University of Florida
Center for Coastal Solutions

Final Report

Synthesizing User Needs to Inform Data-Driven Approaches for Wastewater Enhancement Prioritization and Planning in Florida

DEP Agreement # AT022 Final Report (Task 3b)

For the Florida Department of Environmental Protection,

Office of Environmental Accountability and Transparency

June 2024

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Executive Summary

Background: Maintaining water quality is essential to the health of Florida's citizens, environment and economy. A notable source of nutrients to water bodies that local communities and the State are dedicated to addressing is nutrient loading from Onsite Sewage Treatment and Disposal Systems (OSTDS, or septic systems) as well as from aging sewer networks and wastewater treatment facilities (WWTF). However, the lack of data on existing sewer networks, OSTDS locations, and the changing regulatory landscape, make it challenging to prioritize where to invest in wastewater infrastructure enhancements to achieve the most substantial improvements in water quality.

To better understand the interconnectedness of wastewater treatment with the environment and with service providers, the Florida Department of Environmental Protection (DEP) has undertaken a series of projects since 2022 to increase understanding of these challenges with the larger goal of developing tools that focus on improving water quality while supporting and prioritizing investments in wastewater treatment. These projects have included engaging subject matter experts around the state on OSTDS vulnerability assessment modeling, landscape vulnerability assessment modeling, and this project, which brought together centralized wastewater treatment facility operators from around the state to understand their challenges, and potential solutions, for increasing capacity, and updating and upgrading treatment facilities and sewer networks.

With each project, the knowledge and ideas shared by the subject matter experts has helped to 'fill in' the picture of wastewater treatment from the individual OSTDS level to the centralized wastewater treatment facility level; across the environmental spectrum from what factors influence impacts to water quality (soils, slope, etc.) to how the environment is in turn impacted by wastewater treatment (such nutrient loading outputs); and how those who provide wastewater treatment services at all levels are responding to capacity, regulatory, and environmental drivers.

Project Activities including Wastewater Enhancement Planning Summit and Potential Tools: The University of Florida Center for Coastal Solutions (UF CCS) backed by DEP implemented a survey, conducted interviews, and hosted a summit to evaluate the status of wastewater planning in Florida and to gather insights about the tools and resources that communities and the state need to optimize water quality benefits. Participants for the surveys, interviews, and summit were sought from a database of Basin Management Action Plan (BMAP) stakeholders and applicants to previous Protecting Florida Together grant opportunities. Respondents represented a cross section of large and small wastewater treatment facility operators across the state, some engineering consultant companies, and a few environmental staff from municipalities. The survey and interviews provided valuable information on the current challenges facing WWTF operators, namely increasing capacity and meeting regulatory requirements in the face of sharply rising costs due to inflation in recent years. The surveys, interviews, and summit also provided useful feedback from these subject matter experts on tools that could be developed to support water quality improvements while facilitating infrastructure enhancement planning, funding applications, and reporting requirements.

The tool is envisioned as a software application used by WWTF operators that incorporates data sources such as BMAP data (location, pollutants and needed reductions); environmental data including soils data and topographic elevation; and regulatory requirements such as effluent nitrogen limitations and disposal requirements. The tool would also allow users to incorporate their existing infrastructure network GIS data and other data sources useful for prioritizing water quality improvements. This data would help WWTFs plan for future enhancements in sewer networks, facility expansions (both capacity and treatment requirements), and would provide them with outputs that can be used to facilitate funding applications

and reporting requirements. It was stressed that the tool should be easy to use in order to increase adoption by the user community.

In Table 1, we synthesize key challenges to water quality improvements that could be attained through WWTF operations, and propose solutions that were identified in the surveys, interviews, and by participants at the summit. The potential solutions include a diversity of approaches from funding to data and tools, and training and staffing ideas. Overall, feedback from the WWTF community was positive, collaborative, and solution oriented. Improving water quality helps us all improve Florida's environment, economy, and quality of life.

Table 1: Summary of Florida's Wastewater Planning Challenges and Potential Solutions.

Category	Current Challenge	Potential Solutions
Funding	Project Backlogs Exceed Available Funding	• Evaluate funding required to modernize wastewater infrastructure statewide; assess financing/project cost reduction solutions.
	Variation Among Utilities in Capacity to Secure Grant Funding	• Assess distribution and quality of projects in Florida Department of Environmental Protection (DEP) grant pipelines; identify actions to enhance project quality/composition. • Identify/implement solutions to streamline application processes and project funding prioritization.
Data and Tools	Challenges Achieving Regulatory Compliance	• Integrate/streamline state/local data required for reporting. • Train users how to meet requirements via, e.g., Basin Management Action Plan (BMAP) 'Bootcamp'.
	Robust Prioritization Tools Do Not Yet Exist	• Design/build robust tool(s) for prioritizing infrastructure projects that achieve significant water quality benefits.
	Need for Innovative Solutions	• Incentivize technology innovation to advance wastewater planning, e.g., automated sampling, incorporation of user data.
Training and Staffing	Insufficient Staff to Develop and Deliver Enhancement Projects	• Engage professional organizations/higher education to identify and fill gaps in wastewater staff recruitment/training programs. • Establish/maintain platforms for wastewater professionals to interact and share workforce modernization/regional capacity/operational efficiency/public communications strategies.
	Garnering Public and Elected Leader Support	• Enhance education campaigns about OSTDS remediation and wastewater enhancement costs and benefits statewide. • Compile resources to support communities make the business case for OSTDS/wastewater enhancement investments.

Next Steps: To continue the water quality improvement efforts the state has pursued over the last several years, efforts should include design of a tool (or tools) that incorporate the findings from all projects (OSTDS vulnerability assessment modeling, landscape vulnerability assessment modeling, and this Wastewater Enhancement Planning Summit). Design and development of such a tool (or tools), may be

divided into phases to allow deployment of easily achievable modules earlier (such as calculating future capacities, and providing reporting outputs), while tackling more complex integrations (such as user provided GIS data) in a later phase.

Project Background and Purpose

Figure 1: Dr. Mark Rains, DEP, describes Florida's water quality opportunities at the Wastewater Enhancement Planning Summit.

Water and natural resources are vital to Florida's economy and its residents. In 2019, the State of Florida (under the leadership of Governor DeSantis) pledged $2.5B for Everglades restoration and protection of water resources (Executive Order 19-12) and an additional $3.9B for water-quality restoration again in 2023 (Executive Order 23-06). These investments are aimed to address threats to water quality from current and legacy land use or land management practices, aging infrastructure, population growth, and environmental changes. As of December 2023, DEP has identified 33 areas for water quality restoration plans (i.e.; BMAPs) that include nitrogen, phosphorus, dissolved oxygen, and bacteria pollutant parameters (DEP, 2023). These conditions are associated with harmful algal blooms and declines in the health of the state's freshwater, estuarine and nearshore marine ecosystems and it has long been recognized that insufficiently managed wastewater, including failing OSTDS, aging sewer networks, and outdated wastewater treatment facilities can contribute to these water quality challenges (see Figure 1) (Badruzzaman et al., 2012; Korajkic et al., 2011; Kyzar & Bean, 2021; Lapointe et al., 2015; Lusk et al., 2017). However, wastewater utilities across the state are struggling to efficiently modernize their wastewater collection and treatment systems. Population growth and the accompanying development are straining facility capacities while these same facilities are also working to comply with new and upcoming regulations on treatment requirements and disposal limitations. These challenges are further complicated by capital improvement funding needs, staff to manage projects, contractors to implement projects, and public buy-in to pursue substantial infrastructure investments.

Identifying when, where, and how to prioritize local, state, federal and private investments in wastewater infrastructure to improve water quality is not a straightforward task. Much of Florida's development occurred before science and technology really helped inform wastewater impacts to the environment. This has led to a diversity of wastewater collection and treatment systems servicing Florida's communities, and has created a dynamic social, political, and environmental tug-of-war between environmental concerns and financial constraints. Today, approximately 30% of Florida households (2.6 million) (DEP, 2024) collect and treat the wastewater they generate using OSTDS. However, Florida's flat terrain, sandy soils, and shallow karst and groundwater resources are poorly suited for processing wastewater effluent(De, 2015; Lusk et al., 2017; NRCS, 2004). This has contributed to the unique challenge Florida faces when protecting water quality while also addressing the legacy of wastewater treatment implementations statewide. While many OSTDS are operating as intended, there are also systems which have begun to age beyond their usable lifespan, and/or are vulnerable to failure due to rising groundwater elevations and sea levels.

Beyond the environmental challenges, utility providers must consider and weigh a complex web of factors when evaluating where, how and in what order to upgrade their wastewater collection networks and treatment facilities, such as: 1) *Are our sewer pipes experiencing inflow and infiltration, and do they have the capacity to handle additional loading*?; 2) *Are force mains or pump stations required to extend sewer networks into new service areas, and, if so, can revenues cover the construction and maintenance costs of such systems*?; and 3) *Does the wastewater treatment facility have both the treatment and disposal capacity to take on additional wastewater loading from OSTDS to sewer connections, and does the facility require upgrades to meet regulatory requirements*? Currently, most wastewater utilities do not have access to planning tools to efficiently consider these and other factors to guide their decision-making processes, preventing local communities - and the agencies that receive funding applications for these projects - from prioritizing and maximizing their returns on investment in water quality improvements.

DEP has focused on advancing data-driven approaches to evaluate where wastewater inputs pose elevated nutrient loading threats to the state's waters. The Department's work has included a 2022 project entitled, "*Synthesizing Detailed Expert Guidance on FDEP's Septic Vulnerability Assessment Model and Pilot-Testing Recommended Improvements*" (DEP Agreement No.: AT006) that gathered guidance from subject matter experts about what factors should be considered when utilities evaluate the potential of nutrient loading from OSTDS. *Pilot Scale Development of a Septic-to-Sewer Conversion Prioritization Tool Using Analytical Hierarchy Process* (led by the University of South Florida (USF) under DEP Agreement No. AT015) built upon these results and engaged subject matter experts to apply landscape characteristic data sets to identify locations with elevated potential for wastewater effluent transport from OSTDS. This work was continued through a 2023-2024 project (DEP Agreement No. AT020) led by the USF team to develop *LARNLoad*, a tool that applies standardized data sets related to the physical environment to estimate landscape vulnerability to OSTDS pollution and allows users to explore vulnerability scores on easy-to-use, interactive maps.

This project, *Synthesizing User Needs to Inform Data-Driven Approaches for Sewershed Enhancement Planning in Florida,* funded by the Office of Environmental Assessment and Transparency, continues DEP's efforts by exploring the factors that wastewater utilities consider when evaluating wastewater projects. Through the engagement of wastewater professionals in a survey, interviews, and an in-person summit, this project focused on three objectives:

1. Identify and synthesize the factors and processes that are currently informing wastewater enhancement planning decisions across the state of Florida;
2. Evaluate user satisfaction with the data and tools that are currently informing wastewater enhancement planning decisions across the state of Florida; and
3. Define the functionality that next-generation tools should deliver to improve the efficiency and robustness of future wastewater enhancement planning and identify gaps in data and/or technology that may be needed to be filled to achieve the tool functionality that users desire.

This project, which ran from April 15, 2024 to June 30, 2024, was led by the University of Florida Center for Coastal Solutions. In this final report, we synthesize the project's major findings and recommendations for next steps. The goal of this project is to focus wastewater enhancement efforts on improving water quality by identifying ways to support centralized wastewater treatment operators with tools that facilitate infrastructure enhancement planning and investment, funding applications, and regulatory compliance reporting requirements. Providing this type of support to the wastewater community will streamline project planning, reducing time to project completion, and enable identification and prioritization of projects with both financial and environmental benefits.

Project Tasks and Schedule

The project included three (3) main tasks.

Task 1: Survey and Interviews to Assess Current Challenges for Wastewater Treatment Facility Operators. This task included the design and implementation of an online survey distributed to wastewater professionals, followed by outreach to request virtual interviews to gather more nuanced information than what could be derived from the survey responses. The survey was distributed to 987 email addresses on April 26th, 2024, and was resent four (4) times. Requests for interviews were distributed on May 1st, 2024 to 155 email addresses with three (3) additional requests sent. Focal participants included public and private utility operators or managers, engineering consultants that support wastewater utilities, and professionals engaged in decision making processes associated with wastewater infrastructure planning and investments. Fifty-two (52) survey responses were gathered, including 17 participants from city utility providers and 12 from county utility operators. Survey respondents represented all six (6) DEP regional districts with the highest participation from the Central and South DEP districts. Eight (8) interviews were conducted with wastewater professionals representing a range of utility service sizes and geographic regions of the state.

Task 2: Wastewater Enhancement Planning Expert Summit. To gather insights about the current state of wastewater planning and the tools and processes needed to improve planning outcomes, an in-person, facilitated summit was held on June 5th and 6th, 2024 at the University of Florida campus in Gainesville, Florida. Invitations were sent to 309 email addresses, twice. Twenty (20) registrations were received, and 14 participants attended in addition to five (5) representatives from DEP and 10 members of the project team from UF CCS.

Task 3: Final Report. This document summarizes the results of the project including a synthesis of the surveys, interviews, the summit, and project takeaways. The report also includes a brief review of the changes made to the project contract terms, and photo documentation of the project deliverables. The final draft of this report will be delivered to DEP by July 15th, 2024.

Changes to project schedule. All project tasks were completed per the contract schedule. One contract change order was made to remove the requirement of 20 summit participants. This change order was made after UF CCS received several last-minute cancellations from participants. UF CCS engaged three of the participants that cancelled to gather their input on the workshop outcomes. Thus, the Workshop Outcomes Report that was produced through this project includes input from these three entities.

Summary of Survey Findings

UF CCS worked with DEP and subject matter experts within UF and Deloitte to design and distribute a survey to assess the current state of wastewater enhancement planning in Florida and the desired functionality of future tools. In Appendix A, we summarize the process for developing and distributing the survey and survey questions and share the survey form and survey results. In addition to the survey, UF CCS conducted interviews with a subset of eight (8) wastewater professionals that followed the survey question structure, with supplemental questions added on an ad hoc basis to gather further details. A compilation of the survey and interview responses is provided in the presentation slides shared within the Workshop Outcomes Report that is associated with this project (see Appendix C). All survey responses are also provided in an excel file as a supplement to this final report.

Survey and Interview Takeaways

Feedback received from both survey respondents and interview participants largely aligned across utilities of varying sizes, types and locations. For instance, both small and large utilities noted that: 1) market conditions affecting project costs, such a rising costs of supplies and delays in receiving materials as well as limited competition among contractors, are a major factor driving wastewater planning decisions; 2) improving water quality is a primary driver for wastewater enhancement and septic-to-sewer conversion projects, and 3) septic to sewer conversion projects are likely to have more public and elected official support if homeowner costs to connect to the sewer network can be eliminated or distributed over extended time horizons. Table 2 outlines key takeaways across five focal topics of the survey and interview questions. The figures that follow summarize some of the key responses from the survey.

Table 2: Survey and Interview participants and the facilities they support.

<table>
<tr><th colspan="2">Summary of Wastewater Professionals Survey and Virtual Interviews</th></tr>
<tr><td>Section I: Background on Survey Participants and the Communities They Serve</td><td>

Water quality improvements are very important when considering wastewater enhancement planning (24/44) according to the response from the survey shown in Table 3.

Table 3: Importance of Water Quality Improvements to Survey Respondents.
<table>
<tr><th>Importance of water quality as a driver of sewer network expansion projects</th><th>Responses</th></tr>
<tr><td>Very important</td><td>24</td></tr>
<tr><td>It's fairly important</td><td>8</td></tr>
<tr><td>About 50/50</td><td>4</td></tr>
<tr><td>Somewhat</td><td>4</td></tr>
<tr><td>Not at all</td><td>4</td></tr>
</table>

Most participants indicated that their utility would need to acquire significant supplemental funding to enhance their wastewater collection system and treatment facility. Figure 2 illustrates the level of funding available to respondents and Figure 3 depicts their need for grants or loans.

</td></tr>
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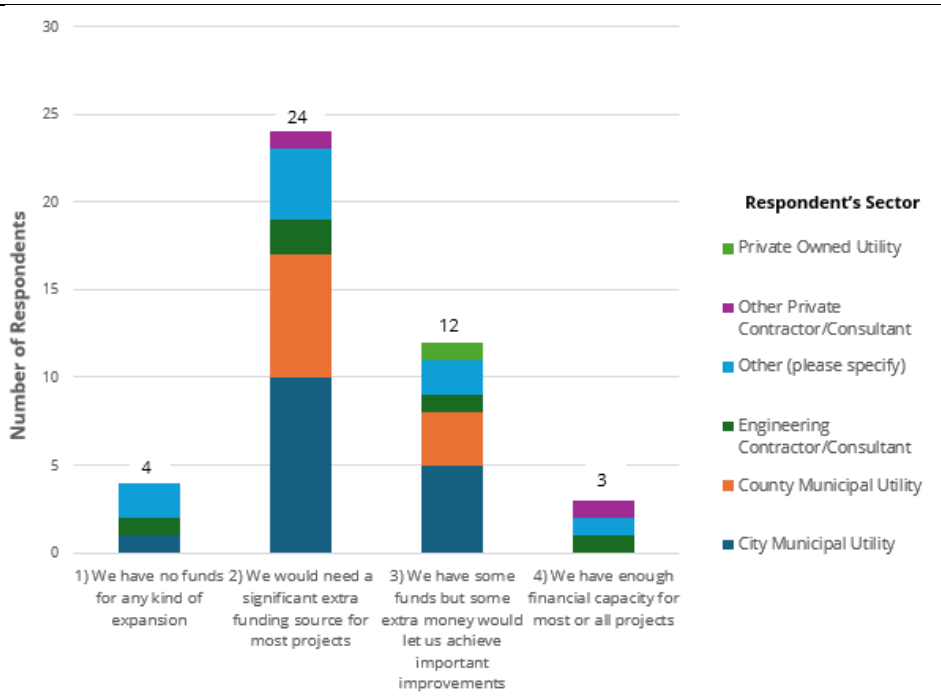


Figure 2: Collection Network Expansion Funding Needs.

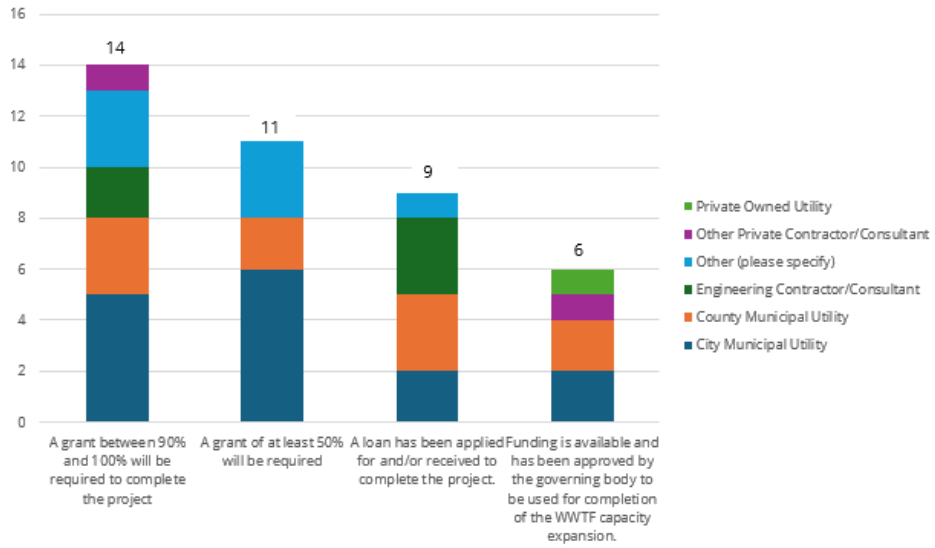
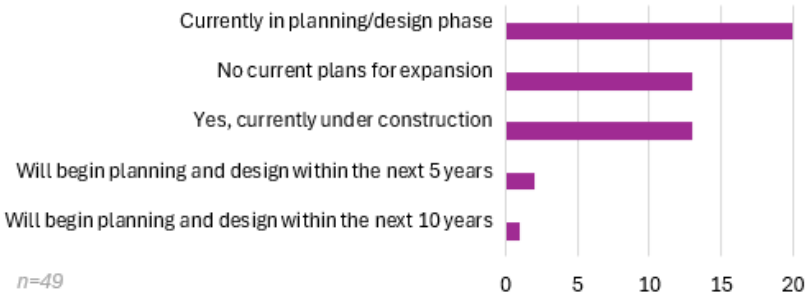
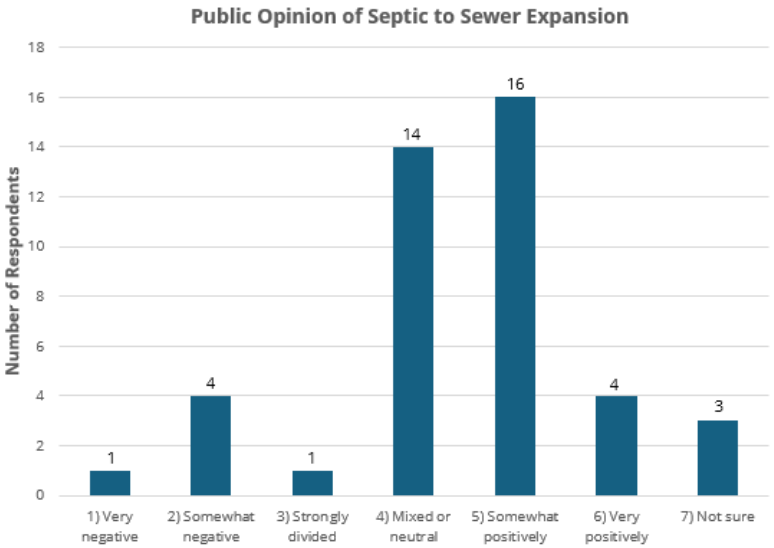
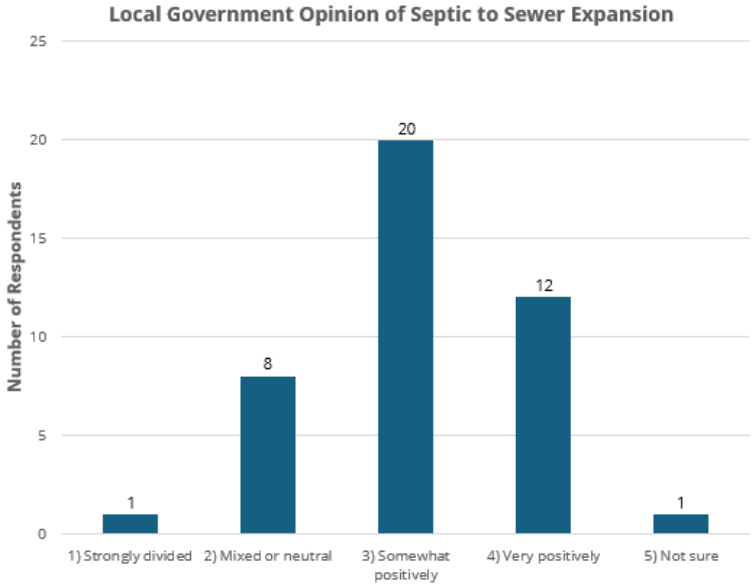
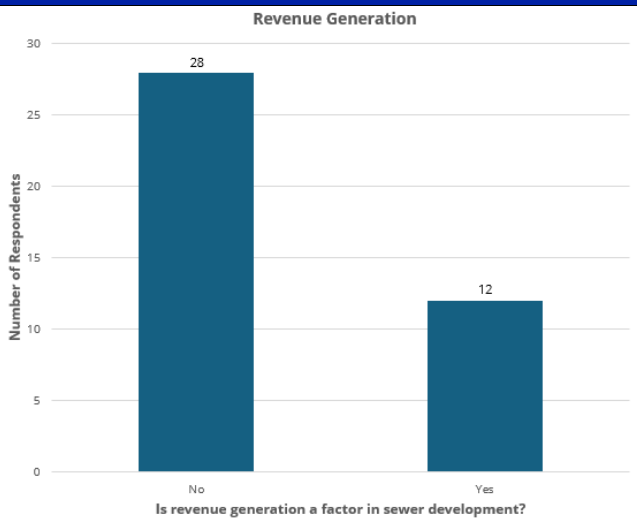
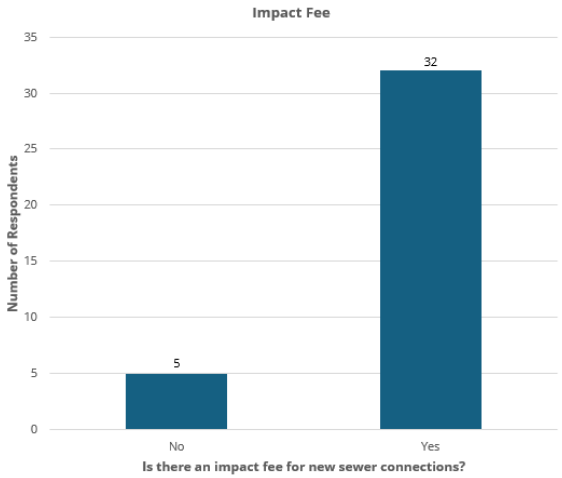


Figure 3: Wastewater Treatment Facility (WWTF) Expansion Funding Needs.

- In order to meet regulatory changes (e.g. utility respondents had to remove projects from current capital improvement plan to meet the requirements of Senate Bill 64 and House Bill 1379)
- Market conditions, including rising supply costs and limited competition among contractors, are causing project costs to increase; utilities are responding by

Summary of Wastewater Professionals Survey and Virtual Interviews	
	reducing project scopes to fit within budget constraints, acquiring additional debt, or postponing projects.
Section II: Drivers of Wastewater Collection and Treatment Capacity Expansion	• Statutory requirements, project cost, and benefit to local waterbodies are the top three (3) factors considered in wastewater infrastructure expansion plans. • Most respondents indicated that they are currently under construction or in the planning/design phase of wastewater treatment facility expansion projects. A summary of respondents' expansion planning are shown in Figure 4.  *Figure 4: WWTF Expansion Plans.* • Utilities are finding innovative ways to dispose of treated sludge or effluent through public-to-public or public-private partnerships.
Section III: Drivers of Septic to Sewer Connections	• Public opinion of septic to sewer projects is still mixed/neutral (14/43) or somewhat positive (16/43). Figure 5 and Figure 6 illustrate public opinion and local government opinion of septic to sewer expansion projects, respectively.  *Figure 5: Public Opinion of Septic to Sewer Expansion.*

Summary of Wastewater Professionals Survey and Virtual Interviews	
	 *Figure 6: Local Government Opinion of Septic to Sewer Expansion.* • Most utilities (25/32) have defined requirements for connecting to available sewer within a certain timeframe and possible penalties if not connected, in line with state regulations. • Utilities that have been able to cover homeowner costs or provide funding opportunities have been able to achieve higher participation in OSTDS remediation projects.
Section IV: Drivers of Sewer Service Expansion into New Development	• Most respondents (28/40) do not consider revenue generation as a major factor in decisions to connect new developments/homes to the sewer network (see Figure 7). • Most utilities charge impact fees for new development (32/37) (see Figure 8).

Summary of Wastewater Professionals Survey and Virtual Interviews	
	 *Figure 7: Consideration of Revenue Generation as a Major Factor in Decisions to Connect New Developments/Homes to a Sewer Network.*  *Figure 8: Impact Fees for New Sewer Connection.*
Section V: Current and Future Planning Tools	• Most respondents (24/41) indicated they did not have access to a planning tool (see Figure 9).

Summary of Wastewater Professionals Survey and Virtual Interviews	

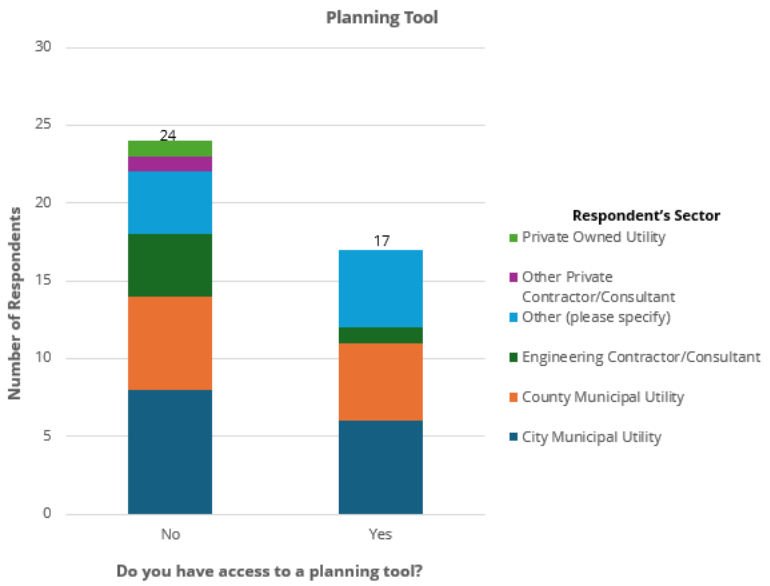


Figure 9: Access to Planning Tools.

- Supplemental information available in tools used by respondents most often referenced nitrogen reduction estimates.
- Most useful tool functionality included cost estimating, capacity analysis, and modeling system hydraulic performance.
- Most desired functionality included ability to prediction necessary treatment facility expansion, cost benefit analysis (including operation and maintenance costs), and GIS integration with other tools/data.

In the open-ended survey questions and in the interviews, many participants touched on the interconnectedness of water supply-demand-use- and -disposal as a topic that they have interest in further integrating into their operations and management planning. Utilities are pursuing effluent disposal to recharge areas where possible, and noted that - with the drive to improve water quality statewide - treatment to potable reuse levels has the potential to support solutions for supply-demand-disposal considerations.

Primary Summit Findings

The Wastewater Enhancement Planning Summit was hosted and facilitated by UF CCS and its contract support team, in partnership with DEP. The primary goal was to collect additional feedback from those in the wastewater industry regarding the priorities and challenges they are facing, and to collect feedback on tools in development (see Figure 10). The summit uncovered findings on planning decision-making and consolidated user feedback to improve planning-related data and tools.

Figure 10: Wastewater Enhancement Planning Summit Participants in Breakout Groups.

The summit was held at the University of Florida (UF) on June 5th and 6th and included representatives from public and private utility providers, engineering and consulting firms, DEP, and universities. There were 29 participants in attendance at the summit, with 14 wastewater professionals, including public utility operators and engineering consultants.

The design and facilitation of the Wastewater Enhancement Planning Summit was broken down into five stages, including iterative feedback with UF subject matter advisors and DEP. The summit design and facilitation approach are detailed in Appendix B.

Summit Takeaways

The project team identified common takeaways from the summit, even though participants from the summit varied in type and size of population they serve and in function. The sections below summarize the prevailing themes related to broader wastewater sector challenges, as well as next steps the state might consider taking in the future. Specific challenges related to OSTDS remediation projects are included in tables below, as applicable. A full listing of detailed summit outcomes is included in the Task 2b Workshop Outcomes Report (see Appendix C).

One challenge shared by many of the utility participants throughout the summit is the need for more funding. Table 4 summarizes the nature of this challenge along with the proposed solutions and next steps.

Table 4: Funding for Wastewater Projects Remains Limited.

Funding for Wastewater Projects Remains Limited	
Current State	**General Wastewater Sector**: Funding for wastewater projects and system maintenance remains a challenge in the sector, further compounded by rapidly rising project costs and shifting regulations (e.g., Senate Bill 64), making utilities more reliant on external funding, including grant funding from DEP and other sources. In addition, rising construction costs have made project costs difficult to predict. Within the wastewater industry, bids for recent projects have been significantly higher than projected, leading to funding gaps between project estimating/grant application and grant award. This has left utilities in the difficult

Funding for Wastewater Projects Remains Limited	
	position of either scrambling to find more funding, scaling back projects, or canceling or delaying projects altogether. Rate increases to cover shortfalls are politically difficult to obtain due to public pushback. **OSTDS Remediation Projects**: There is a very high number of septic to sewer conversion projects yet to be completed and, according to utility participants, engineering and construction companies may have raised prices because they know there is OSTDS grant money available.
Participant Proposed Solutions	Regionalization or utility cost-sharing; revenue/rate restructuring; utility cost saving measures (e.g., conservation) or implementation of advanced metering infrastructure.
Recommended Next Steps	• Evaluate funding required to modernize wastewater infrastructure statewide; assess financing/project cost reduction solutions. • Identify common measures utilities can take to optimize wastewater revenues and costs.

Table 5 discusses utilities' challenges in obtaining grant funding.

Table 5: Obtaining Grant Funding Remains Challenging.

Obtaining Grant Funding Remains Challenging	
Current State	**General Wastewater Sector:** The process of identifying and applying for grant funding is arduous and time-consuming. Utilities with the internal resources available have multiple staff dedicated to this process, but most utilities are forced to seek outside support from consultants and engineering firms to identify and apply for grant funds. While utilities are aware that there is often grant funding available for projects, the application process remains an obstacle. Grant application processes are usually lengthy, requiring a significant amount of time to complete. If funding applications were simplified, it would ease the burden on utilities and allow greater access to funds for beneficial projects. **OSTDS Remediation Projects:** Grant funding is currently available for septic to sewer/OSTDS remediation programs, although future funding is uncertain.
Participant Proposed Solutions	Simplify and streamline grant application processes; conduct workshops to inform and assist utilities through the grant process; continue to provide information and communication resources for upcoming grant fund opportunities; implement a planning grant program.
Recommended Next Steps	• Conduct 'roadshow' to educate utilities about DEP funding and eligibility. • Host workshops to assist utilities through the grant applicant process. • Provide statewide planning grants for public utilities.

Table 6 discusses challenges utilities have related to meeting regulatory requirements.

Table 6: Challenge Existing for Utilities to Meet Permitting, Compliance, and/or BMAP Requirements.

Challenge meeting and reporting on Permitting, Compliance, and/or BMAP Requirements	
Current State	**General Wastewater Sector**: "A basin management action plan (BMAP) is a framework for water quality restoration that contains local and state commitments to reduce pollutant loading through current and future projects and strategies. BMAPs contain a comprehensive set of solutions, such as permit limits on wastewater facilities, urban and agricultural best management practices, and conservation programs designed to achieve pollutant reductions established by a total maximum daily load (TMDL). These broad-based plans are developed with local stakeholders and rely on local input and commitment for development and successful implementation. BMAPs are adopted by Florida Department of Environmental Protection Secretarial Order and are legally enforceable. (DEP, 2024). Additionally, utilities struggle to find the best way to meet their National Pollutant Discharge Elimination System (NPDES) permits, which enforce specific pollutant limits (e.g., nitrogen and phosphorus) to protect water quality. Compliance with these permits requires substantial investments in infrastructure upgrades, such as the implementation of advanced treatment technologies to meet effluent standards. Additionally, the utilities must engage in regular monitoring and reporting to demonstrate adherence to permit conditions, which adds operational costs and data management. **OSTDS Remediation Projects:** Some utilities have limited plans in place to meet BMAP requirements, including final plans due August 1st, 2024 (required by the Clean Waterways Act, Subparagraph 403.067(7)(a)9, Florida Statutes).
Participant Proposed Solutions	Further automate and streamline monitoring and reporting; continue to provide information for upcoming regulatory updates and reporting requirements.
Recommended Next Steps	• Assess opportunities to integrate or streamline statewide and locally available data sources for reporting. • Assess existing and/or expand training opportunities to utility users on how to meet requirements (e.g. expanding existing BMAP trainings and communications).

Table 7 discusses the impacts of aging infrastructure on project prioritization.

Table 7: Utilities Have Varied Processes for Project Prioritization for Aging Infrastructure.

Utilities Have Varied Processes for Project Prioritization for Aging Infrastructure	
Current State	**General Wastewater Sector:** Aging infrastructure is a challenge that wastewater utilities are struggling to address as competing system needs are often prioritized.

Utilities Have Varied Processes for Project Prioritization for Aging Infrastructure	
	While aging infrastructure is at higher risk of failure and adverse environmental impacts, the threat is sometimes not imminent and is thus easy to defer in favor of projects that are required for regulatory compliance or to meet burgeoning system demands. Both population growth and environmental change (e.g. rising sea levels and flooding) impose further stress on aging infrastructure. While aging infrastructure is often difficult to prioritize, utilities are trying to address this challenge as deferred maintenance and system upgrades could cost the utilities more and pose substantial risk to public and environmental health in the event of wastewater collection/treatment system failure in the future. **OSTDS Remediation Projects:** Many OSTDS remain operational, although the age and risk of failure of many in the state are unknown since data is largely unavailable.
Participant Proposed Solutions	Integrate infrastructure risk of failure and repair costs into future wastewater infrastructure prioritization tools; Use property appraisal parcel data to estimate OSTDS age; Implement advanced metering infrastructure to monitor inflow & infiltration; Advance cost-effective technologies to assess infrastructure condition/risk of failure
Recommended Next Steps	• Identify available statewide data sources and tools for assessing aging infrastructure needs and develop strategy for prioritization of system upgrades. • Design/build robust tool(s) for prioritizing infrastructure projects that achieve significant water quality benefits.

Table 8 discusses continued impacts of Florida's continued population growth and respective strain on the state's wastewater systems.

Table 8: Rapid Population Growth Continues to Present Uncertainty for Utilities.

Rapid Population Growth Continues to Present Uncertainty for Utilities	
Current State	**General Wastewater Sector:** Population growth and development in Florida are significantly impacting wastewater utilities, leading to increased wastewater volumes and costs to customers to expand existing systems. This growth also strains the capacity of facilities and challenges utilities to comply with water quality standards. With new regulations on wastewater facility disposal, utilities must invest in advanced treatment technologies and innovative management practices to handle both the increased volume and pollutant levels effectively. **OSTDS Remediation Projects:** New development is rapidly occurring, with many new developments installing new OSTDS, according to participants.
Participant Proposed Solutions	Optimize use of available population and development projections; enhance population projection accuracy; incorporate population growth, and associated wastewater loads and wastewater collection/treatment/disposal system expansions into wastewater infrastructure investment planning.

Rapid Population Growth Continues to Present Uncertainty for Utilities	
Recommended Next Steps	• Assess utility usability of population data projections, data integration opportunities, and communication with utilities. • Promote technological innovation for wastewater planning and operations to better address growth and the associated uncertainty. • Design, identify data/models for inclusion in, and build a robust tool to prioritize wastewater infrastructure investments most likely to achieve significant water quality benefits.

Table 9 discusses garnering public and elected leader support.

Table 9: Resources for Garnering Public or Elected Leader Support Remain Limited.

Resources for Garnering Public or Elected Leader Support Remain Limited	
Current State	**General Wastewater Sector:** As community stewards, utilities face the challenge of justifying the allocation of public funds for various projects. Utility managers must prove that they are utilizing public funds effectively and in such a way that activates the public and elected leaders to recognize the value and support wastewater infrastructure enhancement investments. Public opinion can greatly influence the success of a project, according to participants. Additionally, support from elected officials is necessary, as they often make budget allocation decisions. **OSTDS Remediation Projects**: Public and political buy-in is also required to complete OSTDS remediation projects.
Solutions Proposed by Utilities	Provide facility tours to elected officials; focus on public health safety and benefit; conduct outreach on positives and not just when there are issues.
Recommended Next Steps	• Enhance education campaigns about OSTDS remediation and wastewater enhancement costs and benefits statewide. • Compile resources to support communities make the business case for OSTDS/wastewater enhancement investments.

Finally, Table 10 discusses how staffing and capacity at the utility level has compounded challenges listed above.

Table 10: Utilities Have Difficult with Staffing and Capacity.

Utilities Have Difficulty with Staffing and Capacity	
Current State	**General Wastewater Sector:** Like challenges experienced with funding needs, utilities lack sufficient staff and human resources to meet wastewater project objectives. This is across various functions from engineering, environmental compliance, funding acquisition and financial management. Additionally, utilities

Utilities Have Difficulty with Staffing and Capacity	
	often compete with the private sector for talent, who are often able to compensate staff more competitively. Additionally, utility leadership and staff have limited opportunity to collaborate and learn from other utility peers through existing forums, where most forums are formatted as one-way communication. **OSTDS Remediation Projects**: Even though grant funding is available for OSTDS remediation projects, oftentimes smaller to mid-size utilities are unable to apply due to lack of time, resources, and/or knowledge to complete applications in a timely manner.
Solutions Proposed by Utilities	Assess staff restructuring/workforce modernization; identify targeted training and education programs (e.g., skill alignment trainings); identify regional cost-sharing opportunities for staff; university outreach to enhance recruitment/training
Recommended Next Steps	• Engage professional organizations/higher education to identify and fill gaps in wastewater staff recruitment/training programs. • Establish/maintain platforms for wastewater professionals to interact and share workforce modernization/regional capacity/operational efficiency/public communications strategies.

In addition to broad wastewater sector challenges and next steps, the project team identified recommendations from utilities on useful functionalities for future planning tools. These recommendations are discussed in detail below.

Recommendations For Future Planning Tools

This section distills the functionalities that participants in this project desire in future tools to guide wastewater infrastructure investments. Based on the insights gleaned from participants throughout this project, we suggest that developing a complementary pair of wastewater planning tools – *one tailored to empower utilities to optimize their wastewater infrastructure planning and a second to guide DEP and other granting entities in prioritizing projects for funding* - has the potential to transform the effectiveness of when, where and how Florida modernizes its wastewater infrastructure systems to deliver the improvements in water quality that our citizens and elected leaders are striving to realize.

Figure 1111: Dr. Christine Angelini (UF CCS) summarizes background of OSTDS remediation projects at the Wastewater Enhancement Planning Summit.

For wastewater professionals including city, county and private utility managers, and the engineering consultants that support them, this project revealed resounding support for the innovation of new technology to support these users in the identification and prioritization of investments to modernize their wastewater infrastructure systems to meet growing wastewater loads, comply with new regulations and address water

quality concerns. The desired functionalities for such a tool for wastewater professionals coalesced primarily around three (3) areas: deliver reliable estimates of project costs and benefits to facilitate project prioritization and sequencing, streamline integration of data sets vital to planning decisions, and facilitate grant writing and/or project reporting. We summarize how these needs could be met through future technology development below.

Users' Recommendation 1: Utilities need robust and communicable cost-benefit analysis functionality.

Participants discussed that decision making is challenging for OSTDS remediation projects because projects are tightly constrained by factors such as limited funding and project prioritization. Participants noted they would use a tool that supports decision making within their organizations (see Figure 11). Functional components of the tool and potential next steps are summarized in Table 11.

Table 11: Users' Recommendation 1: Utilities Need Robust and Communicable Cost-Benefit Analysis Functionality.

Functionality Proposed by Utility	Potential Next Steps to Activate Recommendation
• Nutrient loading estimates (e.g. nitrogen and phosphorus). • Cost/benefit or return-on-investment metrics, such as pound of nitrogen/phosphorus removed from environment per dollar invested. • Project ranking, as well as detailed cost/benefit roll-up calculations and operations and maintenance costs for each project.	Define and validate common calculations/approaches for cost and nutrient removal, project costs, total cost of ownership, and operations and maintenance costs.
• Project clustering, mapping, and parcel data, including number of septic systems, households, and existing sewer networks.	Evaluate feasibility of future capability surrounding optimization modeling and predictive modeling.
• Predictive modeling to support estimates for future expansion using growth projections.	

Users' Recommendation 2: Utilities would benefit from integrated external and internal data sets that can be tailored to their specific operating contexts.

Participants noted they would use a tool which could be customized and tailored to leverage external and internal data sets. During the summit, participants both at the state and utility level recognized that each utility has different needs and operating contexts. Additionally, utility level data is often more accurate than statewide data sets and relevant for the utility's decision-making processes. Functional components and potential next steps are described in Table 12.

Table 12: Utilities need external and internal data integration that can be tailored to their specific operating contexts.

Functionality Proposed by Utility	Potential Next Steps to Activate Recommendation
• Integration with population data and forecast projections (e.g., UF Bureau of Economic and Business Research data). • Applicable DEP grant funding for identified projects, and outputs that could be incorporated directly or indirectly to grant or funding application portals. • Flexibility for utility users to augment with utility data sets, including utility planned projects, such as new. • Methods to incorporate Geographic Information System (GIS) data and incorporation of both surface and groundwater elevation for collection network planning. • Data integration with landscape vulnerability data (e.g., integration with components already in development by tools such as LARNLoad, which identify vulnerable areas of environment). Iterations may incorporate surface and groundwater elevation, slope, soil characteristics, and lift station needs and locations.	Develop comprehensive listing of potential data integrations and define capability and feasibility to perform integrations or establish a data lake. Further define utility data integration capabilities and feasibility.

Users' Recommendation 3: Utilities need reporting and supporting communication to appeal to internal and external stakeholders.

Participants frequently discussed that communicating needs, decisions, business cases, or justification is an important element of septic to sewer projects. Septic to sewer projects must communicate to various stakeholders, including state leadership (e.g., DEP), internal utility leadership, funding entities (at federal, state, or local levels), customers, and the general public. Functional components and potential next steps are described in Table 13.

Feedback received from this project in the survey responses, interviews, and summit outputs, and shared through this report, may be used by project partners from DEP, UF, University of South Florida (USF), and Florida State University (FSU) to design an end user tool for utility and related contractors that will facilitate wastewater enhancement planning and grant applications for the purposes of water quality improvement in the state.

Table 13: Utilities need reporting and supporting communication to appeal to internal and external stakeholders.

Functionality Proposed by Utility	Potential Next Steps to Activate Recommendation
• Tailored reporting modules for internal leadership, public, customers, and elected officials. • Business case summaries by individual project. • The ability to print relevant reports to support regulatory and BMAP compliance. • characteristics, and lift station needs and locations.	Perform comprehensive stakeholder mapping, and further define common business case, reporting and communication needs by stakeholder group.

In addition, for entities that award grant funding, like DEP, we conclude from this project that there is a need for new technology that enables users to prioritize wastewater infrastructure enhancement grant applications in an efficient data-driven way based on their potential to achieve gains in water quality improvement. Such a prioritization tool could build upon criteria and methods already employed to rank projects for funding and integrate standardized information about project costs, environmental-economic-social benefits, and urgency and risk. This tool could also explore the cost and benefits of different project combinations with the potential to empower government agencies to allocate funding to the portfolio of projects that achieve the most cost-effective improvements in water quality in communities facing the most urgent needs. Since the surveys, interviews and summit did not explicitly focus on what functionality such a prioritization tool for funding agencies would look like (but rather focused on planning tools for wastewater professionals), we do not further detail recommendations for this new technology.

Conclusion

As evidenced by significant financial investments and substantive changes in water regulations and policy, elected leaders are demonstrating a strong resolve to improve water quality in the state of Florida. Protecting the state's vital water resources rests in part on the capacity of local communities to mitigate nutrient loading through strategic modernization of their wastewater infrastructure systems. Florida has the potential to lead the nation in improving water quality and the resilience of its communities by investing in wastewater infrastructure in the right places and at the right time. Due to breakthroughs in artificial intelligence and high-performance computing, it is now possible to deliver the investment prioritization technologies that participants in this project envision. Integrating the increasing maturity of data sets available and the capacity to simulate multiple scenarios to optimize planning solutions will further maximize water quality benefits. When this is brought together with powerful collaborations involving government agencies, academic institutions, and the private sector, the opportunity exists to accelerate the water quality improvement solutions which this, and previous projects, have envisioned. Thus, we are at a moment where there is the political will, the expertise, the data and the technology potential to transform how Florida manages its wastewater to safeguard its waters and natural resources and to ensure the health and prosperity of its citizens.

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Appendix A: Survey Approach, Form, and Results

The survey was built and distributed in Qualtrics. The pages in this appendix include how the survey was developed (Survey Approach), and the survey as exported from Qualtrics to Word. The survey results have been exported from Qualtrics to Excel and saved to pdf format in order to be inserted into the final pdf document. The Excel file may be accessed here. To cross reference between the survey form and survey results, reference the question number in the survey form below (example: Q6 1.1) to the question number in the excel file. The number in parentheses following each response option refers to the ordering in the survey (example: (2) denotes that this was the second option that a respondent could select).

Survey Approach

The focus of the survey, and the project, was to identify how water quality improvements might be achieved for Florida waterbodies by improving wastewater enhancement planning processes and tools. Septic to sewer planning was a large part of this discussion, but it is also recognized that if a WWTF does not have the capacity to treat additional flows from such conversions, then it would not be possible to accommodate these projects anyway. To better understand how enhancement of both the WWTF and the collection network also factored into the goal of water quality improvement through septic to sewer projects, UF CCS wanted to highlight these planning processes as well. Additionally, it is recognized that the planning process and regulatory requirements that accompany it can be onerous, time consuming, and expensive, and UF CCS wanted to see if there was a way to develop tools that could make this process less burdensome, and potentially faster, for system managers. Towards this end, the survey was designed to explore the nature of wastewater enhancement project planning processes, including the processes currently in use and whether the data and tools supporting them are meeting user needs regarding usefulness and accessibility.

To home in on all the aspects related to water quality improvement through wastewater enhancement planning, the survey was designed with five (5) sections that delved into each in detail.

Section I: Information about survey participants and the facilities they support.

This section included questions about the location of the facility, how long the respondent had been in their current position, the permitted and designed capacity, number of households served, and if there were current plans for expansion.

Section II: Drivers of wastewater collection and treatment capacity expansion.

Questions about the drivers included knowledge and eligibility of various funding opportunities, rating of a list of factors that might be relevant to enhancement planning, and resources (staffing and funding) available within the organization for project planning.

Section III: Drivers of decision making associated with septic to sewer conversion.

This was the most extensive of the survey sections and included questions about the state of public and elected opinions of septic to sewer projects, how many OSTDS were in the service area, local regulations around requirements, timelines, and penalties to connect to sewer when available, identification of factors included in the current prioritization process, and if a selection of factors were likely to impact project pursuit.

Section IV: Drivers and considerations for sewer vs. septic for new construction.

This section focused on when and if new development was required to connect to sewer or were allowed to install new septic systems. Questions were asked to determine if there were distances to existing sewer infrastructure that determined septic vs sewer for new development, or if the capacity of existing WWTF was a driving factor.

Section V: Planning tools.

This section asked if respondents had access to planning tools, what those tools are, what outputs were provided that were more than just wastewater planning, and what features respondents would like to see in potential future tools.

All sections ended with an open text box asking for other information the respondent felt was necessary but not included in the questions.

Survey Form

Synthesizing User Needs to Inform Data-Driven Approaches for Sewershed Enhancement Planning in FL (Qualtrics Survey)

Start of Block: Welcome

Hello!

Thank you for visiting our survey! We really appreciate your time and input. The purpose of this project is to improve our understanding of the challenges municipalities and utility managers face when planning for wastewater treatment in their service area. This includes planning for sewer network expansion, Wastewater Treatment Facility (WWTF) expansion, septic to sewer conversion, and choosing septic vs sewer for new construction projects. We understand that these are costly projects and that the planning lead times for these projects can last for several years, during which many things can also change. Costs for labor and materials can change, new developments may emerge, regulations may change, and even available funding opportunities may change. We hope to learn from you what your planning process looks like currently, and how we might make it easier (and faster) so that the potential for change in all those variables might be reduced. Here is how we are going to approach this:

(1) identify and synthesize the factors and processes that are currently informing service area enhancement planning decisions across the state of Florida;
(2) evaluate user satisfaction with the data and tools that are currently informing service area enhancement planning decisions across the state of Florida; and
(3) define the functionality that next-generation tools should deliver to improve the efficiency and robustness of future service area enhancement planning and identify gaps in data and/or technology that may need to be filled to achieve the tool functionality that users desire. We are focusing specifically on domestic wastewater services, not industrial, and would like to hear from facility operators, managers, staff who have strong knowledge of the collection network, staff involved in capital improvement planning, and also engineers, consultants and construction partners that you outsource related work to.

If you are an engineer, consultant or construction partner who contracts for WWTFs, please consider these questions in the context of your 'typical' client. For example, Section 1 asks about the design size of 'your' WWTF. If you are an engineering company working with one or multiple municipalities, please answer questions based on either your most current project or the size you most frequently work with.

Whichever project you use as your focus, answer all questions for that same project. We anticipate that completing this survey will not take more than 20 minutes to complete. This survey is broken up into 5 sections as follows: Section 1 has 12 questions and asks about your role in service area planning activities, where your work is geographically focused and what services the service area with which you are engaged provides. Section 2 has 10 questions and seeks to understand factors that are important for your facility when considering expansion projects. Section 3 has 13 questions that are more specific to septic to sewer conversion projects that can expand your facility and how those decisions are made. Section 4 has 5 questions and is intended to understand, when new construction projects are carried out, how you decide to connect these projects to sewer versus having a project(s) install new septic systems. Section 5 has 7 questions and is intended to examine what tools you have to help you with planning and decision making for any of these scenarios and how these tools could be improved. At the end of each section you can provide additional information in an open text box. This might include

questions we did not ask but you think are important, options that we did not provide for any of the questions, or anything else we should know about this process. After all, you are the expert and sharing your knowledge with us will be greatly appreciated.

Again, you are not required to answer any of the questions, but the information you provide can help the Florida Department of Environmental Protection (DEP) provide better support for all types of wastewater projects across the state.

Also, if there are additional stakeholders you think we should reach out to, please forward to them the email you received with the link to this survey, or provide us their contact information so we can share this survey with them.

Thank you very much for your time and your input!

End of Block: Welcome

Start of Block: IRB

IRB RESEARCH PARTICIPANT INFORMED CONSENT FORM

Please read this document carefully before you decide to participate in this study. Your participation is voluntary, and you can decline to participate, or withdraw consent at any time, with no consequences. Should you participate, we anticipate that this survey will not take more than 20 minutes to complete.

Study Title: Synthesizing User Needs to Inform Data-Driven Approaches for Sewershed Enhancement Planning in Florida.

Person(s) conducting the study: PI: Dr. Christine Angelini, Director, University of Florida (UF) Center for Coastal Solutions (CCS), Associate Professor, Engineering School of Sustainable Infrastructure & Environment (ESSIE), c.angelini@ufl.edu, 352-294-7815.

Purpose of the study: The purpose of this project is to solicit, integrate, and provide expert input to the DEP on the factors relevant to the enhancement, expansion or upgrade of WWTF either through connection of new development projects or from septic to sewer conversion projects. Results of the expert input will be used to inform DEP about the needs and challenges facing municipalities when considering these projects.

What you will be asked to do in the study: Your participation in this portion of the study includes the completion of the following survey. In this survey, intended for a large number of participants from many sectors, you will be asked to provide your expert opinion on multiple sewershed enhancement planning components such as sewer network expansion, WWTF expansion, septic to sewer conversion, choosing septic vs sewer for new construction projects, and what tools currently exist to facilitate planning. Results from the survey will be compiled and presented at an in-person summit June 5th and 6th. Summit participants will work with us to further refine these results so that we may develop tools to make sewershed enhancement planning more effective.

Time required: The survey should take no longer than 20 minutes to complete and will be distributed in April 2024 and will be open until May 10th, 2024.

Risks and benefits: There are no risks or detriments anticipated and there are no direct benefits of participation for you.

Confidentiality: There is a minimal risk that security of any online data may be breached, but since (1) no identifying information will be collected, and (2) UF OneDrive uses several layers of encryption and firewalls, it is highly unlikely that a security breach of the online data will result in any adverse consequence for you.

Compensation: No compensation is provided for your participation in this study.

Source(s) of funding for this study: This study is funded by a grant from DEP.

Withdrawal from the study: You are free to withdraw your consent and to stop participating in this study at any time without consequence.

If you wish to discuss the information above or any detriments/concerns you may experience, please ask questions now or contact one of the research team members listed at the top of this form.

If you have any questions regarding your rights as a research subject, please contact the Institutional Review Board (IRB02) office (University of Florida; PO Box 100173; Gainesville, FL 32610, (352) 392-0433 or irb2@ufl.edu.)irb2@ufl.edu.)

Agreement: Now that you've read about the study, if you wish to participate, click the "I agree to participate" button to continue; if you do not consent to participate, click "I do not wish to participate" or just close this window.

- I agree to participate (1)
- I do not wish to participate (2)

Skip To: End of Survey If RESEARCH PARTICIPANT INFORMED CONSENT FORM Please read this document carefully before you decide... = I do not wish to participate

End of Block: IRB

Start of Block: Section I:

Q5 **Section I: Tell us about your role and the wastewater collection and treatment system(s) that you work in**

This section seeks to know more about the experts working in the wastewater treatment field in Florida, and the size and location of the facilities where they work. If you are from an engineering company or other outside contractor/consultant supporting a municipality/utility as they pursue enhancement or expansion projects, please respond to these questions while thinking about your most recent project, or the projects you most commonly support.

Q6 1.1 What sector do you work in? (select one)

- City Municipal Utility (2)
- County Municipal Utility (3)
- Regional Municipal Utility (4)
- Private Owned Utility (5)
- Engineering Contractor/Consultant (6)
- Other Private Contractor/Consultant (7)
- Other (please specify) (8) _____

1.1 City If you indicated you work for a city utility, which city utility do you work for? (Select one from the dropdown list. Typing the first letter will take you to that section of the list.)

▼ Acacia Villas (1) ... Zolfo Springs (957)

1.1 County If you indicated you work for a county utility, which county utility do you work for? (Select one from the dropdown list. Typing the first letter will take you to that section of the list.)

▼ Alachua (1) ... Washington (69)

Q7 1.2 How long have you been in this position/capacity? (select one)

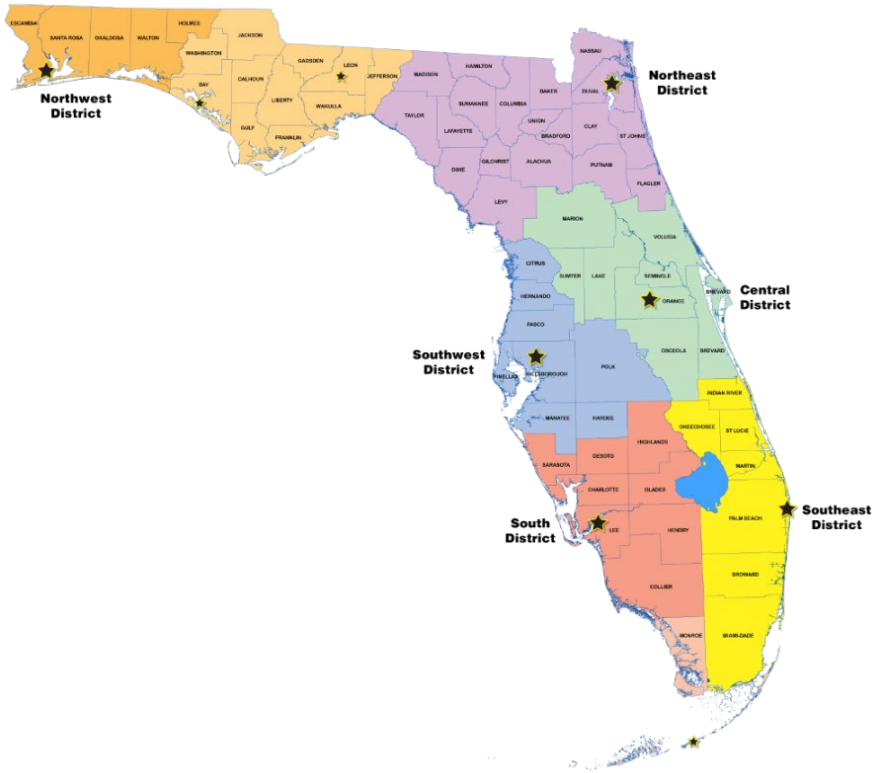
- Less than 2 years (1)
- 3-5 years (2)
- 6-10 years (3)
- More than 10 years (4)

Q8 1.3 What DEP region do you work in? (select all that apply) (reference the DEP District map below)

- Central (7)
- Northeast (8)
- Northwest (9)
- South (10)

- Southeast (11)
- Southwest (12)

Q8 Map of DEP Districts



Q9 1.4 Does the utility you work for or support have multiple WWTF locations? (select one)

- Yes (1)
- No (2)

Q10 1.5 Approximately how many households (HH) does the utility serve? If the utility you work for has multiple WWTF locations, select one based on the location you are most familiar with.

- Less than 50,000 HH (1)
- 50,001 - 100,000 (2)
- 100,001 - 200,000 (3)
- 200,001 - 500,000 (4)
- 500,001 - 1M HH (5)
- I am not sure (6)

Q11 1.6 What is the Utility's WW **permitted** capacity (MGD)? If the utility you work for has multiple WWTF locations, select one based on the location you are most familiar with.

- Less than 1 MGD (1)
- 1 - 20 (2)
- 21 - 50 (3)
- 51 - 100 (4)
- 101 - 200 MGD (5)
- I am not sure (6)
- Our ww is piped to a nearby facility for treatment (7)

Q12 1.7 What is the Utility's WW **design** capacity? If the utility you work for has multiple WWTF locations, select one based on the location you are most familiar with.

- Less than 1 MGD (1)
- 1 - 20 (2)
- 21 - 50 (3)
- 51 - 100 (4)
- 101 - 200 MGD (5)
- I am not sure (6)
- Our ww is piped to a nearby facility for treatment (7)

Q13 1.8 Are there any plans for expanding the WW Treatment Facility/Plant? (not including collection network). If the utility you work for has multiple WWTF locations, select one based on the location you are most familiar with.

- Yes, currently under construction (1)
- Currently in planning/design phase (2)
- Will begin planning and design within the next 5 years (3)
- Will begin planning and design within the next 10 years (4)
- No current plans for expansion (5)

Q14 1.9 Since some facilities treat both stormwater and wastewater in the same treatment facility, taking on new sewer treatment from new construction may also include taking on new stormwater treatment from that same new construction. If your facility treats both wastewater and stormwater, how does accepting stormwater in addition to wastewater impact the facility's capacity, operations, and/or considerations for expansion?

_____

_____

_____

_____

_____

Q15 1.10 If the utility also provides potable drinking water or reclaimed water for irrigation, providing new sewer service to new construction might include also laying new pipe for new drinking water or irrigation water service to that new construction. Does your utility also provide drinking water (DW) or reclaimed water for irrigation to customers? If so, does providing new drinking water or irrigation water service impact the sewer network or treatment facility capacity, operations, and/or expansion?

_____

_____

_____

_____

_____

Q64 1.11 Is the utility/municipality required to, or have otherwise completed, a septic remediation plan pursuant to Florida Statutes, Ch. 403? (select one)

- Yes, we are required to have and have completed a septic remediation plan pursuant to Florida Statutes, Ch. 403 (4)
- Yes, we are required to have a septic remediation and are working on it (5)
- No, we are not required to have a septic remediation plan (6)

Q16 1.12 What else would you like to add about the utility that you think we should know, but have not asked about?

_____

_____

_____

_____

_____

End of Block: Section I:

Start of Block: Section II:

Section II: Capacity Expansion Drivers

This section asks questions intended to learn more about your decision-making process when considering expanding your sewer network and/or treatment facility. Expanding your sewer network (wastewater collection capacity) does not automatically mean the (WWF) is also expanding, so we have tried to be specific about which we are referring to. If you are from an engineering company or other outside contractor/consultant supporting a municipality/utility as they pursue enhancement or expansion projects, please respond to these questions while thinking about your most recent project, or the projects you most commonly support.

Q18 2.1 Is the pace of new development or septic connections in your service area exceeding the pace at which you can accommodate those new connections within your current WWTF design capacity? (select one)

- Yes (1)
- No (2)

Q19 2.2 In your region, is improvement of water quality a driver of sewer network expansion projects? (select one)

- Not at all (1)
- Somewhat (2)
- About 50/50 (3)
- It's fairly important (4)
- Very important (5)

Q20 2.3 Are there sufficient financial resources within your organization for wastewater collection capacity expansion projects or would you require grants or other funding support? (select one)

- We have enough financial capacity for most or all projects (1)
- We have some funds but some extra money would let us achieve important improvements (2)
- We would need a significant extra funding source for most projects (3)
- We have no funds for any kind of expansion (4)

Q21 2.4 Are there sufficient resources within your organization for WWTF expansion projects or would you require grant/etc. funding? (select one)

- Funding is available and has been approved by the governing body to be used for completion of the WWTF capacity expansion. (5)
- A loan has been applied for and/or received to complete the project. (6)
- A grant of at least 50% will be required (7)
- A grant between 90% and 100% will be required to complete the project (8)

Q22 2.5 Are there sufficient resources (staff) in-house to pursue grant funding for wastewater expansion project(s) (collection systems and/or facility)? (select one)

- Yes (1)
- No (2)

Q23 2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity.

	Not aware of this opportunity (1)	Not eligible for this opportunity (2)	We are aware of this opportunity (3)	We are aware of and have applied to this opportunity in the past 3 years (4)
Water Quality Improvement Grants (7)	•	•	•	•
State Water-Quality Assistance Grants (SWAG) (8)	•	•	•	•
Federal 319 Grants (10)	•	•	•	•
Clean Water State Revolving Funds Loan Program (11)	•	•	•	•
Small Community Wastewater Construction Grant (12)	•	•	•	•
Septic Upgrade Incentive Program (13)	•	•	•	•
Resilience Planning Grant (14)	•	•	•	•

Resilience Implementation Grant (15)	•	•	•	•
Regional Resilience Entity Grants (16)	•	•	•	•
St. Johns River Water Management District Cost-Share Funding (17)	•	•	•	•
Florida Small Cities Community Development Block Grant (18)	•	•	•	•
Regional Rural Development Grant (19)	•	•	•	•
Rural Infrastructure Fund (20)	•	•	•	•
Special District Accountability Program (21)	•	•	•	•

Q24 2.7 Are there other sources of funding that the utility has successfully used?

_____

_____

_____

_____

_____

Q25 2.8 Understanding that funding may not be available for all utilities trying to meet regulatory requirements, how prominently do regulatory requirements factor into decisions regarding wastewater

capacity expansion projects (collection and/or facility) on a scale of 1-5, with 1 being 'Not at all', and 5 being 'A very big consideration'? (select one)

- Not at all (1)
- Somewhat (2)
- About 50/50 (3)
- It's fairly important (4)
- A very big consideration (5)

Q26 2.9 When making the decision to expand collection or facility capacity, how much of that decision is driven by the following factors? Please indicate the level of consideration each of these factors contribute to decision making.

	Not Considered		Low		Moderate		Medium-High		Highly Considered	
	1	2	3	4	5	6	7	8	9	10
Developers seeking to ensure sewer connections ()										
Citizen requests for sewer connection ()										
Governing bodies guiding expansion within service area ()										
Desire to benefit local waterbodies by eliminating or prevent septic tanks ()										
Revenue projections of new connections ()										
Overall expense of project ()										
Needed to meet statutory requirements ()										

Q27 2.10 What else should we know about decision making drivers around service expansion for the utility you represent?

_____

_____

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_____

End of Block: Section II:

Start of Block: Section III:

Q28 **Section III: Drivers of Decision Making Associated with Septic-to-Sewer Conversion** This section is asking specifically about septic to sewer conversion projects within your service area. If you are from an engineering company or other outside contractor/consultant supporting a municipality/utility as they pursue enhancement or expansion projects, please respond to these questions while thinking about your most recent project, or the projects you most commonly support.

Q29 3.1 What is the **public** opinion of septic to sewer expansion in your area? (select one)

- Not sure (1)
- Very negative (2)
- Somewhat negative (3)
- Mixed or neutral (4)
- Strongly divided (5)
- Somewhat positively (6)
- Very positively (7)

Q30 3.2 What is the opinion of the **city/county commission** (elected local leadership) regarding septic to sewer expansion in your area? (select one)

- Not sure (1)
- Very negative (2)
- Somewhat negative (3)
- Mixed or neutral (4)
- Strongly divided (5)
- Somewhat positively (6)
- Very positively (7)

Q65 3.3 How many Onsite Sewage Treatment and Disposal Systems (septic systems) are in your service area? (select one)

- < 5,000 (4)
- 5,001 – 20,000 (5)
- 20,001 – 40,000 (6)
- 40,001 – 60,000 (7)
- 60,001 – 80,000 (8)
- 80,001 – 100,000 (9)
- I don't know (10)

Q31 3.4 When planning for a septic to sewer project, is there a minimum number or percent of households that are required to sign an agreement committing to septic abandonment and sewer connection before the project moves forward? (select one)

- Yes. If yes, what is the minimum number or percent? (2) _____
- No (3)
- I don't know (4)

Q32 3.5 Are there regulations in your area (e.g., city/county/state/Basin Management Action Plan (BMAP)) that require residents to connect to sewer if it is available at the property? (select one)

- Yes (1)
- No (2)
- I don't know (3)

Q33 3.5 Follow up: If there are regulations in your area that require residents to connect to sewer if it is available at the property, is there a time frame by which those residents must connect to sewer once it has been made available? (select one)

- Yes. If yes, what is that time frame? (2) _____
- No (4)
- I don't know (5)

Q70 3.5 Follow up: If there are regulations in your area that require residents to connect to sewer if it is available at the property in a given time frame, are there consequences for not connecting? (select one)

- Yes. If yes, are there consequences for not connecting? (3) _____
- No (4)
- I don't know (5)

Q34 3.6 Does the utility or municipality currently have a prioritization process for septic to sewer conversion projects? (select one)

- Yes (1)
- A process is currently being developed (2)
- There have been discussions about developing a prioritization process but it has not been started yet (3)
- No (4)
- I don’t know (5)

Q35 3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process? Please indicate whether or not each of these factors are part of a prioritization or selection process, either currently, in the future, or not at all.

	In the current process (1)	Might be added to a future process (2)	Not a consideration (4)
We include estimated pre- and post-construction activities, including design and permitting (46)	•	•	•
We estimate total construction costs for project as a whole (47)	•	•	•
Based on estimates, we evaluate a per unit calculation without consideration for additional future connections (e.g., total construction costs divided by total parcels available to connect for the project, regardless of future expansion opportunities) (48)	•	•	•
Based on estimates, we evaluate a per unit calculation inclusive of future expansion opportunities (e.g., total construction costs divided by total parcels available to connect for the project plus potential additional parcels available to connect with future expansion) (49)	•	•	•
We evaluate project costs only after an area has been identified as a priority since cost considerations are factored in through the evaluation of other factors (such as distance from nearest available collection line) (50)	•	•	•

Availability of funding (51)	•	•	•
Estimated age of septic systems (52)	•	•	•
Proximity to waterbody (53)	•	•	•
BMAP (Basin Management Action Plan) requirements (54)	•	•	•
BMAP nutrient reduction crediting (55)	•	•	•
Water quality concerns (56)	•	•	•
Soil conditions (wet soils) (57)	•	•	•
Flooding (surficial) vulnerability (58)	•	•	•
Depth to groundwater (including vulnerability to rising groundwater table) (59)	•	•	•
Elevation of parcels (60)	•	•	•
Proximity to existing sewer collection network (61)	•	•	•
Public buy-in (or public requests) (62)	•	•	•
Rights of way or other logistical routing issues (63)	•	•	•
Existing treatment facility design or permitted capacity (64)	•	•	•

Existing collection system design or permitted capacity (65)	•	•	•
Regulatory requirements or incentives (66)	•	•	•
Technological feasibility (67)	•	•	•
Potential impact on property values (68)	•	•	•
Current capacity of the existing sewer system (69)	•	•	•
Potential for future growth or development in the area (70)	•	•	•

Q36 3.7 Follow up: If you use, or plan to use, an estimated age of septic systems, how do you estimate the age of septic systems?

_____

_____

_____

_____

_____

Q66 3.7 Follow up: If you use, or plan to use, proximity to waterbody/ies, how do you estimate proximity to waterbody/ies?

_____

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_____

Q67 3.7 Follow up: Are there other factors you use in your current process, or that you are considering adding in a future update that are not mentioned?

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Q37 3.8 Which data sets/sources are used as inputs into the decision process?

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_____

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Q38 3.9 When considering the costs or feasibility of septic to sewer projects, how likely would projects be pursued given the following:

Q39 3.9a The project contains only gravity driven sewer lines (select one)

- Very unlikely to pursue (1)
- Possibly unlikely to pursue (2)
- Doesn't factor in (3)
- Likely to pursue (4)
- Very likely to pursue (5)

Q40 3.9b The project contains both gravity driven and pressurized/force main lines (select one)

- Very unlikely to pursue (1)
- Possibly unlikely to pursue (2)
- Doesn't factor in (3)
- Likely to pursue (4)
- Very likely to pursue (5)

Q41 3.9c At least one lift station is needed for the project (select one)

- Very unlikely to pursue (1)
- Possibly unlikely to pursue (2)
- Doesn't factor in (3)
- Likely to pursue (4)
- Very likely to pursue (5)

Q42 3.9d The project will require installation of sewer lines under a state or federal road (select one)

- Very unlikely to pursue (1)
- Possibly unlikely to pursue (2)
- Doesn't factor in (3)
- Likely to pursue (4)
- Very likely to pursue (5)

Q43 3.9e Other cost or feasibility considerations

_____

_____

_____

_____

_____

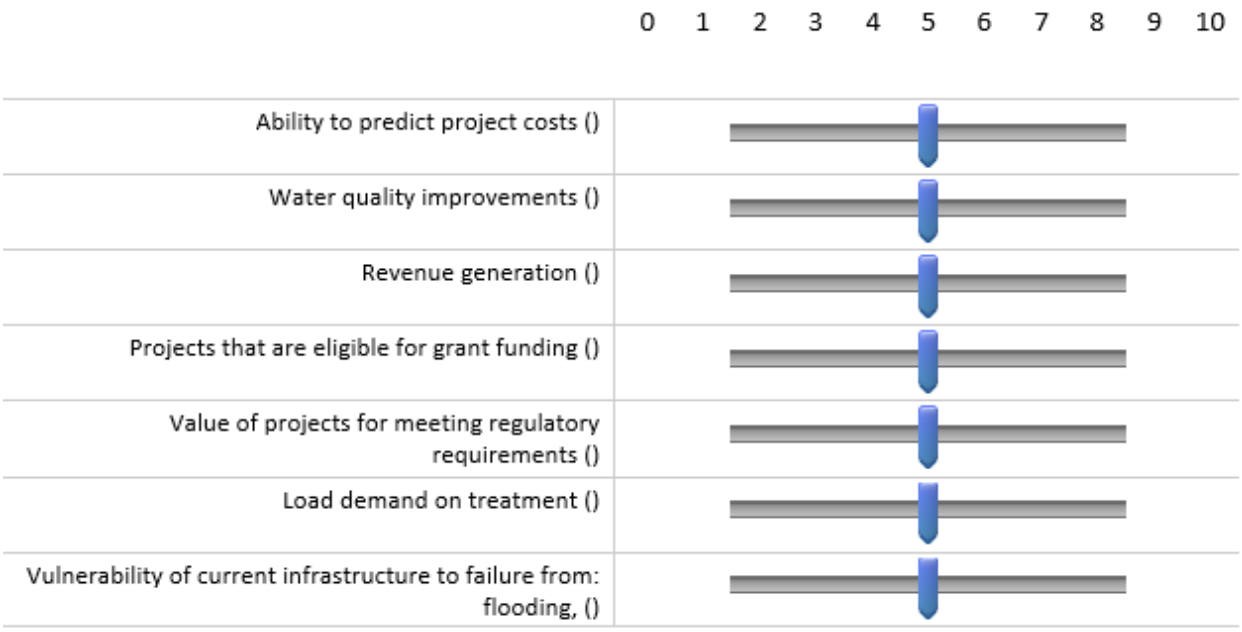
Q44 3.10 Who participated in developing the process above? (select all that apply)

- Governing body (5)
- Committee of stakeholders (6)
- Utility or local government staff (7)
- Vendor secured by utility or local government (8)
- Citizens (9)
- Other (10) _____

Q45 3.11 How far into the future is the planning process for septic to sewer conversion projects? (select one)

- 5 years (1)
- 10 years (2)
- 15 years (3)
- 20 years (4)
- More than 20 years (5)

Q46 3.12 How important are these factors when considering which projects to advance to construction? Move the slider along the bar to indicate that item's importance where 0 is not important and 10 is significantly important.



Q47 3.13 What else should we know about decision making drivers for septic to sewer conversion projects in the service territory?

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End of Block: Section III:

Start of Block: Section IV:

Q48 **Section IV: Drivers and Considerations for sewer vs. septic for new construction** In this section, we want to learn how your utility determines if new development should connect to the existing sewer network, or if new septic systems should be installed. If you are from an engineering company or other outside contractor/consultant supporting a municipality/utility as they pursue

enhancement or expansion projects, please respond to these questions while thinking about your most recent project, or the projects you most commonly support.

Q49 4.1 If there is a new development being planned within the service area, how is it decided if that development must connect to the sewer network or can install septic systems? (Select all that apply)

- All newly constructed homes and businesses must be connected to the sewer system (1)
- If the newly constructed home or business is located within a certain distance of an existing sewer collection network, they must connect. Please provide that distance here. (2) _____
- If there is a required gravity driven gradient, please provide that gradient value here. (4) _____
- If the planned development is further than a given distance, it is an automatic septic system install. Please provide that distance below. (5)
- If development is limited to within a certain distance of the existing sewer network so they must connect to sewer. Please provide that distance below. (7)
- The WWTF is at or near capacity and there are no funds or plans for expansion so new developments must rely on septic systems (9)
- Other (10) _____

Q50 4.2 Is revenue generation a consideration for connecting new development to sewer? (select one)

- Yes (1)
- No (2)

Q51 4.3 Is there an impact fee for new development connections to the sewer network? (select one)

- Yes (1)
- No (2)

Q52 4.4 If there is an impact fee for new development connections, does it adequately cover new connection costs? (select one)

- Yes, including collection system expansion costs (1)
- Yes, but not including collection system expansion costs (3)
- No (2)

Q53 4.5 What else should we know about decision making drivers for requiring new construction to connect to existing sewer vs installing new septic systems in the service territory?

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End of Block: Section IV:

Start of Block: Section V:

Q54 **Section V: Planning Tools**
We have covered several important areas around wastewater treatment systems; expanding existing sewer networks and/or wastewater treatment facilities, decision-making for septic to sewer conversion projects, and deciding if new construction should be required to connect to existing networks or if they can install new septic systems. In this section, we want to know what tool(s) you currently use to help you make these decisions, how useful these tools are for you, and how they could be more useful. If you are from an engineering company or other outside contractor/consultant supporting a municipality/utility as they pursue enhancement or expansion projects, please respond to these questions while thinking about your most recent project, or the projects you most commonly support.

Q55 5.1 Do you have access to a planning tool? (select one)

- Yes (1)
- No (2)

Skip To: Q59 If 5.1 Do you have access to a planning tool? (select one) = No

Q56 5.2 If you have access to a planning tool, what is the name of that tool?

_____

Q57 5.3 Does this tool cover any of the following processes? (select all that apply)

- Project efficiency (neighborhood identification/planning) (1)
- Estimating project costs (2)
- Identification of where gravity can be used vs pressurized/force main lines (3)
- Identification of lift station requirement/placement (4)
- Estimating capacity requirements (pipes or treatment facilities) (5)
- Estimating environmental benefits (6)

- Aid for grant application preparation (7)

Q58 5.4 Does the tool provide supplemental information such as potential Total Nitrogen (TN) reductions? (select one)

- If yes, what information, beyond project planning, does the tool provide? (2) _____
- No (3)

Q68 5.5 What functionality do you find most useful in this tool?

_____

Q59 5.6 What functionality would you like to see in a wastewater enhancement planning tool?

_____

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Q60 5.7 What else should we know about tools that could support decision making and planning around sewershed expansion for the utility?

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End of Block: Section V:

End of Block: Section V:

Survey and Interview Respondents

Where locations were noted, survey and interview responses were received from:

Survey Cities	Survey Counties	Interviews
Apopka	Alachua	Emerald Coast Utility Authority
Atlantic Beach	Charlotte	Gainesville Regional Utilities
Belleview	Citrus	Indian River County
Bronson	Hernando	Miami Dade
Cape Canaveral	Hernando	Orlando
DeLand	Indian River	St Lucie Village
Howey-in-the-Hills	Leon	St Lucie West Services District
Indiantown	Leon	Trenton
Jacksonville	Levy	
Jupiter Inlet Colony	Marion	
Minneola	Martin	
Newberry	Palm Beach	
Ocoee	Palm Beach	
Orlando	Putnam	
Palatka	Volusia	
Palm Bay		
Port St. Lucie		
Sebring		
Tallahassee		
Trenton		
Vero Beach		
Wildwood		

Survey Results File

RecordedDate	1.1 City	IRB	Q6	Q6_8_TEXT	1.1 County	Q7
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	RESEARCH PARTICIPANT INFORMED CONSENT FORM	1.1 What sector do you work in? (select one) - Selected Choice	1.1 What sector do you work in? (select one) - Other (please specify) - Text	If you indicated you work for a county utility, which county utility do you work	1.2 How long have you been in this position/capacity? (select one)
4/26/2024 12:11		I agree to participate	Engineering Contractor/Consultant			More than 10 years
4/26/2024 13:50	DeLand	I agree to participate	City Municipal Utility			More than 10 years
4/26/2024 14:05		I agree to participate	Other Private Contractor/Consultant			More than 10 years
4/26/2024 14:08		I agree to participate	County Municipal Utility			6-10 years
4/26/2024 15:14		I agree to participate	Other (please specify)	Not-for-profit member owned cooperative.		More than 10 years
4/26/2024 15:48		I agree to participate	Other (please specify)	Innovative technology to produce hydroxyl radicals affo		3-5 years
4/27/2024 12:49	Atlantic Beach	I agree to participate	City Municipal Utility			6-10 years
4/29/2024 6:06		I agree to participate	Other (please specify)	Member owned non-profit		More than 10 years
4/29/2024 9:16		I agree to participate	Engineering Contractor/Consultant			More than 10 years
4/29/2024 9:24		I agree to participate	County Municipal Utility		Charlotte	3-5 years
4/29/2024 12:34	Vero Beach	I agree to participate	City Municipal Utility			3-5 years
4/29/2024 14:11	Jacksonville	I agree to participate	City Municipal Utility			6-10 years
5/1/2024 9:45	Wildwood	I agree to participate	City Municipal Utility			3-5 years
5/1/2024 11:43	Palatka	I agree to participate	City Municipal Utility			More than 10 years
5/1/2024 14:59		I agree to participate	Engineering Contractor/Consultant		Levy	More than 10 years
5/2/2024 9:19	Orlando	I agree to participate	City Municipal Utility			3-5 years
5/3/2024 8:04		I agree to participate	County Municipal Utility		Putnam	Less than 2 years
5/3/2024 9:13		I agree to participate	Private Owned Utility			6-10 years
5/3/2024 12:17	Trenton	I agree to participate	City Municipal Utility			3-5 years
5/6/2024 7:40	Bronson	I agree to participate	Other (please specify)	Engineering consultant for Town of Bronson, we serve r		More than 10 years
5/6/2024 17:21		I agree to participate				
5/6/2024 17:26		I agree to participate	Other (please specify)	County that is not a utility	Alachua	More than 10 years
5/7/2024 8:24		I agree to participate	County Municipal Utility		Martin	6-10 years
5/7/2024 9:26	Indiantown	I agree to participate	Other (please specify)	Village Municipal Utility		3-5 years
5/7/2024 10:33		I agree to participate	Other (please specify)	Community Development District - Special Purpose Gov		More than 10 years
5/7/2024 11:13		I agree to participate	Other (please specify)	County Government with no municipal wastewater util	Leon	3-5 years
5/7/2024 14:59		I agree to participate				
5/7/2024 15:18		I agree to participate	County Municipal Utility		Hernando	3-5 years
5/7/2024 20:18		I agree to participate	Other (please specify)	County Natural Resources Department implementing p		More than 10 years
5/8/2024 9:41		I agree to participate	Engineering Contractor/Consultant			More than 10 years
5/8/2024 11:31	Jupiter Inlet Colony	I agree to participate	Other Private Contractor/Consultant		Palm Beach	More than 10 years
5/8/2024 12:16	Belleview	I agree to participate	City Municipal Utility			3-5 years
5/8/2024 14:28	Apopka	I agree to participate	City Municipal Utility			6-10 years
5/9/2024 9:02		I agree to participate	County Municipal Utility		Volusia	More than 10 years
5/9/2024 13:08		I agree to participate	County Municipal Utility		Indian River	6-10 years
5/9/2024 13:47	Ocoee	I agree to participate	City Municipal Utility			3-5 years
5/9/2024 13:49		I agree to participate	Engineering Contractor/Consultant			3-5 years
5/9/2024 14:41		I agree to participate	County Municipal Utility		Palm Beach	Less than 2 years
5/9/2024 16:03		I agree to participate	County Municipal Utility		Citrus	More than 10 years
5/10/2024 9:00		I agree to participate	Other (please specify)	Saint Lucie West Services District		3-5 years
5/10/2024 9:47	Newberry	I agree to participate	City Municipal Utility			6-10 years
5/13/2024 10:04		I agree to participate	County Municipal Utility		Hernando	6-10 years
5/13/2024 15:13		I agree to participate	County Municipal Utility		Marion	More than 10 years
5/15/2024 15:18		I agree to participate	Other (please specify)	Special District		Less than 2 years
5/16/2024 10:12	Sebring	I agree to participate	City Municipal Utility			Less than 2 years
5/16/2024 12:21	Port St. Lucie	I agree to participate	City Municipal Utility			3-5 years
5/23/2024 8:20	Howey-in-the-Hills	I agree to participate	City Municipal Utility			3-5 years
6/4/2024 11:29	Cape Coral	I agree to participate	City Municipal Utility		Lee	6-10 years

RecordedDate	1.1 City	Q8	Q9	Q10	Q11	Q12	Q13
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	1.3 What DEP region do you work in? (select all that apply) (reference the DEP District map below)	1.4 Does the utility you work for or support have	1.5 Approximately how many households (HH) does the utility serve? If the utility you work for has multiple WWTF locations,	1.6 What is the Utility's WW permitted capacity (MGD)? If the utility you work for has multiple	1.7 What is the Utility's WW design capacity? If the utility you work for has multiple WWTF	1.8 Are there any plans for expanding the WW Treatment Facility/Plant? (not including collection network). If the utility you work for has multiple WWTF locations, select one based on the location
4/26/2024 12:11		Southeast	Yes	Less than 50,000 HH	1 - 20	1 - 20	No current plans for expansion
4/26/2024 13:50	DeLand	Central	No	Less than 50,000 HH	1 - 20	1 - 20	Yes, currently under construction
4/26/2024 14:05		Central,Northeast,Northwest,South,Southeast,Southwest	Yes	Less than 50,000 HH	1 - 20	1 - 20	Currently in planning/design phase
4/26/2024 14:08		Northwest	No	Less than 50,000 HH	Our ww is piped to a ne	Our ww is piped to a ne	No current plans for expansion
4/26/2024 15:14		Northwest	Yes	Less than 50,000 HH	1 - 20	1 - 20	Currently in planning/design phase
4/26/2024 15:48		Southwest					
4/27/2024 12:49	Atlantic Beach	Northeast	No	Less than 50,000 HH	1 - 20	1 - 20	No current plans for expansion
4/29/2024 6:06		South	No	Less than 50,000 HH		Our ww is piped to a ne	No current plans for expansion
4/29/2024 9:16		Central,Northeast,Northwest,South,Southwest	Yes	500,001 - 1M HH	Less than 1 MGD	Less than 1 MGD	Currently in planning/design phase
4/29/2024 9:24		South	Yes	Less than 50,000 HH	1 - 20	1 - 20	Yes, currently under construction
4/29/2024 12:34	Vero Beach	Southeast	Yes	Less than 50,000 HH	1 - 20	1 - 20	Currently in planning/design phase
4/29/2024 14:11	Jacksonville	Northeast	Yes	500,001 - 1M HH	I am not sure	I am not sure	Yes, currently under construction
5/1/2024 9:45	Wildwood	Central	Yes	Less than 50,000 HH	1 - 20	1 - 20	Currently in planning/design phase
5/1/2024 11:43	Palatka	Northeast	No	Less than 50,000 HH	1 - 20	1 - 20	Will begin planning and design within the next 5
5/1/2024 14:59		Northeast	Yes	Less than 50,000 HH	Less than 1 MGD	Less than 1 MGD	No current plans for expansion
5/2/2024 9:19	Orlando	Central	Yes	50,001 - 100,000	21 - 50	21 - 50	Currently in planning/design phase
5/3/2024 8:04		Northeast	No	Less than 50,000 HH	Less than 1 MGD	Less than 1 MGD	Currently in planning/design phase
5/3/2024 9:13		Northeast	No	Less than 50,000 HH	Less than 1 MGD	Less than 1 MGD	No current plans for expansion
5/3/2024 12:17	Trenton	Northeast	No	Less than 50,000 HH	Less than 1 MGD	Less than 1 MGD	Will begin planning and design within the next 10
5/6/2024 7:40	Bronson	Central,Northeast,Northwest,South,Southwest	No	Less than 50,000 HH	Less than 1 MGD	Less than 1 MGD	No current plans for expansion
5/6/2024 17:21							
5/6/2024 17:26		Northeast	Yes	I am not sure	I am not sure	I am not sure	
5/7/2024 8:24		Southeast	Yes	Less than 50,000 HH	1 - 20	1 - 20	Will begin planning and design within the next 5
5/7/2024 9:26	Indiantown	Southeast	No	Less than 50,000 HH	Less than 1 MGD	Less than 1 MGD	Currently in planning/design phase
5/7/2024 10:33		Central	No	Less than 50,000 HH	1 - 20	1 - 20	Yes, currently under construction
5/7/2024 11:13		Northwest	No	I am not sure	Our ww is piped to a ne	Our ww is piped to a ne	No current plans for expansion
5/7/2024 14:59							Yes, currently under construction
5/7/2024 15:18		Southwest	Yes	100,001 - 200,000	1 - 20	1 - 20	Currently in planning/design phase
5/7/2024 20:18		Central	Yes	I am not sure	I am not sure	I am not sure	Yes, currently under construction
5/8/2024 9:41		Central,South,Southeast,Southwest	Yes	500,001 - 1M HH	101 - 200 MGD	101 - 200 MGD	Yes, currently under construction
5/8/2024 11:31	Jupiter Inlet Colony	Central	No	Less than 50,000 HH			Currently in planning/design phase
5/8/2024 12:16	Belleview	Central	No	Less than 50,000 HH	1 - 20	1 - 20	Yes, currently under construction
5/8/2024 14:28	Apopka	Central	No	50,001 - 100,000	1 - 20	1 - 20	Currently in planning/design phase
5/9/2024 9:02		Central	Yes	Less than 50,000 HH	1 - 20	1 - 20	Yes, currently under construction
5/9/2024 13:08		Southeast	Yes	Less than 50,000 HH	1 - 20	1 - 20	No current plans for expansion
5/9/2024 13:47	Ocoee	Central	No	Less than 50,000 HH	1 - 20	1 - 20	Currently in planning/design phase
5/9/2024 13:49		Central,Northeast,South,Southwest	Yes	Less than 50,000 HH	1 - 20	1 - 20	Currently in planning/design phase
5/9/2024 14:41		Southeast	Yes	100,001 - 200,000	21 - 50	21 - 50	Yes, currently under construction
5/9/2024 16:03		Southwest	Yes	Less than 50,000 HH	1 - 20	1 - 20	Currently in planning/design phase
5/10/2024 9:00		Southeast	No	Less than 50,000 HH	1 - 20	1 - 20	No current plans for expansion
5/10/2024 9:47	Newberry	Northeast	No	Less than 50,000 HH	Less than 1 MGD	Less than 1 MGD	Currently in planning/design phase
5/13/2024 10:04		Southwest	Yes	100,001 - 200,000	1 - 20	1 - 20	Currently in planning/design phase
5/13/2024 15:13		Central	Yes	Less than 50,000 HH	1 - 20	1 - 20	Currently in planning/design phase
5/15/2024 15:18		Northeast	No	Less than 50,000 HH	1 - 20	1 - 20	No current plans for expansion
5/16/2024 10:12	Sebring	South	Yes	Less than 50,000 HH	1 - 20	1 - 20	Currently in planning/design phase
5/16/2024 12:21	Port St. Lucie	Southeast	Yes	50,001 - 100,000	1 - 20	1 - 20	Yes, currently under construction
5/23/2024 8:20	Howey-in-the-Hills	Central	No	Less than 50,000 HH	I am not sure	I am not sure	Yes, currently under construction
6/4/2024 11:29	Cape Coral	South	Yes	I am not sure	I am not sure	I am not sure	Currently in planning/design phase

RecordedDate	1.1 City	Q14	Q15	Q64	Q16	Q18
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	1.9 Since some facilities treat both stormwater and wastewater in the same treatment facility, taking on new sewer treatment from new construction	1.10 If the utility also provides potable drinking water or reclaimed water for irrigation, providing new sewer service	1.11 Is the utility/municipality required to, or have otherwise completed, a septic remediation plan pursuant to Florida Statutes, Ch. 403? (select one)	1.12 What else would you like to add about the utility that you think we should know, but have not asked about?	2.1 Is the pace of new developmen t or septic
4/26/2024 12:11		No stormwater contribution	No potable water, facilities	Yes, we are required to have and have completed a septic remediation plan pursuant t	I represent most wastewater utilities in the Keys. Efflue	No
4/26/2024 13:50	DeLand		Yes need to meet reclaim st	Yes, we are required to have and have completed a septic remediation plan pursuant t		No
4/26/2024 14:05				Yes, we are required to have a septic remediation and are working on it		No
4/26/2024 14:08		n/a	n/a	No, we are not required to have a septic remediation plan	Smaller utilities really struggle to provide the necessary	No
4/26/2024 15:14		We do not treat stormwater.	We provide both water and	No, we are not required to have a septic remediation plan	We have six individually permitted wastewater treatme	Yes
4/26/2024 15:48						
4/27/2024 12:49	Atlantic Beach		Not likely. We are essentiall	Yes, we are required to have and have completed a septic remediation plan pursuant t		No
4/29/2024 6:06				No, we are not required to have a septic remediation plan		No
4/29/2024 9:16				Yes, we are required to have a septic remediation and are working on it	We provide engineering services to dozens of municipa	No
4/29/2024 9:24		NA	No impact	No, we are not required to have a septic remediation plan		No
4/29/2024 12:34	Vero Beach	City only treats wastewater.	City provides DW and reclai	Yes, we are required to have and have completed a septic remediation plan pursuant t	Elaborate on question 1.8. COVB is currently evaluating	No
4/29/2024 14:11	Jacksonville			Yes, we are required to have a septic remediation and are working on it		Yes
5/1/2024 9:45	Wildwood	Wastewater only	We do provide drinking wat	Yes, we are required to have a septic remediation and are working on it	Staffing is a large part of the issues we have been dealir	Yes
5/1/2024 11:43	Palatka	we do not mix the two	not at all	Yes, we are required to have a septic remediation and are working on it		
5/1/2024 14:59		not applicable	Yes No	Yes, we are required to have a septic remediation and are working on it		No
5/2/2024 9:19	Orlando	N/A	Yes it does.	Yes, we are required to have a septic remediation and are working on it	Growth is anticipated to be occur primarily in the south	Yes
5/3/2024 8:04		N/A	Drinking water is provided.	Yes, we are required to have a septic remediation and are working on it		No
5/3/2024 9:13		It does not, no issues.		No, we are not required to have a septic remediation plan	Privately owned utility owned by the Dept of Military A	No
5/3/2024 12:17	Trenton	N/A	Yes.	No, we are not required to have a septic remediation plan		Yes
5/6/2024 7:40	Bronson	Bronson's WWTF only treats domest	Bronson does not have recl	Yes, we are required to have a septic remediation and are working on it	The Town of Bronson, like many small utilities, requires	No
5/6/2024 17:21						
5/6/2024 17:26				Yes, we are required to have and have completed a septic remediation plan pursuant t		No
5/7/2024 8:24		n/a	yes we provide water / recl	Yes, we are required to have a septic remediation and are working on it		No
5/7/2024 9:26	Indiantown	N/A	N/A	Yes, we are required to have a septic remediation and are working on it		Yes
5/7/2024 10:33		N/A	Question 1 - Yes / Question	No, we are not required to have a septic remediation plan		No
5/7/2024 11:13		N/A	N/A	Yes, we are required to have and have completed a septic remediation plan pursuant t		
5/7/2024 14:59						
5/7/2024 15:18		N/A	yes	Yes, we are required to have a septic remediation and are working on it		Yes
5/7/2024 20:18		N/A	Yes.I don't know.	Yes, we are required to have and have completed a septic remediation plan pursuant t		Yes
5/8/2024 9:41		NA	NA	Yes, we are required to have a septic remediation and are working on it		No
5/8/2024 11:31	Jupiter Inlet Colony	The capacity system handles stormw	Providing drinking water or	Yes, we are required to have and have completed a septic remediation plan pursuant t		Yes
5/8/2024 12:16	Belleview	NA	Our utility provides potable	No, we are not required to have a septic remediation plan		No
5/8/2024 14:28	Apopka	NA	Yes to both	Yes, we are required to have and have completed a septic remediation plan pursuant t		Yes
5/9/2024 9:02		N/A	No impact	Yes, we are required to have a septic remediation and are working on it		Yes
5/9/2024 13:08		N/A	Yes, our utility provide DW a	Yes, we are required to have and have completed a septic remediation plan pursuant t	We are planning to conduct a DPR pilot study, commen	No
5/9/2024 13:47	Ocoee		Yes, we provide drinking wa	Yes, we are required to have a septic remediation and are working on it	We are impacted by multiple BMAPs- Wekiva & Rock Sp	No
5/9/2024 13:49		no stormwater input	Provides water, wastewater	No, we are not required to have a septic remediation plan	The permitted treatment limits for WW are more string	Yes
5/9/2024 14:41		not applicable	Yes, we provide reclaimed w		We recently initiated construction of a Water Purificatic	No
5/9/2024 16:03			Yes, we provide drinking wa	Yes, we are required to have and have completed a septic remediation plan pursuant t	Citrus County has 3 first order magnitude springs and is	No
5/10/2024 9:00			yes we provide potable wat	No, we are not required to have a septic remediation plan		No
5/10/2024 9:47	Newberry	n/a	yes	No, we are not required to have a septic remediation plan	n/a	Yes
5/13/2024 10:04		N/A	Yes we also provide potable	Yes, we are required to have and have completed a septic remediation plan pursuant t	None	No
5/13/2024 15:13			We do provide DW services	Yes, we are required to have and have completed a septic remediation plan pursuant t		No
5/15/2024 15:18				No, we are not required to have a septic remediation plan		No
5/16/2024 10:12	Sebring	N/A	N/A	No, we are not required to have a septic remediation plan	We have three plants operating. One is currently in exp	No
5/16/2024 12:21	Port St. Lucie	The City of Port St. Lucie Wastewate	Our utility does produce rec	Yes, we are required to have a septic remediation and are working on it		No
5/23/2024 8:20	Howey-in-the-Hills					No
6/4/2024 11:29	Cape Coral	Our WWTP include only wastewater	Yes. We provide both DW a			

RecordedDate	1.1 City	Q19	Q20	Q21	Q22	Q23_1
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	2.2 In your region, is improvement of water quality a driver of sewer network expansion projects? (select one)	2.3 Are there sufficient financial resources within your organization for wastewater collection capacity expansion projects or would you require grants or other funding support? (select one)	2.4 Are there sufficient resources within your organization for WWTF expansion projects or would you require grant/etc. funding? (select one)	2.5 Are there sufficient resources (staff) in-	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Water Quality
4/26/2024 12:11		Very important	We have some funds but some extra money would let u	A loan has been applied for and/or received to complet	Yes	We are aware of this opportunity
4/26/2024 13:50	DeLand	Very important	We would need a significant extra funding source for m	A grant of at least 50% will be required	No	We are aware of and have applied to this opportunity in
4/26/2024 14:05		Very important	We would need a significant extra funding source for m	A grant between 90% and 100% will be required to con	No	We are aware of and have applied to this opportunity in
4/26/2024 14:08		Very important	We would need a significant extra funding source for m	A grant between 90% and 100% will be required to con	No	We are aware of this opportunity
4/26/2024 15:14		Somewhat	We have some funds but some extra money would let u	A grant of at least 50% will be required	No	Not aware of this opportunity
4/26/2024 15:48						
4/27/2024 12:49	Atlantic Beach	It's fairly important	We have some funds but some extra money would let u	A grant of at least 50% will be required	Yes	We are aware of this opportunity
4/29/2024 6:06		Very important	We would need a significant extra funding source for m		No	Not aware of this opportunity
4/29/2024 9:16		Very important	We would need a significant extra funding source for m	A grant between 90% and 100% will be required to con	No	We are aware of and have applied to this opportunity in
4/29/2024 9:24		Somewhat	We have some funds but some extra money would let u	A loan has been applied for and/or received to complet	Yes	We are aware of and have applied to this opportunity in
4/29/2024 12:34	Vero Beach	Very important	We have some funds but some extra money would let u	Funding is available and has been approved by the gove	No	We are aware of and have applied to this opportunity in
4/29/2024 14:11	Jacksonville	It's fairly important	We would need a significant extra funding source for m		Yes	We are aware of and have applied to this opportunity in
5/1/2024 9:45	Wildwood	About 50/50	We would need a significant extra funding source for m	A loan has been applied for and/or received to complet	No	We are aware of this opportunity
5/1/2024 11:43	Palatka	It's fairly important	We would need a significant extra funding source for m	A grant between 90% and 100% will be required to con	Yes	We are aware of this opportunity
5/1/2024 14:59		It's fairly important	We have no funds for any kind of expansion	A grant between 90% and 100% will be required to con	No	Not aware of this opportunity
5/2/2024 9:19	Orlando	Very important	We would need a significant extra funding source for m	A grant between 90% and 100% will be required to con	No	Not aware of this opportunity
5/3/2024 8:04		It's fairly important	We would need a significant extra funding source for m	A grant between 90% and 100% will be required to con	Yes	Not aware of this opportunity
5/3/2024 9:13		Not at all	We have some funds but some extra money would let u	Funding is available and has been approved by the gove	No	Not aware of this opportunity
5/3/2024 12:17	Trenton	Somewhat	We have no funds for any kind of expansion	A grant between 90% and 100% will be required to con	No	We are aware of this opportunity
5/6/2024 7:40	Bronson	Somewhat	We have no funds for any kind of expansion	A grant between 90% and 100% will be required to con	No	We are aware of and have applied to this opportunity in
5/6/2024 17:21						
5/6/2024 17:26		It's fairly important				We are aware of and have applied to this opportunity in
5/7/2024 8:24		Very important	We have some funds but some extra money would let u	A loan has been applied for and/or received to complet	Yes	We are aware of and have applied to this opportunity in
5/7/2024 9:26	Indiantown	About 50/50	We would need a significant extra funding source for m	A grant between 90% and 100% will be required to con	No	We are aware of and have applied to this opportunity in
5/7/2024 10:33		Very important	We have enough financial capacity for most or all proje	A grant of at least 50% will be required	Yes	We are aware of and have applied to this opportunity in
5/7/2024 11:13		Very important	We would need a significant extra funding source for m	A grant of at least 50% will be required	No	We are aware of and have applied to this opportunity in
5/7/2024 14:59						
5/7/2024 15:18		Very important	We would need a significant extra funding source for m	Funding is available and has been approved by the gove	Yes	We are aware of and have applied to this opportunity in
5/7/2024 20:18		Very important	We would need a significant extra funding source for m	A loan has been applied for and/or received to complet	No	We are aware of and have applied to this opportunity in
5/8/2024 9:41		Very important	We have enough financial capacity for most or all proje	A loan has been applied for and/or received to complet	Yes	We are aware of and have applied to this opportunity in
5/8/2024 11:31	Jupiter Inlet Colony	Very important	We have enough financial capacity for most or all proje	Funding is available and has been approved by the gove	Yes	We are aware of this opportunity
5/8/2024 12:16	Belleview	Not at all	We would need a significant extra funding source for m	A grant of at least 50% will be required	No	We are aware of and have applied to this opportunity in
5/8/2024 14:28	Apopka	It's fairly important	We would need a significant extra funding source for m	A grant between 90% and 100% will be required to con	No	We are aware of this opportunity
5/9/2024 9:02		Very important	We would need a significant extra funding source for m	A grant of at least 50% will be required	Yes	We are aware of and have applied to this opportunity in
5/9/2024 13:08		Very important	We would need a significant extra funding source for m	A grant of at least 50% will be required	No	We are aware of and have applied to this opportunity in
5/9/2024 13:47	Ocoee	Very important	We would need a significant extra funding source for m	A grant of at least 50% will be required	No	Not aware of this opportunity
5/9/2024 13:49		Very important	We would need a significant extra funding source for m	A loan has been applied for and/or received to complet	Yes	We are aware of this opportunity
5/9/2024 14:41		Not at all			Yes	We are aware of this opportunity
5/9/2024 16:03		Very important	We would need a significant extra funding source for m	A grant between 90% and 100% will be required to con	No	We are aware of and have applied to this opportunity in
5/10/2024 9:00		Not at all	We have some funds but some extra money would let u		Yes	Not aware of this opportunity
5/10/2024 9:47	Newberry	Very important	We would need a significant extra funding source for m	A grant between 90% and 100% will be required to con	Yes	We are aware of and have applied to this opportunity in
5/13/2024 10:04		Very important	We would need a significant extra funding source for m	A loan has been applied for and/or received to complet	Yes	We are aware of and have applied to this opportunity in
5/13/2024 15:13		Very important	We have some funds but some extra money would let u	Funding is available and has been approved by the gove	No	We are aware of this opportunity
5/15/2024 15:18			We have no funds for any kind of expansion	A grant between 90% and 100% will be required to con	No	Not aware of this opportunity
5/16/2024 10:12	Sebring	About 50/50	We have some funds but some extra money would let u	A loan has been applied for and/or received to complet	Yes	We are aware of and have applied to this opportunity in
5/16/2024 12:21	Port St. Lucie	Very important	We would need a significant extra funding source for m	A grant of at least 50% will be required	Yes	We are aware of and have applied to this opportunity in
5/23/2024 8:20	Howey-in-the-Hills	About 50/50	We have some funds but some extra money would let u	Funding is available and has been approved by the gove	Yes	We are aware of this opportunity
6/4/2024 11:29	Cape Coral	Somewhat	We would need a significant extra funding source for m	A loan has been applied for and/or received to complet	Yes	We are aware of and have applied to this opportunity in

RecordedDate	1.1 City	Q23_2	Q23_3	Q23_4	Q23_5
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - State Water-	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Federal 319 Grants	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Clean Water State	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Small Community
4/26/2024 12:11				We are aware of this opportunity	
4/26/2024 13:50	DeLand	We are aware of and have applied to this opportunity i	We are aware of this opportunity	We are aware of and have applied to this opportunity i	Not eligible for this opportunity
4/26/2024 14:05		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
4/26/2024 14:08		We are aware of this opportunity	Not aware of this opportunity	We are aware of and have applied to this opportunity i	Not aware of this opportunity
4/26/2024 15:14		Not aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	Not eligible for this opportunity
4/26/2024 15:48					
4/27/2024 12:49	Atlantic Beach	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	Not eligible for this opportunity
4/29/2024 6:06		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
4/29/2024 9:16		We are aware of this opportunity	We are aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i
4/29/2024 9:24		We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	Not eligible for this opportunity
4/29/2024 12:34	Vero Beach	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	Not eligible for this opportunity
4/29/2024 14:11	Jacksonville	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/1/2024 9:45	Wildwood	We are aware of this opportunity	Not aware of this opportunity	We are aware of this opportunity	Not eligible for this opportunity
5/1/2024 11:43	Palatka	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/1/2024 14:59			Not aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity
5/2/2024 9:19	Orlando	Not aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity
5/3/2024 8:04		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/3/2024 9:13		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/3/2024 12:17	Trenton	We are aware of this opportunity	Not aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/6/2024 7:40	Bronson	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/6/2024 17:21					
5/6/2024 17:26		Not eligible for this opportunity	We are aware of this opportunity	Not eligible for this opportunity	Not eligible for this opportunity
5/7/2024 8:24		Not aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	Not eligible for this opportunity
5/7/2024 9:26	Indiantown	We are aware of and have applied to this opportunity i	Not aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i
5/7/2024 10:33		Not aware of this opportunity	Not aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity
5/7/2024 11:13		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity
5/7/2024 14:59					
5/7/2024 15:18		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/7/2024 20:18		We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of this opportunity
5/8/2024 9:41		We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of this opportunity
5/8/2024 11:31	Jupiter Inlet Colony	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/8/2024 12:16	Belleview	We are aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of this opportunity
5/8/2024 14:28	Apopka	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	Not eligible for this opportunity
5/9/2024 9:02			We are aware of this opportunity	We are aware of this opportunity	Not eligible for this opportunity
5/9/2024 13:08		Not aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/9/2024 13:47	Ocoee	We are aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	Not eligible for this opportunity
5/9/2024 13:49		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/9/2024 14:41		Not aware of this opportunity	Not aware of this opportunity	We are aware of and have applied to this opportunity i	Not eligible for this opportunity
5/9/2024 16:03		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/10/2024 9:00		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/10/2024 9:47	Newberry	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i
5/13/2024 10:04		We are aware of and have applied to this opportunity i	We are aware of this opportunity	We are aware of this opportunity	Not eligible for this opportunity
5/13/2024 15:13		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	Not eligible for this opportunity
5/15/2024 15:18		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/16/2024 10:12	Sebring	We are aware of this opportunity	Not aware of this opportunity	We are aware of and have applied to this opportunity i	Not aware of this opportunity
5/16/2024 12:21	Port St. Lucie	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of this opportunity	We are aware of this opportunity
5/23/2024 8:20	Howey-in-the-Hills	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
6/4/2024 11:29	Cape Coral	We are aware of and have applied to this opportunity i	We are aware of this opportunity	We are aware of this opportunity	Not eligible for this opportunity

RecordedDate	1.1 City	Q23_6	Q23_7	Q23_8	Q23_9
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Septic Upgrade	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Resilience Planning	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Resilience	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Regional Resilience
4/26/2024 12:11			We are aware of and have applied to this opportunity i	We are aware of this opportunity	
4/26/2024 13:50	DeLand	Not aware of this opportunity	We are aware of and have applied to this opportunity i		Not aware of this opportunity
4/26/2024 14:05		We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
4/26/2024 14:08		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity
4/26/2024 15:14		Not eligible for this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
4/26/2024 15:48					
4/27/2024 12:49	Atlantic Beach	We are aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of this opportunity
4/29/2024 6:06		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
4/29/2024 9:16		We are aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	Not aware of this opportunity
4/29/2024 9:24		Not eligible for this opportunity	We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity
4/29/2024 12:34	Vero Beach	Not aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	Not aware of this opportunity
4/29/2024 14:11	Jacksonville	We are aware of and have applied to this opportunity i	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/1/2024 9:45	Wildwood	We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/1/2024 11:43	Palatka	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/1/2024 14:59		Not aware of this opportunity	We are aware of and have applied to this opportunity i	Not aware of this opportunity	Not aware of this opportunity
5/2/2024 9:19	Orlando	We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/3/2024 8:04		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/3/2024 9:13		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/3/2024 12:17	Trenton	Not aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	Not aware of this opportunity
5/6/2024 7:40	Bronson	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity
5/6/2024 17:21					
5/6/2024 17:26		Not eligible for this opportunity	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	Not aware of this opportunity
5/7/2024 8:24		Not aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i
5/7/2024 9:26	Indiantown	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/7/2024 10:33		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/7/2024 11:13		We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	Not aware of this opportunity
5/7/2024 14:59					
5/7/2024 15:18		We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of this opportunity	We are aware of this opportunity
5/7/2024 20:18		We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i
5/8/2024 9:41		We are aware of and have applied to this opportunity i	We are aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of this opportunity
5/8/2024 11:31	Jupiter Inlet Colony	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/8/2024 12:16	Belleview	We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/8/2024 14:28	Apopka	We are aware of and have applied to this opportunity i	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/9/2024 9:02		We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/9/2024 13:08		We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/9/2024 13:47	Ocoee	We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/9/2024 13:49		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/9/2024 14:41		We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	Not aware of this opportunity
5/9/2024 16:03		We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of this opportunity	We are aware of this opportunity
5/10/2024 9:00		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/10/2024 9:47	Newberry	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i
5/13/2024 10:04		We are aware of and have applied to this opportunity i	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/13/2024 15:13		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/15/2024 15:18		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/16/2024 10:12	Sebring	We are aware of and have applied to this opportunity i	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/16/2024 12:21	Port St. Lucie	We are aware of this opportunity	We are aware of this opportunity	We are aware of and have applied to this opportunity i	We are aware of this opportunity
5/23/2024 8:20	Howey-in-the-Hills	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
6/4/2024 11:29	Cape Coral	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity

RecordedDate	1.1 City	Q23_10	Q23_11	Q23_12	Q23_13
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - St. Johns River	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Florida Small Cities	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Regional Rural	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Rural Infrastructure
4/26/2024 12:11			We are aware of and have applied to this opportunity i		
4/26/2024 13:50	DeLand	We are aware of and have applied to this opportunity i	Not eligible for this opportunity	Not eligible for this opportunity	We are aware of this opportunity
4/26/2024 14:05		We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
4/26/2024 14:08		Not eligible for this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of and have applied to this opportunity i
4/26/2024 15:14		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	We are aware of this opportunity
4/26/2024 15:48					
4/27/2024 12:49	Atlantic Beach	We are aware of this opportunity	We are aware of and have applied to this opportunity i	Not eligible for this opportunity	Not eligible for this opportunity
4/29/2024 6:06			Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
4/29/2024 9:16		We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of this opportunity	We are aware of and have applied to this opportunity i
4/29/2024 9:24		Not eligible for this opportunity	We are aware of and have applied to this opportunity i	Not eligible for this opportunity	Not eligible for this opportunity
4/29/2024 12:34	Vero Beach	We are aware of and have applied to this opportunity i	Not eligible for this opportunity	Not eligible for this opportunity	Not eligible for this opportunity
4/29/2024 14:11	Jacksonville	We are aware of and have applied to this opportunity i	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/1/2024 9:45	Wildwood	Not eligible for this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/1/2024 11:43	Palatka	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/1/2024 14:59		Not aware of this opportunity	We are aware of this opportunity		We are aware of this opportunity
5/2/2024 9:19	Orlando	Not eligible for this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/3/2024 8:04		We are aware of and have applied to this opportunity i	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/3/2024 9:13		We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/3/2024 12:17	Trenton	Not aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity
5/6/2024 7:40	Bronson	We are aware of this opportunity	We are aware of and have applied to this opportunity i	Not aware of this opportunity	We are aware of this opportunity
5/6/2024 17:21					
5/6/2024 17:26		We are aware of and have applied to this opportunity i	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/7/2024 8:24		Not eligible for this opportunity	Not eligible for this opportunity	Not eligible for this opportunity	Not eligible for this opportunity
5/7/2024 9:26	Indiantown	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/7/2024 10:33		Not eligible for this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/7/2024 11:13		Not eligible for this opportunity	We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/7/2024 14:59					
5/7/2024 15:18		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/7/2024 20:18		We are aware of and have applied to this opportunity i	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/8/2024 9:41		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/8/2024 11:31	Jupiter Inlet Colony	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/8/2024 12:16	Belleview	We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/8/2024 14:28	Apopka	We are aware of and have applied to this opportunity i	Not aware of this opportunity	Not eligible for this opportunity	Not eligible for this opportunity
5/9/2024 9:02		We are aware of and have applied to this opportunity i	Not eligible for this opportunity	Not eligible for this opportunity	Not eligible for this opportunity
5/9/2024 13:08		We are aware of and have applied to this opportunity i	We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/9/2024 13:47	Ocoee	We are aware of and have applied to this opportunity i	Not eligible for this opportunity	Not eligible for this opportunity	Not eligible for this opportunity
5/9/2024 13:49		We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
5/9/2024 14:41		Not eligible for this opportunity	We are aware of and have applied to this opportunity i	Not eligible for this opportunity	Not eligible for this opportunity
5/9/2024 16:03		Not aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity
5/10/2024 9:00		We are aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/10/2024 9:47	Newberry		We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i	We are aware of and have applied to this opportunity i
5/13/2024 10:04		Not eligible for this opportunity	We are aware of this opportunity	Not eligible for this opportunity	
5/13/2024 15:13		We are aware of and have applied to this opportunity i	We are aware of this opportunity	Not eligible for this opportunity	Not eligible for this opportunity
5/15/2024 15:18		Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity	Not aware of this opportunity
5/16/2024 10:12	Sebring	Not eligible for this opportunity	We are aware of and have applied to this opportunity i	Not aware of this opportunity	We are aware of this opportunity
5/16/2024 12:21	Port St. Lucie	We are aware of this opportunity	We are aware of this opportunity	Not aware of this opportunity	We are aware of this opportunity
5/23/2024 8:20	Howey-in-the-Hills	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity	We are aware of this opportunity
6/4/2024 11:29	Cape Coral	Not eligible for this opportunity	We are aware of and have applied to this opportunity i	Not eligible for this opportunity	Not eligible for this opportunity

RecordedDate	1.1 City	Q23_14	Q24	Q25	Q26_5	Q26_6	Q26_7	Q26_8	Q26_9	Q26_10	Q26_11
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	2.6 Is your organization eligible for and aware of the funding opportunities available annually from state and federal resources such as these listed below? Please indicate your awareness of each funding opportunity. - Special District	2.7 Are there other sources of funding that the utility has successfully used?	2.8 Understanding that funding may not be available for all utilities trying to meet regulatory requirements, how prominently do	2.9 When making the decision	2.9 When making the decision	2.9 When making the decision	2.9 When making the decision	2.9 When making the decision	2.9 When making the decision	2.9 When making the decision
4/26/2024 12:11		Not aware of this opportunity	State of Florida Stewardship grants, CDBG, HUD.	A very big considertion	9	2	8	5	4	8	10
4/26/2024 13:50	DeLand	Not aware of this opportunity		A very big considertion	7	5	5	5	3	10	10
4/26/2024 14:05		Not aware of this opportunity		A very big considertion	3			5		10	10
4/26/2024 14:08		Not aware of this opportunity		It's fairly important	8	1	7	5	7	3	0
4/26/2024 15:14		Not aware of this opportunity		A very big considertion	9	9	5	8	0	9	9
4/26/2024 15:48											
4/27/2024 12:49	Atlantic Beach	Not aware of this opportunity	HGMP, BRIC, DCIP	A very big considertion	3	7	10	9	1	10	10
4/29/2024 6:06		Not aware of this opportunity	USDA Funding	A very big considertion	8	7	10	10	8	10	9
4/29/2024 9:16		Not aware of this opportunity	Legislative appropriations	A very big considertion	4	4	10	10	6	10	10
4/29/2024 9:24		Not aware of this opportunity		It's fairly important	7	7	7	7	2	6	9
4/29/2024 12:34	Vero Beach	Not aware of this opportunity	Fed WWG grant administered by FDEP.	It's fairly important	8	8	7	8	7	9	10
4/29/2024 14:11	Jacksonville	Not aware of this opportunity	FDEP, City of Jacksonville		5	5	5	5	5	8	7
5/1/2024 9:45	Wildwood	Not aware of this opportunity	Not that I'm aware of. This would be higher, up the cha	About 50/50	8	3	6	2	3	8	8
5/1/2024 11:43	Palatka	We are aware of this opportunity	FDEP, FRWA	A very big considertion	6	8	4	10	5	8	10
5/1/2024 14:59		Not aware of this opportunity		A very big considertion	10	8	2	7		10	10
5/2/2024 9:19	Orlando	Not aware of this opportunity	Utility Rate Study	A very big considertion	8	7	8	9	8	9	10
5/3/2024 8:04		Not aware of this opportunity	ARPA and USACE grants	It's fairly important	3	7	8	6	7	9	6
5/3/2024 9:13		Not aware of this opportunity	None	A very big considertion	4		7	7		8	8
5/3/2024 12:17	Trenton	Not aware of this opportunity	Currently working on a CDBG grant project to upgrade \	About 50/50	1	5	5	9	3	9	5
5/6/2024 7:40	Bronson	Not aware of this opportunity	Due to the Town's grant needs, applications and progra	A very big considertion	5	5	6	5	6	10	9
5/6/2024 17:21											
5/6/2024 17:26		Not aware of this opportunity	I filled this out, but I am not a utility								
5/7/2024 8:24		Not eligible for this opportunity		It's fairly important	5	5	4	10	5	8	8
5/7/2024 9:26	Indiantown	We are aware of this opportunity		A very big considertion	5	7	5	8	5	5	9
5/7/2024 10:33		Not aware of this opportunity	We are located in the Southwest Florida Water Manage	A very big considertion	10				5	7	9
5/7/2024 11:13		Not aware of this opportunity	No	It's fairly important			5	5		5	5
5/7/2024 14:59											
5/7/2024 15:18		We are aware of this opportunity		It's fairly important	8	7	7	9	8	9	10
5/7/2024 20:18		We are aware of this opportunity		A very big considertion	8	8		8		8	10
5/8/2024 9:41		We are aware of this opportunity		A very big considertion	8	3	8	7	9	8	8
5/8/2024 11:31	Jupiter Inlet Colony	We are aware of this opportunity	Individual homeowners have contributed to the septic t	Not at all		10		10			
5/8/2024 12:16	Belleview	Not aware of this opportunity		A very big considertion	9	2		2	2	9	5
5/8/2024 14:28	Apopka	Not eligible for this opportunity	St Johns Cost Shares and bonds	A very big considertion	6	4	7	5	7	10	10
5/9/2024 9:02			Utility service agreements for new development	A very big considertion	5	3	5	6	8	10	8
5/9/2024 13:08		Not aware of this opportunity	ARP - American Recovery ProgramIRLNEP - Indian River	About 50/50	10	2	9	7	4	4	5
5/9/2024 13:47	Ocoee	Not eligible for this opportunity	ARPA funds are currently being used for projects.	A very big considertion	5	5	5	6	10	10	10
5/9/2024 13:49		We are aware of this opportunity		A very big considertion	9	9	8	9	9	9	9
5/9/2024 14:41		Not eligible for this opportunity	SFWMD Alternative Water Supply; State Appropriation	A very big considertion	5	3	9	7	2	9	10
5/9/2024 16:03		Not aware of this opportunity	FDEP Springs Initiative Funding, Direct State of Florida L	A very big considertion	6	7	9	9	2	9	7
5/10/2024 9:00		Not aware of this opportunity		A very big considertion	7				6	9	10
5/10/2024 9:47	Newberry		legislative appropriations	A very big considertion	8	8	8	8	6	10	10
5/13/2024 10:04		Not aware of this opportunity	Legislative appropriations, SWFWMD Cooperative fundi	A very big considertion	7	8	8	9	3	8	10
5/13/2024 15:13		Not aware of this opportunity		A very big considertion	6	8	8	10	4	9	10
5/15/2024 15:18		Not aware of this opportunity		A very big considertion							
5/16/2024 10:12	Sebring	Not aware of this opportunity	We have been using SRF loans for most of our projects.	A very big considertion	2	2	5	8	5	10	9
5/16/2024 12:21	Port St. Lucie	Not eligible for this opportunity	Historically, the City has utilized municipal utility bonds	A very big considertion	7	8	9	8	3	9	10
5/23/2024 8:20	Howey-in-the-Hills	We are aware of this opportunity		It's fairly important							
6/4/2024 11:29	Cape Coral	Not eligible for this opportunity	NA		3	3	8	3	3	3	3

RecordedDate	1.1 City	Q27	Q29	Q30	Q65	Q31	Q31_2_TEXT	Q32	Q33
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	2.10 What else should we know about decision making drivers around service expansion for the utility you represent?	3.1 What is the public opinion of septic to sewer expansion in your area? (select one)	3.2 What is the opinion of the city/county commission (elected local leadership) regarding septic to sewer	3.3 How many Onsite Sewage Treatment and Disposal Systems (septic systems) are in	3.4 When planning for a septic to sewer project, is there	3.4 When planning for a septic to sewer	3.5 Are there regulations in your area (e.g.	3.5 Follow up: If there are regulations in your area that require residents to connect to sewer if it is available at the property, is there a time frame by which those residents must connect to sewer once it
4/26/2024 12:11			Very positively	Very positively	<5,000	No		Yes	Yes. If yes, what is that time frame?
4/26/2024 13:50	DeLand		Somewhat negative	Mixed or neutral	20,001 – 40,000	No		No	No
4/26/2024 14:05			Mixed or neutral	Somewhat positively	5,001 – 20,000			Yes	Yes. If yes, what is that time frame?
4/26/2024 14:08			Somewhat negative	Mixed or neutral	<5,000	No		Yes	Yes. If yes, what is that time frame?
4/26/2024 15:14			Mixed or neutral	Somewhat positively	I don't know			No	No
4/26/2024 15:48									
4/27/2024 12:49	Atlantic Beach	The biggest decision making driver is SB64 requirement	Mixed or neutral	Mixed or neutral	<5,000	Yes. If yes, wha	75% (SJRWM	Yes	Yes. If yes, what is that time frame?
4/29/2024 6:06			Somewhat positively	Very positively	<5,000	No		Yes	
4/29/2024 9:16		Public perception and education around water quality i	Very positively	Somewhat positively	I don't know	Yes. If yes, wha	It depends o	Yes	Yes. If yes, what is that time frame?
4/29/2024 9:24			Somewhat positively	Very positively	20,001 – 40,000	No		Yes	Yes. If yes, what is that time frame?
4/29/2024 12:34	Vero Beach	COVB is making every effort to lower the cost of the ne	Somewhat positively	Somewhat positively	<5,000	No		Yes	Yes. If yes, what is that time frame?
4/29/2024 14:11	Jacksonville		Somewhat positively	Somewhat positively	I don't know			No	No
5/1/2024 9:45	Wildwood		Not sure	Mixed or neutral	<5,000			No	Yes. If yes, what is that time frame?
5/1/2024 11:43	Palatka		Somewhat positively	Very positively	<5,000			Yes	
5/1/2024 14:59			Mixed or neutral	Mixed or neutral	5,001 – 20,000	No		Yes	Yes. If yes, what is that time frame?
5/2/2024 9:19	Orlando	The Clean Waterways Act is directed at protecting Florid	Mixed or neutral	Somewhat positively	<5,000			Yes	Yes. If yes, what is that time frame?
5/3/2024 8:04			Very positively	Very positively	5,001 – 20,000	Yes. If yes, wha	50%	No	
5/3/2024 9:13		None	Somewhat positively	Somewhat positively	<5,000	No			
5/3/2024 12:17	Trenton	We are attempting to get all of our resident's that have	Somewhat positively	Somewhat positively	<5,000			Yes	
5/6/2024 7:40	Bronson		Mixed or neutral	Somewhat positively	<5,000	No		Yes	Yes. If yes, what is that time frame?
5/6/2024 17:21									
5/6/2024 17:26			Very negative	Somewhat positively	20,001 – 40,000				
5/7/2024 8:24			Somewhat positively	Very positively	5,001 – 20,000	No		Yes	Yes. If yes, what is that time frame?
5/7/2024 9:26	Indiantown		Mixed or neutral	Somewhat positively	<5,000			Yes	
5/7/2024 10:33		Our Utility service area has approximately 10 septic sys	Mixed or neutral	Mixed or neutral	<5,000	No		Yes	Yes. If yes, what is that time frame?
5/7/2024 11:13			Somewhat positively	Very positively	I don't know	No		Yes	Yes. If yes, what is that time frame?
5/7/2024 14:59									
5/7/2024 15:18			Somewhat positively	Somewhat positively	20,001 – 40,000			Yes	Yes. If yes, what is that time frame?
5/7/2024 20:18			Somewhat positively	Very positively	80,001 – 100,000	No		Yes	Yes. If yes, what is that time frame?
5/8/2024 9:41			Somewhat negative	Somewhat positively	20,001 – 40,000	No		No	No
5/8/2024 11:31	Jupiter Inlet Colony	The residents are very conscious of the impact of septic	Very positively	Very positively	<5,000	No		Yes	Yes. If yes, what is that time frame?
5/8/2024 12:16	Belleview	Service expansion is normally developer driven. The cos	Somewhat negative	Somewhat positively	<5,000			Yes	No
5/8/2024 14:28	Apopka		Somewhat positively	Strongly divided	5,001 – 20,000			Yes	No
5/9/2024 9:02			Mixed or neutral	Mixed or neutral	5,001 – 20,000			Yes	Yes. If yes, what is that time frame?
5/9/2024 13:08		Growth and demand projections, increasing legislations	Mixed or neutral	Somewhat positively	20,001 – 40,000	No		Yes	Yes. If yes, what is that time frame?
5/9/2024 13:47	Ocoee	Expansion projects are generally cost prohibitive for us.	Not sure	Somewhat positively	<5,000	No		Yes	Yes. If yes, what is that time frame?
5/9/2024 13:49		Public notification and public input is a very strong and	Somewhat positively	Somewhat positively	<5,000	No		Yes	No
5/9/2024 14:41			Mixed or neutral	Somewhat positively	20,001 – 40,000	Yes. If yes, wha	50		
5/9/2024 16:03		Public perception and buy in is a big consideration in br	Strongly divided	Very positively	20,001 – 40,000	No		Yes	Yes. If yes, what is that time frame?
5/10/2024 9:00						No			
5/10/2024 9:47	Newberry	n/a	Mixed or neutral	Mixed or neutral	<5,000	No		Yes	Yes. If yes, what is that time frame?
5/13/2024 10:04		None	Somewhat positively	Somewhat positively	40,001 – 60,000	No		Yes	Yes. If yes, what is that time frame?
5/13/2024 15:13			Somewhat positively	Very positively	80,001 – 100,000	No		Yes	Yes. If yes, what is that time frame?
5/15/2024 15:18			Not sure	Not sure	<5,000				
5/16/2024 10:12	Sebring		Somewhat positively	Somewhat positively	<5,000	No		Yes	
5/16/2024 12:21	Port St. Lucie	While ARPA and grant funding have really helped proje	Mixed or neutral	Very positively	5,001 – 20,000	No		Yes	Yes. If yes, what is that time frame?
5/23/2024 8:20	Howey-in-the-Hills		Mixed or neutral		I don't know			Yes	
6/4/2024 11:29	Cape Coral	Our decision drivers for selecting the next Utility Expans	Very positively	Very positively	I don't know	Yes. If yes, wha		Yes	Yes. If yes, what is that time frame?

RecordedDate	1.1 City	Q33_2_TEXT	Q70	Q70_3_TEXT	Q34	Q35_1
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	3.5 Follow up: If there are regulations in your area that require residents to connect to sewer if it is available at the	3.5 Follow up: If there are regulations in your area that require residents to	3.5 Follow up: If there are regulations in your area that require residents to connect to sewer if it is available at the property in a given time frame, are there consequences for not connecting? (select one) -	3.6 Does the utility or municipality currently have a prioritization process for septic to sewer conversion projects? (select one)	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?
4/26/2024 12:11		1 year	Yes. If yes, are there	Residents get charged for sewer whether connect	No	
4/26/2024 13:50	DeLand		No		No	In the current process
4/26/2024 14:05		1 yr			A process is currently being developed	In the current process
4/26/2024 14:08		1 year	Yes. If yes, are there	More costly after construction	Yes	In the current process
4/26/2024 15:14					No	Not a consideration
4/26/2024 15:48						
4/27/2024 12:49	Atlantic Beach	1 year	Yes. If yes, are there	Lien	Yes	In the current process
4/29/2024 6:06			Yes. If yes, are there		No	
4/29/2024 9:16		It depends upon the funding a	Yes. If yes, are there	per funding agreement and local ordinances	A process is currently being developed	In the current process
4/29/2024 9:24		1 year	Yes. If yes, are there	Activate Base Charges	Yes	In the current process
4/29/2024 12:34	Vero Beach	If OSTDS is failing, then imme	Yes. If yes, are there	Code enforcement fines.	Yes	Not a consideration
4/29/2024 14:11	Jacksonville		No		Yes	Might be added to a future process
5/1/2024 9:45	Wildwood	City Ordinance			There have been discussions about developing a p	In the current process
5/1/2024 11:43	Palatka		Yes. If yes, are there	YES	I don't know	
5/1/2024 14:59		1 year			No	
5/2/2024 9:19	Orlando	Prior to receiving a CO.	Yes. If yes, are there	In some areas a CO will not be issued.	A process is currently being developed	In the current process
5/3/2024 8:04					No	
5/3/2024 9:13					No	Not a consideration
5/3/2024 12:17	Trenton				I don't know	
5/6/2024 7:40	Bronson	365 days	No		A process is currently being developed	In the current process
5/6/2024 17:21						
5/6/2024 17:26					A process is currently being developed	
5/7/2024 8:24		1 year	Yes. If yes, are there	charge base ww fees	Yes	In the current process
5/7/2024 9:26	Indiantown				There have been discussions about developing a p	
5/7/2024 10:33		Immediately	No		No	
5/7/2024 11:13		2035			Yes	In the current process
5/7/2024 14:59						
5/7/2024 15:18		1 year	No		Yes	In the current process
5/7/2024 20:18		365 days	Yes. If yes, are there	fines	Yes	In the current process
5/8/2024 9:41			No		A process is currently being developed	In the current process
5/8/2024 11:31	Jupiter Inlet Colony	immediate mahdatory	Yes. If yes, are there		Yes	In the current process
5/8/2024 12:16	Belleview		No		No	
5/8/2024 14:28	Apopka				There have been discussions about developing a p	
5/9/2024 9:02						
5/9/2024 13:08		1 year	No		Yes	Might be added to a future process
5/9/2024 13:47	Ocoee	1 year			There have been discussions about developing a p	
5/9/2024 13:49			No		A process is currently being developed	In the current process
5/9/2024 14:41					No	
5/9/2024 16:03		365 days	Yes. If yes, are there	Code enforcement	Yes	In the current process
5/10/2024 9:00						
5/10/2024 9:47	Newberry	1 year	Yes. If yes, are there	septic repairs are not permitted	There have been discussions about developing a p	In the current process
5/13/2024 10:04		1 year	Yes. If yes, are there	Code enforcement	Yes	In the current process
5/13/2024 15:13		365 days from notice	Yes. If yes, are there	Lien on the property	Yes	In the current process
5/15/2024 15:18					I don't know	Not a consideration
5/16/2024 10:12	Sebring				There have been discussions about developing a p	
5/16/2024 12:21	Port St. Lucie	One year once noticed.	No		Yes	In the current process
5/23/2024 8:20	Howey-in-the-Hills					
6/4/2024 11:29	Cape Coral	180 days	Yes. If yes, are there	Ordinance 34-16 Paragraph 1e: "Penalty. Any pers	Yes	

RecordedDate	1.1 City	Q35_2	Q35_3	Q35_4	Q35_5	Q35_6
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?
4/26/2024 12:11						
4/26/2024 13:50	DeLand	In the current process	Not a consideration	Not a consideration	Not a consideration	In the current process
4/26/2024 14:05		In the current process	In the current process	Not a consideration	Not a consideration	In the current process
4/26/2024 14:08		In the current process	In the current process	In the current process	Not a consideration	In the current process
4/26/2024 15:14		Not a consideration	Not a consideration	Not a consideration	Not a consideration	Not a consideration
4/26/2024 15:48						
4/27/2024 12:49	Atlantic Beach	In the current process	Not a consideration	Not a consideration	In the current process	In the current process
4/29/2024 6:06						In the current process
4/29/2024 9:16		In the current process	In the current process		In the current process	In the current process
4/29/2024 9:24		In the current process	In the current process	Not a consideration	Not a consideration	In the current process
4/29/2024 12:34	Vero Beach	Not a consideration	Not a consideration	Not a consideration	Not a consideration	Not a consideration
4/29/2024 14:11	Jacksonville		Might be added to a future process	Might be added to a future process	In the current process	In the current process
5/1/2024 9:45	Wildwood	In the current process	In the current process	In the current process	In the current process	In the current process
5/1/2024 11:43	Palatka					
5/1/2024 14:59						
5/2/2024 9:19	Orlando	Might be added to a future process	Might be added to a future process	In the current process	Might be added to a future process	Might be added to a future process
5/3/2024 8:04						
5/3/2024 9:13		In the current process	Not a consideration	Not a consideration	Not a consideration	In the current process
5/3/2024 12:17	Trenton					
5/6/2024 7:40	Bronson	In the current process	In the current process	In the current process	Not a consideration	In the current process
5/6/2024 17:21						
5/6/2024 17:26						
5/7/2024 8:24		In the current process	In the current process	In the current process	In the current process	In the current process
5/7/2024 9:26	Indiantown					
5/7/2024 10:33						
5/7/2024 11:13		In the current process	In the current process	In the current process	In the current process	In the current process
5/7/2024 14:59						
5/7/2024 15:18		In the current process	In the current process	In the current process	In the current process	In the current process
5/7/2024 20:18		In the current process	In the current process	Might be added to a future process	In the current process	In the current process
5/8/2024 9:41		In the current process	In the current process	In the current process	In the current process	In the current process
5/8/2024 11:31	Jupiter Inlet Colony	In the current process	In the current process	In the current process	In the current process	In the current process
5/8/2024 12:16	Belleview					
5/8/2024 14:28	Apopka					
5/9/2024 9:02						
5/9/2024 13:08		In the current process	In the current process	In the current process	Not a consideration	Might be added to a future process
5/9/2024 13:47	Ocoee					
5/9/2024 13:49		In the current process	In the current process	In the current process	In the current process	In the current process
5/9/2024 14:41						
5/9/2024 16:03		In the current process	In the current process	Not a consideration	In the current process	In the current process
5/10/2024 9:00						
5/10/2024 9:47	Newberry	In the current process	In the current process	In the current process	In the current process	In the current process
5/13/2024 10:04		In the current process	In the current process	Not a consideration	In the current process	In the current process
5/13/2024 15:13		In the current process	In the current process	In the current process	In the current process	In the current process
5/15/2024 15:18		Not a consideration	Not a consideration	Not a consideration	Not a consideration	Not a consideration
5/16/2024 10:12	Sebring					
5/16/2024 12:21	Port St. Lucie	In the current process	Not a consideration	Not a consideration	Not a consideration	In the current process
5/23/2024 8:20	Howey-in-the-Hills					
6/4/2024 11:29	Cape Coral					

RecordedDate	1.1 City	Q35_7	Q35_8	Q35_9	Q35_10	Q35_11
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?
4/26/2024 12:11						
4/26/2024 13:50	DeLand	Not a consideration	In the current process	In the current process	In the current process	In the current process
4/26/2024 14:05		Not a consideration	Not a consideration	In the current process	In the current process	In the current process
4/26/2024 14:08		Not a consideration	In the current process	In the current process	In the current process	In the current process
4/26/2024 15:14		Not a consideration	Not a consideration	Not a consideration	Not a consideration	Not a consideration
4/26/2024 15:48						
4/27/2024 12:49	Atlantic Beach	Not a consideration	In the current process	In the current process	Might be added to a future process	In the current process
4/29/2024 6:06			In the current process	In the current process	In the current process	In the current process
4/29/2024 9:16		In the current process	In the current process	In the current process	Might be added to a future process	In the current process
4/29/2024 9:24		In the current process	In the current process	In the current process	In the current process	In the current process
4/29/2024 12:34	Vero Beach	In the current process	In the current process	In the current process	Not a consideration	In the current process
4/29/2024 14:11	Jacksonville	In the current process	In the current process	In the current process	In the current process	In the current process
5/1/2024 9:45	Wildwood	Might be added to a future process	Not a consideration	In the current process	In the current process	In the current process
5/1/2024 11:43	Palatka					
5/1/2024 14:59						
5/2/2024 9:19	Orlando	Might be added to a future process	In the current process	Might be added to a future process	In the current process	In the current process
5/3/2024 8:04						
5/3/2024 9:13		Not a consideration	Not a consideration	Not a consideration	Not a consideration	In the current process
5/3/2024 12:17	Trenton					
5/6/2024 7:40	Bronson	Might be added to a future process	Might be added to a future process	In the current process	In the current process	In the current process
5/6/2024 17:21						
5/6/2024 17:26						
5/7/2024 8:24		Might be added to a future process	In the current process	In the current process	In the current process	In the current process
5/7/2024 9:26	Indiantown					
5/7/2024 10:33						
5/7/2024 11:13		Not a consideration	In the current process	In the current process	In the current process	In the current process
5/7/2024 14:59						
5/7/2024 15:18		In the current process	In the current process	In the current process	In the current process	In the current process
5/7/2024 20:18		In the current process	In the current process	In the current process	In the current process	In the current process
5/8/2024 9:41		In the current process	In the current process	In the current process	In the current process	In the current process
5/8/2024 11:31	Jupiter Inlet Colony	In the current process	In the current process	In the current process	In the current process	
5/8/2024 12:16	Belleview					
5/8/2024 14:28	Apopka					
5/9/2024 9:02						
5/9/2024 13:08		Not a consideration	In the current process	In the current process	In the current process	In the current process
5/9/2024 13:47	Ocoee					
5/9/2024 13:49		In the current process	In the current process	In the current process	In the current process	
5/9/2024 14:41						
5/9/2024 16:03		Not a consideration	Not a consideration	In the current process	In the current process	In the current process
5/10/2024 9:00						
5/10/2024 9:47	Newberry	Not a consideration	In the current process	In the current process	Might be added to a future process	Might be added to a future process
5/13/2024 10:04		Not a consideration	In the current process	In the current process	In the current process	In the current process
5/13/2024 15:13		In the current process	In the current process	In the current process	In the current process	In the current process
5/15/2024 15:18		Not a consideration	Not a consideration	Not a consideration	Not a consideration	Not a consideration
5/16/2024 10:12	Sebring					
5/16/2024 12:21	Port St. Lucie	Might be added to a future process	In the current process	In the current process	Might be added to a future process	In the current process
5/23/2024 8:20	Howey-in-the-Hills					
6/4/2024 11:29	Cape Coral					

RecordedDate	1.1 City	Q35_12	Q35_13	Q35_14	Q35_15	Q35_16
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?
4/26/2024 12:11						
4/26/2024 13:50	DeLand	Not a consideration	Not a consideration	Not a consideration	Not a consideration	In the current process
4/26/2024 14:05		In the current process	Might be added to a future process	In the current process	Not a consideration	In the current process
4/26/2024 14:08		Might be added to a future process	Might be added to a future process	Might be added to a future process	Might be added to a future process	In the current process
4/26/2024 15:14		Not a consideration	Not a consideration	Not a consideration	Not a consideration	Not a consideration
4/26/2024 15:48						
4/27/2024 12:49	Atlantic Beach	In the current process	In the current process	In the current process	In the current process	In the current process
4/29/2024 6:06				In the current process		
4/29/2024 9:16		In the current process	In the current process	In the current process	In the current process	In the current process
4/29/2024 9:24		In the current process	In the current process	In the current process	In the current process	In the current process
4/29/2024 12:34	Vero Beach	In the current process	In the current process	In the current process	In the current process	Not a consideration
4/29/2024 14:11	Jacksonville	In the current process	In the current process	In the current process	In the current process	In the current process
5/1/2024 9:45	Wildwood	In the current process	In the current process	Might be added to a future process	In the current process	In the current process
5/1/2024 11:43	Palatka					
5/1/2024 14:59						
5/2/2024 9:19	Orlando	In the current process	In the current process	In the current process	In the current process	In the current process
5/3/2024 8:04						
5/3/2024 9:13		In the current process	In the current process	In the current process	Not a consideration	In the current process
5/3/2024 12:17	Trenton					
5/6/2024 7:40	Bronson	Might be added to a future process	In the current process	Might be added to a future process	In the current process	In the current process
5/6/2024 17:21						
5/6/2024 17:26						
5/7/2024 8:24		In the current process	In the current process	In the current process	In the current process	In the current process
5/7/2024 9:26	Indiantown					
5/7/2024 10:33						
5/7/2024 11:13		In the current process	In the current process	In the current process	In the current process	In the current process
5/7/2024 14:59						
5/7/2024 15:18		Not a consideration	Not a consideration	In the current process	In the current process	In the current process
5/7/2024 20:18		In the current process	In the current process	Might be added to a future process	In the current process	In the current process
5/8/2024 9:41		In the current process	In the current process	In the current process	In the current process	In the current process
5/8/2024 11:31	Jupiter Inlet Colony	In the current process	In the current process	In the current process	In the current process	In the current process
5/8/2024 12:16	Belleview					
5/8/2024 14:28	Apopka					
5/9/2024 9:02						
5/9/2024 13:08		Might be added to a future process	Might be added to a future process	Not a consideration	Not a consideration	In the current process
5/9/2024 13:47	Ocoee					
5/9/2024 13:49		In the current process	In the current process	In the current process	In the current process	In the current process
5/9/2024 14:41						
5/9/2024 16:03		Not a consideration	Not a consideration	Not a consideration	Not a consideration	In the current process
5/10/2024 9:00						
5/10/2024 9:47	Newberry	Might be added to a future process	Might be added to a future process	Might be added to a future process	In the current process	In the current process
5/13/2024 10:04		Not a consideration	Not a consideration	Not a consideration	In the current process	
5/13/2024 15:13		In the current process	Not a consideration	Not a consideration	Not a consideration	Not a consideration
5/15/2024 15:18		Not a consideration	Not a consideration	Not a consideration	Not a consideration	Not a consideration
5/16/2024 10:12	Sebring					
5/16/2024 12:21	Port St. Lucie	Not a consideration	Might be added to a future process	Not a consideration	Not a consideration	In the current process
5/23/2024 8:20	Howey-in-the-Hills					
6/4/2024 11:29	Cape Coral					

RecordedDate	1.1 City	Q35_17	Q35_18	Q35_19	Q35_20	Q35_21
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?
4/26/2024 12:11						
4/26/2024 13:50	DeLand	In the current process	In the current process	In the current process	In the current process	In the current process
4/26/2024 14:05		Not a consideration	In the current process	In the current process	In the current process	In the current process
4/26/2024 14:08		Not a consideration	Not a consideration	Not a consideration	Not a consideration	Not a consideration
4/26/2024 15:14		Not a consideration	Not a consideration	Not a consideration	Not a consideration	Not a consideration
4/26/2024 15:48						
4/27/2024 12:49	Atlantic Beach	Might be added to a future process	In the current process	Not a consideration	Not a consideration	In the current process
4/29/2024 6:06			In the current process			In the current process
4/29/2024 9:16		In the current process	In the current process	In the current process	In the current process	In the current process
4/29/2024 9:24		In the current process	In the current process	In the current process	In the current process	In the current process
4/29/2024 12:34	Vero Beach	Not a consideration	Might be added to a future process	Might be added to a future process	Might be added to a future process	In the current process
4/29/2024 14:11	Jacksonville	In the current process	In the current process	In the current process	In the current process	In the current process
5/1/2024 9:45	Wildwood	Might be added to a future process	In the current process	In the current process	In the current process	In the current process
5/1/2024 11:43	Palatka					
5/1/2024 14:59						
5/2/2024 9:19	Orlando	In the current process	Might be added to a future process	Might be added to a future process	In the current process	In the current process
5/3/2024 8:04						
5/3/2024 9:13		Not a consideration	Not a consideration	Not a consideration	In the current process	In the current process
5/3/2024 12:17	Trenton					
5/6/2024 7:40	Bronson	In the current process	In the current process	In the current process	In the current process	In the current process
5/6/2024 17:21						
5/6/2024 17:26						
5/7/2024 8:24		Might be added to a future process	In the current process	Might be added to a future process	In the current process	In the current process
5/7/2024 9:26	Indiantown					
5/7/2024 10:33						
5/7/2024 11:13		In the current process	In the current process	In the current process	In the current process	In the current process
5/7/2024 14:59						
5/7/2024 15:18		Might be added to a future process	Might be added to a future process	In the current process	In the current process	In the current process
5/7/2024 20:18		Might be added to a future process	In the current process	In the current process	In the current process	In the current process
5/8/2024 9:41		In the current process	In the current process	In the current process	In the current process	In the current process
5/8/2024 11:31	Jupiter Inlet Colony	In the current process	In the current process	In the current process	In the current process	In the current process
5/8/2024 12:16	Belleview					
5/8/2024 14:28	Apopka					
5/9/2024 9:02						
5/9/2024 13:08		Not a consideration	Might be added to a future process	Might be added to a future process	Might be added to a future process	In the current process
5/9/2024 13:47	Ocoee					
5/9/2024 13:49		In the current process	In the current process	In the current process	In the current process	In the current process
5/9/2024 14:41						
5/9/2024 16:03		Not a consideration	In the current process	In the current process	In the current process	In the current process
5/10/2024 9:00						
5/10/2024 9:47	Newberry	In the current process	In the current process	In the current process	In the current process	In the current process
5/13/2024 10:04		In the current process	In the current process	In the current process	In the current process	In the current process
5/13/2024 15:13		In the current process	In the current process	In the current process	In the current process	In the current process
5/15/2024 15:18		Not a consideration	Not a consideration	Not a consideration	Not a consideration	Not a consideration
5/16/2024 10:12	Sebring					
5/16/2024 12:21	Port St. Lucie	In the current process	In the current process	In the current process	In the current process	In the current process
5/23/2024 8:20	Howey-in-the-Hills					
6/4/2024 11:29	Cape Coral					

RecordedDate	1.1 City	Q35_22	Q35_23	Q35_24	Q35_25	Q36
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 If there is an existing septic to sewer prioritization or selection process, what factors are currently part of that process, or might be considered in a future update of that process?	3.7 Follow up: If you use, or plan to use, an estimated age of septic systems, how do you
4/26/2024 12:11						NA
4/26/2024 13:50	DeLand	Not a consideration	Not a consideration	In the current process	In the current process	
4/26/2024 14:05		In the current process	Not a consideration	In the current process	Might be added to a future process	
4/26/2024 14:08		Might be added to a future process	Not a consideration	Not a consideration	Not a consideration	
4/26/2024 15:14		Not a consideration	Not a consideration	Not a consideration	Not a consideration	N/A
4/26/2024 15:48						
4/27/2024 12:49	Atlantic Beach	In the current process	Not a consideration	Not a consideration	Not a consideration	
4/29/2024 6:06			In the current process		In the current process	
4/29/2024 9:16		In the current process	Might be added to a future process	In the current process	Might be added to a future process	County health Departn
4/29/2024 9:24		In the current process	In the current process	In the current process	In the current process	Review any updated pa
4/29/2024 12:34	Vero Beach	Might be added to a future process	Might be added to a future process	Might be added to a future process	Might be added to a future process	Building department a
4/29/2024 14:11	Jacksonville	In the current process	In the current process	In the current process	Might be added to a future process	
5/1/2024 9:45	Wildwood	In the current process	Might be added to a future process	In the current process	In the current process	
5/1/2024 11:43	Palatka					
5/1/2024 14:59						
5/2/2024 9:19	Orlando	In the current process	Might be added to a future process	Might be added to a future process	Might be added to a future process	Based on installation d
5/3/2024 8:04						
5/3/2024 9:13		In the current process	Not a consideration	In the current process	In the current process	NA
5/3/2024 12:17	Trenton					
5/6/2024 7:40	Bronson	In the current process	Might be added to a future process	In the current process	In the current process	The Town intends to s
5/6/2024 17:21						
5/6/2024 17:26						
5/7/2024 8:24		In the current process	In the current process	In the current process	In the current process	
5/7/2024 9:26	Indiantown					N/A
5/7/2024 10:33						
5/7/2024 11:13		In the current process	In the current process	In the current process	In the current process	
5/7/2024 14:59						
5/7/2024 15:18		Might be added to a future process	Not a consideration	In the current process	In the current process	
5/7/2024 20:18		In the current process	Might be added to a future process	In the current process	In the current process	Age of the home, unles
5/8/2024 9:41		In the current process	In the current process	In the current process	In the current process	
5/8/2024 11:31	Jupiter Inlet Colony	In the current process	In the current process	In the current process	In the current process	Installation date
5/8/2024 12:16	Belleview					
5/8/2024 14:28	Apopka					
5/9/2024 9:02						
5/9/2024 13:08		Might be added to a future process	Not a consideration	Might be added to a future process	Not a consideration	Age is not currently a f
5/9/2024 13:47	Ocoee					Year built from OCPA d
5/9/2024 13:49		In the current process	In the current process	In the current process	In the current process	
5/9/2024 14:41						
5/9/2024 16:03		In the current process	Not a consideration	In the current process	Not a consideration	N/A
5/10/2024 9:00						
5/10/2024 9:47	Newberry	In the current process	In the current process	In the current process	In the current process	historical data on a par
5/13/2024 10:04		In the current process	Not a consideration	In the current process	Not a consideration	N/A
5/13/2024 15:13		In the current process	In the current process	In the current process	In the current process	
5/15/2024 15:18		Not a consideration	Not a consideration	Not a consideration	Not a consideration	No Septic systems
5/16/2024 10:12	Sebring					
5/16/2024 12:21	Port St. Lucie	In the current process	Might be added to a future process	In the current process	In the current process	
5/23/2024 8:20	Howey-in-the-Hills					
6/4/2024 11:29	Cape Coral					

RecordedDate	1.1 City	Q66	Q67	Q37	Q39	Q40	Q41
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	3.7 Follow up: If you use, or plan to use, proximity to waterbody/ies, how do you estimate proximity to waterbody/ies?	3.7 Follow up: Are there other factors you use in your current process, or that you are considering adding in a	3.8 Which data sets/sources are used as inputs into the decision process?	3.9a The project contains only gravity driven sewer lines (select one)	3.9b The project contains both gravity driven and pressurized/force main lines (select one)	3.9c At least one lift station is needed for the project (select one)
4/26/2024 12:11		NA	NA	NA	Doesn't factor in	Doesn't factor in	Doesn't factor in
4/26/2024 13:50	DeLand				Very likely to pursue	Very likely to pursue	Very likely to pursue
4/26/2024 14:05				FDOH/FDEP inventory of septic sys	Likely to pursue	Likely to pursue	Likely to pursue
4/26/2024 14:08		Waterfront lots are prioritized.		Funding	Very likely to pursue	Likely to pursue	Doesn't factor in
4/26/2024 15:14		GIS		Wastewater plant flows and servic	Likely to pursue	Likely to pursue	Likely to pursue
4/26/2024 15:48							
4/27/2024 12:49	Atlantic Beach	100-year floodplain			Doesn't factor in	Doesn't factor in	Doesn't factor in
4/29/2024 6:06		local maps			Likely to pursue	Likely to pursue	Likely to pursue
4/29/2024 9:16		GIS		Our in-house systems and publical	Very likely to pursue	Very likely to pursue	Very likely to pursue
4/29/2024 9:24		GIS mapping	NA		Very unlikely to pursue	Possibly unlikely to pursue	Likely to pursue
4/29/2024 12:34	Vero Beach	COVB's consultant has performed an	COVB's goal is to provide th	GIS parcel data. OSTDS data, and r	Possibly unlikely to pursue	Possibly unlikely to pursue	Possibly unlikely to pursue
4/29/2024 14:11	Jacksonville				Very likely to pursue	Very likely to pursue	Very likely to pursue
5/1/2024 9:45	Wildwood			Sewer capacity, Agreements with c	Doesn't factor in	Doesn't factor in	Doesn't factor in
5/1/2024 11:43	Palatka				Possibly unlikely to pursue	Likely to pursue	Doesn't factor in
5/1/2024 14:59					Likely to pursue	Possibly unlikely to pursue	Possibly unlikely to pursue
5/2/2024 9:19	Orlando	Near to body of water.			Likely to pursue	Likely to pursue	Likely to pursue
5/3/2024 8:04					Doesn't factor in	Likely to pursue	Likely to pursue
5/3/2024 9:13		BMAP basis analysis	No	flow meter data, elevations, soil m	Likely to pursue	Likely to pursue	Likely to pursue
5/3/2024 12:17	Trenton				Likely to pursue	Likely to pursue	Likely to pursue
5/6/2024 7:40	Bronson		Logistical expansion and ex	As-built records, funding options,	Very likely to pursue	Very likely to pursue	Very likely to pursue
5/6/2024 17:21							
5/6/2024 17:26							
5/7/2024 8:24		Adjacency to water body, adjacent to	Current potable water avai	all of the above	Very unlikely to pursue	Possibly unlikely to pursue	Possibly unlikely to pursue
5/7/2024 9:26	Indiantown	N/A	N/A	N/A	Likely to pursue	Likely to pursue	Likely to pursue
5/7/2024 10:33							
5/7/2024 11:13		GIS			Doesn't factor in	Doesn't factor in	Doesn't factor in
5/7/2024 14:59							
5/7/2024 15:18					Very likely to pursue	Likely to pursue	Likely to pursue
5/7/2024 20:18		GIS	clusters of septic systems v	soils, property appraiser, tax collec	Likely to pursue	Likely to pursue	Likely to pursue
5/8/2024 9:41					Very likely to pursue	Likely to pursue	Likely to pursue
5/8/2024 11:31	Jupiter Inlet Colony	All existing septics were too close to t			Very likely to pursue	Very likely to pursue	Very likely to pursue
5/8/2024 12:16	Belleview						
5/8/2024 14:28	Apopka				Likely to pursue	Likely to pursue	Doesn't factor in
5/9/2024 9:02							
5/9/2024 13:08		Using the ArcNLET model or other ava	Proximity to the Lagoon, D	Outputs from the ArcNLET model c	Doesn't factor in	Likely to pursue	Doesn't factor in
5/9/2024 13:47	Ocoee	GIS		GIS utility and infrastructure layers	Very likely to pursue	Likely to pursue	Doesn't factor in
5/9/2024 13:49				Local development needs and recc	Likely to pursue	Likely to pursue	Likely to pursue
5/9/2024 14:41							
5/9/2024 16:03		The Wastewater Feasibility analysis p		Density of development, lot size (s	Likely to pursue	Likely to pursue	Likely to pursue
5/10/2024 9:00						Very likely to pursue	
5/10/2024 9:47	Newberry	GIS mapping	N/A	Septic tank location data	Very likely to pursue	Very likely to pursue	Very likely to pursue
5/13/2024 10:04		Feasibility study performed	May perform a septic to se	Several factors are considered and	Likely to pursue	Likely to pursue	Likely to pursue
5/13/2024 15:13					Very likely to pursue	Likely to pursue	Very likely to pursue
5/15/2024 15:18					Doesn't factor in	Doesn't factor in	Doesn't factor in
5/16/2024 10:12	Sebring				Doesn't factor in	Doesn't factor in	Doesn't factor in
5/16/2024 12:21	Port St. Lucie	City Council has allocated annual mor	Since 1999, we offer 0% fin	Approximately 5-7 years ago we pa	Possibly unlikely to pursue	Very likely to pursue	Doesn't factor in
5/23/2024 8:20	Howey-in-the-Hills						
6/4/2024 11:29	Cape Coral				Doesn't factor in	Doesn't factor in	Doesn't factor in

RecordedDate	1.1 City	Q42	Q43	Q44	Q44_10_TEXT	Q45
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	3.9d The project will require installation of sewer lines under a state or federal road (select one)	3.9e Other cost or feasibility considerations	3.10 Who participated in developing the process above? (select all that apply) - Selected Choice	3.10 Who participated in developing the process above? (select all that apply) - Other - Text	3.11 How far into the future is the planning process for septic to sewer conversion projects? (select one)
4/26/2024 12:11		Doesn't factor in		Governing body,Committee of stakeholders,Utility or lo		10 years
4/26/2024 13:50	DeLand	Very likely to pursue		Utility or local government staff,Vendor secured by util		15 years
4/26/2024 14:05		Likely to pursue		Utility or local government staff		20 years
4/26/2024 14:08		Doesn't factor in		Governing body,Utility or local government staff,Vendo		10 years
4/26/2024 15:14		Doesn't factor in		Other	Our engineers and operators	5 years
4/26/2024 15:48						
4/27/2024 12:49	Atlantic Beach	Doesn't factor in		Governing body,Utility or local government staff,Citizen		5 years
4/29/2024 6:06		Likely to pursue		Utility or local government staff		5 years
4/29/2024 9:16		Likely to pursue	Every project has a number of additional factors includi	Governing body,Utility or local government staff		5 years
4/29/2024 9:24		Likely to pursue	Using other collection system alternatives. Vacuum Sev	Utility or local government staff		20 years
4/29/2024 12:34	Vero Beach	Doesn't factor in	COVB, currently has a successful septic to sewer progra	Utility or local government staff,Citizens		More than 20 years
4/29/2024 14:11	Jacksonville	Very likely to pursue		Governing body,Committee of stakeholders,Utility or lo		More than 20 years
5/1/2024 9:45	Wildwood	Doesn't factor in	Most developers have private lift stations and also own	Utility or local government staff		10 years
5/1/2024 11:43	Palatka	Possibly unlikely to pursue		Utility or local government staff		10 years
5/1/2024 14:59		Very unlikely to pursue				
5/2/2024 9:19	Orlando	Likely to pursue		Utility or local government staff		5 years
5/3/2024 8:04		Doesn't factor in	Distance of forcemain and proximity to wetlands or wa	Utility or local government staff		5 years
5/3/2024 9:13		Likely to pursue	No	Utility or local government staff,Other	Federal funding source	5 years
5/3/2024 12:17	Trenton	Likely to pursue	No funding.			
5/6/2024 7:40	Bronson	Likely to pursue	Due to maintenance considerations, traditional gravity	Governing body,Utility or local government staff		20 years
5/6/2024 17:21						
5/6/2024 17:26						
5/7/2024 8:24		Doesn't factor in	Have determined that conventional gravity cost prohibi	Governing body,Utility or local government staff		5 years
5/7/2024 9:26	Indiantown	Likely to pursue		Utility or local government staff		5 years
5/7/2024 10:33						
5/7/2024 11:13		Doesn't factor in		Utility or local government staff,Vendor secured by util		20 years
5/7/2024 14:59						
5/7/2024 15:18		Likely to pursue		Governing body,Committee of stakeholders,Utility or lo		10 years
5/7/2024 20:18		Likely to pursue	cost of project compared to pounds of nutrient loading	Governing body,Committee of stakeholders,Utility or lo		10 years
5/8/2024 9:41		Possibly unlikely to pursue		Governing body,Utility or local government staff		20 years
5/8/2024 11:31	Jupiter Inlet Colony	Very likely to pursue		Governing body		
5/8/2024 12:16	Belleview					More than 20 years
5/8/2024 14:28	Apopka	Possibly unlikely to pursue		Governing body,Utility or local government staff,Vendo		5 years
5/9/2024 9:02						
5/9/2024 13:08		Doesn't factor in	None	Utility or local government staff,Citizens		5 years
5/9/2024 13:47	Ocoee	Doesn't factor in		Utility or local government staff		10 years
5/9/2024 13:49		Possibly unlikely to pursue		Governing body,Utility or local government staff,Citizen		5 years
5/9/2024 14:41						
5/9/2024 16:03		Likely to pursue	The cost of property owner assessments to make up fu	Governing body,Utility or local government staff,Vendo		20 years
5/10/2024 9:00				Utility or local government staff		
5/10/2024 9:47	Newberry	Very likely to pursue		Governing body,Utility or local government staff		5 years
5/13/2024 10:04		Likely to pursue	Depth of sewer gravity mains, maintenance of traffic co	Governing body,Committee of stakeholders,Utility or lo		20 years
5/13/2024 15:13		Very likely to pursue		Vendor secured by utility or local government ,Citizens		More than 20 years
5/15/2024 15:18		Doesn't factor in	Only have a force main system	Governing body		
5/16/2024 10:12	Sebring	Doesn't factor in	We are currently only doing a large conversion with gra			5 years
5/16/2024 12:21	Port St. Lucie	Doesn't factor in		Governing body,Committee of stakeholders,Utility or lo		More than 20 years
5/23/2024 8:20	Howey-in-the-Hills					
6/4/2024 11:29	Cape Coral	Doesn't factor in		Governing body,Utility or local government staff		More than 20 years

RecordedDate	1.1 City	Q46_1	Q46_2	Q46_3	Q46_4	Q46_5	Q46_6	Q46_7	Q47	Q49
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	3.12 How important are these factors when considering which projects to	3.12 How important are these factors when considering which projects to	3.12 How important are these factors when considering which projects to	3.12 How important are these factors when considering which projects to	3.12 How important are these factors when considering which projects to	3.12 How important are these factors when considering which projects to	3.12 How important are these factors when considering which projects to	3.13 What else should we know about decision making drivers for septic to sewer conversion projects in the service territory?	4.1 If there is a new development being planned within the service area, how is it decided if that development must connect to the sewer network or can install septic systems? (Select all that apply)
4/26/2024 12:11		8	9	6	9	4	3	3	Septic to sewer was mandated throughout Monroe Cou	All newly constructed homes and businesses r
4/26/2024 13:50	DeLand	8	5	5	10	10	5	5		If the newly constructed home or business is l
4/26/2024 14:05		7	9		10	10	5			All newly constructed homes and businesses r
4/26/2024 14:08		8	0	8	10	5	5	0		If the newly constructed home or business is l
4/26/2024 15:14		10	7	0	8	0	7	7		If the newly constructed home or business is l
4/26/2024 15:48										
4/27/2024 12:49	Atlantic Beach	10	5		10	10		10		All newly constructed homes and businesses r
4/29/2024 6:06		9	10	9	10	9	8	10		All newly constructed homes and businesses r
4/29/2024 9:16		10	10	5	10	10	10	6	The overall age and condition of the collection, pumpin	Other
4/29/2024 9:24		7	9	3	7	9	8	7		If the newly constructed home or business is l
4/29/2024 12:34	Vero Beach	5	10	8	10	10	5	10	Meet SB 712.	If the newly constructed home or business is l
4/29/2024 14:11	Jacksonville	5	5	5	5	5	5	5		All newly constructed homes and businesses r
5/1/2024 9:45	Wildwood	3	6	6	6	7	9	3		All newly constructed homes and businesses r
5/1/2024 11:43	Palatka	4	9	3	8	9	8	9		All newly constructed homes and businesses r
5/1/2024 14:59		10	8	4	10	10	10	10		If the newly constructed home or business is l
5/2/2024 9:19	Orlando	8	10	6	9	8	8	6		All newly constructed homes and businesses r
5/3/2024 8:04		6	5	7	9	6	6	6		If the newly constructed home or business is l
5/3/2024 9:13		8	4		8	9	7		none	If the newly constructed home or business is l
5/3/2024 12:17	Trenton									
5/6/2024 7:40	Bronson	9	7	9	10	9	7	7	Funding is the major obstacle.	All newly constructed homes and businesses r
5/6/2024 17:21										
5/6/2024 17:26									We are interested in septic to sewer, but are not a utilit	
5/7/2024 8:24		5	7	6	10	8	4	5		If the newly constructed home or business is l
5/7/2024 9:26	Indiantown	5	8	8	8	8	8	5		All newly constructed homes and businesses r
5/7/2024 10:33										All newly constructed homes and businesses r
5/7/2024 11:13		5	5		5	5				If the newly constructed home or business is l
5/7/2024 14:59										
5/7/2024 15:18		8	9	7	9	9	9	6		Other
5/7/2024 20:18		9	10		5	7	8	6		If the newly constructed home or business is l
5/8/2024 9:41		10	10	9	10	9	10	10		All newly constructed homes and businesses r
5/8/2024 11:31	Jupiter Inlet Colony		10				10	10	We are fully converted to sewer and are working on eli	All newly constructed homes and businesses r
5/8/2024 12:16	Belleview	7	5	5	9	9	8	7		All newly constructed homes and businesses r
5/8/2024 14:28	Apopka	10	8	9	10	8	7	8		All newly constructed homes and businesses r
5/9/2024 9:02										
5/9/2024 13:08		10	8	2	10	8	5	5	Proximity to the Lagoon, Density of OSTDS, Total pollut	All newly constructed homes and businesses r
5/9/2024 13:47	Ocoee	10	9	10	10	10	0			If the newly constructed home or business is l
5/9/2024 13:49		9	9	9	9	9	9	9		All newly constructed homes and businesses r
5/9/2024 14:41										If the newly constructed home or business is l
5/9/2024 16:03		8	8	1	10	8	1	1		
5/10/2024 9:00										All newly constructed homes and businesses r
5/10/2024 9:47	Newberry	10	5	5	10	10	9	1	we have establishes an urban services area....will not ex	All newly constructed homes and businesses r
5/13/2024 10:04		8	10	3	10	8	8	3	None	Other
5/13/2024 15:13		10	8	3	10	10	10	2		If the newly constructed home or business is l
5/15/2024 15:18									No Septic systems	All newly constructed homes and businesses r
5/16/2024 10:12	Sebring	5	9	7	7	9	9	10		
5/16/2024 12:21	Port St. Lucie	7	9	3	10	10	5	4		All newly constructed homes and businesses r
5/23/2024 8:20	Howey-in-the-Hills									
6/4/2024 11:29	Cape Coral									

RecordedDate	1.1 City	Q49_2_TEXT	Q49_4_TEXT	Q49_10_TEXT	Q50	Q51	Q52
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	4.1 If there is a new development being planned within the service area, how is it decided if that development must connect to the	4.1 If there is a new development being planned within the service area, how is it decided if that development must connect to the sewer network or can install septic systems? (Select all that apply) - If there is a	4.1 If there is a new development being planned within the service area, how is it decided if that development must connect to the sewer network or can install septic systems? (Select all	4.2 Is revenue generation a consideration for connecting new	4.3 Is there an impact fee for new development connections to the	4.4 If there is an impact fee for new development connections, does it adequately cover new connection costs? (select one)
4/26/2024 12:11					No	Yes	Yes, including collection system expansion costs
4/26/2024 13:50	DeLand	1/4 mile		1/4 mile	No	Yes	Yes, but not including collection system expansion cost
4/26/2024 14:05					No	Yes	
4/26/2024 14:08		abuts			No	Yes	Yes, including collection system expansion costs
4/26/2024 15:14					Yes	Yes	Yes, including collection system expansion costs
4/26/2024 15:48							
4/27/2024 12:49	Atlantic Beach				No	Yes	Yes, including collection system expansion costs
4/29/2024 6:06					Yes	Yes	Yes, including collection system expansion costs
4/29/2024 9:16				Typically driven by BMAP and Priority Focus	No	No	Yes, but not including collection system expansion cost
4/29/2024 9:24		500 ft.			No	Yes	No
4/29/2024 12:34	Vero Beach	Immediately available.			Yes	Yes	Yes, but not including collection system expansion cost
4/29/2024 14:11	Jacksonville				Yes	Yes	Yes, including collection system expansion costs
5/1/2024 9:45	Wildwood				Yes	Yes	Yes, but not including collection system expansion cost
5/1/2024 11:43	Palatka				No	Yes	Yes, but not including collection system expansion cost
5/1/2024 14:59		per fs 381.0065			No	Yes	No
5/2/2024 9:19	Orlando	100ft			No	Yes	No
5/3/2024 8:04		1000 ft			Yes	No	
5/3/2024 9:13		One mile			No	No	
5/3/2024 12:17	Trenton				No	Yes	Yes, but not including collection system expansion cost
5/6/2024 7:40	Bronson			Need to confirm current requirements with t	Yes		
5/6/2024 17:21							
5/6/2024 17:26							
5/7/2024 8:24		1/4 mile			No	Yes	Yes, including collection system expansion costs
5/7/2024 9:26	Indiantown				No	Yes	Yes, but not including collection system expansion cost
5/7/2024 10:33					No	Yes	Yes, but not including collection system expansion cost
5/7/2024 11:13					No	Yes	
5/7/2024 14:59							
5/7/2024 15:18				County requires capacity analysis	No	No	Yes, but not including collection system expansion cost
5/7/2024 20:18		depends on size of developmer	1%		No	Yes	Yes, but not including collection system expansion cost
5/8/2024 9:41					Yes	Yes	Yes, including collection system expansion costs
5/8/2024 11:31	Jupiter Inlet Colony				No		
5/8/2024 12:16	Belleview				No	Yes	Yes, including collection system expansion costs
5/8/2024 14:28	Apopka				No	Yes	Yes, but not including collection system expansion cost
5/9/2024 9:02							
5/9/2024 13:08			0.35% at start of a run, and 0.3% after.		No	Yes	No
5/9/2024 13:47	Ocoee	1000 ft			No	Yes	Yes, but not including collection system expansion cost
5/9/2024 13:49					Yes	Yes	Yes, including collection system expansion costs
5/9/2024 14:41		1320 feet			No		
5/9/2024 16:03					No	Yes	Yes, including collection system expansion costs
5/10/2024 9:00					Yes	Yes	Yes, including collection system expansion costs
5/10/2024 9:47	Newberry	1 mile for new development wi			Yes	Yes	Yes, but not including collection system expansion cost
5/13/2024 10:04				Lot sizes. However to maximize devlopemen	No	Yes	Yes, but not including collection system expansion cost
5/13/2024 15:13		400-feet			No	Yes	Yes, but not including collection system expansion cost
5/15/2024 15:18							
5/16/2024 10:12	Sebring				Yes	No	
5/16/2024 12:21	Port St. Lucie			Only exception has been when some new co	No	Yes	No
5/23/2024 8:20	Howey-in-the-Hills						
6/4/2024 11:29	Cape Coral						

RecordedDate	1.1 City	Q53	Q55	Q56	Q57	Q58
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	4.5 What else should we know about decision making drivers for requiring new construction to connect to existing sewer vs installing new septic systems in the service territory?	5.1 Do you have access to a planning	5.2 If you have access to a planning tool, what is the name of that tool?	5.3 Does this tool cover any of the following processes? (select all that apply)	5.4 Does the tool provide supplemental information such as potential Total Nitrogen (TN) reductions? (select one) - Selected Choice
4/26/2024 12:11		No new septic system are allowed in Monroe County.	No			
4/26/2024 13:50	DeLand		Yes	Engineers	Estimating project costs,Identification of lift station req	No
4/26/2024 14:05			No			
4/26/2024 14:08		The county does not pay out of pocket for potential cor	No			
4/26/2024 15:14			No			
4/26/2024 15:48						
4/27/2024 12:49	Atlantic Beach		Yes	GIS, collection system model	Identification of where gravity can be used vs pressuriz	No
4/29/2024 6:06			No			
4/29/2024 9:16		Not all communities charge impact fees. Most if not all	No			
4/29/2024 9:24			No			
4/29/2024 12:34	Vero Beach	COVB's service territory is predominantly built-out. CO	Yes	GIS. City ordinance. City standards. ArcInlet modeling.	Project efficiency (neighborhood identification/plannin	If yes, what information, beyond project planning, does
4/29/2024 14:11	Jacksonville		No			
5/1/2024 9:45	Wildwood		Yes	Not sure this is done through Development Services De	Project efficiency (neighborhood identification/plannin	If yes, what information, beyond project planning, does
5/1/2024 11:43	Palatka		No			
5/1/2024 14:59			No			
5/2/2024 9:19	Orlando		No			
5/3/2024 8:04			No			
5/3/2024 9:13		None	No			
5/3/2024 12:17	Trenton		No			
5/6/2024 7:40	Bronson	Confirm with Town on current impact fee ordinance. I	Yes	We typically complete some sort of 'master planning' p	Project efficiency (neighborhood identification/plannin	If yes, what information, beyond project planning, does
5/6/2024 17:21						
5/6/2024 17:26						
5/7/2024 8:24			No			
5/7/2024 9:26	Indiantown		Yes	N/A	Estimating project costs,Identification of where gravity	No
5/7/2024 10:33			No			
5/7/2024 11:13			Yes	Leon County Comprehensive Wastewater Treatment Pl	Estimating environmental benefits	If yes, what information, beyond project planning, does
5/7/2024 14:59			No			
5/7/2024 15:18			No			
5/7/2024 20:18			Yes	Local variation on ArcNLET model	Project efficiency (neighborhood identification/plannin	If yes, what information, beyond project planning, does
5/8/2024 9:41			No			
5/8/2024 11:31	Jupiter Inlet Colony				Project efficiency (neighborhood identification/plannin	
5/8/2024 12:16	Belleview		No			
5/8/2024 14:28	Apopka		No			
5/9/2024 9:02			Yes			
5/9/2024 13:08		Development less than 25 units can install septic that n	Yes	WaterCAD	Identification of where gravity can be used vs pressuriz	
5/9/2024 13:47	Ocoee	It is on a case by case basis. We strive to connect all nev	Yes	Water & Sewer CAD Hydraulic Model	Estimating capacity requirements (pipes or treatment f	No
5/9/2024 13:49			Yes	Cost accounting and current construction and engineer	Project efficiency (neighborhood identification/plannin	No
5/9/2024 14:41		Connection to the sanitary sewer system is determined	Yes	Intergrated Utility Master Plan; GIS; hydraulic modeling	Project efficiency (neighborhood identification/plannin	
5/9/2024 16:03		The BMAPs for Citrus County require lots of a size less t	No			
5/10/2024 9:00			Yes		Project efficiency (neighborhood identification/plannin	No
5/10/2024 9:47	Newberry	N/A	Yes	GIS data base	Identification of where gravity can be used vs pressuriz	No
5/13/2024 10:04		None	Yes	Feasibility study	Project efficiency (neighborhood identification/plannin	If yes, what information, beyond project planning, does
5/13/2024 15:13			Yes			
5/15/2024 15:18			No			
5/16/2024 10:12	Sebring	We utilize concurrency requirements for new developm	No			
5/16/2024 12:21	Port St. Lucie	We have been very fortunate to have expanded our col	No			
5/23/2024 8:20	Howey-in-the-Hills					
6/4/2024 11:29	Cape Coral					

RecordedDate	1.1 City	Q58_2_TEXT	Q68	Q59	Q60
Recorded Date	If you indicated you work for a city utility, which city utility do you work for? (Select one from the	5.4 Does the tool provide supplemental information such as potential Total Nitrogen (TN) reductions? (select one) - If yes, what information, beyond project planning, does the tool provide? - Text	5.5 What functionality do you find most useful in this tool?	5.6 What functionality would you like to see in a wastewater enhancement planning tool?	5.7 What else should we know about tools that could support decision making and planning around sewershed expansion for the utility?
4/26/2024 12:11				NA	NA
4/26/2024 13:50	DeLand				
4/26/2024 14:05					
4/26/2024 14:08					
4/26/2024 15:14				The ability to predict the need to treatment plant expa	Provide a current estimate of cost per gallon of treatme
4/26/2024 15:48					
4/27/2024 12:49	Atlantic Beach			cost-benefit analysis, water quality, O&M cost	
4/29/2024 6:06					
4/29/2024 9:16				GIS driven with accurate septic system age and location	
4/29/2024 9:24				Estimating costs. Estimating Nutrient Reductions. Esti	
4/29/2024 12:34	Vero Beach	ArcInlet modeling provides TN loading/reductions	COVB utilizes multiple tools in order arrive at a decision	I am not intimately aware of the wastewater enhancem	A easy to use cost benefit analysis tool that encompass
4/29/2024 14:11	Jacksonville				
5/1/2024 9:45	Wildwood	Not sure	Another department uses this tool		
5/1/2024 11:43	Palatka				
5/1/2024 14:59					
5/2/2024 9:19	Orlando			Funding sources, impacts to WWTF, impacts to bodies	SSO history in the area.
5/3/2024 8:04				GIS integration, construction cost analysis, revenue and	
5/3/2024 9:13				availability	grant sources and application process
5/3/2024 12:17	Trenton				
5/6/2024 7:40	Bronson	We have defaulted to the water management district T	Cost and technical feasibility considerations.		
5/6/2024 17:21					
5/6/2024 17:26					
5/7/2024 8:24				unknown	
5/7/2024 9:26	Indiantown				
5/7/2024 10:33					
5/7/2024 11:13		Treatment technology			
5/7/2024 14:59					
5/7/2024 15:18				Projection, funding, scheduling, analysis, coverage area	demographics, soils, water table, ROW
5/7/2024 20:18		TN	TN loading estimates	TP loading estimatesModel that uses land elevation to	
5/8/2024 9:41					
5/8/2024 11:31	Jupiter Inlet Colony				
5/8/2024 12:16	Belleview				
5/8/2024 14:28	Apopka				
5/9/2024 9:02					
5/9/2024 13:08			Model system hydraulic performance and network desi	Predictive modelling of future grow and demand for se	
5/9/2024 13:47	Ocoee		It is used for capacity analysis primarily		We are always looking for improved decision making to
5/9/2024 13:49			Costs to determine feasibility and project viability for th	Environmental TN and TP load reductions based on leve	
5/9/2024 14:41					
5/9/2024 16:03					Take into account BMAP requirements for utilities servi
5/10/2024 9:00					
5/10/2024 9:47	Newberry				
5/13/2024 10:04		estimating nitrogen reduction	prioritization of areas for performing conversions	prioritization and analyzing cost/benefits ratios.	If within water service area for the utility, since that ma
5/13/2024 15:13					
5/15/2024 15:18					
5/16/2024 10:12	Sebring			tracking of current systems (sewer and septic) as well a	
5/16/2024 12:21	Port St. Lucie			Something that could actively include changes to help v	We are currently in the process of working with consult
5/23/2024 8:20	Howey-in-the-Hills				
6/4/2024 11:29	Cape Coral				

Appendix B: Summit Approach

The section below describes how the project team designed the Wastewater Enhancement Planning Summit, by stage.

Objectives: UF CCS developed a list of objectives for the summit, in consultation with DEP, which were aligned with the needs outlined for the final report. The purpose of the summit was to:

- Synthesize factors, challenges, and opportunities informing wastewater decision making
- Understand Decision Making and Data Usage
- Characterize Wastewater Planning Landscape
- Inform Roadmap Development

After obtaining alignment, the project team developed an agenda to reflect the results of initial project surveys results so that each session was targeted and relevant.

Table 14: Summary of Summit Activities

Summary of Summit Activities
Review of Survey Results
Wastewater Project Factor Prioritization
Demo USF/FSU and UF Tools
OSTDS Remediation Challenges Breakout
Tool Functionality Breakout
Initiatives Brainstorm Breakout
"What One Thing" Close Out Activity

Agenda: The summit agenda was designed in conjunction with UF CCS and DEP to provide a structured and collaborative environment so that organizations could not only provide necessary inputs to meet project objectives, but also allow attendees to learn from one another as peer organizations. The agenda incorporated feedback from UF, DEP, and team subject matter advisors. Throughout each day, there were several group breakout discussions which pinpointed primary issues and consolidated insights from participants. The summit agenda included presentations from DEP, USF, and UF on ongoing efforts to set the stage and provide context for the current state of wastewater affairs. Detailed information about the Summit can be found in the Task 2b Workshop Outcomes Report (see Appendix C).

Material Development: After developing the agenda, the facilitation team developed materials that aligned with both the survey results and the specific needs of the summit. UF CCS planned for a group of 20-40 participants, leveraging breakout groups as a mechanism for engagement to ensure dynamic discussions and effective collaboration.

Summit Facilitation: The summit, facilitated by UF and its contract support team, took place over two half-days at UF, and included presentation time and breakout group discussions.

Summit Outcomes: The project team consolidated data from utility participants on challenges and potential solutions they are experiencing in the wastewater sector; identified tools would benefit septic to sewer project decision-making; and allowed DEP and its partners to receive feedback and direct communication with utility participants across the state. Takeaways and findings are discussed in detail below and can also be found in the Task 2b Workshop Outcomes report.

Appendix C: Workshop Outcomes Report (Task 2b)

University of Florida
Center for Coastal Solutions

Workshop Outcomes Report

Synthesizing User Needs to Inform Data-Driven Approaches for Wastewater Enhancement Prioritization and Planning in Florida

DEP Agreement # AT022 Workshop Outcomes Report (Task 2b)

For the Florida Department of Environmental Protection,

Office of Environmental Accountability and Transparency

June 2024

Prepared by the University of Florida, Center for Coastal Solutions.

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Executive Summary

Purpose: The purpose of this report is to summarize the outcomes of the ***Wastewater Enhancement Planning Summit,*** hosted and facilitated by the University of Florida Center for Costal Solutions (UF CCS) and its contract support team, in partnership with the Florida Department of Environmental Protection (DEP) Office of Environmental Accountability and Transparency (OEAT). Table 1 outlines the summit logistics.

Table 1: Summit Details.

Wastewater Enhancement Planning Summit	
Date	June 5, 2024 12:00 – 6:00pm June 6, 2024 8:00am – 1:00pm
Location	University of Florida Herbert Wertheim Laboratory for Engineering Excellence, Room 405
Number of Attendees	29
Number of Wastewater Professional Attendees	14

Project Background: The goal of this project (Synthesizing User Needs to Inform Data-Driven Approaches for Wastewater Enhancement Prioritization and Planning in Florida, AT022) is to focus wastewater enhancement efforts on improving water quality by identifying ways to support centralized wastewater treatment operators with tools that facilitate infrastructure enhancement planning and investment, funding applications, and regulatory compliance reporting requirements. As part of this project, the Wastewater Enhancement Planning Summit (e.g..; workshop) brought together centralized wastewater treatment operators and consultants to share survey and interview findings, and other related project updates, including possible tool development. The purpose of the summit was 1) to collect feedback from those in the wastewater industry regarding their priorities and challenges, 2) to collect feedback on tools in development, and 3) to strategize further development of those tools to determine where future investment might accelerate water quality improvement solutions. For this project, the Florida Department of Environmental Protection (DEP), Office of Environmental Accountability and Transparency engaged University of Florida Center for Coastal Solutions (UF CCS) to develop a survey, conduct interviews, and hold an in-person summit to understand the current challenges of wastewater enhancement planning and decision-making. The goal of the project is to support water quality improvements by guiding effective and efficient planning due to the shifting population and infrastructure pressures straining wastewater collection and treatment systems, benefitting managers of those systems across Florida.

Key Takeaways: The summit resulted in productive engagement between public and private utility providers and engineering consultants, DEP, UF CCS, and University of South Florida (USF) on current challenges and factors impacting wastewater enhancement, future technology solutions to support improved planning and decision-making, and potential solutions. Common themes outlined in this report include:

- Participants shared consensus on the most impactful factors guiding wastewater planning, with seven factors identified amongst the four breakout groups: **Availability of funding/financing**

and **Basin Management Action Plans (BMAP) requirements** were two factors that came up in every breakout group. The other five factors included **aging infrastructure**, **population growth**, **permitting and compliance**, **public/elected officials' opinion**, and **staffing**.

- Participants agreed that a tool would be useful to support decision-making around engineering factors (e.g., population density, nutrient loads, proximity to water, enhancement planning); the tool should be both user-friendly, and should evaluate environmental and technical factors.
- Onsite Treatment and Disposal Systems (OSTDS, or septic systems) remediation was also a key topic because of its role in water quality impacts, impacts to centralized wastewater treatment facility capacity, and project costs.
- Participants shared general feedback throughout the sessions about difficulty conforming to the regulatory environment; difficulty hiring and retaining skilled staff and contractors; and difficulty managing competing priorities (e.g., updating and expanding collection networks and treatment facility upgrades).

Report Outline: As defined by Task 2b of the agreement between DEP and UF, the Summit Outcomes Report summarizes materials developed and used in the Wastewater Enhancement Planning Summit. This report includes:

- Key outcomes of the summit
- Attendee information
- Full presentation slideshows
- Summit photos
- Summaries of materials produced during the Summit and detailed summit notes and (anonymized)

Summit Attendees and Agenda

Table 2 outlines the participants and facilitators that attended the UF summit that took place on June 5th, 2024 and June 6th, 2024.

Table 2: Summit Attendees.

Participants		Facilitators	
Name	**Organization**	**Name**	**Organization**
Anthony Gubler	Brevard County	**Dr. Christine Angelini**	UF CCS
Buddy Stephens	Santa Rosa County	**Dr. Tricia Kyzar**	UF CCS
Chris Colson	Talquin Electric Cooperative	**Sharlynn Sweeney**	UF CCS
Dave Watson	Charlotte County	**Sharon Ryan**	UF CCS
Garann Hopkins	City of Palm Coast	**David Friedman**	Deloitte
Greg Lang	Mitthauer & Associates Inc.	**Sue Frost**	Deloitte
Jared Lee	City of Sebring	**Christine Daoud**	Deloitte
Jennifer McElroy	Gainesville Regional Utilities	**Chris Carrillo**	Deloitte
Jeremy Hockenbury	City of Wildwood	**Zach Good**	Deloitte
Jim Melley	City of Palm Coast	**Kelly McEnerney**	Deloitte
Kristen Sealey	Gainesville Regional Utilities		
Natalia Larsen	Gainesville Regional Utilities	**DEP and Other**	
Rob Melton	Charlotte County	**Dr. Mark Rains**	DEP
Wayne Bouchard	City of Wildwood	**Sara Davis**	DEP
		Kim Shugar	DEP
		Kristine Morris	DEP
		Julia Danyuk	DEP
		Dr. Kai Rains	USF

Summit Agenda

The agenda for each day outlines the timeline of activities along with the associated goal for each activity. The agenda was designed to provide a structured and collaborative environment so that participants could not only provide necessary inputs to meet project objectives, but also allow attendees to learn from one another as peers. The agenda incorporated feedback from UF, DEP, and relevant Deloitte subject matter advisors, as shown in Table 3 and Table 4.

Table 3: Day 1 Agenda and Outcomes.

Day 1 Agenda	Time & Duration	Outcomes
Welcome and Gathering		
Check-in / Meet & Great	12:00-12:30pm 30 mins	• Familiarize participants with facility layout and amenities
Act I: Current State and Setting the Stage		
Welcome	12:30-12:40pm 10min	• Welcome and introduce the Summit facilitators
Project Background	12:40-12:50pm 10min	• Context and Rationale for this Summit
Summit Objectives, Agenda Overview, & Key Deliverables	12:50-1:05pm 15min	• Confirm topics and objectives • Align on Summit objectives and expectations, and results
Participant Introductions	1:05-1:20pm 15min	• Meet participants
Review of Survey Results	1:20-1:45pm 25min	• Review survey + interview findings
Speed Chats Icebreaker	1:45-2:00pm 15min	• Foster a collaborative atmosphere
15 Minute Coffee Break 2:00-2:15pm		
Factor Prioritization (Breakout with Peers)	2:15-3:15pm 1hr	• Identify and prioritize factors that play a role in deciding when and which wastewater expansion projects to pursue
Gallery Walk	3:15-3:30pm 15min	• Share breakout discussion outcomes • Provide feedback on presented ideas
15 Minute Coffee Break 3:30-3:40pm		
Popcorn Debrief	3:40-4:00pm 20min	• Share breakout discussion outcomes • Provide feedback on presented ideas
Demo USF/FSU and UF Tools	4:00-4:30pm 30min	• Learn about USF/FSU and UF planning tools
10 Minute Break 4:30-4:40pm		
OSTDS Remediation Challenges (Breakout with Peers)	4:40-5:30pm 50min	• Identify and prioritize factors that play a role in deciding when and which OSTDS remediation expansion projects the municipality will pursue
Day 2 Preview, and Closing Remarks	5:30-5:45pm 15min	• Recap today, preview tomorrow's plan

Table 4: Day 2 Agenda and Outcomes.

Day 2 Agenda	Time & Duration	Outcomes
Act II: Challenges, Opportunities, and Actions		
Gathering	8:00-8:30am 30 min	• Networking and gathering
Opening Remarks and Plan for the Day	8:30-8:45am 15min	• Review of yesterday and the goals/activities for today
Tool Functionality Breakout	8:45-9:45am 60min	• Discuss future tool functionality and beneficial enhancements
Popcorn Debrief	9:45-10:00am 15min	• Share breakout discussion outcomes • Provide feedback on presented ideas
15 Minute Coffee Break 10:00-10:15am		
Initiatives Brainstorm (Peer Groups)	10:15-11:15am 60min	• Characterize wastewater project challenges
Popcorn Debrief	11:15-11:45am 30min	• Share breakout discussion outcomes • Provide feedback on presented ideas
Act III: Closing and Next Steps		
"What One Thing" Close Out Activity	11:45am-12:15pm 30min	• Recap summit, seek additions/ clarifications
Next Steps/Close	12:15-12:30pm 15min	• Share next steps on how project outputs will be shared

Summary of Summit Outcomes

High-level outcomes and takeaways are described in the sections below, in order of the summit agenda. Anonymized detailed notes are included in Appendix A: Detailed Notes.

Project Background

The summit began with a program and project background discussion to orient participants. Dr. Mark Rains (DEP, Chief Science Officer) shared that DEP's focus is on water quality and briefed attendees on the Executive Orders that pledged $6.4B toward water quality restoration.

Dr. Christine Angelini (UF CCS Director) then briefed attendees on the project background. She introduced the factors that are most important to the utilities when assessing OSTDS to sewer connection projects, and which tool functionality could benefit them.

Survey Results

Dr. Tricia Kyzar (UF, CCS Researcher and Project Manager) briefed attendees on the survey results, and then a discussion took place on the importance of revenue derived from new customers being serviced by wastewater utilities, tool functionality needs, and the availability of funding. Key outcomes of this discussion include:

- Revenue is not a key factor in assessing onsite sewage treatment and disposal systems (OSTDS) remediation projects for most participating utilities, because most participating utilities do not generate sufficient revenue from OSTDS connections to cover the costs of projects.
- Participating utilities could benefit from a robust decision-making tool.
- Some utility providers have recently shifted focus from septic to sewer projects to upgrading new wastewater treatment facilities, due to new state regulations associated with effluent disposal from these facilities.

Factor Prioritization

Participants were divided into four pre-defined groups to diversify utility providers, DEP participants, academic participants, and facilitators amongst the groups. The facilitators set the stage for attendees by sharing the STEEP (Social, Political, Economic, Environmental, and Political) model to assess key factors in the marketplace that impact utilities; they then asked participants to select and prioritize the top five factors in their breakout group. The following factors were identified as high priority factors considered in wastewater enhancement planning by participants, as shown in Table 5.

Table 5: Highest Rated Factors Impacting Wastewater Project Development.

Factor Impacting Wastewater Project Development	Number of Groups to Include in Top 5 Factors
Availability of funding	4
BMAP requirements	4
Aging infrastructure	3
Population growth	3
Permitting and compliance	3

Factor Impacting Wastewater Project Development	Number of Groups to Include in Top 5 Factors
Public/Elected officials' opinion	2
Staffing	2

Each of the four breakout groups agreed that 1) funding for projects and 2) operation and maintenance are key priorities in utility planning. Without funding, utilities are unable to implement projects that address system needs or complete necessary upkeep on the system. Additionally, rising construction costs have made project estimating difficult to predict and rate increases are politically difficult to obtain to meet funding gaps. While utilities are aware of grant opportunities, identifying and applying for these grants is an arduous process that requires considerable time.

Meeting all the reporting requirements for permitting, compliance and BMAP requirements is paramount for utilities in their daily operations and long-term planning. Utilities must adhere to these requirements not only to avoid penalties, but also to maintain compliance to be eligible for grant funding. Complying with permit and BMAP requirements often requires substantial investments in infrastructure upgrades, such as the implementation of advanced treatment technologies to meet effluent standards. Additionally, the utilities must engage in continuous monitoring and reporting to demonstrate compliance with permit conditions, which adds operational costs and data management.

Addressing aging infrastructure was another concern for most of the utility participants. Competing needs within the wastewater system often makes it difficult to prioritize necessary upgrades to aging infrastructure. This challenge is compounded by rapid population growth throughout the state. According to participants, population growth increases wastewater volumes, pollutant loads, and in some cases, increased costs to customers. This intensifies the demand on existing wastewater infrastructure, requiring upgrades and expansions to manage the higher loads.

Utility participants also shared that there are still challenges to garner public and elected support for projects. Participants recognize that public opinion can influence the success of a project and therefore, community support is essential.

Difficulties with staffing is another primary concern within the wastewater industry. Utilities find it difficult to attract talent and many wastewater operators are beginning to retire. These shortages are not limited to operators but also extend to engineering, environmental compliance, funding and finance. This lack of sufficient staff and human resources are making it difficult to achieve wastewater project objectives.

Existing Tools Demonstration

Dr. Kai Rains (USF, Research Associate Professor) provided a presentation on LARNLoad: Landscape Assessment of Risk of Nutrient Loading to Waterbodies, and Dr. Christine Angelini provided a presentation on an OSTDS Remediation Optimization Tool that UF CCS is developing.

Following the tool demonstration, the group agreed that cost estimation, benefits quantification, and data integration would be useful functions to include. Some utilities utilize models with contingency factors for cost estimating (some as large as 50%). There was general interest from utilities to have

tailorable data sets in a tool, as statewide data sets may not reach the level of granularity that may be available at the utility level.

OSTDS Remediation Challenges

Summit participants consolidated into three breakout groups and discussed project challenges specifically for OSTDS remediation projects. The activity, *Here & There*, asked participants to characterize positive and negative elements of both the current state and the desired future state for OSTDS remediation projects. Positive and negative elements are summarized below in Table 6.

Table 6: OSTDS Remediation Current State and Future State.

Current State	Future State
• Grant funding is currently available for septic to sewer/OSTDS remediation programs. DEP has also provided grants to offset connection costs. • Public and political buy-in is often required to complete these types of projects. • There is a very high number of projects yet to be completed, and both engineering consultants and contractors recognize this, further increasing cost. • Water quality improvements have been realized in communities that have completed OSTDS remediation projects. • Nutrient benefit versus total cost is often inconsistent or difficult to quantify in the selected projects. • Septic to sewer conversion is generally an unstructured process across the state, and is largely stakeholder driven, versus state driven.	• Florida's wastewater industry is growing. This may lead to additional tools or technologies from the public and private sectors to add efficiencies to operations. • Future funding is uncertain, and rate increases may be required to complete projects. • Increased financial responsibility of developers to address expanding systems and improving infrastructure. • There is a potential for diminishing returns on water quality benefits as more projects come online. • Uncertainty around OSTDS vulnerability associated with climate impacts. • Staffing shortages may become a more severe challenge.

Tool Functionality Breakout

Participants were divided into the three pre-defined groups to diversify utility providers, DEP participants, UF/USF participants, and facilitators amongst the groups. Facilitators discussed the tools that were presented in the first day of the summit by Dr. Kai Rains and Dr. Christine Angelini and asked participants to discuss the tool functionalities that would help them with OSTDS remediation projects and what that functionality would entail. Participants indicated a variety of desired tool functionalities, including:

- Estimating wastewater collection, treatment and disposal system capacity, especially to help indicate when expansion planning would need to begin.
- Nutrient load removal estimates, in formats compatible with BMAP accounting.
- Project cost estimates.

- Population growth and associate wastewater loading estimates.
- Funding opportunities and eligibility.
- Vulnerabilities to flooding and rising sea and groundwater levels.
- User friendly solution, with an easy-to-use user interface and robust reporting capabilities.
- Sewer network routing optimization, accounting for transportation infrastructure, access to right-of-way, HOA distribution, and avoidance of tough-to-permit land uses.
- Ability to visualize pollution plume reduction benefits associated with different septic to sewer projects.
- Automated production of statistics/text to include in grant applications.

Wastewater Project Initiatives Brainstorm

During the wastewater projects initiatives brainstorm, participants gathered in the same three groups from the Tool Functionality Breakout. The groups were prompted to brainstorm solutions to address the OSTDS challenges previously discussed throughout the summit. The breakout groups described these ideas into high-level initiatives with respect to people, process, and technology/data.

The key initiatives developed by the three groups included:

Table 7: High-Level Initiatives for Wastewater Projects.

High-Level Initiative	Description and Notes
People	• Developing intern and apprenticeship programs along with incentives to address staffing shortages. • Creating more summits and forums that allow those within the wastewater industry to discuss and interface with each other to learn and develop cooperative solutions.

Process	• Streamlining and simplifying the permitting and regulatory process.
	• Simplifying the grant application process.
	  ○ Allowing applicants to apply for multiple types of state grants though the same application portal.
	  ○ Adding planning grants would also be beneficial since the cost of planning can be prohibitive to developing projects.
	• Encouraging community engagement within the wastewater industry by involving universities and other schools as well their student and alumni base.
	• Identifying cost-share opportunities between small utilities for funding wastewater treatment facility construction.

Technology/Data	• Identifying, developing, and implementing new tools and upgrading existing technology systems to reduce resource burdens. • Need new technology to digitize as-built plans and map existing infrastructure to evaluate sewer pipe diameters, depths, condition. • Need more reliable OSTDS distribution, age, condition and vulnerability data as well as data on existing sewer network capacity/configuration. • Leveraging and integrating statewide data with utility-level data.

High-Level Initiative	Description and Notes
	• Shared database with recent wastewater project rates so that utilities can provide justification to elected officials related to project costs and utility investments throughout the state.

Summit Close Out and Wrap-Up

Before closing out the summit, facilitators asked participants for feedback on their experience over the past two days including any suggestions for the future. Overall, participants were pleased with their experience at the summit. Many participants expressed that they found the interactive format of the summit to be beneficial since there is a lack of forums in which utilities can voice their experiences and the needs in their profession. Additionally, several participants from the utilities found it helpful to have DEP in attendance. It allowed DEP to hear directly from the utilities and created an opportunity for the utilities to better understand DEP's goals.

To capture additional feedback from participants, they completed a short poll describing what they gained from the summit and recommendations for future summits in an email that followed the summit. The responses to this poll echoed the responses from the group debrief. Dr. Kyzar noted project next steps, including sharing published reports with DEP and eventually with participants.

Appendix A: Detailed Notes

The summit facilitation team captured detailed discussion notes during each of the summit activities. These notes are summarized below. Comments from utility participants have been anonymized and are not directly attributable to specific utility organizations.

Project Background

Dr. Mark Rains (DEP, Chief Science Officer) provided an introduction about broader DEP programmatic goals; Dr. Mark Rains shared that:

- DEP's primary focus is water quality.
- Most of the work in Florida right now to improve water quality is a result of the Clean Waterways Act (2020).
- Florida deviates from the rest of the world in the establishment of Basin Management Action Plans (BMAPs).
    - There are 33 BMAPs in Florida; 27 are for nutrients.
- Florida pledged $2.5B for water-quality restoration (EO 19-12), with $3.3B realized, then pledged an additional $3.9B for water-quality restoration (EO 23-06).
    - 56.7% of the first round of funding went to domestic wastewater upgrades.
- DEP's goal is not to convert all septic to sewer, as it may not make sense in every case.
- DEP is interested in learning from this summit about broader project considerations, such as engineering and cost constraints.

Dr. Christine Angelini (UF, CCS Director) then outlined the goals of the summit and the background.

- UF received a DEP grant to look into tools to support septic to sewer decision-making.
- The goals of the summit are two-fold:
    - Prioritize factors impacting septic to sewer decision making, and
    - Evaluate tools needed to support decision making.

Review of Survey Results

Dr. Tricia Kyzar (UF, CCS Researcher and Project Manager) provided an overview of survey results and interview remarks.

- Dr. Angelini polled the audience to discuss the survey results. She shared that one result showed that revenue is not a key factor in decision making and asked if the participants could explain the result:
    - County respondent stated that when they undertake a large septic to sewer connection, they have certain funding set aside.
    - Contractor respondent stated that in some small communities, the customer base does not support their program with or without expansion, they do not bring in enough revenue, so they are reliant on grants to fund new septic to sewer projects.
        - Their systems will never generate the revenue to be self-sufficient, especially with new regulatory requirements.

    - City respondent stated that for new developments, they will assess the revenue and cost. However, the cost for connecting new and expanding development is so high that the City does not consider revenue as the reason for connection but there are other goals and drivers for the conversion.
- Dr. Angelini polled the audience further on the response to the tools question by asking what their dream scenario for a tool would be?
    - Benefit analysis to justify more funding.
        - A tool that, based on the size of the lot, could identify square footage, and determine minimum size lot that meets nitrogen loading values. Phosphorous loading would also be helpful to track.
    - A public tool to get community buy-in and educate residents and governing board. It would also be helpful to be able to share communications on projects.
- Other reactions to survey results
    - County noted that some survey results may have changed because there are new compliance requirements for plans.
        - For example: Some utilities may have planned $8M for septic to sewer conversion, but now they have an $80M WWTF upgrade project that must be prioritized.
    - Public opinion
        - Public opinion is positive but shifts in public meetings. Additionally, the public has questions that the county does not have answers to if they are in the initial planning phases around the cost and timeline.
            - Costs for laterals and septic tank abandonment are costly and not easily afforded by most residents. Need solutions to cover these costs.
            - Also, 'new' monthly bill associated with sewer service is difficult for many. Need solutions to address these costs.
    - Pretreatment effluent pumping (PEP) tanks are a big issue. They are trying to figure out how to address this issue going forward. They have talked to DEP about engineering study being performed to improve or remove PEP tanks. They are on private property and the city owns the tank.

Factor Prioritization (Breakout with Peers)

The facilitation team instructed the group to identify the top five factors that impact utilities in the marketplace. The STEEP (Social, Political, Economic, Environmental, and Political) model and key factors were provided as a prompt; however, participants were encouraged to add their own factors. Once the top five factors were identified, then each group answered two questions regarding why this factor is important as well as the current state of this factor.

Participants were divided into four groups, the factor prioritization response from Group 1 can be found in Table 8.

Table 8: Group 1 Factor Prioritization.

Factor	Description and Notes

Public/elected officials' opinion	• Importance: As community stewards, we need to justify use of public funding effectively in such a way that activates public/elected leaders to support the investment. Demonstrate community safety (public health) and environmental benefits.
	• Current state:
	  ○ Utilities spend time and resources to justify the costs; collect lots of data.
	  ○ Utilities often wait to communicate with a community when there is a problem and do not tout successes. It is time consuming to win over the entire service area.

Availability of funding	• Importance: Rising costs have made it essential to secure additional funding.
	  ○ One utility hired a grant writer, consultant, and lobbyist to get funding. Another indicated they need help with grants.
	  ○ DEP participant: DEP tries to make it simple enough that utilities do not need grant writer. They care most about the numbers, plain language, and reasonable justifications.
	• Current state:
	  ○ There are lots of grant opportunities available.
	  ○ One utility's primary care is about principal forgiveness, State Revolving fund (SRF) loan is not at better rate than a bond. There is also trouble securing match funding.
	  ○ Wastewater treatment upgrades are so steep but differs between utilities.
	  ▪ DEP participant: we have seen "inexpensive" methods to advanced wastewater treatment (AWT).

Aging infrastructure	• Importance: old plants do not have capacity for new population growth. ○ Inflow and infiltration (I&I) are big issues (groundwater or stormwater entering). • Current state: Varies community to community. Rural communities have higher costs because of distance needed to plumb.
BMAP requirements	• Importance: Protect the springs. Everyone wants to be in compliance. • Current state: Utilities have big learning curve to understand what is needed, where there are impacts to spend money appropriately. Work together with DEP. Understand and trust data integrity.
Population Growth	• Importance: Affects our system capacity.

Factor	Description and Notes
	• Current state: Growing rapidly.

Additional Notes:

- Some utilities are trying to do tours to educate elected officials.
- Utilities need to communicate what is wanted vs what is needed (more than just a law, needs to show how it impacts water quality).
- Education & Outreach > relate everything back to safety (public health safety is the easiest to defend).
- DEP participant: We have seen more adaptation/resilience strategies at wastewater facilities, with a lot of facilities are moving to higher ground. Many communities have been hit hard by hurricanes/flooding, which is making a more compelling argument to go to higher ground. New flood zone maps have pushed that as well.
    - Utilities should think about opportunities to provide community asset as well, such as parks that serve people (i.e., Tallahassee Capital Cascades)
    - When you are trying to convert people from septic to sewer and what they have always known, while adding that there will be a monthly bill and impact fee, some communities will push back.
        - Some communities are all for it and others will fight.
- Cybersecurity concerns are present for some participants but not all.
- Funding is paramount to everyone.
    - Projects have a huge capital cost, but the State has lots of funding. If they have a huge project, they need more than 49% principal forgiveness.
    - Because DEP has had so much turnover, they need to get to know everyone again so things could get things done quicker.
    - DEP participant: We try to reach out to communities that do not know about resources.
        - We put all grants info in one place.
        - We get a lot of funding requests for aging infrastructure which we push to SRF, but it is a loan.
        - It is difficult for DEP to reach homeowners, want local people to have relationship with homeowners to help with septic to sewer conversion.
        - We see a lot of applications, not all are suitable for a grant, but there is a need for them still.
        - We try to direct people to the right grant funding but wish more communities would be able to reach out.

The factor prioritization results from Group 2 are listed in Table 9.

Table 9: Group 2 Factor Prioritization.

Factor	Description and Notes
Permitting & Compliance/BMAP requirements	• Statutory requirements are the basis for improving water quality in the state. These are bare minimum and should be foundation for wastewater project decision making. • Statutory requirements are "not a menu" to choose from – all requirements must all be upheld. • Final OSTDS plans are due August 1st from required utilities/entities, according to DEP. • There are common cycles that the state has seen with respect to compliance: regulations are normally not net-new. For example, following the 2018 red-tide crisis in the state of Florida, improving water quality received increased attention, and the state provided additional guidance and requirements for meeting federal water quality requirements.
Availability of funding	• Funding is limited, and utilities often are working in zero-sum games. Saying yes to a project often means another project will not get funded. • Grants require compliance with state – to be eligible for funding, utilities or other organizations must directly attribute benefits or compliance directly with statutes.
Elected Leader Opinion	• Grants require compliance with state – to be eligible for funding, utilities or other organizations must directly attribute benefits or compliance directly with statutes.
Aging infrastructure/asset deterioration	• The go-no/go decision making process for projects is a complex process subject to many variables. • Given limited funding, utilities cannot complete every project. There is often a larger backlog of projects than available funding. • Grant funding is available, depending on eligibility. Sometimes utilities are not eligible due to not falling within a BMAP. Even if funding is available and the utility is eligible, there must be individuals with capacity and understanding to apply, monitor, and report on the funding.
Network Capacity and In-House Capacity (New Factor Identified)	• Physical infrastructure capacity requirements influence decision-making. If an existing collection system cannot handle new capacity, then expansion will of course cost more. • Not easy to hire plant operators as they do not get paid a lot starting off. • There is a lack of contractors.

Additional Notes:

- Federal lands within the state of Florida are still required to meet water quality standards, although project timelines are often much slower.

The factor prioritization response from Group 3 can be found in Table 10.

Table 10: Group 3 Factor Prioritization.

Factor	Description and Notes
BMAPs/sustainability	• Importance: current water quality is bad • Septic systems are impacting water quality. • BMAP requirements can be hard to meet, but they need BMAP for access to funding.
Population growth	• Importance: out of control growth. • Impacts treatment facilities, which impacts cost to all customers, not just new customers.
Availability of funding	• Importance: current funding is less than needed for projects. • Limited capacity to compete for funding. • Funding has complex requirements that everyone is not able to address. • In the case of severe storm and immediate needs, there is a funding. delay, where funding may come a year or two years after it is needed.
Aging infrastructure	• Importance: aging infrastructure holds back environmental and economic goals. • Supply chain and inflation risk is impacting ability to address issues with aging infrastructure. • Managing the tradeoff from operational and maintenance (O&M) costs and deferred maintenance (DM).
Permitting & Compliance	• Importance: permitting is a tool for water quality and growth. • Sometimes permitting requests are manipulated to go beyond capacity with plants and development, but ideally the process should be limiting growth appropriately to support water quality. • Participants shared that it can be hard to explain how they are following permitting in the BMAP, because the requirements are listed differently. • Many compliance items are due and triggered around permit renewals. • There are many unfunded requirements. • The pace of requirements is hard to address.

Additional Notes:

- Each person in this group formulated their list of the top five factors, leveraging the factor cards on the table, and then the group voted and selected the five factors with the most votes. In addition to the factors listed above, there were also votes for the following factors: data availability, organizational directive, public opinion, elected leader opinion, and regulatory incentives.
- One participant shared that there is no BMAP for their locality and that impacts grant eligibility.
- The group discussed that lifecycle costs are important, but they are not at the point yet where they can focus on that element.
- There was a discussion on whether public opinion drives elected leader opinion, or the other way, and which group would need to be positively influenced to improve septic to sewer opinions throughout the state.
- When Group 2 was sharing, DEP clarified that when the wastewater regulations came out, they required BMAP for funding. Two years ago, that requirement changed, and a BMAP is not required, but the utility must prove that the water quality is impaired, and a nutrient issue exists.

Group 4 results from the factor prioritization are listed in Table 11.

Table 11: Group 4 Factor Prioritization.

Factor	Description and Notes
Permitting	• This is a requirement and needs to be addressed to avoid ramifications. • The utility is compliant but facing greater challenges as permitting/ compliance becomes stricter.
Funding	• Support is needed for how to navigate funding opportunities. • Staffing shortages have forced utilities to rely on outside contractors to complete projects. Bids for projects are coming in significantly higher than expected.
Population growth	• This drives the system needs. • It also brings in funds. The connection fees are based on the additional system costs.
Aging infrastructure	• There is a lot of aging infrastructure; older municipalities don't know where lines and the materials are old (i.e., clay). • There are significant factors to deterioration including hydrogen sulfide, heat, salt water.
Staffing (New Factor Identified)	• The lack of staffing is hindering the utility's ability to complete projects.

General Notes:

- Most grant applications are not filled out by the utility/city/county but by outside contractors.
- The utility thinks of projects in terms of wants v. needs which correlate to what happens now or down the line.
- Utility participant: Missed out on a funding opportunity for not having a BMAP. A BMAP bootcamp would help to understand all the requirements.

Planning Tools

- Dr. Kai Rains (USF, Research Associate Professor) provided a presentation on the USF Landscape Assessment of Risk of Nutrient Loading to Waterbodies (LARNLoad) tool.
    - USF selected St. Lucie County to pilot tool development.
    - Tool is GIS based, using ArcGIS.
    - SMEs selected, weighted, and ranked parameters for this model; performing sensitivity analyzing and validating model now before it can be shared with other counties/localities in the state.
    - The parameters in the LARNLoad tool are physical.
        - Distance to water body had 30.0% weight (highest factor weight)
        - Depth to groundwater had 21.6% weight (second factor weight)
- Dr. Angelini provided a presentation on an OSTDS Remediation Optimization Tool that UF is developing.
    - The tool assesses septic to sewer opportunities, while ingesting information on sewer networks, road networks, and parcel level data on where septic tanks are available, pulling from a diverse set of data including Department of Health and utilities.
    - The tool leverages GIS to identify where the utility lines are present and where DOH shows that the parcel can connect to a sewer.
    - Projects are in the tool and can be filtered and prioritized.
    - A DEP participant asked about how UF is estimating costs and how they estimate return on investment (ROI)?
        - Dr. Angelini: Water quality returns. We can weight factors differently. Currently, ROI is measured in nitrogen reduction.
    - A participant shared that their utility developed its own tool with contingency factors for cost estimating (some as large as 50%), where they had 20 lines of cost then used 50% increase on contingency. However, that full contingency was used in initial engineering estimates.
    - USF participant: How do we know how old systems are?
        - Dr. Kyzar: We use property appraiser data, can incorporate DOH data where they have repair records.
        - County respondent mentioned that Miami-Dade County made a map where you can click on a parcel and see the age.
        - Dr. Angelini: There are huge discrepancies in the data between providers on age of pipes, depths of pipes, etc.

- Dr. Mark Rains: There is a big exercise at DEP on what data we can find to make statewide tool.
  - DEP participant: The utilities know exactly who they are billing, not all data is standardized statewide, but it may not need to be. We are all swimming in data, it comes down to the capacity to manage it. Not everything needs to be a statewide data set, some regions would have poor data. Allow utilities to use their higher-quality data and sift through projects effectively in the tool.

OSTDS Remediation Challenges

The activity, *Here & There*, asked participants to characterize positive and negative elements of both the current state and the desired future state of the landscape of challenges and opportunities for OSTDS remediation projects.

Participants consolidated into three groups, and the results from the discussion in Group 1 are noted in Table 12.

Table 12: Group 1 Here & There Activity.

Current (Here)	Description and Notes
Positive	• There is grant money available. • Some communities are already seeing water quality benefits as a result. • DEP has provided some grants to offset connection costs.
Negative	• Some utilities had to expand their library of engineers because the initial ones were so backlogged and move slowly; when a project went from gravity to low-pressure system that added extra cost, the council became less enthusiastic. • Public buy-in will be a challenge. Inland communities will struggle to see connection on the coast or in springs.
Future (There)	**Description and Notes**
Positive	• Service providers share best practices for effective community outreach to secure buy-in. • DEP shares data to help with conversion argument. • Once the WWTP is done, it opens opportunities to do septic to sewer by phasing it.
Negative	• Volume of septic tanks. The goal should not be to remove 100% but there are a lot of areas that need to be addressed. • Flooding on existing systems.

Additional Notes:

- DEP participant:

- We have seen communities that are almost done with septic to sewer, and they have better groundwater quality.
  - DEP is trying to figure out how display and communicate data.
- Crystal River and Homosassa have done septic connections. Key West is doing septic connections as well.
- Some grants were awarded but then declined because they could not convince the public to buy-in.
- Some communities have implemented long-term impact fees to reduce cost.
  - One of the questions on the grant is whether community outreach has taken place yet since garnering support is necessary to do work.
- Miami-Dade did a study for prioritizing septic to sewer because of low depth.

The Group 2 results of the *Here & There* activity can be found in Table 13.

Table 13: Group 2 Here & There Activity.

Current (Here)	**Description and Notes**
Positive	• There is money available. • Public is open to septic to sewer or OSTDS remediation projects, as discussions around ordinances are ongoing. • Neutral items: projects have varied impact and are based on recharge rates. Additionally, septic to sewer often occurs in wealthier neighborhoods, and fixed income neighborhoods are not always considered or able to connect.
Negative	• Nutrient benefit versus total cost and recipient is often inconsistent or difficult to quantify. • Septic to sewer conversion is generally an unstructured process across the state, and is largely stakeholder driven, versus state driven.
Future (There)	**Description and Notes**
Positive	• With increased market attention, advanced treatment technologies will likely advance. Tools will also likely be developed. • Resilient project funding will likely be available in the future.
Negative	• There is uncertainty whether funding will be available. • Population growth continues across the state. • There is uncertainty around vulnerability associated with climate impacts.

The Group 3 results of the *Here & There* activity are listed in Table 14.

Table 14: Group 3 Here & There Activity.

Current (Here)	Description and Notes
Positive	• Multi-year planning. • Established criteria for projects.
Negative	• There is a shortage of personnel/capacity to manage projects. • There are forestry constraints. • Developers impact connections to septic. • The pace of new development is too rapid.
Future (There)	**Description and Notes**
Positive	• The goal is to cap what residents pay and promote affordability. • Increase developer responsibility which would require City Council approval.
Negative	• Potential for more rate increases. • There is a higher total cost when transformation happens. • Potential for continued staffing shortages.

Additional Notes:

- A participant shared that resident co-pay projects underway were 2.5% of resident income; the goal is to cap what residents must pay.
- Higher water tables and certain forestry (e.g., Banyard trees) cannot be removed due to regulations, which requires directional build.
- A discussion occurred on whether there should be a penalty in the future for septic development, since the short-term decision of developers to connect to septic has larger long-term cost when those connections must move to sewer.

Tool Functionality Breakout

Facilitators discussed the tools that were presented in the first day of the summit and asked participants to discuss the tool functionalities that would help them with OSTDS remediation projects. Facilitators asked participants to first identify top functionalities, then describe function details, including usefulness.

Group 1 prioritized the tool functionalities listed in Table 15.

Table 15: Group 1 Tool Functionality Discussion.

Tool Functionality	Function Details
Funding Availability/ Opportunities	• Integration and streamlining of eligibility for various funding sources (e.g., FDEP grants) would be beneficial. • Integration of grant application data and requirements would help users quickly apply for projects.

Tool Functionality	Function Details
	• An official certification that states a grant application that leverages the decision-making tool could encourage usage. For example, if a project applies for DEP grant which
Flood Maps/ Flood Vulnerability	• Flood maps or flood vulnerability visuals would help users understand which clusters of OSTDS systems would be more susceptible to impacting the surrounding environment.
Intensity Metrics	• Developing (or bolstering) a metric that summarizes a high-level benefit of a project would benefit utilities, e.g., cost per benefit such as dollar per unit of nitrogen removed. • Sufficient calculations would be required to trust the number, but a standard unit could help rank projects in a preliminary stage.
Data Integration and Overlaps, and Utility Coordination	• The go-no/go decision making process for projects is a complex process subject to many variables. • Given limited funding, utilities cannot complete every project. There is often a larger backlog of projects than available funding. • Grant funding is available, depending on eligibility. Sometimes utilities are not eligible due to not falling within a BMAP. Even if funding is available and the utility is eligible, there must be individuals with capacity and understanding to apply, monitor, and report on the funding.
Communications	• Tailored business cases or project justifications would be beneficial for appealing to customers. • An integrated communications strategy toolkit could help utilities on common messaging with the state.

The prioritized tool functionalities identified by Group 2 can be found in Table 16.

Table 16: Group 2 Tool Functionality Discussion.

Tool Functionality	Function Details
Density Calculations	• Assessing the number of septic connections divided by the number of households
Growth Forecasting	• Leveraging data from Florida 2040 and Florida 2070
Capacity	• Assessing miles of lines • Allowing users to add their own data too. • Assessing permitting data (e.g., effluent water quality, permitted limits) • Accessing average data flow may be the best metric for utilities, because capacity should never be met

Tool Functionality	Function Details
Ease of Use	• Developing a tool that is user friendly and GIS based
Linking Comprehensive Land Development Plan to LDC	• Leveraging existing data sources, particularly the comprehensive land development plan in future decision making
Nitrogen loading	• Integrating BMAP eligibility and reporting requirements for nutrient load reduction

Additional Notes:

- A utility provider stated that when looking at projects and how to rank them, it would also be interesting to understand how the state would rank them.
    - Utilities may rank according to need, growth related.
    - State may rank according to water quality improvement alone.
    - DEP participant responded that a utility can submit multiple projects and explain why they each tie to water quality and prioritize them.
- There was a discussion on Florida 2040 and Florida 2070, which are initiatives to do growth population estimates using BEAVR and land use data, using both fast growth and compact growth models.
- There was a lot of discussion on connecting the UF and USF landscape tools.
- Some of the most critical ranking factors for utilities, as shared by participants, were considered when making the USF tool (according to that slide) but landscaping was prioritized at the time:
    - Proximity to water
    - Density
    - Age of infrastructure
    - Capacity for wastewater plants and collection plants
        - Example: as soon as a plant went online, there was a need for another one
- Additional considerations:
    - Seasonal occupancy; houses are empty half the year.
    - Sulfur dioxide risk due to lower pressure sewers.
    - Some utilities cannot focus on septic to sewer right now because they are focusing on plants.
    - No new septic systems are allowed in certain areas.
    - Attempting to slow growth because they are over capacity.
    - There is case by case permitting by DEP now.
    - Participants are using other tools to help with analysis, and it would be good to pull them all under the same umbrella of tools.

Table 17 summarizes the tool functionalities that Group 3 prioritized in their discussion.

Table 17: Group 3 Tool Functionality Discussion.

Tool Functionality	Function Details
Treatment plant capacity	• Hydraulic modeling with additional loads to the system.
Treatment plant effluent	• Permitted effluent disposal including reuse and recharge.

Tool Functionality	Function Details
	• Water quality.
Communication and Reporting	• Return on Investment Summary Reports • Socio-economic impacts. • Ability to summarize project eligibility. • Reporting nutrient removal with respect to BMAP.
Community buy-in and pride	• Laura Warner has interesting work around this topic that would be worth looking into.
Route optimization	• Allow for routes that avoid areas such as highways, right-of-ways, conservation land, and prioritize HOAs.
Nutrient removal	• Nutrient removal is needed for BMAP credits for the utility.
Project cost	• Cost accuracy is needed for projects which can be affected by new development versus redevelopment and project location. • This would assist in determining rate impact to users and whether to install pressure or gravity pipes.

Additional Notes:

- It would also be beneficial if the user interfaced include the following:
    - Visualizations of nutrient plume reductions to educate decision makers and the public.
    - Ability to alter pipe routes to explore new costs and avoid sensitive or inaccessible areas such as wetlands, highways, bridges, and other environmentally protected areas.
    - Planning at both an individual project and whole system scale.
- While creating the tool, the following groups should be consulted:
    - City planners and zoning departments
    - Engineering firms
    - DEP and permitting entities
    - Utilities

Initiatives Brainstorm

Facilitators asked groups to brainstorm solutions to address broader wastewater project challenges discussed throughout the summit. Facilitators asked each group to first select three challenges to focus on, and then to develop ideas for high-level initiatives with respect to people, process, and technology/data that would address wastewater project challenges.

The following summarizes the ideas and initiatives in Group 1:

Group 1 Notes

- Regulatory landscape: streamline and/or simplifying permitting or regulatory requirements. Improved processes for characterizing statutory requirements and making clear implications

could benefit as well. Predictive analysis or understanding of forthcoming rules could also help utilities plan ahead of time.

- Funding: water conservation measures could free up spending for wastewater funding or sewer capacity. Grant funding certainty, streamlined applications, or additional incentive programs could also provide funding directly or indirectly. From a technology perspective, advanced metering or additional useful data could also unlock business/operational efficiencies.
- Project prioritization: communicating the value of water and infrastructure to customers could release pressure on potential rate increases. Regionalization or cost sharing opportunities, as well as clear project requirements might benefit project selection as well. Asset data integrated with accurate population growth could increase certainty on wastewater project prioritization.

The following summarizes the ideas and initiatives in Group 2:

Group 2 Notes

- There is a need to recruit and retain staff. Solutions may include offering skill alignment training, developing statewide training for functional roles, and performing graduate student outreach through a cohort program that links universities to wastewater professions.
- There is a need to influence public opinion. Solutions may include community outreach.
- There is a need to improve the funding landscape. DEP may consider rolling out a planning grants program, as it has done previously, or to host a funding roadshow.
- There is a need to understand regulations better. Solutions may include streamlining guidelines and standards across the state.
- There is a need for improved technical solutions. Solutions include visualization tools for stakeholder and citizen outreach, the development of a data lake, standardizing water management well data to link water cycle, automation, leveraging sensor technology, or a cross-functional database.

The following summarizes the ideas and initiatives in Group 3:

Group 3 Notes

- Utilizing funding opportunities aside from the obvious ones such as rural, low-income, and other community specific funding.
- A single application process per project including all environmental, planning, etc.
- Training, apprenticeship, and other incentive and education programs to get young staff engaged and into the workforce.
    - Pay needs to increase to be competitive.
    - Need to evaluate how wastewater workforce may be modernized. For instance, the utilities may no longer need as many customer service staff and can instead pay junior operators more.
- Conference or summit to establish strategies to initiate community-scale moratoriums on permitting of new OSTDS.
- Data-sharing across utilities.

- Universities and other schools can engage alumni to help get them on board with new initiatives.

Initiatives Brainstorm Debrief

- There are reports available that detail the value of specific resources such as lakes, springs, and estuaries. However, this can be a double-edged sword because the economics of a resource do not always capture the less tangible benefits.
- There is potential for multiple utilities to join forces to develop regional strategies to address their capacity issues and create regional resilience.
- Planning grants would be beneficial because the cost of planning is often prohibitive.
- A funding roadshow could help to educate utilities on the funding opportunities available.
- Florida League of Cities has a tool to search grant opportunities.

Activity: "What 1 Thing" and Closeout

The "What 1 Thing" activity promoted feedback from attendees regarding things that they learned during the summit as well as any other suggestions for how to make forums like this as beneficial as possible. In addition to the feedback received during the open discussion, there was also a poll presented to attendees to respond with any additional thoughts. The questions and the corresponding responses to that poll are listed in Table 17.

- There is a lack of opportunities to discuss with others in the wastewater industry, most other opportunities are training or lecture style. AWWA is the primary way that utilities collaborate.
    - In-person is more beneficial than virtual.
    - There needs to be topical focus and a clear objective for time to be worthwhile.
- There is interest from participants to see the evolution of this initiative.
- It was very helpful to have DEP in attendance and get facetime with them. Also, DEP learned a lot from the summit. Perhaps this forum could link with Florida Rural Water as part of their annual series of meetings.

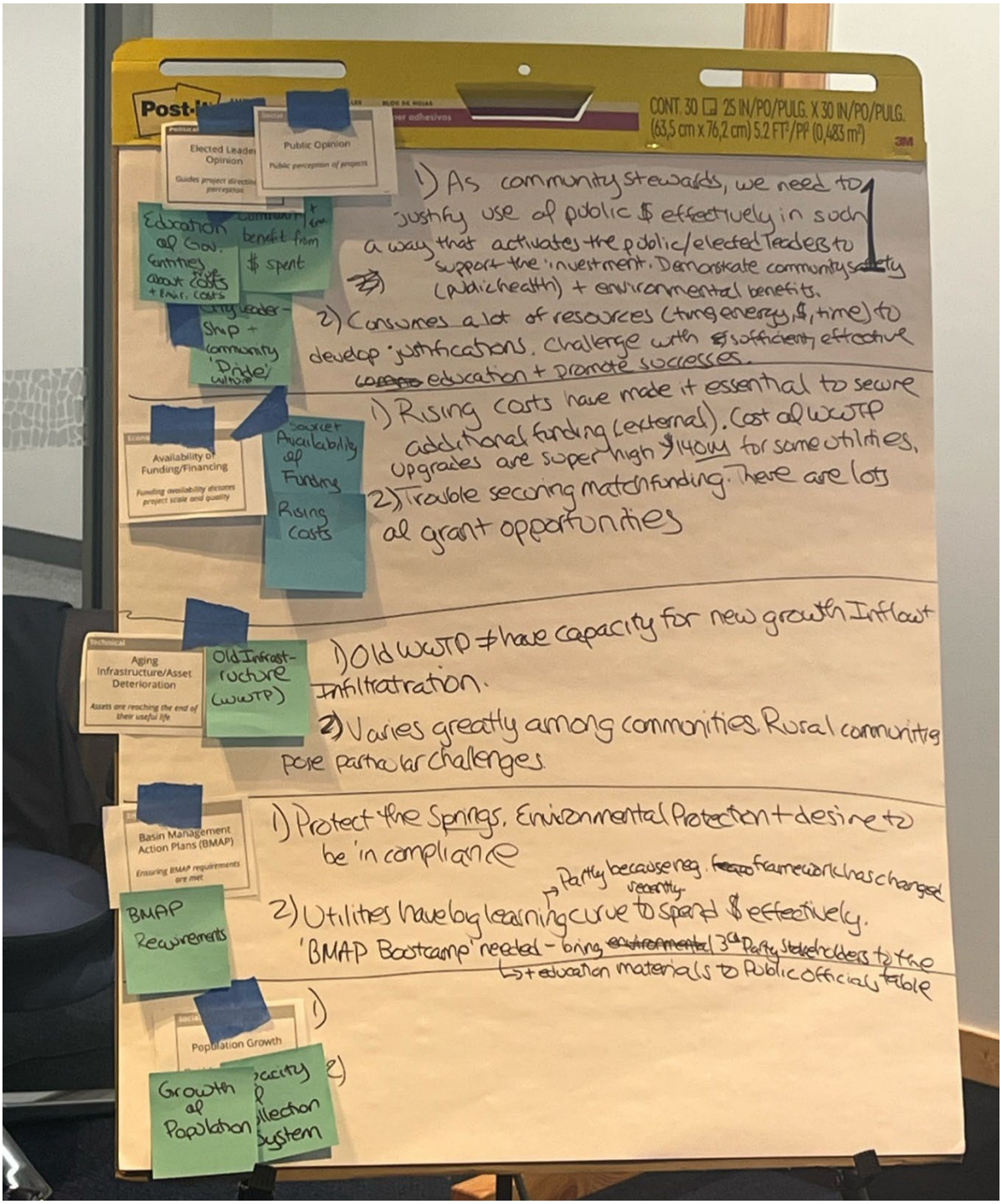
Table 18: "What 1 Thing" Poll and Responses.

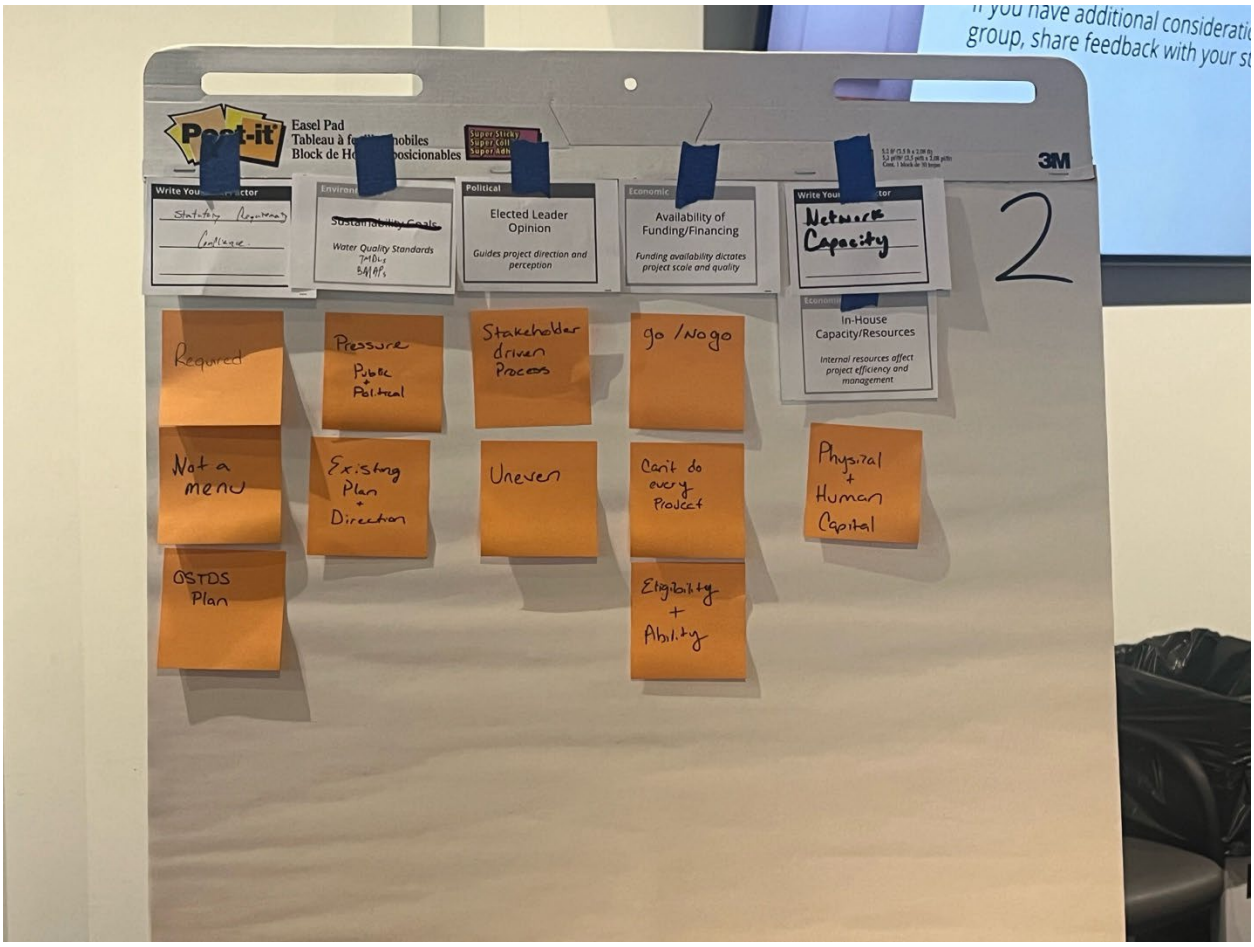
Poll Question	Unedited Responses
What is one thing you learned from the summit?	• Understanding challenges • I learned a lot about the varying challenges of utilities, based on size, and the re-focus to plants. • Our challenges are not unique. • Great tools are being developed! Glad to participate. • Lots of us with the same issues • Learned about additional grant opportunities. • Extraordinary rising costs of WWTPs. • Seeing a better water quality future.

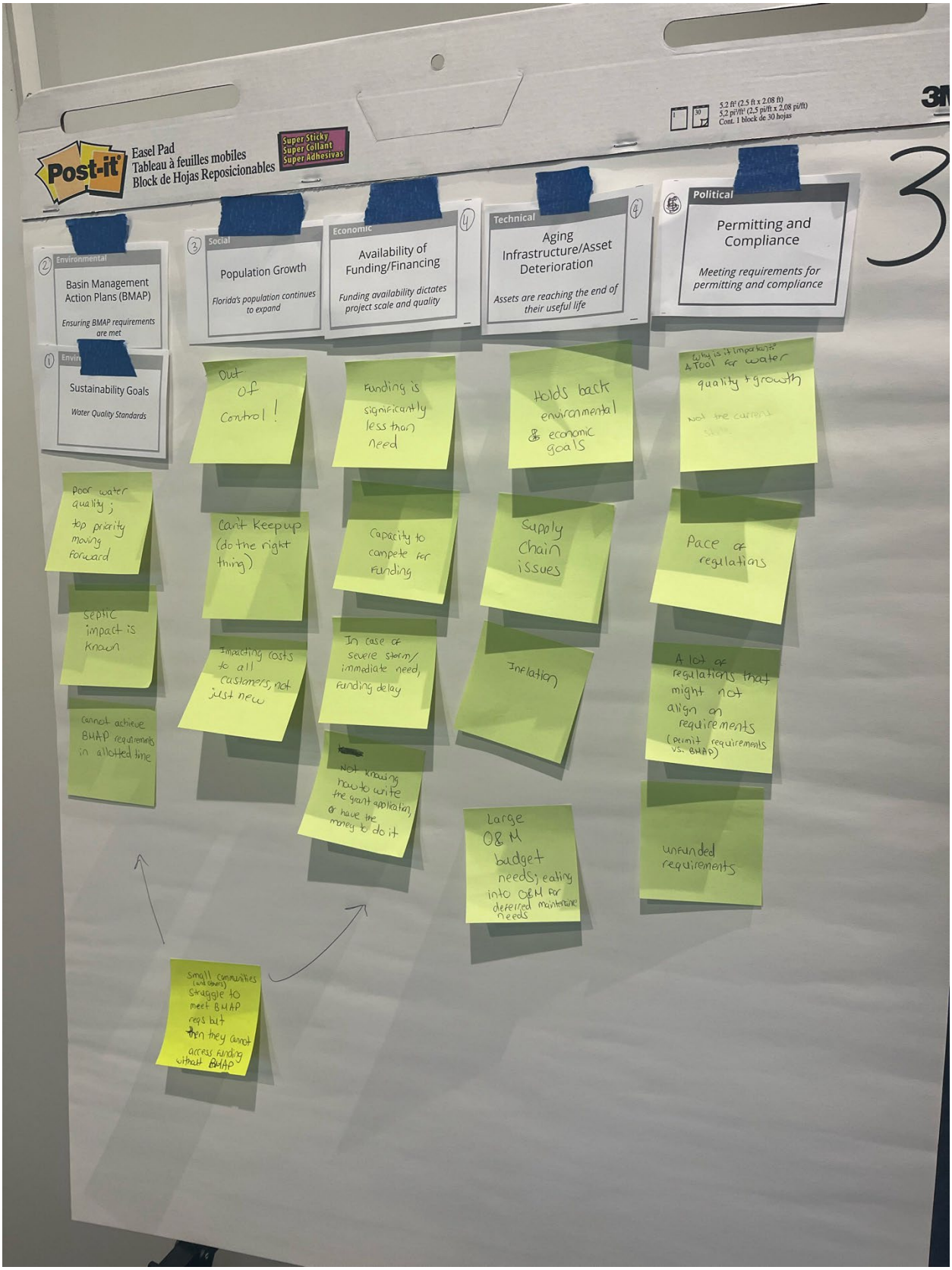
Poll Question	Unedited Responses
	• The magnitude of staff and financing challenges that our utilities are facing. DEP is really dedicated to making real progress. • Impressed with widespread consideration of water quality. • We all have a lot of the same issues, and there are tools in the works to help! • Both utilities and consultants are experiencing the same challenges throughout the state and trying to implement similar changes to move forward as best as possible. • There is widespread need for decision-support tools. • Similar themes & points from other utilities • Degree of difficulty in certain areas of the state, regarding physically installing septic to sewer.
What one thing would you commit to doing after today's session?	• Learn more about the DEP resources. • Continue to meet and share ideas. • More collaboration • Push for better planning and public education. • Exploring what UF can do to support the education needs. • Education outreach • Debrief my team on the knowledge shared here. • Trying to utilize this type of meetings internally as a utility. • Continue to engage in discussions like this one. • Speaking to other systems about issues we face.
Provide any feedback on the session.	• Great! • Great opportunity to connect and discuss issues. • Thank you. • Great experience and a nice cross section of people within the same industry. • I really enjoyed the community here and thoughtful conversation. • Loved the time allowed for the structured conversations, which was sufficient to allow some unstructured conversations to happen simultaneously. • Excellent facilitation. • Well lead group and good engagement by all participants. • Excellent format to try to guide and collaborate on solutions.

Appendix B – Summit Photos

Day 1: Wastewater Project Factor Prioritization




Post-it
Easel Pad
3M
Political
Elected Leader Opinion
Guides project direction and perception
Economic
Availability of Funding/Financing
Funding availability dictates project scale and quality
Network Capacity
In-House Capacity/Resources
Internal resources affect project efficiency and management
2
Required
Pressure Public + Political
Stakeholder driven Process
go / No go
Not a menu
Existing Plan + Direction
Uneven
Can't do every Project
Physical + Human Capital
OSTDS Plan
Eligibility + Ability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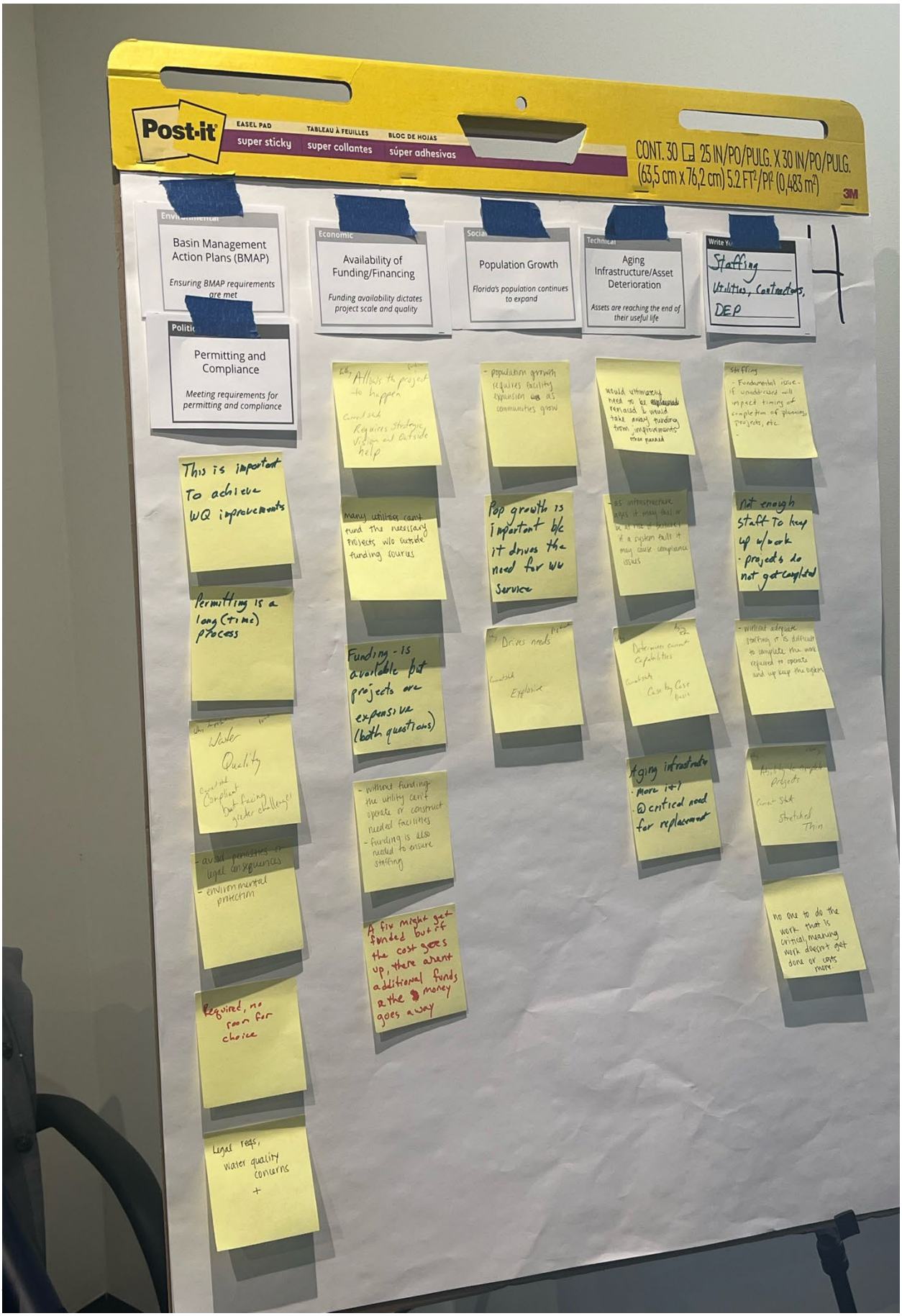
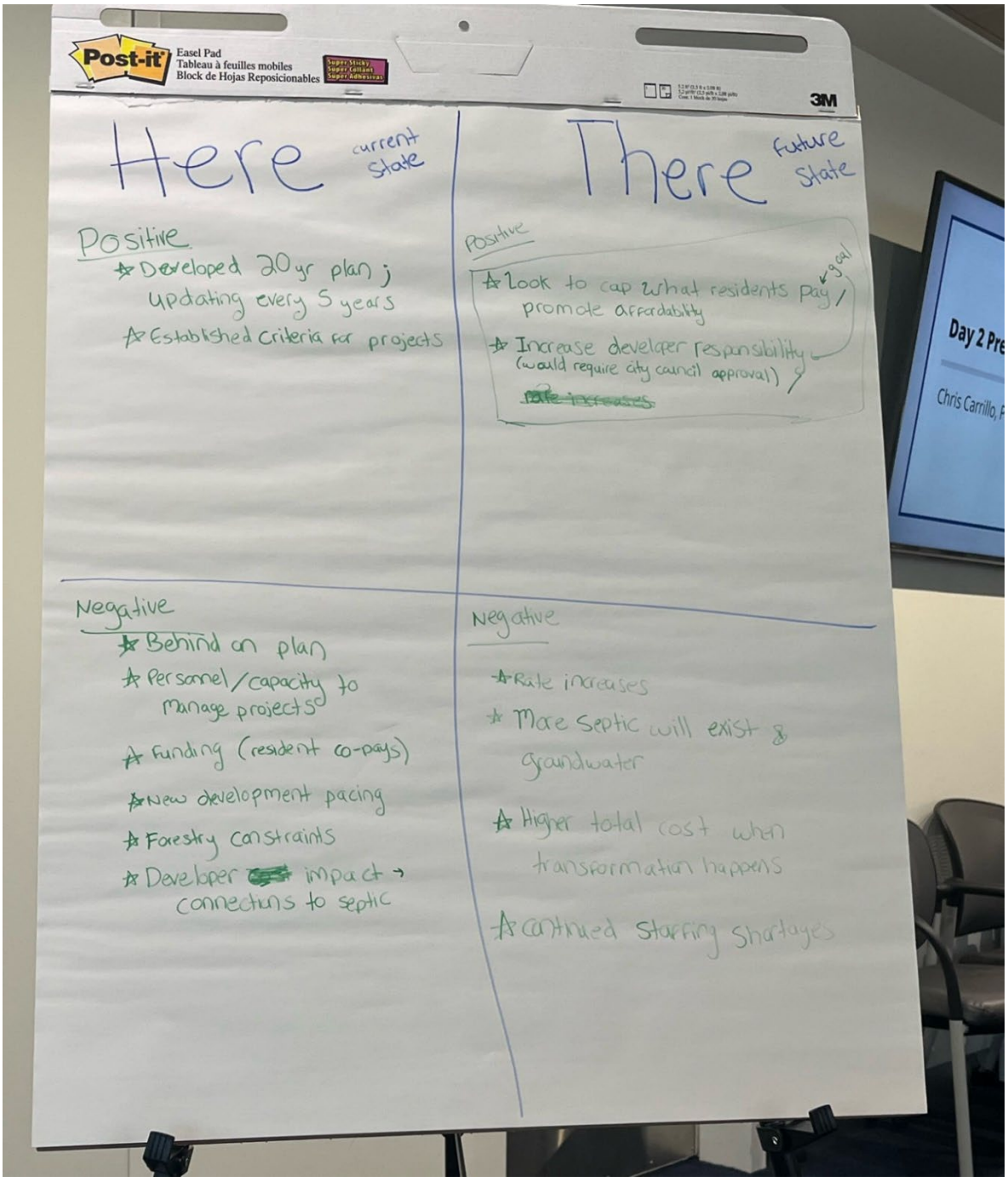
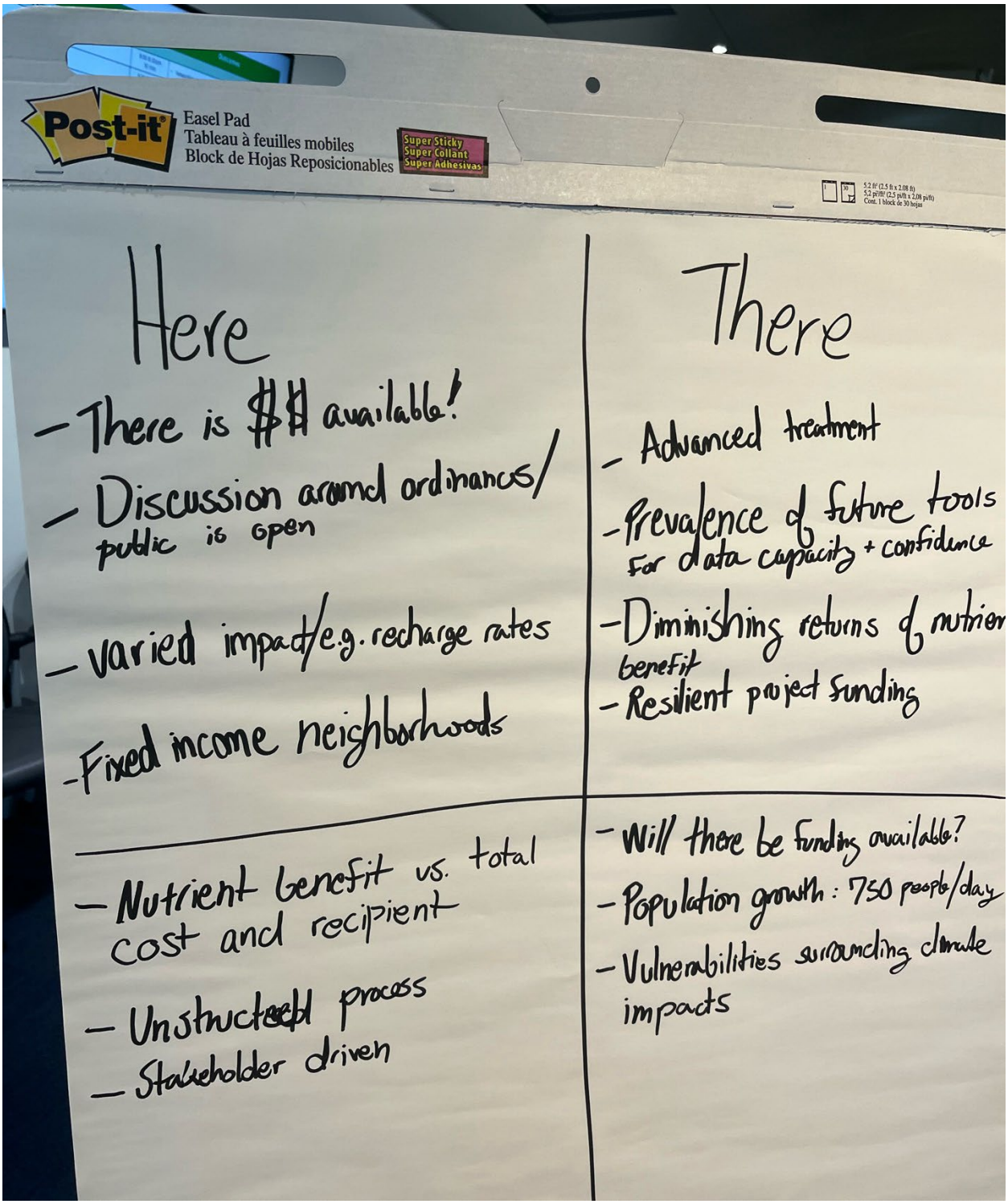
Environmental
Basin Management Action Plans (BMAP)
Ensuring BMAP requirements are met
Sustainability Goals
Water Quality Standards
Social
Population Growth
Florida's population continues to expand
Economic
Availability of Funding/Financing
Funding availability dictates project scale and quality
Technical
Aging Infrastructure/Asset Deterioration
Assets are reaching the end of their useful life
Political
Permitting and Compliance
Meeting requirements for permitting and compliance
Out of Control!
Funding is significantly less than need
Holds back environmental & economic goals
A tool for water quality + growth
Poor water quality; top priority moving forward
Can't keep up (do the right thing)
Capacity to compete for Funding
Supply Chain issues
Pace of regulations
Septic impact is known
Impacting rates to all customers, not just new
In case of severe storm/ immediate need, funding delay
Inflation
A lot of regulations that might not align on requirements (permit requirements vs. BMAP)
Cannot achieve BMAP requirements in allotted time
Not knowing how to write the grant application or have the money to do it
Large O&M budget needs; eating into O&M for deferred maintenance needs
unfunded requirements
Small communities (and others) struggle to meet BMAP reqs but then they cannot access funding without BMAP

University of Florida
Center for Coastal Solutions



Day 1: OSTDS Remediation Challenges

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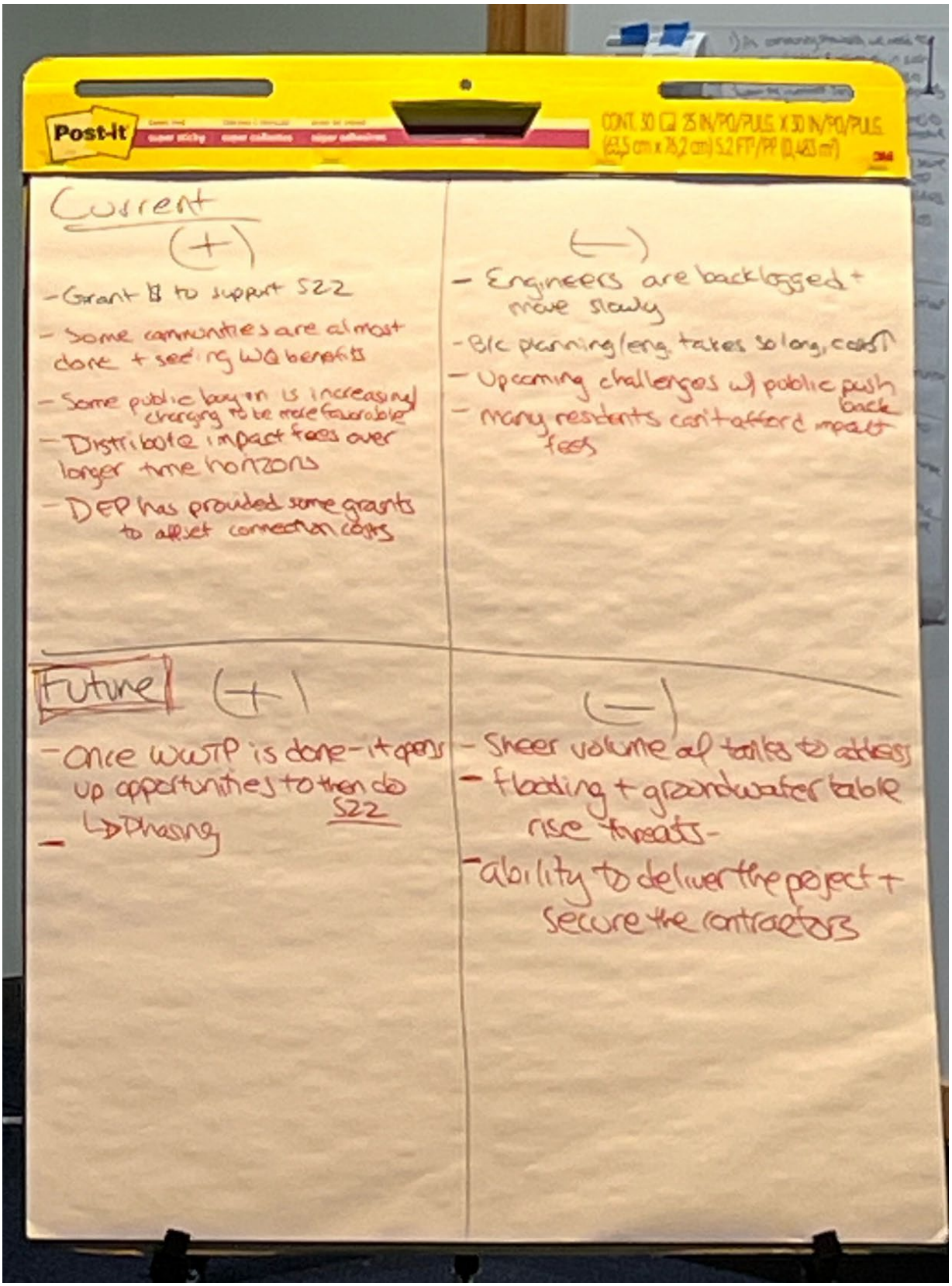
Here
- There is $$ available!
- Discussion around ordinances/ public is open
- varied impact/e.g. recharge rates
- Fixed income neighborhoods
There
- Advanced treatment
- Prevalence of future tools for data capacity + confidence
- Diminishing returns of nutrien benefit
- Resilient project funding
- Nutrient benefit vs. total cost and recipient
- Unstructed process
- Stakeholder driven
- Will there be funding available?
- Population growth: 750 people/day
- Vulnerabilities surrounding climate impacts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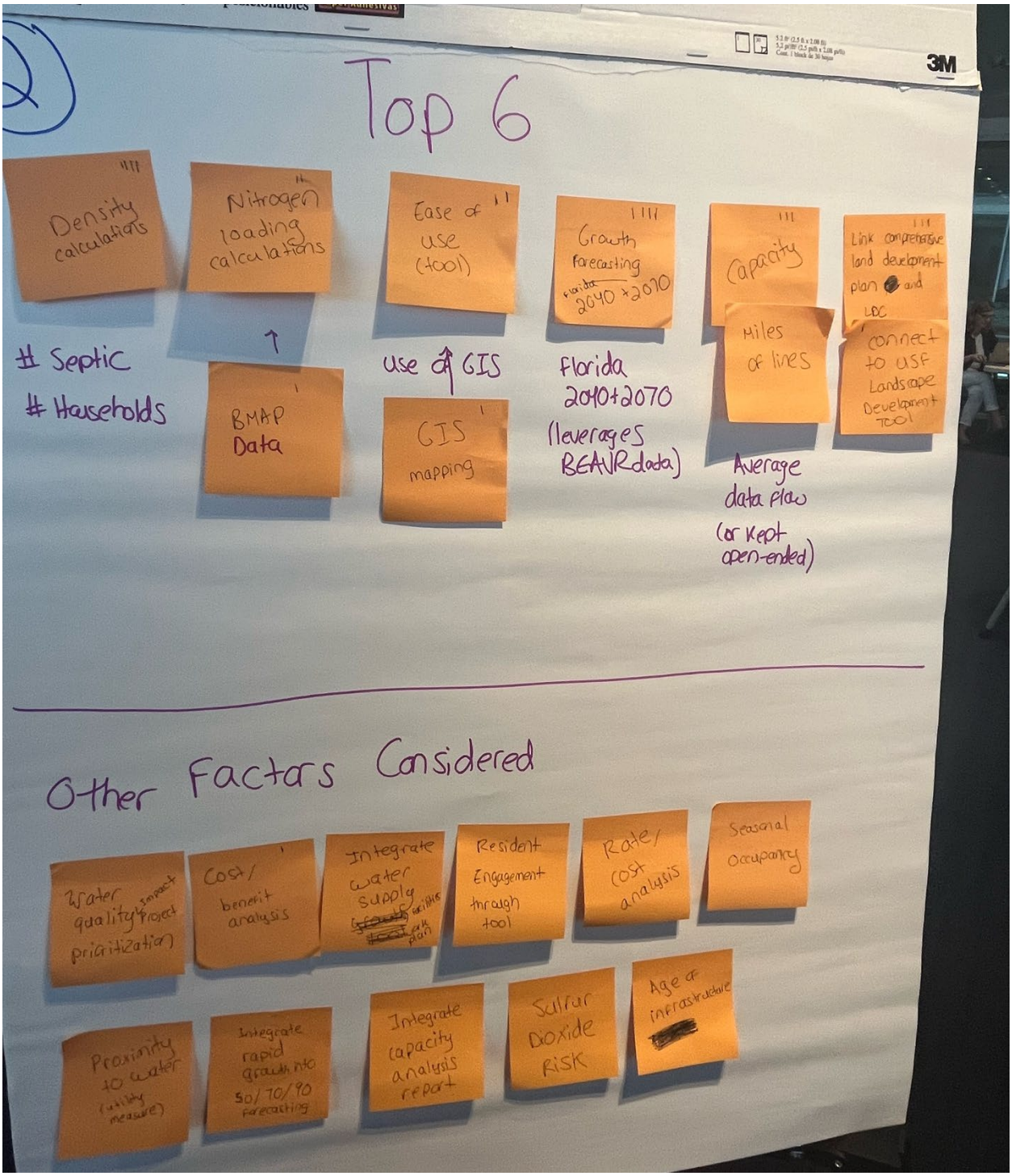
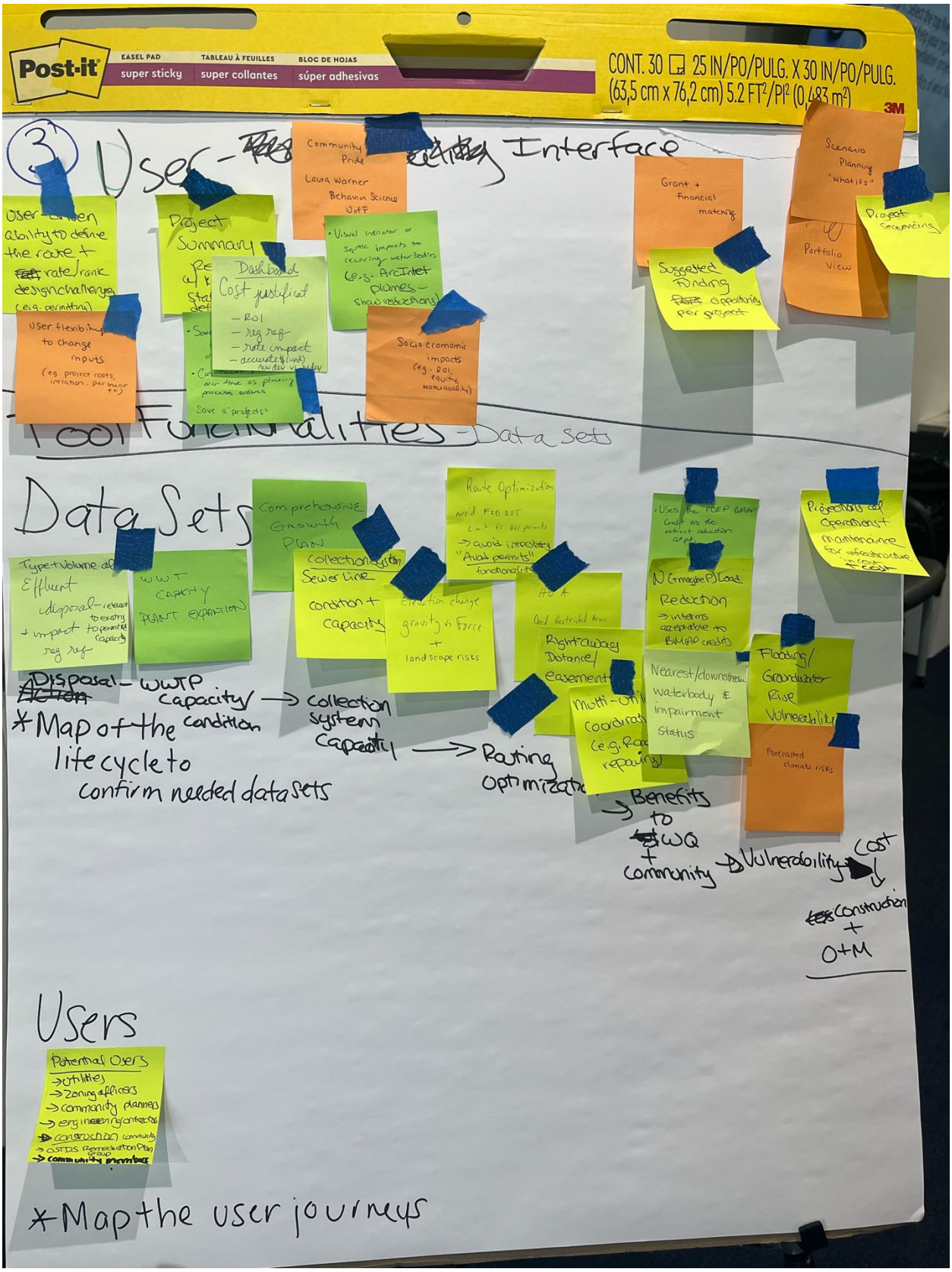
Current
(+)
- Grant $ to support S22
- Some communities are almost done + seeing WQ benefits
- Some public buy-in is increasing/ changing to be more favorable
- Distribute impact fees over longer time horizons
- DEP has provided some grants to offset connection costs
(−)
- Engineers are backlogged + move slowly
- Blc planning/eng. takes so long, costs↑
- Upcoming challenges w/ public push back
- many residents can't afford impact fees
Future
(+)
- Once WWTP is done - it opens up opportunities to then do S22
↳ Phasing
(−)
- Sheer volume of toilets to address
- flooding + groundwater table rise threats -
- ability to deliver the project + secure the contractors

Day 2: Tool Functionality Brainstorm

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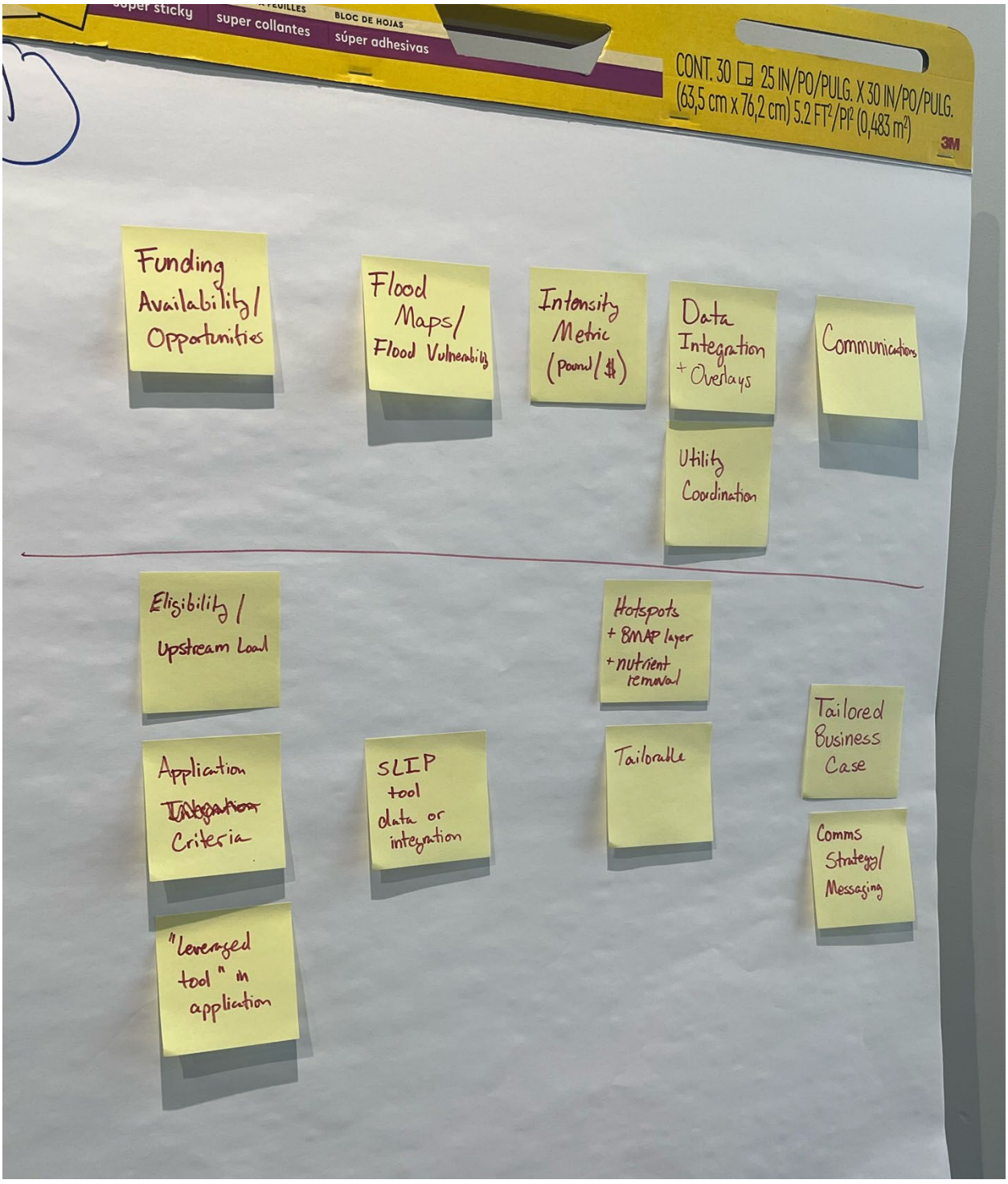
(63,5 cm x 76,2 cm) 5.2 FT²/PI² (0,483 m²)
3M
User Interface
Tool Functionalities - Data sets
Data Sets
Users
*Map of the life cycle to confirm needed datasets
*Map the user journeys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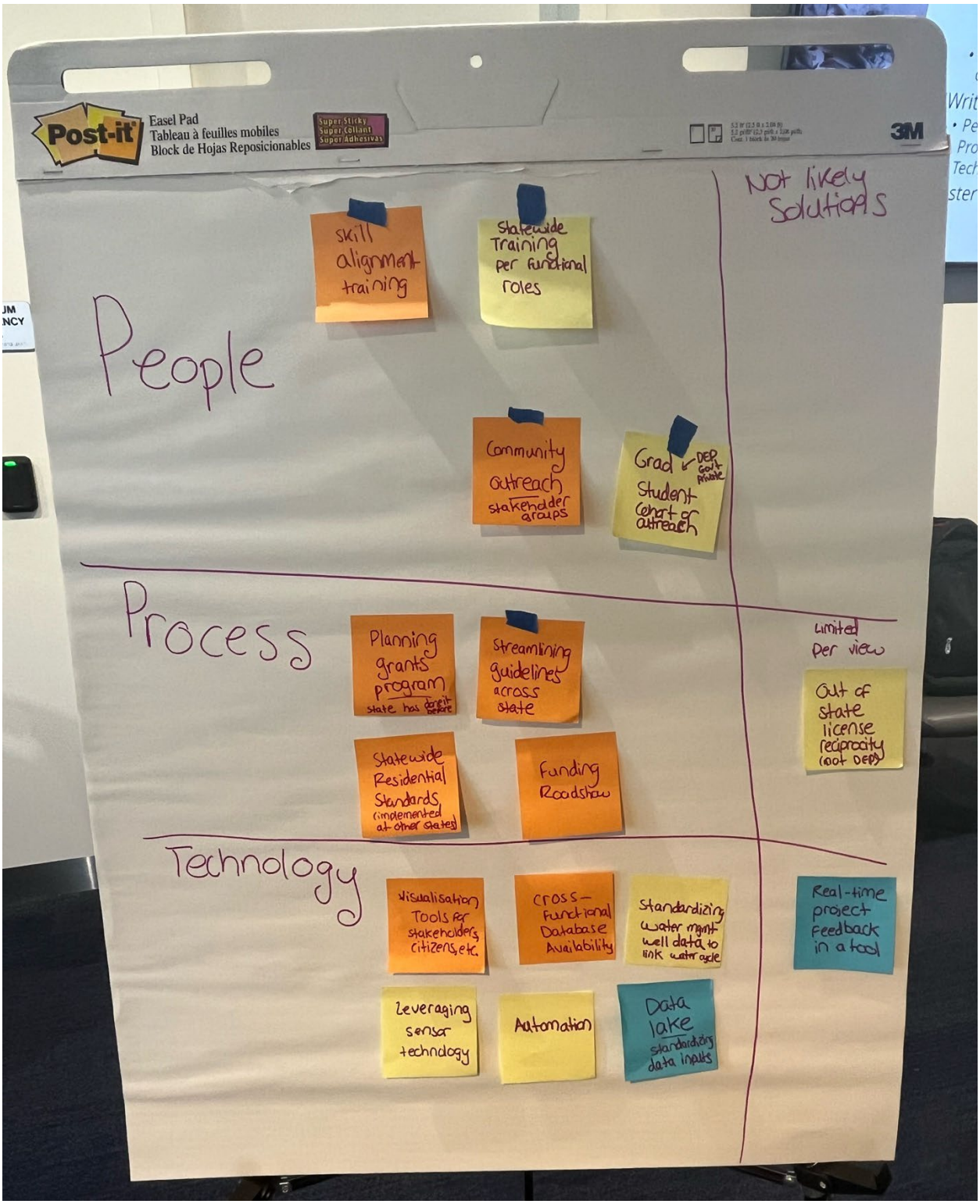
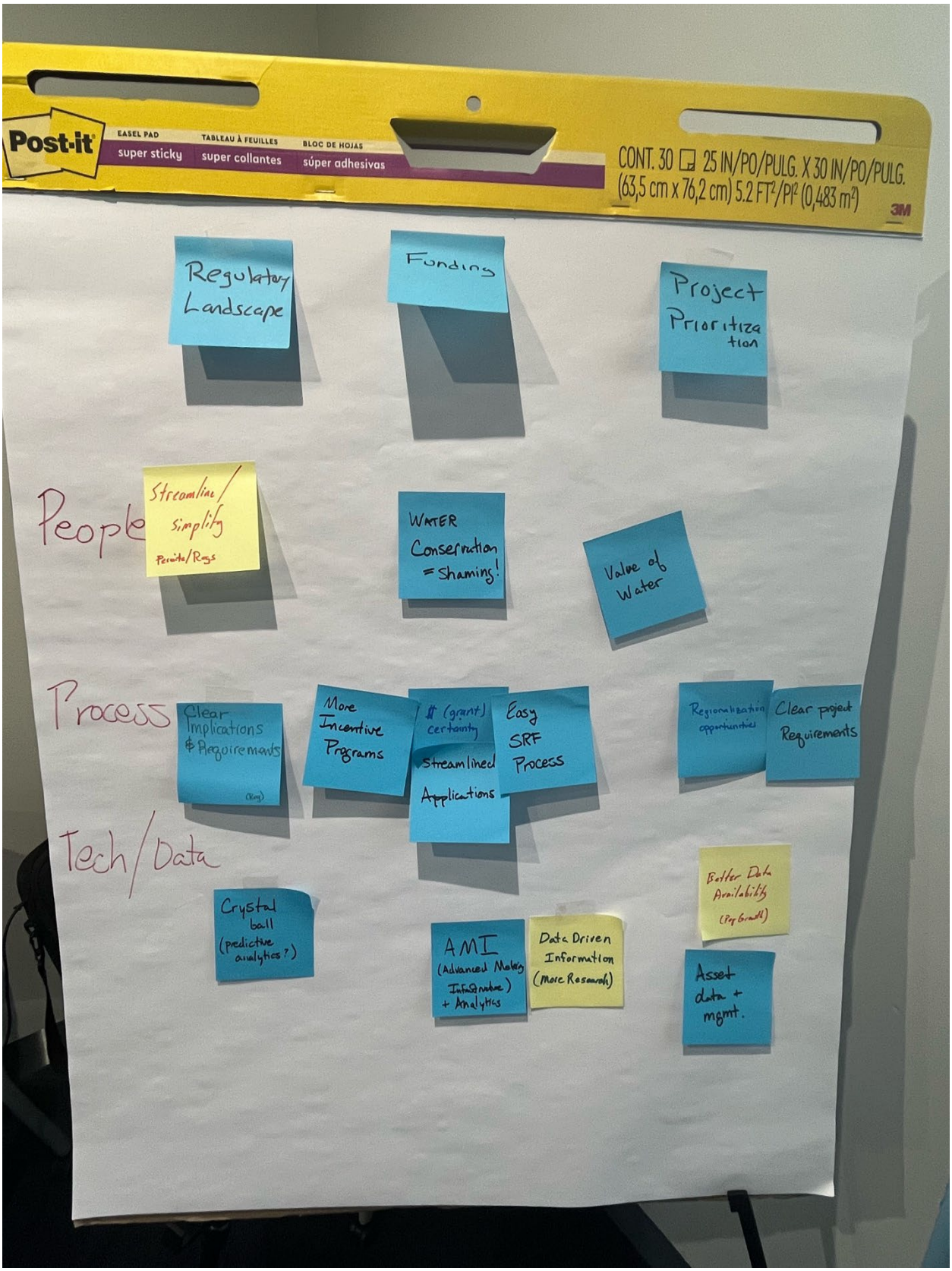
3M
Funding Availability/ Opportunities
Flood Maps/ Flood Vulnerability
Intensity Metric (pound/$)
Data Integration + Overlays
Communications
Utility Coordination
Eligibility / Upstream Load
Hotspots + BMAP layer + nutrient removal
Tailored Business Case
Application ~~Integration~~ Criteria
SLIP tool data or integration
Tailorable
Comms Strategy/ Messaging
"Leveraged tool" in application

Day 2: Initiatives Breakout

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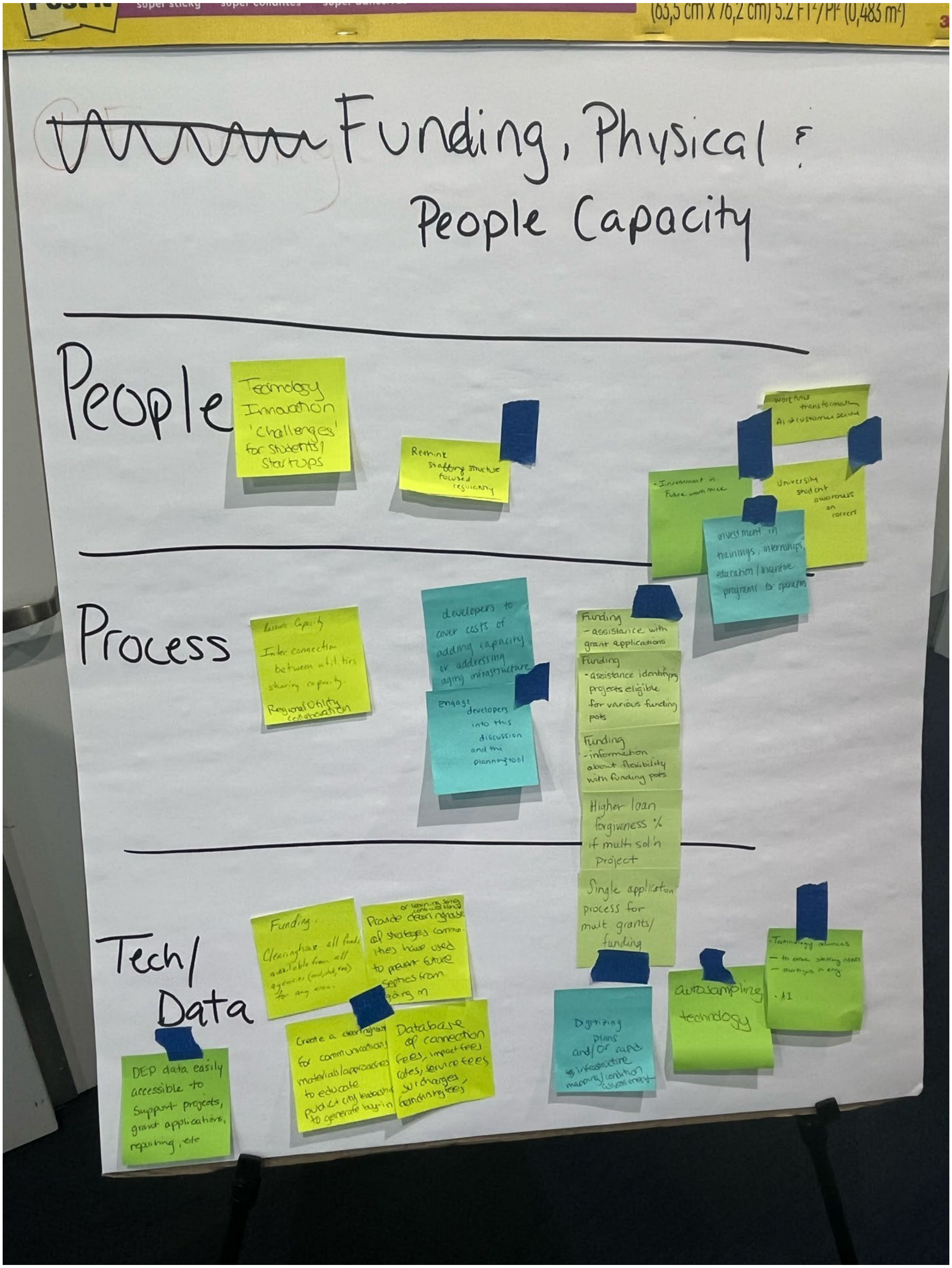
(63,5 cm x 76,2 cm) 5.2 FT²/PI² (0,483 m²)
3M
Regulatory Landscape
Funding
Project Prioritization
People
Streamline/ simplify
Permits/Regs
WATER Conservation = Shaming!
Value of Water
Process
Clear Implications & Requirements
More Incentive Programs
If (grant) certainty
Streamlined Applications
Easy SRF Process
Regionalization opportunities
Clear project Requirements
Tech/Data
Crystal ball (predictive analytics?)
AMI (Advanced Metering Infrastructure) + Analytics
Data Driven Information (more Research)
Better Data Availability
Asset data + mgmt.


Funding, Physical &
People Capacity
People
Technology Innovation 'Challenges' for Students/ Startups
Rethink staffing structure focused regionally
University student awareness on careers
Process
developers to cover costs of adding capacity or addressing aging infrastructure
Engage developers into this discussion and the planning tool
Funding - assistance with grant applications
Funding - assistance identifying projects eligible for various funding pots
Funding - information about flexibility with funding pots
Higher loan forgiveness % if multi sol'n project
Single application process for mult grants/ funding
Tech/ Data
DEP data easily accessible to support projects, grant applications, reporting, etc
Digitizing plans and/or rapid infrastructure mapping/condition assessment
autosampling technology

Appendix C – Full Facilitation Presentation Slides

Wastewater Enhancement Planning Summit

University of Florida Center for Coastal Solutions

Facilitation Presentation

June 5th to June 6th, 2024

Welcome to the Wastewater Enhancement Planning Summit!

We will begin at 12:30pm.

Welcome & Thank You for Coming!

Project Team Facilitators

Dr. Christine Angelini
UF CCS

Dr. Tricia Kyzar
UF CCS

Chris Carrillo, PE
Deloitte

Project Background

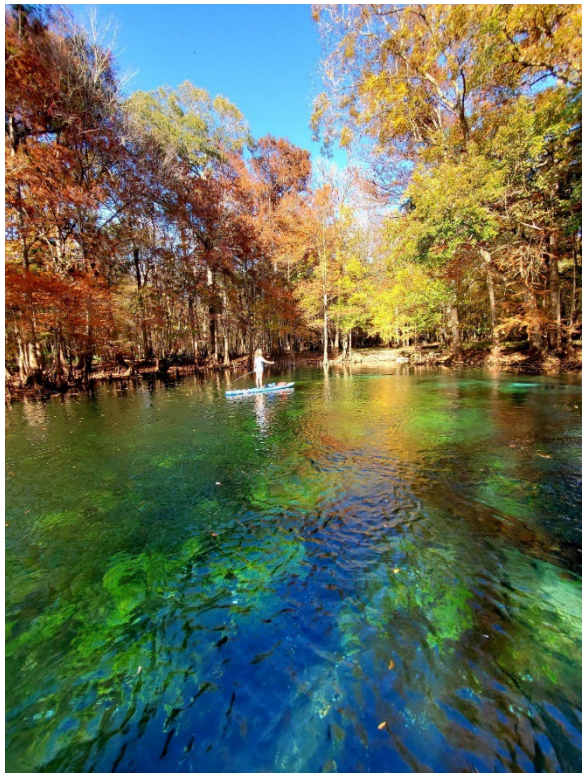
Dr. Mark Rains - DEP

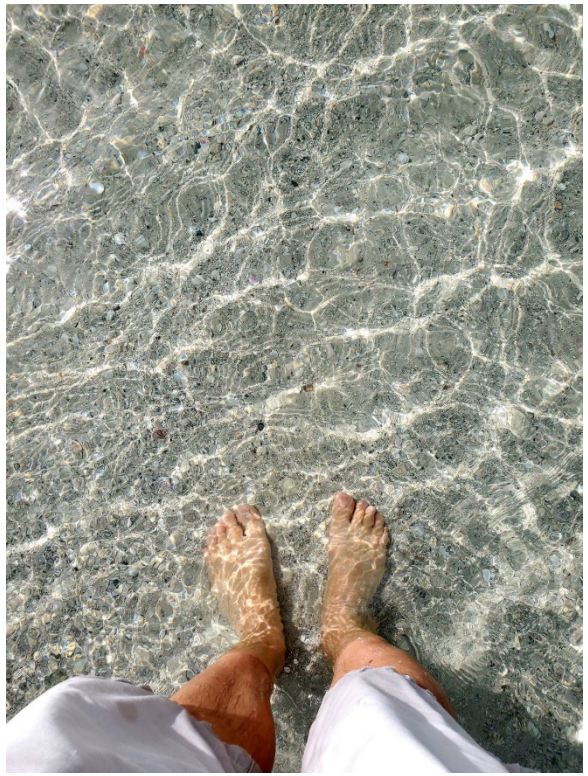
Dr. Christine Angelini - UF

Protecting FLORIDA Together

The Big Idea

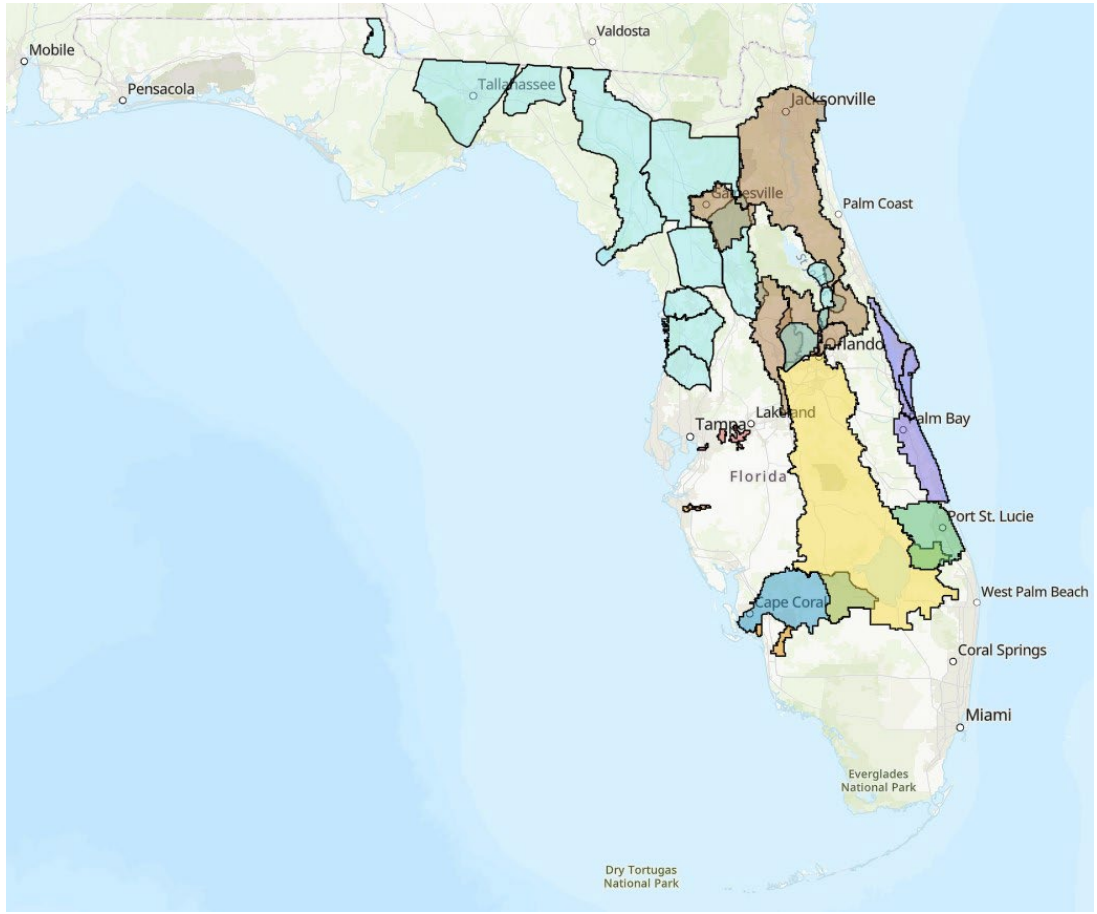
Water-Quality Challenges

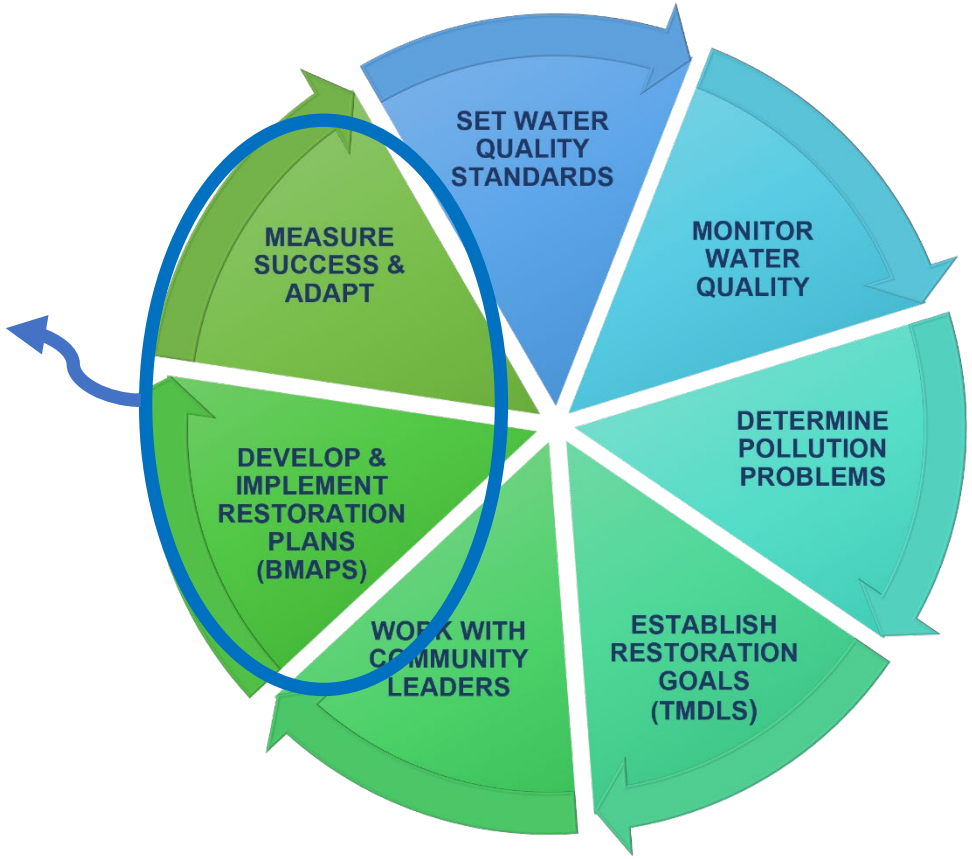




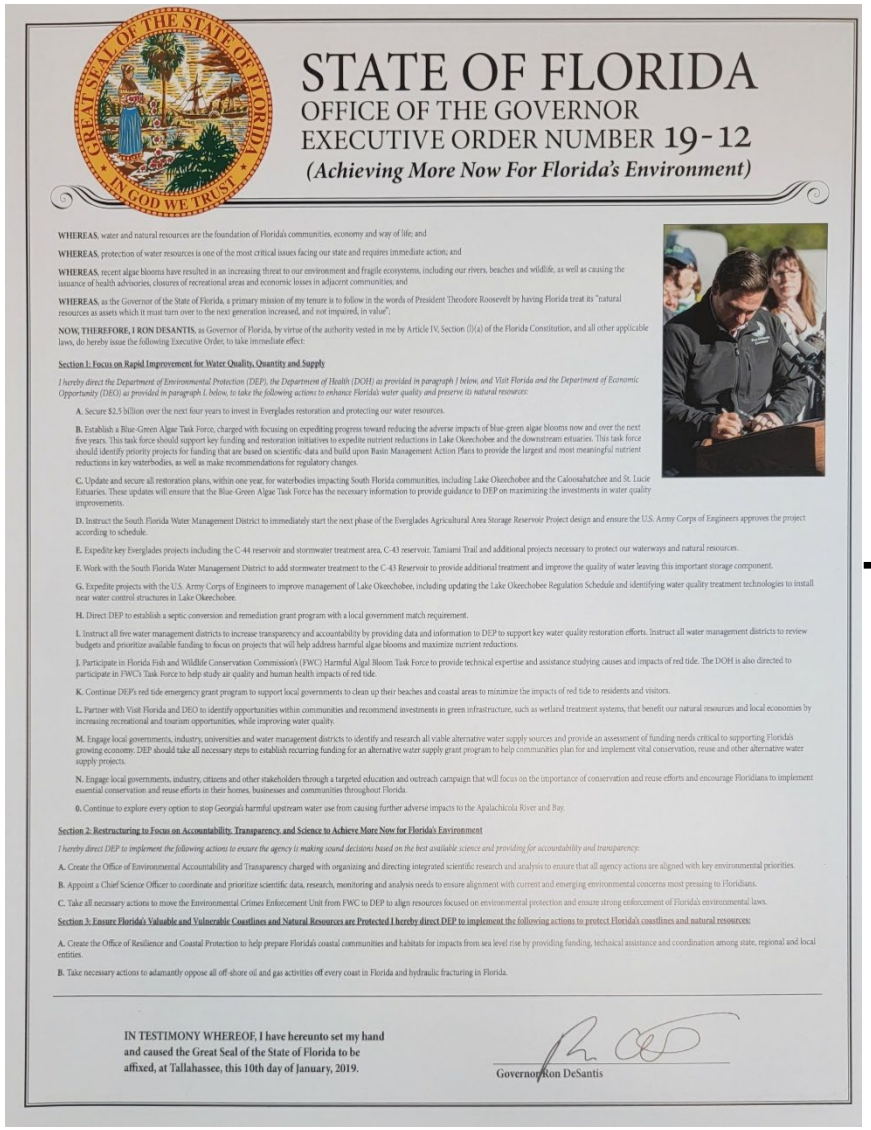
Water-Quality Restoration Framework

Florida Watershed Restoration Act (403.067, F.S.)





Restoration Begins with Leadership



STATE OF FLORIDA
OFFICE OF THE GOVERNOR
EXECUTIVE ORDER NUMBER 19-12
(Achieving More Now For Florida's Environment)

WHEREAS, water and natural resources are the foundation of Florida's communities, economy and way of life; and

WHEREAS, protection of water resources is one of the most critical issues facing our state and requires immediate action; and

WHEREAS, recent algae blooms have resulted in an increasing threat to our environment and fragile ecosystems, including our rivers, beaches and wildlife, as well as causing the issuance of health advisories, closures of recreational areas and economic losses in adjacent communities; and

WHEREAS, as the Governor of the State of Florida, a primary mission of my tenure is to follow in the words of President Theodore Roosevelt by having Florida treat its "natural resources as assets which it must turn over to the next generation increased, and not impaired, in value";

NOW, THEREFORE, I RON DESANTIS, as Governor of Florida, by virtue of the authority vested in me by Article IV, Section (1)(a) of the Florida Constitution, and all other applicable laws, do hereby issue the following Executive Order, to take immediate effect:

Section 1: Focus on Rapid Improvement for Water Quality, Quantity and Supply

I hereby direct the Department of Environmental Protection (DEP), the Department of Health (DOH) as provided in paragraph I below, and Visit Florida and the Department of Economic Opportunity (DEO) as provided in paragraph L below, to take the following actions to enhance Florida's water quality and preserve its natural resources:

A. Secure $2.5 billion over the next four years to invest in Everglades restoration and protecting our water resources.

B. Establish a Blue-Green Algae Task Force, charged with focusing on expediting progress toward reducing the adverse impacts of blue-green algae blooms now and over the next five years. This task force should support key funding and restoration initiatives to expedite nutrient reductions in Lake Okeechobee and the downstream estuaries. This task force should identify priority projects for funding that are based on scientific data and build upon Basin Management Action Plans to provide the largest and most meaningful nutrient reductions in key waterbodies, as well as make recommendations for regulatory changes.

C. Update and secure all restoration plans, within one year, for waterbodies impacting South Florida communities, including Lake Okeechobee and the Caloosahatchee and St. Lucie Estuaries. These updates will ensure that the Blue-Green Algae Task Force has the necessary information to provide guidance to DEP on maximizing the investments in water quality improvements.

D. Instruct the South Florida Water Management District to immediately start the next phase of the Everglades Agricultural Area Storage Reservoir Project design and ensure the U.S. Army Corps of Engineers approves the project according to schedule.

E. Expedite key Everglades projects including the C-44 reservoir and stormwater treatment area, C-43 reservoir, Tamiami Trail and additional projects necessary to protect our waterways and natural resources.

F. Work with the South Florida Water Management District to add stormwater treatment to the C-43 Reservoir to provide additional treatment and improve the quality of water leaving this important storage component.

G. Expedite projects with the U.S. Army Corps of Engineers to improve management of Lake Okeechobee, including updating the Lake Okeechobee Regulation Schedule and identifying water quality treatment technologies to install near water control structures in Lake Okeechobee.

H. Direct DEP to establish a septic conversion and remediation grant program with a local government match requirement.

I. Instruct all five water management districts to increase transparency and accountability by providing data and information to DEP to support key water quality restoration efforts. Instruct all water management districts to review budgets and prioritize available funding to focus on projects that will help address harmful algae blooms and maximize nutrient reductions.

J. Participate in Florida Fish and Wildlife Conservation Commission's (FWC) Harmful Algal Bloom Task Force to provide technical expertise and assistance studying causes and impacts of red tide. The DOH is also directed to participate in FWC's Task Force to help study air quality and human health impacts of red tide.

K. Continue DEP's red tide emergency grant program to support local governments to clean up their beaches and coastal areas to minimize the impacts of red tide to residents and visitors.

L. Partner with Visit Florida and DEO to identify opportunities within communities and recommend investments in green infrastructure, such as wetland treatment systems, that benefit our natural resources and local economies by increasing recreational and tourism opportunities, while improving water quality.

M. Engage local governments, industry, universities and water management districts to identify and research all viable alternative water supply sources and provide an assessment of funding needs critical to supporting Florida's growing economy. DEP should take all necessary steps to establish recurring funding for an alternative water supply grant program to help communities plan for and implement vital conservation, reuse and other alternative water supply projects.

N. Engage local governments, industry, citizens and other stakeholders through a targeted education and outreach campaign that will focus on the importance of conservation and reuse efforts and encourage Floridians to implement essential conservation and reuse efforts in their homes, businesses and communities throughout Florida.

O. Continue to explore every option to stop Georgia's harmful upstream water use from causing further adverse impacts to the Apalachicola River and Bay.

Section 2: Restructuring to Focus on Accountability, Transparency, and Science to Achieve More Now for Florida's Environment

I hereby direct DEP to implement the following actions to ensure the agency is making sound decisions based on the best available science and providing for accountability and transparency:

A. Create the Office of Environmental Accountability and Transparency charged with organizing and directing integrated scientific research and analysis to ensure that all agency actions are aligned with key environmental priorities.

B. Appoint a Chief Science Officer to coordinate and prioritize scientific data, research, monitoring and analysis needs to ensure alignment with current and emerging environmental concerns most pressing to Floridians.

C. Take all necessary actions to move the Environmental Crimes Enforcement Unit from FWC to DEP to align resources focused on environmental protection and ensure strong enforcement of Florida's environmental laws.

Section 3: Ensure Florida's Valuable and Vulnerable Coastlines and Natural Resources are Protected I hereby direct DEP to implement the following actions to protect Florida's coastlines and natural resources:

A. Create the Office of Resilience and Coastal Protection to help prepare Florida's coastal communities and habitats for impacts from sea level rise by providing funding, technical assistance and coordination among state, regional and local entities.

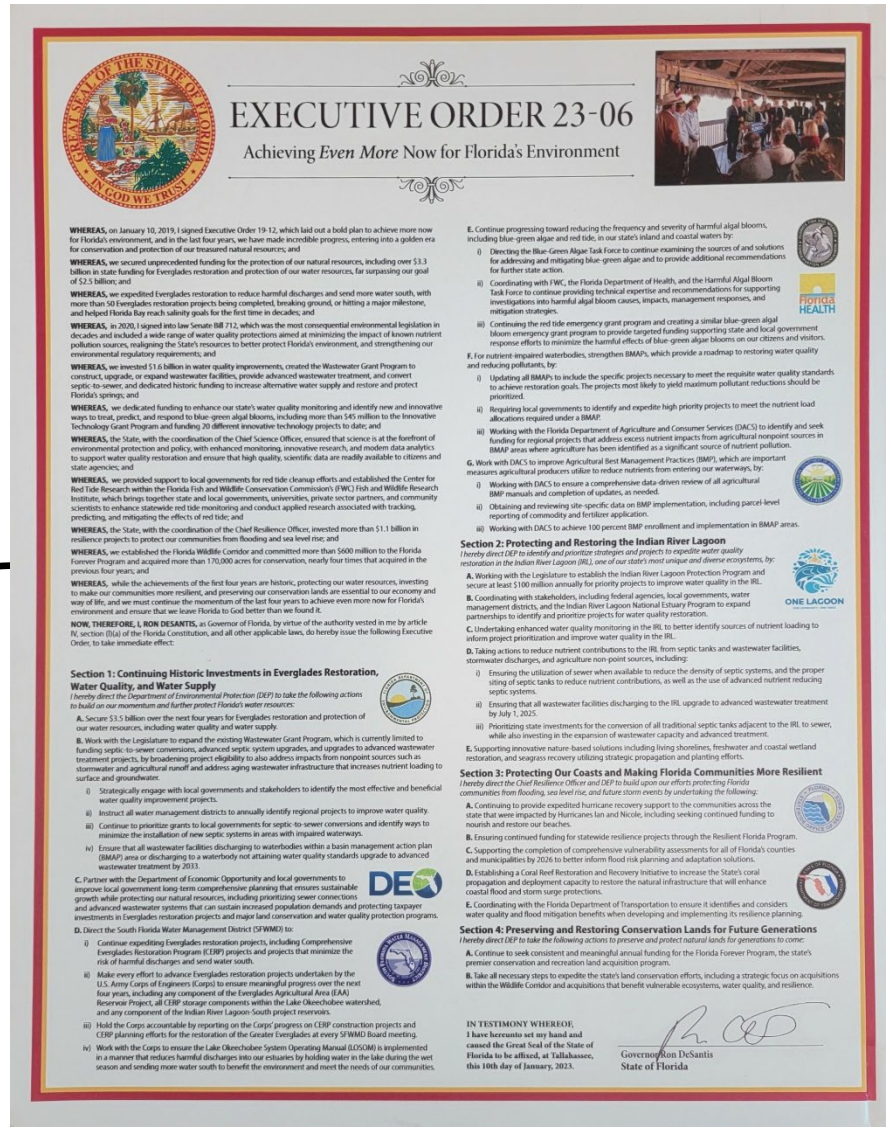
B. Take necessary actions to adamantly oppose all off-shore oil and gas activities off every coast in Florida and hydraulic fracturing in Florida.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Florida to be affixed, at Tallahassee, this 10th day of January, 2019.

Governor Ron DeSantis

$2.5B pledged for water-quality restoration ($3.3B realized)

$3.9B pledged for water-quality restoration



EXECUTIVE ORDER 23-06
Achieving *Even More* Now for Florida's Environment

WHEREAS, on January 10, 2019, I signed Executive Order 19-12, which laid out a bold plan to achieve more now for Florida's environment, and in the last four years, we have made incredible progress, entering into a golden era for conservation and protection of our treasured natural resources; and

WHEREAS, we secured unprecedented funding for the protection of our natural resources, including over $3.3 billion in state funding for Everglades restoration and protection of our water resources, far surpassing our goal of $2.5 billion; and

WHEREAS, we expedited Everglades restoration to reduce harmful discharges and send more water south, with more than 50 Everglades restoration projects being completed, breaking ground, or hitting a major milestone, and helped Florida Bay reach salinity goals for the first time in decades; and

WHEREAS, in 2020, I signed into law Senate Bill 712, which was the most consequential environmental legislation in decades and included a wide range of water quality protections aimed at minimizing the impact of known nutrient pollution sources, realigning the State's resources to better protect Florida's environment, and strengthening our environmental regulatory requirements; and

WHEREAS, we invested $1.6 billion in water quality improvements, created the Wastewater Grant Program to construct, upgrade, or expand wastewater facilities, provide advanced wastewater treatment, and convert septic-to-sewer, and dedicated historic funding to increase alternative water supply and restore and protect Florida's springs; and

WHEREAS, we dedicated funding to enhance our state's water quality monitoring and identify new and innovative ways to treat, predict, and respond to blue-green algal blooms, including more than $45 million to the Innovative Technology Grant Program and funding 20 different innovative technology projects to date; and

WHEREAS, the State, with the coordination of the Chief Science Officer, ensured that science is at the forefront of environmental protection and policy, with enhanced monitoring, innovative research, and modern data analytics to support water quality restoration and ensure that high quality, scientific data are readily available to citizens and state agencies; and

WHEREAS, we provided support to local governments for red tide cleanup efforts and established the Center for Red Tide Research within the Florida Fish and Wildlife Conservation Commission's (FWC) Fish and Wildlife Research Institute, which brings together state and local governments, universities, private sector partners, and community scientists to enhance statewide red tide monitoring and conduct applied research associated with tracking, predicting, and mitigating the effects of red tide; and

WHEREAS, the State, with the coordination of the Chief Resilience Officer, invested more than $1.1 billion in resilience projects to protect our communities from flooding and sea level rise; and

WHEREAS, we established the Florida Wildlife Corridor and committed more than $600 million to the Florida Forever Program and acquired more than 170,000 acres for conservation, nearly four times that acquired in the previous four years; and

WHEREAS, while the achievements of the first four years are historic, protecting our water resources, investing to make our communities more resilient, and preserving our conservation lands are essential to our economy and way of life, and we must continue the momentum of the last four years to achieve even more now for Florida's environment and ensure that we leave Florida to God better than we found it.

NOW, THEREFORE, I, RON DESANTIS, as Governor of Florida, by virtue of the authority vested in me by article IV, section (1)(a) of the Florida Constitution, and all other applicable laws, do hereby issue the following Executive Order, to take immediate effect:

Section 1: Continuing Historic Investments in Everglades Restoration, Water Quality, and Water Supply

I hereby direct the Department of Environmental Protection (DEP) to take the following actions to build on our momentum and further protect Florida's water resources:

A. Secure $3.5 billion over the next four years for Everglades restoration and protection of our water resources, including water quality and water supply.

B. Work with the Legislature to expand the existing Wastewater Grant Program, which is currently limited to funding septic-to-sewer conversions, advanced septic system upgrades, and upgrades to advanced wastewater treatment projects, to broadening project eligibility to also address impacts from nonpoint sources such as stormwater and agricultural runoff and address aging wastewater infrastructure that increases nutrient loading to surface and groundwater.

i) Strategically engage with local governments and stakeholders to identify the most effective and beneficial water quality improvement projects.

ii) Instruct all water management districts to annually identify regional projects to improve water quality.

iii) Continue to prioritize grants to local governments for septic-to-sewer conversions and identify ways to minimize the installation of new septic systems in areas with impaired waterways.

iv) Ensure that all wastewater facilities discharging to waterbodies within a basin management action plan (BMAP) area or discharging to a waterbody not attaining water quality standards upgrade to advanced wastewater treatment by 2033.

C. Partner with the Department of Economic Opportunity and local governments to improve local government long-term comprehensive planning that ensures sustainable growth while protecting our natural resources, including prioritizing sewer connections and advanced wastewater systems that can sustain increased population demands and protecting taxpayer investments in Everglades restoration projects and major land conservation and water quality protection programs.

D. Direct the South Florida Water Management District (SFWMD) to:

i) Continue expediting Everglades restoration projects, including Comprehensive Everglades Restoration Program (CERP) projects and projects that minimize the risk of harmful discharges and send water south.

ii) Make every effort to advance Everglades restoration projects undertaken by the U.S. Army Corps of Engineers (Corps) to ensure meaningful progress over the next four years, including any component of the Everglades Agricultural Area (EAA) Reservoir Project, all CERP storage components within the Lake Okeechobee watershed, and any component of the Indian River Lagoon-South project reservoirs.

iii) Hold the Corps accountable by reporting on the Corps' progress on CERP construction projects and CERP planning efforts for the restoration of the Greater Everglades at every SFWMD Board meeting.

iv) Work with the Corps to ensure the Lake Okeechobee System Operating Manual (LOSOM) is implemented in a manner that reduces harmful discharges into our estuaries by holding water in the lake during the wet season and sending more water south to benefit the environment and meet the needs of our communities.

E. Continue progressing toward reducing the frequency and severity of harmful algal blooms, including blue-green algae and red tide, in our state's inland and coastal waters by:

i) Directing the Blue-Green Algae Task Force to continue examining the sources of and solutions for addressing and mitigating blue-green algae and to provide additional recommendations for further state action.

ii) Coordinating with FWC, the Florida Department of Health, and the Harmful Algal Bloom Task Force to continue providing technical expertise and recommendations for supporting investigations into harmful algal bloom causes, impacts, management responses, and mitigation strategies.

iii) Continuing the red tide emergency grant program and creating a similar blue-green algal bloom emergency grant program to provide targeted funding supporting state and local government response efforts to minimize the harmful effects of blue-green algae blooms on our citizens and visitors.

F. For nutrient-impaired waterbodies, strengthen BMAPs, which provide a roadmap to restoring water quality and reducing pollutants, by:

i) Updating all BMAPs to include the specific projects necessary to meet the requisite water quality standards to achieve restoration goals. The projects most likely to yield maximum pollutant reductions should be prioritized.

ii) Requiring local governments to identify and expedite high priority projects to meet the nutrient load allocations required under a BMAP.

iii) Working with the Florida Department of Agriculture and Consumer Services (DACS) to identify and seek funding for regional projects that address excess nutrient impacts from agricultural nonpoint sources in BMAP areas where agriculture has been identified as a significant source of nutrient pollution.

G. Work with DACS to improve Agricultural Best Management Practices (BMP), which are important measures agricultural producers utilize to reduce nutrients from entering our waterways, by:

i) Working with DACS to ensure a comprehensive data-driven review of all agricultural BMP manuals and completion of updates, as needed.

ii) Obtaining and reviewing site-specific data on BMP implementation, including parcel-level reporting of commodity and fertilizer application.

iii) Working with DACS to achieve 100 percent BMP enrollment and implementation in BMAP areas.

Section 2: Protecting and Restoring the Indian River Lagoon

I hereby direct DEP to identify and prioritize strategies and projects to expedite water quality restoration in the Indian River Lagoon (IRL), one of our state's most unique and diverse ecosystems, by:

A. Working with the Legislature to establish the Indian River Lagoon Protection Program and secure at least $100 million annually for priority projects to improve water quality in the IRL.

B. Coordinating with stakeholders, including federal agencies, local governments, water management districts, and the Indian River Lagoon National Estuary Program to expand partnerships to identify and prioritize projects for water quality restoration.

C. Undertaking enhanced water quality monitoring in the IRL to better identify sources of nutrient loading to inform project prioritization and improve water quality in the IRL.

D. Taking actions to reduce nutrient contributions to the IRL from septic tanks and wastewater facilities, stormwater discharges, and agriculture non-point sources, including:

i) Ensuring the utilization of sewer when available to reduce the density of septic systems, and the proper siting of septic tanks to reduce nutrient contributions, as well as the use of advanced nutrient reducing septic systems.

ii) Ensuring that all wastewater facilities discharging to the IRL upgrade to advanced wastewater treatment by July 1, 2025.

iii) Prioritizing state investments for the conversion of all traditional septic tanks adjacent to the IRL to sewer, while also investing in the expansion of wastewater capacity and advanced treatment.

E. Supporting innovative nature-based solutions including living shorelines, freshwater and coastal wetland restoration, and seagrass recovery utilizing strategic propagation and planting efforts.

Section 3: Protecting Our Coasts and Making Florida Communities More Resilient

I hereby direct the Chief Resilience Officer and DEP to build upon our efforts protecting Florida communities from flooding, sea level rise, and future storm events by undertaking the following:

A. Continuing to provide expedited hurricane recovery support to the communities across the state that were impacted by Hurricanes Ian and Nicole, including seeking continued funding to nourish and restore our beaches.

B. Ensuring continued funding for statewide resilience projects through the Resilient Florida Program.

C. Supporting the completion of comprehensive vulnerability assessments for all of Florida's counties and municipalities by 2026 to better inform flood risk planning and adaptation solutions.

D. Establishing a Coral Reef Restoration and Recovery Initiative to increase the State's coral propagation and deployment capacity to restore the natural infrastructure that will enhance coastal flood and storm surge protections.

E. Coordinating with the Florida Department of Transportation to ensure it identifies and considers water quality and flood mitigation benefits when developing and implementing its resilience planning.

Section 4: Preserving and Restoring Conservation Lands for Future Generations

I hereby direct DEP to take the following actions to preserve and protect natural lands for generations to come:

A. Continue to seek consistent and meaningful annual funding for the Florida Forever Program, the state's premier conservation and recreation land acquisition program.

B. Take all necessary steps to expedite the state's land conservation efforts, including a strategic focus on acquisitions within the Wildlife Corridor and acquisitions that benefit vulnerable ecosystems, water quality, and resilience.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Florida to be affixed, at Tallahassee, this 10th day of January, 2023.

Governor Ron DeSantis
State of Florida

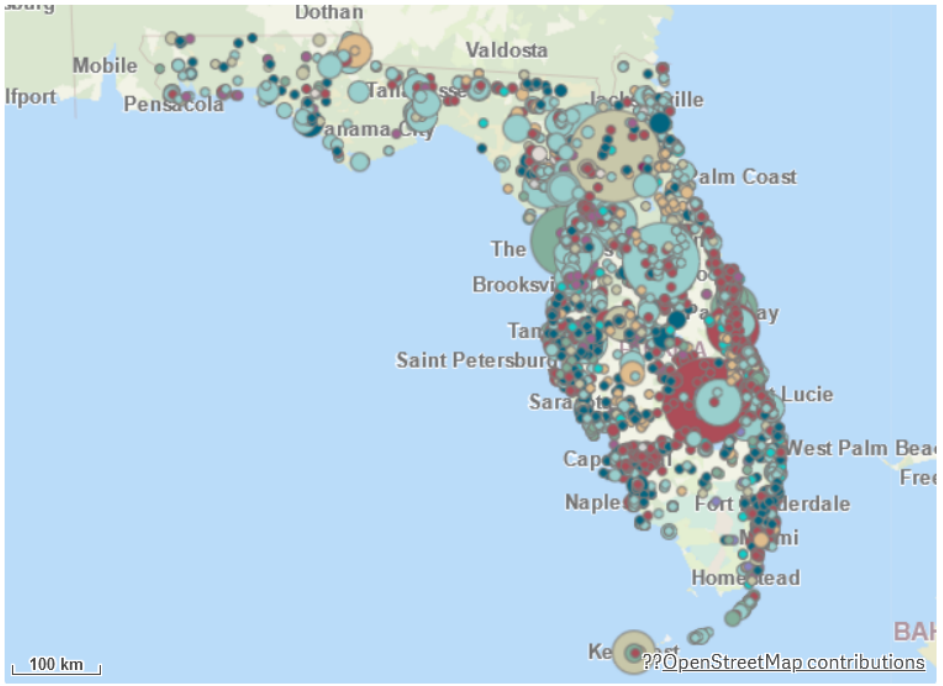
It's a MASSIVE Challenge

ePUP Statewide Water Restoration Projects

Total Projects	Unique Projects	Total DEP Funding
8,219	6,688	$2,501,998,830

Total Credited TN Reductions (lbs/yr)	Total Credited TP Reductions (lbs/yr)
8,083,240	1,109,188

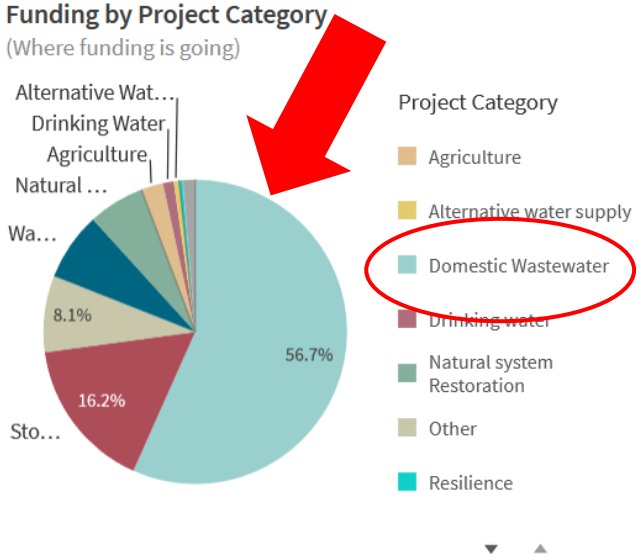
Map of Projects by Funding | Map of Projects by Benefits



Note: In the maps, the greater the bubble, the higher the funding/benefit of the project. The colors of the bubbles also correspond to the legend of the Funding by Project Category pie chart.

Funding by Project Category

(Where funding is going)

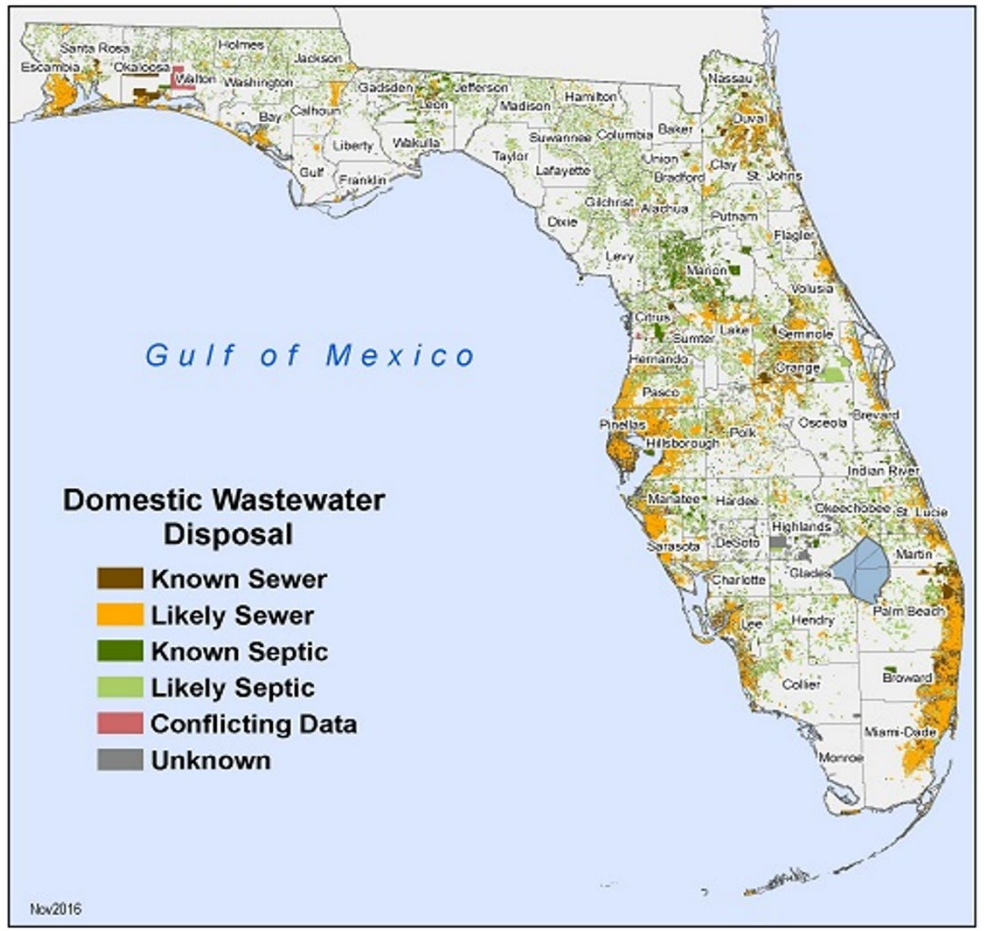


Nutrient Reductions by Project Category

(Benefits for funding)

Project Name	Credited TN Reductions (lbs/yr)	Credited TP Reductions (lbs/yr)
St. Johns River and/or Keystone Heights Lake Region restoration	-	-
Lower Kissimmee Basin Stormwater Treatment Area	0	
Lake Placid Septic to AWT Sewer	-	-
Wekiwa Springs Septic to Sewer Program	-	-
King's Bay Restoration Project	0	
Lake Butler Wastewater Treatment Facility AWT Upgrade Phases 3 through 5	-	-
Top of the World North Advanced Wastewater Treatment	-	-
On Top of the World North Advanced Wastewater Treatment Facility	0	
Indian River Lagoon Water Quality Improvement Projects	-	-
Brevard County Muck Dredging Phase 2	-	-

OSTDS are a Central Part of the Challenge



https://www.floridahealth.gov/environmental-health/drinking-water/flwmi/index.html

- 2.6M OSTDS serving one-third of households
- We don't want to convert them all
  - Lack of need
- We can't convert them all
  - Lack of resources (people, time, capacity)
- We need transparent tools to support septic-to-sewer decision-making
  - Prioritizing water-quality restoration
  - Recognizing engineering/cost constraints

PROTECTING TOGETHER

Mark Rains, Chief Science Officer, State of Florida
mark.rains@floridadep.gov

Sara Davis, Director, Office of Environmental Accountability and Transparency
sara.c.davis@floridadep.gov

Overarching Questions Driving this Summit

What are the most important, and relevant, factors to consider in septic-to-sewer conversion (OSTDS remediation) project prioritization?

What functionality should future planning tools provide?

Project Background

The purpose of the summit is to convene wastewater planning subject matter experts to inform the development of a strategic roadmap for improving Florida's wastewater planning tools.

SUMMIT OBJECTIVES

Synthesize factors, challenges, and opportunities informing wastewater decision making
Understand needs to optimize planning, balancing population growth/changes on infrastructure, specifically wastewater collection and treatment.

Understand Decision Making and Data Usage
Collect system manager input regarding technology used, decision making, and available data. Identify gaps in planning support tools/systems to drive efficient planning decisions.

Characterize Wastewater Planning Landscape
Define how municipal leaders, agencies, engineers, governing boards, and infrastructure owners plan sewer systems and collaborate.

Inform Roadmap Development
Collect input from where to allocate resources at the state level to drive implementation.

Agenda Overview

Chris Carrillo, PE – Deloitte

Agenda Overview

Act I – Day 1
Current State and Setting the Stage

Act II – Day 2
Challenges, Opportunities, and Actions

Act III – Day 2
Closing and Next Steps

SUMMIT DELIVERABLES

1. **Current State and Prioritized Factors**
   Listing of factors affecting wastewater planning and associated decision making, including characteristics related to current state
2. **Project Challenges Summary**
   Identify and characterize challenges related to specific projects within the wastewater sector to achieve water quality benefits
3. **Functional Challenges Summary**
   Identify and characterize functional challenges
4. **Initiatives Brainstorm**
   Document various initiatives to understand types of actions

Day 1 Agenda	Time & Duration	Outcomes
Welcome and Gathering		
Check-in / Meet & Great	12:00-12:30pm 30 mins	• Familiarize participants with facility layout and amenities
Act I: Current State and Setting the Stage		
Welcome	12:30-12:40pm 10min	• Welcome and introduce the Summit facilitators
Project Background	12:40-12:50pm 10min	• Context and Rationale for this Summit
Summit Objectives, Agenda Overview, & Key Deliverables	12:50-1:05pm 15min	• Confirm topics and objectives • Align on Summit objectives and expectations, and results
Participant Introductions	1:05-1:20pm 15min	• Meet participants
Review of Survey Results	1:20-1:45pm 25min	• Review survey + interview findings
Speed Chats Icebreaker	1:45-2:00pm 15min	• Foster a collaborative atmosphere
15 Minute Coffee Break 2:00-2:15pm		
Factor Prioritization (Breakout with Peers)	2:15-3:15pm 1hr	• Identify and prioritize factors that play a role in deciding when and which wastewater expansion projects to pursue
Gallery Walk	3:15-3:30pm 15min	• Share breakout discussion outcomes • Provide feedback on presented ideas

Agenda continues on next slide

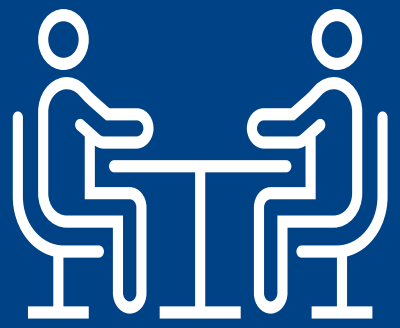
Day 1 Agenda	Time & Duration	Outcomes
10 Minute Break 3:30-3:40pm		
Popcorn Debrief	3:40-4:00pm 20min	• Share breakout discussion outcomes • Provide feedback on presented ideas
Demo USF/FSU and UF Tools	4:00-4:30pm 30min	• Learn about USF/FSU and UF planning tools
10 Minute Break 4:30-4:40pm		
OSTDS Remediation Challenges (Breakout with Peers)	4:40-5:30pm 50min	• Identify and prioritize factors that play a role in deciding when and which OSTDS remediation expansion projects the municipality will pursue
Current Projects Activity	5:30-5:45pm 15min	• Understand what success looks like of current projects underway
Day 2 Preview, and Closing Remarks	5:45-6:00pm 15min	• Recap today, preview tomorrow's plan

Agenda continues on next slide

Day 2 Agenda	Time & Duration	Outcomes
Act II: Challenges, Opportunities, and Actions		
Gathering	8:00-8:30am 30 min	• Networking
Opening Remarks and Plan for the Day	8:30-8:45am 15min	• Review yesterday and today's goals/activities
Wastewater Project Challenges Breakout (Peer Groups)	8:45-9:15am 30min	• Understand wastewater project challenges across population served and project type
Initiatives Brainstorm (Peer Groups)	9:15-10:15am 1hr	• Characterize wastewater project challenges
15 Minute Coffee Break 10:15-10:30am		
Popcorn Debrief	10:30-11:00am 30min	• Share breakout discussion outcomes • Provide feedback on presented ideas
Function and Project Challenges Breakout (Breakout by Function)	11:00-12:00pm 1hr	• Understand wastewater project challenges across functions
Functional Challenges Debrief	12:00-12:15pm 15min	• Share breakout discussion outcomes • Provide feedback on presented ideas
Act III: Closing and Next Steps		
“What One Thing” Close Out Activity	12:15-1:00pm 45min	• Recap summit, seek additions/ clarifications
Next Steps/Close	1:00-1:15pm 15min	• Share next steps on how project outputs will be shared

Participant Introductions

Dr. Tricia Kyzar



Instructions

Briefly introduce yourself with:

- Name
- Role and Function
- Organization
- First concert you attended

Review of Survey Results

Dr. Tricia Kyzar – UF

Survey: Outreach Efforts

Over the last 6 weeks, we surveyed or interviewed city/county governments and utilities to learn about their approaches and challenges when planning wastewater enhancement projects and the types of planning tools they use for these efforts.

Surveys were emailed to **987** addresses beginning April 26th
Reminders were sent **4** times
The survey link was accessed **105** times
Of these, **52** respondents answered most of the questions to date.

Look for n=# to see the number of responses for each question

*Please note, data is as of 05/27/2024

Complementary Interviews

Additionally, 155 emails were sent to request 1-on-1 interviews with Cities, Counties, Utilities, and Consultants. Reminders were sent 3 times, and 6 interviews were conducted:

- Emerald Coast Utility Commission
- Gainesville Regional Utility
- Miami-Dade
- City of Orlando
- St Lucie Village
- St Lucie West Services District

The interviews sought to gather more nuanced understanding of the challenges utilities face when considering wastewater enhancement planning. Questions generally followed the survey, but focused on gathering more specific details and perspectives.

Outreach Efforts: Summit Registrations

Registration invitations were sent to 309 email addresses, reminders were sent twice, and 18 registrations were retained (originally 20; 2 cancellations) from 12 utilities (or municipalities with utility related operations).

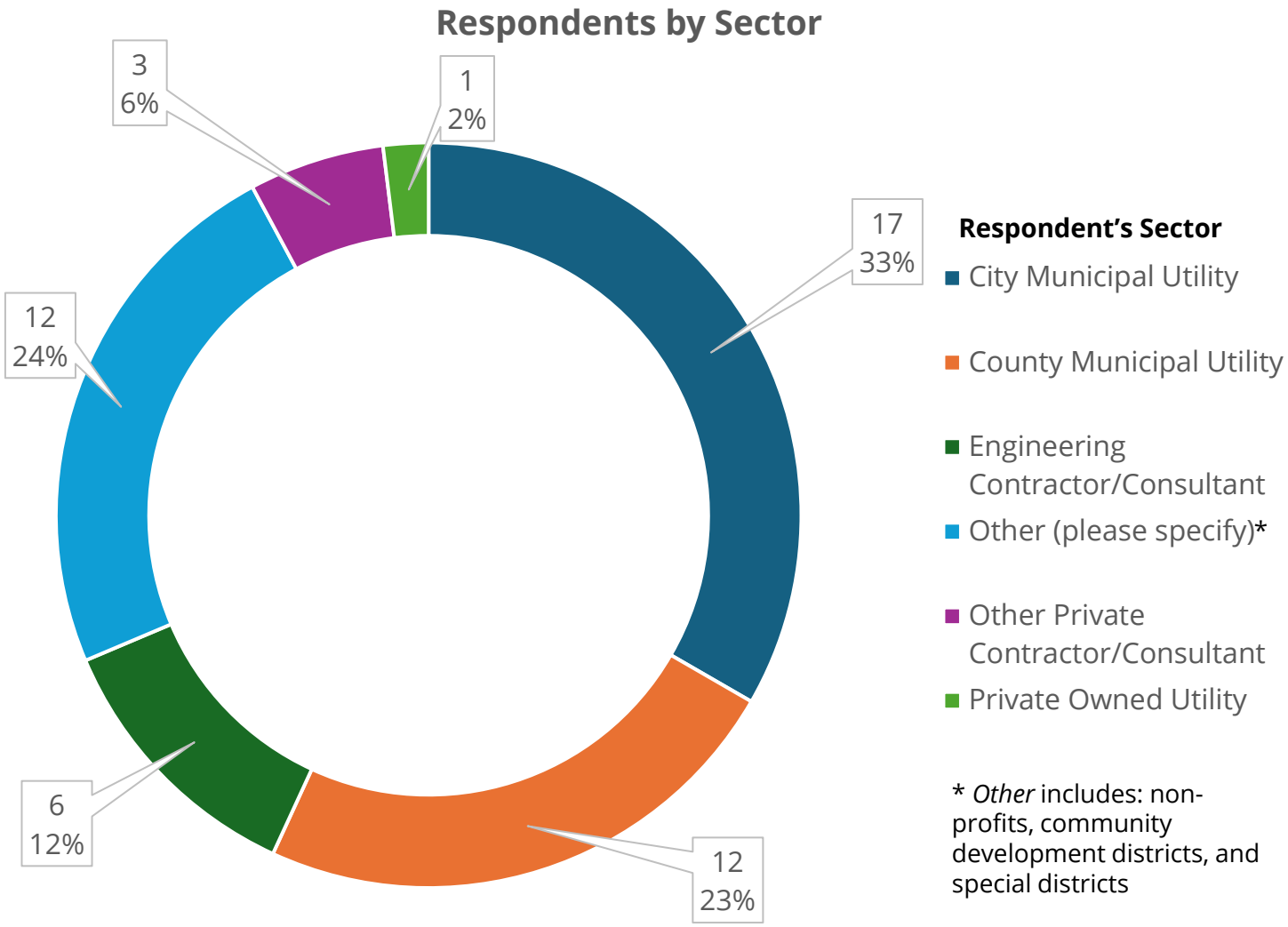
- Brevard County
- Charlotte County Utilities
- City of Miramar
- City of Palm Coast
- City of Sebring
- City of Trenton
- City of Wildwood
- Columbia County
- Gainesville Regional Utilities
- Mitttauer & Associates Inc.
- Santa Rosa County
- Talquin Water and Wastewater Services Manager

Section I:

Information about Survey Participants

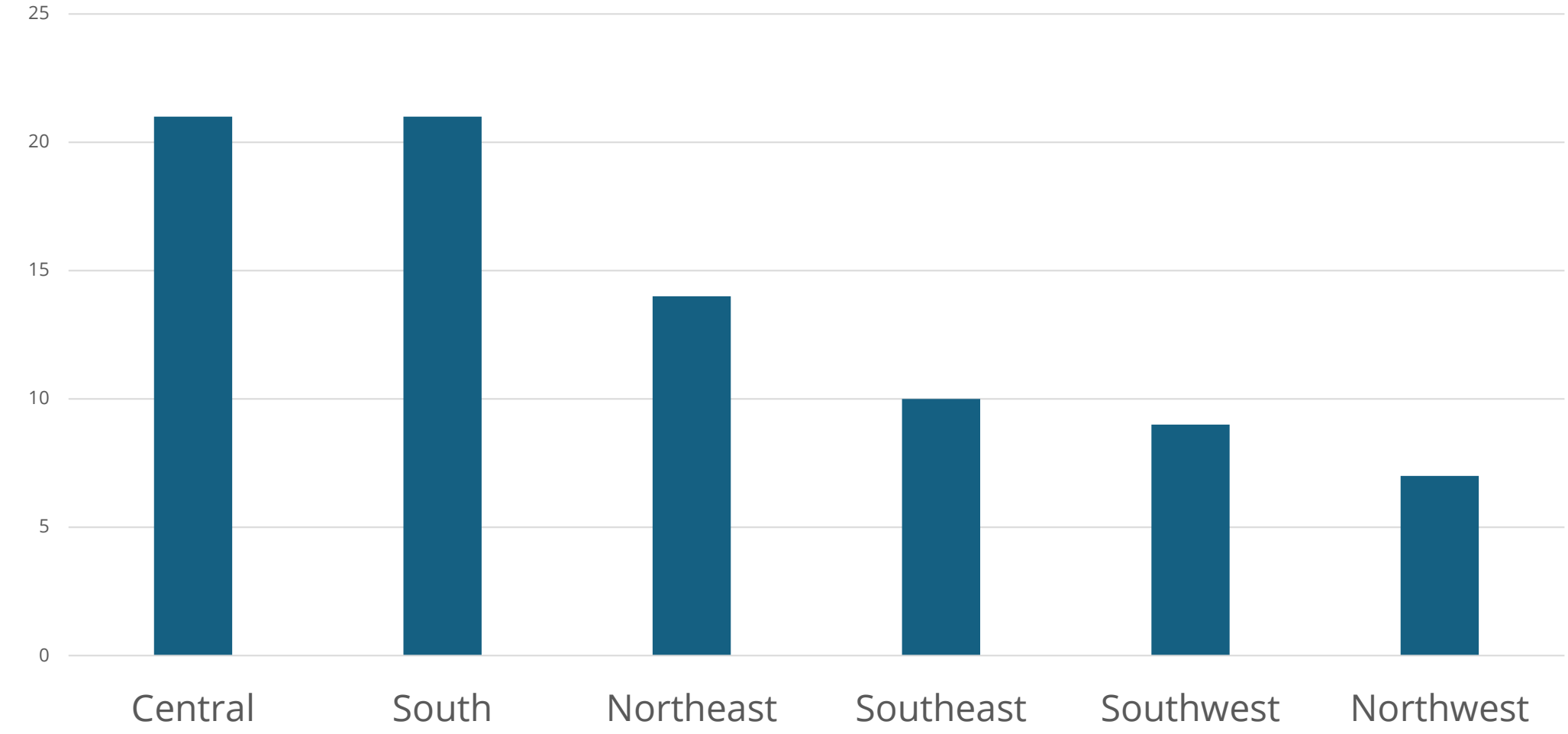
What sector do you work in?

The majority of respondents worked for a county or city municipal utility



n=52

Which DEP district do you work in?



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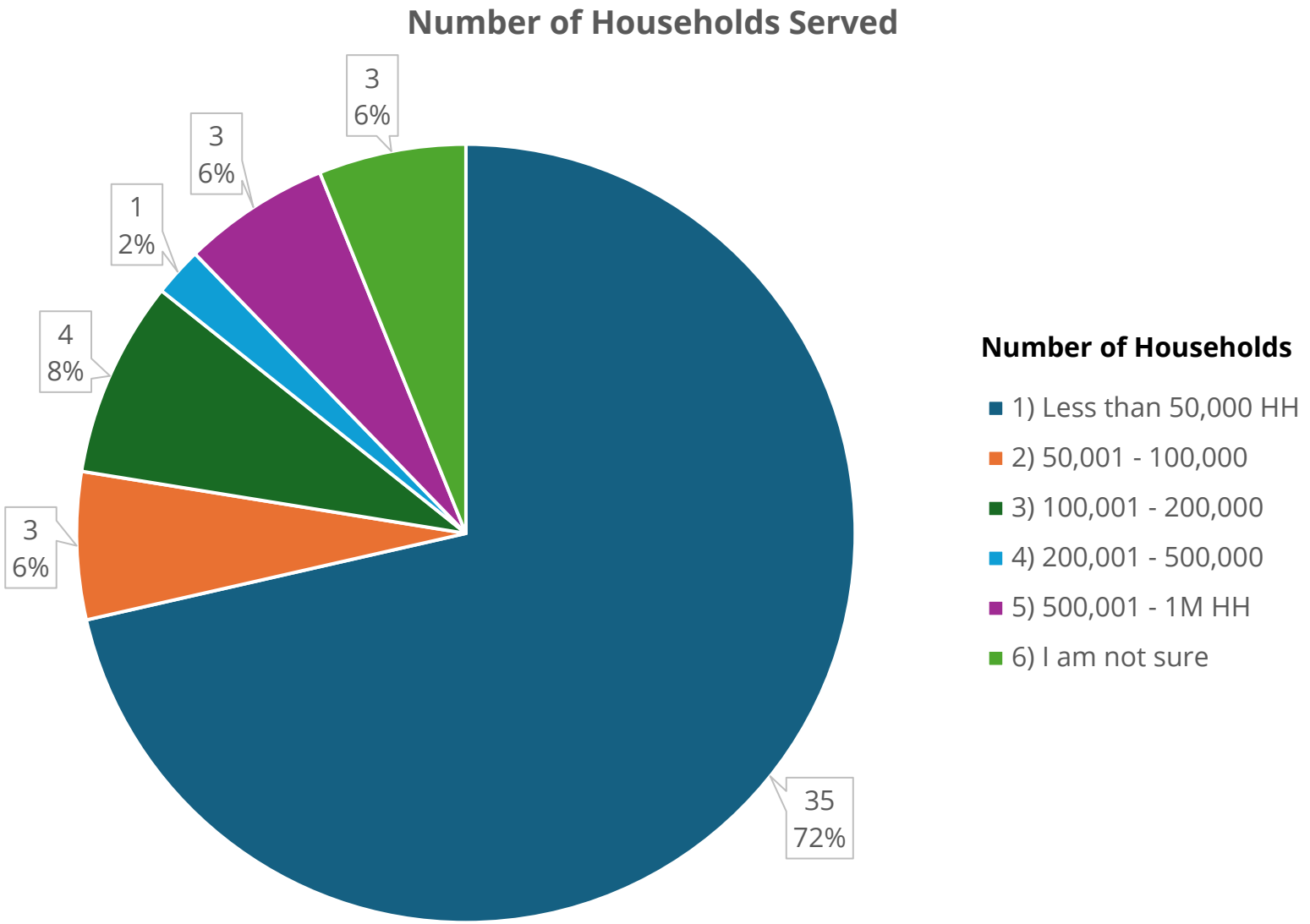
Size of Service Area

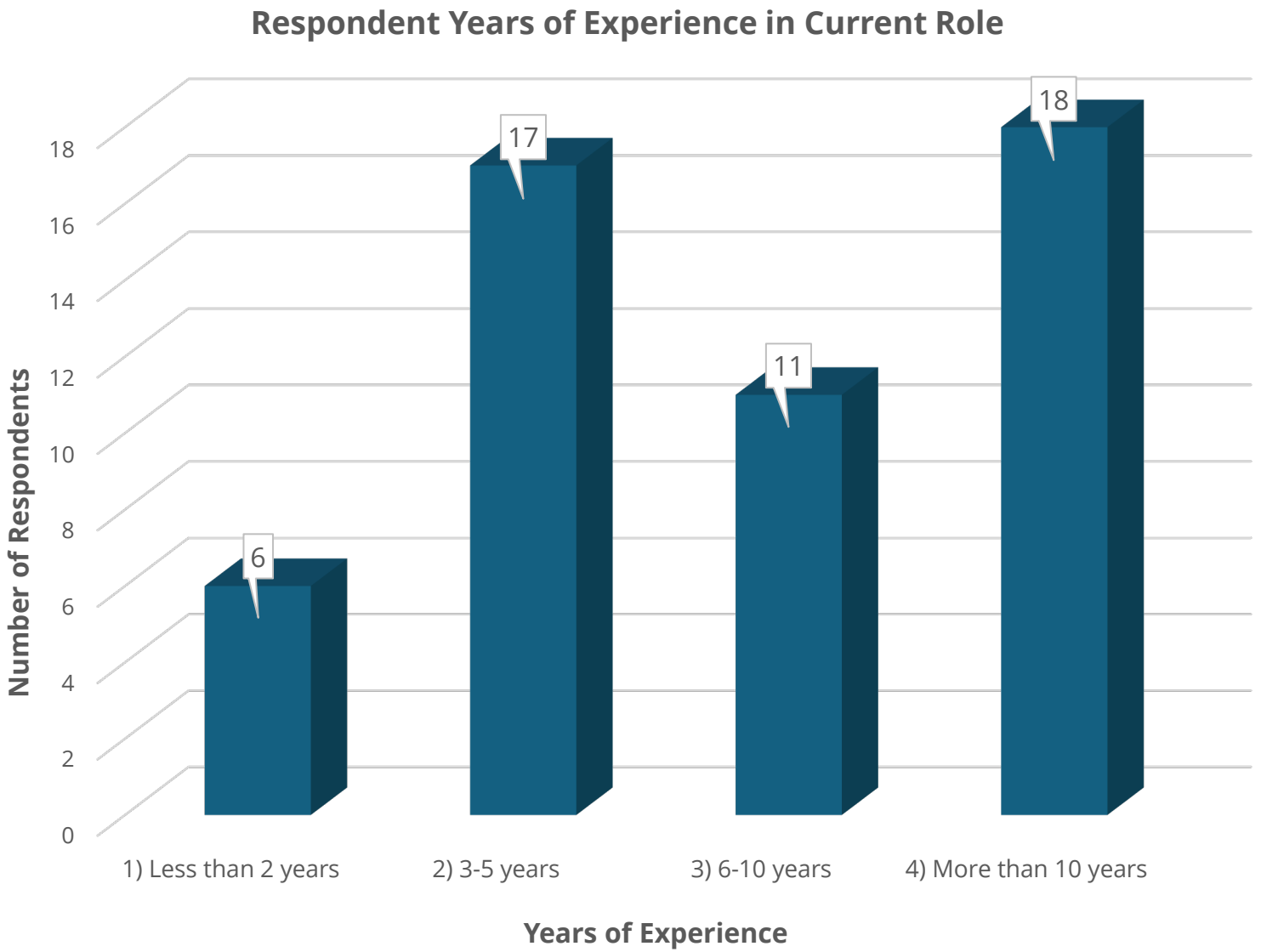
The majority of respondents serve less than 50,000 households within their service area.



n=49

Years in Role

The majority of respondents bring 6+ years of experience in their current roles.



n=52

What else would you like to add about your utility?

Sample of Responses

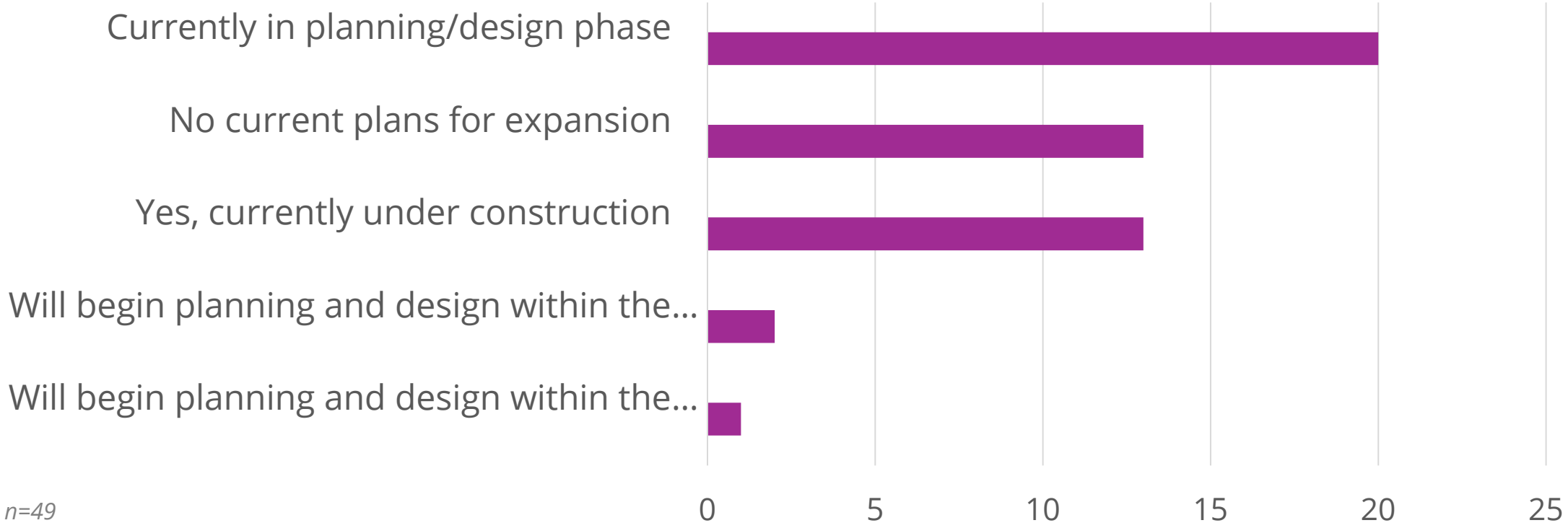
- I represent most wastewater utilities in the Keys. Effluent disposal has become very difficult to address here due to impact of the SCOTUS Maui decision challenging permitting of shallow wells for effluent disposal.
- Our town - like many small utilities - requires grant funding to complete septic to sewer conversions. The capital costs are significant and can result in large debt payments that the small customer base can't absorb into their rate structure.
- Staffing is a large part of the issues we have been dealing with when it comes to plant operations.

Section II:

Drivers of Wastewater Collection and Treatment Capacity Expansion

Wastewater Treatment Facility Expansion Plans

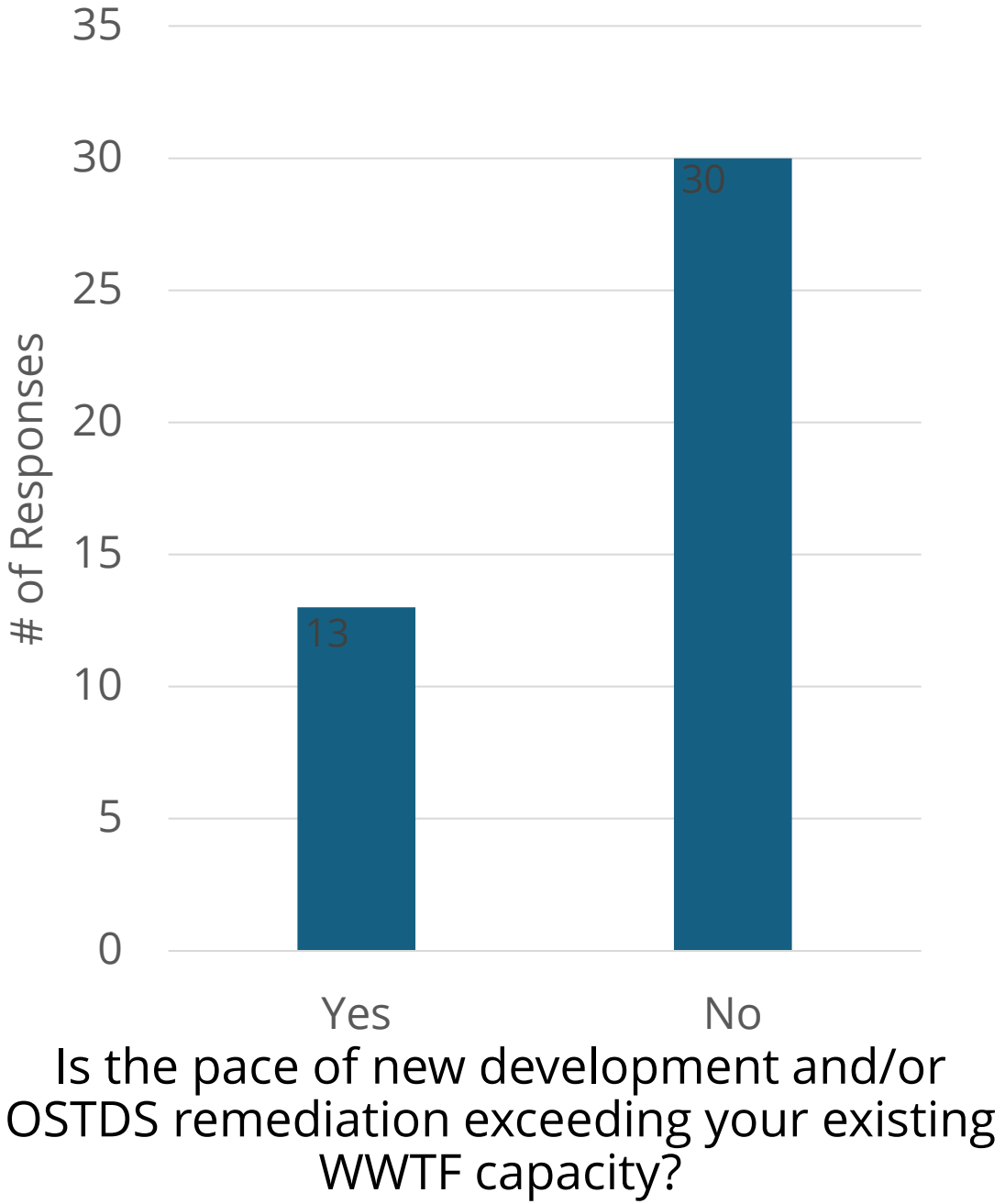
Most respondents are in the planning/design phase of wastewater treatment facility expansion.



Capacity to Accommodate Additional Load

Roughly 1/3 of respondents say the pace of new development and/or OSTDS remediations in their service area is exceeding the pace at which utilities can accommodate this new wastewater load within their current WWTF design capacity.

n=43



Is the pace of new development and/or OSTDS remediation exceeding your existing WWTF capacity?

Importance of Water Quality

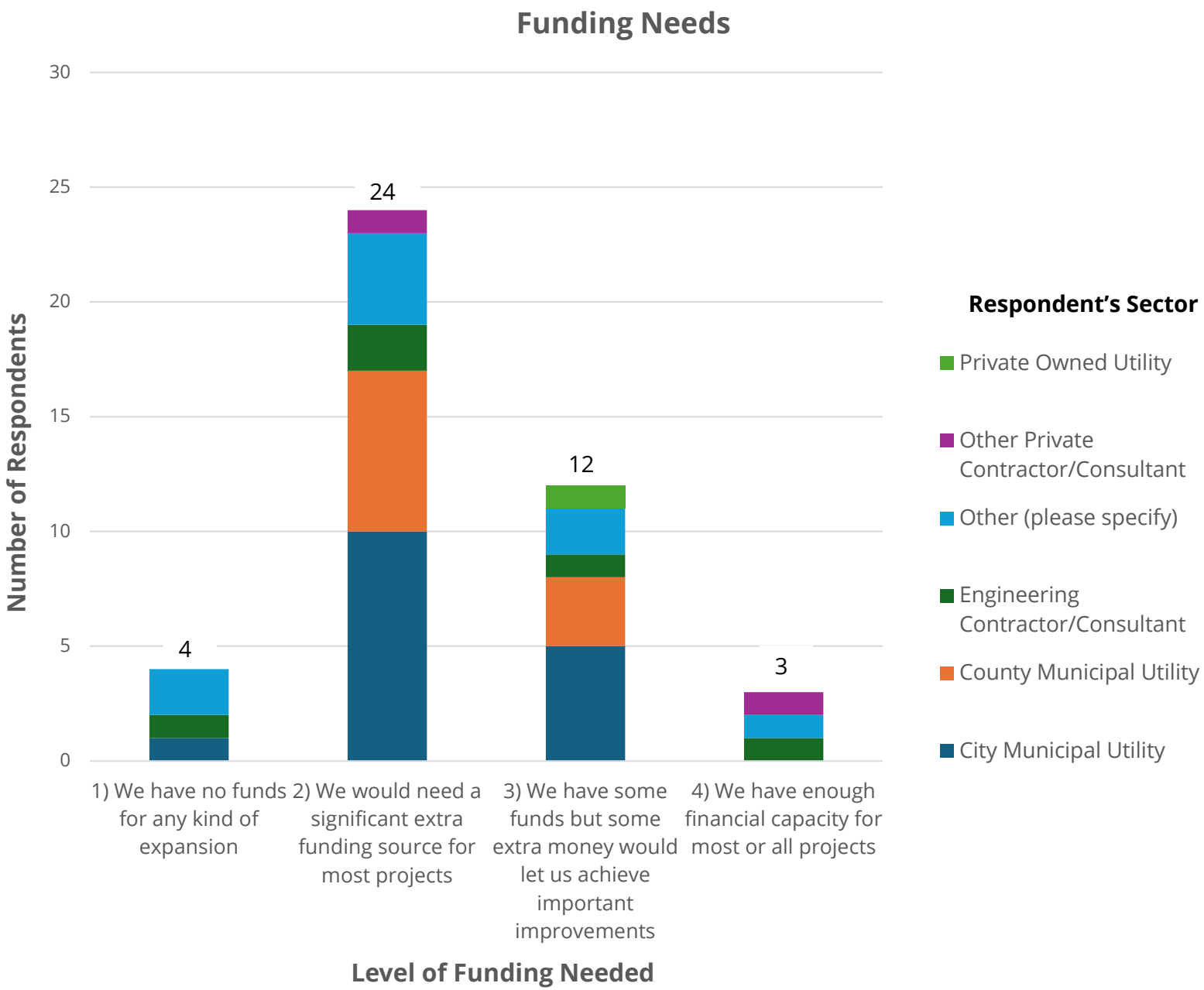
Water quality improvement is a very important driver of sewer network expansion projects.

n=44

Very important	24
It's fairly important	8
About 50/50	4
Somewhat	4
Not at all	4

Funding Needs

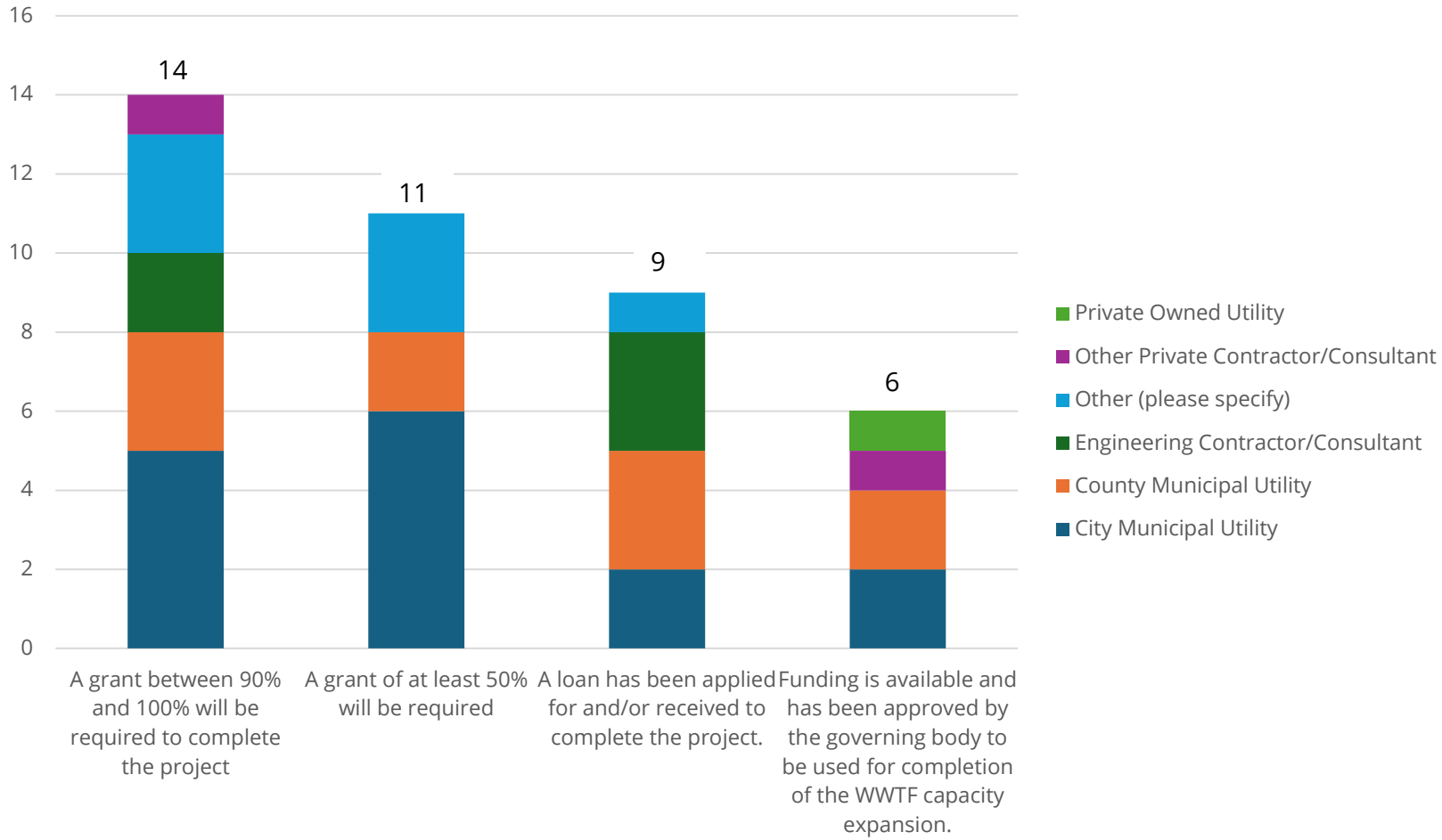
All public and some private utility providers would require additional funding sources for most **collection network expansion** projects.



n=43

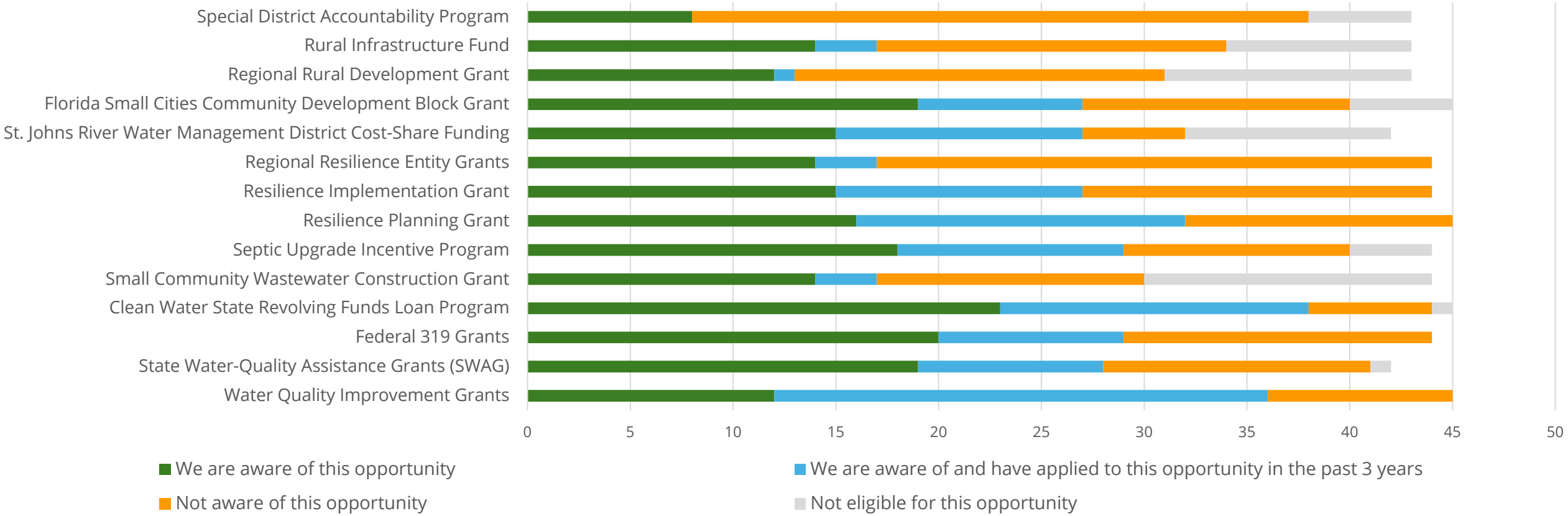
Funding Needs

Most utility providers indicated that they would require significant funding to pursue most **WWTF expansion** projects.



n=40

Is your organization eligible for, and aware of, the funding available from state and federal resources, such as the following programs?



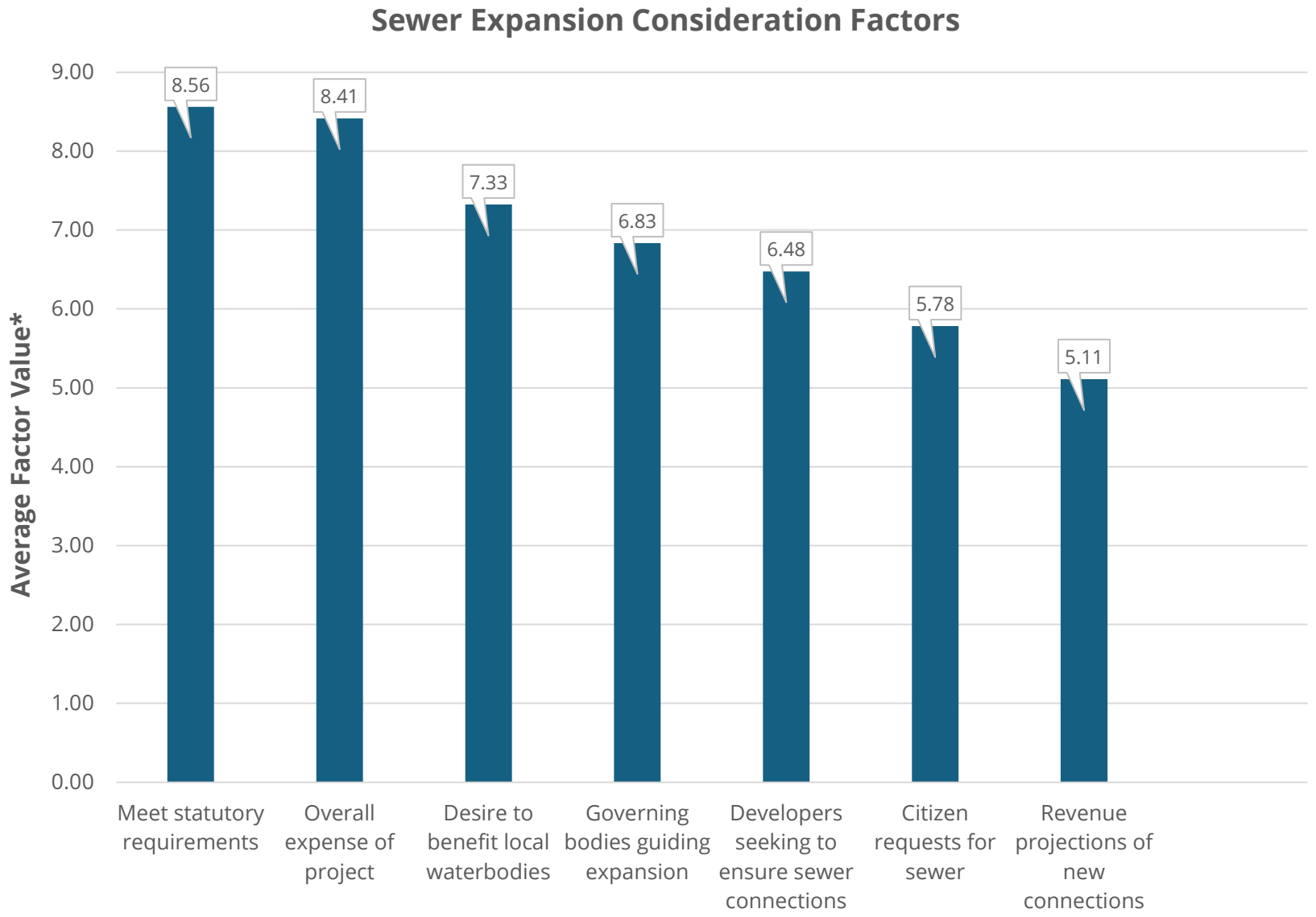
Take Aways:

1. Many utilities apply for DEP's Water Quality Improvement, Clean Water State Revolving Fund Loan Program and Resilience Implementation Grants
2. There is potential value in increasing awareness of different funding sources

Key Factors in Planning

Respondents were asked to score factors based on their importance in making the decision to expand WW collection or WWTF capacity. We then averaged these scores.

The factor that ranked the highest is the ability to meet statutory requirements, closely followed by the expense of the project.



n=41

What else should we know about decision making drivers around service expansion for the utility you represent?

Sample of Responses

- Expansion projects are generally cost prohibitive for us because the customer revenue returned is not enough to fund the projects.
- Service expansion is normally developer-driven. The cost is sometimes 100% developer cost with some reimbursement through future connections. City may participate for oversizing lines or pumping facilities providing credits or sometimes cash.
- Sewer expansion projects that require a local match - which is passed on to the benefitting property owners through an assessment - are generally a very hard sell.
- Residents are very conscious of the impact of septic and other damaging water runoff on the neighboring waterways.
- The biggest decision-making driver is SB64 requirements which will become effective 2032 unless changed.

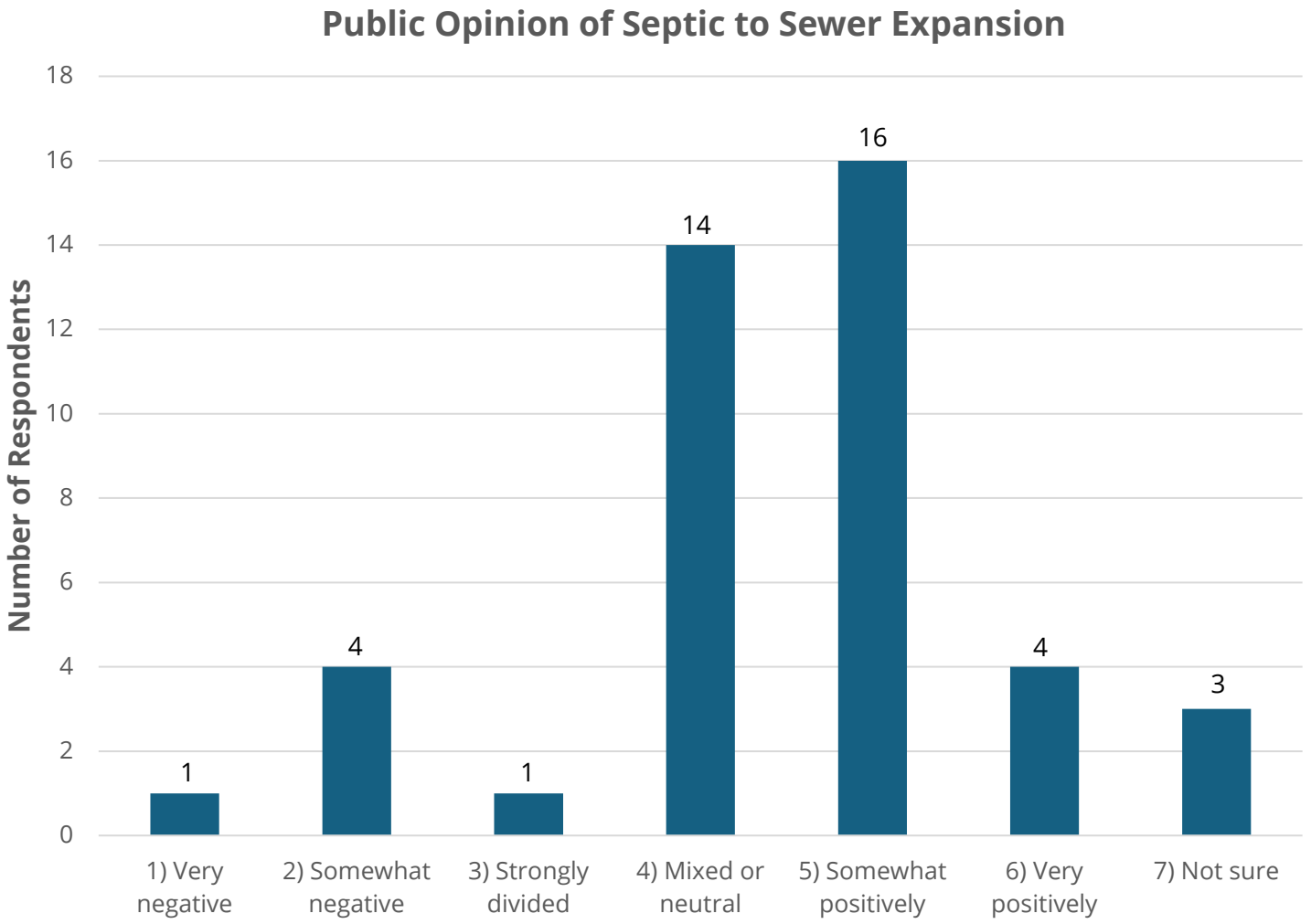
Section III:

Drivers of Decision Making Associated with Septic to Sewer Conversion

Public Opinion of OSTDS Remediation

According to survey respondents, **public opinion** of OSTDS remediation (septic to sewer) overall appears to be mixed or neutral to viewed somewhat positively.

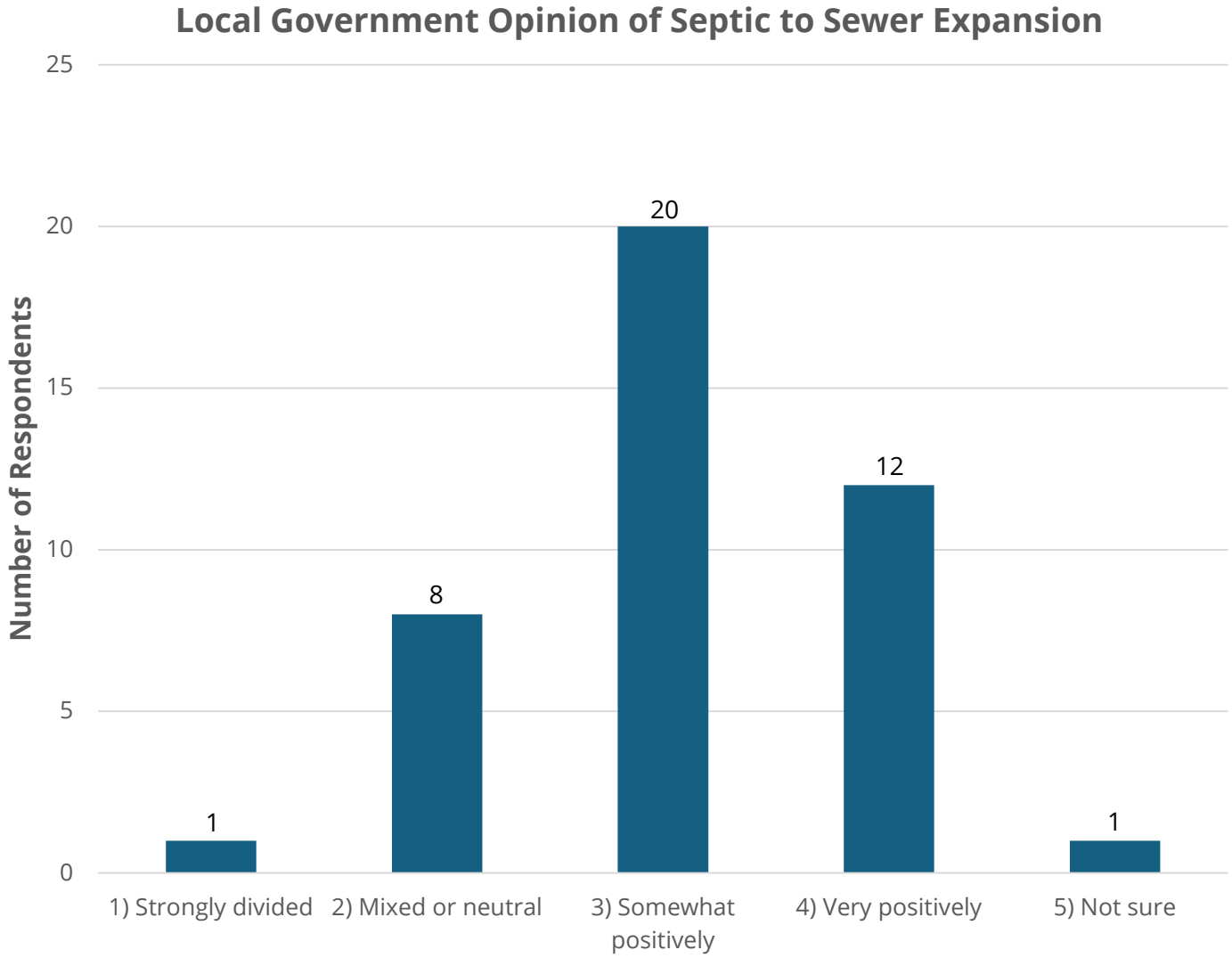
n=43



Local Government Opinion of OSTDS Remediation

While public opinion appears to be mixed, **elected local leadership** appear to have a generally positive viewpoint of OSTDS remediation (septic to sewer) conversions.

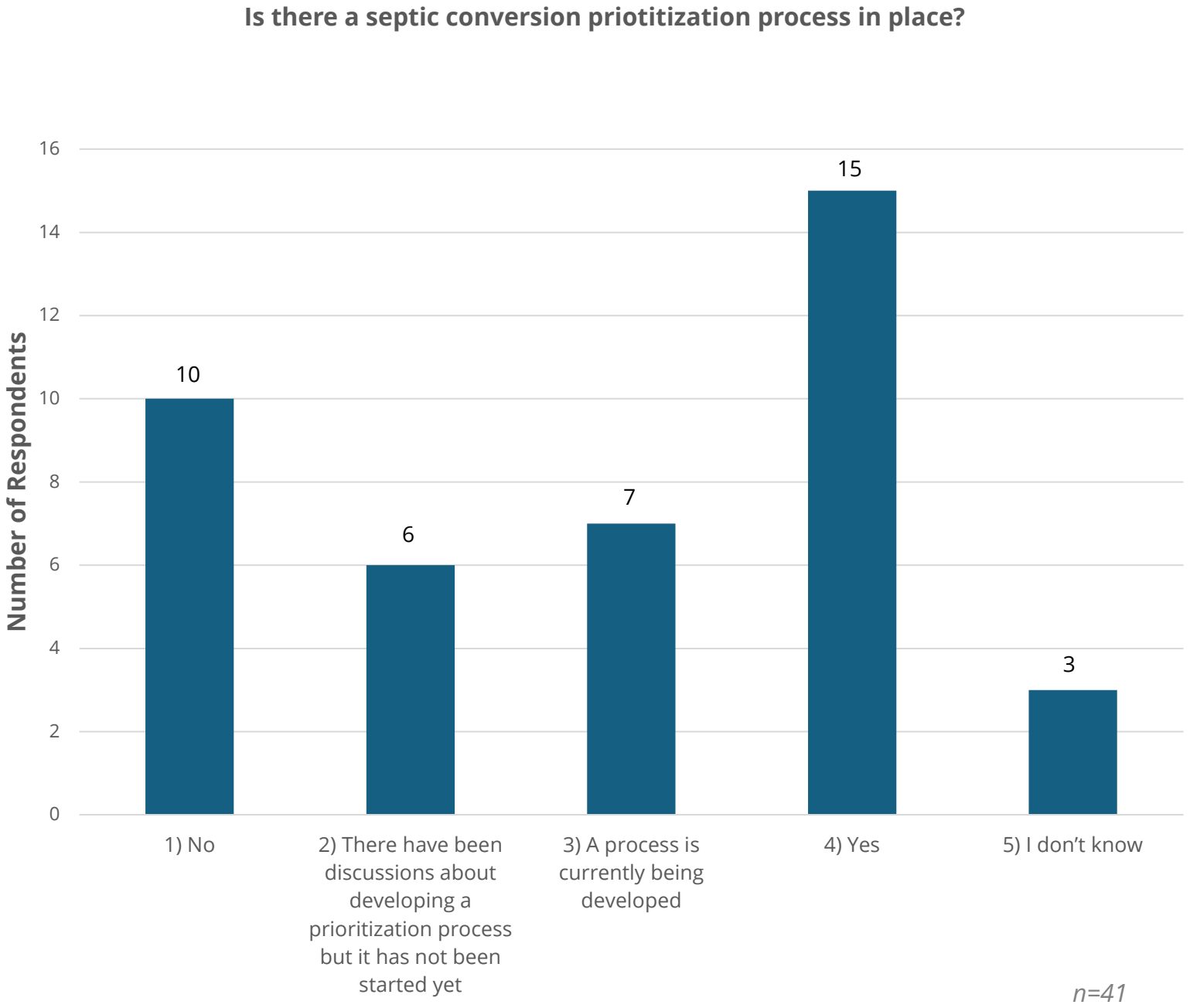
n=42



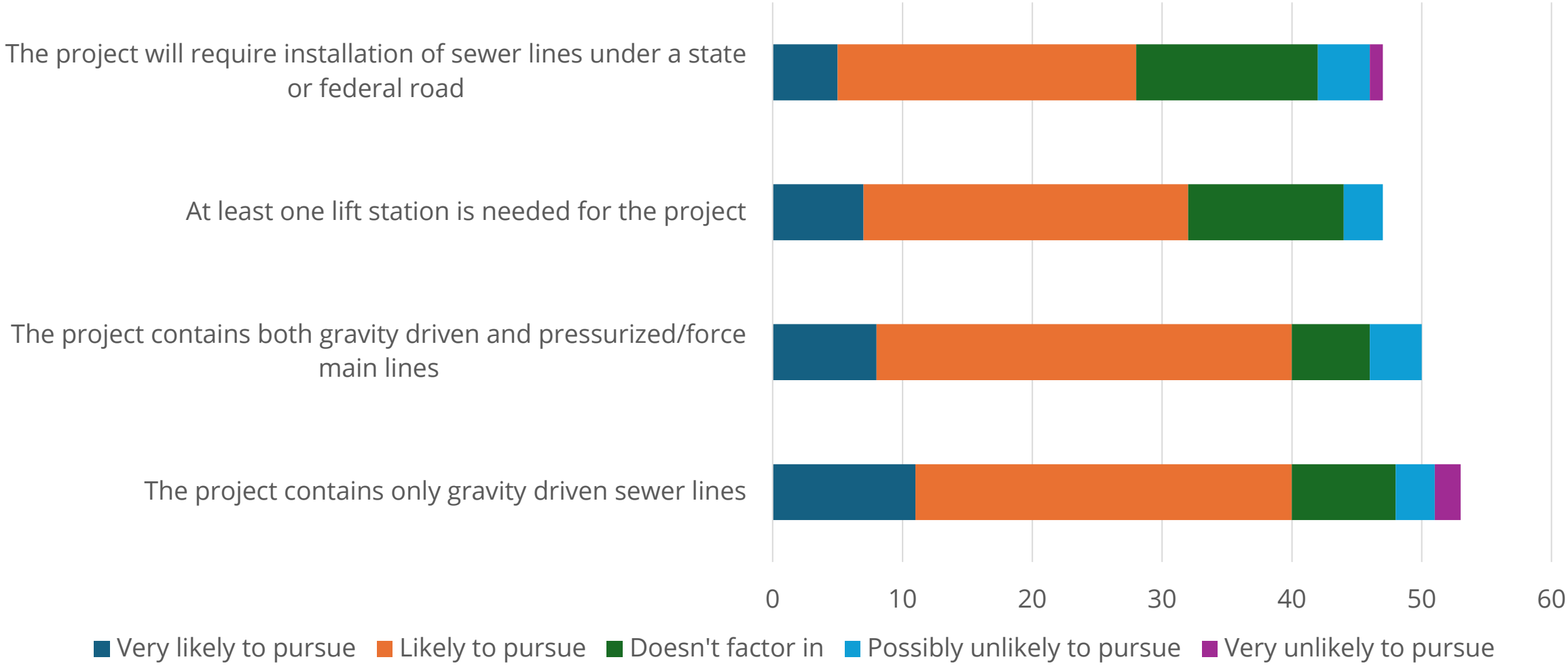
Prioritization Process for OSTDS Remediation

Approximately one-third of utilities surveyed have an OSTDS remediation project prioritization process.

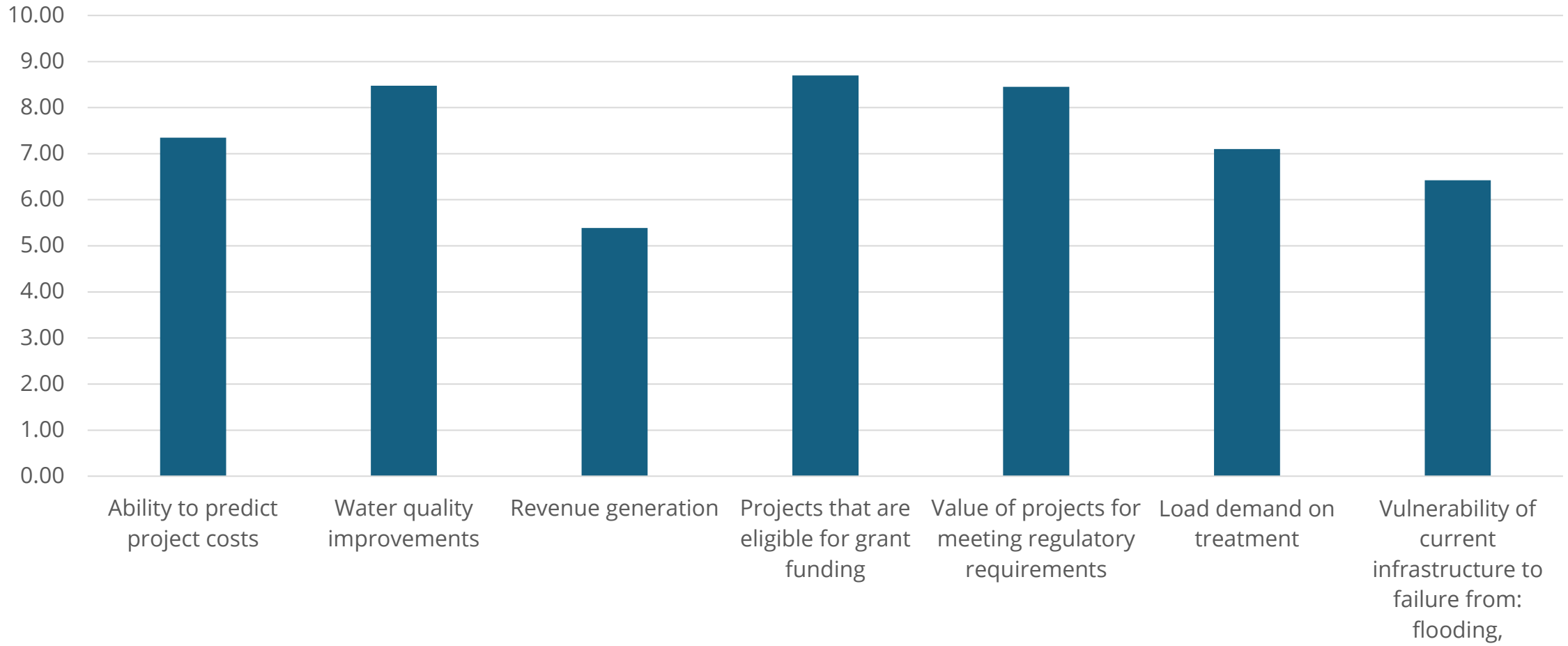
Another one-third have not started on a process.



How likely would you be to pursue projects given the following?



How important are these factors when considering which projects to advance to construction?



What else should we know about decision making drivers?

Sample Responses

- Septic to sewer was mandated throughout Monroe County and is virtually 100% completed.
- The overall age and condition of the collection, pumping systems and treatment facility are also considerations.
- Proximity to the Lagoon, Density of OSTDS, Total pollutant reduction, Cost of infrastructure construction, Presence or absence of water service, Disadvantage community development.
- Clusters of septic systems with high loading estimates

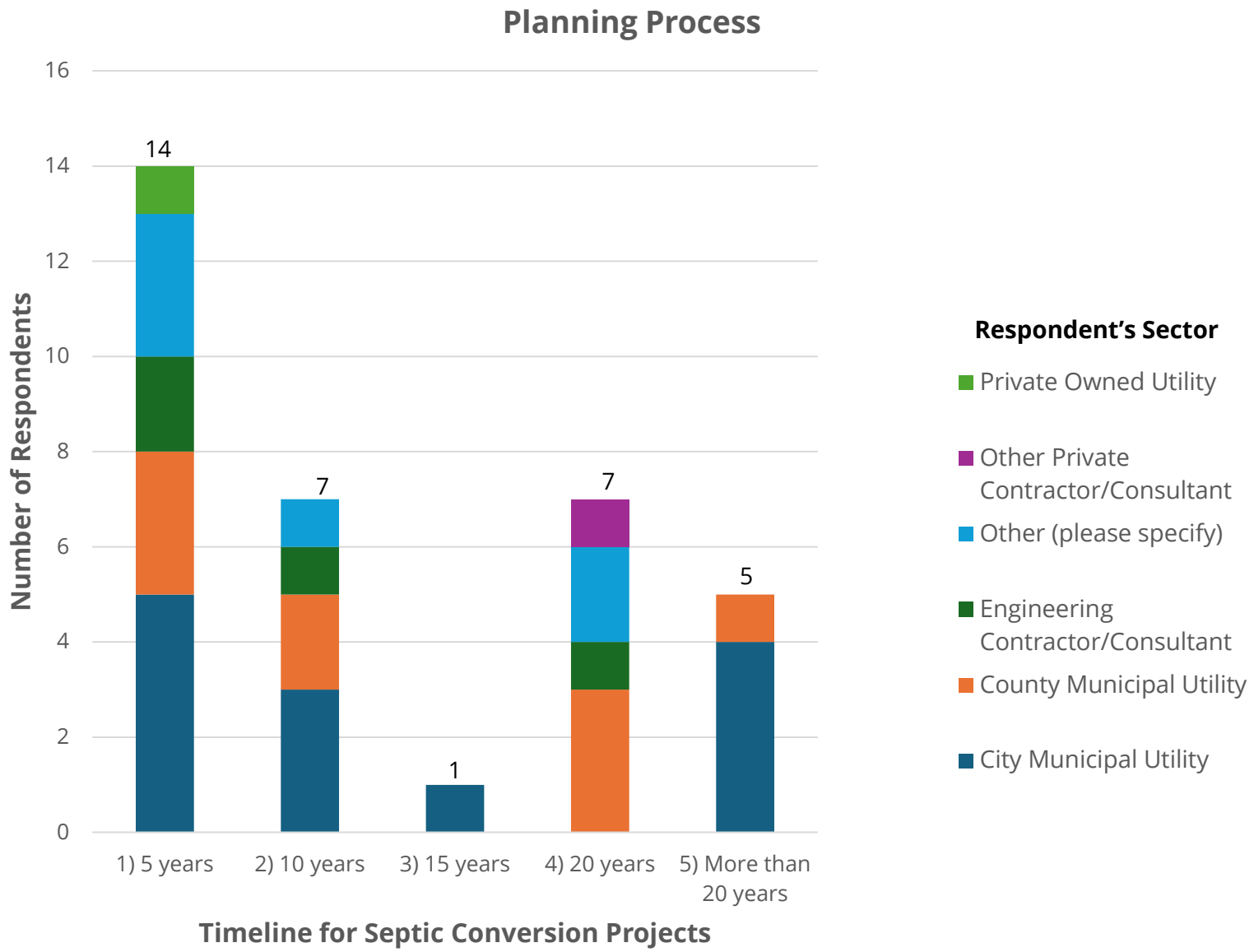
Section IV:

Drivers and Considerations for sewer vs. septic for new construction

Planning Process

The majority of OSTDS remediation projects are planned five years into the future.

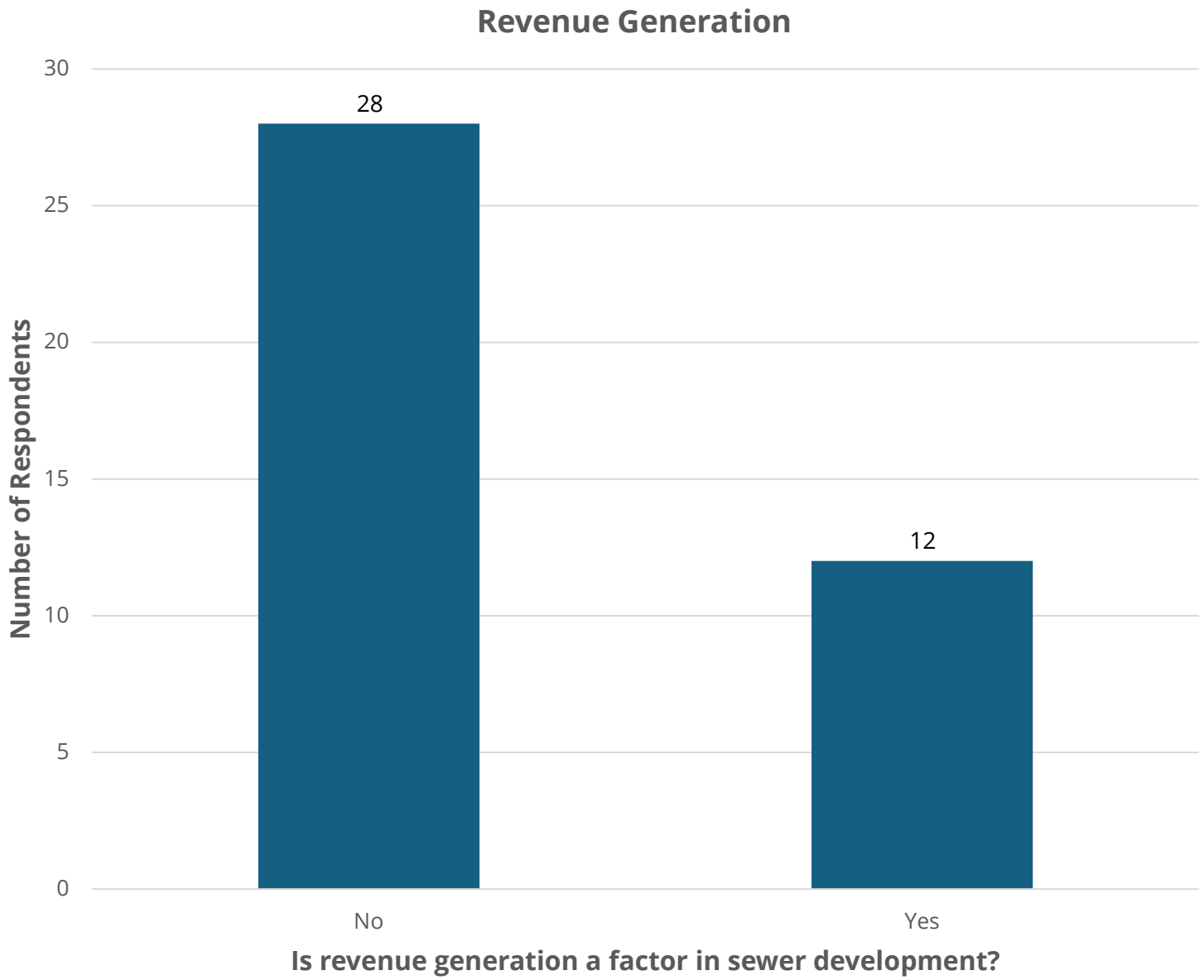
n=34



Revenue Generation

Only about one third of respondents say revenue generation is considered as a factor for connecting new development to sewer.

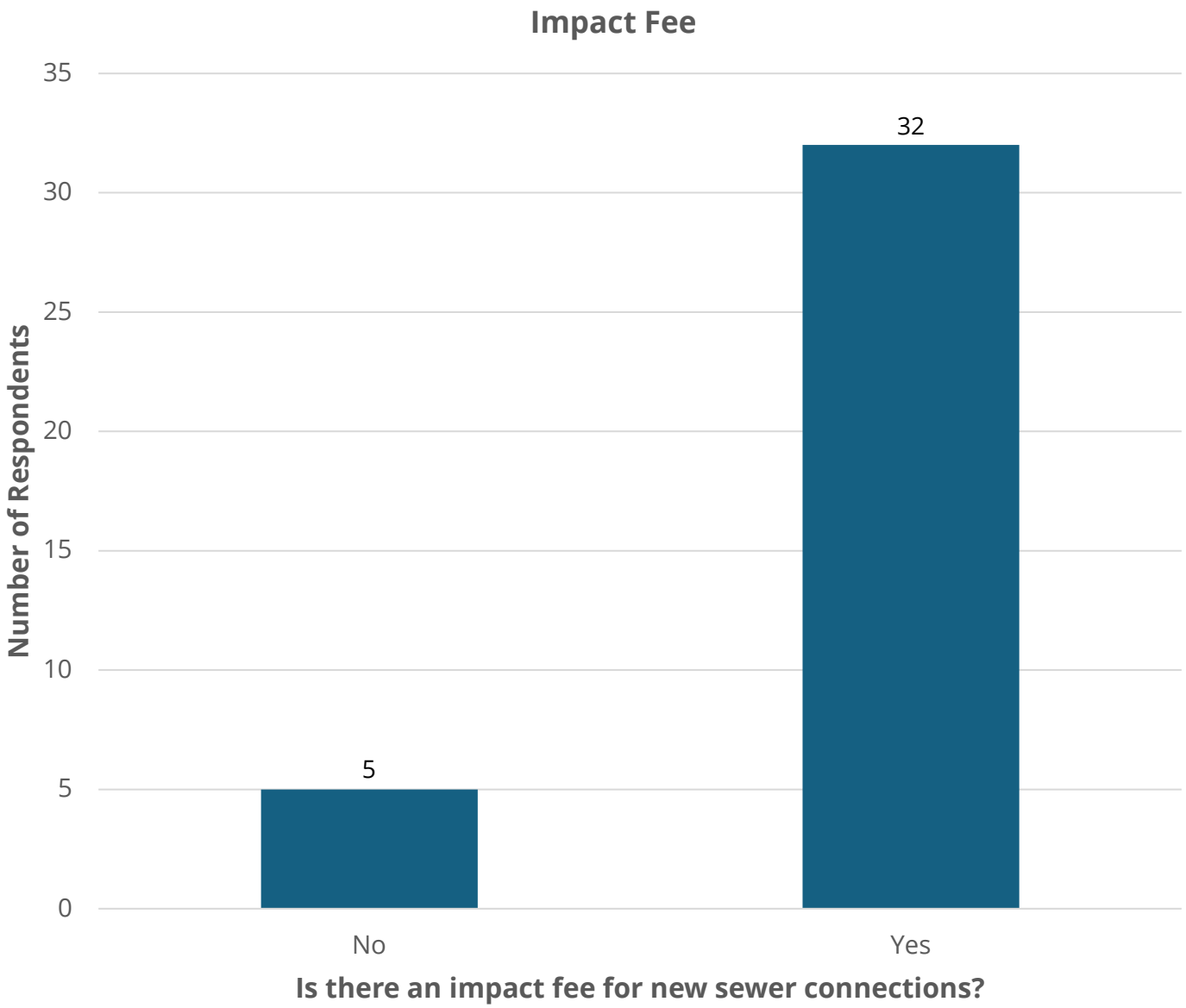
n=40



Impact Fee

There is an impact fee for new development connections to the sewer network in the majority of respondent's regions.

n=37



What else should we know about decision-making drivers related to new construction?

- No new septic system are allowed in Monroe County.
- Not all communities charge impact fees. Most if not all small municipalities can not cover the cost of a system expansion or even cover the debt service is they borrowed the funds.
- It is on a case by case basis. We strive to connect all new developments to the central sewer system when it is available based on utilities staff determination.
- We utilize concurrency requirements for new developments to pay a fair share of the connection costs, but it does not cover the full amount and is not classified as an "impact fee"

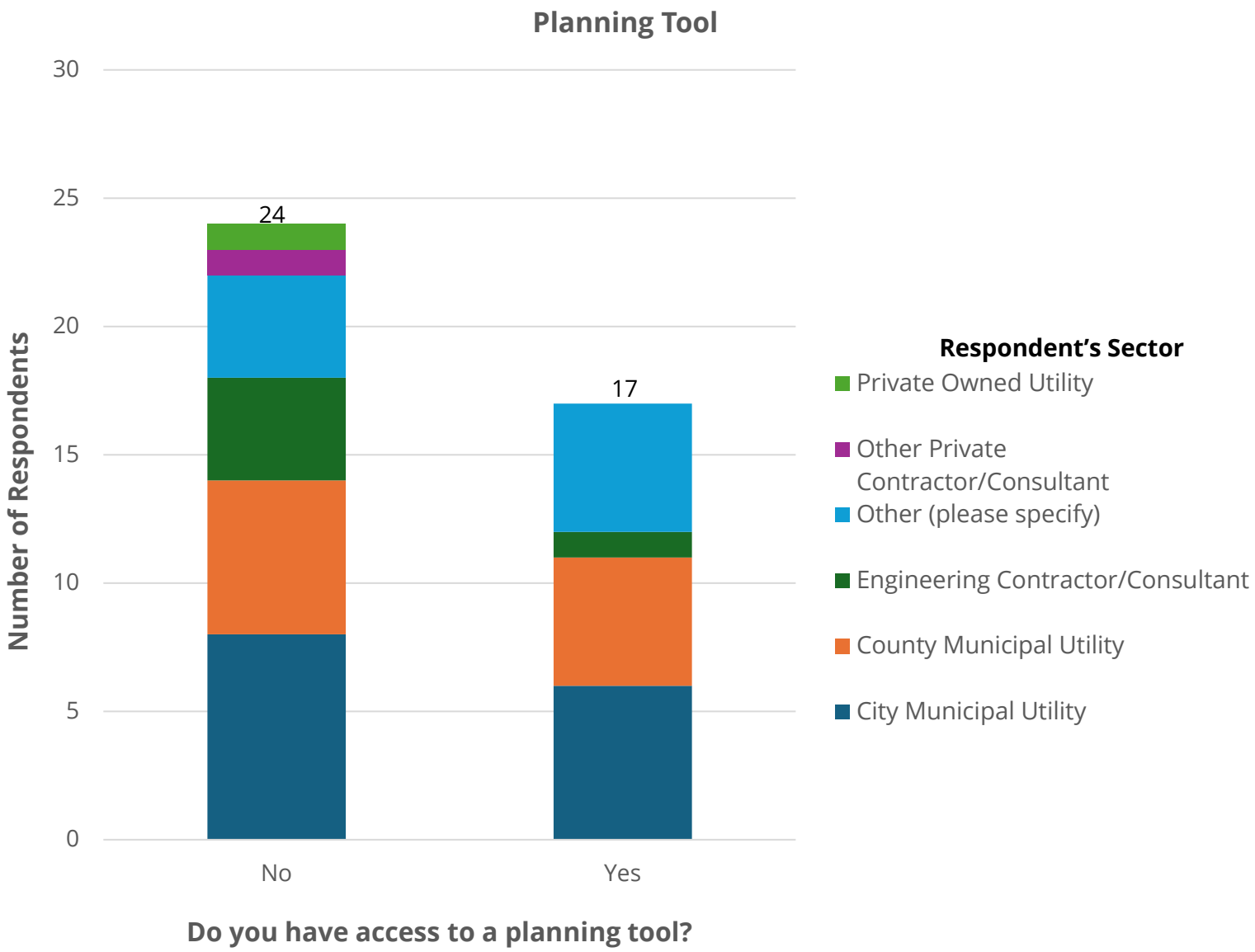
Section V:

Planning Tools

Planning Tool

The majority of respondents do not have access to a planning tool.

n=41



What functionality do you find most useful in this tool?

- Cost and technical feasibility considerations.
- It is used for capacity analysis primarily
- TN loading estimates
- Costs to determine feasibility and project viability for the utility
- COVB utilizes multiple tools in order arrive at a decision on centralized sewer.
- Prioritization of areas for performing conversions
- Model system hydraulic performance and network design options.

What functionality would you like to see in a wastewater enhancement planning tool?

- The ability to predict the need to treatment plant expansion.
- Cost-benefit analysis, water quality, O&M cost
- GIS driven with accurate septic system age and location information overlaid on the BMAP and PFA and including location of WWTF and collection and pumping system location, sizing , etc.
- Model that uses land elevation to estimate likely vertical separation of the drainfield from the water table
- Funding sources, impacts to WWTF, impacts to bodies of water.
- Tracking of current systems (sewer and septic) as well as growth patterns and needs. topography is important and the ability to see where new locations may be necessary.
- Estimating costs. Estimating Nutrient Reductions. Estimating time frame to noticeable changes in water quality of area waterways.
- Projection, funding, scheduling, analysis, coverage area
- prioritization and analyzing cost/benefits ratios.
- Predictive modelling of future grow and demand for service with the service boundaries.
- GIS integration, construction cost analysis, revenue and operational cost impact analysis

Major Takeaways from the Survey

- Water quality improvements are important when considering all types of expansion projects
- Securing funding is a significant concern. Several funding programs are heavily relied upon. Education about other potential programs may be warranted.
- While local elected opinions on septic to sewer are somewhat or very positive, public opinion is still fairly mixed.
- Utilities are struggling with rapidly rising project costs and meeting regulatory requirements
- Not all utilities have access to a tool to guide their prioritization of OSTDS remediation/ conversion and wastewater enhancement projects.
- For those with access to a tool, they recommend several key improvements:
    - Ability to estimate/calculate nutrient reductions
    - Ability to predict when treatment plant expansions are necessary
    - Ability to estimate project costs and funding opportunities
    - Abiility to predict revenue and operational costs

Additional Take-Aways from the Interviews

- **Supply and contractor costs have risen significantly** in the last few years causing project to become increasingly expensive.
  - **Some parts/supplies required for expansion projects are now scarce**, extending lead times and additional costs due to delays. Some utilities are ordering materials up to 2 years in advance.
  - **Contractors are few and charge high prices to both small and large utilities** because they know there is limited competition and that regulatory deadlines can influence projects (pressuring some projects to get approved despite higher costs when utilities might otherwise request new (better) bids). Small projects may not even get bidders.

Survey Quiz Show

Chris Carrillo, PE – Deloitte

Quiz Show

Let’s Test Your Knowledge!

- Open Poll Everywhere
- Florida Trivia Practice Questions:
  - How many permitted wastewater treatment facilities does the State of Florida have?
  - How many lakes are in the State of Florida?
- Feedback Questions:
  - What surprised you about survey results?

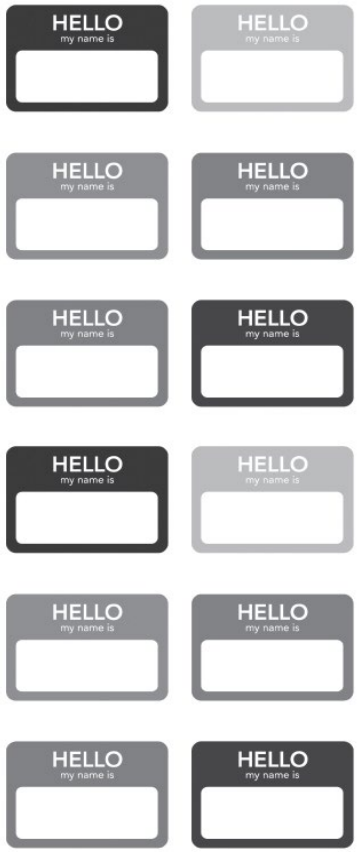
Quiz Show

Access Poll Everywhere at **PollEv.com/UFworkshop** or by scanning the QR code below

Icebreaker – Speed Chats

Chris Carrillo, PE – Deloitte

Speed Chats



Activity Instructions

Deliverable

1 2 3 4

- Stand up. Then find another person in your group.
- You will have 90 seconds to discuss each question with your partner.
  - What was your first job?
  - You can only eat one food again for the rest of your life. What is it?


Meet at
2:05pm

Breakout: Factor Prioritization

Chris Carrillo, PE – Deloitte

Deliverable 1 2 3 4

Activity Instructions

- Now that we have reviewed survey results, we'll dive further into discussion on wastewater planning factors.
- Each activity will build on itself.

What? → Factors — *Step 1*

Now What? → Importance, Current State, and Initiatives — *Step 2 and 3*

Factor Prioritization

Factor Considerations

- **Defining STEEP Framework**:
  - Social
  - Technical
  - Environmental
  - Economic
  - Political

Factor Prioritization

Factor Cards

Deliverable 1 2 3 4

Social	Technical	Environmental	Economic	Political
• Population Growth • Public Opinion • Organizational Directive or Opinion	• Aging Infrastructure/ Asset Deterioration • System Network Functionality • Data Availability	• Sustainability Goals • Flooding • Basin Management Action Plan (BMAP) Requirements	• Availability of Funding/ Financing • In-House Capacity/ Resources • Total Cost of Ownership and Ongoing Maintenance	• City/Urban Planning • Regulatory Compliance or Incentives • Permitting • Elected Leader Opinion

Breakout Groups

These groups were broken out by peer similarity (organization, roles, etc.).

1

Name	Organization
Jared Lee	City of Sebring
Clay Harris	City of Trenton
Jeremy Hockenbury	City of Wildwood
Wayne Bouchard	City of Wildwood
Jennifer McElroy	Gainesville Regional Utilities
Rick Hutton	Gainesville Regional Utilities
Kristine Morris	DEP
Dr. Christine Angelini	UF CCS
Zach Good	Deloitte

2

Name	Organization
Anthony Gubler	Brevard County
Terri Breeden	Brevard County
Buddy Stephens	Santa Rosa County
Alison Adams	City of Miramar
Garann Hopkins	City of Palm Coast
Christopher Crawford	City of Palm Coast
Dr. Mark Rains	DEP
Chris Carrillo	Deloitte
Sue Frost	Deloitte

3

Name	Organization
Rob Melton	Charlotte County Utilities
Dave Watson	Charlotte County Utilities
Rachel Lockhart	Gainesville Regional Utilities
Jim Melley	City of Palm Coast
David Kraus	Columbia County
Greg Lang	Mitttauer & Associates Inc.
Sara Davis	DEP
Sharon Ryan	UF CCS
Christine Daoud	Deloitte

4

Name	Organization
Sean Lieske	Indian River County Utility Services
Chris Colson	Talquin Water and Wastewater Services
TJ Bayer	Saint Lucie West Services District
Dr. Kai Rains	University of South Florida
Kim Shugar	DEP
Julia Danyuk	DEP
Dr. Tricia Kyzar	UF CCS
David Friedman	Deloitte
Kelly McEnerney	Deloitte

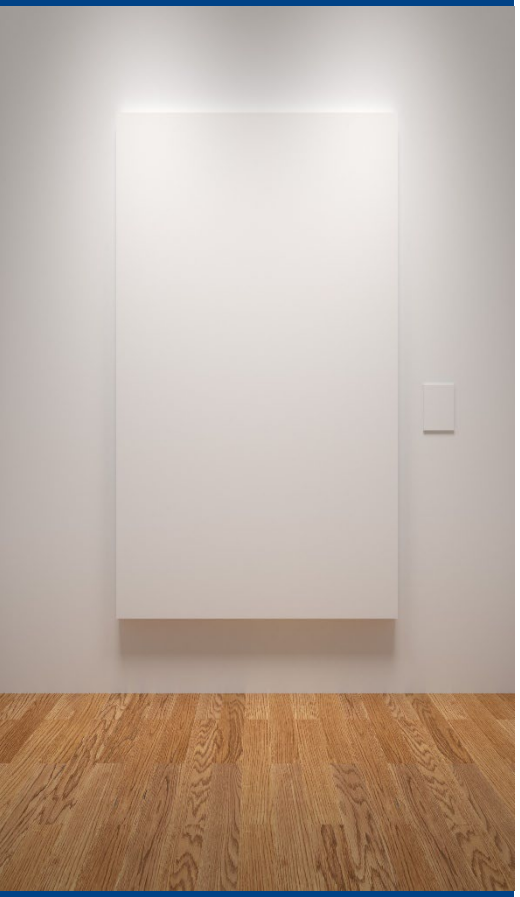
Factor Prioritization: Step 2

- After prioritizing factor cards and placing them on the white board, answer the following questions as a group:
  - Why is this factor important?
  - What is the current state associated with the factor?
- Place your answers on sticky notes on the designated spot on the white board.

Gallery Walk Activity

Dr. Tricia Kyzar – UF

Gallery Walk



Activity Instructions

Deliverable

1 2 3 4

- Stand up. Take your sticky notes with you.
- Spend 5 minutes walking to other groups' boards to review their prioritized factors and their descriptions of current state.
- If you have additional considerations for that group, share feedback with your sticky notes.


Meet back
at 3:40pm

Popcorn
Debrief

Deliverable

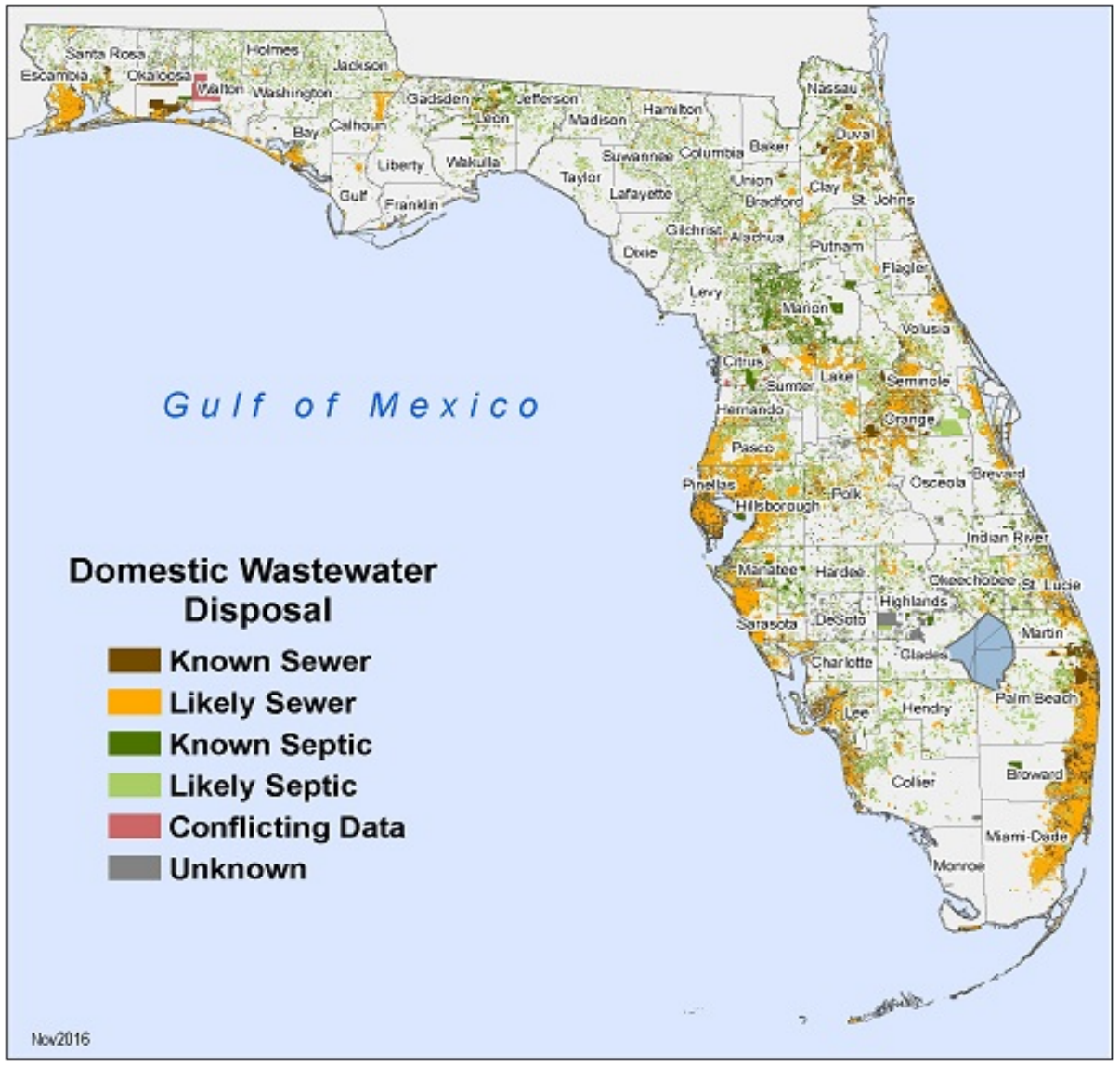
1 2 3 4

Instructions

- Breakout groups:
  - Introduce your table and your peers
  - Share your table's prioritized factors and describe the current state

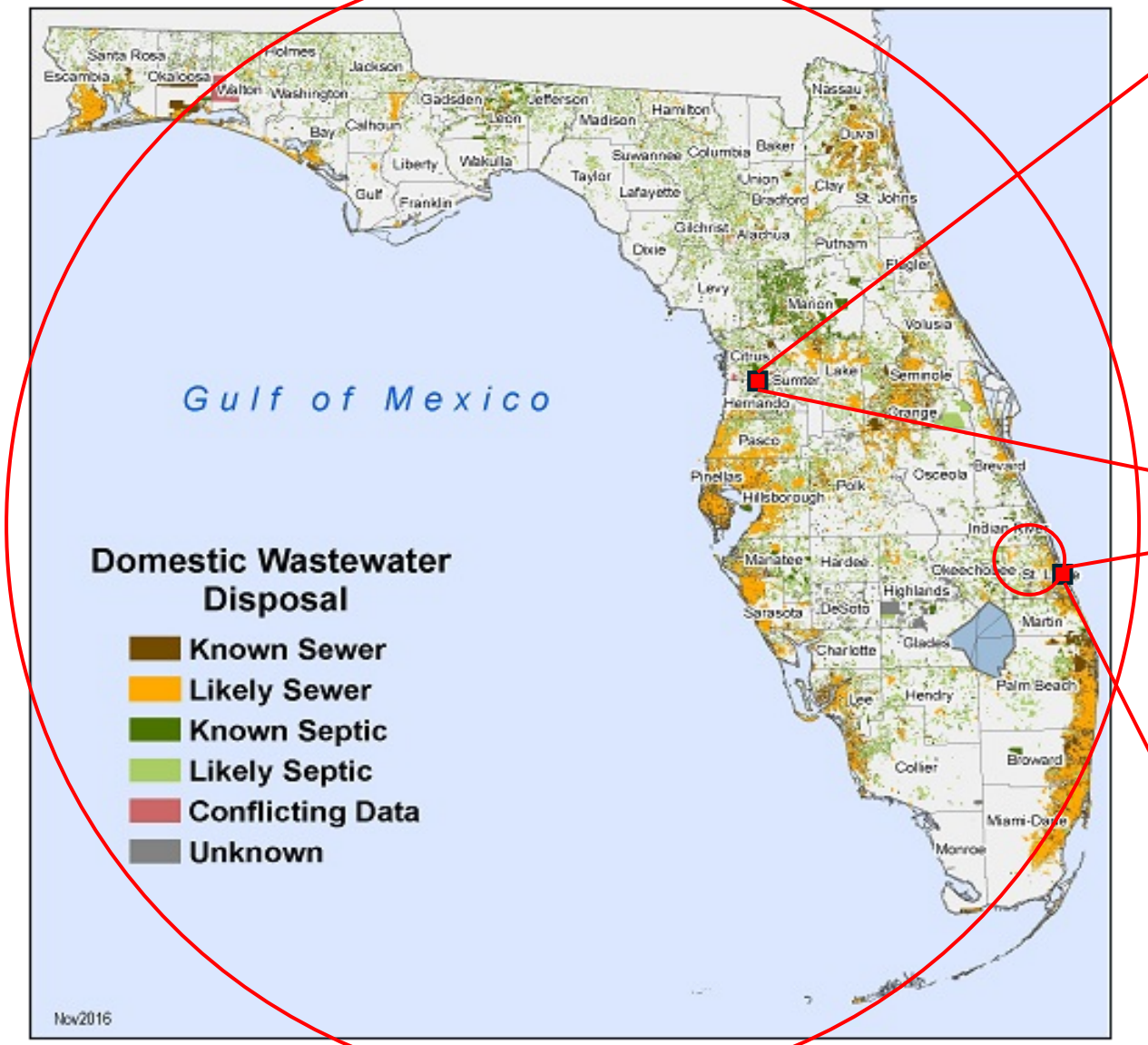
LARNLoad: Landscape Assessment of Risk of Nutrient Loading to Waterbodies

Dr. Kai Rains – USF

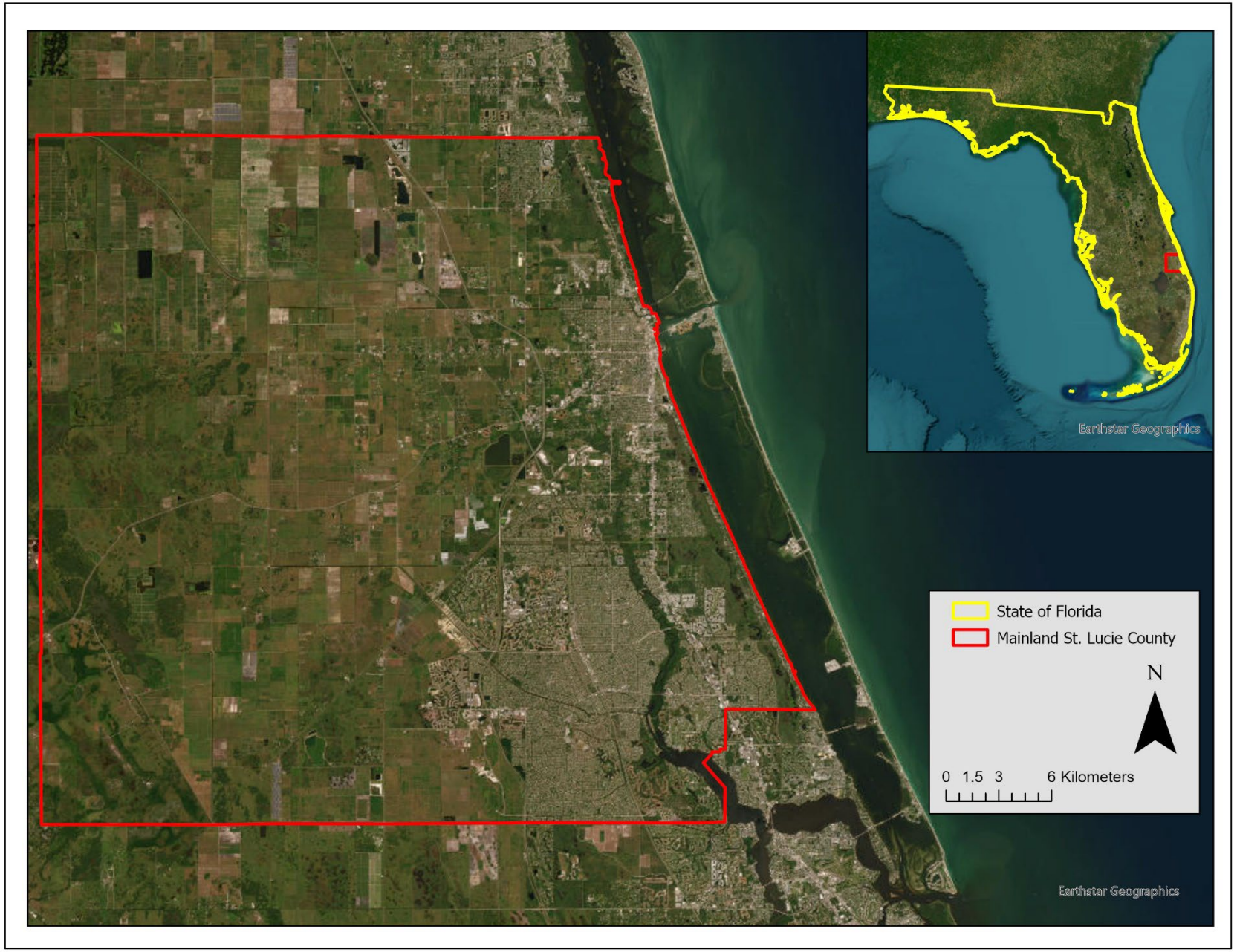


- 2.6M OSTDS serving one-third of households
- We don't want to convert them all
  - Lack of need
- We can't convert them all
  - Lack of resources (people, time, capacity)
- We need transparent tools to support septic-to-sewer decision-making
  - Prioritizing water-quality restoration
  - Recognizing engineering/cost constraints

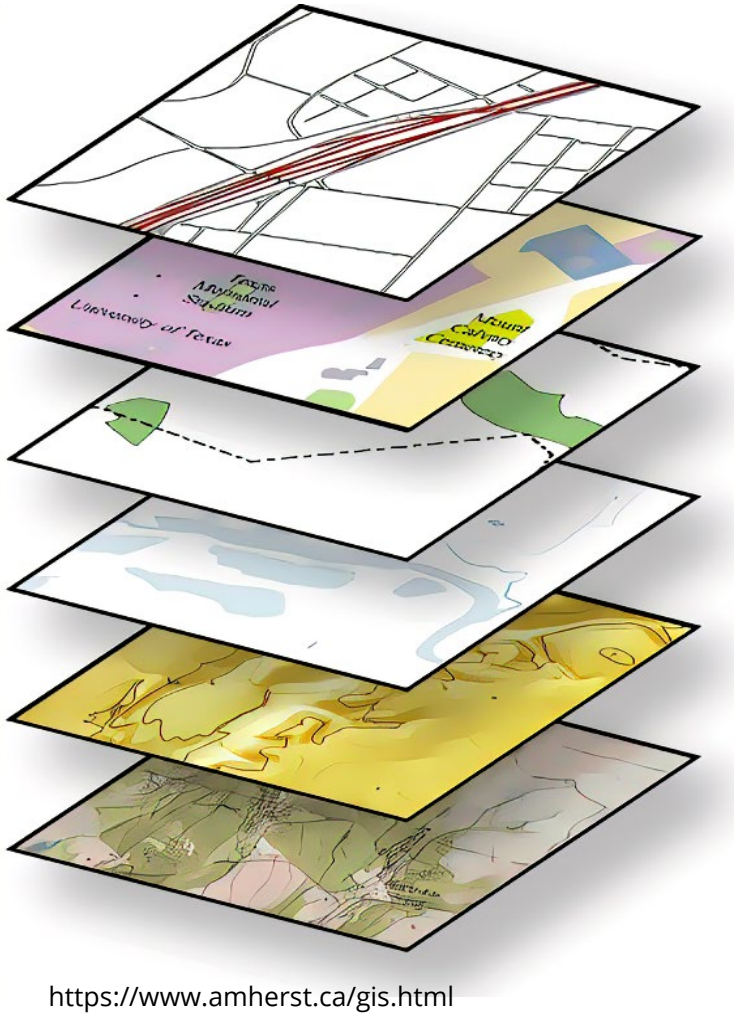
https://www.floridahealth.gov/environmental-health/drinking-water/flwmi/index.html



https://www.floridahealth.gov/environmental-health/drinking-water/flwmi/index.html


State of Florida
Mainland St. Lucie County
N
0 1.5 3 6 Kilometers
Earthstar Geographics
Earthstar Geographics

Basic Approach: ArcGIS-Based Model



https://www.amherst.ca/gis.html

- Select parameters
  - Physical parameters
- Weight parameters
  - MCDA-AHP
- Rank parameters (i.e., standardize parameters)
  - Parameters continuous or categorical and with different values and ranges
- Validate model (i.e., sensitivity analysis, validation)
  - ArcNLET
  - SMEs

Parameter Selection by SMEs in UF- and USF-Led Workshops

Started by SMEs in UF-Led Workshop

Parameter Name	Include	Average Weight	Weigh-Based Rank	Priority Based Weight	Priority-Based Rank	SAS List
Depth to Groundwater	27	11.90%	2	9.49%	1	Yes
Distance to Nearest Surface Waterbody	27	13.31%	1	8.74%	2	Yes
OSTDS Density	27	10.81%	3	8.30%	3	Yes§
OSTDS Age	25	8.25%	4	5.63%	4	Yes
Hydraulic Conductivity	21	7.86%	5	5.11%	5	Yes*
Drain field depth to seasonal high water table	22	6.99%	6^{++}	4.96%	6	No
Topography	24	4.59%	8	4.31%	7	No
Potential for Flooding	20	4.46%	9	3.82%	8	No
Onsite System Type	21	6.11%	7	3.77%	9	No
Proximity to Karst	17	3.79%	10	3.53%	10	No
Depth to Karst	17	3.15%	11	3.32%	11	No
Persons per Household	17	2.33%	13	3.22%	12	Yes**
Soil Texture	16	1.93%	15	3.16%	13	No
Drainage Class	12	1.44%	18	3.13%	14	Yes
W/in a Sensitive Area (OFS, PFA, BMAP)	15	2.65%	12	2.96%	15	Yes
Mean Annual Flood Line	15	2.26%	14	2.96%	15	No
Future Potential for flooding	13	1.55%	17	2.79%	17	No
Indicators of Hydric Soils	16	1.19%	19	2.79%	17	No
Current Land Use	14	1.58%	16	2.77%	19	No
Soil Organic Matter	12	0.81%	21	2.70%	20	No
Historic Land Use	12	0.79%	22	2.55%	21	No
Wastewater Service Type	9	1.12%	20	2.53%	22	No
FAVA vulnerability	+	0.43%	23	2.52%	23	No
Particle Density	10	0.32%	25	2.50%	24	No
Presence of confining unit	+	0.38%	24	2.44%	25	No
Sum		100%		100%		

Modified by SMEs in USF-Led Workshop

LARNLoad Parameter
Distance to Waterbody
Depth to Groundwater
Hydraulic Conductivity
Potential for Flooding
Slope
Depth to Limestone

Parameter Weighting by SMEs in USF-Led Workshop

Sector	No. Participants
State Government	14
Local Government	1
Academia	6
Industry	2
Total	23

Using MCDA-AHP

Parameter	Weight (%)
Distance to Waterbody	30.0
Depth to Groundwater	21.6
Hydraulic Conductivity	20.7
Potential for Flooding	10.9
Slope	9.8
Depth to Limestone	7.0

Consistency Ratio = 0.01*

*Consistency Ratios ≤ 0.1 show internal consistency of the model

Dataset Sources

Parameter	Source*
Distance to Waterbody	USGS (NHDPlus HR)
Depth to Groundwater	NRCS (SSURGO)
Hydraulic Conductivity	NRCS (SSURGO)
Potential for Flooding	FEMA (National Flood Hazard Layer)
Slope	SFWMD (DEM)
Depth to Limestone	FGS (Surficial Geology)

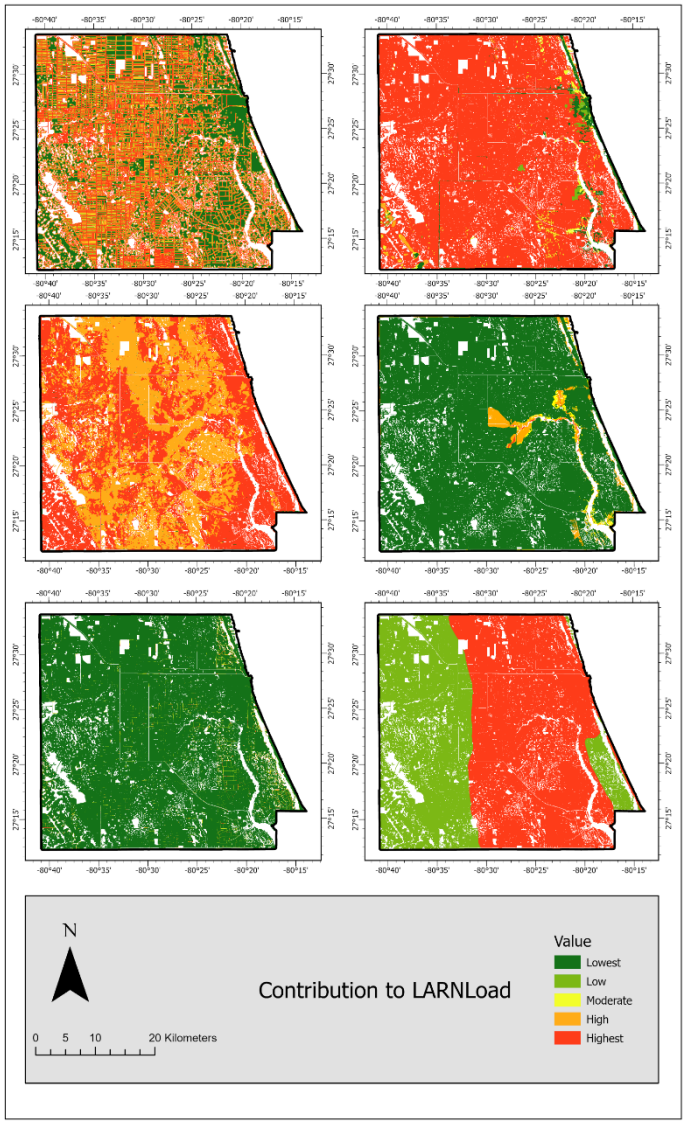
*Selected and ranked (i.e., standardized) in consultation with SMEs

Weighted and Ranked Parameters

Distance to Waterbody
30.0%

Hydraulic Conductivity
20.7%

Slope
9.8%

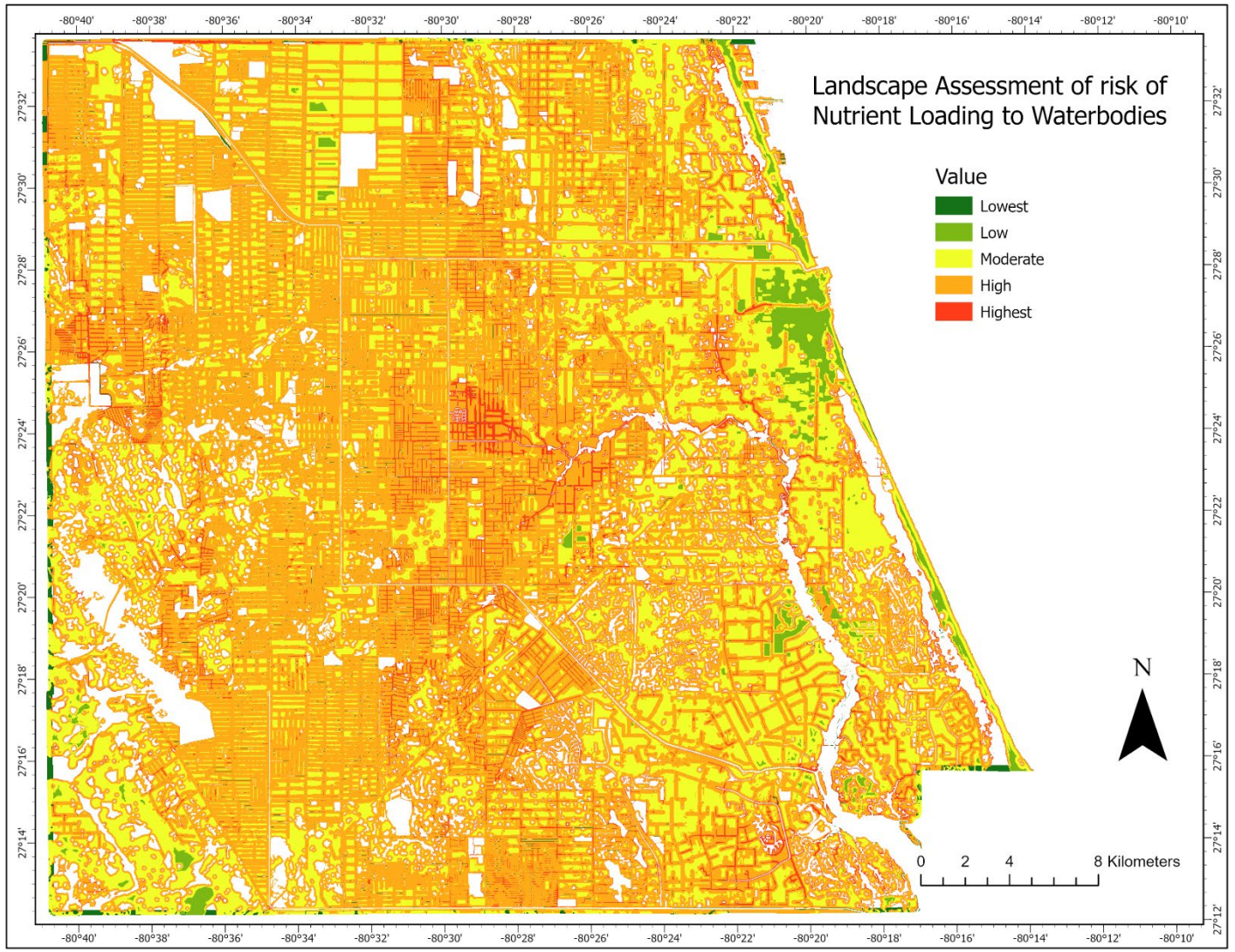


Depth to Water
21.6%

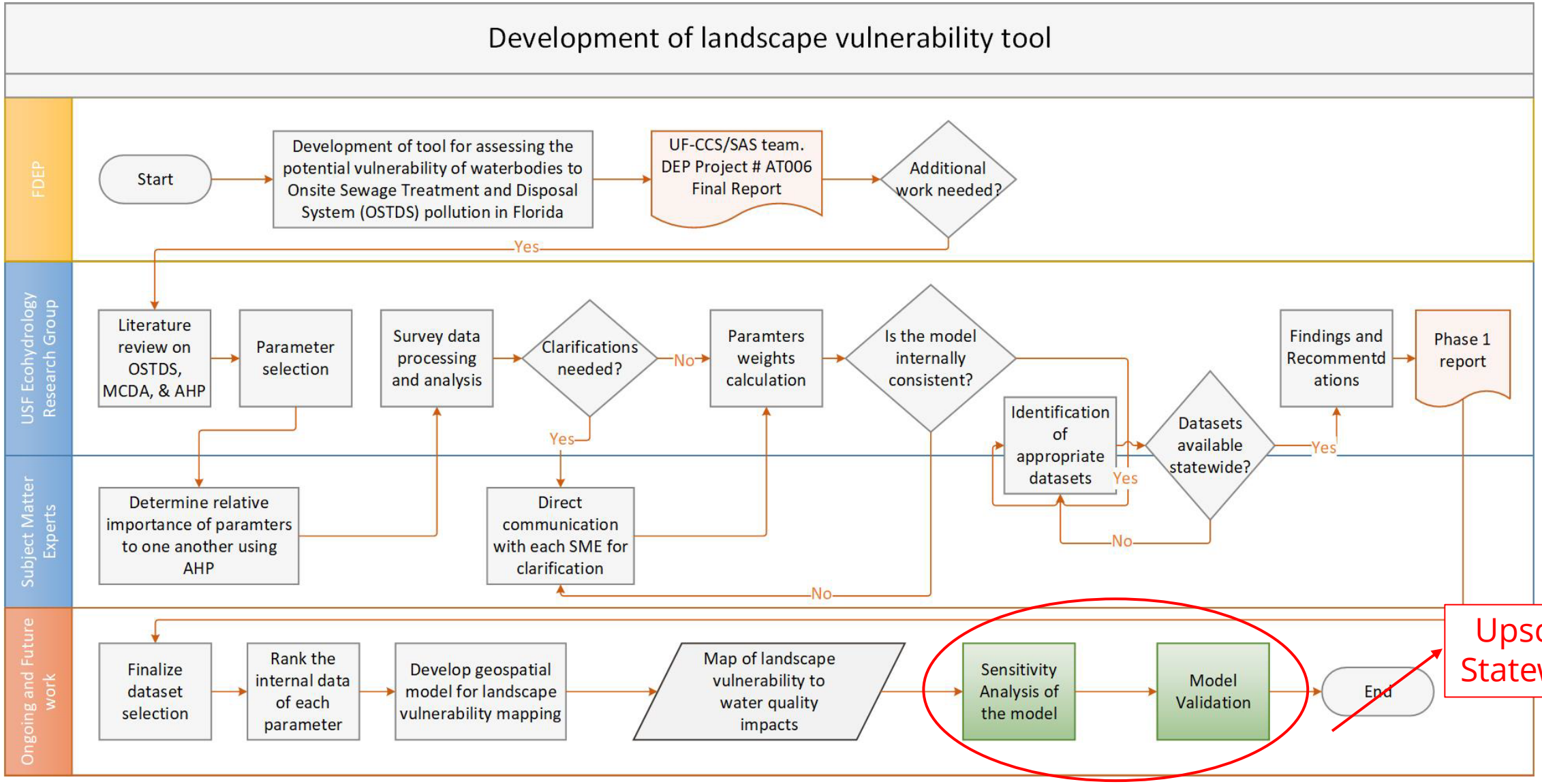
Potential for Flooding
10.9%

Depth to Limestone
7.0%

Preliminary LARNLoad, St. Lucie County



Current Status: Pilot Study Nearly Complete



Martin County

Additional Information

Kai Rains
Ecohydrology Research Group, University of South Florida
krains@usf.edu

Sara Davis
Office of Environmental Accountability and Transparency, Department of Environmental Protection
sara.c.davis@floridadep.gov

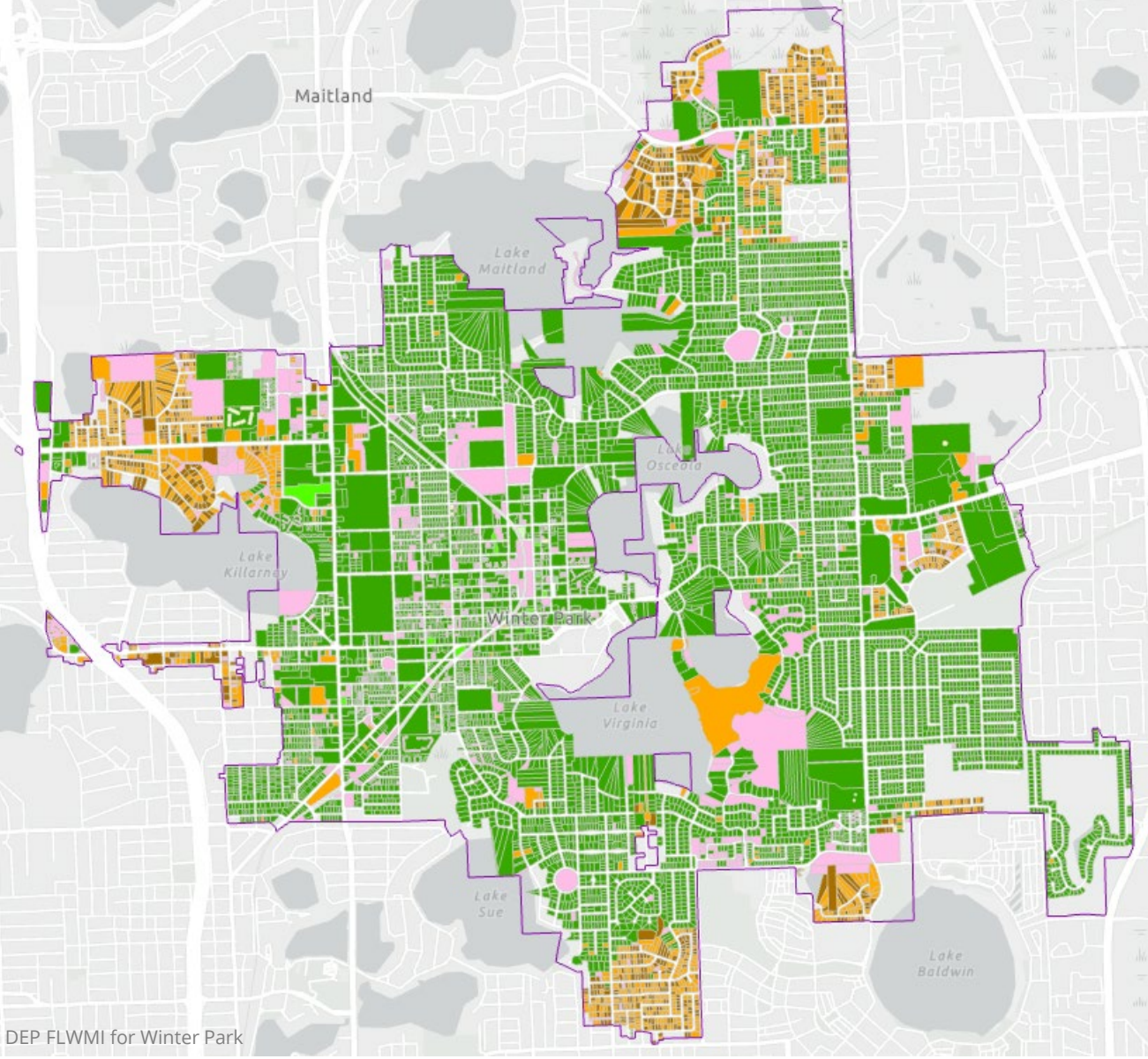
UNIVERSITY of SOUTH FLORIDA

OSTDS Remediation Optimization Tool – UF Current Status

Dr. Christine Angelini– UF

OSTDS REMEDIATION (SEPTIC TO SEWER) OPTIMIZATION TOOL

Image: https://floridahikes.com/winter-park-chain-of-lakes



DEP FLWMI for Winter Park

Ron Fick, rfick@ufl.edu
Tricia Kyzar, tkyzar@ufl.edu
Collin Ortals

UF UNIVERSITY of FLORIDA

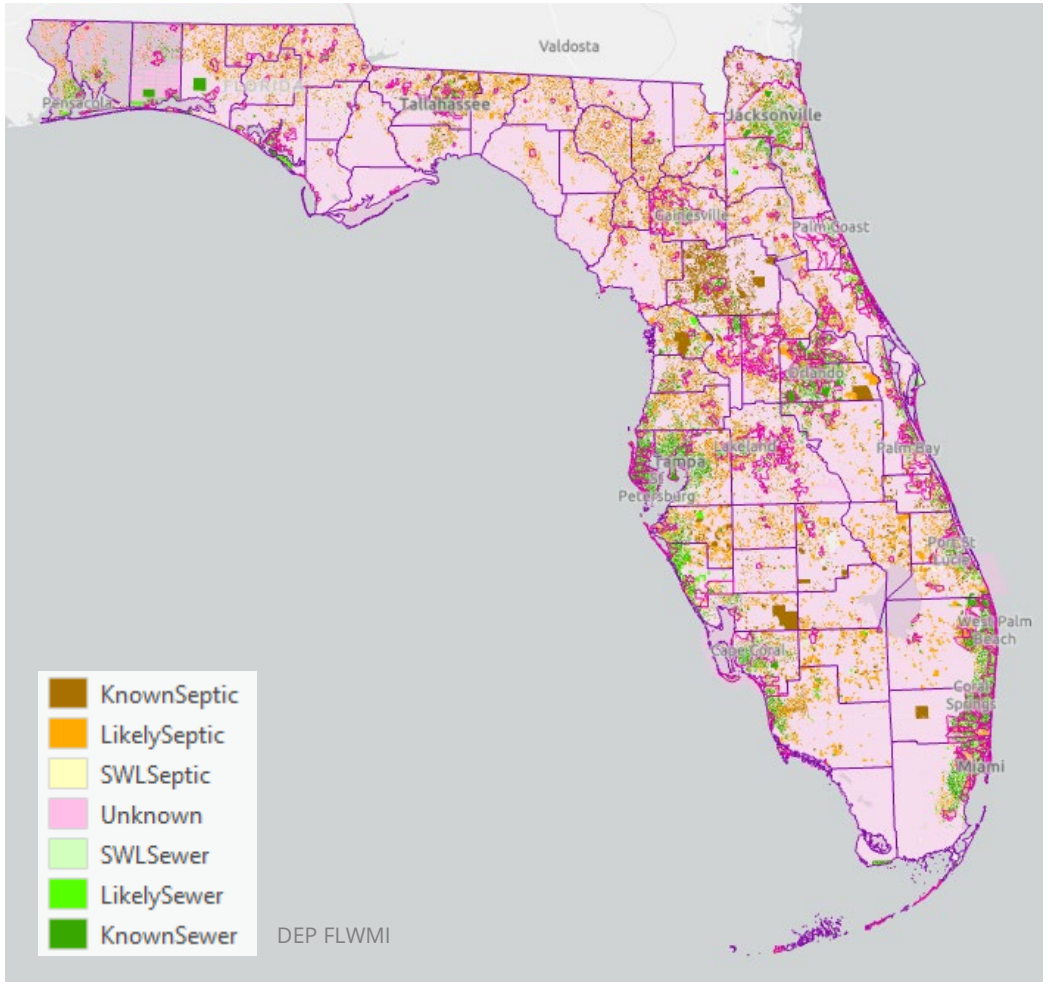
CCS CENTER FOR COASTAL SOLUTIONS

Rationale for Tool Development

How can we achieve the greatest ROI in water quality improvement from funding for OSTDS remediation?

To start:

How can we connect the most OSTDS to existing sewer for the least cost?



OSTDS Remediation (Septic to Sewer (S2S)) Optimization Tool

UF developed a prototype of an OSTDS Remediation Optimization Tool in 2023 through a state-sponsored project.

The tool:

1) Applies an algorithm to explore all potential extensions of the existing sewer network to connect OSTDS parcels and clusters connections into ‘projects’,
2) Calculates each project's cost using lateral line/sewer pipe estimates, and
3) Allows users to explore projects based on size, cost-efficiency, etc on an interactive web-map.

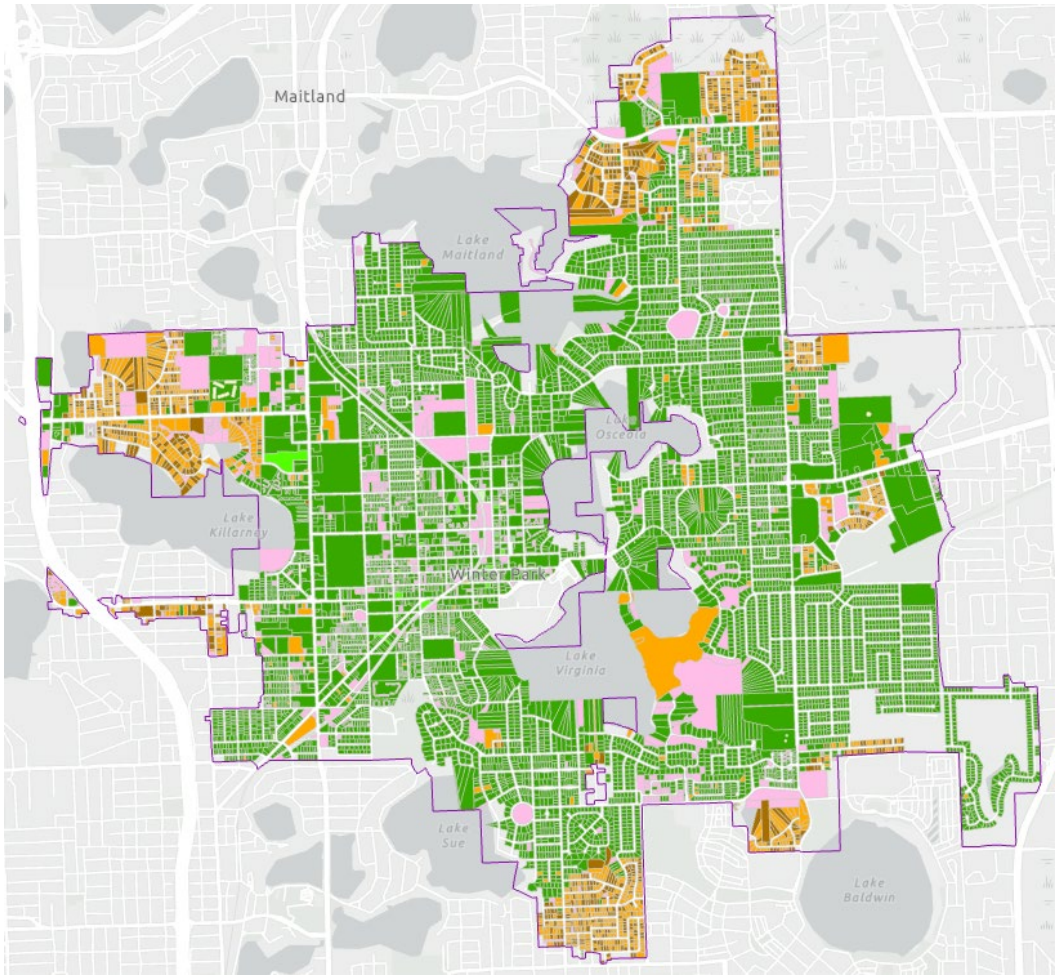
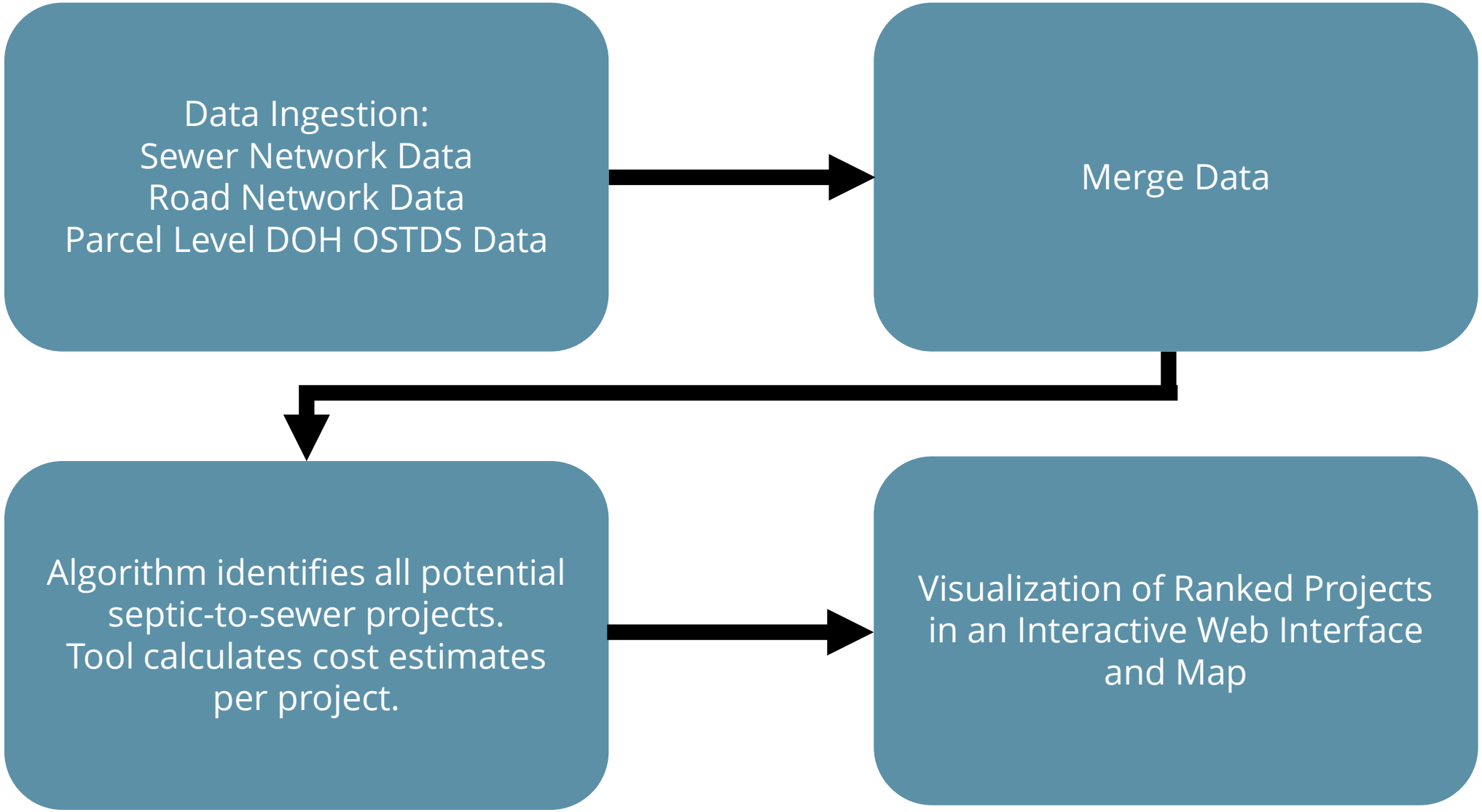


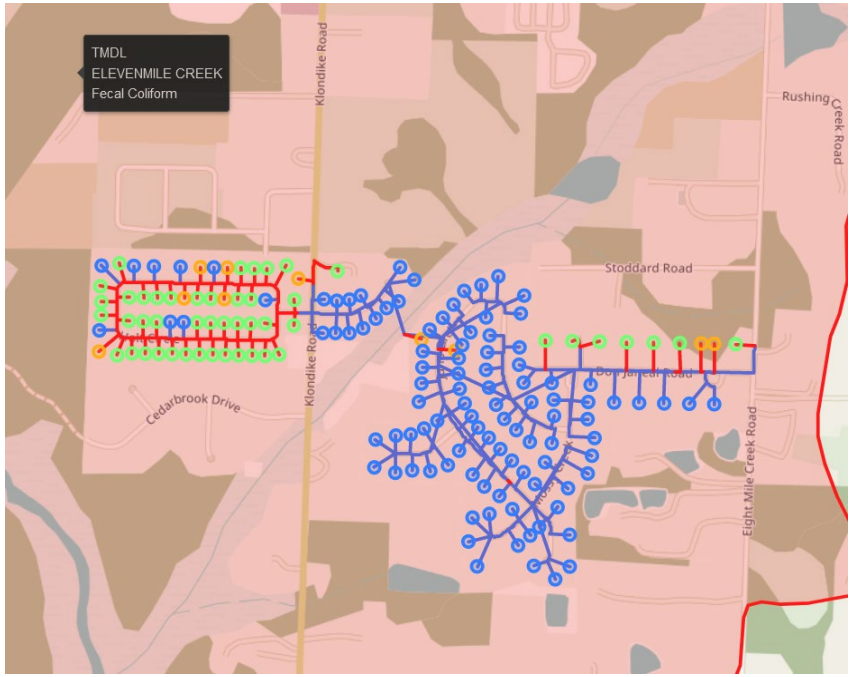
Image: https://coastalreview.org/2022/11/a-cycle-of-septic-repairs-washouts-on-park-service-beaches/

Tool Functionality



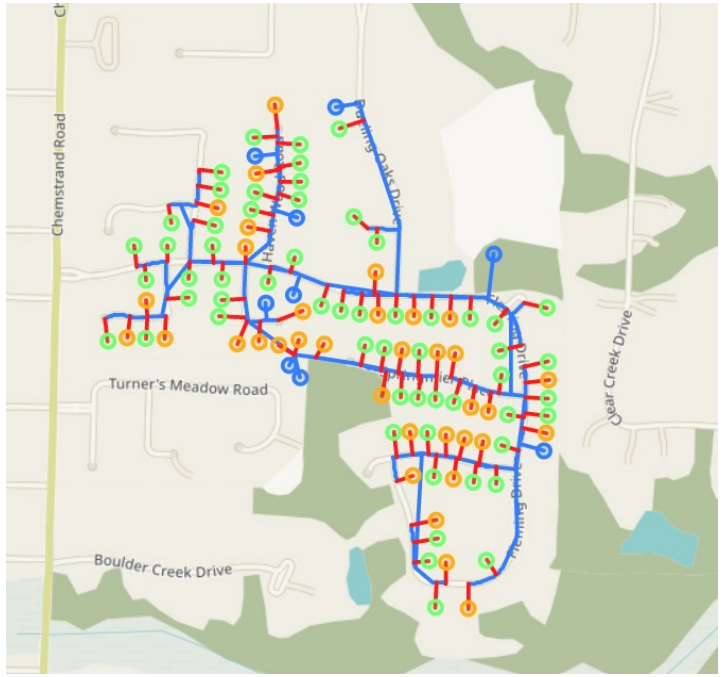
Example Projects Identified by Prototype Tool

A neighborhood within a TMDL for fecal coliforms where a limited extension of sewer would connect many homes.



Legend:
Blue Line – Existing sewer lines
Red Line – New sewer lines
Green Circle – Current OSTDS parcel converted to sewer under this plan
Orange Circle – Parcel currently unknown status according to DOH
Blue Circle – Current sewer parcel

A neighborhood with existing sewer infrastructure, but few connections/



Possible Outputs from the Tool

A database of identified projects that can be filtered by project cost, placement in impairments, OSTDS vulnerability

- Unbiased, data-driven prioritization

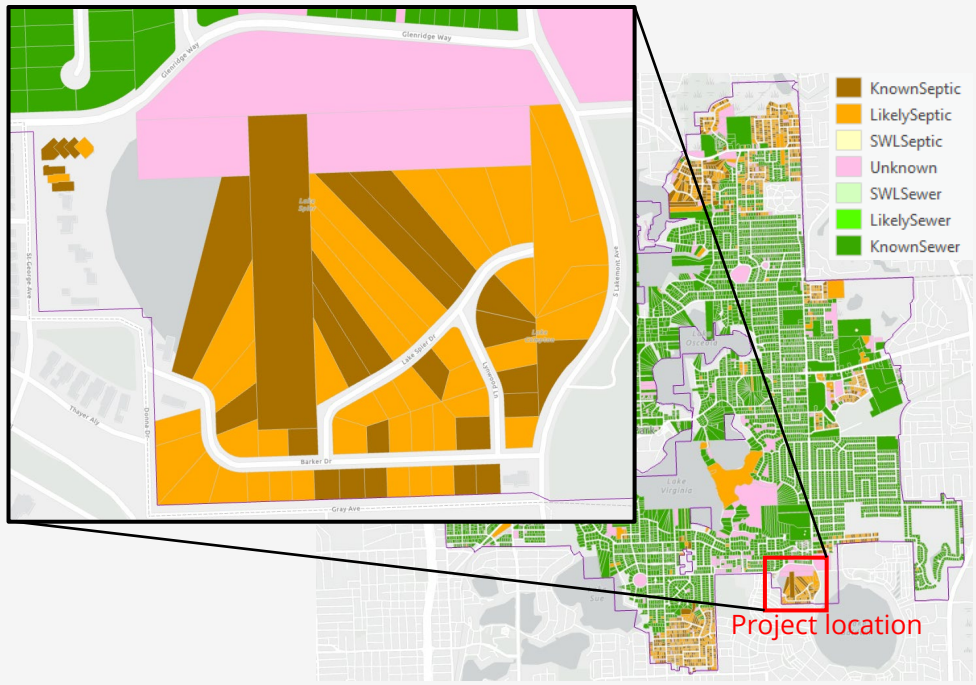
'One-Pager' reports summarizing ranking & details for specific projects

- Funding application support
- Commission meeting materials

A report summarizing potential sewer & parcel ID data inaccuracies to guide targeted data cleaning by service providers

- DEP requires Florida Water Management Inventory (FLWMI) update by July 1, 2025

OSTDS Remediation Project Summary



Project ID	
Project Location	Oak Mews, Lake Spier
Number of OSTDS Known Likely Somewhat Likely Unknown	68 26 40 2
Impairment(s)	Bacteria: Fecal Coliform
Project Area (approx.)	57 acres
Existing Sewer	Gravity/Pressurized
Estimated Project Cost	$###,###

Future Improvements

- Incorporate outputs of Landscape Vulnerability Assessment to target areas in need of conversion to reduce potential for pollution from OSTDS
- Calculate nitrogen reduction estimates for projects
    - Identify locations requiring OSTDS remediation due to BMAP, remediation or other regulatory requirements.
- Incorporate sewer and groundwater elevation data to identify where gravity lines can be installed, or if force mains / pressurized lines / vacuum lines are necessary.
- Determine need and possible location of lift stations.
- Calculate capacity impacts/needs on WWTF
- Identify potential funding sources for projects and produce documentation to support applications

These ideas are needs we have heard from potential users to date.

This list is likely to evolve as we learn more from this Summit!

What functionality do you find most useful in this tool?

- Cost and technical feasibility considerations.
- It is used for capacity analysis primarily
- TN loading estimates
- Costs to determine feasibility and project viability for the utility
- COVB utilizes multiple tools in order arrive at a decision on centralized sewer.
- Prioritization of areas for performing conversions
- Model system hydraulic performance and network design options.

What functionality would you like to see in a wastewater enhancement planning tool?

- The ability to predict the need to treatment plant expansion.
- Cost-benefit analysis, water quality, O&M cost
- GIS driven with accurate septic system age and location information overlaid on the BMAP and PFA and including location of WWTF and collection and pumping system location, sizing , etc.
- Model that uses land elevation to estimate likely vertical separation of the drainfield from the water table
- Funding sources, impacts to WWTF, impacts to bodies of water.
- Tracking of current systems (sewer and septic) as well as growth patterns and needs. topography is important and the ability to see where new locations may be necessary.
- Estimating costs. Estimating Nutrient Reductions. Estimating time frame to noticeable changes in water quality of area waterways.
- Projection, funding, scheduling, analysis, coverage area
- prioritization and analyzing cost/benefits ratios.
- Predictive modelling of future grow and demand for service with the service boundaries.
- GIS integration, construction cost analysis, revenue and operational cost impact analysis

Poll Everywhere

Instructions

Deliverable

1 2 3 4

- Log onto Poll Everywhere
- Answer the question prompts on screen.
- Question:
  - What features appear to be most useful in the Sewer Optimization Tool?
  - What do you believe would be useful to consider in a future edition of the Sewer Optimization tool?

Poll Everywhere

Deliverable

1 2 3 4

Access Poll Everywhere at **PollEv.com/UFworkshop** or by scanning the QR code below


Meet Back
at 4:50pm

OSTDS Remediation Challenges

Chris Carrillo, PE – Deloitte

Here To There

Deliverable

1 2 3 4

Activity Instructions

1. Characterize the current state of OSTDS remediation projects, capturing *both* positive and negative aspects (1 thought/sticky note).
    - *Post sticky notes under the "Here" column*
2. Next, characterize the future state, capturing *both* positive and negative aspects (1 thought/sticky note).
3. *Post sticky notes under the "There" column*

Current Projects

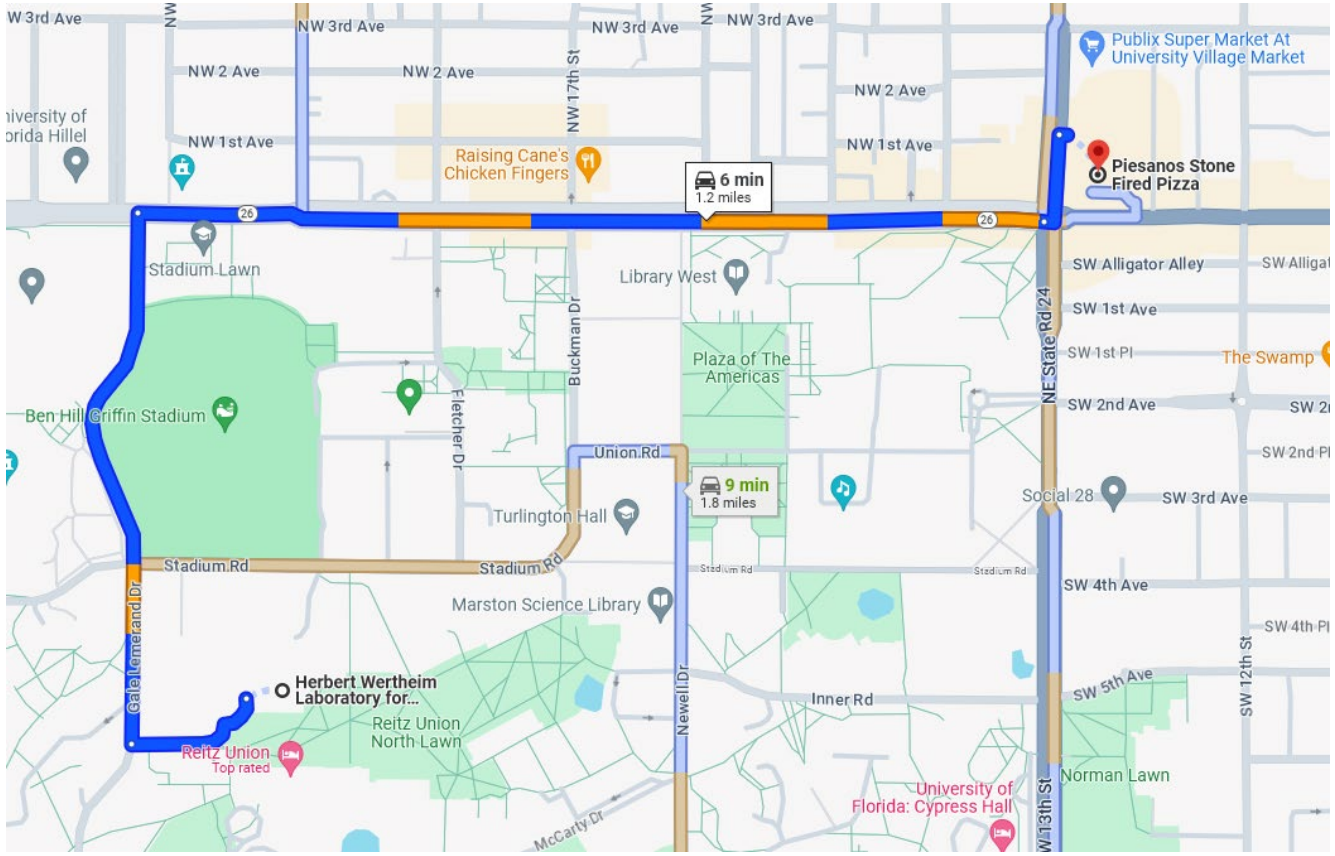
Dr. Tricia Kyzar – UF

Activity Instructions

- Think about a current project you are working on in your area.
- You will write the name and purpose of a priority project you are currently working on.
- Briefly describe the project to your table.
- Place the project name on your flipchart.

Social gathering

Piesanos Stone Fired Pizza
1250 W University Ave,
Gainesville, FL 32601



Day 2 Preview

Chris Carrillo, PE – Deloitte

Day 2 Agenda	Time & Duration	Outcomes
Act II: Challenges, Opportunities, and Actions		
Gathering	8:00-8:30am 30 min	• Networking and gathering
Opening Remarks and Plan for the Day	8:30-8:45am 15min	• Review of yesterday and the goals/activities for today
Wastewater Project Challenges Breakout (Peer Groups)	8:45-9:15am 30min	• Understand wastewater project challenges across population served and project type
Initiatives Brainstorm (Peer Groups)	9:15-10:15am 1hr	• Characterize wastewater project challenges
15 Minute Coffee Break 10:15-10:30am		
Popcorn Debrief	10:30-11:00am 30min	• Share breakout discussion outcomes • Provide feedback on presented ideas
Function and Project Challenges Breakout (Breakout by Function)	11:00-12:00pm 1hr	• Understand wastewater project challenges across functions
Functional Challenges Debrief	12:00-12:15pm 15min	• Share breakout discussion outcomes • Provide feedback on presented ideas
Act III: Closing and Next Steps		
“What One Thing” Close Out Activity	12:15-1:00pm 45min	• Recap summit, seek additions/ clarifications
Next Steps/Close	1:00-1:15pm 15min	• Share next steps on how project outputs will be shared

Closing Remarks and Wrap-Up

Dr. Christine Angelini – UF

Dr. Mark Rains – DEP

Wastewater Enhancement Planning Summit

University of Florida Center for Coastal Solutions

Facilitation Presentation

June 5th to June 6th, 2024

Wastewater Enhancement Planning Summit

We will begin at 8:30am

Day 2 – Opening Remarks

Dr. Christine Angelini – UF

Dr. Mark Rains – DEP

Day 2 – Agenda Recap

Chris Carrillo, PE – Deloitte

Day 2 Agenda	Time & Duration	Outcomes
Act II: Challenges, Opportunities, and Actions		
Gathering	8:00-8:30am 30 min	• Networking and gathering
Opening Remarks and Plan for the Day	8:30-8:45am 15min	• Review of yesterday and the goals/activities for today
Tool Functionality Breakout	8:45-9:45am 60min	• Discuss future tool functionality and beneficial enhancements
Popcorn Debrief	9:45-10:00am 15min	• Share breakout discussion outcomes • Provide feedback on presented ideas
15 Minute Coffee Break 10:00-10:15am		
Initiatives Brainstorm (Peer Groups)	10:15-11:15am 60min	• Characterize wastewater project challenges
Popcorn Debrief	11:15-11:45am 30min	• Share breakout discussion outcomes • Provide feedback on presented ideas
Act III: Closing and Next Steps		
"What One Thing" Close Out Activity	11:45am-12:15pm 30min	• Recap summit, seek additions/ clarifications
Next Steps/Close	12:15-12:30pm 15min	• Share next steps on how project outputs will be shared

Breakout Groups

1

Name	Organization
Jared Lee	City of Sebring
Jeremy Hockenbury	City of Wildwood
Buddy Stephens	Santa Rosa County
Rob Melton	Charlotte County Utilities
Kristen Sealey	Gainesville Regional Utilities
Kristine Morris	DEP
Julie Danyuk	DEP
Chris Carrillo	Deloitte
David Friedman	Deloitte

2

Name	Organization
Wayne Bouchard	City of Wildwood
Garann Hopkins	City of Palm Coast
Dave Watson	Charlotte County Utilities
David Kraus	Columbia County
Dr. Mark Rains	DEP
Kim Shugar	DEP
Christine Daoud	Deloitte
Greg Lang	Mitttauer & Associates Inc.
Tricia Kyzar	UF CCS

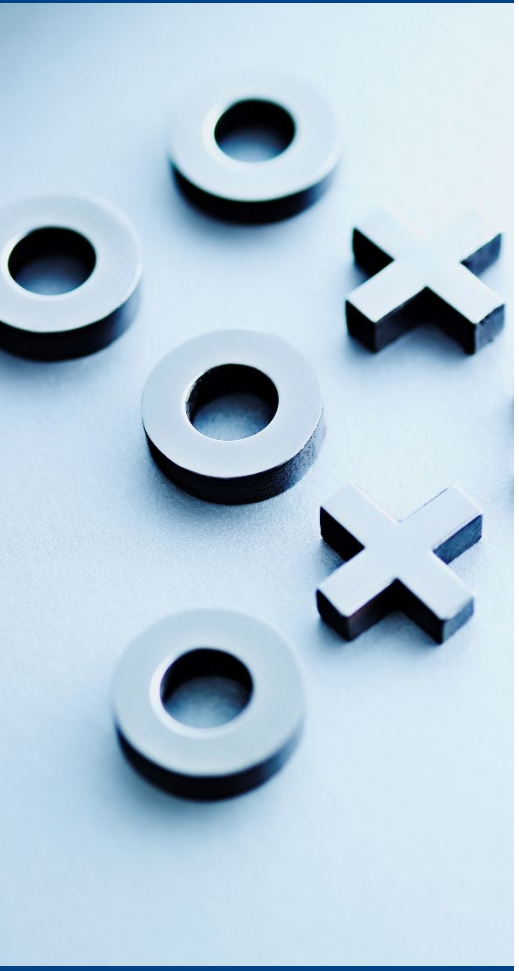
3

Name	Organization
Anthony Gubler	Brevard County
Jim Melley	City of Palm Coast
Jennifer McElroy	Gainesville Regional Utilities
Chris Colson	Talquin Water and Wastewater Services
Sara Davis	DEP
Dr. Christine Angelini	UF CCS
Sue Frost	Deloitte
Kelly McEnerney	Deloitte

Tool Functionality Brainstorm

Chris Carrillo, PE

Tool Discussion



Activity Instructions

Deliverable 1 2 3 4

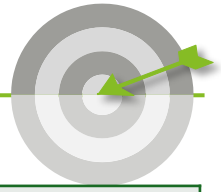
- Stand up to your newly assigned breakout group.
- Step 1: Select the top five tool functionalities which would help your organization select the best OSTDS remediation projects.
- Step 2: Define specifics of what functionality would entail.

Responses from Day 1 Poll Questions

Question1: What features appear to be most useful in the Sewer Optimization Tool?

Creating focus for exploration
Data Availability to effectively manage costs
Project clustering
Optimization of nutrient load reduction
Framework for optimizing based on ROI
Quickness of use. Ability for support staff (non-experts) to use.
Unsure
Mapping
Clustering/mapping

Question 2: What do you believe would be useful to consider in a future edition of the Sewer Optimization tool?



Combine this with landscape risk, other climate risks to help calculate the cost of not doing the projects
Infrastructure age assessment
Elevated treatment factors
N reductions/BMAP credits
Future land use zoning information to analyze future impacts long term projects and goals.
Cost analysis
Risk to waterbodies
Needs ROI to integrate and push decisions for grants.
Development density

What functionality do you find the most useful to help you select the best OSTDS project?

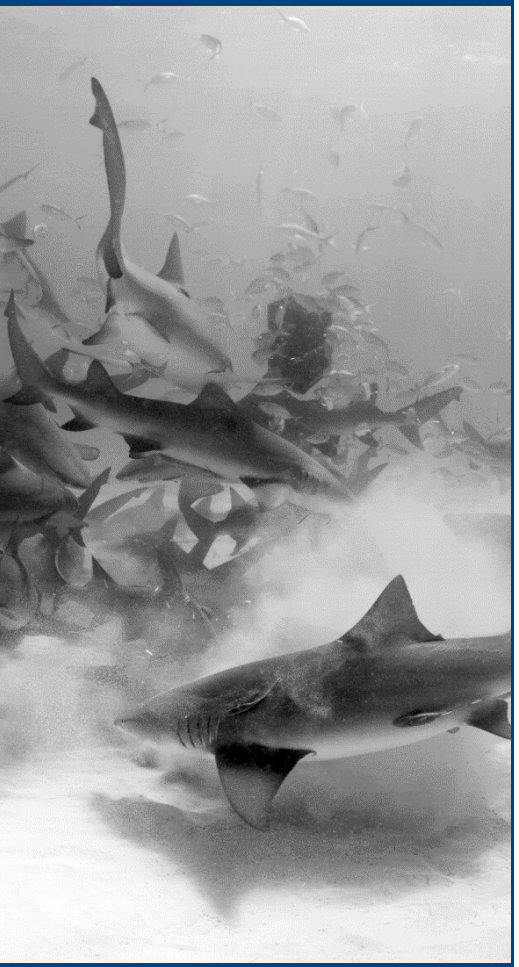
- Technical feasibility considerations
- Cost estimation
- Location
- Integrated data between utilities, DOH, etc.
- Project prioritization
- Nutrient loading prioritization
- Improvement to water quality upon discharge
- Cost/benefit analysis
- Tracking population growth patterns and needs
- Grant funding identification
- Other (define)

Wastewater Project Initiatives Brainstorm

Chris Carrillo, PE – Deloitte

Here's What We Heard | Common OSTDS Remediation Challenges

- Funding availability
- Costs exceeding current revenue
- Rapidly changing regulatory landscape
- Existing network capacity
- Staffing and resource capacity
- Ongoing septic development
- Population growth
- Compliance timelines



Activity: Initiatives Brainstorm

- Develop as many ideas to address those challenges as possible (1 idea/sticky).
  - The goal is quantity of ideas, not quality at this point, so don't filter based on viability or if the idea is achievable.
  - Brainstorm individually for 2 minutes before discussing as a group.
- Write initiatives with respect to:
  - People
  - Process
  - Technology/Data
- Cluster sticky notes into key themes.


Meet at
10:10am

Popcorn
Debrief

Deliverable

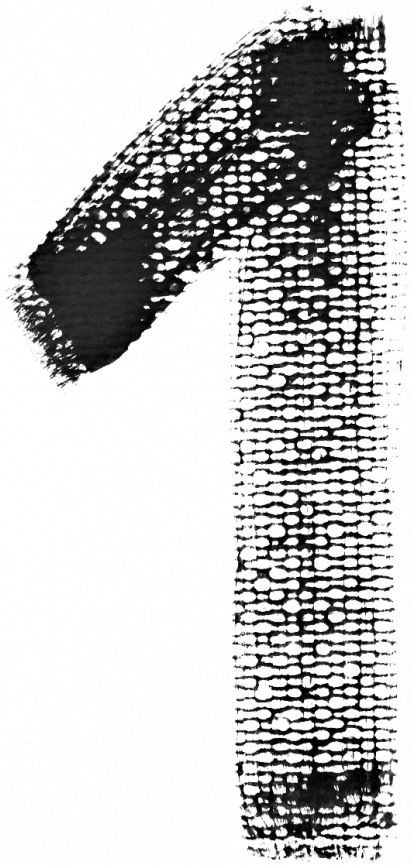
1 2 3 4

Instructions

- Breakout groups:
  - Share your table's proposed initiatives

Closing and Wrap Up

What 1 Thing



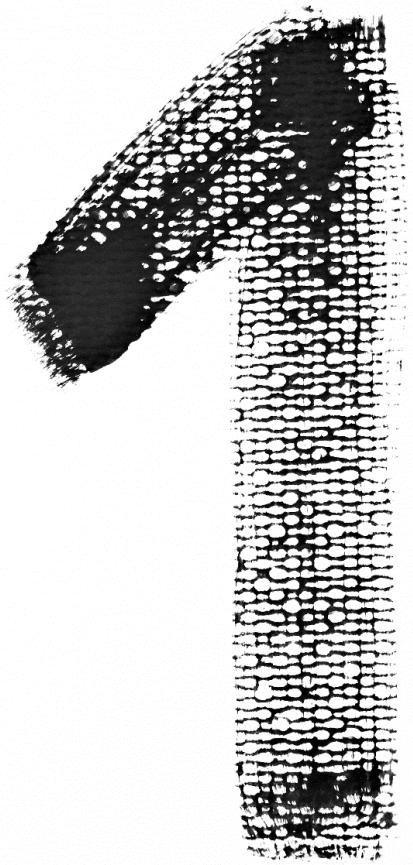
Instructions

Deliverable

1 2 3 4

- Open Poll Everywhere
- Answer the following questions:
  - What is one thing you learned from the summit?
  - What one thing would you commit to doing after today's session?
  - Provide any feedback on the session.

What 1 Thing



Deliverable

1 2 3 4

Access Poll Everywhere at **PollEv.com/UFworkshop** or by scanning the QR code below

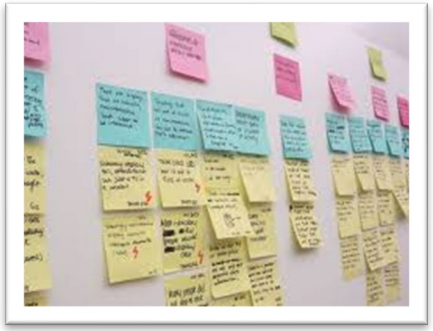
Next Steps

Dr. Tricia Kyzar – UF

Next Steps

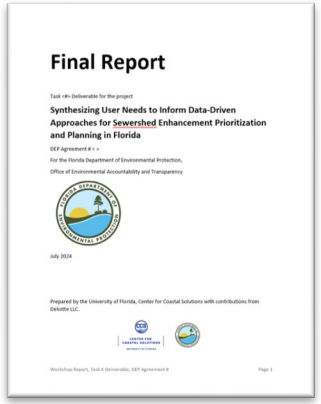
1 COMPILE OUTCOMES FROM WORKSHOP

- Gather results from workshop breakout sessions
- Determine key takeaways and outcomes from this workshop
- Add photos from the workshop to the report



2 FINALIZE REPORT

- Add findings from the survey to the report
- Update the report to include outcomes from this workshop



3 PUBLISH REPORT WITH DEP

- After the report is finalized, it will be submitted to DEP to be published and distributed

Closing Remarks

Dr. Christine Angelini – UF

Dr. Mark Rains – DEP