

OSTDS Remediation Feasibility Analysis Report

June 2020



**Hernando County
Utilities Department**

JonesEdmunds

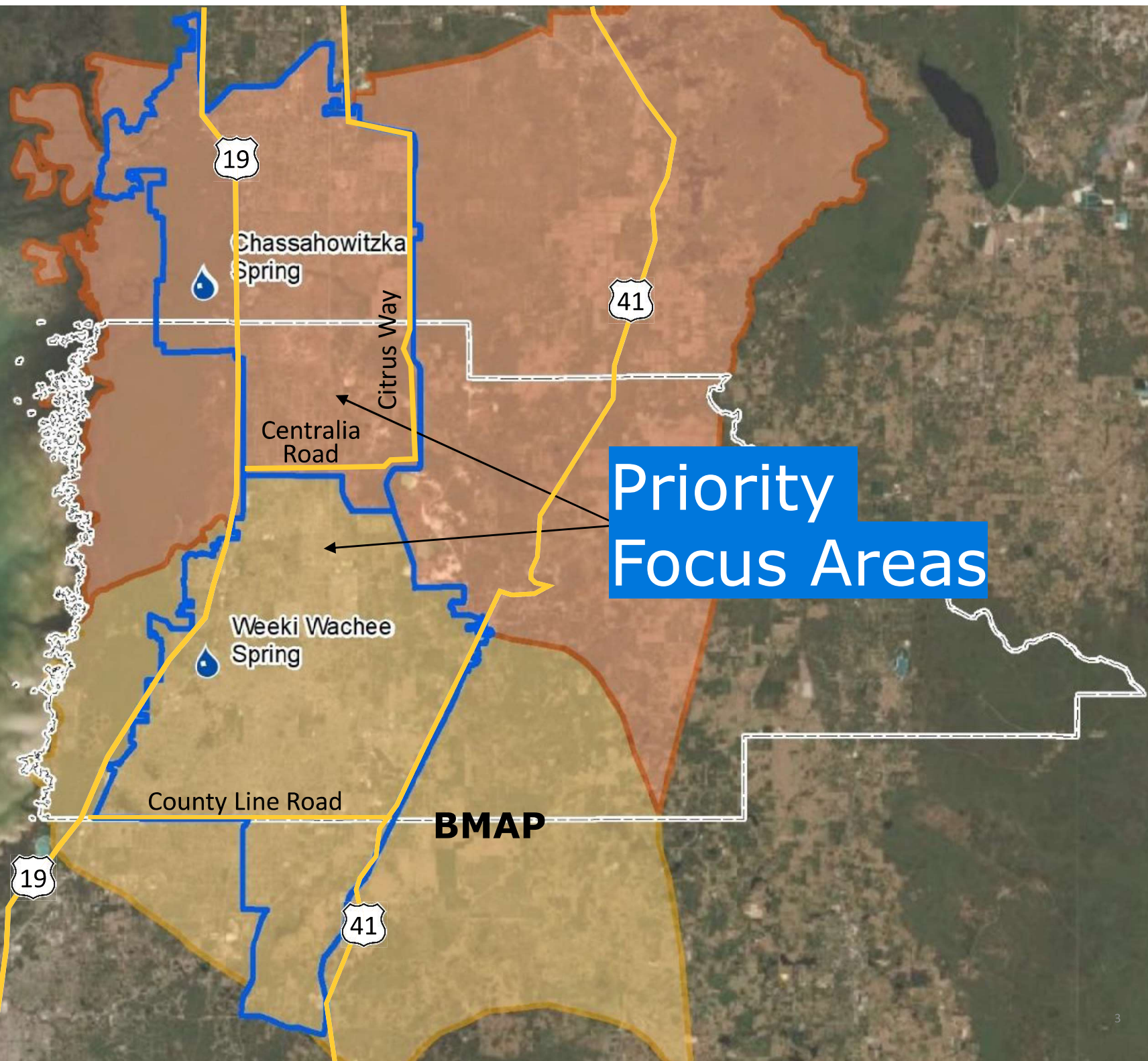
Coastal Engineering
Planning
Surveying
Environmental
Transportation
Construction Management
engineering associates inc.

Florida Springs and Aquifer Protection Act

July 2016 - Governor Signed into Law Actions Mandated by Senate Bill 552

- Must establish Priority Focus Areas (PFAs) and Septic Tank Remediation Plans for all Outstanding Florida Springs
- Remediation Plans required for PFAs with greater than 20% nitrate contribution from septic systems





19

Chassahowitzka Spring

41

Citrus Way

Centralia Road

Priority Focus Areas

Weeki Wachee Spring

County Line Road

BMAP

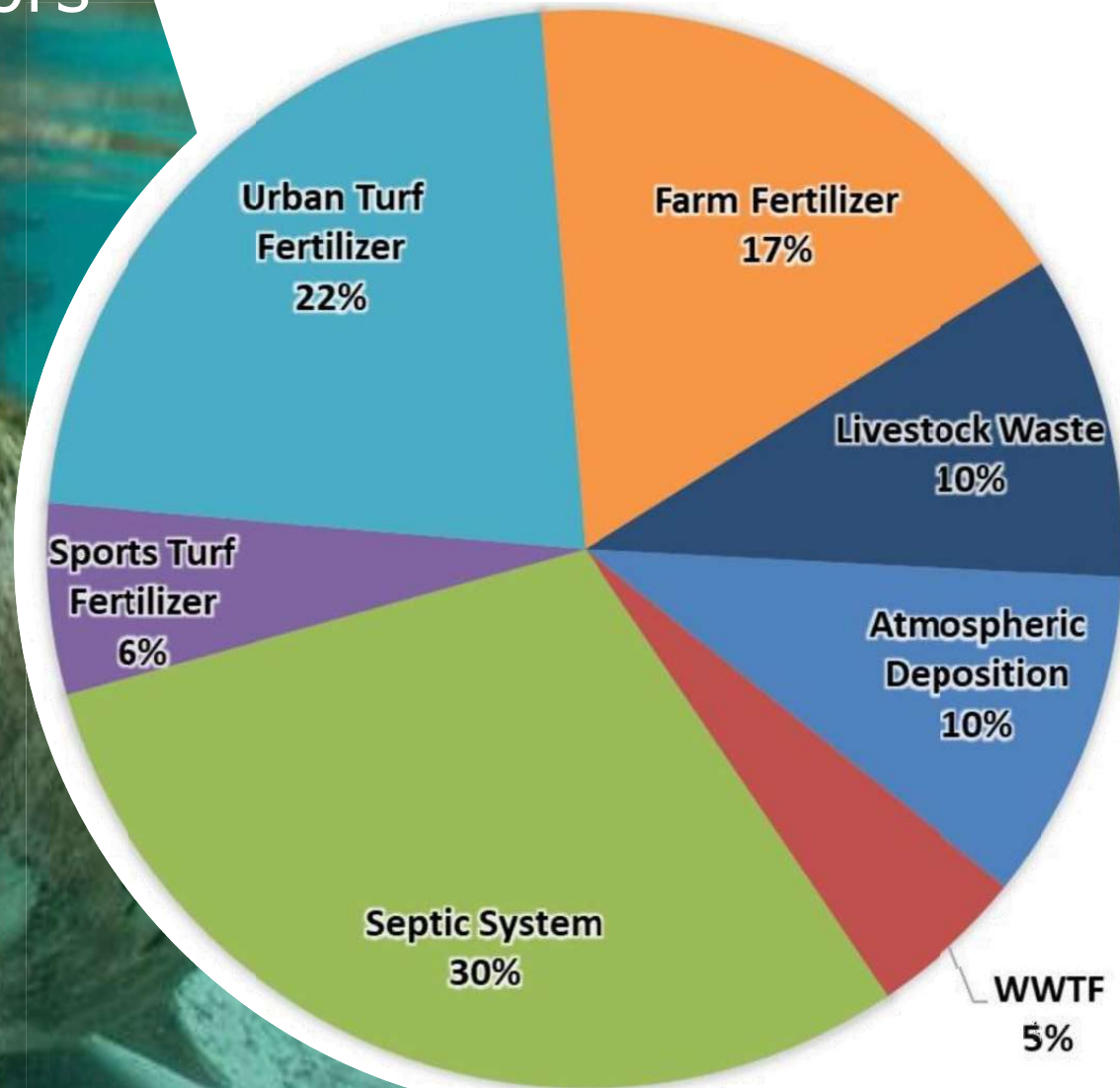
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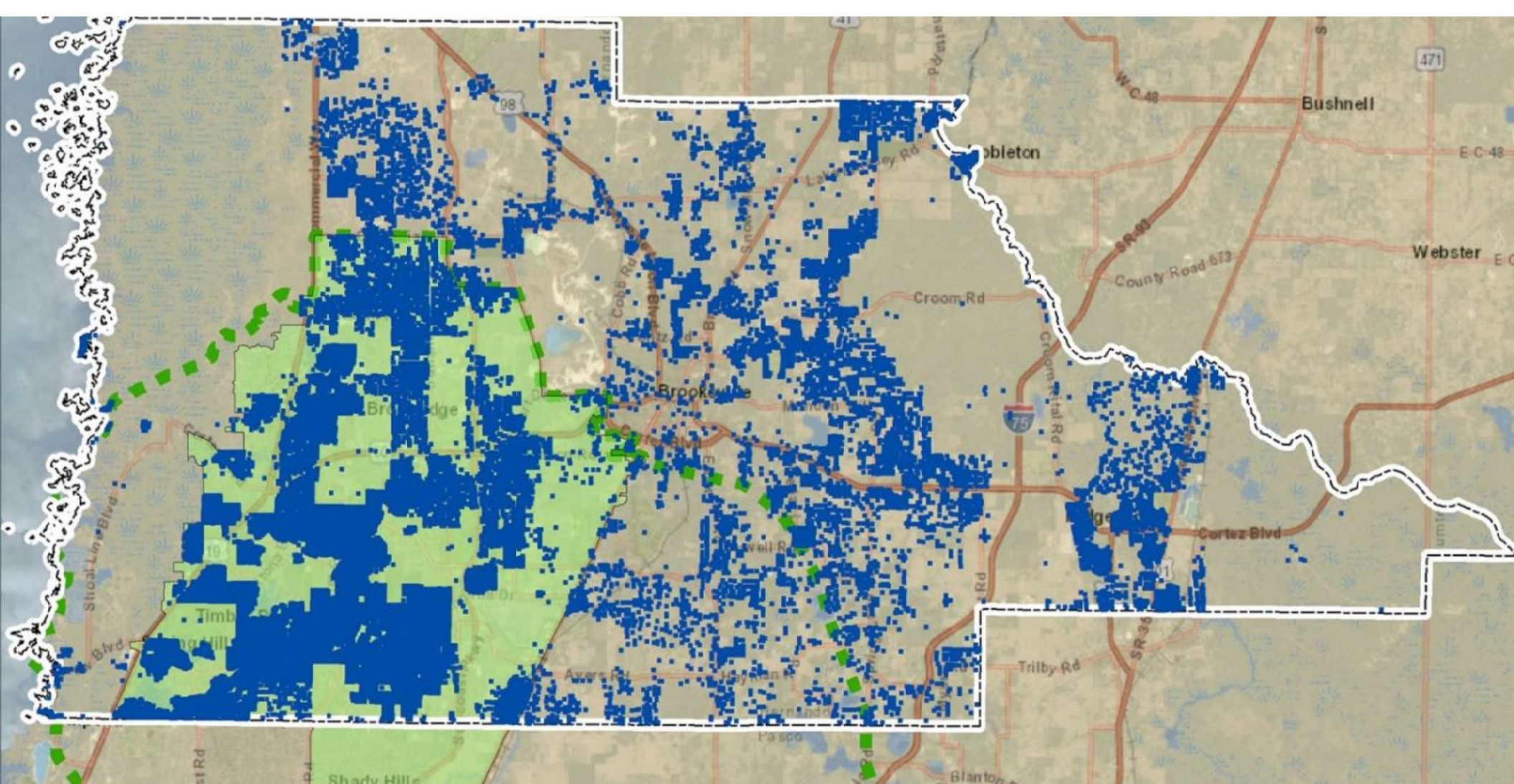
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Weeki Wachee Springs

Major Nitrogen Contributors

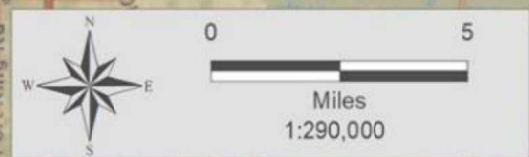
- Septic Systems (30%)
- Urban Turf Fertilizer (22%)
- Farm Fertilizer (17%)



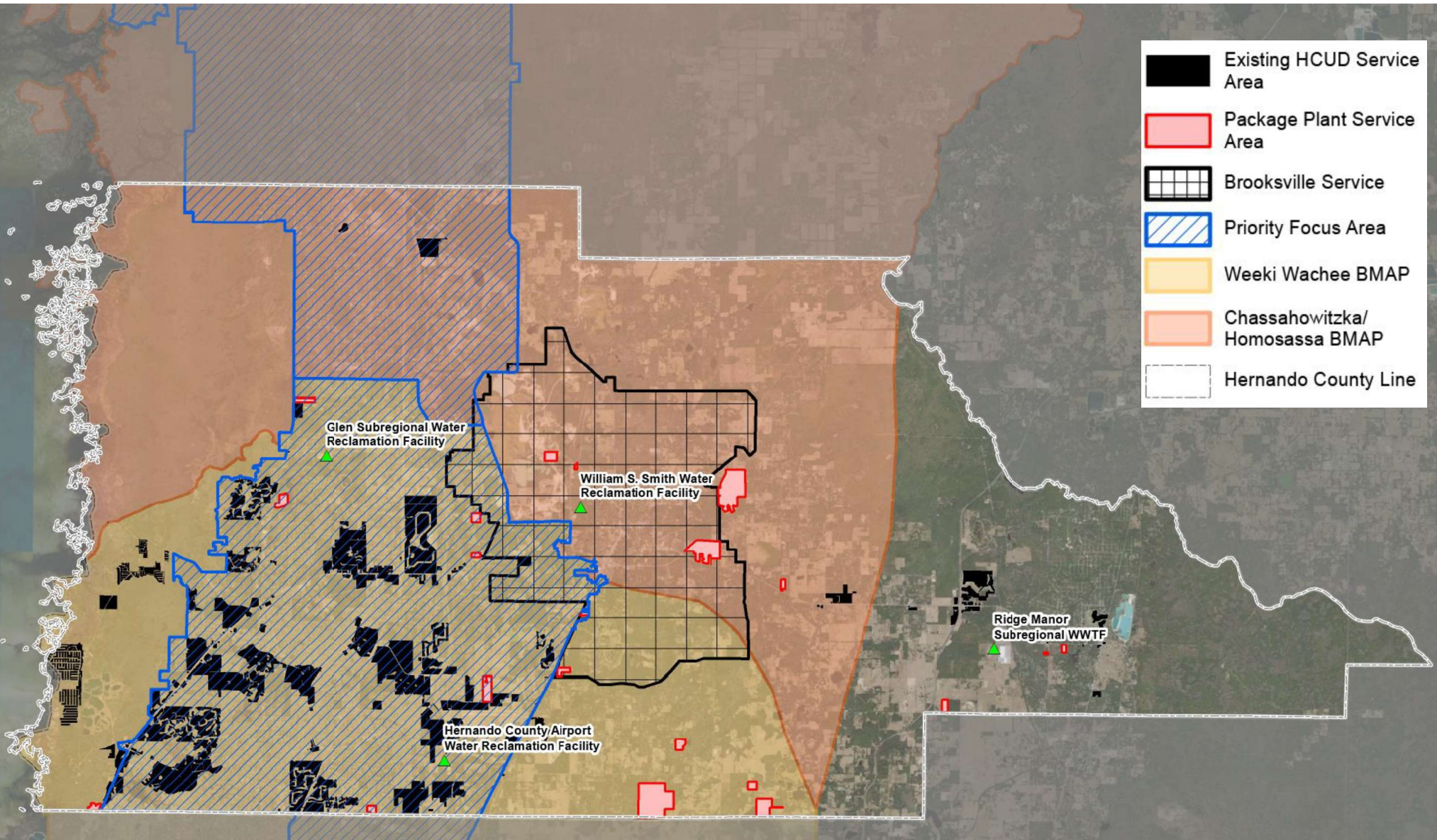


35,912 Septic Tanks in the Priority Focus Area

- Hernando County Septic Systems
- ▭ Hernando County Line
- ▭ Weeki Wachee PFA
- ▭ Weeki Wachee BMAP



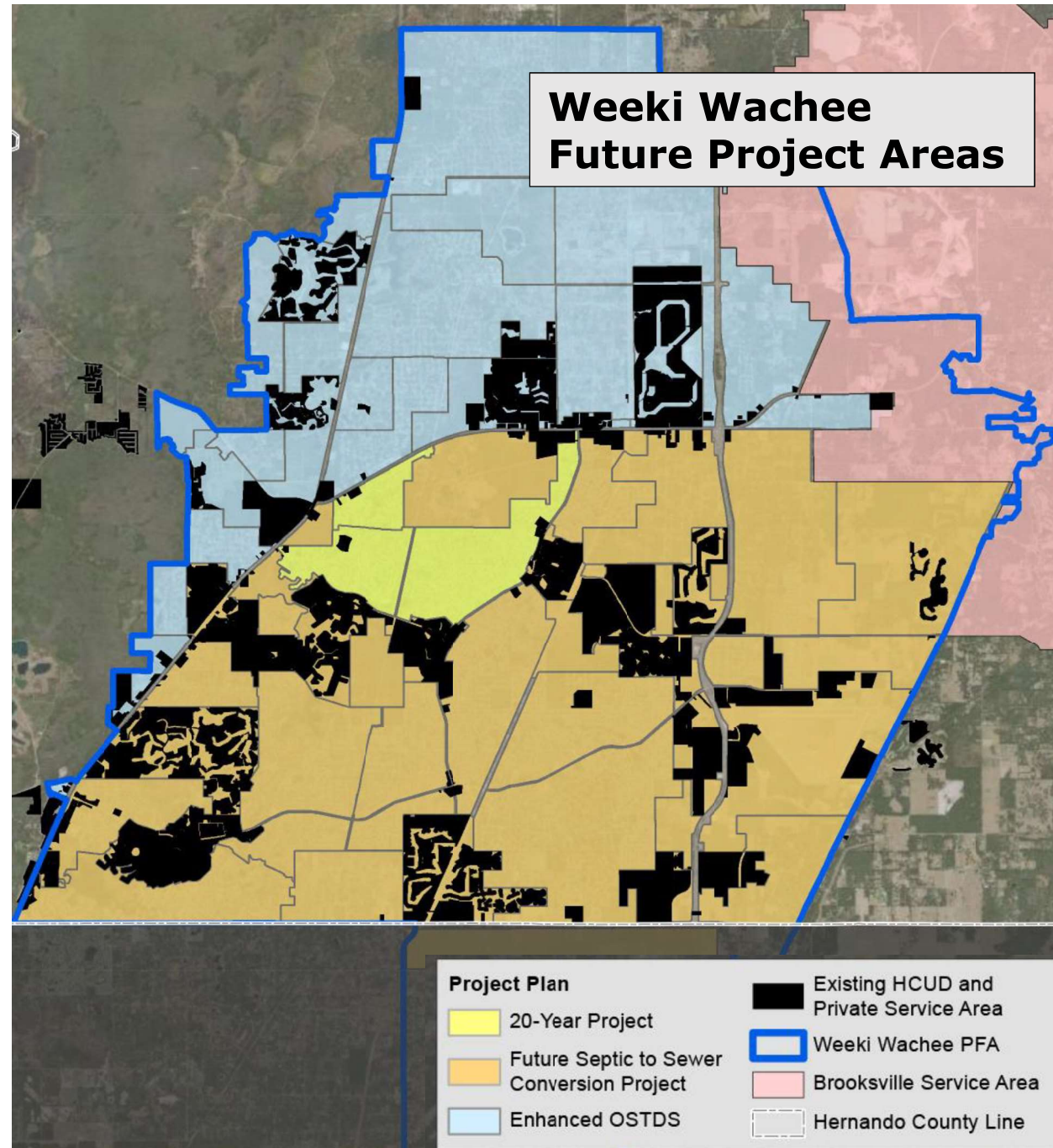
Existing Wastewater Infrastructure



Wastewater Collection and Treatment Facilities

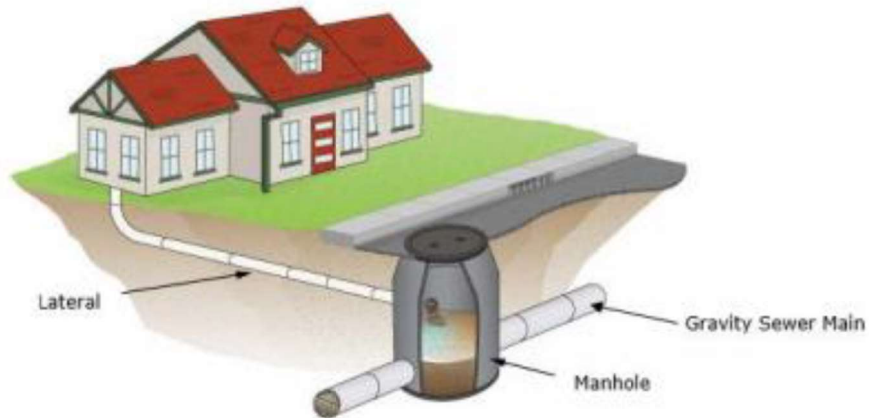
Weeki Wachee PFA - Wastewater Infrastructure Needed to Meet Remediation Requirements

- Septic Tank Nitrogen Loading in Weeki Wachee PFA = 156,000 lb-N/yr
- 20-year Projects Identified for Septic Tank Remediation in the PFA = reductions of 48,707 lb-N/yr (30%)
- Future Project Areas in the PFA w/out Centralized Sewer will use Enhanced Septic Systems (Enhanced OSTDS) for New or Replacement

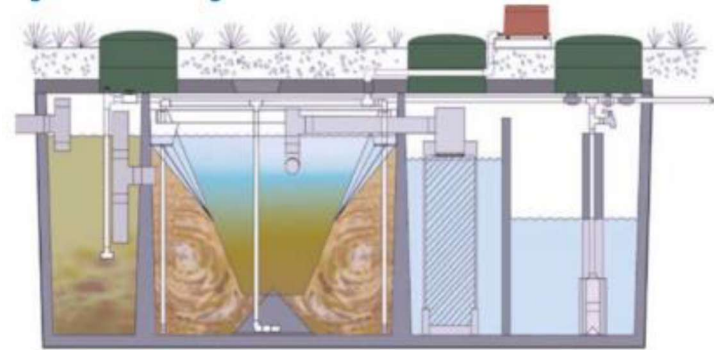


Evaluation of Remediation Alternatives

Gravity Sewer to Centralized WWTP



Nitrogen Removing - ATU

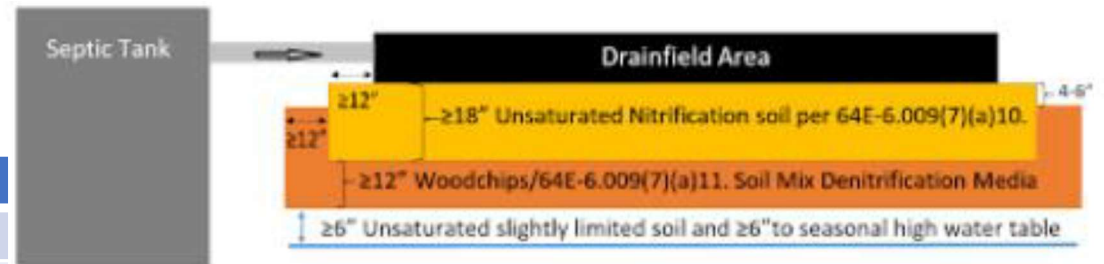


In-ground Nitrogen Reducing Biofilter

Total Cost Evaluation of Alternatives

Costs	Gravity Sewer	ATU	Biofilter
Construction Cost	\$30,000	\$15,200	\$14,000
O & M Costs	\$15,901	\$18,458	\$2,184
Replacement Cost	\$337	\$29,174	\$38,472
Connection Fees	\$3,544	-	-
Interest	\$2,856	\$1,520	\$1,400
Total Present Worth Cost	\$49,782	\$62,832	\$54,656

Gravity Sewer is Recommended Alternative for Selected Study Areas



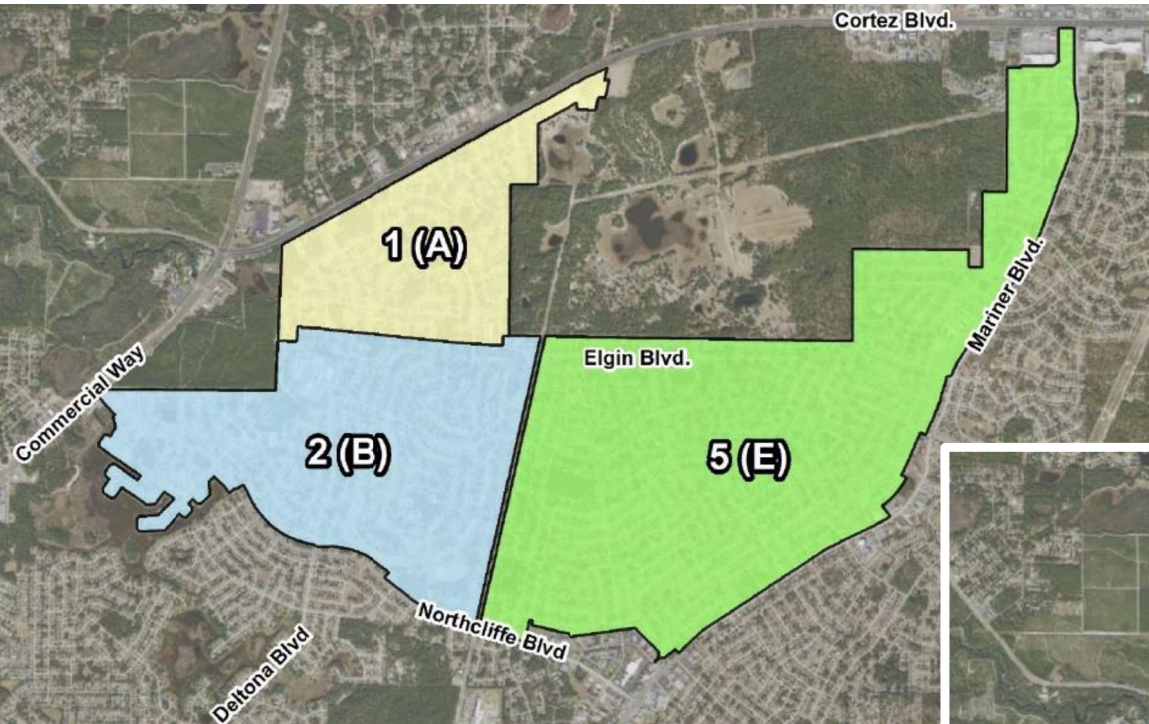
Dispersed – ATU (Private/Public Managed)



Study District Prioritization and Selection and Recommended Alternative

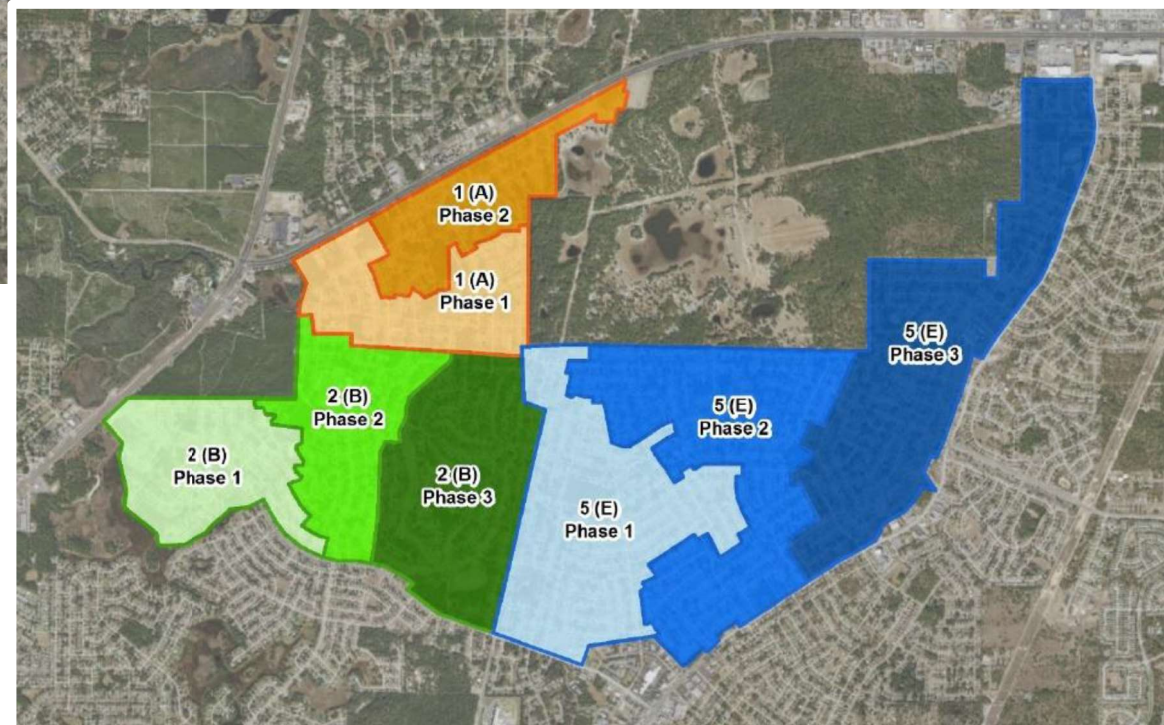
Gravity Sewer Summary of Costs

District	Parcels	Estimated Costs
A	927	\$26,500,000
B	1,372	\$39,225,000
E	4,189	\$119,600,000



Three Selected Study Districts

Selected Projects Phasing



Costs & Potential Funding

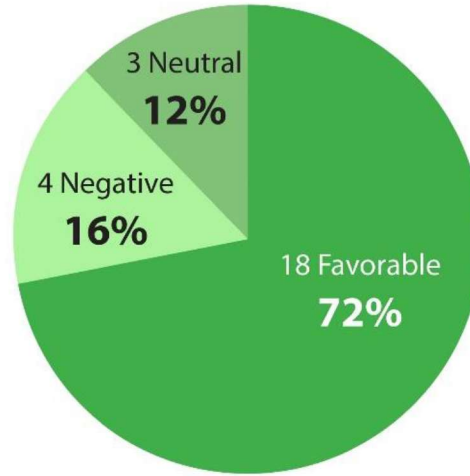
Item	Cost
Estimated Cost per lot	\$30,000
Anticipated Grant Offsets	\$25,500 (85%)
County Contribution	\$1,500 (5%)
Estimated Cost to Resident	\$3,000 (10%)

- Potential funding for construction of the improvements is dependent on receiving **85% outside funding**.
- Objective - identify the lowest-cost options available to the County to fund the infrastructure to minimize the economic impact to the customer.
- Comments received during the Public Outreach Meeting held for District A indicated that the affected property owners generally support the centralized sewer program and that an estimated cost per property of \$3,000 would be reasonable.

Public Outreach Program Area A

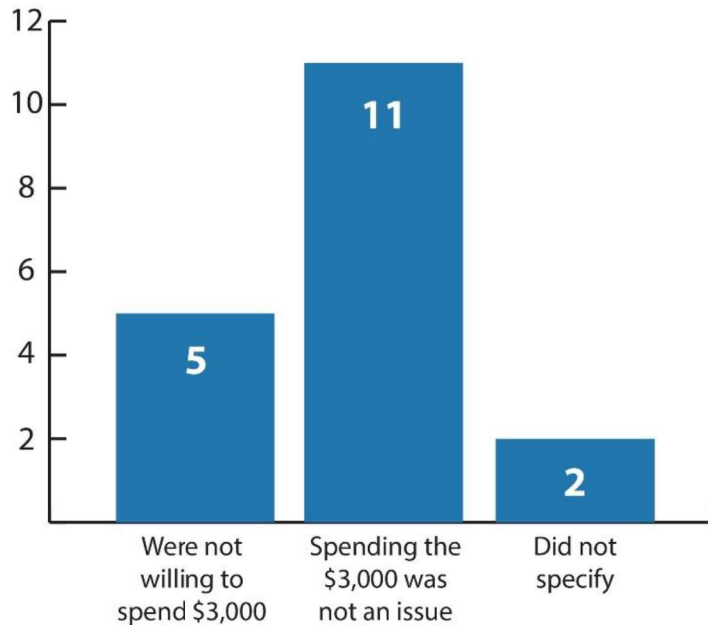


Response of Attendees who Left a Comment

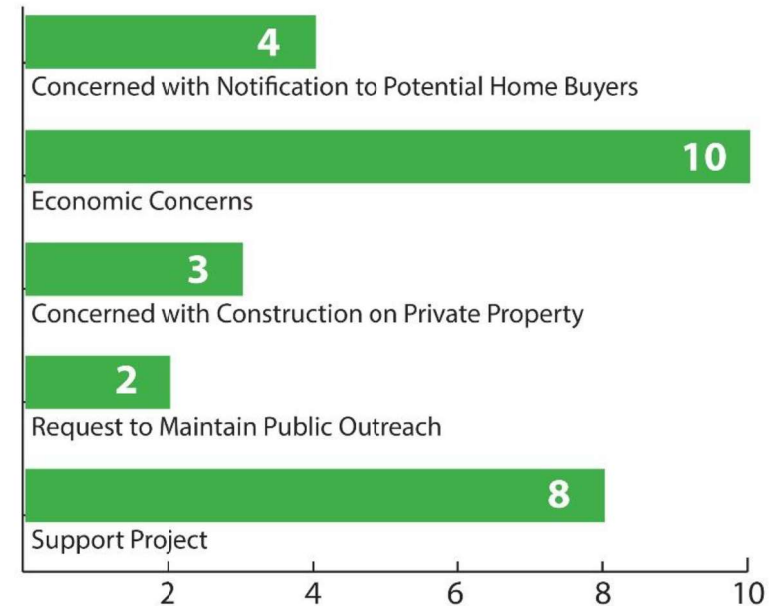


<https://www.hernandocounty.us/departments/departments-n-z/utilities/septic-to-sewer-project>

**Respondents Willing to Pay for
New Sewer System**



Feedback of Attendees who Left a Comment



Wastewater Expansion and Improvements to the HCUD Subregional WRFs



Airport Subregional WRF: BNR Upgrade and Expansion to 6.0 MGD - 2023



Glen Subregional WRF: BNR Upgrade 2023; Expansion - 2025



Ridge Manor Subregional WRF Expansion - 2023

Questions?

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