic Plan to extend water and wastewater service to residents throughout the City in a methodical and economical manner to maximize efficiency and minimize costs.

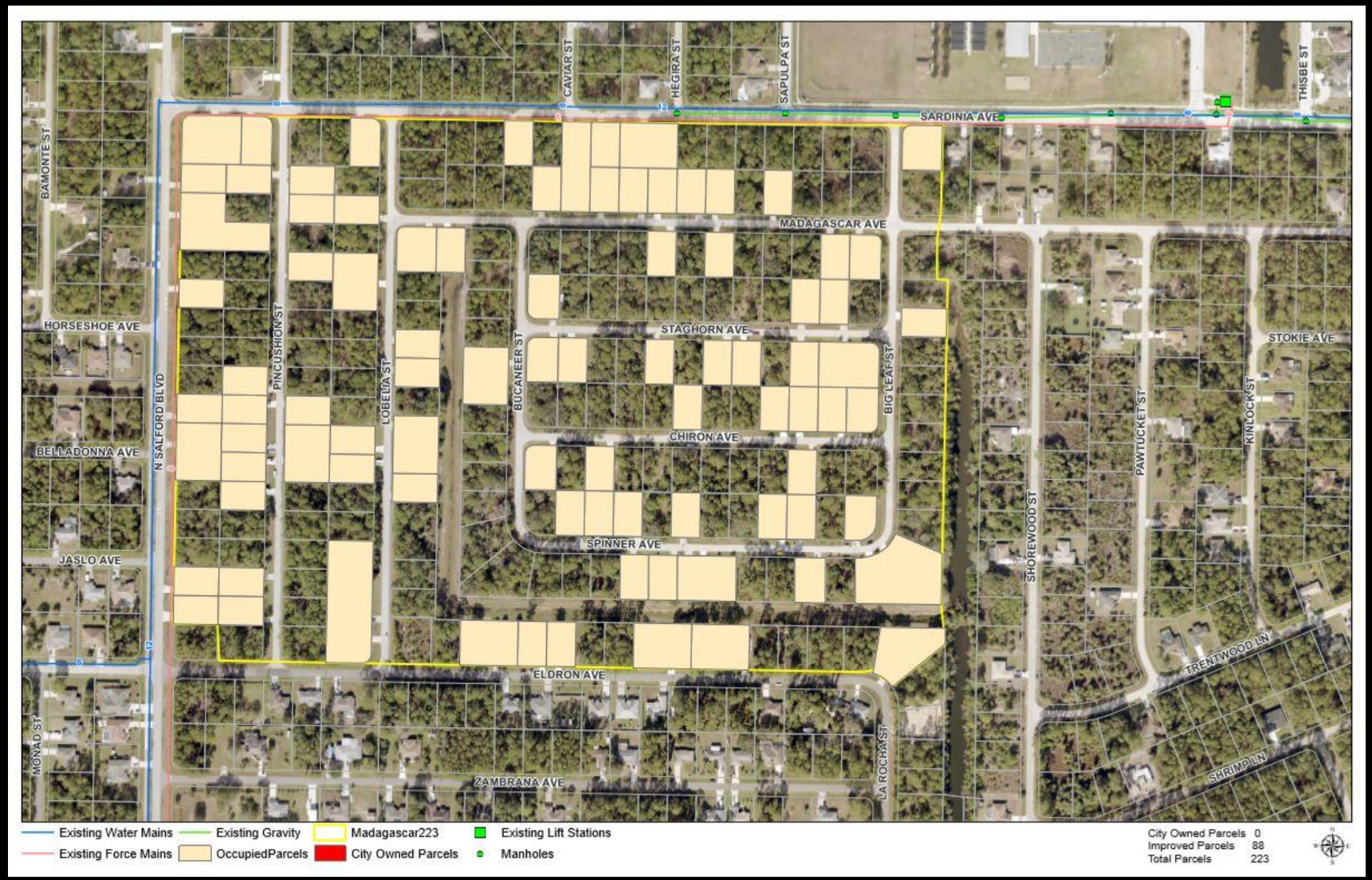
Where?

The current proposed project location is a portion of Madagascar Zone 28.1. Note that this location will be the starting point for bringing both water and wastewater service to residents. Future phases will follow based on available funding.

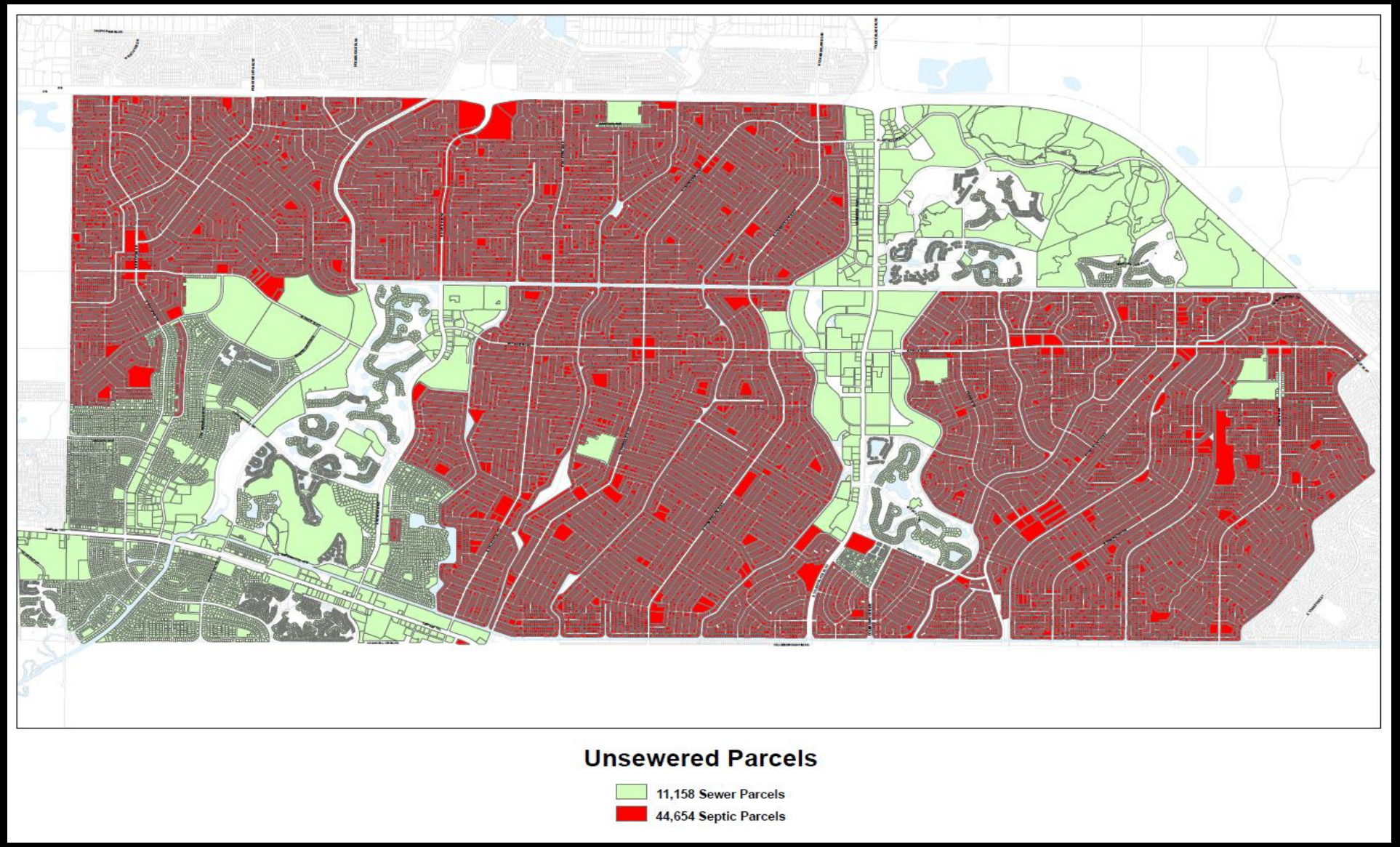
Where? - Priority Neighborhood Zones



Where? - Project Location - Madagascar



Where? – Future Plan - Platted Lots



When?

Available Project Funding

- A portion of the Madagascar Zone 28.1 planned design in FY18-19 and FY19-20; anticipated construction FY20-21 and FY21-22
- Surtax provides funding for Project U19NEP is as follows:

Fiscal Years	Available Funds
FY18-19	$1,492,760
FY19-20	$1,228,000
FY20-21	$1,252,600
FY21-22	$1,277,700
FY22-23	$1,303,300
FY23-28	$6,646,900

- Between FY18-FY22 there is $5,251,060 available and close to $4 million will be needed for Madagascar Zone 28.1 design and construction.
- Over 10 year period, $13.2 million available which could fund approximately 700 lots
- $ 1 billion for 50,000 lots

Why? - If we don't start now, we will have problems in the future.

Septic tank/drain field runoff are major contributor of Nitrogen and Phosphorous pollution that can result in blue-green algae blooms.

Blue-green algae is toxic for both animals and humans, inhibits photosynthesis and negatively impacts the ecosystem, adds toxins to water which reduces water supply for humans and animals.

Septic tanks can lead to soil contamination, as well as foul odors caused by poor maintenance and clogged systems.

Septic tanks are not "free" and require maintenance and replacement over time. Allowing future septic tanks does not support the City's decision to be a sustainable, environmentally conscious, green city or the Strategic Plan to create a safe and healthy environment for residents and visitors.

How? - Project Planning

Two design alternatives for wastewater

- gravity sanitary sewer system
- vacuum sanitary sewer system
- RFP will task the engineering firm to evaluate both vacuum sewer and gravity sewer

Gravity Sewer (current system in the City)

- Transports sewage to lift stations via a non-pressurized pipe system; uses the difference in pipe elevation between two points to move the sewage through the pipe network
- Network of pipes and manholes is much deeper than with a vacuum system
- System includes a series of pipes and manholes that lead to lift stations and ultimately the wastewater treatment plant
- Generally need to reconstruct the existing road to install under the centerline of the road
- System associated with inflow and infiltration over time

Vacuum Sewer (system not currently in the City)

- Uses a differential pressure between atmospheric pressure and a partial vacuum maintained in the pipe network and the vacuum station; wastewater is transported from the vacuum station into a lift station, and then ultimately to the wastewater treatment plant
- Less expensive than gravity and eliminates the need to reconstruct existing roads and roads that were recently paved
- Free of exfiltration and infiltration (i.e. no external leaks and no stormwater infiltration)
- Shallow trenching to install
- No sedimentation due to self-cleaning high velocities
- No odors along the closed vacuum system

How ? - Total Estimated Water and Wastewater Construction Cost $3,000,000.00

Estimated Construction Cost – 223 lots/parcels

	Estimated Construction Cost Per Lot for the 223 lots of in Madagascar Zone 28.1 (includes engineering design fee)
Water	$5,300
Wastewater (gravity system)	$10,500
Total Estimated Cost	$15,800 (funded by surtax dollars)

- Construction costs include items such as mobilization, pipe, fittings, fire hydrants, valves, lift station, road restoration and other items to provide services to which customers can connect.
- Estimated Design Engineering Fee $750,000.00

How? - Estimated Customer Fees

Customer Fees - Wastewater

Wastewater	Amount
Plant Capacity Fees	$2,575
Line Extension Fee	$10,000
Demo/Abandon Septic Tank	$600
Permitting	$125
Total	**$13,300**

Customer Fees - Water

Water	Amount
Plant Capacity Fees	$1,890
Line Extension Fee	$3,500
Meter Connection	$1,150
Lien Recording Fee	$39
Abandon well	$500
Install Backflow Preventer	$300
Permitting	$125
Total	**$7,504**

- TOTAL WATER AND WASTEWATER CUSTOMER FEES = $20,804
- The line extension fee of $13,500 is the only item that can recoup a portion of the construction cost of $15,800.
- The line extension fees and the capacity fees could be paid over time by the customer.

Recommendations

Commission consensus to select the 223 lots/parcels in the Madagascar area for the extension of water and wastewater service as the first phase of an ongoing multi-phase expansion program.

Utilities to issue an RFP for Design Engineering Services. Design during FY18-19 and FY19-20 for estimated $750,000.

Present the Contract for Design Engineering Services to City Commission for approval.

Utilities to prepare an RFB. Contract to construct the water and wastewater improvements during FY 20-22 to City Commission for approval.

Mandatory connection within 365 days in accordance with state statute.

Thank you!

Questions?