



Presentation For:

FGUA Board of Directors

**Water and Wastewater Expansion Program
Lehigh Acres Utility System**

October 18, 2007



Presentation Topics

- FGUA Lehigh Acres Overview
- Objectives
- Current Situation
- Magnitude of Challenges Facing Local Governments
- Concept Plan
- Potential Schedule
- Strategies, Keys and Barriers for Success
- Recommendations
- Conclusions
- Questions?



FGUA - Progress

- Since December 2003 FGUA has invested \$46,352,262 in system enhancements

\$12,218,575 water capacity expansion

\$23,078,539 sewer capacity expansion

\$ 3,875,961 water/sewer line expansion

\$ 7,179,187 other improvements



FGUA - Future

- 2008-2012 FGUA will invest \$91,159,000 in additional enhancements

\$40,455,000 water capacity expansion

\$21,152,000 sewer capacity expansion

\$ 5,153,000 water/sewer line expansion

\$24,399,000 other Improvements

No rate increases anticipated for these investments



Objectives

- ❖ Develop a successful program that will ensure current and future residents of Lehigh Acres the following:

- ❖ Access to dependable and safe water

Shallow Sandstone aquifer levels have dropped 2.5 feet over the past 5 years

- ❖ Minimize contamination to ground and surface water in Lehigh Acres
- ❖ Be consistent with County growth policies
- ❖ Be consistent with Lehigh Acres communities “sense of place”



Current Situation

- ❖ Some individuals and government officials are still not in agreement regarding the current magnitude of the problem confronting Lee County and the FGUA regarding the proliferation of private wells and septic tanks.
- ❖ Resources and training for local monitoring and enforcement has not kept up with the increase in septic tanks and private wells.
- ❖ Inadequate resources exist to address the older “Legacy Systems” using outdated technology (older than 1990).
- ❖ Lack of coordinated approval process.



Magnitude of Challenges Facing Local Governments

- ❖ 10 to 30% of onsite systems are estimated to be failing annually. ¹
- ❖ National Water Quality Inventory 1996 Report to Congress states that “improperly constructed and poorly maintained septic systems are believed to cause substantial and widespread nutrient and microbial contamination to ground water.” ²

¹ EPA's report addressing the Congressional House Appropriations Committee's request on the benefits of decentralized alternatives compared to centralized systems, p. 3, at: www.epa.gov/OWM/mab/smcomm/scpub.htm.

² EPA's Management Handbook, *Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems*, p. 10, Office of Water, Office of research and Development, March 2003, at: www.epa.gov/owm/mtb/decent/download/guidelines.pdf.



Concept Plan

❖ Phase 1

- ❖ Extend service connections to existing non-serviced houses
- ❖ Implementation of an aggressive I&I program to reduce the negative impact to the waste water treatment plant available capacity

❖ Phase 2

- ❖ Extend water lines to residents within the service area
- ❖ Convert septic tanks by mandatory hookups to proposed wastewater lines

❖ Phase 3

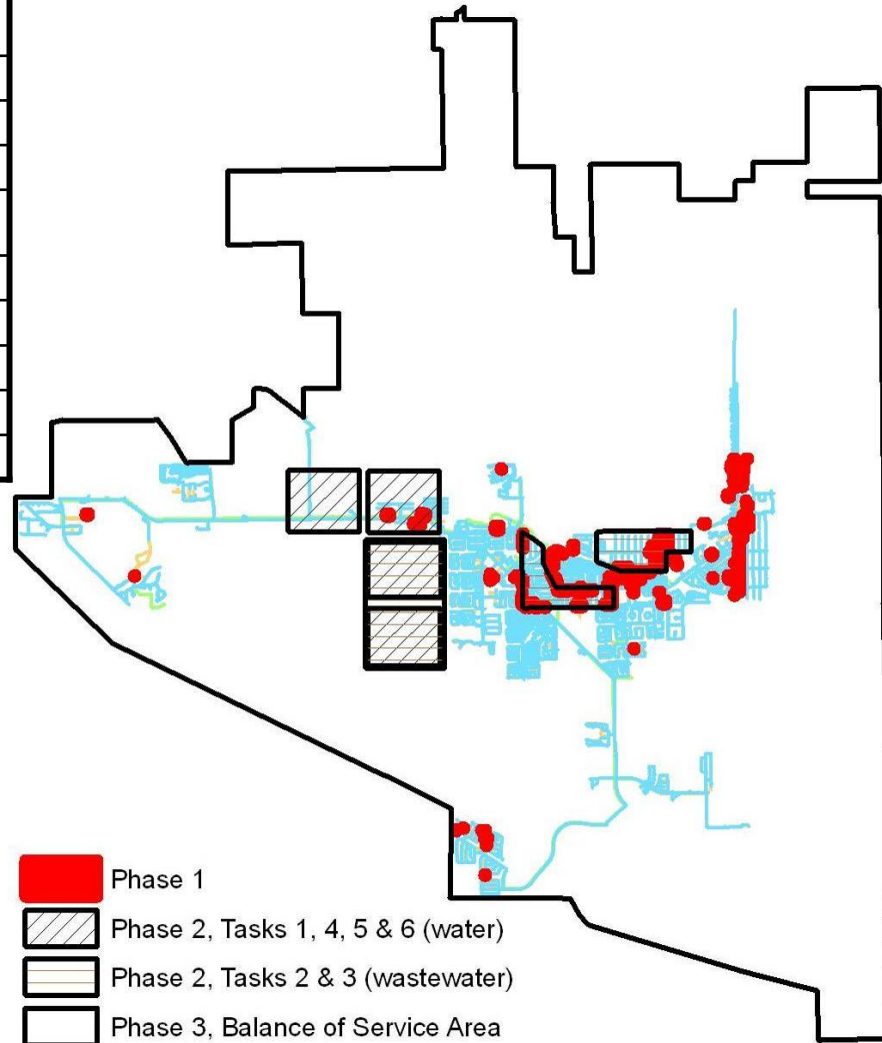
- ❖ Reach out to areas not contiguous to the current FGUA infrastructure
- ❖ Develop a task force of affected governmental entities

(The entire program consists of three phases, however Phase 1 is current focus)



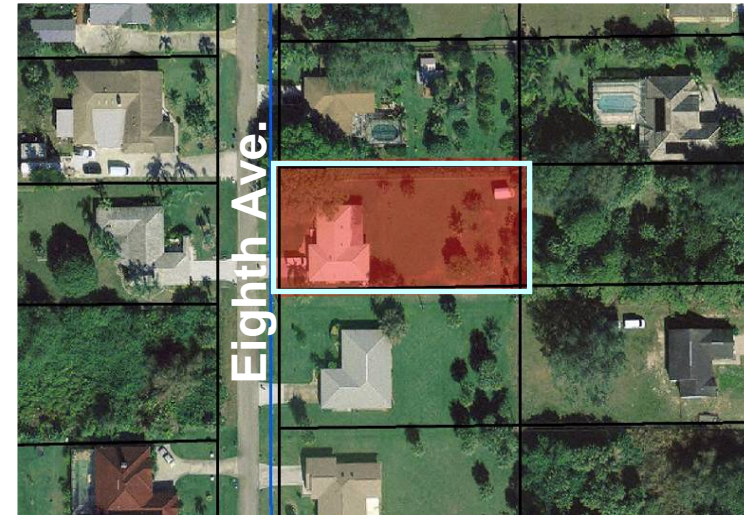
Concept Plan (Phase 1)

Phase #	Description	Private wells Removed		Septic tanks Removed	
		Current	Future	Current	Future
Phase 1:	Service Connections	50	50	300	300
Phase 2, Task 1:	Extend Water Lines	416	1,772	-	-
Phase 2, Task 2:	Extend Wastewater Lines	-	-	910	990
Phase 2, Task 3:	Extend Wastewater Lines	-	-	880	3,500
Phase 2, Task 4:	Extend Water Lines	526	1,996	-	-
Phase 2, Task 5:	Extend Water Lines	599	1,590	-	-
Phase 2, Task 6:	Extend Water Lines	963	2,021	-	-
Total:		2,554	7,429	2,090	4,790



Potential Phase 1 Connections

- ❖ 50 properties were found to be using private wells on parcels adjacent to FGUA water distribution lines.
- ❖ Roughly 300 properties adjacent to existing wastewater gravity collection lines are using septic tanks.





Potential Schedule (Phase 1)

ID	📅	Task Name	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	📅	Phase 1		[Bar]									
2	📅	Phase 2, Task 1 W			[Bar]								
3	📅	Phase 2, Task 2 WW				[Bar]							
4	📅	Phase 2, Task 3 WW					[Bar]						
5	📅	Phase 2, Task 4 W						[Bar]					
6	📅	Phase 2, Task 5 W							[Bar]				
7	📅	Phase 2, Task 6 W								[Bar]			
8	📅	Phase 3									[Bar]		
9	📅	Phase 3 -Task Force		[Bar]									



Potential Costs (Phase 1)

	Private wells Removed		Septic tanks Removed		Cost (\$M)
	Current	Future	Current	Future	
Phase 1:	50	50	300	300	\$0.5
Phase 2, Task 1:	416	1,772	-		\$6.7
Phase 2, Task 2:	-		910	990	\$8.4
Phase 2, Task 3:	-		880	3,500	\$26.6
Phase 2, Task 4:	526	1,996	-		\$7.2
Phase 2, Task 5:	599	1,590	-		\$7.5
Phase 2, Task 6:	963	2,021	-		\$7.5
Total:	2,554	7,429	2,090	4,790	\$64.4M



Taking the Initiative

- ❖ We as stewards of the natural resources should not wait for a crisis. We must be willing to create new options and solutions from the following standpoints:
 - ❖ Land Use
 - ❖ Building Codes
 - ❖ Utility Expansion
 - ❖ Governance Options



Strategies for Success

- ❖ Develop a strategy that would accomplish the following:
 - ❖ Begin today identifying those concentrated areas of private wells and septic tanks adjacent to or in close proximity of FGUA infrastructure.
 - ❖ Identify other areas of concentration that will make capital investment cost effective.
 - ❖ Explore reliable and proven solutions.
 - ❖ Explore use of decentralized waste water technology to serve outlying areas not easily reached.
 - ❖ Develop funding strategies that will be reasonable, fair and consistent with Lee County program.
 - ❖ Develop a comprehensive intergovernmental approach.



Keys for Success

- ❖ Regulations must be coordinated and adequately funded for enforcement and consistent with state mandated policies.
- ❖ Education – all governmental entities and the community must be continually apprised and updated as to the situation, its magnitude and the solutions.
- ❖ Information processor – the program should make sure all decision makers have been provided with adequate information needed to take the appropriate actions.
- ❖ Reorganization – strong consideration given to the method in which the septic tank inspection and maintenance programs are carried out.

Barriers to Success

- ❖ Lack of Consensus on Magnitude of Problem
- ❖ Lack of Political Will to Consider:
 - ❖ Mandatory Connection Enforcement
 - ❖ Enhanced Level of Communication
 - ❖ Intergovernmental Approach
 - ❖ Consideration of Non-Traditional Solutions
- ❖ Unwillingness to begin now:
 - ❖ A small step is still a step forward
 - ❖ No step is a step backward

Recommendations

- ❖ **Our plan will emphasize the following:**
 - ❖ Develop program that will be consistent with Lehigh Acres “sense of place”.
 - ❖ Develop extensive list for “Keys to Success” for the program.
 - ❖ Identify list of options to address such issues as “centralized vs. temporary solutions” and “onsite” solutions. This program should be designed in such a way so that one size does not fit all.

Recommendations

❖ **Emphasize, continued**

- ❖ Properly identify the magnitude of the problem for all governmental entities involved and the community.
- ❖ Establish coordinated program that will continue forward in a successful manner regardless of governance.
- ❖ Develop long-term funding strategy that is deemed to be both fair and reasonable.

What can we be doing today as stewards of the environment to prevent continued proliferation of private water wells and septic tanks?

