

**USER PERCEPTIONS OF ADVANCED
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS (OSTDS)
IN FLORIDA
FLORIDA DEPARTMENT OF HEALTH
SURVEY RESULTS**

**REGULATORS
MAINTENANCE ENTITIES
INSTALLERS
ENGINEERS
MANUFACTURERS
OWNERS AND USERS**

**FSU Survey Research Laboratory
College of Social Science Data Center
Florida State University**

June 2, 2011



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Summary

USER PERCEPTIONS OF ADVANCED ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS (OSTDS) IN FLORIDA FLORIDA DEPARTMENT OF HEALTH

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs conducted a study to measure the practices and perceptions of various user groups about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study included aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters.

Groups Identified. Beginning in April, 2009, The FSU Survey Research Laboratory and Bureau staff began identifying and drafting survey instruments for six groups of user groups.

- Regulators (Florida County Departments of Health)
- Maintenance Entities
- Installers
- Engineers
- Manufacturers
- Owners and Users

Developing Sampling Frames. Beginning in August 2009, the Bureau staff began identifying and compiling sampling frameworks and lists for each of the user groups. A sampling plan for each user group was developed. The following table lists the number of surveys sent to each user group.

User Group	# Surveys Sent
Regulators	67
Maintenance entities	226
Installers	709
Engineers	164
Manufacturers	118
Owners and Users	3,793

Fieldwork and Data Collection. The mailing of the surveys began in March 2010. Data collection and analysis continued through December 2010. The number of surveys returned by each user group is listed in the summary response tables below. These tables include the total number of surveys sent, the number that were “non-deliverable” (bad address, moved, etc) and the number returned. Regulators, engineers, and manufacturers could indicate whether or not the survey applied to them. The “completed” number of surveys for these users refers to those respondents who used advanced onsite septic systems (i.e., regulated, engineered, or manufactured an advanced septic system).

Disposition of Regulator Surveys

Regulators	
% Complete	83.6%
% Return (Completed and "No System")	100.0%
Completed	56
Returned "No Advanced Systems"	11
Number Delivered	67
Non-Deliverable	0
Number Mailed	67

Disposition of Maintenance Entity Surveys

Maintenance Entities	
% Complete	16.3%
Completed	33
Number Delivered	202
Non-Deliverable	24
Number Mailed	226

Disposition of Maintenance Entity Surveys

Maintenance Entities	
% Complete	16.3%
Completed	33
Number Delivered	202
Non-Deliverable	24
Number Mailed	226

Disposition of Engineer Surveys

Engineers	
% Complete	8.2%
% Return (Completed and "No System")	12.0%
Completed	13
Returned "No"	6
Number Delivered	158
Non-Deliverable	6
Number Mailed	164

Disposition of Manufacturer Surveys

Manufacturers	
% Complete	11.2%
% Return (Completed and "No System")	16.3%
Completed	11
Returned "No"	5
Number Delivered	98
Non-Deliverable	20
Number Mailed	118

Disposition of Owner and User Surveys
Based on Bureau of Onsite Sewage Programs' Data Base

	Total in Data Base	Number Sent	Number Completed	Percent Completed
All Types of Systems	13,576	3,793	660	17.4%
Aerobic Treatment Units (ATUs)	12,161	2,378	450	18.9%
ATU Residential	8,660	1,279	237	18.5%
ATU Commercial	549	549	100	18.2%
ATU Unknown	2,952	550	113	20.5%
Performance-Based Treatment system (PBTS)	1,231	1,231	195	15.8%
PBTS Residential	1,044	1,044	190	18.2%
PBTS Commercial	31	31	4	12.9%
PBTS Unknown	156	156	1	0.6%
Innovative System	184	184	15	8.2%
Innovative Residential	175	175	15	8.6%
Innovative Commercial	9	9	0	0.0%

Analysis. This report includes information from the Regulator, Maintenance Entities, Installers, Engineers, Manufacturers and Owner and User surveys of user perceptions. This report contains an overview of the findings for each user group followed by the survey results. For the Owners and Users, a crosstabular analysis for some of the questions is also provided.

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Regulators

Maintenance Entities

Installers

Engineers

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Overview

Advanced Onsite Systems in Florida: Survey of Regulators

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs conducted a study to measure the practices and perceptions of regulators about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study included aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters. Surveys were mailed to all 67 County Health Departments. Surveys were mailed beginning in March 2010. Of the 67 mailed, 11 Counties did not have any Advanced Systems. (See Figure 1). The 56 remaining counties all returned the survey instrument for a completion rate of 100 percent.

Figure 1
Disposition of Regulator Surveys

Regulators	
% Complete	83.6%
% Return (Completed and "No System")	100.0%
Completed	56
Returned "No Advanced Systems"	11
Number Delivered	67
Non-Deliverable	0
Number Mailed	67

Systems Installed. The counties were asked to report the number of systems located in their county.

- **ATUs.** Ten of the 56 counties had 5 or less ATU units; thirteen reported 6 to 15 ATUs and ten counties had 16 to 30 ATU units. Ten counties reported between 30 and 100 ATUs. Twelve counties have over 100 ATU units with 4 counties reporting more than 1,000 ATUs.
- **PBTS.** Sixteen of the 56 counties with Advanced Systems have no PBTS units. Twenty-five counties have between 1 and 10 PBTS units and twelve counties report having between 10 and 100 PBTS units. Only five counties have over 100 PBTS units with 373 as the most PBTS units in a county.
- **Innovative Systems.** Forty-five of the 56 counties with Advanced Systems did not have Innovative Systems in their county. The remaining 11 counties have between 1 and 8 Innovative Systems.
- **Sand or Gravel Filters.** Fifty of the counties with Advanced Systems reported that they had no sand or gravel filters. Three counties had one, one county had 15, and one county reported 87 sand or gravel filters in their county. One county reported having 200 to 500 sand or gravel filter systems in their county.

Inspection Personnel. Counties with Advanced systems were asked a series of questions about inspection personnel.

- Most of the counties with Advanced Systems have less than one FTE assigned to conduct ATU/ PBTS inspections (28 of 56). Twenty-one counties have 1 to 2 FTEs and four counties have 3 to 5 FTEs assigned by their county health department to conduct the inspections. One county, Monroe, has 14 FTEs for the inspection function.
- Nearly three-fourths (39 of 56) of the counties reported that turnover of personnel who conduct inspections on Advanced Systems was not a problem in their county. Turnover of inspectors in Gulf and Franklin county were described as “A Serious Problem: and Walton County described its turnover in inspection personnel as “A Very Serious Problem”.

Contractors and Maintenance Entities. The counties were asked about the number of contractors and licensed maintenance entities located in their counties.

- For the majority of the countries with Advanced Systems (33 of 56), there are between 1 and 5 contractors installing systems in their counties. In four counties, there were no contractors installing Advanced Systems. Eighteen counties have between 6 and 20 contractors. Charlotte County reported having the most contractors installing Advanced Systems (n=23).
- Almost all counties felt the number of contractors was adequate to meet their county’s needs (51 of 54). Only three counties (Charlotte, Clay, and Escambia) did not feel that the number of contractors available to install Advanced Systems was adequate.
- For the majority of the countries with Advanced Systems (33 of 56), there are between 1 and 5 licensed maintenance entities providing services in their counties. In four counties, there were no maintenance entities servicing Advanced Systems. Seventeen counties have between 6 and 20 maintenance entities. Lee County (n=22) and Charlotte County (n=23) reported having the most maintenance entities in their counties.
- About one-third of the counties (16 of 56) felt that the number of licensed maintenance entities was inadequate to meet their county’s needs.

Information Management and Recordkeeping. The counties were asked to respond to a number of questions concerning how they kept records and used various data bases.

- **Entering & Maintaining ATU Information.** Nearly all of the counties use the EH database for construction permit records (51 of 55) and over three-fourths use this database for ATU operating permit records (44 of 55). Paper files are also in use by 47 of the 55 counties. Few counties (8 of 55) use the Carmody database to enter and maintain ATU information. Eighteen counties use spreadsheets and tables.
- **Entering & Maintaining PBTS unit Information.** Nearly all of the counties use the EH database for construction permit records (38 of 44) and PBTS operating permit records (39 of 44). Paper files are also in use by 37 of the 44 counties with PBTS systems. Few counties (9 of 44) use the Carmody database to enter and maintain PBTS information. Fifteen counties use spreadsheets and tables.

- **Keeping Track of Monitoring Requirements.** Most of the counties(40 of 56) look at paper files to keep track of monitoring requirements for different types of ATUs and PBTS units. Spreadsheets (19 of 56), the EH Construction data base (17 of 56), and the EH Facilities data base (17 of 56) are also used to keep track of monitoring requirements. Only 9 of the 56 counties use the Carmody data base. In seven counties, monitoring is not required and in two counties, the County Health department does not do the tracking.
- **Keeping Track of Monitoring and Inspection Results .** Most of the counties (43 of 56) look at paper files to keep track of monitoring and inspection results for ATUs and PBTS units. The EH Operating permits data base (26 of 56) and spreadsheets (18 of 56), are also used to keep track of monitoring requirements. Only 9 of the 56 counties use the Carmody data base. In four counties, monitoring is not required and in one counties, the County Health department does not do the tracking.

Monitoring and Sampling. Counties reported about their monitoring and sampling activities.

- Counties were asked about the extent they used sampling to monitor ATU and PBTS compliance. Forty five of the 56 counties reported they used limited sampling; 2 counties sampled when the system looked bad when conducting an annual inspection or following up on a complaint; one county sampled for special projects, and one county sampled a percentage of the systems in the county regularly at least once a year. Seven counties specified some other sampling procedure.

Counties with limited sampling (n=45) were asked why they used this approach. Nearly half (27 of 45) said they performed limited sampling since sampling was not required. Limited resources (10 of 45), limited staff (7 of 45), and visual inspections sufficient to ensure compliance (10 of 45) were also reasons offered for limited sampling. Only two counties cited no access to the Advanced System as a reason for limited sampling.

- About two-thirds of the counties (38 of 56) have developed a checklist or form to use when conducting inspections of Advanced Systems.
- Nearly all of the counties observe if conditions have changed (51 of 56);that the power is on (50 of 56); observe and record the general appearance of the treatment system functioning (50 of 56); observe the smell from the treatment system (49 of 56) ; check that air supply is running (47 of 56); and observe the wetness in the drain field area. Fewer counties trigger the alarm (39 of 50); observe ponding depth in drain field; open the observation port (20 of 56); and leave the surface undisturbed (19 of 56). Few counties trigger pumps (15 of 56; open tanks to observe inside the system (15 of 56); record number/duration of alarms (10 of 56); record water meter reading (4 of 56); and check present/supply of chlorination.

Permitting. Counties answered a series of questions about the permitting process.

- Counties “rarely” find substantial changes to the permitted design during construction inspections. (40 of 56 counties reported “Rarely”.)
- **Applications for ATUs.** County Health Department staff (52 of 56) most frequently evaluate applications for ATUs; In 5 counties, the County Health Department Engineer evaluates the application while the Bureau Engineer in three counties evaluate the ATU applications.
- **Applications for PBTS.** While County Health Department staff (41 of 52) most frequently evaluate applications for PBTS; the Bureau Engineer in 19 counties evaluates the ATU applications. In 6 counties, the County Health Department Engineer evaluates the application.
- The Bureau Engineer is most likely to evaluate Innovative systems in the county (31 of 44) followed by County Health Department staff (20 of 44). Only two counties report that the County Health Department Engineer evaluates applications for Innovative Systems.
- Given that Innovative Systems are limited, the Bureau Engineer (26 of 51), County Health Department files (14 of 51), and the State Health Office Mediator (11 of 41) are the major sources for checking out a given system are already filed.
- Nine counties have passed ordinances that require standards for Advanced Systems that are more stringent than those required by the State: Brevard, Charlotte, Citrus, Collier, Franklin, Manatee, Orange, Volusia, and Wakulla counties.

Compliance Enforcement and Corrective Action. Counties were asked about their compliance enforcement and corrective action activities.

- The bulk of the counties (21 of 56) reported that there were no Advanced Systems that required compliance enforcement action. Fourteen counties reported that between 1 and 10 Advanced Systems required enforcement action while twelve counties had between 11 and 75 Advanced Systems that required action. Eight counties reported 100 or more compliance enforcement actions. Monroe (n=625), Brevard (n=500), Lee (n=480), Franklin (n=466), and Charlotte (n=267) counties had the largest number of Advanced Systems that required compliance enforcement action.
- About 25 percent (13 of 42) of the Advanced Systems requiring compliance enforcement did not require multiple enforcements or corrective actions to achieve compliance. Four counties reported between 5 and 10 percent of these systems required multiple efforts while 8 counties stated between 20 and 50 percent required multiple enforcement actions. In 17 counties, over 50 percent of the Advanced Systems required multiple enforcement or corrective actions to achieve compliance.
- Paper work issues was the most prevalent reason that compliance enforcement actions were required (39 of 44). Only 7 of 44 counties reported that technical/ sewage issues were the reason for compliance enforcement.
- Counties were asked to rate the success of actions in achieving compliance for corrective action: “Rarely”, “Some of the Time”, “Most of the Time”, or “All of the Time”. Notice to correct (30 of 48 “Most” or “All” of the time) and citation/ fines (19 of 48 “Most” or “All” of the time) were the most successful strategies. Revocation of the permit (11 of 48 “Rarely Successful”) and Re-engineering of the system (11 of 48 “Rarely Successful”) were least successful in achieving compliance for systems that require corrective action.

Maintenance Entity Performance. Counties were asked questions about the way maintenance entity performs.

- Maintenance entities tend to submit their reports by paper. Forty-five counties indicated that 75% to 100% of maintenance entities in their county submitted report by paper. Only eight counties had 75% to 100% of the maintenance entities submit reports using the Carmody database.
- Two of the 56 counties rated the overall quality of maintenance entity reports as “Excellent”, 33 as “Good” and 14 as “Fair” and 7 “Poor”.
- The majority of counties (32 of 55) felt that inspection reports about the same system produced by the maintenance entity and the County Health Department usually agree. Seven counties felt that maintenance entity reports usually indicated better performance than County reports. Two counties stated that county inspections usually indicated better performance. Fourteen said it “depends on the maintenance entity” whether the reports agree or not.
- Counties were asked how they obtained the results of effluent sampling performed by maintenance entities. In the majority of counties (31 of 54), the maintenance entity reports the results to the County Health Department. In nine counties, the county receives a copy of the effluent sampling results from the lab. In 16 counties, effluent sampling by maintenance entities does not take place and in three counties, the Health Department does not get reports and the maintenance entity keeps the results.
- Counties were asked how frequently customer complaints or comments about their maintenance entity occurred: “Rarely”, “Some of the Time”, “Most of the Time”, or “All of the Time”. Cost of the maintenance contract (33 of 51 “Most” or “All” of the time) and being able to choose between several maintenance entities (33 of 51 “Most” or “All” of the time) were the most frequent complaints. In eleven counties, level of service was a complaint “Most” or “All” of the time.

Open-Ended Questions Comments

The survey of Regulators included a series of open-ended questions. The Responses to these questions are included in the Regulator Survey Results.

4. Please describe what, in your opinion, are the major contributors to turnover.

10. How could your county health department RECORDKEEPING PROCESS for advanced systems be improved and made more efficient?

16. Has your county passed any ordinances that require standards for advanced systems that are MORE STRINGENT than those required by the State? (n=56)

a. Yes Please describe.

TRAINING AND EDUCATION NEEDS

25. Please tell us about any training needs for county staff, maintenance entities, or consumers that you would like to be made available regarding advanced systems.

a. County Health Department Staff Education / Training Needs:

b. Maintenance Entity Education / Training Needs:

c. Consumer Education / Training Needs:

d. Installer/Engineer Education / Training Needs:

GENERAL ASSESSMENT

27. Please tell us about what aspects of the advanced system program in Florida are currently working well as it relates to construction permitting, design, installation, inspection, maintenance, and operating permitting:

28. Please tell us about any changes or improvements you would like to see in regards to the following:

a. ATU regulation, permitting, and management:

b. PBTS regulation, permitting, and management:

c. Maintenance entity regulation, permitting, and management:

d. Innovative System regulation, permitting, and management:

e. Sand / Gravel Filter regulation, permitting, and management:



Advanced Onsite Systems in Florida: Survey of Regulators

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Regulators	
% Complete	83.6%
% Return (Completed and "No System")	100.0%
Completed	56
Returned "No Advanced Systems"	11
Number Delivered	67
Non-Deliverable	0
Number Mailed	67

NUMBER OF SYSTEMS

1a. How many of the following systems are in your county? (n=56)	
Aerobic Treatment Units (ATU)	
Systems	Regulators
0/NA	2
1-5	10
6-15	13
16-30	10
31-60	6
61-100	3
130	1
143	1
146	1
163	1
221	1
224	1
282	1
370	1
>1000	4
Total	56

1b. How many of the following systems are in your county? (n=56)

Performance-Based Treatment Systems (PBTS)

Systems	Regulators
0/NA	16
1	11
2	5
3	1
4	2
6	2
7	2
10	2
15	1
17	1
26	2
28	1
31	1
32	1
34	1
49	1
75	1
135	1
201	1
224	1
257	1
373	1
Total	56

1c. How many of the following systems are in your county? (n=56)

Sand or Gravel Filters

Systems	Regulators
0/NA	50
1	3
15	1
87	1
200-500	1
Total	56

1d. How many of the following systems are in your county? (n=56)

Innovative Systems	
Systems	Regulators
0/NA	45
1	6
2	2
3	1
5	1
8	1
Total	56

INSPECTION PERSONNEL

2. How many FTEs are assigned to conduct ATU/PBTS inspections by your county health department? (n=52)

Number of FTEs	Regulators
<1	28
1-2	19
2-4	4
14	1
Total	52

3. Please indicate the number of people in your county health department with the following years of experience inspecting advanced systems: (n=56)

Experience	Number of People
Less than 1 year	0 - 5
1 to 2 years	0 - 3
3 to 5 years	0 - 7
Over 5 years	0 - 9

4. How would you describe turnover of personnel who conduct inspections on advanced systems in your county health department? (n=55)

- 39** Not a problem
- 11** Somewhat a problem
- 2** A Problem
- 2** A Serious Problem
- 1** A Very Serious Problem

Please describe what, in your opinion, are the major contributors to turnover.

* OVER THE LAST 2 YEARS OUR TURNOVER HAS BEEN MINIMAL. HOWEVER, PREVIOUS TO THAT WE DID HAVE A PROBLEM WITH MAINTAINING OSTDS CERTIFIED INSPECTORS.	Not a Problem
* N/A	Not a Problem
* LACK OF OPPORTUNITY FOR ADVANCEMENT WITHIN THE HEALTH DEPARTMENT; SEEK HIGHER PAY	Not a Problem
* IN THE CURRENT ECONOMY TURNOVER IS NOT AN ISSUE. DURING A THRIVING ECONOMY, CONTRIBUTORS TO TURNOVER WOULD BE LOW PAY AND INABILITY TO ADVANCE.	Not a Problem
* PAY. UNABLE TO GIVE PAY RAISES	Not a Problem
* NOT RELATED TO ATU's	Not a Problem
* SALARY; ADVANCEMENT OPPORTUNITIES	Not a Problem
* NOT ENOUGH TRAINING. SHOULD PROVIDE HANDS ON TRAINING (ACTUAL INSPECTIONS OF ATU's.)	Not a Problem
* MOST NEW EMPLOYEES ARE NOT TRAINED TO REVIEW/INSPECT ADVANCED SYSTEMS	Somewhat a Problem
* PAY; NO ROOM FOR ADVANCEMENT	Somewhat a Problem
* CAREER ADVANCEMENT, PAY	Somewhat a Problem
* FEW SYSTEMS. SO THEY CAN ALL BE INSPECTED BY ONE INSPECTOR. IF THEY LEAVE ONLY SUPERVISOR HAS INSPECTION KNOWLEDGE.	Somewhat a Problem
* SALARY ISSUES	Somewhat a Problem
* LOW PAY. HIGH RESPONSIBILITY	Somewhat a Problem
* THE TECHNICAL AND PHYSICAL DIFFICULTIES OF THE PROGRAM IN GENERAL.	Somewhat a Problem
* COORDINATION OF MAINTENANCE AGREEMENTS, OPERATING PERMITS, ENTITY INSPECTIONS, ENTITY PERMITS, ETC.	Somewhat a Problem
* UNABLE TO COMPETE FINANCIALLY WITH LARGER COUNTIES. SO WIND UP TRAINING PERSONNEL ANF THEN LOSING THEM T OTHER COUNTIES.	Somewhat a Problem
* PAY	Somewhat a Problem
* LAYOFFS	A Problem
* INADEQUATE PAY FOR THIS AREA; NO CHANCE OF PROMOTION; DISCIPLINE	A Problem
* BUDGET REDUCTIONS AND/OR UNCOMPETITIVE SALARIES	A Problem
* FRANKLIN COUNTY IS A RURAL COUNTY. MOST EMPLOYEES HIRED WERE SINGLE AND WANTED TO BE CLOSER TO A LARGER CITY.	A Serious Problem
* PAY	A Very Serious Problem

CONTRACTORS AND MAINTENANCE ENTITIES

5. How many CONTRACTORS INSTALL advanced systems in your county? (n=56)

a.	Number of Contractors	Regulators
	0	4
	1-5	33
	6-10	13
	11-20	5
	23	1
	Total	56
b. Is this number adequate to meet your county's need?		
	51 Yes	3 No

6. How many LICENSED MAINTENANCE ENTITIES provide maintenance services for advanced systems in your county? (n=56)

a.	Number of Licensed Maintenance Entities	Regulators
	0	4
	1-5	33
	6-10	12
	11-20	5
	20-23	2
b. Is this number adequate to meet your county's need? (n=53)		
	37 Yes	16 No

INFORMATION MANAGEMENT AND RECORDKEEPING

7. Please indicate which of the following methods your county health department uses to ENTER AND MAINTAIN INFORMATION (such as design flow, wastewater type, tank sizes, manufacturer, model) for each type of advanced system. *[Please ✓ All That Apply.]*

	ATUs (n=55)	PBTS (n=44)
EH Database construction permit records	51	38
EH Database operating permit records	44	39
Carmody database	8	9
Spreadsheets/Tables	18	15
Paper files	47	37
Other electronic database(s)	2	2

8. How does your county health department keep track of THE MONITORING REQUIREMENTS for different types of ATUs and PBTS? [Please ✓ All That Apply.] (n=56)

Monitoring Requirement Examples

ATUs -- >1500 gpd, residential/commercial.

PBTS -- setback and authorized flow allowance, secondary, advanced secondary, Florida Keys.

17	EH Construction database	40	Look at paper files
11	EH Facilities database		
9	Carmody database		
19	Spreadsheet/table	7	Monitoring not required
4	Electronic database	2	County health department does not keep track
3	Other [Please Specify.]		
	* MAINTENANCE ENTITY RECORD KEEPING		
	* AME ANNUAL INSPECTION		

9. How does your county health department keep track of the MONITORING AND INSPECTION RESULTS for ATUs and PBTS? (n=56)

26	EH database Operating permits		
9	Carmody database		
18	Spreadsheet/table		
4	Electronic data base	4	Monitoring not required
43	Look at paper files	1	County health department does not keep track
4	Other [Please Specify.]		
	* MAINTENANCE ENTITY RECORD KEEPING		
	* CALENDAR (ONLY 5 SYSTEMS). COURTESY CALL IS MADE A MONTH PRIOR TO DUE DATE OF INSPECTION FROM MAINTENANCE ENTITY. IF THIS ISN'T DONE MAINTENANCE ENTITY SEES TO FORGET ABOUT THEIR OBLIGATION TO INSPECT.		
	* AME ANNUAL INSPECTION		

10. How could your county health department RECORDKEEPING PROCESS for advanced systems be improved and made more efficient?

- * ADOPT ONLINE PROGRAM ACCESSABLE BY CONTRACTORS AND HEALTH DEPARTMENT WHERE RECORDS CAN BE SUBMITTED AND STORED.
- * AN UPLOAD FROM EHD TO CARMODY WOULD REDUCE STAFF TIME TO ENTER INSPECTIONS AND FACILITIES TWICE. ALSO A STATE REQUIREMENT FOR MAINTENANCE ENTITIES TO UTILIZE CARMODY FOR SUBMISSION OF INSPECTIONS WOULD CUT DOWN ON STAFF HAND ENTERING INSPECTIONS FROM THE
- * BE ABLE TO UTILIZE DATA BASE FOR TRACKING, MONITORING, ETC. INSTEAD OF
- * BY MAKING EH DATABASE MORE USER FRIENDLY FOR TRACKING SYSTEM AND INSPECTION DATA. THE CURRENT APPLICATION USES SOMEWHAT A 'CATCH ALL' FORM WHICH IS NOT VERY USER FRIENDLY OR HELPFUL FOR ATU AND PBTS INSPECTIONS. IT WOULD ALSO BE HELPFUL TO BE ABLE TO IMP
- * BY UPDATING ELECTRONIC FORMS IN EHD
- * COMBINE REHOST SYSTEMS AND REPORT SYSTEM INTO ONE PROGRAM THAT WORKS. THIS WOULD ELIMINATE HAVING TO VIEW TWO SEPARATE DATA BASES.
- * COMPLETE PAPERLESS FILE KEEPING. USING ONLY EHD FOR KEEPING OFFICIAL RECORDS.
- * CONTRACTORS USE CARMODY TO INPUT REPORTS; UPDATES; CURRENT FORMS HO; LOCAL CHD USE CARMODY TO MANAGE OP'S.
- * CURRENTLY NOT A PROBLEM
- * DUE TO LOW NUMBER OF SYSTEMS RECORD MAINTENANCE ISN'T A PROBLEM, AUTOMATIC PENALTIES SHOULD BE CONSEQUENCE OF MAINTENANCE ENTITIES FAILURE TO PERFORM TIMELY SAMPLING AND/OR INSPECTION.
- * EH DATABASE BEING UPGRADED SO YOU CAN USE IT FOR PBTS, MONITORING
- * EHD SHOULD HAVE HELD FOR AME OR PBTS ME INSPECTIONS OR AT LEAST INSPECTION DATES TO BE ENTERED. WHILE CARMODY IS HELPFUL IN THIS PROCESS, USING TWO DIFFERENT DATABASES SEEMS REPETITIVE (UNNECESSARY).
- * ELIMINATE DOUBLE DATA ENTRY BY PROVIDING A COMMUNICATION PORTAL BETWEEN EHD AND CARMODY
- * ENHANCING EHD TO ACCOMMODATE TRACKING OF PERMIT AND CONTRACTOR INSPECTIONS
- * HAVE ALL INFORMATION IN ONE DATABASE- OWNER INFORMATION, MAINTENANCE ENTITY INFORMATION, CHD INFORMATION AND INSPECTION DATA. CARMODY WILL DO THIS BUT NOT REQUIRED FOR MAINTENANCE ENTITIES.
- * IF ALL SYSTEMS WERE REQUIRED TO USE CARMODY IT WOULD BE HELPFUL
- * IF SOME OF THE MAINTENANCE ENTITIES WOULD KEEP BETTER RECORDS AND BETTER TRACK OF WHEN INSPECTIONS/SERVICES ARE DUE IT WOULD HELP US A LOT.
- * IMPROVE EH DATABASE REPORTS. UPGRADE DATA INPUT INTO EH DATABASE
- * INPUT FILES INTO EH DATABASE
- * LAKE COUNTY DOES NOT HAVE ENOUGH PBTS TO REQUIRE IMPROVEMENTS IN THE RECORD KEEPING PROCESS.
- * MAKE ENVIRONMENTAL HEALTH DATA BASE SYSTEM USER FRIENDLY; THEN IT COULD BE MORE WIDELY UTILIZED.

10. How could your county health department RECORDKEEPING PROCESS for advanced systems be improved and made more efficient?

- * MORE TRAINING CLASSES FOR HOW TO ENTER THE SYSTEMS INTO REHOST
- * N/A
- * PROVIDE A STANDARDIZED DATA BASE, FORMS, ETC. THAT IS USED BY ALL COUNTY HEALTH DEPARTMENTS. PROVIDE A MEANS TO REMOTELY ENTER INSPECTION REPORTS ELECTRONICALLY SO DATA IS ONLY ENTERED ONE TIME. THIS WOULD SAVE TIME AND MONEY AND WOULD HELP WITH THE COUNT
- * PROVIDING PERSONNEL WITH ADEQUATE TIME FOR REVIEWING THESE PROJECTS. CURRENTLY IT IS DIFFICULT TO DEVOTE ADEQUATE TIME FOR THESE SYSTEMS.
- * RECORD KEEPING SHOULD IMPROVE WITH THE NEW RE-HOST SYSTEM.
- * REDUCE RECORD KEEPING REQUIREMENTS
- * REHOST AND CARMODY SHOULD UPDATE EACH OTHER. REHOST AND/OR CARMODY SHOULD POPULATE NOTICES AND CITATIONS. REHOST AND/OR CARMODY SHOULD TRACK NOTICES AND CITATIONS. REHOST SHOULD TRACK SAMPLES. REHOST SHOULD LINK NUISANCE COMPLAINTS AND COSTRUCTION PERM
- * REHOST MORE USER-FRIENDLY
- * SEND AUTOMATED OR COMPUTER GENERATED ALERTS FOR INSPECTIONS AND/OR MAINTENANCE MONITORING.
- * SPREADSHEET WORKS FINE FOR OUR LIMITED NUMBER OF SYSTEMS
- * SPREADSHEET WORKS FINE FOR OUR LIMITED NUMBER OF SYSTEMS
- * SPREADSHEETS WORK FINE. NO IMPROVEMENT NEEDED
- * STANDARDIZE TERM OF MAINTENANCE CONTRACTS (BEGIN AND END DATES); CLARIFY THE APPLICABILITY OF OPERATING PERMIT REQUIREMENTS; DEVELOP MORE USER-FRIENDLY SOFTWARE TO TRACE THE MANY COMPONENTS THAT REQUIRE RECORD KEEPING.
- * STRICTER REQUIREMENTS ON MANUFACTURERS AND MAINTENANCE ENTITIES
- * THE REPORTS(S) IN REHOST BE ACCURATE. THE METHOD OF PUTTING IN INSPECTIONS BE STREAMLINED.
- * THROUGH USE OF CARMODY DATABASE
- * UNKNOWN
- * UNTIL MORE SYSTEMS WOULD NOT BE REQUIRED
- * UPGRADE ENVIRONMENTAL HEALTH DATA BASE WITH FORMS THAT CAN BE UPLOADED IN THE FIELD. INITIATION OF PAPERLESS INITIATIVE.
- * WE ARE SATISFIED
- * WHEN WE GET MORE OF THESE SYSTEMS, WE'LL LOOK INTO IT. AS IT STANDS, WE'RE FINE MONITORING PAPER FILES.

MONITORING AND SAMPLING

11. How would you describe the extent to which your county uses sampling to monitor ATU and PBTS compliance? (n=56)

45 Limited sampling *[Please indicate all the reasons that apply.]*

27 Sampling not required

2 No access to system

7 Limited staff

10 Limited resources (money)

10 Visual inspection is sufficient to ensure compliance

12 Other *[Please Specify.]*

* NO SAMPLING

* NO SAMPLING IS REQUIRED FOR ATUs. HOWEVER, THE SECONDARY TREATMENT STANDARD PBTS's REQUIRING SAMPLING TO BE PAID FOR BY HOMEOWNERS.

* SAMPLE IF SYSTEM LOOKS BAD OR SUBMIT SAMPLES FOR PBTS

* SAMPLING PURSUANT TO SUBMITTED MAINTENANCE AND OPERATION PROCEDURES AS DESCRIBED WITH SUBMITTAL FOR PBTS.

* SAMPLING SUBMITTED BY ME's

* WE DON'T DO ANY SAMPLING

2 **Sample the systems that look bad when conducting annual inspection or following-up on a complaint.**

1 **Sample for special projects.**

1 **Sample a percentage of the systems in the county regularly at least once a year with the inspection.** *[Please indicate the percentage of the systems you sample.]*

100 % of advanced systems sampled

0 **Sample all systems.**

7 **Other** *[Please Specify.]*

* ANY SAMPLING DONE IS BY THE MAINTENANCE ENTITY

* BASED ON USE AND CONDITIONS

* LIMITED OPTIONS EVEN IF SAMPLES ARE POOR, NO REAL RECOURSE (IF ALL PARTS ARE OPERATIONAL)

* MAINTENANCE ENTITY SAMPLES ANNUALLY

* NOT REQUIRED WITH RESPECT TO ALL SYSTEMS

* ONLY 1 PBTS REQUIRES SAMPLING

* ONLY 1 PBTS REQUIRING SAMPLING

* ONLY ONE PBTS

* ONLY ONE SYSTEM IN COUNTY REQUIRES TESTING

* ONLY SAMPLES SYSTEMS THAT ARE REQUIRED TO BE SAMPLED. MAY SPOT CHECK OTHER SYSTEMS THAT APPEAR TO NOT FUNCTION PROPERLY.

* SAMPLING NOT ENFORCED

* SYSTEMS ONLY INSTALLED TO DECREASE MOUND HEIGHTS (DRIO IRRIGATION) -1 ACRE PARCELS

12. a. Has your county health department developed a checklist or form to use when conducting inspections of advanced systems? (n=53)

38 Yes Please attach a copy of the inspection form you use.

15 No

b. What activities are typically included during an inspection?

[Please ✓ All That Apply.] (n=55)

13 Do inspection at the same time a maintenance entity is doing a maintenance visit

15 Open tanks to observe inside of system

19 Leave surface undisturbed

20 Open observation port

39 Trigger alarm

15 Trigger pumps

50 Observe that power is on

47 Check that air supply is running

51 Observe if site conditions have changed

49 Observe smell from treatment system

43 Observe sounds from treatment system

4 Record water meter reading

10 Record presence, number, or duration of alarms

23 Observe ponding depth in drainfield

47 Observe wetness in drainfield area

50 Observe and record general appearance of treatment system functioning

4 Check presence and supply of chlorination tablets if system includes them

11 Other: *[Please describe.]*

- * CALL MAINTENANCE ENTITY IF PROBLEMS OBSERVED FOR FURTHER INVESTIGATION
- * CHECK CONDITION OF FILTER MEDIA, ATU FILTER EFFLUENT CLARITY
- * CHECK PAPER WORK
- * CRACKS IN COVERS, HIGH GRASS
- * ENSURE LIDS ARE SECURELY FASTENED DOWN.
- * ENSURE NO SANITARY NUISANCE EXISTS
- * REVIEW FILE PRIOR TO INSPECTION
- * REVIEW MAINTENANCE ENTITY INSPECTION LOGS
- * SEE ATTACHED FORM
- * SPEAK WITH OCCUPANT IF HOME
- * TAKE PHOTOS FOR FUTURE REFERENCE

PERMITTING

13. How common is it to find SUBSTANTIAL CHANGES TO THE PERMITTED DESIGN during construction inspections? (n=55)

40 Rarely 15 Sometimes	0 Frequently 0 Most of the Time
---	--

14. When applications come in who evaluates them? [Please ✓ All That Apply.]

Evaluates Applications

Applications for ...	County Health Department Engineer	County Health Department Staff	Bureau Engineer	Other [Please Specify.]
ATUs (n=56)	5	52	3	1 * 2nd Level Review
PBTS (n=52)	6	41	19	2 * 2nd Level Review
Innovative Systems (n=44)	2	20	31	1 * DOH

15. Knowing that a limited number of INNOVATIVE SYSTEMS APPLICATIONS are allowed to be installed, where do you check to find out how many permits for a given system are already filed? [Please ✓ All That Apply.] (n=51)

14 County Health Department files 3 Applicant 0 Contractor 11 Other [Please Specify.] * BUREAU STAFF * CARMODY * DATABASE * HAVE NOT HAD APPLICATION FOR INNOVATIVE SYSTEM * HAVE NOT HAD ONE * N/A * N/A * N/A * NO APPLICATIONS IN OUR COUNTY * NO INNOVATIVES IN COUNTY * NONE IN OUR COUNTY	11 State Health Office Mediator 26 Bureau Engineer
---	---

16. Has your county passed any ordinances that require standards for advanced systems that are MORE STRINGENT than those required by the State? (n=56)

47 No

9 Yes Please describe.

- * BREVARD DENSITY RESTRICTIONS
- * CHARLOTTE STRICT WORDING ON CONTRACTOR FOLLOWING MANUFACTURER'S MANUAL. INSPECTION EVERY 6 MONTHS OR 3 MONTHS AS REQUIRED.
- * CITRUS ANY NONRESIDENTIAL DEVELOPMENT OVER 1000 GALLONS AND ALL PROPERTY IN INDUSTRIAL ZONING. SEE CITRUS COUNTY ORDINANCE 42-142 AVAILABLE AT WWW.BOC.CITRUS.FL.US
- * COLLIER OUR OPERATING PERMITS ARE RENEWED ANNUALLY BY A COUNTY ORDINANCE.
- * FRANKLIN ATU ON ST. GEORGE ISLAND AND ALLIGATOR POINT OR WITHIN 150 FT OF WETLANDS
- * MANATEE LAND DEVELOPMENT CODE REQUIRING 400 FEET SETBACK FROM SURFACE WATERS. IF 400 FT CAN'T BE MET, PERFORMANCE BASED SYSTEM REQUIRED.
- * ORANGE THERE ARE COUNTY ORDINANCES. HOWEVER, THERE IS NOT A MEMORANDUM OD AGREEMENT BETWEEN THE COUNTY AND CHD. NO ENFORCEMENT ACTION BEING TAKEN BY CHD.
- * VOLUSIA YES, ORDINANCE REQUIRES ATU WHERE THE SYSTEM WILL BE WITHIN 200 FT OF MOSQUITO LAGOON OR INDIAN RIVER.
- * WAKULLA PBTS THAT ACHIEVE 10 MG/L OF TN OR LESS

COMPLIANCE ENFORCEMENT AND CORRECTIVE ACTION

17. Please indicate the number of advanced systems in your county that required COMPLIANCE ENFORCEMENT action in the past year. (n=55)

a.	Number of advanced systems requiring enforcement action.	Regulators
	0/NA	21
	1-10	14
	11-30	8
	40-47	2
	51	1
	74	1
	100	1
	140	1
	175	1
	267	1
	466	1
	480	1
	500	1
	625	1
	Total	55

b.	Percentage of these systems required <u>multiple</u> enforcement or corrective actions to achieve compliance (n=42)	Regulators
	0	13
	5-10	4
	20-50	8
	51-60	2
	75	3
	80	2
	83	1
	94	1
	100	8
	Total	42

18. COMPLIANCE ENFORCEMENT actions required in the past year were most often due to: (n=44)

- 39** Paperwork issues such as failure to pay fees on time or failure to provide updated paperwork when requested
- 7** Technical / sewage issues such as the system not working correctly
- 9** Other *[Please Specify.]*
 - * CUSTOMER UNHAPPY WITH MONOPOLY EXISTING FOR MAINTENANCE ENTITIES ON SOME PRODUCTS
 - * EXPIRED CONTRACTS
 - * MODIFICATIONS
 - * N/A
 - * N/A
 - * NOT HAVING A MAINTENANCE ENTITY
 - * REQUIRED INSPECTIONS/SAMPLING
 - * SANITARY NUISANCE- MAINTENANCE ENTITY RECEIVED LETTER AND CORRECTED PROBLEM
 - * SYSTEM SHUT OFF

19. In general, how often is each of the following successful in ACHIEVING COMPLIANCE for systems that require corrective action?

Achieve Compliance	RARELY	SOME OF THE TIME	MOST OF THE TIME	ALL OF THE TIME	DON'T KNOW
a. Notice to correct	7	9	24	6	2
b. Citation/ fine	5	2	16	3	11
c. Administrative complaint	6	4	6	2	17
d. Revocation of permit	11	1	1	2	21
e. Re-engineering of system	11	1	1	1	22
f. Other <i>[Please Specify.]</i>	1	1	0	1	7
* FORECLOSURE LETTER					
* ENVIR CONTROL BOARD					

MAINTENANCE ENTITY PERFORMANCE

20. Please indicate the percentage of reports submitted by maintenance entities in the following format:

Maintenance Entity Reports	PERCENT SUBMITTED BY FORMAT					
	5% or Less	10%	25%	50%	75%	100%
Paper (n=54)	1	0	7	1	7	38
Carmody Database (n=20)	8	2	1	1	7	1
Other [Please Specify]. (n=3)	2	0	0	0	0	1
* RECORD KEEPING INSPECTED DURING MAINTENANCE ENTITY INSPECTION (100% Submitted)						

21. How would you rate the OVERALL QUALITY of maintenance entity reports submitted to your county? (n=56)

EXCELLENT	GOOD	FAIR	POOR
2	33	14	7

22. When COMPARING INSPECTION REPORTS about the same system by the maintenance entity and the county health department, would you say: (n=55)

32	Both usually agree
7	Maintenance entity reports usually indicate better performance
2	County inspections usually indicate better performance
14	Depends on maintenance entity

23. How does your county obtain the results of effluent sampling performed by maintenance entities? [Please ✓ All That Apply.] (n=54)

9	County receives copy from lab
31	Maintenance entity reports results to County Health Department
3	County Health Department does not get reports; maintenance entities keep results
16	Effluent sampling by maintenance entity does not take place
7	Other [Please Specify.] _____
*	MAINTENANCE ENTITIES HAVE RECORDS ON FILE DURING INSPECTION
*	N/A
*	N/A. SAMPLING NOT REQUIRED ON ANY OF THE 5 SYSTEMS IN THE COUNTY
*	ONLY SYSTEM THAT REQUIRES SAMPLING IS NOT IN COMPLIANCE- NO SAMPLING
*	ONLY SYSTEM THAT REQUIRES SAMPLING IS NOT IN COMPLIANCE--NO SAMPLING
*	SUBMITTER TO TALLAHASSEE (INNOVATIVE SYSTEMS)

24. In customer COMPLAINTS OR COMMENTS related to their maintenance entity, how often do customers express concern about:

Customer Complaints	RARELY	SOME OF THE TIME	MOST OF THE TIME	ALL OF THE TIME
Cost of maintenance contract (n=51)	16	12	12	11
Being able to choose between several maintenance entities (n= 51)	17	11	12	11
Level of service (n= 49)	21	17	8	3
Other [<i>Please Specify</i>]. (n=7)	1	2	2	2
* COMPLETING SERVICE				
* COST OF OPERATING PERMITS				
* COST BENEFIT				
* DIFFERENCES IN COST FOR SERVICE BETWEEN PROVIDERS				
MAINT CONTRACTS OFTEN DO NOT COVER COST OF PUMP OUT OR REPLACEMENT OF ANY PARTS.				
* THE FEE PAYS FOR A VISUAL INSPECTION ONLY AND THE OTHER STUFF COSTS EXTRA.				
* N/A				
* UNAWARE UPON PURCHASE OF RESIDENCE				

TRAINING AND EDUCATION NEEDS

25. Please tell us about any training needs for county staff, maintenance entities, or consumers that you would like to be made available regarding advanced systems.

a. County Health Department Staff Education / Training Needs:

- * A STANDARDIZED INSPECTION PROTOCOL
- * AS ADVANCED TREATMENT SYSTEMS CHANGE INSPECTORS NEED TRAINING TO BE UP TO DATE AND KNOWLEDGEABLE WITH REGARD TO PAPERWORK AND INSPECTIONS.
- * BASIC ATU/PBTS TRAINING; ADVANCED ATU/PBTS TRAINING BY MANUFACTURER; INSPECTION PROCEDURES
- * BASIC INTRODUCTION TO OPERATION, MAINTENANCE, AND PERMITTING OF ADVANCED SYSTEMS
- * CARMODY DATBASE! WHAT PBTS/ATU IS
- * EXISTING TRAINING PROGRAMS ARE ADEQUATE.
- * FIELD INSPECTION TRAINING FOR PBTS
- * FIELD TRAINING
- * GENERAL INSPECTION TECHNIQUES FOR CONSTRUCTION AND ROUTINE INSPECTION
- * HANDS ON (SITE) FORMAL INSPECTIONS TRAINING OF ACTUAL SYSTEMS. DRAFT INSPECTION FORMS TO BE USED SO ALL DOH COUNTIES ARE CONSISTENT IN WHAT THEY ARE LOOKING AT.
- * HAVE FLORIDA ONSITE WASTEWATER ASSOCIATION CONDUCT LOCAL TRAINING
- * INSPECTION CRITERIA; PERMITTING AND APPROVAL GUIDELINES
- * MAKE TRAINING AVAILABLE MORE FREQUENTLY TO BE INFORMED OF PRODUCT CHANGES IN REGARDS TO 64E.
- * MONITORING THE SYSTEMS
- * MORE MANUFACTURE TRAINING IN DETAIL REGARDING UNITS
- * MORE SPECIFIC TRAINING BY THE MANUFACTURER ABOUT HOW THEIR SYSTEM WORKS AND WHAT TO LOOK FOR ON INSPECTION. A STANDARD INSPECTION FORM WOULD BE GOOD.
- * MORE TRAINING ON PBTS, SYSTEM DESIGNS
- * NEED MORE SPECIFIC TRAINING REGARDING THE VARIOUS TYPES OF AEROBIC TREATMENT UNTIS AND INSPECTION PROTOCOLS.
- * NEED TO ATTEND REFRESHER COURSE ON ADVANCED SYSTEMS; BEEN A WHILE
- * NEED TRAINING FOR ATU's/PBTS/INNOVATIVE SYSTEM
- * NO COMMENT AT THIS TIME
- * NO COMMENTS AT THIS TIME
- * NONE
- * NONE
- * REQUIRE MANUFACTURER TO PROVIDE REGIONAL TRAINING FOR DOH STAFF.
- * SAMPLE INSPECTION FOR ATU/PBTS; STEP BY STEP APPLICATION PROCEDURES; DETERMINATION OF SAMPLING REQUIREMENTS, INSTALLER REQUIREMENTS
- * SEE BELOW
- * SIMPLIFY RECORD KEEPING AND REDUCE REDUNDANCY.
- * STAFF COULD USE A LITTLE MORE TRAINING ON CONSTRUCTION INSPECTIONS.
- * STAFF NEED TRAINING TO PROPERLY REVIEW ENGINEER PLANS FOR ACCURACY
- * STAFF TRAINING IS ALWAYS NEEDED
- * SYSTEM FUNCTION, LEGAL MATTERS, CONTRACT LAW

a. County Health Department Staff Education / Training Needs:

- * SYSTEM PERMITTING, INSPECTION AND MAINTENANCE
- * THERE HAS BEEN NO OFFICIAL TRAINING FOR PROPER INSPECTION OF ADVANCED ON SITE SYSTEMS
- * THERE HAS BEEN NO OFFICIAL TRAINING FOR PROPER INSPECTION OF ADVANCED ONSITE SYSTEMS
- * TRAINING FROM THE MANUFACTURER WILL BE ADEQUATE
- * TRAINING ON INSTALLATION AND MAINTENANCE OF NUMEROUS TYPES OF ATUs WOULD BE HELPFUL. WE USUALLY SEE 2-3 TYPES OF UNITS.
- * TRAINING ON INSTALLATIONS AND MAINTENANCE ENTITY REPORTS
- * WOULD LIKE TO SEE MORE GENERAL ATU/PBTS TRAINING AS TO WHAT TO LOOK FOR. HOW SHOULD SYSTEM LOOK. ALL ITEMS THAT SHOULD BE CHECKED.

b. Maintenance Entity Education / Training Needs:

- * CONTINUING EDUCATION ON PRODUCT AS IT CHANGES
- * CUSTOMER SERVICE; RECORD KEEPING/SUBMISSION
- * FIELD HANDS OFTEN WORK UNDER THE LICENSE OF "THE" CONTRACTOR AND DO NOT HAVE THE SAME KNOWLEDGE.
- * FOLLOWING UP WITH MONITORING REQUIREMENTS
- * GENERAL INSPECTION TECHNIQUES FOR CONSTRUCTION AND ROUTINE INSPECTION
- * HOW TO KEEP MAINTENANCE ENTITY CONTRACT CURRENT. WHAT IS THEIR RESPONSIBILITY IF CONTRACT EXPIRES.
- * I WOULD LIKE FOR MAINTENANCE ENTITIES TO BE REQUIRED TO RECEIVE MORE TRAINING REGARDING ATU's AND PBTS
- * ITEMS THAT SHOULD BE INSPECTED EACH VISIT AND WHEN THEY SHOULD PULL SAMPLES
- * MAINTENANCE AGREEMENT MINIMUM REQUIREMENTS; MINIMUM SAMPLING REQUIREMENTS; MINIMUM REPORTING REQUIREMENTS
- * MAINTENANCE ENTITY MAY NEED ADDITIONAL TRAINING ON STATE REQUIREMENTS.
- * MINIMUM REQUIREMENTS, TRAINING, ceu's, TO ENSURE CONSISTENCY
- * MORE TRAINING FROM MANUFACTURER ABOUT HOW TO DO AN INSPECTION.
- * N/A
- * NEED MORE SPECIFIC TRAINING REGARDING THE VARIOUS TYPES OF AEROBIC TREATMENT UNITS AND INSPECTION PROTOCOLS
- * NEED TO ATTEND REFRESHER COURSE ON ADVANCED SYSTEMS; BEEN A WHILE
- * NEED TRAINING ON CARMODY. ALSO SHOULD HAVE TRAINING BY MANUFACTURER ON SYSTEMS.
- * NO COMMENTS AT THIS TIME
- * NONE
- * NONE
- * NONE IN COUNTY
- * OTHER COUNTY CONTRACTORS MAY WANT TO BE CERTIFIED TO BE ENTITIES BUT DO NOT KNOW HOW TO GET STARTED.
- * PAPERWORK, COMPLIANCE, SAMPLING
- * REQUIRE TRAINING AS STATED ABOVE (HANDS ON INSPECTION TRAINING OF ACTUAL SYSTEMS)
- * RULE REQUIREMENT COURSE, TECH TRAINING
- * SAMPLING METHODOLOGY, ACTUAL TRAINING, INSTEAD OF TACIT APPROVAL.
- * SAMPLING REQUIREMENTS FOR PBTS AND WHO COLLECTS THEM
- * SEE BELOW
- * THAT THEY ARE THE OPERATING PERMIT HOLDER; REPORTING REQUIREMENTS OF 64E-6FAC
- * THE IMPORTANCE OF SUBMITTING MAINTENANCE REPORTS TO CLIENT AND CHD
- * THEY NEED BETTER KNOWLEDGE OF THE RULE
- * TRAINING IN LAW/STATUTE AND CODE REQUIRING INSPECTIONS, MAINTENANCE CONTRACT AND AOP. ALSO CONTRACTOR DISCIPLINARY GUIDELINES FOR NON-COMPLIANCE.

c. Consumer Education / Training Needs:

- * ATU/PB INFORMATIONAL PAMPHLET
- * BASIC REQUIREMENTS FOR THEIR SYSTEMS (PERMITTING)
- * BASICS OF OWNING AN ADVANCED ONSITE TREATMENT AND DISPOSAL SYSTEM; OPERATING PERMIT AND MAINTENANCE AGREEMENT AWARENESS AND TRAINING
- * CONSUMER EDUCATION MATERIAL WOULD GO A LONG WAY
- * CONSUMER MAY NEED MORE EDUCATION ON THEIR SYSTEM
- * CONSUMER SHOULD KNOW ABOUT THE ADVANCED SYSTEMS @ LEAST AT TIME OF CLOSING
- * DAILY USE AND IMPORTANCE OF USE OF TREATMENT. KNOWLEDGE
- * EDUCATE CONSUMER OF THE IMPORTANCE OF THE MAINTENANCE ENTITY.
- * GENERAL TRAINING ON DIFFERENCES BETWEEN ATU, PBTS, AND INNOVATIVE SYSTEMS COMPARED TO REGULAR OSTDS
- * HOW TO CARE FOR THEIR SYSTEM
- * HOW TO TAKE CARE OF THEIR SYSTEMS AND REQUIREMENTS.
- * I HAVE NOTICED IN SOME PUBLIC MEETINGS THAT THE PUBLIC HAS A LOT OF QUESTIONS REGARDING ADVANCED SYSTEMS.
- * INFORMATIONAL FLIERS AND LETTERS
- * INFORMING CONSUMERS ABOUT WHAT SYSTEM THEY HAVE AND WHAT THEIR RESPONSIBILITY WILL BE TO MAINTAIN. AND TO INFORM THE NEXT BUYER ABOUT THE SYSTEM.
- * MAINTENANCE ENTITIES SHOULD INFORM OWNER
- * MAKE MORE PAMPHLETS AVAILABLE THAT THE HEALTH DEPARTMENT CAN GIVE OUT AT PERMITTING REGARDING THEIR PARTICULAR TYPE OF SYSTEM
- * MANY TIMES OWNERS THINK THEY ARE BEING FORCED BY HD TO INSTALL PBTS OR ATU. THEIR ENGINEER AND/OR AGENT DOES NOT TELL THEM THE WHOLE STORY, THEY ARE BEING GIVEN THE OPTION IN EXCHANGE FOR LOT FLOW OR SET BACK ALLOWANCES.
- * MORE MATERIALS TO GIVE CLIENTS ON ATU VERSUS CONVENTIONAL SEPTIC AND PROCE DIFFERENCES
- * NA
- * NEED MORE CUSTOMER FOCUSED TRAINING ON THE DO'Ss AND DON'T's OF MAINTAINING A ATU OR PBTS. THIS COULD POSSIBLY BE ACCOMPLISHED THROUGH HANDOUTS OR BROCHURES.
- * NO COMMENTS AT THIS TIME
- * NONE
- * OPERATING PERMIT REQUIREMENTS DISCLOSED AT REAL ESTATE SALE
- * PAMPHLET ON ADVANCED SYSTEM WOULD BE GREAT
- * PROVIDE PAMPHLET FOR ADVANCED SYSTEMS DESCRIBING BRIEFLY THE SYSTEM AND WHAT TO LOOK FOR ON A SYSTEM WHEN IT IS BEING USED
- * PSA's
- * SYSTEM COMPLIANCE AND MAINTENANCE
- * THE REQUIREMENTS TO KEEP MAINTENANCE ENTITY CONTRACT ON THE SYSTEM
- * TV COMMERCIALS ABOUT CARE OF SYSTEMS. TRIFOLD PAMPHLET FOR MAIL OUT.
- * WHY THEY NEED A MAINTENANCE ENTITY AND CONSEQUENCES FOR NOT HAVING THE SYSTEM INSPECTED/SERVICED ROUTINELY

d. Installer/Engineer Education / Training Needs:

- * 646 MINIMUM REQUIREMENTS
- * BASIC ATU/PBTS TRAINING; ADVANCED ATU/PBTS TRAINING BY MANUFACTURER; INSPETION PROCEDURES
CERTIFICATION AND TRAINING SHOULD BE AVAILABLE TO ALL SEPTIC CONTRACTORS TO PUT IN ALL ADVANCED SYSTEMS- NOT JUST WHO MANUFACTURER SELECTS.
- * CONTINUING EDUCATION ON PRODUCT AS IT CHANGES
- * GENERAL INSPECTION TECHNIQUES FOR CONSTRUCTION AND ROUTINE INSPECTION
- * HAVE FLORIDA ONSITE WASTEWATER ASSOCIATION CONDUCT LOCAL TRAINING
- * I DON'T KNOW. ?
- * MINIMUM REQUIREMENTS, TRAINING, CEU'S, TO ENSURE CONSISTENCY
- * N/A
- * N/A
- * NA
- * NO COMMENT AT THIS TIME
- * NO COMMENTS AT THIS TIME
- * NONE
- * PBTS, DRIP IRRIGATION AND LOW PRESSURE SYSTEM DESIGN
- * REGISTER WASTEWATER ENGINEERS AND REQUIRE SPECIFIC CEU's
- * REQUIREMENTS OF 64E-6FAC IN REGARDS TO SAMPLING/SET BACK ALLOWANCES/MAINTENANCE REPORTING
- * RULE TRAINING
- * SAMPLING REQUIREMENTS; DRILLING DRAIN FIELD DESIGN
- * SEEM TO BE DOING OK. KEEP UP THE GOOD WORK.

e. Manufacturer Education / Training Needs:

- * ?
- * DON'T KNOW
- * IMPROVE CONSTRUCTION TO WITHSTAND FL SUNSHINE /UV CONDITIONS. "GELCOAT LIDS." IMPROVE LATCHING AND LOCKING MECHANISMS TO SECURE MANHOLE COVERS.
- * INSTALLATION TRAINING
- * MANUFACTURER NEEDS TO BE AWARE OF STATE REQUIREMENTS AND ENSURE THEIR APPROVED ENTITY ARE TRAINED IN THESE RULES.
- * MANUFACTURER NEEDS TO PROVIDE MORE TRAINING AND CERTIFICATION FOR THE MAINTENANCE ENTITY.
- * METHODS FOR TREATMENT
- * MINIMUM REQUIREMENTS, TRAINING, CEU's, TO ENSURE CONSISTENCY
- * MODEL SPECIFIC TRAINING WOULD BE GREAT
- * MORE MATERIALS ON ATU AND MANUFACTURER TO PROVIDE WAYS FOR HEALTH DEPT AND INSTALLER TO BETTER INSPECT SYSTEM
- * N/A
- * N/A
- * NA
- * NEED TO PROVIDE MORE SPECIALIZED INSTALLATION, MAINTENANCE, AND SAMPLING TRAINING AT LOCATIONS AROUND STATE. SHOULD SET PRICING STANDARDS FOR MAINTENANCE CONTRACTS.
- * NO COMMENTS AT THIS TIME
- * NONE
- * NOT AWARE OF ANY. NEED TO BE WILLING TO CERTIFY MORE THAN 1 ENTITY; WILL PROBABLY REQUIRE A LAW TO CHANGE FOR THIS TO HAPPEN.
- * THE MANUFACTURER NEEDS TO PROVIDE TRAINING TO THE CHD WHEN ITS SYSTEMS ARE BEING INSTALLED
- * WEBSITE FOR CONSUMER MAINTENANCE AND AWARENESS

GENERAL ASSESSMENT

26. How would you rate the OVERALL TREATMENT PERFORMANCE of the systems in your county?

Type of System	EXCELLENT	GOOD	FAIR	POOR	NO BASIS TO JUDGE
a. ATU (n=54)	5	32	6	0	11
b. PBTS (n=47)	2	25	6	3	11

27. Please tell us about what aspects of the advanced system program in Florida are currently working well as it relates to construction permitting, design, installation, inspection, maintenance, and operating permitting:

- * "NOTICE OF PBTS IN USE"
- * ABILITY TO ACCESS INFORMATION FROM MANUFACTURERS ONLINE; ABILITY TO ACCESS BUREAU STAFF WITH QUESTIONS
- * ASPECTS THAT ARE WORKING WELL: PEOPLE CAN NOW DEVELOP LOTS THAT OTHERWISE ARE UNABLE TO BE DEVELOPED.
- * ATU REQUIREMENTS ARE CLEARLY DEFINED IN CODE
- * ATU REQUIREMENTS CLEARLY DEFINED IN CODE
- * ATUs
- * BECAUSE OF THE LIMITED NUMBER OF ADVANCED TREATMENT SYSTEMS PERMITTED IN OUR COUNTY WE DO NOT HAVE AN ACCURATE WAY TO GAUGE THIS.
- * CARMODY; EXCEL SPREADSHEET DEVELOPED BY STAFF
- * CONSTRUCTION DELAYS AND VARIANCES CAN BE AVOIDED BY PUMPING ADVANCED SYSTEMS. ALSO, ADVANCED SYSTEMS CLEARLY BETTER FOR ENVIRONMENT AND PUBLIC HEALTH THAN SEPTIC SYSTEMS.
- * CONSTRUCTION PERMITTING, DESIGN, INSTALLATION AND OPERATING PERMITS. HOWEVER, THE MAINTENANCE AND FOLLOW UP OF THESE SYSTEMS MUST BE GREATER IMPROVED ON.
- * DOH, ENGINEERS, INSTALLERS ARE VERY KNOWLEFEABLE IN PERMITTING, DESIGN, AND INSTALL
- * DUE TO THE LACK OF ADVANCED SYSTEM APPLICATION/PERMITS IN BROWARD COUNTY WE ARE UNABLE TO PROVIDE COMMENTS
- * ENGINEER DESIGNING SYSTEMS
- * I DON'T BELIEVE THE PROGRAM IS WORKING WELL AT MEETING ITS OBJECTIVES.
- * I THINK IT WORKS FINE THE WAY IT IS.
- * MAINTENANCE AND OPERATING PERMITTING ARE MOST DIFFICULT
- * MONTHLY ONLINE TRAINING IS HELPFUL BUT LIMITED. TALLAHASSEE FEEDBACK HAS IMPROVED.
- * N/A
- * NO COMMENTS
- * NOT WORKING: OVERALL MONITORING, MAINTENANCE ENTITY COMPLIANCE/OVERSIGHT. SOME HOMEOWNERS STILL USE LARGE VOLUME OF FERTILIZER ON LAWN CREATING RUNOFF INTO TIDAL AND SURFACE WATERS. DOESN'T THIS DEFEAT THE PURPOSE OF NUTRIENT REDUCING SYSTEMS?
- * PERMITTING AND INSPECTIONS SEEM TO GO WELL SO FAR.
- * PERMITTING, INSTALLATIONS, INSPECTION
- * PERMITTING, PLAN REVIEW, INSPECTION PROCESS.
- * REQUIRING ENGINEER DESIGN. STAFF STILL NEEDS MORE TRAINING.
- * SO FEW IN COUNTY NOT DIFFICULT TO MANAGE AT THIS POINT
- * SYSTEM SEEMS TO WORK WELL. THE ONLY ISSUE WE HAVE IS CONTINUALLY HAVING TO REMIND THE MAINTENANCE ENTITIES TO SEND THE REPORTS.
- * THE IMPLEMENTATION OF THE USE OF REHOST STANDARDIZE; THE INFORMATION PUT INTO THE STATE DATABASE
- * THE PROCESS CREATES A BETTER SYSTEM FOR THE ENVIRONMENT
- * THEY ARE GREAT TO SOLVE SPACE ISSUES.
- * THIS IS A NATIONAL PROBLEM. FLORIDA HAS STRUCK A GOOD BALANCE. ULTIMATELY MORE PASSIVE HIGH TREATMENT SYSTEMS ARE THE ANSWER.

28. Please tell us about any changes or improvements you would like to see in regards to the following:

a. ATU regulation, permitting, and management:

- * "NOTICE OF ATU" RECORDED LIKE PBTS. MUCH LONGER MINIMUM TERMS FOR MAINTENANCE AGREE.- MINIMUM 10 YEARS
- * A STANDARD INSPECTION FORM FOR STATE INSPECTIONS. ALSO NEED INSTALLERS TO SUBMIT INSPECTIONS ELECTRONICALLY. EHD NEEDS TO BE ABLE TO TRACK ATU'S BETTER.
- * ALLOW OWNER OF THE SYSTEM TO PAY THEIR OWN PERMIT IF THEY HAVE MAINTENANCE ENTITY AND CONTRACT (CURRENT).
- * APPLICATIONS GO THROUGH ENGINEERING APPROVAL (STATE) BEFORE HANDED INTO CHD'S THAT DON'T HAVE AN ENGINEER ON STAFF.
- * ATU OWNERS SHOULD BE REQUIRED TO EXECUTE AND RECORD AT THE COUNTY COURTHOUSE A WRITTEN NOTICE THAT INFORMS FUTURE OWNERS OF ATU SYSTEM AND REQUIREMENTS. ATU TANKS SHOULD BE CONCRETE ONLY TO PREVENT FLOATING OUT OF GROUND AND A TANK INSTALLED PRIOR TO ATU
- * ATU OWNERS SHOULD BE REQUIRED TO EXECUTE AND RECORD AT THE COUNTY COURTHOUSE A WRITTEN NOTICE THAT INFORMS FUTURE OWNERS OF ATU SYSTEM AND REQUIREMENTS. ATU TANKS SHOULD BE CONCRETE ONLY TO HELP PREVENT FLOATING OUT OF GROUND AND A TANK INSTALLED PRIOR TO
- * BETTER MANAGEMENT OF ATU SYSTEMS
- * BETTER TOOL IN EHD. MORE TRAINING
- * CHANGE IN STATE FORM
- * FORMAL OPERATING PERMIT INSPECTION GUIDELINES
- * HOMEOWNER BE MORE RESPONSIBLE FOR THE MANAGEMENT AND MAKING SURE THEY HAVE AN APPROVED MAINTENANCE ENTITY WORKING ON ATU AT ANY TIME.
- * INCREASE DOH INSPECTION TO 2 TIMES A YEAR. AOP TO \$100/YR OR \$200/2 YRS. REMOVE MAINTENANCE REQUIREMENTS; ONLY REQUIRE MAINTENANCE CONTRACT FOR INITIAL 2 YEARS WITH WARRANTY. REQUIRE EQUIPMENT AND OTHER REPAIRS TO BE DONE BY CONTRACTOR TRAINED AND APPROVED
- * INCREASE OPERATING PERMIT FEES AND OPERATING PERIOD TO MATCH EXISTING I/M OPERATING PERMIT. OPERATING PERMITS SHOULD BE THE RESPONSIBILITY OF THE HOMEOWNER.
- * INSPECTIONS, ETC. IN EHD. THIS HAS BEEN A REQUEST FOR YEARS.
- * INSUFFICIENT NUMBER OF ATU PERMITS TO COMMENT
- * IT WILL BE GOOD TO HAVE THE REQUIREMENTS TO BECOME A MAINTENANCE ENTITY LESS STRINGENT
- * LOCAL TRAINING
- * MAINTENANCE CONTRACTS HAVE BECOME A BURDEN ON HOMEOWNERS WHO DO NOT RECEIVE A VALUE
- * MORE FEES
- * MORE HOMEOWNER INVOLVEMENT IN PERMITTING PROCESS
- * MORE STREAMLINE PROCESS ON HOW THEY ARE MANAGED
- * NEED STANDARDIZED FORM; OWNERS ARE REFUSING TO BUT PERMITS AND MAINTENANCE ENTITY CONTRACTS.
- * NO CHANGES
- * NO SUGGESTIONS
- * NONE
- * PROTECT HOMEOWNERS FROM CONTRACTOR MISCONDUCT (REQUIRE INSURANCE); HOMEOWNER EDUCATION; REQUIRE ATU DISCLOSURE AT HOME CLOSURE SIGNINGS.
- * REQUIRE DEED NOTICE , SET MANDATORY RESPONSIBILITIES FOR MAINTENANCE ENTITIES.
- * SEEKING EFFICIENCY, KEEP UP THE GOOD WORK.

a. ATU regulation, permitting, and management:

- * SHOULD HAVE TO REPORT IN COUNTY RECORDS AT COURTHOUSE (LIKE PBTS.)
- * SIMPLIFY OR CLARIFY THE RULE (FAC AND FLORIDA STATUTES) FOR ALL ATU's/PBTS's. HAVE ALL APPROVED PLANS FOR EACH MANUFACTURER PLACED ON LINE IN ELECTRONIC FORM SO COUNTY HEALTH DEPARTMENTS HAVE A REFERENCE TO ENSURE PROPER INSTALLATION AND MAINTENANCE OF CO
- * STATEWIDE INSPECTION FORM
- * STATEWIDE ONLINE DATABASE; MORE ACCOUNTABILITY FROM CHD's; MORE COMPREHENSIVE TRAINING; MORE SAMPLING REQUIREMENTS.
- * WE NEED TO HAVE BETTER GUIDANCE PROVIDED TO THE COUNTIES ON THE REQUIREMENTS FOR PERMITTING, REGULATING, AND MONITORING THOSE SYSTEMS. ALSO, WE SHOULD REQUIRE THAT THE EXPIRATION DATES FOR MAINTENANCE CONTRACTS COINCIDE WITH THE EXPIRATION OF OPERATING
- * WOULD LIKE TO SEE BLANKET APPROVALS FOR MAINTENANCE ENTITIES TO SERVICE ALL ATU's.

b. PBTS regulation, permitting, and management:

- * A STANDARD INSPECTION FORM FOR STATE INSPECTIONS. ALSO NEED INSTALLERS TO SUBMIT INSPECTIONS ELECTRONICALLY. EHD NEEDS TO BE ABLE TO TRACK PBTS'S BETTER.
- * APPLICATIONS GO THROUGH ENGINEERING APPROVAL (STATE) BEFORE HANDED INTO CHD'S THAT DON'T HAVE AN ENGINEER ON STAFF.
- * BETTER MANAGEMENT OF PBTS SYSTEMS
- * CONTINUE SEEKING EFFICIENCY. REDUCE ENERGY CONSUMPTION
- * DROP THE WASTE WATER AFFIDAVIT
- * FORMAL OPERATING PERMIT INSPECTION GUIDELINES
- * FORMALIZED BUREAU ENGINEERING REVIEW WHEN SYSTEMS NOT MEET PERFORMANCE CRITERIA
- * HOME OWNER EDUCATION; DISCLOSURE AT TIME OF HOME SALE
- * HOMEOWNER BE MORE RESPONSIBLE FOR THE MANAGEMENT AND MAKING SURE THEY HAVE AN APPROVED MAINTENANCE ENTITY WORKING ON PBTS AT ANY TIME.
- * INCREASE DOH INSPECTION TO 2 TIMES A YEAR. AOP TO \$100/YR OR \$200/2 YRS. REMOVE MAINTENANCE REQUIREMENTS; ONLY REQUIRE MAINTENANCE CONTRACT FOR INITIAL 2 YEARS WITH WARRANTY. REQUIRE EQUIPMENT AND OTHER REPAIRS TO BE DONE BY CONTRACTOR TRAINED AND APPROV
- * INCREASE OPERATING PERMIT FEES AND OPERATING PERIOD TO MATCH EXISTING I/M OPERATING PERMIT. OPERATING PERMITS SHOULD BE THE RESPONSIBILITY OF THE HOMEOWNER. OFFICIAL GUIDANCE ON EARTH TECH SYSTEMS.
- * INSUFFICIENT TIME ALLOWED FOR PLAN REVIEW (15 DAYS ALLOWED CURRENTLY)
- * IT IS VERY DIFFICULT TO GET MONITORING ACCOMPLISHED BECAUSE OF THE COST OF SAMPLING. CAN WE GET SOMETHING ON PEOPLE'S TAX BILL TO COVER?
- * IT WILL BE GOOD TO HAVE THE REQUIREMENTS TO BECOME A MAINTENANCE ENTITY LESS STRINGENT
- * LOCAL TRAINING
- * LONGER MINIMUM TERMS MAINTENANCE AGREE.
- * MANDATORY RESPONSIBILITIES FOR MAINTENANCE ENTITIES. IF CONSISTENT GOOD SAMPLES REQUIRE LESS SAMPLING (SLIDING SCALE.)
- * MORE FEES
- * N/A
- * N/A
- * N/A
- * NO CHANGES
- * NO SUGGESTIONS
- * NONE
- * SIMPLIFY MONITORING FOR DIFFERENT TREATMENT LEVELS.
- * SIMPLIFY OR CLARIFY THE RULE (FAC AND FLORIDA STATUTES) FOR ALL ATU's/PBTS's. HAVE ALL APPROVED PLANS FOR EACH MANUFACTURER PLACED ON LINE IN ELECTRONIC FORM SO COUNTY HEALTH DEPARTMENTS HAVE A REFERENCE TO ENSURE PROPER INSTALLATION AND MAINTENANCE OF CO
- * STATEWIDE INSPECTION FORM
- * STATEWIDE ONLINE DATABASE; MORE ACCOUNTABILITY FROM CHD's; MORE COMPREHENSIVE TRAINING; MORE SAMPLING REQUIREMENTS.
- * WE NEED COUNTY TO DIFFERENTIATE BETWEEN PBTS AND ATUs AND THE REQUIREMENTS FOR THEM.

c. Maintenance entity regulation, permitting, and management:

- * ALLOW HOMEOWNERS TO MORE EASILY BECOME THEIR OWN MAINTENANCE ENTITY OR ALLOW GENERAL PLUMBERS TO BE MAINTENANCE ENTITIES.
- * ALLOW MORE MAINTENANCE ENTITIES TO DO MORE MAINTENANCE ON DIFFERENT SYSTEMS
- * AUTOMATIC PENALTIES FOR FAILURE TO SUBMIT TIMELY SAMPLING AND INSPECTIONS.
- * CARMODY OR A COMPARABLE SYSTEM IS REQUIRED.
- * CONSTANTLY HAVE TO REMIND M.E. TO PERFORM INSPECTIONS AND COLLECT SAMPLES. AUTOMATIC FINES FOR NON COMPLIANCE WITH SAMPLING/INSPECTIONS
- * COST OF PERMITTING MAINTENANCE ENTITIES IS TOO LOW FOR THE AMOUNT OF WORK
- * DO AWAY WITH PERMIT REQUIREMENT. ALL MAINTENANCE ENTITY WOULD NEED IS TRAINING/CERTIFICATION FROM MANUFACTURER. WOULD NEED TO NOTIFY DOH OF ANY REPAIRS TO ADVANCED SYSTEMS, PROVIDE PROOF OF TRAINING/CERTIFICATION AND SCHEDULE INSPECTIONS FOR REPAIR.
- * HOME OWNER EDUCATION; DISCLOSURE AT TIME OF HOME SALE; REFRESHER COURSE OR RIDE ALONGS; HAVE TECHNICIANS TRAINED BY FOWA OR MANUFACTURER
- * IMPLEMENT A STANDARD INSPECTION PROTOCOL AND FORM REQUIRED TO BE COMPLETED BY ENTITIES
- * IT WILL BE GOOD TO HAVE THE REQUIREMENTS TO BECOME A MAINTENANCE ENTITY LESS STRINGENT
- * LOCAL TRAINING
- * LONGER CONTRACT TIME. MUST CONTINUE TO SERVICE UNIT UNTIL ANOTHER ME IS OBTAINED
- * MAINTENANCE ENTITIY PERMITTED THROUGH NEIGHBORING COUNTY
- * MAINTENANCE ENTITY BE REQUIRED TO HAVE MORE TRAINING FROM THE MANUFACTURER ON THE UNITS THEY ARE APPROVED FOR.
- * MORE DEFINED STANDARDS FOR TRAINING, RECORD SUBMITTAL
- * MORE FEES
- * MORE INDUSTRY PROVIDED TRAINING
- * MORE OPTIONS OF ENTITIES; SYSTEM OWNER SHOULD BE INFORMED OF OPTIONS.
- * N/A
- * N/A
- * NEED MORE COMPETITION (APPROVED BY MANUFACTURER)
- * NEED MORE MAINTENANCE ENTITIES. OWNERS OF SYSTEMS DO NOT HAVE MANY CHOICES AND SEEM TO GET RIPPED OFF FINANCIALLY FOR CONTRACTS. NEED STANDARD MAINTENANCE ENTITY FORMS.
- * NO SUGGESTIONS
- * NONE
- * REQUIRE DATA SUBMISSION THROUGH CARMODY
- * SET A CEILING FOR OPERATING AND MAINTENANCE COSTS. STREAMLINE DISCIPLINARY GUIDELINES/METHOD FOR ENTITIES THAT DON'T SUBMIT REPORTS. MAINTAIN A ROSTER OF ENTITIES AND MANUFACTURER APPROVAL AT CENTRAL SITE.
- * SOMEHOW PROVE THEY HAVE VISITED THE SITE
- * SPECIFIC PENALTIES FOR NOT PROVIDING PROPER SERVICE
- * STATEWIDE INSPECTION FORM
- * TIGHTER CONTROLS; MORE ACCOUNTABILITY; RAISE FEE, REQUIRE MORE THAN ONE MAINTENANCE ENTITY FOR TYPE OF SYSTEM!
- * TOUGHER PENALTIES FOR NOT SUBMITTING PAPERWORK ON TIME.
- * TRAINING TO INCLUDE EXPECTATIONS

d. Innovative System regulation, permitting, and management:

- * BETTER COMMUNICATION BETWEEN TALLAHASSEE AND COUNTY HEALTH DEPARTMENT. ONLINE DATABASE NEEDED.
- * CHD's NEED A CENTRAL DATA RESOURCE TO BE ABLE TO UPDATE AND REVIEW PERMITTING STATUS. WE SUGGEST SOMETHING ELECTRONIC WITH STATEWIDE SCOPE.
- * EXPLAIN THE DIFFERENCES AND ALLOWANCES
- * KEEP LOCAL DOH INVOLVED MORE DURING PERMITTING PROCESS AND TRIAL
- * N/A
- * N/A
- * N/A
- * N/A
- * N/A
- * N/A
- * N/A
- * N/A
- * NA
- * NO SUGGESTIONS
- * NONE
- * PERHAPS MORE STRINGENT REQUIREMENTS PRIOR TO FIELD TESTING/INSTALLATION
- * SIMPLIFY OR CLARIFY THE RULE (FAC AND FLORIDA STATUTES) FOR ALL ATU's/PBTS's. HAVE ALL APPROVED PLANS FOR EACH MANUFACTURER PLACED ON LINE IN ELECTRONIC FORM SO COUNTY HEALTH DEPARTMENTS HAVE A REFERENCE TO ENSURE PROPER INSTALLATION AND MAINTENANCE OF CO
- * STATEWIDE INSPECTION FORM
- * WE NEED EDUCATION ON HOW THESE SYSTEMS SHOULD BE TREATED DIFFERENTLY THAN A PBTS.

e. Sand / Gravel Filter regulation, permitting, and management:

- * N/A
- * N/A
- * N/A
- * N/A
- * N/A
- * N/A
- * N/A
- * N/A
- * N/A
- * N/A
- * N/A
- * NA
- * NEED EDUCATION ON THESE TYPES OF SYSTEMS.
- * NO SUGGESTIONS
- * NO SUGGESTIONS
- * NONE
- * STATEWIDE INSPECTION FORM

**USER PERCEPTIONS OF ADVANCED
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS (OSTDS)
IN FLORIDA
FLORIDA DEPARTMENT OF HEALTH**

SURVEY RESULTS

Maintenance Entities

**FSU Survey Research Laboratory
College of Social Science Data Center
Florida State University**

Overview

Advanced Onsite Systems in Florida: Survey of Maintenance Entities

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs conducted a study to measure the practices and perceptions of maintenance entities about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study included aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters. The Bureau of Onsite Sewage Programs identified 226 advanced onsite systems maintenance entities for the survey effort. Surveys were mailed beginning in March 2010. Of the 226 mailed, 24 were returned as non-deliverable (See Figure 1). Thirty-three of the 202 remaining maintenance entities returned the survey for a completion rate of 13 percent.

Figure 1
Disposition of Maintenance Entity Surveys

Maintenance Entities	
% Complete	16.3%
Completed	33
Number Delivered	202
Non-Deliverable	24
Number Mailed	226

Amount of Maintenance Work And Systems. Maintenance entities were asked about the number and manufacturer of the various types of advanced onsite systems they maintained.

- 29 of the 33 Maintenance Entities reported they maintained Aerobic Treatment Units (ATUs); 21 of the Maintenance entities serviced between 1 and 50 ATUs; one entity reported maintaining 1,250 ATUs.
- 24 of the 33 Maintenance Entities reported they maintained Performance Based Treatment Systems (PBTS) units; 20 of the Maintenance entities serviced between 1 and 15 PBTS units; one entity reported maintaining 125 PBTS units.
- Only 4 of the 33 Maintenance Entities reported they maintained Innovative System units; they maintained between 1 and 5 Innovative Systems.
- 28 of the Maintenance Entities reported their company's annual revenue from maintaining advanced systems in Florida. Ten entities reported less than one percent of their revenue came from this source while 14 entities said between 1 to 14 percent of their revenues came from maintaining advanced units/systems. Only one entity reported that 100 percent of their annual revenue came from advance onsite system maintenance.

Maintenance Contracts. Maintenance Entities were asked a series of questions related to contracts.

- Annual billing was the most common practice (18 of 30) followed by billing every two years (7 of 30). Only 2 Maintenance entities billed quarterly and no one reported billing every month.
- The majority of the maintenance entities (16 of 29) charged an annual fee between \$100 and \$300. Two maintenance entities reported annual fees between \$701 and \$800.
- Required inspections (31 of 31) and routine maintenance (25 of 31) were the services covered by the annual contract fee. Only 13 Maintenance Entities included sampling and no Maintenance Entity included replacement of parts or replacement of the system in the annual contract.
- Inspecting a system twice a year as part of the contract was the most common practice among the Maintenance Entities (16 of 32). Many (12 of 32) stated that inspection depends on the type of unit. No Maintenance Entity inspected less than twice a year as part of the contract.
- Maintenance Entities were asked about the average number of non-routine service and repair visits for the different types of Advanced Systems. For those servicing ATUs, 5 of 26 reported that they made no visits; 8 stated they made 1 or less than 1 visit; 6 stated they made 1 to 2 visits per year; 3 stated they made 2 to 4 visits, 2 stated 7 to 10, and 2 of the 26 reported they made 75 or more visits per year. For those servicing PBTS systems, 5 of 22 reported that they made no visits; 2 stated they made 1 or less than 1 visit, 12 stated they made 1 to 3 visits per year; 2 stated they made 3 to 7 visits, and 1 of the 22 reported they made 25-50 visits per year. For those servicing Innovative Systems, all (3 of 3) reported that they made no repair visits.
- Maintenance Entities were asked to indicate all the ways they use to keep customers informed about their systems' performance. Of the 32 answering the questions, 19 gave the customer a copy of the inspections report; 18 left notice of the inspection visit at the home; and 20 contacted the customer only if there was a problem with their system that required corrective action.

Maintenance, Monitoring, and Sampling. Maintenance Entities were asked to indicate the tasks they performed during routine inspections of the advanced systems.

- **Forms and Check lists.** Most (27 of 33) reported they worked through a manufacturer's checklist or worked through their own check list (21 of 33). Few (6 of 21) worked through an engineer's or County Health Department's check list.
- **System Access.** Almost all (32 of 33) open covers to observe the aerobic treatment chamber, open covers to observe trash compartment (28 of 33), and opened covers to observe clarifier/dosing tank (26 of 33). Few (4 of 33) left the surface undisturbed.

- **Equipment Checks.** Nearly all of the maintenance entities checked the trigger alarm (31 of 33), checked that the air supply was running (31 of 33), and trigger pumps (29 of 33).
- **Maintenance Actions.** Nearly all the Maintenance entities inspect/ clean the effluent filter (28 of 33) and the air filter (28 of 33). They also pump the tank (24 of 33). Only 17 of the 33 reported inspecting/cleaning the air diffusers or replacing parts.
- **Assessment of Operating Conditions.** Nearly all check for smell (31 of 33); check water clarity in tank (30 of 33), measure sludge accumulation (29 of 33), and observe/record the general appearance of treatment system functions (27 of 33). Few check the ponding depth in the drain field (8 of 33), record the number of dosing events or pump runtime (6 of 33), or record the water meter reading (3 of 33).
- **Assessment of Effluent Quality.** Nearly all of the Maintenance entities (27 of 33) observe the clarity of effluent in the observation port and over one-half take effluent samples for laboratory analysis (18 of 33). Few use test strips (4 of 33) or chemistry kits (3 of 33) to assess effluent concentrations. Only 2 Maintenance Entities reported taking ground water samples.

Sampling Characteristics. Maintenance Entities were asked about how they sampled.

- Eighteen of the Maintenance Entities reported they took samples from the advanced systems they serviced. Fifteen of the 18 indicated that a permit requirement triggered taking a sample. Taking a sample as a standard business practice (4 of 18) or due to the odor/color of the effluent (4 of 18) were not prominent conditions to trigger taking a sample.
- Most Maintenance Entities companies (9 of 18) do their own sampling while 7 of 18 specified that another entity does the sampling. Only 1 Maintenance entity reported that sampling was not required/performed on maintained systems.
- One-half of the Maintenance Entities (9 of 18) said that samples or observations during the inspections show that the advanced systems are out of compliance “Some of the Time” and 7 of 18 said “Rarely”.

Reasons for Failure. Maintenance Entities were asked to rate the frequency a specific reason for failure or problems that occurred with the systems they maintained: “Never”, “Some of The Time”, “Most of The Time”, or “All of the Time”.

- Malfunctioning treatment system parts were cited as the reason for problems “Some” or “Most” of the time by 27 of the 33 Maintenance entities. Homeowner misuse was cited as the reason for problems “Some” or “Most” of the time by 26 of the 33 Maintenance Entities. Dosing pump failure (22 of 33) and the unit being turned off (22 of 33) were reasons for problems “Some” or “Most of the Time”.
- For nearly one-half of the Maintenance Entities, installation (18 of 33) and engineer design (15 of 33) were “Never” a reason for failure or problems with the systems.

Information Management. Maintenance Entities were asked about the ways in which they reported and kept their records.

- Faxing (18 of 32) and using the Carmody data base (14 of 32) were the most frequently used methods to transmit inspection reports to the County Health Department.
- Nearly one-half of the Maintenance Entities (15 of 32) used more than one system for accessing and keeping information on their maintenance activities. Thirteen used the Carmody data base or some combination of the Carmody data base and other system such as paper filing system or spreadsheets. Thirteen entities indicated that they used only a paper filing system.
- Sixteen of the 32 entities answering the question indicated they did not use the Carmody data base and were asked why. Seven did not know about the free service, 7 did not want to use more than one record-keeping method, two had no access to computers or the internet. Data security issues were not a reason cited by any Maintenance Entity for not using the Carmody data base system.

Performance. Maintenance Entities were asked to rate the overall treatment performance of the systems they maintain: “Excellent”, “Good”, “Fair”, or “Poor”.

- **ATUs.** Thirteen of the 29 entities rated ATUs’ performance as “Excellent”, 14 as “Good” and 2 as “Fair” No one rated the ATUs’ performance as “Poor”.
- **PBTS.** Nine of the 24 entities rated PBTS’ performance as “Excellent”, 11 as “Good”, 3 as “Fair”, and 1 as “Poor”.
- **Innovative Systems.** Three of the 4 entities rated Innovative Systems’ performance as “Excellent”, and 1 as “Good”.

Contact with Other Entities. Maintenance Entities were asked about the extent they interacted with others when maintaining advanced systems: “Rarely Interact”, “Some of the Time”, “Most of the Time”, or “All of the Time”.

- Maintenance Entities interact most frequently with owners of the systems (24 of 33 “Most” or “All” of the time) and County Health Department staff (20 of 33 “Most” or “All” of the time).
- Maintenance Entities interact least with Engineers (15 of 33 “Rarely” interact).
- There is interaction with the manufacturers of the systems they maintain (12 “Some”, 7 “Most” and 5 “All” of the time).

Open-Ended Questions Comments

The survey of Maintenance Entities included a series of open-ended questions. The Responses to these questions are included in the Maintenance Entities Results.

TRAINING AND EDUCATION NEEDS

16. Please tell us about training opportunities related to ATUs and PBTS that you would like to be made available to your company personnel.

GENERAL ASSESSMENT

17. Please tell us about what aspects of the advanced system program in Florida are currently working well as it relates to construction permitting, design, installation, inspection, maintenance, and operating permitting:

18. Please tell us about any changes or improvements you would like to see in regards to the following:

a. ATU regulation, permitting, and management:

b. PBTS regulation, permitting, and management:

c. Innovative System regulation, permitting, and management:

d. Maintenance entity regulation, permitting, and management:



Advanced Onsite Systems in Florida: Survey of Maintenance Entities

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs is conducting a study to measure the practices and perceptions of maintenance entities about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study include aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters. Your participation in this study will help us identify the strengths of current practices and experiences as well as areas where improvement may be needed.

Maintenance Entities	
% Complete	16.3%
Completed	33
Number Delivered	202
Non-Deliverable	24
Number Mailed	226

AMOUNT OF MAINTENANCE WORK

1. How many, and what types, of the following advanced onsite systems do you maintain:

- a. How many **Aerobic Treatment Units** * does your company **MAINTAIN in Florida** at this time?
**This question pertains to ATU only systems, i.e. units that are NOT a component of a PBTS*

0—1,250 units/systems (n=33)	
# Aerobic Treatment Units	Maintenance Entities
0	4
1-5	7
6-20	6
21-50	8
51-100	3
101-200	2
201-300	0
301-400	2
1,250	1

Please list the TYPES AND MANUFACTURERS of the ATUs your company maintains in Florida.

- * AEROBIC DIGESTION JET LINE
- * AQUA AIRE, AQUA SAFE
AQUA-AIRE, AQUA SAFE, ALLIANT, CAJUNAIRE, HYDROACTION, HOOT, CLEARSTREAM, JET
- * NORWECO
- * AQUA-AIRE, AQUA-SAFE, MO-DAD, CAJUNAIRE, CLEARSTREAM
- * CAJUNAIRE, MICROFAST, ALLIANCE, PREMIERTECH
- * CLEARSTREAM, BIO-MICROBICS
- * CLEARSTREAM, CAJUNAIRE
- * CLEARSTREAM, WASTEWATER SYSTEMS, MICRO FAST SYSTEMS, NORWECO SINGULAR
CLEARSTREAM/DELTA/ECO FLO/ECOPURE/HYDROACTION/JET/MULTI FLO/NYADIC/SOUTHERN
- * AEROBICS
- * DELTA, HOOT, CAJUN AIRE, HYDRO-ACTION, AQUAKLEAR, CLEARSTREAM, FAST
- * EARTH TEC
- * HOOT
- * HOOT H1000 & H600
- * HOOT, AQUAKLEAR, SINGULAIR
- * HOOT, HYDRO-ACTION, SINGULAIR
- * HOOT-NORWECO
- * HYDROACTION
- * JET 500 GPD
JET, BIO-MICROBICS, AQUAKLEAR, DELTA WHITEWATER, MIGHTY MAC, CAJUNAIRE,
- * EVAPORTRANSPIRATION
- * MIGHTY MAC, DELTA WHITEWATER, AQUAKLEAR, FAST
- * MULTIFLO, NAYADIC, NORWECO, MICROFAST, BIOMICROBIC, HOOT
- * MULTI-FLO, NAYADIC. HOOT, FAST, AQUACLEAR
- * MULTIFLO/NYADIC
- * MULTIFLO/NYADIC-CONSOLIDATED; HOOT AEROBICS, FAST, AQUA CLEAR
- * MULTI-FLOW SYSTEMS, CONSOLIDATED TREATMENT SYSTEMS INC.
- * NORWECO- 500 GPD
- * NORWECO, FAST, HOOT, JET , CAJUNAIRE
- * NYADIC M6A AND M8A
- * QUANTICS, HOOT MULTI-FLO, AQUAKLEAR, ENVIROFILTER

b. How many **PBTS** * units does your company **MAINTAIN in Florida** at this time?
 * This question includes ATU's used as part of a PBTS

0—125 units/systems	(n=33)
# Performance-Based Treatment Systems	Maintenance Entities
0	9
1-5	13
6-10	3
11-15	4
16-30	1
31-40	1
41-50	1
125	1

Please list the TYPES AND MANUFACTURERS of the PBTS your company maintains in Florida.

- * ALL HOOT WITH DRIP IRRIGATION
- * BIO MICROBICS/ FAST SYSTEM
- * BIOMICROBICS, JET, DELTA, WHITEWATER
- * CLEARSTREAM, AQUA AIRE
- * DELTA/CLEARSTREAM/ECOPURE
- * EARTHTEK SYSTEMS OF FLORIDA , INC., ENVIRO FILTER
- * ECOFLOW, FAST, SCAT, NORWECO
- * FAST, DELTA WHITEWATER
- * HOOT
- * HOOT
- * HOOT
- * HOOT
- * HOOT 500
- * HOOT AEROBIC TREATMENT SYSTEMS
- * HOOT, BIOMICROBIC
- * HOOT, FAST
- * HOOT, FAST, NO MOUND
- * JET 750 GPD WITH DRIP IRRIGATION
- * MICROBIC, FAST, NORWECO
- * NORWECO
- * NORWECO SINGULAR
- * QUANTICS, HOOT MULTI-FLO, AQUAKLEAR, ENVIROFILTER

c. How many **INNOVATIVE SYSTEM** * units does your company **MAINTAIN in Florida** at this time? * *This question includes ATU's used as part of an INNOVATIVE SYSTEM*

0—5 units/systems		(n=33)
# Innovative Systems	Maintenance Entities	
0	29	
1	1	
2	1	
3	1	
5	1	

Please list the TYPES AND MANUFACTURERS of the INNOVATIVE SYSTEMS your company maintains in Florida.

- * CLEARSTREAM SUBSTITUTE DRIP IRRIGATION
- * HOOT-NORWECO
- * NO MOUND
- * NO-MOUND
- * NO-MOUND

2. What percentage of your company's annual revenue comes from MAINTAINING advanced units/systems (ATUs, PBTS, and Innovative Systems) in Florida?

0—100 % of annual revenue		(n=28)
% Annual Revenue	Maintenance Entities	
0%	2	
<1%	8	
1-5%	8	
6-10%	3	
11-15%	3	
16-20%	0	
21-30%	2	
80%	1	
100%	1	

MAINTENANCE CONTRACTS

3. How often do you bill your maintenance contract customers? (n=30)

18	Yearly	0	Every Month
2	Quarterly	10	Other <i>[Please Specify.]</i> _
			Two Years (n=7)
			Biennial (n=3)

4. What is the average annual fee you charge your maintenance contract customers?

\$ 150 -- \$800		(n=29)
Average Annual Fee	Maintenance Entities	
<\$100	0	
\$100-200	4	
\$201-300	12	
\$301-400	4	
\$401-500	4	
\$501-600	3	
\$601-700	0	
\$701-800	2	

5. What services are covered by the annual contract fee you charge?

[Please ✓ all that apply.] (n=31)

- | | |
|---|-------------------------------|
| 31 Required inspections | 25 Routine maintenance |
| 0 Replacement of parts | 13 Sampling |
| 0 Replacement of system | |
| 6 Other [Please Specify | |
| * FILTER CLEANING OF AERATORS AND DRIP IRRIGATION | |
| * FLOCK REMOVAL, AMP READING | |
| * MONITORING DIGITAL READINGS AND ALARMS | |
| * PHONE CONSULTATIONS AND/OR QUESTIONS | |
| * REPLACE BATTERY | |
| * TESTING MOTOR AMPS | |

6. How often do you INSPECT a system as part of the maintenance contract? (n=32)

- | | |
|---|----------------------------------|
| 5 Three or more times a year | 3 Depends on type of unit |
| 15 Twice a year | 0 Less than twice a year |
| 9 Other [Please Specify.] | |
| * 3 OR 4 TIMES FOR COMMERCIAL, TWICE A YEAR, DEPENDS ON TYPE OF UNIT | |
| * 5 TIMES IN TWO YEARS | |
| * DEPENDS ON TYPE OF UNIT, 2 TO 4 TIMES A YEAR | |
| * DEPENDS ON TYPE OF UNIT, PBTS 4 TIMES A YEAR | |
| * DEPENDS ON UNIT AND OPERATING PERMIT, TWICE OR QUARTERLY PER YEAR | |
| * THREE OR MORE TIMES A YEAR, DEPENDS ON TYPE OF UNIT | |
| * THREE OR MORE TIMES A YEAR OR TWICE A YEAR, DEPENDS ON TYPE OF UNIT- INJECTION WELL OR DRAINFIELD | |
| * THREE OR MORE TIMES A YEAR, DEPENDS ON TYPE OF UNIT | |
| * TWICE A YEAR AND WHEN THEY CALL WITH AN ALARM CONDITIONS OR ISSUE | |

7. Please estimate the average number of NON-ROUTINE service and repair visits per year for a typical system:

ATU only (n=26)	PBTS (n=22)	Innovative (n=3)
5 0 visits	5 0 visits	3 0 visits
8 1 or less visits	2 1 or less visits	
6 1 to 2 visits	12 1-3 visits	
3 2 to 4 visits	2 3-7 visits	
2 7 to 10 visits	1 25-50	
1 75-100		
1 156 (3 per week)		

8. What method does your company use to keep customers informed about their system's performance? *[Please ✓ all that apply.]* (n= 32)

19 Give customer copy of inspection report

18 Leave notice of inspection visit at home

20 Contact customer only if there is a problem with their system that requires corrective action

8 Other *[Please Specify.]*

* CONTACT CUSTOMER WHEN THERE IS A PROBLEM THAT REQUIRES CORRECTIVE ACTION

* DIRECT CONTACT

* INSPECTION REPORTS ARE PROVIDED TO CUSTOMER UPON REQUEST

* MAIL OUT 30 DAYS BEFORE SERVICE DATE

* PHONE CALLS TO CUSTOMERS IF THERE ARE PROBLEMS

* SEND PICTURES OF PROBLEM

* USUALLY PERFORM INSPECTIONS WHILE THE HOMEOWNER IS THERE.

* WE EDUCATE CUSTOMER AT FIRST VISIT AND CALL ANYTIME THERE IS A PROBLEM.

MAINTENANCE, MONITORING, AND SAMPLING

9. Which of the following tasks do you usually specify that the maintenance contractor perform during routine inspections of the advanced systems you manufacture for use in Florida?
 [Please ✓ All That Apply.] (n= 33)

Forms and Checklists

- 27 Work through a manufacturer's or distributor's check list
- 6 Work through the engineer's check list if engineered-designed
- 6 Work through the County Health Department's check list
- 21 Work through own check list

System Access

- 32 Open covers to observe aerobic treatment chamber
- 28 Open covers to observe trash tank/compartments
- 26 Open covers to observe clarifier/dosing tank
- 4 Leave surface undisturbed
- 16 Open observation port

Equipment Checks

- 31 Trigger alarm
- 29 Trigger pumps
- 31 Check that air supply is running

Maintenance Actions

- 28 Inspect/clean effluent filter
- 28 Inspect/clean air filter
- 17 Inspect/clean air diffusers
- 24 Pump tank(s) every ____ years
- 17 Replace parts

3 Other [Please describe.]

- * PRESSURE WASH SYSTEM
- * REPLACE BATTERY
- * WE HAVE TANKS PUMPED WHEN NECESSARY AND PARTS WHEN NECESSARY

Assessment of Operating Conditions

- 30 Check clarity of water in treatment tank/clarifier
- 31 Check for smell from treatment system
- 25 Check sounds from treatment system
- 29 Measure sludge accumulation
- 20 Check how well solids settle in aerobic treatment chamber
- 3 Record water meter reading
- 6 Record number of dosing events or pump runtime (for dosed systems)
- 11 Record presence, number, or duration of alarms
- 17 Check and record pressure (drip systems)
- 8 Check ponding depth in drainfield
- 25 Check wetness in drainfield area
- 10 Check presence and supply of chlorination tablets if system includes them
- 27 Observe and record general appearance of treatment system functioning

Assessment of Effluent Quality

- 27 Observe clarity of effluent in observation port
- 4 Use test strips to assess effluent concentrations
- 3 Use chemistry kits to assess effluent concentrations
- 18 Take effluent samples for laboratory analysis
- 2 Take groundwater samples

10. Do you take samples from any of the advanced systems you service? (n=28)

18 YES [Please answer the following.]

a. What conditions trigger taking a sample? [Please ✓ all that apply.]

- 15** Permit requirement
- 4** Standard business practice
- 2** Other [Please Specify.]
 - * TROUBLE SHOOTING PROBLEMS
- 4** Odor/ color of effluent

b. Who performs sampling for lab analysis of the advanced systems you maintain?

- 9** My company does sampling
- 7** Other entity does sampling [Please Specify.] _____
 - * CERTIFIED LAB/BENCHMARK LABORATORY
 - * LAB
 - * NELAC APPROVED LAB
 - * SYNAGRU LABS
 - * U.S. WATER
- 1** Sampling is not required/performed on maintained systems

c. How often do samples or observations during maintenance inspections show that the advanced systems are out of compliance?

- 7** Rarely
- 9** Some of the time
- 1** Most of the time
- 0** All of the time

10 NO

11. How often are each of the following a REASON FOR FAILURE OR PROBLEMS with the systems you maintain?

Reason for Failure or Problems	NEVER	SOME OF THE TIME	MOST OF THE TIME	ALL OF THE TIME	DON'T KNOW
a. Homeowner misuse	2	13	13	1	0
b. Malfunctioning treatment system parts	1	22	5	0	0
c. Engineer design	15	8	4	0	2
d. Installation	18	8	2	0	0
e. Dosing Pump Failure	3	18	4	0	2
f. Drainfield Failure	12	13	1	0	1
g. Unit turned off	2	18	4	4	1
h. Other [Please Specify.] ____	1	4	0	2	0
* CONTROL PANEL FAILURE					
* FAILURE OF HOMEOWNER TO FOLLOW RECOMMENDED MAINTENANCE, MOSTLY PUMPING					
* LIGHTNING STRIKES					
* NOT PUMPING UNIT					
* PERMITTING OF ENGINEER DESIGNED NOT LABORATORY TESTED UNITS					
* SNOW BIRDS VACATION TURNING OFF THE POWER TO THE HOUSE AND ELECTRIC SURGE					

- * SYSTEM DAMAGE BY TENANT/HOMEOWNER
- * WHEN INSTALLERS BURY LIDS TOO DEEP TO GET TO

INFORMATION MANAGEMENT

12. What method do you use to TRANSMIT YOUR INSPECTION REPORTS to the county health department? *[Please ✓ all that apply.]* (n=32)

- | | |
|----------------------------|---|
| 14 Carmody Database | 9 Mail |
| 6 E-mail | 8 Deliver in person |
| 18 Fax | 1 Other <i>[Please Specify]</i> COUNT VISITS ON SITE |

13. Which system or method do you use for accessing and keeping information on the systems you maintain? (n=32)

- | | |
|--|---|
| 3 Carmody Database | 0 Contact county health department when needed |
| 1 Spreadsheets and tables | 13 Paper filing system |
| 15 Other <i>[Please Specify.]</i> | |

- * CARMODY DATABASE AND OWN DATA FILE
- * CARMODY DATABASE, CONTACT COUNTY HEALTH DEPARTMENT WHEN NEEDED
- * CARMODY DATABASE, CONTACT COUNTY HEALTH DEPARTMENT WHEN NEEDED, CALENDAR
- * CARMODY DATABASE, PAPER FILING SYSTEM
- * CARMODY DATABASE, PAPER FILING SYSTEM
- * CARMODY DATABASE, PAPER FILING SYSTEM
- * CARMODY DATABASE, PAPER FILING SYSTEM
- * CARMODY DATABASE, SPREADSHEETS AND TABLES, PAPER FILING SYSTEM
- * CARMODY DATABASE, SPREADSHEETS AND TABLES, PAPER FILING SYSTEM, CONTACT COUNTY HEALTH DEPARTMENT WHEN NEEDED
- * CARMODY DATABASE. PAPER FILING SYSTEM
- * PAPER FILING SYSTEM, CONTACT COUNTY HEALTH DEPARTMENT WHEN NEEDED
- * PAPER FILING SYSTEM, CONTACT COUNTY HEALTH DEPARTMENT WHEN NEEDED
- * SPREADSHEETS AND TABLES, PAPER FILING SYSTEM
- * SPREADSHEETS AND TABLES, PAPER FILING SYSTEM
- * SPREADSHEETS AND TABLES, PAPER FILING SYSTEM, COMPUTER

If you do not use the Carmody Database system, please indicate why (n=16)

- 7** Don't know about this free service
- 1** No access to computers
- 1** No access to the internet
- 0** Data security issues
- 6** Don't want to use more than one record-keeping method
- 4** Other *[Please Specify.]*
 - * NOT AN ISSUE AT THE CURRENT TIME
 - * VOL COUNTY HEALTH DEPARTMENT DOES NOT USE CARMODY
 - * VOL COUNTY HEALTH DEPARTMENT DOES NOT USE THIS PROGRAM
 - WE SPENT SEVERAL MAN WEEKS INPUTTING DATA THEN STATE STOPPED. WE
 - * WASTED A LOT OF OUR TIME

PERFORMANCE

14. How would you rate the OVERALL TREATMENT PERFORMANCE of the systems you maintain?

Type of System Maintained	EXCELLENT	GOOD	FAIR	POOR	NO BASIS TO JUDGE
a. ATU	13	14	2	0	0
b. PBTS	9	11	3	1	3
c. Innovative Systems	3	1	0	0	10

CONTACT WITH OTHER ENTITIES

15. To what extent do you INTERACT WITH EACH OF THE FOLLOWING ENTITIES CONCERNING THE ADVANCED SYSTEMS YOU MAINTAIN?

Entity	RARELY INTERACT	SOME OF THE TIME	MOST OF THE TIME	ALL OF THE TIME	OTHER [PLEASE SPECIFY.]	
a. Manufacturers of systems you maintain	6	12	7	5	1 RARELY INTERACT, EXCEPT HOOTS	
b. Owners of systems you maintain	1	6	15	9	0 _____	
c. County Health Department Staff	6	7	11	8	0 _____	
d. Engineers of the systems you maintain	15	6	3	6	1 NEVER	
e. Installers of systems you maintain	5	4	1	1	WE ARE THE INSTALLER	21

TRAINING AND EDUCATION NEEDS

16. Please tell us about training opportunities related to ATUs and PBTS that you would like to be made available to your company personnel.

- * A 2 YEAR UPDATE WOULD BE NICE
- * ALREADY ADDRESSED THROUGH CLASSES AT FOWA
- * BETTER MANUFACTURER SPECIFIC TRAINING
- * CLASSES ARE AVAILABLE ON SOME, BUT NOT ALL, SYSTEMS. SHOULD OFFER CLASSES LIKE HOOT DOES.
- * FOWA TRAINING CENTER
- * HOOT AND NORWECO TRAINED AT TRAINING CENTER AND ON JOB INSTALLATION PLUS PHONE CALLS
- * HOW TO INSTALL DRIP IRRIGATION
- * I DO IN HOUSE TRAINING
- * JAX
- * KNOWLEDGE OF PBTS
- * MORE MANUFACTURER HANDS-ON TRAINING. MORE ON METHODS AND TREATMENT BASICS FOR SERVICE PERSONNEL.
- * MORE TRAINING ON RECOGNIZING PROBLEMS AND WHY THEY HAPPEN, E.G. MEDIA FAILURE, DRAINFIELD FAILURE, CLOUDY WATERM ODORS, ETC.
- * NONE. WE DO ALL OUR OWN TRAINING AND HAVE OUTSIDE PEOPLE COME IN FOR TRAINING.
- * STUDY COURSE CLASSES TO KEEP YOU UP TO DATE ON ANY NEW CHANGES
- * THE BASIC FUNCTION AND MAINTENANCE OF DIFFERENT TYPES OF SYSTEM, RESPONSIBILITIES OF MAINTENANCE ENTITY AND STATE/COUNTY INSPECTORS
- * THE COUNTY HEALTH DEPARTMENT AND THE FOWA CLASSES ARE VERY GOOD AND FREQUENT.
- * TRAINING IS GOOD
- * TROUBLE SHOOTING
- * UPDATED TECHNICAL INFO ON RESEARCH AND PRACTICES
- * VERY SATISFIED WITH THE CURRENT TRAINING THE HOOT REPRESENTATIVE PROVIDES

GENERAL ASSESSMENT

17. Please tell us about what aspects of the advanced system program in Florida are currently working well as it relates to construction permitting, design, installation, inspection, maintenance, and operating permitting:

- * ALL WORKING WELL EXCEPT DESIGN IN PBTS AND ENGINEERS THAT DO THEM
- * ALLOF THE ABOVE
- * ATU IF OWNER IS CAREFUL IS A GOOD SYSTEM
- * CONSTRUCTION PERMITTING OKAY; DESIGN AND INSTALLATION VERY SATISFACTORY; INSPECTION OKAY; MAINTENANCE AND OPERATING PERMITTING OKAY.
- * DCDH
- * DOH INSPECTORS WORKING WITH MAINTENANCE ENTITY
- * I ENJOY GETTING THE TPO MAGAZINE FROM COLE PUBLISHING INC.
- * IN GENERAL, ALL THE ATU's IS WHERE I HAVE THE LEAST PROBLEM
- * NONE
- * NOT MANY ATU's ARE PERMITTED IN OUR COUNTY (ESCAMBIA)
- * ONLINE CARMODY DATABASE IS GREAT.
- * SEEMS SYSTEM WORKS WELL
- * TAKES TOO MUCH TIME FOR PERMITTING
- * THE PERMITTING, DESIGN, AND INSTALL ARE ALL GOING WELL. INSPECTIONS ARE AS REQUIRED. THE PERFORMANCE OF THE AWTS DEPENDS ON THE HOMEOWNERS ABUSE.
- * THE PROGRAM ITSELF PROVIDES BASIC PROCEDURE. HOWEVER, THE APPARENT DEFICIENCIES SEEM TO LIE IN THE ABILITY OF THE COUNTY/STATE PERMIT REVIEWER TO ADEQUATELY GUIDE THE SYSTEM DESIGN ENGINEERS.
- * THE SYSTEMS THAT ARE IN PLACE AT THIS TIME ARE WORKING WELL.
- * TOO MUCH PAPERWORK
- * WE ENGINEER AND DESIGN ALL PUR OWN ATU AND PBTS SYSTEMS. MORE EDUCATION FOR ENGINEERS.

18. Please tell us about any changes or improvements you would like to see in regards to the following:

a. ATU regulation, permitting, and management:

- * ALL ATU's INSTALLED SHOULD HAVE A PRE-TREATMENT TANK SIZED ACCORDING TO 64-E-6 NEW SYSTEM STANDARDS. ALL ATU's ON THE MARKET SHOULD HAVE AN NSF SEAL OF APPROVAL BEFORE BEING CONSIDERED.
- * ANNUAL OPERATING PERMIT. MAKE PROPERTY OWNER RESPONSIBLE FOR OPERATING PERMIT. NO EXCLUSIVITY. ALL TYPES OF ATU SHOULD BE INCLUDED FOR MAINTENANCE ENTITY.
ATU REGULATION MUST BE WRITTEN TO CLEARLY DIFFERENTIATE BETWEEN RESIDENTIAL AND COMMERCIAL UNITS.
- * BETTER QUALIFICATION, MONITORING AND ENFORCEMENT
- * COST OF PERMITS AND OPERATING FEES ANNUALLY BE REDUCED BY DOH
- * COUNTY/STATE SHOULD REQUIRE HOMEOWNERS TO PUMP THE SYSTEM ON A REGULAR BASIS. MOST DON'T WANT TO PAY AND INSIST THAT IT IS NOT NEEDED.
- * FEES REDUCED- NO EXTRA EXPENSE TO HOMEOWNER FOR IMPROVED TREATMENT. REQUIRE CHU's TO USE CARMODY.
- * HAVE ONE YEAR AN OPTION FOR OWNERS ON THEIR MA/OP RENEWALS. HAVING CARMODY BACK WHERE WE CAN RENEW THE CONTRACTS TO KEEP TRACK.
- * HOMEOWNERS ARE BEING PENALIZED BY THE ANNUAL PERMIT FOR HAVING A BETTER TREATMENT SYSTEM. THIS DISCOURAGES PEOPLE WHEN THIS IS REQUIRED.
- * INSTALLERS AND MAINTENANCE ENTITIES SHOULD NOT HAVE TO BE RESPONSIBLE FOR STATE PERMIT BILLING AND COMPLIANCE. WE HAVE NO WAY TO FORCE COMPLIANCE.
- * MORE FORMAL INTAKE FROM COUNTY HEALTH DEPARTMENTS
- * NEWSLETTER ON ANY TRAINING, VENDOR LIST FOR REPAIRS.
- * NONE
- * NONE
- * NOTHING, EVERYTHING IS PERFECT.
- * PK
- * SEPTIC TANK CONTRACTOR SHOULD NOT BE RESPONSIBLE FOR ENGINEER MISHAPS.
- * TRYING TO GET THE DOH TO GET CUSTOMERS TO HAVE REPAIRS TO THE SYSTEM DONE AND GET THEM UNDER CONTRACT. PROBLEM IS THE DOH DOES NOT HAVE A GOOD LEGAL DEPARTMENT. THEY ARE ALL BARK AND NO BITE- NO GUTS. FOOLISH TO RUN SYSTEMS WHEN HOUSES ARE CLOSED UP, NOT
- * VOL CO DOES A GREAT JOB
- * WORKS WELL AS IS

b. PBTS regulation, permitting, and management:

- * ALL PBTS ON THE MARKET SHOULD HAVE AN NSF SEAL OF APPROVAL BEFORE BEING CONSIDERED.
- * ANNUAL OPERATING PERMIT. MAKE PROPERTY OWNER RESPONSIBLE FOR OPERATING PERMIT. NO EXCLUSIVITY. ALL TYPES OF PBTS SHOULD BE INCLUDED FOR MAINTENANCE ENTITY.
- * BETTER QUALIFICATION, MONITORING AND ENFORCEMENT
- * DELETE ENGINEERING ON RESIDENTIAL SYSTEMS. THAT WOULD REDUCE JOB BY \$400.00.
- * LESS COSTLY UNITS AND OPERATING PERMIT FEES
- * MORE TRAINING FOR THE HEALTH DEPT. STAFF. REMOVE INCONSISTENCIES. REQUIRE CHU's TO USE CARMODY.
- * NONE
- * NOT NECESSARY TO DO LAB SAMPLES. THIS IS AN ADDED EXPENSE TO THE HOMEOWNER. IT IS WHAT IT IS!
- * OK
- * THE TESTING OUTCOME DEPENDS ON THE HOMEOWNER USE/MISUSE OF SYSTEM
- * THEY NEED TO BE MORE RELIABLE.
- * TRYING TO GET THE DOH TO GET CUSTOMERS TO HAVE REPAIRS TO THE SYSTEM DONE AND GET THEM UNDER CONTRACT.

c. Innovative System regulation, permitting, and management:

- * NO PROBLEMS AT ALL WITH NO-MOUND SYSTEM, NOT ONE.
- * NONE
- * REDUCE FEE FOR APPLICATION. \$2,500 IS A BIT TOO MUCH. THERE ARE A LOT OF GOOD IDEAS OUT THERE, \$2,500 IS A LOT OF MONEY TO TRY THEM.
- * SMALL FLOWS SHOULD BE ALLOWED AS REPLACEMENT FOR THE MANDATORY CONNECTION TO CENTRAL SEWAGE. THE TREATMENT LEVEL IS CLEANER THAN THE POINT SOURCE CURRENTLY MONITORED BY THE FDEP.
- * THE PROCEDURE IS TOO FORMIDABLE . IT NEEDS TO BE STREAMLINED

d. Maintenance entity regulation, permitting, and management:

- * ALMOST ANYBODY, INCLUDING THE HOMEOWNER, CAN BECOME THE MAINTENANCE ENTITY WHICH IS WRONG IN PRACTICE.
- * COUNTY HEALTH DEPARTMENT AND STATE DO NOT FOLLOW THROUGH ON ANY TYPE OF FINES/PUNISHMENT IF CUSTOMER DOES NOT FOLLOW THROUGH ON RULES OF ATU's. THIS MAKES IT DIFFICULT FOR US; WE HAVE NO WAY TO FORCE COMPLIANCE.
- * FUNCTIONS FINE
- * HAVE 1 INSPECTION A YEAR INSTEAD OF 2.
- * HAVE STATE LAB FOR REQUIRED SAMPLES
- * INSTEAD OF A YEARLY RENEWAL LET IT BE TAGGED ON TO THE CONTRACTOR REGISTRATION.
- * LAB SAMPLING IS AN ADDED EXPENSE AND NOT NECESSARY
- * LESS PAPERWORK AND REGULATION, BE MORE USER FRIENDLY
- * MAKE SURE OTHER MAINTENANCE ENTITIES DO WHAT IS ON THE FORM.
- * MORE QUALIFIED AND MORE TRAINING
- * NONE
- * OK
- * PROPERTY OWNER BE RESPONSIBLE FOR OPERATING AND HAVE IN THEIR NAME.
- * RECOMMEND A FLORIDA LANDOWNER VOLUNTARY TAX ASSESSMENT IN LIEU OF MANDATORY SEWAGE HOOKUP.
- * REMOVE PROPRIETARY RESTRICTIONS ON MAINTENANCE OR REQUIRE MANUFACTURERS TO PROVIDE TRAINING AND AUTHORIZATION TO ANY CONTRACTOR DESIRING TO MAINTAIN SYSTEMS. PROVIDES HOMEOWNERS WITH OPTIONS. CONSISTENCY WITHIN THE HD's.
- * THE REGULATION MUST BE REWRITTEN TO REMOVE THE BURDEN OF COLLECTION OF STATE OPERATING PERMIT FROM THE MAINTENANCE ENTITY TO THE COUNTY HEALTH DEPARTMENT.
- * WE SHOULD BE ABLE TO GET CERTIFIED IN ANY ATU OR PBTS.

**USER PERCEPTIONS OF ADVANCED
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS (OSTDS)
IN FLORIDA
FLORIDA DEPARTMENT OF HEALTH**

SURVEY RESULTS

Installers

**FSU Survey Research Laboratory
College of Social Science Data Center
Florida State University**

Overview

Advanced Onsite Systems in Florida: Survey of Installers

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs conducted a study to measure the practices and perceptions of installers about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study included aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters. The Bureau of Onsite Sewage Programs identified 709 advanced onsite system installers for the survey effort. Surveys were mailed beginning in March 2010. Of the 709 surveys mailed, 39 were returned as non-deliverable (See Figure 1). Sixty-one of the 670 remaining installers returned the survey for a completion rate of 9 percent.

Figure 1
Disposition of Installer Surveys

Installers	
% Complete	3.9%
% Return (Completed and "Do Not Install"	9.1%
Completed	26
Returned "No"	35
Number Delivered	670
Non-Deliverable	39
Number Mailed	709

Systems Installed. Installers were asked to list the type of system installed and the reason they installed that particular system. They were also asked about the number of units they install.

- Hoot was the most frequently listed type of system installed followed by Aqua Clear.
- **ATUs.** 10 of the 26 installers did not install ATUs. During the past year, 10 of the 26 installed one to five ATU systems. The largest number of ATUs installed by an installer was 60 units.
- **PBTS.** 10 of the 26 installers did not install PBTS units. During the past year, 13 of the 26 installed one to three PBTS units. The largest number of PBTS units installed by an installer was 38 units.
- **Innovative Systems.** 23 of the 26 installers did not install Innovative Systems. During the past year, 2 of the 26 installed six to ten Innovative Systems. One installer installed 75 Innovative systems during the previous year.
- **Sand or Gravel Filters.** None of the installers responding to the survey reported installing sand or gravel filters.

- **Revenues.** 26 of the Installers reported their company's annual revenue from installing advanced systems in Florida. Five Installers reported less than one percent of their revenue came from this source while 10 Installers said between 1 to 5 percent of their revenues came from installation. Seven Installers reported 6 to 10 percent of their annual revenue came from installation. Only one Installer reported that 80 percent of their annual revenue came from advance onsite system maintenance.
- **Maintenance Entity and Installers.** 24 of the 26 Installers reported that they were a maintenance entity as well.

Repair. Installers were asked a series of questions concerning repairs and problems with advanced systems. They were also asked to rate the performance of various types of units.

- **ATUs.** ATUs had the largest number of repair calls. Only two Installers of the 19 servicing ATUs reported no repair calls were made during a typical year. Seven Installers reported making 1 to 4 repair calls while four Installers made between 5 and 10 repair calls per year. Three Installers said they made over 100 repair calls in typical year.
- **PBTS.** Four Installers of the 20 servicing PBTS units reported no repair calls were made during a typical year. Twelve Installers reported making five or fewer repair calls.
- **Innovative Systems.** Innovative systems have few repair calls. Of the six Installers who work with these systems, four reported they had no repair calls in a typical year and two Installers reported only making 2 to 5 repair calls per year.
- **Sand or Gravel Filters.** Only six Installers reported performing repair calls for sand or gravel filters. Here, three Installers noted they typically made no calls during the year while the other three Installers reported making between one and more than 10 repair calls per year.

Reasons for Failure. Installers were asked to rate the frequency a specific reason for failure or problems that occurred with the systems they maintained: “Never”, “Some of The Time”, “Most of The Time”, or “All of the Time”.

- Malfunctioning treatment system parts were cited as the reason for problems “Some” or “Most” of the time by 23 of the 26 Installers. Homeowner misuse was cited as the reason for problems “Some” or “Most” of the time by 23 of the 26 Installers. Dosing pump failure (20 of 26) and the unit being turned off (18 of 26) were reasons for problems “Some” or “Most of the Time”. Power to the unit turned off (18 of 26) and Drain field failure (13 of 26) were cited as reason for problems “Some” or “Most of the Time” less frequently by Installers.
- For nearly one-half of the Maintenance Entities, installation (13 of 26) and engineer design (13 of 26) were “Never” a reason for failure or problems with the systems.

Performance. Installers were asked to rate the overall treatment performance of the systems they maintain: “Excellent”, “Good”, “Fair”, or “Poor”.

- **ATUs.** Six of the twenty Installers rated ATUs’ performance as “Excellent”, 11 as “Good” and 2 as “Fair” and 1 as ATUs’ performance as “Poor”.
- **PBTS.** Nine of the 19 Installers rated PBTS’ performance as “Excellent”, 7 as “Good”, 2 as “Fair”, and 1 as “Poor”.
- **Innovative Systems.** One of the two Installers rated Innovative Systems’ performance as “Excellent”, and 1 as “Good”.
- **Sand or Gravel Filters.** Three of the four Installers rated sand or gravel filter systems’ performance as “Excellent”, and 1 as “Good”.

Contact with Other Entities. Installers were asked about the extent they interacted with others when concerning the advanced systems they install: “Rarely Interact”, “Some of the Time”, “Most of the Time”, or “All of the Time”.

- Installers interact most frequently with owners of the systems (19 of 26 “Most” or “All” of the time) and County Health Department staff (14 of 26 “Most” or “All” of the time).
- Installers interact least with Engineers (7 of 26 “Rarely” interact).
- There is interaction with the manufacturers of the systems they maintain (8 “Some”, 5 “Most” and 5 “All” of the time).
- Nearly three-fourths of the Installers (18 of 26) are also the maintenance entity.

- **Customer Satisfaction.** Installers were asked to indicate all the ways they use to keep customers informed about their systems' performance. Of the 26 answering the questions, 9 tracked customer complaints received; 9 left a card for customer comments with the inspection; and 6 specified other ways they determined customer satisfaction. Nine of the 26 Installers reported they did not keep track of customer satisfaction. None of the Installers sent a questionnaire with the bill in order to assess customer satisfaction.

Permitting Time. Installers were asked about how many days it typically takes from filing a construction permit application to construction permit issuance.

- **ATUs.** Five of the 16 ATU Installers stated that it took less than a week for permitting; two said it took about two weeks while seven Installers estimated it typically took two weeks to a month. Only three of the 16 ATU Installers reported permitting taking more than a month with 180 days the longest period of time for the permitting process.
- **PBTS.** Permitting took longer for the PBTS units. Four of the 17 PBTS Installers stated that it took less than a week for permitting; three said it took about two weeks while eight Installers estimated it typically took two weeks to a month. Four of the 17 PBTS unit Installers reported permitting taking more than a month with 360 days the longest period of time for the permitting process.
- **Innovative Systems.** Only three installers reported experience with the Innovative System permitting process. One reported that the process took a week and one between 2 weeks to a month. One Installer estimated the permitting process for the Innovative System to be greater than 180 days.
- **Sand or Gravel Filters.** Sand or Gravel Filter systems took the least amount of permitting time. Of the 4 Installers, one reported it took a week, two stated it took a couple of weeks, and one estimated it took between two weeks to a month between filing a construction permit and permit issuance.

Information Management. Installers were asked about the ways in which they reported and kept their records.

- Nearly one-half of the Installers (10 of 26) used more than one system for accessing and keeping information on their maintenance activities. Ten used the Carmody data base or some combination of the Carmody data base and other system such as paper filing system or spreadsheets. Nine Installers indicated that they used only a paper filing system. Six Installers contact the health department when needed and use other methods as well.

Open-Ended Questions Comments

The survey of Installers included a series of open-ended questions. The Responses to these questions are included in the Survey of Installer Results.

1. Does your company install advanced treatment systems, such as aerobic treatment units (ATUs), performance-based treatment systems (PBTS), sand or gravel filters, and/or innovative systems?

26 YES *[Please answer the following.]*

- a. Please list the TYPES AND MANUFACTURERS of the advanced treatment systems your company is certified to install.**
- b. What are the reasons you install the systems listed above?**

TRAINING AND EDUCATION NEEDS

10. Please tell us about training opportunities related to ATUs and PBTS that you would like to be made available to your company personnel.

GENERAL ASSESSMENT

11. Please tell us about what aspects of the advanced system program in Florida are currently working well as it relates to construction permitting, design, installation, inspection, maintenance, and operating permitting:

12. Please tell us about any changes or improvements you would like to see to the following:

- a. ATU regulation, permitting, and management:**
- b. PBTS regulation, permitting, and management:**
- c. Innovative System regulation, permitting, and management:**
- d. Sand or Gravel Filter regulation, permitting, and management:**
- e. Maintenance entity regulation, permitting, and management:**



Advanced Onsite Systems in Florida: Survey of Installers

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs is conducting a study to measure the practices and perceptions of installers about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study include aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters. Your participation in this study will help us identify the strengths of current practices and experiences as well as areas where improvement may be needed.

Installers	
% Complete	3.9%
% Return (Completed and "Do Not Install")	9.1%
Completed	26
Returned "No"	35
Number Delivered	670
Non-Deliverable	39
Number Mailed	709

SYSTEMS INSTALLED

1. Does your company install advanced treatment systems, such as aerobic treatment units (ATUs), performance-based treatment systems (PBTS), sand or gravel filters, and/or innovative systems?

26 YES *[Please answer the following.]*

- a. Please list the TYPES AND MANUFACTURERS of the advanced treatment systems your company is certified to install.**
- b. What are the reasons you install the systems listed above?**

<u>Types and Manufacturers</u>	<u>Reason Install System</u>
* ADVANCED TREATMENT- HOOT	THEY ARE REQUIRED IN THE DEVELOPMENT WE WORK IN.
* AQUAKLEAR, FAST, HOOT, CAJANAIR, NORWECO, NO-MOUND	BEING VERSATILE TO COMPLY WITH ENGINEERING
* ATU- AQUA KLEAR; PBTS- BIOMICROBICS-FAST UNIT; ATU-CLEARSTREAM; PBTS-QUANICS	WE MANUFACTURE THE CONCRETE TANKS FOR ALL 3 SYSTEMS. QUANICS-ENG. SPECIFIED
* ATU-AQUAAIRE AND AQUA SAFE	COUNTY REQUIRED
* ATU's, GRAVEL SUSTEMS. LOW DOSING SYSTEMS INFILTRATORS	AS PER STATE PERMIT STATES
* BIO-MICROBICS; HOOT; CLEARSTREAM	ENGINEER REQUIRED
* CAJUN-AIRE	
* CLEARSTREAM; CLIONAIRE	GOOD WORKING SYSTEMS
* CLEARSTREAM; DELTA; ECOPURE;MULTIFLO	TO SOLVE THE WASTEWATER PROBLEM SITES

<u>Types and Manufacturers</u>	<u>Reason Install System</u>
* CLEARSTREAM-BOLD GOLD PASSIVE NITROGEN AND PHOSPHATE REMOVAL SYSTEM; HOOT;FAST;DELTA	TO MEET OR EXCEED ENGINEERED JOB SPECIFICATIONS. OUR BELIEF IN PROMOTING SYSTEMS THAT SHOULD PROVIDE LESS IMPACT ON RECEIVING WATERS.
* FAST BIOMICROBICS; AQUA KLEAR	AREA CONSTRAINTS, ENVIORNMENTAL ISSUES
* FAST, NORWELD, HYDRO ACTION	WE ARE FACTORY CERTIFIED -- WOULD LIKE TO INSTALL MORE, KEEP UP WITH FUTURE NEEDS.
* FAST/NORWECO	LAW-NO OTHER REASON
* HOOT	ENGINEERS DESIGN
* HOOT	I GET THE MOST OUT OF THIS SYSTEM.
* HOOT AEROBIC TREATMENT SYSTEM	REQUIRES A PRETREATMENT TANK. SYSTEM IS NSF CERTIFIED AND TESTED. MY ENGINEER HAS REVIEWED THE DESIGN AND TESTING INFORMATION AND IS VERY SATISFIED.
* HOOT SYSTEMS	PACKAGE DEAL- ALL INCLUSIVE; DRIP IRRIGATION; FOWA MEMBER
* HOOT, AQUA KLEAR	LOT SIZE, LARGE HOUSES, WATER TABLE
* HOOT, AQUAKLEAR	LOT SIZE, LIMITED ROOM AND SETBACKS
* HOOT, FAST, DELTA, MOSTLY HOOT	WE ARE THE DEALER
* MULTIFLO, NYADIC AND BIOMICROBICS FAST II	BEEN DISTRIBUTOR FOR MULTIFLO AND NYADIC FOR 24 YEARSS AND PERMITS FOR HOMES IN ENVIRONMENTALLY SENSITIVE AREAS REQUIRE THEM.
* NAYADIC- CONSOLIDATED; HOOT	WATER TABLES AND SIZE OF PROPERTIES
* NORWECO, HOOT	PRICING
* NYADIC; AERO-CELL; BIO COIR	REDUCED SYSTEM SIZE FOR LOT
* QUANTICS, HOOT, MULTIFLO, AQUKLEAR, ENVIROFILTER	SOME ARE GOOD. OTHERS WE MAINTAIN

c. How many of the following systems did your company INSTALL IN FLORIDA during the last year? (n=26)

Type of System	# Installed	Installers
Aerobic Treatment Unit <i>[ATU only, i.e. not part of a PBTS]</i>	0	10
	1-5	10
	6-10	2
	11-20	2
	50	1
	60	1
Performance-Based Treatment System (PBTS) <i>[Not counting innovative systems]</i>	0	10
	1-3	13
	20	1
	30	1
	38	1
Innovative Systems	0	23
	6	1
	>10	1
	75	1
Sand or Gravel Filters	0	26

**d. What percentage of your company's annual revenue comes from
INSTALLING ADVANCED SYSTEMS IN FLORIDA?**

0—80 % of annual revenue	(n=26)
% Annual Revenue	Installers
0%	2
<1%	3
1-5%	10
6-10%	7
15%	3
80%	1

28 NO - Please tell us why you do not install advanced systems.

- * NOT YET CERTIFIED
- * WE NEVER SEE ANY PLANS FOR THESE SYSTEMS
- * I DO NOT INSTALL ANY SYSTEMS -JUST PUMP
- * NO CALL FOR THEM
- * WE MAINLY PUMP TANKS, HARDLY EVER INSTALL OR REPAIR OSTDS
- * WE SPECIALIZE IN MAINTENANCE ONLY ON OLDER SYSTEMS (CONVENTIONAL). THAT IS MOSTLY ALL WE HAVE IN OUR AREA. 99.9%. PERSONAL CHOICE
- * TRADITIONAL TYPES WORK WELL AND ARE LESS EXPENSIVE
- * DO NOT INSTALL-ONLY PUMP
- * PUMPING SERVICE ONLY
- * COST AND AVAILABILITY
- * BASICALLY I AM NO LONGER IN THE SEPTIC INDUSTRY, I KEEP MY LICENSE ONLY BECAUSE IT WAS DIFFICULT TO ACHIEVE WHEN I RECEIVED IT OVER 20 YEARS AGO.
- * NOT REQUIRED TO BE INSTALLED IN THIS AREA
- * BECAUSE THEY ARE GIVEN REDUCTIONS IN D.F. SIZING!
- * DEMAND IS LOW, PRICE IS HIGH, PERFORMANCE IS QUESTIONABLE, MAINTENANCE IS DEMANDING.
- * I NO LONGER DO ANY SEPTIC WORK-ONLY PORTABLE TOILETS
- * WE ARE CERTIFIED TO INSTALL MIGHTY MAC AND FAST SYSTEMS. WE DO NOT INSTALL ATUS ANY MORE BECAUSE YOU NEED TO HAVE A LARGE QUANTITY TO MAKE ANY MONEY DOING THE ANNUAL INSPECTION. WE OUTSOURCE OURS NOW.
- * I DO NOT HAVE A GOOD REASON
- * NOT REQUIRED. CUSTOMERS DO NOT WANT TO SPEND MONEY
- * NO NEED TO DATE IN MY SERVICE AREA.
- * THERE HAS NOT BEEN A DEMAND. WE ARE INSTALLING OUR FIRST SYSTEM SOON
- * ONLY PUMP TANKS
- * WE INSTALL CORRIG. PIPE AND STONE, INFILTRATOR AND LOW DOSING WHEN NECESSARY.
- * CUSTOMER EXPENSE- EXPENSIVE-PEOPLE DO NOT HAVE THE MONEY
- * I ONLY PUMP OUT TANKS
- * NOT INTERESTED

2. Are you a MAINTENANCE ENTITY? (n=26)

24 YES

2 NO - Please tell us why you are not a maintenance entity.

* DON'T WANT TO BE

REPAIR

3. Please estimate the average number of repair calls your company performs per year for a typical system.

ATU only (n=19)	PBTS (n= 20)	Innovative (n=6)	Sand or Gravel (n=6)
2 0 calls	4 0 calls	4 0 calls	3 0 calls
7 1 to 4 calls	1 >1 calls	2 2-5 calls	1 1 calls
4 5-10 calls	1 <2 calls		1 10 calls
1 < 6 calls	10 1-5 calls		1 >10
1 12 calls	1 6 calls		
1 25 calls	2 10 calls		
1 75-100 calls	1 25-50		
1 200 calls			
1 250 calls			

4. How often are each of the following a REASON FOR FAILURE OR PROBLEMS with the systems you install?

Reason for Failure or Problems	NEVER	SOME OF THE TIME	MOST OF THE TIME	ALL OF THE TIME	DON'T KNOW
a. Homeowner misuse	1	12	11	1	0
b. Malfunctioning treatment system parts	1	20	3	1	1
c. Engineer design	13	7	1	1	3
d. Installation	13	7	2	0	1
e. Dosing Pump Failure	3	15	5	0	2
f. Drainfield Failure	8	12	1	1	1
g. Power to unit turned off	6	11	7	1	1
h. Other [Please Specify.] _____	0	2	1	1	0

Reason

- * CUT DRIP LINE
- * CUSTOMER/OWNER DAMAGE
- * ELECTRICAL
- * FILTER CLEAN
- * PERMITTING OF ENGINEER DESIGN NOT LABORATORY TESTED UNITS
- * DON'T CLEAN FILTERS

Frequency

- Some of the time
- Some of the time
- Most of the Time
- All of the Time

5. How would you rate the OVERALL TREATMENT PERFORMANCE of the systems you install?

Type of System Installed	EXCELLENT	GOOD	FAIR	POOR	NO BASIS TO JUDGE
a. ATU	6	11	2	1	1
b. PBTS	9	7	2	1	3
c. Innovative Systems	1	1	0	0	12
d. Sand or Gravel Filters	3	1	0	0	12

CONTACT WITH OTHER ENTITIES

6. To what extent does your firm/company INTERACT WITH EACH OF THE FOLLOWING ENTITIES CONCERNING THE ADVANCED SYSTEMS YOU INSTALL? (n=26)

Entity	RARELY INTERACT	SOME OF THE TIME	MOST OF THE TIME	ALL OF THE TIME	OTHER [PLEASE SPECIFY.]
a. Owners of systems	1	6	8	11	0
b. County Health Department Staff	2	7	3	13	1 HAVE NOT GOT AN O.P. PERMIT IN 3 YEARS
c. Manufacturers of system components	6	8	5	7	0
d. Engineers of the systems you install	7	6	4	9	0
e. Maintenance Entities for systems	5	2	1	0	WE ARE THE MAINTENANCE ENTITY

7. What method does your company use to determine CUSTOMER SATISFACTION WITH THE PERFORMANCE of the advanced systems you install? [Please ✓ all that apply.] (n =26)

- 9 Track customer complaints received
- 9 Leave card for customer comments with service call/inspection
- 0 Questionnaire sent with bill
- 9 Don't keep track
- 6 Other [Please Specify.]
 - * CUSTOMER LETS ME KNOW
 - * EVERY SYSTEM I INSTALL PERSONALLY AND TALK TO THEM ABOUT ALL OF THE SYSTEM. THEY HAVE MY CELL NUMBER AND IT'S ON 24/7.
 - * KEEP CONTACT WITH CUSTOMERS
 - * PHONE DIRECTLY TO CUSTOMER AND ASK FOR COMMENTS
 - * THEY WILL CALL US
 - * VERBAL COMMUNICATIONS BEFORE AND AFTER CALL.

8. Do you normally handle construction and operating permitting with the County Health Department for the systems you install?

23 Yes

How many days does it typically take from filing a construction permit application to construction permit issuance?

ATU only (n=16)	PBTS (n= 17)	Innovative (n=3)	Sand or Gravel (n=4)
1 1-2 days	4 1-7 days	1 7 days	1 5 days
1 <5 days	1 5-15 days	1 14-28 days	2 7-10
3 5-7 days	2 10-14 days	1 >180 days	1 14-28
2 8-13 days	6 14-30 days		
5 14-30 days	1 60 days		
1 >20 days	1 >60 days		
1 >30 days	1 270 days		
1 45 days	1 360 days		
1 180 days			

3 No Please tell us who handles permitting for the systems you install?

- * CONTRACTORS REPAIRS WE DO
- * ENGINEERS
- * THE DESIGNING ENGINEERS

INFORMATION MANAGEMENT

9. Which system or method do you use for accessing and keeping information on the advanced systems you install? (N=25)

- | | | | |
|----|--------------------------------|---|--|
| 3 | Carmody Database | 2 | Contact county health department when needed |
| 1 | Spreadsheets and tables | 9 | Paper filing system |
| 10 | Other <i>[Please Specify.]</i> | | |

- * ALL - CARMODY DATABASE, SPREADSHEETS AND TABLES, PAPER FILING SYSTEM, CONTACT COUNTY HEALTH DEPARTMENT WHEN NEEDED.
- * CARMODY DATABASE AND PAPER FILING SYSTEM
- * CARMODY DATABASE AND PAPER FILING SYSTEM
- * CARMODY DATABASE, CONTACT COUNTY HEALTH DEPARTMENT WHEN NEEDED
- * CARMODY DATABASE, SPREADSHEETS AND TABLES, PAPER FILING SYSTEM
- * CARMODY DATABASE, SPREADSHEETS AND TABLES, PAPER FILING SYSTEM
- * CARMODY DATABASE; PAPER FILING SYSTEM
- * SPREADSHEETS AND TABLES, PAPER FILING SYSTEM, CONTACT COUNTY HEALTH DEPARTMENT WHEN NEEDED
- * SPREADSHEETS AND TABLES, PAPER FILING SYSTEM, CONTACT COUNTY HEALTH DEPARTMENT WHEN NEEDED
- * SPREADSHEETS AND TABLES; PAPER FILING SYSTEM

TRAINING AND EDUCATION NEEDS

10. Please tell us about training opportunities related to ATUs and PBTS that you would like to be made available to your company personnel.

- * ALL TRAINING AVA.-FOWA, DOH, MANUFACTURERS, ETC.
- * ANYTHING OTHER THAN "SOIL ANALYSIS" WOULD BE REFRESHING
- * CARMODY DATABASE TRAINING
- * FOWA TRAINING CLASSES ARE THE BEST OPER. EACH COMPANY SHOULD HAVE THE OPPORTUNITY TO QUALIFY TO SERVICE ANY BRANDS
- * IF COMPANIES HAD TO GIVE A MANDATORY CLASS TO ANY CONTRACTOR NOT JUST THE ONES WITH EXCLUSIVE CONTRACTS THE MAINTENANCE WOULD BE DONE BY MORE FIRMS AND THE QUALITY WOULD IMPROVE ALLONG WITH CUSTOMER CONTACT.
- * MANY BRANDS (MANUFACTURERS) HAVE JURISDICTION (GEOGRAPHIC) AREAS THAT ARE GIVEN TO SPECIFIC ENTITIES AND DO NOT ALLOW OTHERS TO WORK IN THOSE SYSTEMS.
- * MORE SEMINARS STRICTLY ABOUT ATU'S AND PBTS
- * NEAR JACKSONVILLE
- * NONE
- * TRAINING BY PROFESSIONALS WITH THE STATE & MANUFACTURERES IS ALWAYS APPRECIATED. PLEASE KEEP US INFORMED OF THESE OPPORTUNITIES.
- * TRAINING IS GOOD
- * TRAINING NOTIFICATION
- * VERY SATISFIED WITH THE CURRENT TRAINING THE HOOT REPRESENTATIVE PROVIDES.
- * WE WOULD LIKE TO DO MAINTENANCE ON ALL ATU AND PBS.
- * WOULD LIKE TRAINING IN NIATIC ATU AND OTHER ATU TO BE AVAILABLE TO ALL INSTALLERS.

GENERAL ASSESSMENT

11. Please tell us about what aspects of the advanced system program in Florida are currently working well as it relates to construction permitting, design, installation, inspection, maintenance, and operating permitting:

- * ATU ARE A GOOD WORKING SYSTEM
- * DCDH
- * ENGINEERING IS TOTALLY NOT NEEDED. WASTE OF MONEY. MAINTENANCE SHOULD BE 1 TIME A YEAR.
- * GOOD
- * I THINK THE SYSTEMS ARE TOO EXPENSIVE TO BE USED IN REPAIRS. AVERAGE REPAIR COST IS 3-4 THOUSAND DOLLARS. AVERAGE ATU IS \$12,000 TO 20,000. THERE ARE A LOT OF PEOPLE WHO CAN'T AFFORD THE LOWER END, MUCH LESS THE ATU.
- * IT'S OK. WOULD LIKE TO SEE QUICKER PERMIT TURN AROUND.
- * LOOKS GOOD ON PAPER. NO 2 COUNTIES ASK OR LOOK FOR THE SAME PAPERS.
- * MOST ALL OF IT.
- * N/A- STILL TOO EXPENSIVE FOR WHAT THE TYPICAL RESIDENTIAL HOUSEHOLD CAN AFFORD IN FLORIDA'S ECONOMY.
- * NONE
- * OKAY WITH ALL THE ABOVE
- * PBTS SEEM TO BE WORKING BEST
- * PERMITTING TOO BUREAUCRATIC
- * POLK COUNTY DOES NOT ISSUE OPERATING PERMITS, THEY JUST TAKE THE \$\$\$, I HAVE NOT GOT AN OPERATING PERMIT IN THREE YEARS AND WE MAINTAIN ABOUT 300 ATU's.
- * THE HEALTH DEPARTMENT TAKES OUR PERMIT FEE WELL AND GIVES US A RECEIPT NORMALLY ON THE SAME DAY.
- * WE ARE NOT HAVING ANY PROBLEMS WITH THE ATU, PBTS SYSTEMS WE CURRENTLY INSTALL AND MAINTAIN.
- * WE THINK ALL ITEMS ABOVE ARE WORKING WELL ESP. IN THESE TURBULENT TIMES. WE APPRECIATE THE PROFESSIONAL ASSISTANCE OF ALL THE STAFF AT BREVARD AND INDIAN RIVER HEALTH DEPARTMENTS.

12. Please tell us about any changes or improvements you would like to see to the following:

a. ATU regulation, permitting, and management:

- * ALL ATU's INSTALLED SHOULD HAVE A PRETREATMENT TANK SIZED ACCORDING TO 64E-6 NEW SYSTEMS STANDARDS. ALL ATU's ON THE MARKET SHOULD HAVE AN NSF SEAL OF APPROVAL BEFORE BEING CONSIDERED FOR STATE APPROVAL.
- * ANNUAL OPERATING PERMIT, NOT BI-ANNUAL
- * ENGINEERING IS TOTALLY NOT NEEDED. WASTE OF MONEY. MAINTENANCE SHOULD BE 1 TIME A YEAR.
- * IF COMPANIES HAD TO GIVE A MANDATORY CLASS TO ANY CONTRACTOR NOT JUST THE ONES WITH EXCLUSIVE CONTRACTS THE MAINTENANCE WOULD BE DONE BY MORE FIRMS AND THE QUALITY WOULD IMPROVE ALLONG WITH CUSTOMER CONTACT.
- * LESS REGULATION AND LESS PERMITTING. PLACE THE RESPONSIBILITY ON THE CONTRACTORS.
- * MORE COMPETITION IN MAINTENANCE ENTITIES AND MANUFACTURERS
- * NEED TO CONSOLIDATE TO THE SAME PAPER WORK. NEED TO BE ABLE TO DO MAINTENANCE ON ALL SYSTEMS.
- * NONE
- * NONE
- * NONE
- * OK
- * PERMITTING SHOULD NOT REQUIRE A ENGINEER IN THE FUTURE.
- * QUALIFICATIONS TO SERVICE UNIT AFTER TRAINING
- * THE BIGGEST COMPLAINT FOR ATU IS THAT ENGINEERS BEING ABLE TO DECIDE EXACTLY WHAT MANUFACTURER WE HAVE TO INSTALL.
- * YES, MANAGEMENT. THERE IS NONE IN POLK COUNTY

b. PBTS regulation, permitting, and management:

- * ALL ATU's INSTALLED SHOULD HAVE A PRETREATMENT TANK SIZED ACCORDING TO 64E-6 NEW SYSTEMS STANDARDS. ALL ATU's ON THE MARKET SHOULD HAVE AN NSF SEAL OF APPROVAL BEFORE BEING CONSIDERED FOR STATE APPROVAL.
- * ANNUAL OPERATING PERMITS, NOT BI-ANNUAL
- * ENGINEERING IS TOTALLY NOT NEEDED. WASTE OF MONEY. MAINTENANCE SHOULD BE 1 TIME A YEAR.
- * LESS REGULATION AND LESS PERMITTING. KEEP IT SIMPLE.
- * MANAGEMENT
- * MORE COMPETITION IN MAINTENANCE ENTITIES AND MANUFACTURERS
- * NEED TO CONSOLIDATE TO THE SAME PAPER WORK. NEED TO BE ABLE TO DO MAINTENANCE ON ALL SYSTEMS.
- * NONE
- * NONE
- * PERMITTING SHOULD NOT REQUIRE A ENGINEER IN THE FUTURE. ANNUAL FEES FOR OPERATING PERMIT SHOULD BE LESS
- * SHORTER
- * THE BIGGEST COMPLAINT IS THAT ENGINEERS BEING ABLE TO DECIDE EXACTLY WHAT MANUFACTURER WE HAVE TO INSTALL.

c. Innovative System regulation, permitting, and management:

- * ANNUAL FEES FOR OPERATING PERMIT SHOULD BE LESS
- * LESS REGULATION AND LESS PERMITTING. HAVE LOCAL HEALTH DEPTS COMPLETE PAGE 3 OF APPLICATION.
- * MORE OPENNESS TO NEW AND INNOVATIVE SYSTEMS TO BE TRIED OUT IN DESIGNATED AREAS OR TRAINING CENTERS PROPERTIES
- * N/A
- * N/A
- * SMALL FLOWS SHOULD BE ALLOWED AS REPLACEMENT FOR MANDATORY CONNECTION TO CENTRAL SEWAGE. THE TREATMENT LEVEL IS CLEANER THAN THE POINT SOURCES CURRENTLY MONITORED BY FDEP
- * SPEED UP THE PROCESS

d. Sand or Gravel Filter regulation, permitting, and management:

- * THE VAST MAJORITY OF THESE SYSTEMS ARE UNDER MAINTAINED OR NOT MAINTAINED AT ALL. CURRENT EVALUATION AND APPROVAL PROCEDURE ADEQUATE.
- * NONE
- * N/A. DON'T INSTALL GRAVEL SYSTEMS ANYMORE.
- * N/A

e. Maintenance entity regulation, permitting, and management:

- * ALLOW TRAINING FOR ALL ATU AND PBTS SYSTEMS FOR ALL INSTALLERS
- * COST OF PERMIT TO BE LOWERED
- * LOCAL HEALTH DEPT SHOULD BILL THE CLIENT DIRECTLY FOR ANNUAL PERMITTING FEES, NOT THE CONTRACTOR.
- * NEED MORE REGULATION. TOO MANY CROOKS IN BUSINESS.
- * NEED TO BE ABLE TO DO MAINTENANCE ON ALL SYSTEMS. OUR SINGLE MINDNESS IS KILLING OUR INDUSTRY. MONOPOLY ON MAINTENANCE ON ATU'S IS BAD BUSINESS. LET ANYONE WHO IS A MAINTENANCE ENTITY WITH PROPER TRAINING COMPETE FOR THIS SERVICE.
- * NONE
- * NONE
- * OK
- * RECOMMEND A FLORIDA LANDOWNER VOLUNTARY TAX ASSESSMENT IN LIEU OF MANDATORY SEWAGE.
- * THE CHD SHOULD BE RESPONSIBLE FOR COLLECTING THEIR FEES. (OP)

**USER PERCEPTIONS OF ADVANCED
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS (OSTDS)
IN FLORIDA
FLORIDA DEPARTMENT OF HEALTH**

SURVEY RESULTS

Engineers

**FSU Survey Research Laboratory
College of Social Science Data Center
Florida State University**

Overview

Advanced Onsite Systems in Florida: Survey of Engineers

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs conducted a study to measure the practices and perceptions of engineers about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study included aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters. The Bureau of Onsite Sewage Programs identified 164 advanced onsite system engineers for the survey effort. Surveys were mailed beginning in March 2010. Of the 164 surveys mailed, 6 were returned as non-deliverable (See Figure 1). Nineteen of the 158 remaining engineers returned the survey for a completion rate of 12 percent

Figure 1
Disposition of Engineer Surveys

Engineers	
% Complete	8.2%
% Return (Completed and "No System")	12.0%
Completed	13
Returned "No"	6
Number Delivered	158
Non-Deliverable	6
Number Mailed	164

Systems Designed. Engineers were asked to list the types and manufacturers of advanced treatment systems normally used in their designs.

- Hoot was mentioned most frequently as a system used in their designs.
- **ATUs.** 4 of the 13 Engineers did not design any ATUs for use in Florida. During the past year, seven engineers designed 1 to 4 ATU systems for use in Florida. Two Engineers reported designing over 40 ATUs for use in Florida.
- **PBTS.** 4 of the 13 Engineers did not design any PBTS units for use in Florida. During the past year, eight engineers designed 1 to 4 PBTS units for use in Florida. One Engineer reported designing 15 to 20 PBTS units for use in Florida.
- **Innovative Systems.** Ten of the Engineers responding to the survey reported they did not design Innovative Systems for use in Florida; three Engineers reported designing one Innovative system.
- **Sand or Gravel Filters.** Eleven of the Engineers responding to the survey reported they did design Sand or Gravel Filter systems; one Engineer designed 3 sand and gravel systems and another designed 12.

- **Revenues.** Eight Engineers had annual company revenue of 5% or less; two Engineers reported 20% to 25%; and two Engineers reported 40% to 60% of revenues came from designing Advanced Systems in Florida.

Permitting Time. Engineers were asked about how many days it typically takes from filing a construction permit application to construction permit issuance.

- Nine of the 13 Engineers normally handle construction and operating permitting with the County Health Department for the Advanced Systems they design.
- **ATUs.** Two of the 6 ATU design Engineers stated that it took less than a week for permitting; two Engineers estimated it typically took two weeks to a month. Only two of the 9 ATU design Engineers reported permitting taking more than a month with 90 days the longest period of time for the permitting process.
- **PBTS.** Permitting took less time for the PBTS units. All of the 6 PBTS design Engineers stated that it took two weeks or less for permitting.
- **Innovative Systems.** Only two Engineers reported experience with the Innovative System permitting process. Both reported that the process took two weeks or less for permitting.
- **Sand or Gravel Filters.** Of the two Engineers designing for sand or gravel filters, one reported it took a two weeks and one reported permitting took 90 days.
- Engineers report that it is rare (7 of 11) to find substantial changes to the permitted design during construction inspections.

Re-Engineering. Engineers were asked about re-engineering designs and the overall treatment performance of the systems they design.

- It is rare (10 of 11 reported “Rarely”) for the Engineer’s firm to have to re-engineer one of its designs for an Advanced System in Florida because the system had problems that occurred after the installation was complete.
- Engineers were asked about how frequently their advanced system needed to be re-engineered due to various factors: “Rarely”, “Some of the Time”, “Most of the Time”, or “All of the Time”. Homeowner misuse was the top reason for re-engineering (5 of 13 “Most” or “Some of the Time”).

■ **Performance.** Engineers were asked to rate the overall treatment performance of the systems they design: “Excellent”, “Good”, “Fair”, or “Poor”.

- **ATUs.** 4 of the 10 entities rated ATUs’ performance as “Excellent” and 6 as “Good” No one rated the ATUs’ performance as “Fair” or “Poor”.
- **PBTS.** Three of the 9 entities rated PBTS’ performance as “Excellent”, 5 as “Good”, 1 as “Fair”. No one rated the PBTS unit’s performance as “Poor”.

Maintenance, Monitoring, and Sampling. Engineers were asked to indicate the tasks they specified that the contractor perform during routine inspections of the advanced systems.

- Nine of the 13 Engineers require sampling for the Advanced Systems they design.
- **Forms and Check lists.** Most (9 of 13) indicated work through a manufacturer’s checklist. Few (4 of 13) specify a contractor work through a engineer’s or County Health Department’s check list (4 of 13).
- **System Access.** Almost all (9 of 13) specify contractors open covers to observe the aerobic treatment chamber, open covers to observe trash compartment (8 of 13), and opened covers to observe clarifier/dosing tank (8 of 13). Fewer (4 of 13) specify leaving the surface undisturbed or open the observation port (5 of 13).
- **Equipment Checks.** Most Engineers (7 of 13) specify that contractors check the trigger alarm, check that the air supply was running (7 of 13), and check trigger pumps. (8 of 13)
- **Maintenance Actions.** Engineers tend to specify that contractors inspect/ clean the effluent filter (10 of 13), pump the tank (8 of 13), inspect the air filter (8 of 13), and inspect/clean the air diffusers (7 of 13). Replacing parts was the least mentioned maintenance action (6 of 13).
- **Assessment of Operating Conditions.** Most Engineers specify that contractors check for smell (9 of 13); check wetness in drain field (9 of 13), check water clarity in tank (8 of 13), check ponding depth (8 of 13), observe and record general appearance of treatment system functioning (7 of 13). Only 6 of the 13 Engineers specify contractors check sounds, record number of dosing events, measure sludge accumulation. Five of 13 Engineers recommend recording the water meter reading and checking the presence / supply of chlorination tablets. Only 4 Engineers specified that contractors check how solids settle in treatment chamber
- **Assessment of Effluent Quality.** Most Engineers (7 of 13) specify that maintenance contractors observe the clarity of effluent in the observation port and take effluent samples for laboratory analysis (6 of 13). Fewer specify the use of test strips (4 of 13) or chemistry kits (3 of 14) to assess effluent concentrations. Three Engineers specify taking ground water samples.

Contact with Other Entities. Manufacturers were asked about the extent they interacted with others concerning the advanced systems their firm manufactures: “Rarely Interact”, “Some of the Time”, “Most of the Time”, or “All of the Time”.

- Engineers interact most frequently with Installers of Systems (9 of 13 “Most” or “All” of the time); County Health Department staff design (8 of 13 “Most” or “All” of the time), Owners of Systems they design (4 of 13 “Most” or “All” of the time) and Manufacturers of system components (6 of 13 “Most” or “All” of the time).
- Manufacturers interact less with Owners of Systems (9 of 13 “Rarely” or “Some of the Time”) and Maintenance Entities (9 of 13 “Rarely” or “Some of the Time”).

Open-Ended Questions Comments

The survey of Engineers included a series of open-ended questions. The Responses to these questions are included in the Survey of Engineer Results.

1. Does your firm/company design advanced treatment systems such as aerobic treatment units (ATUs), performance-based treatment systems (PBTS), and/or innovative systems?

NO Please tell us why you do not work on advanced systems and skip to Question 10 in the Training and Education Needs Section on page 5.

1. Does your firm/company design advanced treatment systems such as aerobic treatment units (ATUs), performance-based treatment systems (PBTS), and/or innovative systems?

YES *[Please answer the following.]*

a. Please list the **TYPES AND MANUFACTURERS** of the advanced treatment systems normally used in your designs.

b. What are the reasons you design the systems listed above?

7. Do you require sampling for the advanced systems you design?

YES Please tell us about the reasons sampling is required, and what sampling frequency you recommend.

NO Please tell us about the reasons sampling is not required.

TRAINING AND EDUCATION NEEDS

10. Please tell us about educational/training opportunities related to advanced systems that you would like to be made available to individuals in your profession.

GENERAL ASSESSMENT

11. Please tell us about what aspects of the advanced system program in Florida are currently working well as it relates to construction permitting, design, installation, inspection, maintenance, and operating permitting:

12. Please tell us about any changes or improvements you would like to see to the following:

a. ATU regulation, permitting, and management:

b. PBTS regulation, permitting, and management:

c. Maintenance entity regulation, permitting, and management:

d. Innovative System and/or Sand or Gravel Filter regulation, permitting, and management:



Advanced Onsite Systems in Florida: Survey of Engineers

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs is conducting a study to measure the practices and perceptions of engineers about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study include aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters. Your participation in this study will help us identify the strengths of current practices and experiences as well as areas where improvement may be needed.

Engineers	
% Complete	8.2%
% Return (Completed and "No System"	12.0%
Completed	13
Returned "No"	6
Number Delivered	158
Non-Deliverable	6
Number Mailed	164

SYSTEMS DESIGNED

1. Does your firm/company design advanced treatment systems such as aerobic treatment units (ATUs), performance-based treatment systems (PBTS), and/or innovative systems?

6 NO Please tell us why you do not work on advanced systems and skip to Question 10 in the Training and Education Needs Section on page 5.

- UNDOCUMENTED SCIENCE/ HIGH LIABILITY
- HAVE NOT HAD A REQUEST FOR THIS SERVICE AND I AM NOT UP TO SPEED ON THESE TYPES OF SYSTEMS
- WE DON'T DO SEWAGE TREATMENT DESIGN
- MAINTENANCE IS A PROBLEM IN OUR AREA. VERY FEW COMPANIES ARE INTERESTED NOT QUALIFIED
- NO LONGER PROVIDE THIS SERVICE

13 YES *[Please answer the following.]*

a. Please list the TYPES AND MANUFACTURERS of the advanced treatment systems normally used in your designs.

b. What are the reasons you design the systems listed above?

<u>Types and Manufacturers</u>	<u>Reason Design System</u>
* AERO CELL BY QUANICS, INC.; BIOCOIR BY QYANICS, INC; PRIOR TO 2006- ECO PURE PEAT SYSTEMS; HOOT; NAYADIC; BIOMICROBICS; FAST; CLEARSTREAM	MORE CONSISTENT PERFORMANCE OF FIXED FIRM SYSTEMS
* AQUA-AIRE; HOOT SYSTEMS	SUPPORT FROM MANUFACTURER; PACKAGE DESIGN
* ATU, PBTS, STS, DRIP, HOOT, AQUAAIRE	DOH REQUIREMENTS (CHARLOTTE COUNTY); SETBACK AND SIZE REDUCTIONS
* BORO NA MANA (DESIGN EVALUATION); ATU SYSTEMS	CLIENT DIRECTED OR REGULATIONS FOR DRAINFIELD SIZING
* DELTA/CLEARSTREAM	TO SOLVE WASTEWATER PROBLEM PROPERTIES
* EZ-FLOW	LOCAL CONTRACTOR PREFERRED
* HOOT	RECOMMENDED BY HEALTH DEPARTMENT
* HOOT AEROBIC SYSTEMS	UNDERSTANDING OF THE SYSTEM AND HOW IT IS PERMITTED
* HOOT AEROBIC SYSTEMS, INC.	LOCAL DISTRIBUTORS; EASY TO GET DATA
* HOOT AEROBIC TREATMENT SYSTEMS	EASE OF INSTALLATION; GOOD MANUFACTURER SUPPORT
* HOOT AEROBICS; AQUAKLEAR; NORWECO; BIO MICROBICS	PROVEN PERFORMANCE, RELIABILITY AND MANUFACTURER SUPPORT
* PEEKED BED FILTERS-ADVENTEX BY ORENCO	FLORIDA DEALER- IT IS A RELIABLE, EASY TO MAINTAIN, HIGH PERFORMANCE SYSTEM WITH LOW POWER CONSUMPTION.
* ZABEL/SCAT BIO FILTER; MULTI FLOW/AWT SYSTEM; QUANICS/AWT SYSTEM	ONE SYSTEM WAS FOR SETBACKS. THE OTHER 2 WERE FOR NEW ENGINEERED SYSTEMS

c. How many of the following systems did your company DESIGN FOR USE IN FLORIDA during the last year?

# Aerobic Treatment Units	Engineers (n=13)
0	4
1- 4	7
40	1
50-70	1

# Performance Based Treatment Systems	Engineers (n=13)
0	4
1-4	8
15-20	1

# Innovative Systems	Engineers (n=13)
0	10
1	3

# Sand or Gravel Systems	Engineers (n=13)
0	11
3	1
12	1

d. What percentage of your company's annual revenue comes from DESIGNING ADVANCED SYSTEMS FOR USE IN FLORIDA?

% Annual Revenue	Engineers (n=12)
<1%	1
1-2%	3
3-5%	2
<5%	2
20-25%	2
40%	1
60%	1

PERMITTING AND OPERATION

2. Do you normally handle construction and operating permitting with the County Health Department for the advanced systems that you design? (n =13)

9 Yes *[Please answer the following]*

HOW MANY DAYS does it typically take from filing a construction permit application to construction permit issuance?

ATU only (n=6)	PBTS (n= 6)	Innovative (n=2)	Sand or Gravel (n=2)
2 3-5 days	2 7-8days	1 8 days	1 14 days
2 20-30 days	1 5-15 days	1 10 days	1 90 days
1 60 days	3 10 days		
1 90 days			

4 No Please tell us who handles permits for the advanced systems you design.

- * CONTRACTOR
- * CONTRACTOR/OTHER CONSULTANTS
- * INSTALLERS
- * SYSTEM INSTALLERS (VARIOUS)

3. How common is it to find SUBSTANTIAL CHANGES TO THE PERMITTED DESIGN during construction inspections? (n =13)

- 7** Rarely
- 3** Sometimes
- 3** Frequently
- 0** Most of the Time

4. How often does your firm/company have to re-engineer one of its designs for an advanced system in Florida because the system had problems that occurred after the installation was complete? (n=13)

- 10** Rarely
- 2** Some of the time
- 1** Most of the time
- 0** All of the time

5. How often is each of the following a reason one of your advanced system designs needs to be re-engineered?

Reason for Re-engineering	RARELY	SOME OF THE TIME	MOST OF THE TIME	ALL OF THE TIME	DON'T KNOW
a. Homeowner misuse	4	2	3	0	2
b. Malfunctioning treatment system parts	6	3	0	0	1
c. Engineer design	10	0	0	0	0
d. Installation	8	3	0	0	1
e. Dosing Pump Failure	6	3	0	0	1
f. Drainfield Failure	8	0	1	0	1
g. Other <i>[Please Specify.]</i>	1	1	0	0	1

6. How would you rate the OVERALL TREATMENT PERFORMANCE of the systems you have designed:

Type of Advanced System	EXCELLENT	GOOD	FAIR	POOR	NO BASIS TO JUDGE
a. ATU	4	6	0	0	2
b. PBTS	3	5	1	0	2

MAINTENANCE, MONITORING, AND SAMPLING

7.	Do you require sampling for the advanced systems you design?
9	YES Please tell us about the reasons sampling is required, and what sampling frequency you recommend.
	<ul style="list-style-type: none"> * DOH RECOMMENDED; WITH RULE REQUIREMENTS (SEMI ANNUAL) * FOUR TIMES PER YEAR. MANY COASTAL AREAS HAVE SEASONAL USE, ESPECIALLY RENTAL PROPERTIES. * INNOVATIVE SYSTEMS- WE TEST MONTHLY AND REPORT QUARTERLY; PBTS- 2 TIMES PER YEAR. SYSTEMS SHOULD BE TESTED IN THE FIELD AND THOSE RESULTS USED TO ESTABLISH TRUE PERFORMANCE. * REQUIRED BY CODE * REQUIRED UNDER REGS-SAMPLING SCHEDULED PER REGULATORY CRITERIA * SAMPLING IS DONE TO ASSURE THE INTEGRITY OF THE SYSTEM. USUALLY ANNUALLY. * SAMPLING IS REQUIRED TO ENSURE IS PERFORMING AS DESIGNED. SAMPLING ON SYSTEMS WE DESIGN IS RECOMMENDED TWICE A YEAR. * SITE USES ONE OR MORE ADVANTAGES, E.G. INCREASED AUTHORIZED FLOW TECHNOLOGY US RATED INNOVATIVE, SO SMALING DATA IS NEEDED TO MOVE THE TECHNOLOGY TO ALTERNATIVE. 1 OR 2 TIMES A PER YEAR. * TO CONFIRM SYSTEM PERFORMANCE. QRTLY THEN SEMI THEN ANNUALLY
4	NO Please tell us about the reasons sampling is not required.
	<ul style="list-style-type: none"> * MAINTENANCE INSPECTIONS ONLY REQUIRED * PERFORMANCE HAS ALREADY BEEN ESTABLISHED VIA THIRD PARTY TESTING. SAMPLING IS ALSO COSTLY AND TIME CONSUMING DISCOURAGING USE.

8. Which of the following tasks do you usually specify that the maintenance contractor perform during routine inspections of the advanced systems you manufacture for use in Florida?

[Please ✓ All That Apply.] (n =11)

Forms and Checklists

- 9 Work through a manufacturer's or distributor's check list
- 4 Work through the engineer's check list if engineered-designed
- 4 Work through the County Health Department's check list
- 2 Work through own check list

System Access

- 8 Open covers to observe aerobic treatment chamber
- 8 Open covers to observe trash tank/compartment
- 9 Open covers to observe clarifier/dosing tank
- 4 Leave surface undisturbed
- 5 Open observation port

Equipment Checks

- 7 Trigger alarm
- 8 Trigger pumps
- 7 Check that air supply is running

Maintenance Actions

- 10 Inspect/clean effluent filter
- 8 Inspect/clean air filter
- 7 Inspect/clean air diffusers
- 8 Pump tank(s) every _____ years
- 6 Replace parts

4 Other [Please describe.]

- * CHECK PRESSURE IN DRIP FIELDS (PRESSURE EMITTERS)
- * EXPLAIN SYSTEM OPERATION AND SERVICE TO CLIENT
- * WE USE THE HOOT SYSTEM CRITERIA THAT IS SPECIFIED FOR THE UNIT

Assessment of Operating Conditions

- 8 Check clarity of water in treatment tank/clarifier
- 9 Check for smell from treatment system
- 6 Check sounds from treatment system
- 6 Measure sludge accumulation
- 4 Check how well solids settle in aerobic treatment chamber
- 5 Record water meter reading
- 6 Record number of dosing events or pump runtime (for dosed systems)
- 7 Record presence, number, or duration of alarms
- 8 Check and record pressure (drip systems)
- 8 Check ponding depth in drainfield
- 9 Check wetness in drainfield area
- 5 Check presence and supply of chlorination tablets if system includes them
- 7 Observe and record general appearance of treatment system functioning

Assessment of Effluent Quality

- 7 Observe clarity of effluent in observation port
- 4 Use test strips to assess effluent concentrations
- 3 Use chemistry kits to assess effluent concentrations
- 6 Take effluent samples for laboratory analysis
- 3 Take groundwater samples

CONTACT WITH OTHER ENTITIES

9. To what extent does your firm/company INTERACT WITH EACH OF THE FOLLOWING ENTITIES CONCERNING THE ADVANCED SYSTEMS YOUR FIRM DESIGNS? (N=13)

Entity	RARELY INTERACT	SOME OF THE TIME	MOST OF THE TIME	ALL OF THE TIME	OTHER [PLEASE SPECIFY.]	
a. Maintenance Entities for systems	6	3	1	3	0	_____
b. Owners of systems	5	4	2	2	0	_____
c. County Health Department Staff	3	2	1	7	0	_____
d. Manufacturers of system components	4	3	3	3	0	_____
e. Installers of systems	0	4	3	6	0	_____

TRAINING AND EDUCATION NEEDS

10. Please tell us about educational/training opportunities related to advanced systems that you would like to be made available to individuals in your profession.

- * WOULD LIKE TO HAVE ENGINEERS PRESENT EXAMPLES OF THEIR SYSTEM DESIGNS AND PROBLEM SYSTEMS.
- * DESIGN COURSE THRU DOH ENGINEER FOR ALL SYSTEMS
- * DRAINFIELD/DRIP DESIGN
- * DRIP IRRIGATION SYSTEM DESIGN; TREATMENT SYSTEM CONSTRUCTION INSPECTIONS; ONGOING SYSTEM MONITORING AND MAINTENANCE
- * EDUCATION/TRAINING BY DOH RELATING TO THEIR (DOH'S) REASONING AND OR REQUIREMENTS FOR PBTS.
- * I WOULD PREFER THE DEPT EVALUATE A PARTICULAR SYSTEM/BRAND AND THEN MAKE A APPROVAL FOR THAT UNIT WITH VARIOUS FLOW COMBINATIONS. THEN THE ENGR COULD SELECT A MANUFACTURER AND EXPECT TO RECEIVE PERMITTING IN A REASONABLE TIME FOR A DEVICE THAT HAS BEEN D
- * IT WOULD BE HELPFUL TO HAVE TRAINING ON ALL ADVANCED TREATMENT SYSTEMS AS THEY ARE BECOMING MORE NECESSARY. THEY NEED TO OFFER CONTINUING ED. CREDITS ANS MARKET IT WELL AT LOW COST.
- * MANUFACTURERS NEED TO PRESENT THIS DESIGN CONCEPT IN DETAIL TO DESIGNERS. NOT MARKETING OR SALES, BUT TECHNOLOGICALLY VERIFIED INFORMATION. PERHAPS YOU COULD GET A DOH ENGINEER TO PRESENT THE INFORMATION IN A "NO SPIN" ATMOSPHERE.
- * NONE AT THIS TIME- LOCAL HEALTH DEPT STAFF (LEE CO.) IS VERY HELPFUL IF THERE ARE ANY ISSUES.
- * PBTS WOULD BE HELPFUL, ESPECIALLY UV LIGHT BASED SYSTEMS.
- * TRAIN INSTALLERS, MAINTENANCE PROVIDERS AND ENGINEERS ON DESIGN, INSTALLATION AND MAINTENANCE OF ADVANCED SYSTEMS. ORENCON IS WILLING TO PROVIDE THE TECHNICAL INSTRUCTION ON THEORY AND INSTALLATION FOR FOWA CLASSES.
- * WORK WITH THE FLORIDA BOARD OF PROFESSIONAL ENGINEERS TO GET PPH's FOR PBTS TRAINING IN DESIGN. FOWA HAS A GOOD PROGRAM.

GENERAL ASSESSMENT

11. Please tell us about what aspects of the advanced system program in Florida are currently working well as it relates to construction permitting, design, installation, inspection, maintenance, and operating permitting:

- * CONSTRUCTION AND OPERATING PERMITTING ARE CURRENTLY WORKING WELL IN OUR AREA.
- * CONSTRUCTION PERMITTING; DESIGN; INSTALLATION
- * CONSTRUCTION PERMITTING-LOUSY, ALMOST RIDICULOUS TIME TO PERMIT; DESIGN EASY WITH THE RIGHT MANUFACTURER; INSTALLATION -EASY; MAINTENANCE AND OPERATIONS-VERY EASY TO FIND OPERATORS BUT EXPENSIVE.
- * DOSED SYSTEMS SEEM BEST.
- * EVERYTHING IS WORKING SMOOTHLY.
- * GIVEN COMPLETE LACK OF SIGNIFICANT ISSUES WITH SYSTEM INSTALLED OVER 6+ YEAR PERIOD, PROGRAM APPEARS SATISFACTORY.
- * NO DATA
- * OK
- * PHILOSOPHICALLY, THE CODE GIVES SUFFICIENT BENEFITS TO THE USE OF PBTS SO THEY ARE PROPERLY VALUED. HEALTH DEPARTMENT STAFF OF COUNTIES ARE PRETTY WELL TRAINED. THEY ASK INTELLIGENT QUESTIONS AND MAKE SURE A LEGITIMATE EFFORT BY THE DESIGNER IS MADE.
- * THE PROGRAM WORKS WELL FOR ME IN LEE COUNTY. I'VE HAD SOME DIFFICULTIES IN OTHER COUNTIES WITH INEXPERIENCED DOH STAFF AND COMMUNICATIONS ISSUES DUE TO LANGUAGE ISSUES.
- * THE SYSTEM ISN'T TOO BAD, HOWEVER IT'S ADMINISTERED DIFFERENTLY DEPENDING ON THE COUNTY.

12. Please tell us about any changes or improvements you would like to see to the following:

a. ATU regulation, permitting, and management:

- * ATU PLUS DRIP SHOULD NOT REQUIRE A PE. IT HAS NOW BECOME "COOKIE CUTTER."
- * ATU USE SHOULD BE ENCOURAGED VIA EASY REGULATION AND PERMITTING. BENEFIT TO ENVIRONMENT OVER CONVENTIONAL SYSTEMS IS HUGE.
- * MAKE IT EASIER TO PERMIT THUS ELIMINATING THE UP FRONT COST.
- * OK
- * RECONSIDER REQUIREMENTS BASED ON LOCATION NOT SIZE
- * REGULATION OF MAINTENANCE PROVIDER

b. PBTS regulation, permitting, and management:

- * A REALISTIC EVALUATION OF REQUIRED NITROGEN AT DISCHARGE BASED ON PERCENT REMOVED OF IN INFLUENT SYSTEMS. IN-FIELD TESTING.
- * LARGE SYSTEMS ONLY
- * OK
- * REGULATION OF MAINTENANCE PROVIDER
- * SUGGEST SAMPLING REQUIREMENTS BE RELAXED FOR QUALIFIED SYSTEMS--LARGE VARIATIONS IN INFLUENT STRENGTH AND HOMEOWNER USE CAN MAKE DIFFICULT.
- * THE PERMIT FEE SHOULD BE INCREASED AND THE RESOURCES USED TO HACE A THIRD PARTY SAMPLE THE EFFLUENT FROM PBTS ON A REGULAR, RANDOM BASIS.

c. Maintenance entity regulation, permitting, and management:

- * MAKE SURE ANYONE WHO WANTS TO SPECIALIZE IN MAINTENANCE CAN DO THIS WITHOUT INTERFERENCE WITH MANUFACTURERES GIVING COMPANIES EXCLUSIVE TERRITORIES
- * OK
- * REEVALUATE ALL SYSTEMS PERFORMRANCE BASED ON IN FIELD TESTING (REAL WORKD) TESTING RESULTS.
- * REGULATION OF MAINTENANCE PROVIDER
- * SHOULD BE LOCAL
- * WE HAVE BEEN DISAPPOINTED IN THE MAINTENANCE ENTITY REGULATION FOR THE EARTHTEK ENVIROFILTER SYSTEM. MANUFACTURER REFUSES TO APPROVE LOCAL MAINTENANCE ENTITY AND PROVIDES POOR SERVICE TO OWNERS.

d. Innovative System and/or Sand or Gravel Filter regulation, permitting, and management:

- * MORE DETAILED STEP BY STEP PROCESS BRINGING INNOVATIVE TECHNOLOGIES THROUGH THE PROCESS. MANY ARE STUCK IN THE INNOVATIVE CATEGORY.
- * NEED TO ELIMINATE SOLE SOURCE TESTING REQUIREMENTS FOR A PARTICULAR SYSTEM TO GIVE CUSTOMERS A CHANCE TO HAVE OPTIONS. ALL MAINTENANCE ENTITIES DO NEED TO BE TRAINED ON SYSTEMS THEY ARE MAINTAINING.
- * PERMITTING TIMES ARE FAR TOO EXCESSIVE.
- * REGULATION OF MAINTENANCE PROVIDER
- * SHOULD HAVE MORE LATITUDE FOR INNOVATION
- * TOO FORBIDDING

**USER PERCEPTIONS OF ADVANCED
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS (OSTDS)
IN FLORIDA**

FLORIDA DEPARTMENT OF HEALTH

SURVEY RESULTS

Manufacturers

**FSU Survey Research Laboratory
College of Social Science Data Center
Florida State University**

Overview

Advanced Onsite Systems in Florida: Survey of Manufacturers

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs conducted a study to measure the practices and perceptions of manufacturers about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study included aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters. The Bureau of Onsite Sewage Programs identified 118 advanced onsite system manufacturers for the survey effort. Surveys were mailed beginning in March 2010. Of the 118 surveys mailed, 20 were returned as non-deliverable (See Figure 1). Sixteen of the 98 remaining manufacturers returned the survey for a completion rate of 16 percent.

Figure 1
Disposition of Manufacturer Surveys

Manufacturers	
% Complete	11.2%
% Return (Completed and "No System")	16.3%
Completed	11
Returned "No"	5
Number Delivered	98
Non-Deliverable	20
Number Mailed	118

Manufacture and Sale of Units in Florida. Manufacturers were asked to list the type of system installed and the reason they installed that particular system. They were also asked about the number of units they install.

- **ATUs.** 8 of the 11 Manufacturers did not sell ATUs. During the past year, one manufacturer sold one system and two manufacturers sold 8 ATU systems.
- **PBTS.** 9 of the 11 Manufacturers did not sell PBTS units. During the past year, one manufacturer sold one PBTS unit and one manufacturer sold 2 PBTS units.
- **Innovative Systems.** None of the 11 Manufacturers sold any Innovative Systems.
- **Sand or Gravel Filters.** Ten of the Manufacturers responding to the survey reported they did not sell Sand or Gravel Filters. One manufacturer reported selling 300 sand or gravel filters the previous year.

- **Revenues.** 11 of the Manufacturers reported their company's annual revenue from selling Advanced System Components and Standard System Components in Florida. Four of the 11 Manufacturers reported no sales of Advanced System Components in Florida; 4 reported revenues of 2% or less; and two Manufacturers reported 15% of their annual revenue came from Advanced System Components.

Annual sales from Standard System Components comprised even less of the annual revenue for the Manufacturers. Eight of the 11 manufacturers reported no sales of Standard System Components in Florida; 2 Manufacturers reported revenues of 2% or less; and one Manufacturers reported 10% of their annual revenue came from Standard System Components.

Contact with Other Entities. Manufacturers were asked about the extent they interacted with others concerning the advanced systems their firm manufactures: "Rarely Interact", "Some of the Time", "Most of the Time", or "All of the Time".

- Manufacturers interact most frequently with installers of systems they manufacture (6 of 11 "Most" or "All" of the time) and Maintenance Contractors for systems (5 of 11 "Most" or "All" of the time).
- Manufacturers interact less with Owners of Systems (6 of 11 "Rarely" or "Some of the Time") , and County Health Department staff (6 of 11 "Rarely" or "Some of the Time").

Authorized Maintenance Contractor. Manufacturers were asked about their contractors and service areas.

- Four of the 11 Manufacturers have no authorized contractors in Florida; 4 Manufacturers have 10 or less authorized contractors; two Manufacturers have 20 authorized contractors and one firm has 32 contractors.
- Four of the 11 Manufacturers specify a region where a maintenance contractor can maintain their advanced system in Florida.

Maintenance, Monitoring, and Sampling. Manufacturers were asked to indicate the tasks they specified that the contractor perform during routine inspections of the advanced systems.

- **Forms and Check lists.** Most (9 of 11) indicated work through a manufacturer's checklist. Few (1 of 11) specify a contractor work through a engineer's or County Health Department's check list (3 of 11).
- **System Access.** Almost all (8 of 11) specify contractors open covers to observe the aerobic treatment chamber, open covers to observe trash compartment (6 of 11), and opened covers to observe clarifier/dosing tank (6 of 11). Few (2 of 11) specify leaving the surface undisturbed or open the observation port (3 of 11).

- **Equipment Checks.** Less than one-half of the Manufacturers (5 of 11) specify that contractors check the trigger alarm, check that the air supply was running, and trigger pumps.
- **Maintenance Actions.** Manufacturers tend to specify that contractors replace parts (7 of 11), inspect/ clean the effluent filter (6 of 11), pump the tank (6 of 11), and the inspect the air filter (5 of 11). Only 2 of the 11 Manufacturers specify contractors inspect/clean the air diffusers or replacing parts.
- **Assessment of Operating Conditions.** Most Manufacturers specify that contractors check for smell (7 of 11); check water clarity in tank (6 of 11), observe and record general appearance of treatment system functioning (6 of 11). Four of the 11 Manufacturers specify that contractors measure sludge accumulation, check sounds from treatment, check how solids settle in treatment chamber, check wetness in drain field, and check presence and supply of chlorination tables. Few Manufacturers specify that Manufacturers check the ponding depth in the drain field (3 of 11), record the number of dosing events or pump runtime (3 of 11).
- **Assessment of Effluent Quality.** Most Manufacturers (6 of 11) specify that maintenance contractors observe the clarity of effluent in the observation port and take effluent samples for laboratory analysis (4 of 11). Few specify the use of test strips (1 of 11) or chemistry kits (0 of 11) to assess effluent concentrations. Only 1 Manufacturer specifies taking ground water samples.

Open-Ended Questions Comments

The survey of Manufacturers included a series of open-ended questions. The Responses to these questions are included in the Survey of Manufacturer Results.

2. Please list the TYPES of advanced systems your company manufactures for sale/use in Florida:

7. What criteria/qualifications do you require maintenance contractors to meet in order to be authorized by your company to service the advanced systems you manufacture for sale in Florida?

TRAINING AND EDUCATION NEEDS

10. Please tell us about educational/training opportunities related to advanced systems that you would like to be made available to your customers and maintenance contractors in Florida.

GENERAL ASSESSMENT

11. Please tell us about what aspects of the advanced system program in Florida are currently working well as it relates to construction permitting, design, installation, inspection, maintenance, and operating permitting:

12. Please tell us about any changes or improvements you would like to see to the following:

a. ATU regulation, permitting, and management in Florida:

b. PBTS regulation, permitting, and management in Florida:

c. Innovative System regulation, permitting, and management:

d. Sand or gravel filter regulation, permitting, and management:

e. Maintenance contractor regulation, permitting, and management:



Advanced Onsite Systems in Florida: Survey of Manufacturers

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs is conducting a study to measure the practices and perceptions of manufacturers about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study include aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters. Your participation in this study will help us identify the strengths of current practices and experiences as well as areas where improvement may be needed.

Manufacturers	
% Complete	11.2%
% Return (Completed and "No System")	16.3%
Completed	11
Returned "No"	5
Number Delivered	98
Non-Deliverable	20
Number Mailed	118

MANUFACTURE AND SALE OF ADVANCED UNITS IN FLORIDA

1. Does your company manufacture advanced treatment systems such as aerobic treatment units (ATUs), performance-based treatment systems (PBTS), and/or innovative systems sold for use in Florida?

5 NO Please tell us why you do not manufacture advanced systems for use in Florida.

- WE MAKE TANKS FOR OUR USE, NOT FOR SALE TO OTHER COMPANIES
- WE DO NOT OFFER OSTDS AS PART OF THE COMPANY'S PRODUCT LINE
- NOT ENOUGH POTENTIAL PROFIT TO DEAL WITH GOV'T REGS
- HAVE NOT BEEN REQUESTED BY MY CUSTOMERS

11 YES

MANUFACTURE AND SALE OF ADVANCED UNITS IN FLORIDA

2. Please list the TYPES of advanced systems your company manufactures for sale/use in Florida:

- * ATU AND PBRs
- * AERO CELL® - OPEN CELL FOAM; BIOCOIR® - COCONUT HUSK- (BOTH ARE MEDIA FILTERS)
- * INCINOLET ELECTRIC INCINERATING TOILETS
- * AEROBIC TREATMENT COMPONENTS; PERFORMANCE BASED TREATMENT COMPONENTS; INNOVATIVE SYSTEMS. WE MANUFACTURE LARGE FIBERGLASS TANKS AS COMPONENTS USED IN ON-SITE SEPTIC.
- * HYDRO-ACTION MODELS: AP500-500GAL/DAY RESIDENTIAL TREATMENT UNIT; AP600-600GAL/DAY RESIDENTIAL TREATMENT UNIT; AP750-750GAL/DAY RESIDENTIAL TREATMENT UNIT; AP1000-1000GAL/DAY COMMERCIAL TREATMENT UNIT; AP1500-1500GAL/DAY COMMERCIAL TREATMENT UNIT
- * EXTENDED AERATION SUSPENDED SLUDGE ATU; DRIP DISPOSAL SYSTEM
- * WE OFFER SEVERAL COMPOSTING TOILET MODELS: CTS 410, CTS 710, CTS 1010, CTS 904, CTS 914, CTS OUTBACK
- * JET 500, 1000, 1250 AND GPD; CLEARSTREAM 600 GPD
- * AEROBIC TREATMENT SYSTEMS
- * NITREX™ DENITRICATION SYSTEM
- * HOOT SYSTEMS

3. How many of each of the following systems did your company sell for USE IN FLORIDA during the last year?

Type of System	Number Sold	Manufacturers
Aerobic Treatment Unit	0	8
<i>[ATU only, i.e. not part of a PBTS]</i>	1	1
	8	2
Performance-Based Treatment System (PBTS)	0	9
<i>[Not counting innovative systems]</i>	1	1
	2	1
Innovative Systems	0	11
Sand or Gravel Filters	0	10
	300	1

4. What percentage of your company's annual revenue comes from the sale of the following TO CUSTOMERS IN FLORIDA?

	% Annual Revenue	Manufacturers
Advanced System Components	0%	4
	<1%	3
	1%	1
	<2%	1
	15%	2
Standard System Components	0%	8
	<1%	1
	<2%	1
	10%	1

CONTACT WITH OTHER ENTITIES

5. To what extent does your firm/company INTERACT WITH EACH OF THE FOLLOWING ENTITIES CONCERNING THE ADVANCED SYSTEMS YOUR FIRM MANUFACTURES? (N=11)

Entity	RARELY INTERACT	SOME OF THE TIME	MOST OF THE TIME	ALL OF THE TIME	OTHER [PLEASE SPECIFY.]
a. Maintenance Contractors for systems	3	1	2	3	1 WE ARE THE MAINTENANCE CONTRACTOR.
b. Owners of systems	3	3	3	1	0 _____
c. County Health Department Staff	2	4	2	1	0 _____
d. Engineers of the systems you manufacture	1	4	1	3	1 NOT NEEDED
e. Installers of systems you manufacture	2	2	1	5	1 NOT NEEDED. HOMEOWNER INSTALLS OR AN ELECTRICIAN.

AUTHORIZED MAINTENANCE CONTRACTOR

6. How many maintenance contractors are currently authorized by your company to service your company's advanced systems in Florida?

# Authorized Contractors	Manufacturers
0	4
1	1
2	2
10	1
20	2
32	1

7. What criteria/qualifications do you require maintenance contractors to meet in order to be authorized by your company to service the advanced systems you manufacture for sale in Florida?

- * THE MAINTENANCE CONTRACTOR MUST BE STATE CERTIFIED AND TRAINED BY OUR LOCAL DISTRIBUTER OR US.
- * REGISTERED SEPTIC TANK CONTRACTOR (OR MASTER); WASTEWATER TREATMENT PLANT OPERATOR; TAKE A COURSE THAT WE PROVIDE.
- * ANY COMPETENT ELECTRICIAN CAN REPAIR OR INSTALL
- * N/A
- * HAVE A SEPTIC CONTRACTORS/OPERATORS LICENSE AND BE TRAINED BY US (THE MANUFACTURERS)

- BE TRAINED BY AUTHORIZED PERSONNEL. MEET FLORIDA HEALTH DEPARTMENT
- * REQUIREMENTS. SHOW PROOF OF COMPLETING TRAINING, AND BE IN AN AREA NOT IN CONFLICT WITH ANY EXISTING CONTRACTS.

- * COMPLETE TRAINING BY A COMPOSTING TOILET SYSTEMS, INC. REPRESENTATIVE
- * MUST BE PROPERLY LICENSED BY THE STATE; MUST RECEIVE FACTORY TRAINING; MUST MAINTAIN INVENTORY OF REPLACEMENT PARTS.

- COMPETENCY IN UNDERSTANDING WASTEWATER TREATMENT, MECHANICAL AND
- * ELECTRICAL SYSTEMS, CONSTRUCTION ISSUES, AND AN ABILITY TO RESPOND TO PROFESSIONAL DIRECTION.
- * AUTHORIZED HOOT CONTRACTOR

8. Do you specify a region where a maintenance contractor can maintain your advanced systems within Florida? (N=9)

- 4 YES
- 5 NO

9. Which of the following tasks do you usually specify that the maintenance contractor perform during routine inspections of the advanced systems you manufacture for use in Florida?
[Please ✓ All That Apply.]

Forms and Checklists

- 9 Work through a manufacturer's or distributor's check list
- 1 Work through the engineer's check list if engineered-designed
- 3 Work through the County Health Department's check list
- 1 Work through own check list

System Access

- 8 Open covers to observe aerobic treatment chamber
- 6 Open covers to observe trash tank/compartament
- 6 Open covers to observe clarifier/dosing tank
- 2 Leave surface undisturbed
- 3 Open observation port

Equipment Checks

- 5 Trigger alarm
- 5 Trigger pumps
- 5 Check that air supply is running

Maintenance Actions

- 6 Inspect/clean effluent filter
- 5 Inspect/clean air filter
- 2 Inspect/clean air diffusers
- 6 Pump tank(s) every 3-5 years
- 7 Replace parts
- 3 **Other** *[Please describe.]*

- * AS NEEDED
- * AS NEEDED
- * 2-4 YEARS (PRETREAT0; 4-6 YEARS (ATU)
- * 5
- * AS NEEDED
- * 3

Assessment of Operating Conditions

- 6 Check clarity of water in treatment tank/clarifier
- 7 Check for smell from treatment system
- 4 Check sounds from treatment system
- 4 Measure sludge accumulation
- 4 Check how well solids settle in aerobic treatment chamber
- 4 Record water meter reading
- 3 Record number of dosing events or pump runtime (for dosed systems)
- 3 Record presence, number, or duration of alarms
- 5 Check and record pressure (drip systems)
- 3 Check ponding depth in drainfield
- 4 Check wetness in drainfield area
- 4 Check presence and supply of chlorination tablets if system includes them
- 6 Observe and record general appearance of treatment system functioning

Assessment of Effluent Quality

- 6 Observe clarity of effluent in observation port
- 1 Use test strips to assess effluent concentrations
- 0 Use chemistry kits to assess effluent concentrations
- 4 Take effluent samples for laboratory analysis
- 1 Take groundwater samples

TRAINING AND EDUCATION NEEDS

10. Please tell us about educational/training opportunities related to advanced systems that you would like to be made available to your customers and maintenance contractors in Florida.

- * WE WOULD LIKE TO SEE ALL STATES PROVIDE AND REQUIRE GENERAL WASTEWATER TRAINING AND CERTIFICATION. AFTER BEING CERTIFIED BY THE STATE THE CONTRACTOR SHOULD BE TRAINED BY THE MANUFACTURER OR MANUFACTURE'S REPRESENTATIVE FOR PRODUCT SPECIFIC CERTIFICATION.
- * FOWA CLASS (SUCH AS A-Z); MAINTENANCE ENTITIES RECEIVING TRAINING FROM US (NO CREDIT)
- * CUSTOMER SHOULD READ THE MANUAL.
- * NONE
- * THE FOWA TRAINING CENTER IS AN OPTIMAL EVENT FOR US TO ATTEND. WE LIKE THE CONVENIENCE OF ONCE PER YEAR AND COMPLETED IN 1-2 DAYS.
- *
- * EDUCATIONAL TRAINING OPPORTUNITIES ARE AVAILABLE THROUGH A SERVICE CONTRACT WITH COMPOSTING TOILET SYSTEMS, INC.
- * WE PREFER TO PROVIDE FACTORY TRAINING TO OUR AUTHORIZED REPRESENTATIVES, INCLUDING INSTALLERS AND MAINTENANCE PROVIDERS.
- * FOWA TRAINING ADEQUATE
- * ALREADY IN PLACE

GENERAL ASSESSMENT

11. Please tell us about what aspects of the advanced system program in Florida are currently working well as it relates to construction permitting, design, installation, inspection, maintenance, and operating permitting:

- | | |
|---|--|
| * | ACCEPTANCE AND RULES THAT SUPPORT THE FACTS THAT ADVANCED SYSTEMS DO WORK IN RESIDENTIAL APPLICATIONS. |
| * | CODE IS CLEAR; CONTRACTORS ARE INTELLIGENT AND WANT TO DO A GOOD JOB; ENGINEERS ARE CAPABLE; INSPECTORS ARE TRAINED. |
| * | N/A |
| * | HAVE NOT HAD MUCH EXPERIENCE OVER THE LAST FEW YEARS. |
| * | NO COMMENT AS WE HAVE NOT INSTALLED SYSTEMS |
| * | HOOT IS DOING VERY WELL |

12. Please tell us about any changes or improvements you would like to see to the following:

a. ATU regulation, permitting, and management in Florida:

- * THERE SHOULD BE A GREATER EMPHASIS MADE ON REQUIRING MAINTENANCE AND ENFORCEMENT OF MAINTENANCE AND OPERATION.
- * DRIP NO LONGER NEEDS TO BE DESIGNED BY AN ENGINEER (PE IN FLA)
- * PLEASE! DO NOT ALLOW HOMEOWNERS TO WORK ON THEIR OWN SYSTEMS.
- * OFFER OTHER ACCEPTABLE STANDARDS FOR ATU's. I BELIEVE FDOH ONLY ALLOWS ATUs IF THEY MEET THE ONE STANDARD FDOH ACCEPTS. THIS STANDARD IS EXTREMELY EXPENSIVE TO ACQUIRE AND MAINTAIN. THIS MAKES IT DIFFICULT FOR SMALL BUSINESS OWNERS TO BE COMPETITIVE AND

b. PBTS regulation, permitting, and management in Florida:

- * THERE SHOULD BE A GREATER EMPHASIS MADE ON REQUIRING MAINTENANCE AND ENFORCEMENT OF MAINTENANCE AND OPERATION. THE REGULATION FOR NITROGEN REMOVAL SHOULD BE CHANGED TO A PERCENTAGE REDUCTION OR MORE REALISTIC NUMBER THAN 10 MGL TO AVOID HAVING SYSTEMS TH
- * CHD's NEED TO MORE DIRECTLY MAKE THEMSELVES KNOWN TO HOMEOWNERS, SO THEY ARE MORE LIKELY TO PAY THE OPERATING PERMIT FEE. DON'T MAKE RESPONSIBLE MAINTENANCE ENTITIES COLLECT FEES FOR THEM.
- * ACCOUNTABILITY. SYSTEMS NOT MEETING STANDARDS SHOULD BE REQUIRED TO HAVE CORRECTIVE ACTIONS. REPEATED FAILURES SHOULD BE BASIS FOR REMOVAL FROM APPROVED LIST.

c. Innovative System regulation, permitting, and management:

- * THERE SHOULD BE A GREATER EMPHASIS MADE ON REQUIRING MAINTENANCE AND ENFORCEMENT OF MAINTENANCE AND OPERATION. THE REGULATION FOR NITROGEN REMOVAL SHOULD BE CHANGED TO A PERCENTAGE REDUCTION OR MORE REALISTIC NUMBER THAN 10 MGL TO AVOID HAVING SYSTEMS TH
- * LET ME KNOW IF YOU HAVE A SYSTEM.

d. Sand or gravel filter regulation, permitting, and management:

- * THERE SHOULD BE A GREATER EMPHASIS MADE ON REQUIRING MAINTENANCE AND ENFORCEMENT OF MAINTENANCE AND OPERATION. THE REGULATION FOR NITROGEN REMOVAL SHOULD BE CHANGED TO A PERCENTAGE REDUCTION OR MORE REALISTIC NUMBER THAN 10 MGL TO AVOID HAVING SYSTEMS THAT ARE 2 TO 3 TIMES MORE EXPENSIVE. THESE SYSTEMS REQUIRE MAINTENANCE ALSO

e. Maintenance contractor regulation, permitting, and management:

- * THERE ARE ENOUGH SYSTEMS OUT THERE THAT SOME PEOPLE MAY WANT TO SPECIALIZE.

**USER PERCEPTIONS OF ADVANCED
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS (OSTDS)
IN FLORIDA
FLORIDA DEPARTMENT OF HEALTH
SURVEY RESULTS**

Owners and Users

**FSU Survey Research Laboratory
College of Social Science Data Center
Florida State University**

Overview

Advanced Onsite Systems in Florida: Survey of Owners and Users

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs conducted a study to measure the practices and perceptions of owners and users about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study included aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters. The Bureau of Onsite Sewage Programs identified 13,576 advanced onsite systems. The sample was based on the type of system (ATU, PBTSs, and Innovative) and the location of the system (Residential, Commercial, Unknown). Figure 1 summarizes the number of total units and the number sampled for the survey effort. A total of 3,793 surveys were mailed and 660 were returned completed with information about the type of system. Surveys were mailed beginning in March 2010.

Figure 1
Disposition of Owner and User Surveys
Based on Bureau of Onsite Sewage Programs' Data Base

	Total in Data Base	Number Sent	Number Completed	Percent Completed
All Types of Systems	13,576	3,793	660	17.4%
Aerobic Treatment Units (ATUs)	12,161	2,378	450	18.9%
ATU Residential	8,660	1,279	237	18.5%
ATU Commercial	549	549	100	18.2%
ATU Unknown	2,952	550	113	20.5%
Performance-Based Treatment system (PBTS)	1,231	1,231	195	15.8%
PBTS Residential	1,044	1,044	190	18.2%
PBTS Commercial	31	31	4	12.9%
PBTS Unknown	156	156	1	0.6%
Innovative System	184	184	15	8.2%
Innovative Residential	175	175	15	8.6%
Innovative Commercial	9	9	0	0.0%

Background Information. The results reported here are based on 660 surveys returned by owners and users indicating that they had an advanced septic system. The owners and users were asked a number of demographic questions.

- Most of the owners and users own the property (96%) rather than rent (4%). Most of the advanced systems are in single family homes (83%) compared to duplexes/apartments/condominiums (2%) or mobile/modular homes (2%). Business establishments comprise 11 percent of the owners and users in the survey results.
- Most of the systems are in use 10 to 12 months of the year (86%).
- The owners and users are full-time residents (85%). A majority of the advanced septic systems (54%) serve 1 to 2 people. Another 29 percent serve 3 to 4 people. Only 17% serve 5 or more people.
- One-half of the respondents (51%) are located in four counties: Monroe (17%), Brevard (13%), Charlotte (12%), and Lee (9%).
- More males (66%) responded to the survey effort than females (34%).
- The owners and users tend to be college graduates (33%) or hold graduate or professional degrees (27%). Only 17 percent of the respondents have a high school degree or less.
- About one-half of the survey respondents report total household income of over \$85,000.

Characteristics of Advanced Onsite Sewage System. Owners and users were asked about the type and manufacturer of their onsite sewage system.

- Among the 655 respondents, 79 Percent reported they had an Aerobic Treatment Unit (ATU), 8 percent a Performance-Based Treatment system (PBTS) and 1 percent an Innovative system. Seven percent reported that they did not know what type of system they had.
- Fifty percent of the owners/users provided a name of their system's manufacturer while 50 percent did not know the name of the manufacturer. A Hoot system (n=116) was mentioned most frequently, followed by Clearstream (n=26), Multi-Flo (n=23), Norweco (n=17), and Nayadic (n=15).
- Most of the systems (58%) were installed within the last five years. Only 15 percent were installed more than 10 years ago.

Operation and Maintenance. Owners and users of sewage systems were asked a series of questions about problems and how those problems were handled.

- Over one-half (55%) of the owners/users reported they never experienced problems with their sewage system over the past year. One-third reported they experienced once or twice while 11 percent experienced problems several times over the past year.
- While most did not experience problems, 20 percent cited system malfunctions as the major source of problems while 25 percent identified specific problems they encountered. The bulk of the problems specified by this group were also system malfunctions such as air pumps broken, electrical malfunctions, faulty alarms, bad motors, and pump failures. Five percent or less of the owners/users checked weather/flooding, roots, water table too high, hydraulic overload, inadequate drainage of soils as causes of problems.
- Nearly one-half of the owners and users (48%) use septic tank contractors or plumbers to fix problems with their system. Thirty-five percent rely on a maintenance entity and 10 percent report fixing the problem themselves. Only one percent rely on their County Health Department to fix problems with their system.

Assessment of Advanced System. Owners and users were asked to assess their advanced sewage system and about their preferences.

- Nearly two-thirds reported being either "Very Satisfied" (34%) or "Satisfied" (40%) with the way problems with their system were handled.
- When asked about the greatest advantage of having one of these systems, nearly one-fourth (24%) checked cleaner wastewater. Fewer thought increased options for building on a lot (17%), not being hooked up to a sewer system (16%), low cost (15%), or the system will last longer (6%) were the greatest advantage of having an advanced onsite sewage system. Nearly one fourth (24%) of the owners or users checked "other" for the greatest advantage.

Among this “other” group, the preponderance of the comments specified that there was “no advantage” or that they had “no other option”.

- When asked if the cost was equal, 59 percent of the owners and users would prefer to hookup to a municipal/county sewer system while 33 percent preferred to continue to use an advanced onsite sewer system. Only 8 percent preferred to use a simpler conventional septic system and pay savings into a water quality improvement trust fund.

System Inspection and Monitoring. Owners and users were asked about the frequency they inspect their system, how often their maintenance entity inspects their system, and if they are informed of the results.

- Nearly one-half (42%) of the owners and users inspect their own system at least every few months. About one-third (34%) inspect their system about once or twice a year while one-quarter (25%) report that they do not inspect their system at all.
- Over one-half (55%) of the owners and users reported that their maintenance entity inspects their onsite septic system twice a year. Fewer owners and users report that Maintenance Entities inspect less than 2 times a year (13%) or 3 or more times a year (17%). Very few owners and users said that their Maintenance Entity never inspected their septic system (2%) or only inspected when there was a problem (4%).
- Most owners and users (86%) reported that their maintenance entity informed them of the results of the inspection. Only 43 percent said that the County Health Department informed them about the inspection results.

System Inspection and Monitoring. Owners and users were asked about how they preferred to receive information from their County Health Department and topics that they would like to learn more about.

- Most owners and users (69%) prefer to receive information from their County Health Department through mailed brochures. Emails (27%) and utility bill inserts (12%) were also methods used to communicate information about their advanced onsite systems. Few indicated that information received from the Department website (6%), newspapers (5%), public meetings/ workshops (2%), or presentations to civic groups (1%) were preferred communication methods.
- Only 21 percent of the 660 owners and users listed a topic related to advanced onsite systems that they would like to learn more about. Owner maintenance, system performance, and cost were the top three topical areas in which the owners and users made suggestions.

Operating Permits and Maintenance for Advanced Onsite Sewage Systems. Owners and users were asked about Maintenance Entity costs and performance.

- Nearly three-fourths of owners and users (73%) had no difficulty in finding a Maintenance Entity for their system and only 8 percent reported it was very difficult to find one.

- The majority of owners and users (55%) pay between \$200 and \$500 for operating permits and a one year maintenance contract. The average cost is \$441 and the median cost is \$350.
- About one-fourth of the owners and users (28%) had no expenses with respect to repairs and other items not covered by their maintenance contract last year. The average repair costs for the owners and users were \$474 and the median cost was \$200.
- Owners and users (n=533) rating the serviced provided by their Maintenance Entity report high levels of satisfaction. One third (32%) were “Very Satisfied” and 51 percent were “Satisfied“ with their the Maintenance Entity.
- Most (67%) of the owners and users will renew their agreement with the same Maintenance entity when it comes up for renewal. Fifteen percent reported that they would like to switch when their agreement comes up for renewal but there is no alternative.
- Owners and users were asked if they had a choice, who they would prefer to deal with concerning the permitting and maintenance of the advanced onsite system. One third (33%) indicated they wanted to do it themselves with the help by contractors as needed. About the same proportion (29%) indicated they wanted a Maintenance Entity that charged for maintenance and operating permits in one lump sum when they are due with repairs being extra. Only 10 percent indicated they wanted a Maintenance Entity to charge monthly for maintenance and operating permits with repairs being extra costs. Users and owners were also given the option of a utility-type entity that charges a monthly cost that includes all maintenance, repairs, replacement, operating permits and the like.: Eleven percent preferred this monthly cost option when the utility –type entity owns the system and 11 percent preferred this monthly cost option when they remain owner of the system.

Changes and Improvements. Users and owners were asked to provide general comments about any changes or improvements you would like to see related to the regulation, permitting and management of advanced onsite sewage treatment and disposal systems in the State of Florida.

- Only 31 percent of the 660 owners and users made a suggestion for changes and improvements. Suggestions concerning regulation and management, costs, and contractor/ maintenance entities were the top three areas. .



Advanced Onsite Systems in Florida: Survey of Owners and Users

The Florida Department of Health, Division of Environmental Health, Bureau of Onsite Sewage Programs is conducting a study to measure the practices and perceptions of owners and users about the management of advanced onsite sewage treatment and disposal systems (OSTDS). Advanced treatment systems for the purposes of this study include aerobic treatment units (ATUs), performance-based treatment systems (PBTS), innovative systems, and sand or gravel filters. Your participation in this study will help us identify the strengths of current practices and experiences as well as areas where improvement may be needed. The FSU Survey Research Laboratory is collecting the information for the Bureau.

Your participation is voluntary, but important and will assist the Florida Department of Health in improving wastewater management. If you wish to participate, please complete the enclosed survey and return it in the postage paid business reply envelope provided for your convenience. Thank you for your participation.

The results of this study will be posted on our website: <http://myfloridaeh.com/ostds/research>

CHARACTERISTICS OF YOUR ADVANCED ONSITE SEWAGE SYSTEM

1 You have been identified as having an advanced Onsite Sewage Treatment and Disposal System. What type of ADVANCED SYSTEM do you have? (n=655)

- 79% Aerobic Treatment Unit
- 8% Performance-Based Treatment system
- 2% Sand or gravel filter
- 1% Innovative System *[Please Specify.]* _____
- 3% Other *[Please Specify.]* _____
- 7% Don't Know
- <1% No, my home/business does not have a septic system → Please return the survey in the envelope provided.
- <1 My home/business does not have an ADVANCED system →
[standard septic tank, drainfield system]

2. Please provide the name of your system's manufacturer. (n=660)

- 50% Manufacturer of system _____
- 50% Don't know the name of the manufacturer

2. Manufacturer of System

Number of Respondents	Name of Manufacturer
307	Don't Know Name of System
353	Name of Manufacturer
1	.75 F.A.S.T. INSTALLED BY HOWIE CONCRETE
1	1ST ENVIRONMENT SOLUTIONS
1	3RD GENERATION PLUMBING
1	5 HYDROACTION AND 1 MICROFAST
1	500 GPD INVIROFILTER MODEL 500
3	A-ABLE
1	ADVANCED WASTEWATER ENGINEERING; UCF
3	AK 500 AEROBIC TREATMENT SYSTEM
1	AMERICAN WASTEWATER SYSTEMS, INC.
1	AQUA AIRE
15	AQUA KLEAR
3	AQUA SAFE
1	AQUALINK
2	AVERETT
1	BEST
10	BIO MICROBIO, INC.
1	BIOLOGICALLY EFFECTIVE SEWER TREATMENT BEST 1
4	CAJUN-AIRE
3	CHROMO GLASS
1	CLEAR WATER
26	CLEARSTREAM
2	CONSOLIDATED TREATMENT SYSTEMS INC.
11	DELTA ENVIRONMENTAL
1	DRILLING + IRRIGATION SYSTEMS OF BREVARD COUNTY
5	EARTHTECH
4	ECO-FLO
7	ECO-PURE
1	ECOLOGICAL TANK INC.
1	ENVIRO FILTER AEROBIC "EARTTEK" "OUT OF BUSINESS"
1	ENVIROTEK
4	F.A.S.T.
1	FIESTA ENVIRONMENT
1	FLASH SYSTEM
1	HEINKLE AND SONS
1	HHYDRO-ACTION
116	HOOT
1	HYBRID BETWEEN 2 MANUFACTURERS BIO MICROBICS IS ONE
3	HYDRO-ACTION
9	JET
1	KLARGESTER
1	KOONTZ
1	MACK CONCRETE INDUSTRIAL
1	MARTIN SEPTIC
1	MEDO

2. Manufacturer of System

Number of Respondents	Name of Manufacturer
1	MICROFAST
9	MIGHT MAC
1	MONROE COUNTY (FKAA-FL KEYS. AQUA DUCT ASSOCIATION
23	MULIT-FLO
17	NAYADIC
1	NEECO ENGINEERING AND EQUIPMENT 60 INC.
2	NO -MOUND
1	NORCO
2	NORDIC
17	NORWECO
1	ORENCO
1	PENA
2	PENCE
3	PREMIER TECH
1	SEARS
5	SINGULAIR
1	SOUTHERN AEROBIC
1	TOTAL ENVIRO SERVICES, INC.
1	WARREN SEPTIC LAKE PANASOTTKEE FLA.
7	WHITE WATER
1	ZABEL ENVIRONMENTAL

3. When was your system installed? (n=650)

5%	Within the past year	24%	6 to 10 years ago
29%	2 to 3 years ago	15%	More than 10 years ago
24%	4 to 5 years ago	3%	Don't Know

OPERATION AND MAINTENANCE

4. How many times have you experienced problems with your sewage system over the PAST YEAR? (n=636)

55%	Never	11%	Several Times
33%	Once or Twice	1%	Just about weekly

5. Within the LAST 5 YEARS, have you had any of the following problems?

[Please ✓ all that apply.] (n=637)

- | | | | |
|-----|--------------------------------------|-----|--------------------------------------|
| 6% | Sewage on ground | 1% | Tank damaged |
| 10% | Plumbing backup | 25% | Parts broken/ system stopped working |
| 7% | Drainfield damaged | 1% | D-box/ header damaged |
| 20% | Other <i>[Please Specify.]</i> _____ | | |
| 49% | No problems in the last 5 years | | |

5. Within the LAST 5 YEARS, have you had any of the following problems?

OTHER 20% *[Please Specify]*

- * 4 NEW PUMPS IN 5 YEARS
- * AERATION PUMP BROKEN
- * AERATOR MALFUNCTION
- * AERATOR NEEDED REPLACED
- * AIR PUMP
- * AIR PUMP FAILED TO FUNCTION WELL
- * AIR PUMP FAILS EVERY 24 MONTHS
- * AIR PUMP HAD TO BE REBUILT
- * AIR PUMP MALFUNCTION
- * AIR PUMP NOT WORKING
- * AIR PUMP REPLACED.
- * AIR PUMP REQUIRED A NEW DIAPHRAGM
- * AIR PUMP STOPPED WORKING
- * ALARM CONTINUALLY GOES OFF, DETAILS WATER LEVEL PROBLEMS.
- * ALARM MALFUNCTION
- * ALARM NIGHTLY
- * ALARM OUT -BLOWER OUT
- * ALARM PROBLEM CAUSED BY ROOTS FROM A TREE
- * ALARM THAT WOULD NOT RESET
- * ALARMS, FILTER CLEANING AND REPLACEMENT
- * ALARMS, MINOR REPAIRS TO COMPRESSOR
- * BAD ODORS
- * BLADDER PUMP FAILED
- * BLOWER MOTOR REPLACED
- * BLOWER NOT WORKING PROPERLY
- * BLOWER REPLACED 3/18/09
- * BLOWER WAS BAD AND WAS REPAIRED
- * BUILDER FAILED TO TURN ON WHEN WE MOVED IN
- * CHANGE FILTER
- * CLOSING OF PUMPS
- * COMPLETE BACKUP INTO HOUSE
- * COMPRESSOR FAULT
- * CONSTANT ALARM, ALGAE DIES, GROUND SATURATED
- * CONSTANT PROBLEMS PAID \$19,800 FOR CRAP!!
- * COULDN'T KEEP UP FOR DEMAND
- * COUNTY REQUIRED SERVICE
- * COVER BROKEN
- * DISLODGED FLOATER
- * DON'T KNOW OWN HOUSE FOR 8 MONTHS
- * DRAIN FIELD PUC PIPES NOT GLUED AT INSTALLATION. AIR BLOWER FAILURE.
- * ELECTRICAL (LIGHTING)
- * ELECTRICAL
- * ELECTRICAL POINTS (ANTS)
- * ELECTRONIC ALARMS
- * ELECTRONIC CONTROL MALFUNCTION
- * ELECTRONICS

5. Within the LAST 5 YEARS, have you had any of the following problems?

OTHER 20% [Please Specify]

- * ELECTRONIC PANEL BREAKING, WATER LEVEL PROBLEMS
- * EXTREME ODOR SINCE INSTALL
- * FILTER CLOGGED
- * FILTER CLOGGED/ ALARM FAILURES/PUMP FAILURES
- * FITTING CRACKED DURING INSTALL -- LEAK
- * GRASS IN DRAINFIELD LINE
- * GRINDER NEEDED CLEANING
- * HAD TO BE RE-SET
- * HAD TO REPLACE MOTOR
- * HIGH H2O ALARM
- * HURRICANE RELATED
- * I HAVE NOT BEEN HERE 5 YEARS
- * IMPROPER DRAINAGE
IT MAKES OUR HOUSE STINK INSIDE + OUT IN THE YARD SO CANNOT WORK IN GARDEN. THIS
- * WAS FROM THE BEGINNING + THEIR SOLUTION WAS WANTED TO PUT A VENT PIPE HEIGHT OF
UTILITY POLES TO OFFEND ALL THE NEIGHBORS
- * JUST MAINTENANCE
- * LEE COUNTY MADE US PLANT 6.7 TREES ON DRAINFIELD.
- * LIFT PUMP, FLOAT SWITCHERS, WE HAVE NOT EXPERIENCED DOWN TIME BECAUSE WE HAVE
REDUNDANT SYSTEM PLUS NEW PUMPS ON HAND
- * LIFT STATION PUMP BURNED OUT
- * LOUD PIPES W/ PLUMBING
- * MOTOR BURNED OUT
- * MOTOR BURNED OUT
- * MOTOR FAILED, REPLACED TWICE
- * MOTOR FOR THE AIR BLOWER NEED REPLACE
- * MOTOR HAD TO BE REPLACED 3 TIMES FOR \$800 EACH.
- * MOTOR NEEDED RE-START
- * MOTOR NEEDED REPLACING THE FIRST YR.
- * MOTOR REPLACED, PUMPED OUT
- * MOTOR STOPPED- GROUND FAULT DEFECTIVE
- * MOTOR STOPS WORKING AND ALARM SOUNDS
- * NEEDED NEW FILTER DUE TO GUESTS DISPOSAL OF NON-BIODEGRADABLE PRODUCTS DOWN
TOILET
- * NEEDED PUMPING
- * NEW AERATOR
- * NEW AIR PUMP 09
- * NO PROBLEMS IN THE LAST 18 MONTHS
- * NONE
- * NONE
- * NOT SURE JUST MOVED INTO THE HOME
- * OCCASIONAL PUMP REPLACEMENT
- * ODOR
- * ONLY AFTER A FLOOD OR HURRICANE
- * ONLY BEEN IN HOME 3 MOS.
- * ONLY HAD IT FOR A YR
- * PARTS REPLACED DURING ROUTINE MAINTENANCE
- * POWER OUTAGE CAUSED LACK OF PERFORMANCE
- * PUMP FAILURE
- * PUMP FAILURE ONCE
- * PUMP HAD TO BE REPLACED
- * PUMP OUT
- * PUMP REPLACED
- * PUMP REPLACED DUE TO SALT WATER INTRUSION
- * PUMP STOP WORKING
- * PUMP WENT OUT
- * RATTLE NOISE, SEWAGE ODOR

5. Within the LAST 5 YEARS, have you had any of the following problems?

OTHER 20% *[Please Specify]*

- * REMOVED ROOTS
- * REPLACE MOTOR
- * REPLACED AIR PUMP TWICE & FILTERS TWICE
- * REPLACED DRAIN FIELD
- * REPLACED DRIP DRAIN FIELD DOSING PUMP
- * REPLACED EFFLUENT PUMP
- * REPLACED TRADITIONAL TANK WITH A HOOT SYSTEM W/ NEW DRAIN FIELD TO AVOID LARGE MOUND IN FRONT YARD
- * ROOT GROWTH
- * SEAL REPLACED
- * SMELL, NEVER HAD BEFORE AEROBIC SYSTEM
- * SMELLS REALLY BAD LIKE SEWAGE
- * SOME DUNCE DROVE A TRACTOR TRAILER OVER FIELD WHICH RESULTED IN REPLACEMENT
- * SOMETHING BROKE, UNSURE
- * SYSTEM ONLY 3 YEARS OLD/NO PRIOR EXP.
- * SYSTEM UNDERSIZED
- * SYSTEMS COMPUTER FRIED, MAIN PUMP REPLACED TWICE
- * TANK LIDS NOT PROPERLY SECURED -CAUSED EROSION.
- * THE ALARM IS CONSTANTLY GOING OFF (DAILY)
- * TURN ON/OFF SWITCH BROKE AND SYSTEM WENT OFF. PLUS NO POWER (NO PBTS) FOR 6 WEEKS AFTER HURRICANE CHARLEY.
- * VACANT HOUSE
- * VANDALISM
- * VENTING PROBLEMS
- * WARNING LIGHT KEEPS COMING ON. BAD ODOR OUTSIDE.
- * WARNING SIREN
- * WATER LEVEL ALARM EVERY 3 DAYS
- * WATER LEVEL ALARM GOING OFF AFTER HEAVY RAIN
- * WATER LEVEL PROBLEMS
- * WATER OVERFLOWS

6. If you experienced problems, what was the CAUSE OF PROBLEMS?

[Please ✓ all that apply.] (n=590)

6%	System damage	20%	System malfunction
3%	Water table too high	2%	Too much water (hydraulic overload)
5%	Weather/ flooding	2%	Inadequate drainage (area too wet)
5%	Roots	1%	Soils
25%	Other <i>[Please Specify.]</i> _____		
45%	No problems in the last 5 years		

6. If you experienced problems, what was the CAUSE OF PROBLEMS?

OTHER 25% *[Please Specify]*

- * AERATOR MALFUNCTION
- * AERATOR MOTOR
- * AGE OF THE MOTOR
- * AIR COMPRESSOR DEFECTIVE
- * AIR HOSE BROKE AND NOW I HAVE TO PAY \$175.00 TO GET IT FIXED
- * AIR HOSE DAMAGED.
- * AIR LOCK IN LINE FROM SEPTIC TANK TO LIFE STATION.
- * AIR PUMP
- * AIR PUMP BROKE
- * AIR PUMP FAILED
- * AIR PUMP WEARS OUT 5-6 YRS
- * AIR PUMP, PUMPS
- * ALARM GOES OFF ALL THE TIME SO ITS DISABLED.
- * ALARMS, FILTER CLEANING AND REPLACEMENT
- * ANTS
- * ANTS RESTED IN HOUSING AND DAMAGED CURCUIT BOARD
- * ASWE
- * BEARINGS WENT OUT ON AERATOR- REPLACED
- * BLOCKAGE
- * BLOCKED IMPELLER-> NEW MOTOR
- * BLOWER DIED
- * BLOWER FAN HAD TO BE REPLACED
- * BREAK IN AIR PIPE GOING TO TANK REPAIRED IT MYSELF
- * BROKEN BRACKET
- * CANNOT GET IN CONTACT WITH CONTRACTOR (SEPTIC)
- * CAUSE IS UNKNOWN
- * CAUSED MOTOR TO SHORT OUT
- * CIRCUIT BOARD
- * CLOGGING OF PUMPS
- * COASTAL SEPTIC NOT PERFORMING MAINTENANCE
- * CORROSION
- * CRACKED FITTING
- * DIRT ON FILTER
- * DOING AWAY WITH MY CESSPIT
- * DON'T KNOW
- * DON'T KNOW
- * DRAIN FIELD DRIVEN ON BROKEN LINE
- * DRAINFIELD FAILURE, NOT SURE WHY
- * DRAINFIELD INSTALLED IMPROPERLY AND PEAT MOSS CLOGS SYSTEM AND NEW MOTORS NEEDED PUMP ETC.
- * DRAINFIELD REBUILT LAST YEAR
- * ELECT PUMP FAILED
- * ELECTRIC-UNRELATED TO PRIMARY SYSTEM.

6. If you experienced problems, what was the CAUSE OF PROBLEMS?

OTHER 25% *[Please Specify]*

- * ELECTRICAL
- * ELECTRICAL
- * FAILED DRAINFIELD
- * FAILURE OF PREVIOUS OWNER TO PUMP
- * FAILURE TO HAVE TANK PUMPED IN PROPER TIME FRAME
- * FALSE ALARM
- * FAULTY AERATOR MOTOR
- * FAULTY INSTALLATION OF DRAIN FIELD (PUC PIPES NOT GLUED. BAD AIR PUMP.
- * FAULTY PANEL, PROBLEM WITH PIPING
- * FEMININE PRODUCTS CLOGGED
- * FILTER CLOGGED, TANK FULL, PUMP REPLACED
- * FILTERS CLOG, PUMP WENT OUT.
- * GARDENERS CUTTING UNDERGROUND DRAIN FIELD TUBING
- * GREASE
- * GREASE BLOCKAGE
- * HEAVY TRUCK DROVE OVER DRAINFIELD AND POPPED PIPE, POWER OUTAGE.
- * HURRICANE OR LIGHTENING-BOX WAS HIT
- * I DON'T KNOW
- * IMPROPER INSTALLATION, IMPROPER SERVICING, IMPROPER INSPECTIONS
- * INADEQUATE MAINTENANCE - CREWS ENV.
- * INAPPROPRIATE ITEM FLUSHED
- * INAPPROPRIATE MATERIAL (STRING) FLUSHED IN SYSTEM.
- * INCORRECT INSTALL
- * INCORRECT INSTALLATION
- * INSTALLATION ERRORS
- * ISLANDED FLOODED.
- * IT'S ALWAYS OVER FLOWING!
- * LANDSCAPES DAMAGED
- * LAWN MAINTENANCE
- * LIGHTNING FRIED THE SYSTEMS COMPUTER
- * LIGHTNING STRUCK CONTROL PANEL
- * LINES CLOGGED WITH TOYS
- * LIQUID LAUNDRY SOFTENER BUILD UP. ELECTRICAL SERVICE UPGRADE-IMPROVE INSTALLATION.
- * MAINTENANCE COMPANY TOLD US MOTORS BURNED OUT
- * MANDATED SIZE EXCEEDS USAGE CAUSING FAILURE
- * MORE THAN 2 PEOPLE IN THE HOME.
- * MOTOR
- * MOTOR BAD
- * MOTOR BROKE
- * MOTOR BURNED OUT
- * MOTOR STOPPED WORKING
- * N/A
- * NEED TO LIMIT USE OF WATER
- * NO BATTERY INSTALLED
- * NO PROBLEMS IN THE LAST 18 MONTHS
- * NOT INCLUDED OR MAINTAINED CORRECTLY
- * NOT LARGE ENOUGH TO HANDLE WASTE
- * NOT SURE
- * NOT TURNED ON
- * OLD
- * OLD PUMPS AND WIRES
- * ONLY HAD IT FOR A YR
- * ORIGINAL INSTALLATION PUT IN WRONG HEADER AND PIPE IN DRAINFIELD
- * PIPE ADHESIVE HAD TO BE REPLACED
- * PIPE CLOGGED LEADING TO SYSTEM
- * PLUG BURNED UP/REPLACED

6. If you experienced problems, what was the CAUSE OF PROBLEMS?

OTHER 25% *[Please Specify]*

- * POOR QUALITY/DESIGN
- * POSSIBLY SOMEONE CHECKING THE SYSTEM AND DROPPING THE COVER. NO ONE ADMITS TO IT.
- * POWER FAILURE
- * PUMP BROKEN MAKING NOISE
- * PUMP BURNED OUT
- * PUMP BURNED OUT
- * PUMP DIED
- * PUMP FAILED, HOSES BROKEN
- * PUMP FAILURE
- * PUMP IS A PIECE OF *****
- * PUMP MANUFACTURED x 2 TIMES
- * PUMP WORE OUT
- * RELAY SWITCH
- * REPLACE THE BLOWER MOTOR
- * REPLACED FILTER - NO PROBLEM SINCE
- * REPLACEMENT OF A RECALLED PART
- * SEE #5
- * SEE ITEM #5
- * SMELLS BAD
- * SOLIDS BLOCKING THE DRAIN. TO THE FIRST HOLDING TANK 2ND TANK IS TOO HIGH.
- * SOLIDS NOT BROKEN DOWN
- * SOMETIMES HUMAN INDUCED- BACKUPS CAUSED BY CLOTHING OTHER ITEMS FLUSHED.
- * STRING GETTING TANGLED AROUND THE AERATOR ARM
- * SYSTEM MOTOR FEILER
- * TAMPONS
- * TAMPONS AND WRAPPED IN TANK
- * TANK
- * TANK WAS SUNK TOO LOW IN GROUND BY DISTRIBUTER AND KEPT OVERFLOWING HAD TO HAVE PUMPED OUT EVERY 2 MONTHS.
- * THE BLOWER WORE OUT
- * TOILET KEPT RUNNING-SYSTEM OVER FLOWED
- * TREE ROOTS INTERACTING WITH ALARM SYSTEM
- * TRUCK WENT OVER THROUGH MY DAUOP MILL
- * UNCERTAIN
- * UNKNOWN
- * UNKNOWN REPLACED BY MANUFACTURER
- * UNSURE
- * UV LAMP BURNED OUT
- * WAS NEVER TOLD
- * WAS NOISY - GRINDER NEEDED CLEANING
- * WEAR
- * WILMA-COVERED UNIT
- * WIRE CORROSION
- * WIRING -ALARM TRIPS BY WEATHER
- * WORN PART
- * WRONG VENT INSTALLED, NO FOUNDATION UNDER BLOWER

7. Who do you USUALLY rely on to fix problems with your system? (n=610)

10%	Self	48%	Septic tank contractor/ plumber
35%	Maintenance entity	1%	County Health Department
6%	Other [Please Specify.] _____		

7. Who do you USUALLY rely on to fix problems with your system? (n=610)

OTHER 6% [Please Specify]

- * 3RD GENERATION PLUMBING I WOULD CALL THEY INSTALLED THE SYSTEM AND MAINTAIN THE SYSTEM.
- * 3RD GENERATION PLUMBING
- * AVERETT SEPTIC TANKS
- * BC ENTERPRISES
- * CREWS ENVIRONMENTAL/ SUN PLUMBING
- * ENGINEER WHO INSTALLED IT
- * ENGLEWOOD ENVIRONMENTAL
- * FENCE AND MAT
- * FKA/COUNTY
- * HAVE HAD NO PROBLEMS
- * HAVE NOT HAD A PROBLEM TO DATE.
- * HAVE NOT HAD A PROBLEM,BUT WOULD CONTACT THE MAINTENANCE
- * HOUSING CORPERATION
- * I WOULD PREFER TO HAVE EITHER MYSELF OR AN INDEPENDENT CONTRACTOR FIX IT
- * IM RENTING THE APARTMENT
- * INSTALLED (UNDER WARRANTY)
- * JACKSON TOTAL SERVICE
- * LOCAL PROPERTY MANAGER HIRES SEPTIC TANK CO.
- * MAINTENANCE CONTRACT IN PLACE
- * MR. SEPTIC-CITRUS CO. FLA
- * N/A I WOULD USE A CONTRACTOR/PLUMBER IF PROBLEMS OCCURS.
- * NASSEF ENGINEERING
- * NEVER HAD ANY PROBLEMS SINCE MOVE IN
- * NO MONEY
- * NO ONE FIXED THE COVER-THE HEALTH DEPARTMENT ADVISED ME TO GET A NEW COVER.
- * NO PROBLEM WILL CAL ACCURATE SEPTIC
- * NO PROBLEMS
- * NO PROBLEMS SINCE- JUST \$500/YR FOR HEALTH DEPT AND MAINT.
- * NO PROBLEMS YET
- * NO, IT'S NEVER BROKEN
- * NONE
- * OR DEPENDING OR PROBLEM
- * OUR COUNTY MAKES US PAY A YEARLY FEE TO UC SEPTIC SERVICE.
- * REALTOR COMPANY
- * RENTAL PROPERTY MANAGER
- * SEPTIC TANK CONTRACTOR/PLUMBER AS WELL
- * SEPTIC TANK CONTRACTOR/PLUMBER AS WELL.
- * SERVICE PROVIDER
- * THE INSTALLATION COMPANY WENT OUT OF BUSINESS AND NO ONE IN THE AREA WORKS ON PBTS.
- * THE PEOPLE TO WHOM I PAID SO TOWER MONEY BI ANNUALLY.
- * THIRD GENERATION PLUMBING INSTALLER.
- * THIRD GENERATION PLUMBURY
- * UNDER CONTACT NOTHER TAX ON SMALL BUSINESS
- * MAINTENANCE ENTITY WOULD DEAL WITH ANY PROBLEMS
- * MAINTENANCE ENTITY AEROBIC MAINTENANCE
- * WE ALSO USE A LOCAL SEPTIC CONTRACTOR TO DO THE WASTE SLUDGE PUMP DOWN
- * WHOEVER INSTALLED IT
- *

Total

8. How satisfied are you with the way problems with your system are handled? (n=582)

34% Very Satisfied 40% Satisfied 6% Dissatisfied 8% Very Dissatisfied
12% Other [Please Specify] _____

8. How satisfied are you with the way problems with your system are handled? (n=582)

OTHER 12% [Please Specify]

- * AMBIVALENT
- * BECAUSE OF DISAGREEMENT WITH THE INSTALLER AND HOME BUILDER-TOOK A MONTH TO GET SYSTEM FIXED
- * CONSTRUCTION OF ST. GEORGE ISLAND, INC. EL SEWAGE TREATMENT SERVICES.
- * CONTRACT INSTALLER HAS NEVER FOLLOWED UP TO CHECK OUR SYSTEM SINCE INSTALLMENT
- * DO NOT KNOW HAVE NOT HAD PROBLEMS
- * EXPENSIVE TO REPAIR
- * FAILED AS CITY SEWER INSTALLED; HOOKED TO SEWER.
- * HAD TO FIGHT HEIGHT OF FIELD
- * HAD TO USE ROOT CUTTER SNAKE MYSELF
- * HAVE HAD NOT PROBLEMS
- * HAVE NOT HAD ANY PROBLEMS YET
- * HAVE NOT HAD TO CALL YET. NO IDEA!
- * HAVEN'T HAD ANY SO FAR
- * I AM SATISFIED, BECAUSE I DO IT MYSELF.
- * I HAVE HAD NO PROBLEMS
- * I HAVE NO PROBLEMS I JUST SEND THEM A CHECK. I MUST HAVE A CONTRACT OR THE COUNTY WILL CLOSE MY BUSINESS.
- * I JUST DON'T LIKE THE AEROBIC SYSTEM
- * I THINK THE SEPTIC TANK CONTRACTOR SHOULD MAKE REPAIRS, NOT JUST COLLECT MONEY FOR INSPECTION.
- * INSTALLED NOV 2005 HAD NO PROBLEMS
- * MAINTENANCE PROVIDED TWICE YEARLY
- * NO BASICS
- * NO PROBLEMS (36 RESPONDENTS)
- * NOW I'M SATISFIED
- * OK WITH NEW COMPANY
- * OUT OF 350+ HOMES ON THE ISLAND WE ARE THE ONLY ONE WITH A PBTS. IT WAS AN EXPERIMENT BY FL DOH 20+ YEARS AGO
- * REALLY CHEESED OFF-AFTER PAYING SO MUCH MONIES WHY
- * THE EXPENSES INVOLVED IN HAVING IT "CHECKED" TWICE A YEAR.
- * THIS IS A DENTAL HOUSE AND DON'T KNOW HOW IT WORKS
- * TOO COSTLY
- * TOO COSTLY
- * WAS SUPPOSED TO BE COVERED UNDER WARRANTY THEY TRIED TO CHARGE ME AND I COMPLAINED AND THEY CHANGED THEIR MIND
- * WE STILL HAVE THE PROBLEM
- * WE WERE VERY SATISFIED WITH MR. SEPTIC OVER A-ABLE
- * WORKS FINE FOR/ YEAR UNTIL SOLID BUILD UP. HOLDING TANK TOO SMALL.
- * WAS DISSATISFIED, NEW MAINTENANCE COMPANY IS A LOT BETTER

ASSESSMENT OF YOUR ADVANCED SYSTEM

9. How would you describe your overall satisfaction with your advanced onsite sewage system (septic system)? (n=639)
 38% Very Satisfied 42% Satisfied 11% Dissatisfied 10% Very Dissatisfied

10. In your opinion, what is the GREATEST ADVANTAGE of having one of these systems?
[Please ✓ One.] (n=581)

15% Low cost	16% Not being hooked up to sewer system
24% Cleaner wastewater	17% Increased options for building on lot <i>[possible to build what we want to build on lot]</i>
6% System will last longer	
23% Other <i>[Please Specify.]</i> _____	

10. In your opinion, what is the GREATEST ADVANTAGE of having one of these systems
 (n=581)
OTHER 23% *[Please Specify]*

- * NO CITY SEWER AVAILABLE
- * ABLE TO LIVE WHERE THERE IS NO SEPTIC AND LOVE THAT THERE ARE STRONG REGULATIONS TO PREVENT FURTHER BUILDING IN OUR AREA
- * ABSOLUTELY NO ADVANTAGE--YOU PEOPLE (HEALTH DEPT.) FORCED ME TO PUT THIS SYSTEM IN FOR NO REASON!!! YOU COST ME \$20,000!!!
- * ABSOLUTELY NO ADVANTAGE TO HAVING THE HOOT SYSTEM. NOT ONE.
- * ADVANTAGES FOR SMALL HOUSEHOLD ARE NON-EXISTENT
- * ADVERTISED AS "ENVIRONMENTALLY FRIENDLY"
- * ALTHOUGH QUITE SATISFIED WE ARE NOW ON CITY SEWER
- * BETTER FOR ENVIRONMENT
- * BOUGHT HOUSE WITH IT, PREFER CITY SEWER
- * CAME WITH HOUSE
- * CITY SERVICE NOT AVAILABLE
- * COST OF WATER USAGE IS VERY HIGH AND IS TRAINED TO PUNISH (BY COST) THE HOMEOWNER
- * COUNTY SEWER SYSTEM DOES NOT EXTEND TO THE AREA AROUND MY PROPERTY.
- * DIGITAL ALERTS
- * DO NOT KNOW
- * DO NOT KNOW, FIRST TIME WITH SEWER SYSTEM
- * DO NOT KNOW.
- * DON'T KNOW
- * DON'T LIKE
- * DON'T KNOW-IT WAS THE ONLY OPTION AS FAR I KNOW.
- * DON'T REALLY SEE ONE. WAS TOLD I HAD TO HAVE IT HOOK INTO SEWER SYSTEM WHICH IS BEING FORCED UPON US ALSO
- * ENVIRONMENTAL ADVANTAGE
- * ENVIRONMENTAL FRIENDLY
- * FORCED BY INSPECTORS
- * GREY WATER PLANT IRRIGATION
- * HAD NO CHOICE -CO. HEALTH DEPT TOLD ME I HAD TO HAVE THIS ONE.
- * HANDLING PERIODIC HEAVY USE
- * HATE IT. TOOK UP HALF OF MY YARD
- * HAVING SOME ONE CHECK EVERY 2 YEARS ON SYSTEM
- * HELP SEWER SYSTEM BY CITY SOON
- * HIGH COST (INVESTMENT + UPKEEP)
- * HOUSE ALREADY HAD THE SYSTEM WHEN WE BOUGHT IT
- * I DIDN'T HAVE A CHOICE AND WOULDN'T CHOOSE IT IF I HAD A CHOICE. SYSTEM VERY EXPENSIVE! \$20,000.
- * I DO NOT KNOW OF ANY ADVANTAGE. IT COSTS MORE!!!
- * I DO NOT LIKE PAYING \$700 EVERY TWO YEARS, I HAVE HAD SEPTIC SYSTEMS IN THE PAST AND

10. In your opinion, what is the GREATEST ADVANTAGE of having one of these systems

(n=581)

OTHER 23% [Please Specify]

- FEEL THIS IS A WASTE OF MONEY.
- * I DO NOT LIKE THIS UNDERNEATH MY HOUSE IT SMELLS
- * I DO NOT SEE AN ADVANTAGE
- * I DON'T THINK WE'VE BEEN ABLE TO EXPERIENCE THE ADVANTAGES YET
- * I DON'T HAVE TO BOTHER WITH IT.
- I HAD NO CHOICE. THERE IS NO SEWER CLOSE AND THE COUNTY COULD NOT ALLOW A
- * REGULAR SEPTIC SYSTEM THE COST OF THIS SYSTEM IS DOUBLE AND ONLY A FEW PEOPLE CAN INSTALL THEM.
- * I HAD NO CHOICES WHEN HOUSE WAS BUILT IN 2005
- * I SEE NO ADVANTAGE OVER A PROPERTY MAINTAINED SEPTIC SYSTEM
- * I THINK THIS SYSTEM IS VERY HIGH MAINTENANCE, THERE ARE ONLY A FEW CONTRACTORS OS THEY CHARGE A LOT.
- * I WAS FORCED TO GET IT!
- * I WOULD LIKE A SEWAGE SYSTEM THAT LEADS TO COUNTY
- * I WOULD RATHER HAVE CITY SEWAGE
- * I WOULD RATHER HAVE CITY WATER AND SEWER
- * IT'S OVER PRICED AND THIS IS FLEECING POOR PEOPLE
- * IT WAS HERE WHEN I MOVED IN I WOULD RATHER NOT HAVE IT
- * IT WAS THE ONLY OPTION
- * LOOKING A LOT BETTER. NO HUGE MOUND.
- * LOW PROFILE DRAINFIELD
- * LOWER COST IS NOT A REASON
- * MINIMAL MOUND
- * N/A
- * NEEDED TO BUILD
- * NEVER A PROBLEM NO BACK-UPS. YET VERY EXPENSIVE TO PUT IN V/S THE SYSTEM
- * NO 4 FT MOUND IN YARD. DECREASE PROPERTY VALUE I WOULD PREFER A SEWER HOOK UP.
- * NO ADVANTAGE-HIGHER COST HIGHER MAINTENANCE.
- * NO ADVANTAGE - EXTRA COST
- * NO ADVANTAGE - IT WAS REQUIRED - NO CHOICE
- * NO ADVANTAGE - MORE EXPENSIVE
- * NO ADVANTAGE -HOOK US TO SEWER SYSTEM.
- * NO ADVANTAGE
- * NO ADVANTAGE AT ALL
- NO ADVANTAGE EXCEPT SUPPORTS AN INDUSTRY THAT BILKS CUSTOMERS OUT OF HIGH FEES
- * FOR A SYSTEM THAT IS USELESS. THE EFFIECENT STILL DRAINS INFO THE GROUND REGARDLESS OF THE TREATMENT. THE BIGGEST RIPOFF I'VE EVER EXPERIENCED.
- * NO ADVANTAGE VERY EXPENSIVE IN CHARLOTTE COUNTY
- * NO ADVANTAGE WHAT SO EVER!
- * NO ADVANTAGE.
- * NO ADVANTAGES
- * NO CHOICE- COUNTY RULES
- * NO CITY SERVICE AVAILABLE
- * NO GREAT ADVANTAGE JUST HEAVY UNNECESSARY PERMIT COSTS.
- * NO HOOK AVAILABLE ON PINE ISLAND.
- * NO LARGE MOUND OF DIRT IN YARD
- * NO MOUND IN MY YARD
- * NO ODOR WHEN OPENED. IT WORKS.
- * NO OPINION.
- * NO OTHER OPTION.
- * NO OTHER OPTIONS HERE
- * NO REAL ADVANTAGE
- * NO REASON
- * NO SEWER CHANGES
- * NO YARD MOUND!
- * NONE-ITS ABOVE GROUND AD LOOKS UGLY AS SIN, PUTS OUT AN ODOR IN HOT WEATHER, ETC.
- * NONE - NO ADVANTAGE

10. In your opinion, what is the GREATEST ADVANTAGE of having one of these systems

(n=581)

OTHER 23% *[Please Specify]*

- * none
- * NONE
- * NONE ADVANTAGE
- * NONE THAT I NOTICE
- * NONE TOO EXPENSIVE INITIALLY AND TOO EXPERIENCE TO MAINTAIN.
- * NONE, WE HAVE HAD TRADITIONAL SEPTIC SYSTEM THAT LAST FOUR HOMES THAT WE HAVE OWNED NOT A SYSTEM THAT CAN HANDLE MORE THAN A FAMILY OF 2. THE "DON'T" LIST IS VERY LONG OF WHAT CAN BE PUT DOWN THE DRAIN.
- * NONE<ITS AN EXTRA COST A YEAR>
- * NOT LOW COST MUCH PAY HIGH MAINTENANCE FEES AND HAVE PUMPED OFTEN NO ADVANTAGES AT ALL
- * NOT SURE
- * NOTHING
- * NOTHING AT ALL GOOD ABOUT THE WHOLE SYSTEM FROM THE HEALTH DEPT. GETTING PAID TO OPERATE + HAVING TO PAY A COMPANY TO JUST LOOK AT IT
- * NOTHING REALLY
- * OBTAIN CERTIFICATE OF OCCUPANCY
- * ONLY ADVANTAGE IS TO GOVERNMENT AND SUBSIDIZED INDUSTRY.
- * ONLY ADVANTAGES
- * ONLY OPTION AVAILABLE
- * ONLY OPTION FOR BUILDING ON THIS LOT
- * ONLY WAY WE COULD OPEN UP
- * PAYING FOR PLUMBER CONTRACT, PERMITS, AIR RATER THAN ONLY LAST 2 YEARS COSTLY.
- * PREFER SEWER-WAS REQUIRED TO INSTALL SYSTEM WHEN BUILDING
- * RATHER BE HOOKED TO SERVICE LINE
- * REALLY DON'T KNOW BUT DEFINITELY NOT LOW COST
- * REDUCING DEMAND ON CENTRAL SYSTEM AND THEIR NEED TO DEAL WITH WASTE WATER.
- * REQUIRED BY STATE TO OBTAIN PERMIT TO BUILD.
- * SEE NO ADVANTAGE
- * SEE NO SPECIFIC ADVANTAGE.
- * SIMPLIFIED LIFT FLOW
- * THE ABILITY TO BUILD HOME CLOSE TO THE RIVER FRONT. WITH A STANDARD SEPTIC SYSTEM I WOULD NOT HAVE BEEN ALLOWED.
- * THERE'S NO ADVANTAGE IT IS A PAIN. I AM GETTING RID OF IT.
- * THERE ARE NONE I WOULD LIKE TO GO ON SEWER
- * THERE IS NO ADVANTAGE
- * THERE IS NO ADVANTAGE.
- * THERE IS NO ADVANTAGE. IT COSTS 4350-400 TO MAINTAIN
- * THERE IS NONE
- * THIS SYSTEM MANDATED BY LOCAL HEALTH DEPARTMENT.
- * TOO COSTLY
- * TOO SOON TO TELL.
- * TROUBLE FREE
- * UNKNOWN
- * VERY EXPENSIVE ELECTRICALLY \$30/ MONTH ELECTRICITY
- * VERY HIGH COST, IF YOU CAN CALL THAT AN ADVANTAGE.
- * VERY LITTLE POLLUTION. DIR. TECH. SYSTEM
- * WANT TO HOOK TO SEWER SYSTEM.
- * WE WERE ORDERED TO HOOK UP TO A SEWER SYSTEM FOR CHEAPER TO USE THE ONSITE SYSTEM
- * WE WOULD PREFER TO BE HOOKED UP TO A SEWER
- * WE WOULD RATHER HAVE CITY SEWAGE
- * WITHOUT IT I COULD NOT REMODEL
- * WOULD RATHER CITY SYSTEM

11. If cost was equal, would you prefer to: (n=622)

- 33% Continue to use an advanced onsite system
- 59% Hookup to a municipal/ county sewer system
- 8% Use simpler conventional septic system and pay savings into a water quality improvement trust fund

SYSTEM INSPECTION AND MONITORING

12. Do you periodically inspect your own system? (n=632)

- 42% Yes, at least every few months
- 34% Yes, about once or twice a year
- 25% No, I don't inspect it at all

13. How often is your onsite septic system inspected by your MAINTENANCE ENTITY? (n=634)

- | | |
|--------------------------------------|----------------------------|
| 2% Never | 55% Twice a year |
| 4% Only when there is a problem | 17% 3 or more times a year |
| 13% Less than 2 times a year | 4% Don't Know |
| 4% I don't have a maintenance entity | |

14. Are you informed of the RESULTS OF INSPECTIONS conducted by: (n=544)

- | | |
|--------------------------------------|------------|
| | Yes |
| County Health Department | 43% |
| Maintenance entity | 86% |
| 6% I don't have a maintenance entity | |

EDUCATION ABOUT YOUR ADVANCED SYSTEM

15. What way would you prefer to receive INFORMATION FROM YOUR COUNTY HEALTH DEPARTMENT about your advanced onsite system? *[Please ✓ all that apply.]* (n=609)

- | | |
|---|--|
| 69% Mailed brochures | 3% TV/ Radio |
| 12% Utility bill inserts | 6% Information posted on department website |
| 27% E-mails | 2% Public meetings/ workshops |
| 5% Newspapers | 1% Presentations to civic groups (e.g., Rotary Club) |
| 6% Other <i>[Please Specify.]</i> _____ | |

15. **What way would you prefer to receive INFORMATION FROM YOUR COUNTY HEALTH DEPARTMENT about your advanced onsite system?** (n=609)
OTHER 6% *[Please Specify]*

- * ALL
- * AS IS NOW
- * DON'T WANT MORE INFO
- * DON'T KNOW, NEVER HAVE RECEIVED INFO FROM COUNTY
- * FAX
- * FREE ARTICLES ONLY. DO NOT WASTE MONEY.
- * FROM SEPTIC SYSTEM INSPECTOR WHICH WE DO
- * HAVE A MAINTENANCE AGREEMENT THEY INFORM ME
- * I DO NOT NEED INFO. IT COST MONEY.
- * I REALLY DON'T CARE. THE TOILETS FLUSH, THE WATER DRAINS, THIS IS A BACK WATER COUNTY BUT THEY KNOW HOW TO MAKE MONEY.
- * I WOULD HAVE PREFERRED A REGULAR DRAIN FIELD; I AM POOR AND ONLY SPENT 6 MONTH A YEAR HERE.
- * I WOULD PREFER THAT THEY LEAVE ME ALONE
- * I WOULD PREFER THAT YU WOULD LEAVE US ALONE BECAUSE EVERY TIME YOU GET INVOLVED YOU COST ME MONEY
- * IT DON'T MATTER I AM GETTING RID OF IT.
- * LETTER ONCE A YEAR WITH EVALUATION
- * MAINTENANCE COMPANY
- * NEW HOME INSTRUCTIONS ON SYSTEM
- * NEWSPAPERS, THAT WAY EVERYONE CAN SEE WHAT A RIP OFF THIS SYSTEM IS.
- * NO
- * NO ADDITIONAL INFORMATION
- * NONE-YOU ARE ENVIRONMENTALIST WACKOOOS! FIRE ALL COUNTY HEALTH WORKERS - THEY ARE SLUGS!!
- * NONE
- * NONE
- * NOTIFY BY MAIL
- * ONLY WANT TO KNOW IF THERE IA A PROBLEM
- * OPERATOR GUIDE INCLUDE RETURN TO LAWS, RULES AND REGULATIONS AS APPLICABLE
- * PAYMENT IS INCLUDED IN MAINTENANCE THEREFORE I DO NOT NEED TO KNOW
- * PERSONAL MAIL
- * SET TO HOME
- * THAT THE STATE HEALTH DEPARTMENT FINALLY KNOWS HOW BAD THESE ARE PERFORMING
- * THEY DO NOTHING - WHAT WOULD THEY REPORT ON - 200 TAX COLLECTION SCAM
- * THEY HAVE NOTHING TO SAY
- * THROUGH PROPERTY MANAGER
- * WHY?

16. Please tell us about topics related to advanced onsite systems that you would like to learn more about.

Appendix A contains the specific topics identified by 104 owners and users.

Number of Owners/ Users (n=141)	Topics Identified
25	Owner Maintenance
19	System Performance
17	Cost
16	Other
13	Sewer Hook-Up
12	Environmental Issues
11	Permitting/Regulation
11	Contractors/Maintenance Entities
10	Operating Instructions
7	Satisfied
0	Inspections

OPERATING PERMITS AND MAINTENANCE FOR ADVANCED ONSITE SEWAGE SYSTEMS

17. How difficult was it to find a maintenance entity for your system? (n=631)

- 8% Very difficult to find
- 13% Somewhat difficult to find
- 73% Not difficult at all
- 6% I don't have a maintenance entity

18. What do you estimate is the COST of your:

a. Operating permits and maintenance contract (agreement) for one year (n=536)

\$0	2%	Mean	\$440.51
\$1-\$199	10%	Median	\$350.00
\$200-\$499	55%	Range	\$0 to \$4,300
\$500-\$999	27%		
1000+'	7%		

b. Repairs and other items not covered by your maintenance contract last year (n=242)

\$0	28%	Mean	\$474.16
\$1-\$100	13%	Median	\$200
\$101-\$300	25%	Range	\$0 to \$10,000
\$301-\$999	21%		
1000+'	31%		

19. How would you rate your satisfaction with the services provided by your maintenance entity? (n=627)

27% Very Satisfied 43% Satisfied 7% Dissatisfied 8% Very Dissatisfied

12% No basis to judge

3% Other [Please Specify.] _____

19. How would you rate your satisfaction with the services provided by your maintenance entity? (n=627)

OTHER 3% [Please Specify]

- * DO NOT HAVE MUCH CHOICE. THEY ALL RE VERY EXPENSIVE
- * DO NOT THINK THEY WERE IN THE YARD
- * DO SOMETHING ABOUT THE ODOR (SMELL)
- * xxx WAS A DISASTER. xxx IS EXCELLENT.
- * EXCEPT NO REPAIRS-PRICE IS HIGH FOR INSPECTION.
- * EXPENSIVE FOR SERVICE PROVIDERS
FIND IT HORRIBLE THAT ONLY ONE PERSON IN THE TRI-COUNTY AREA IS ALLOWED TO SERVICE
- * IT AND CHARGES 700.00 FOR 2 YEARS BECAUSE HE REALLY DOES NOT WANT TO DEAL WITH IT.
THIS IS PAYMENT ONLY FOR INSPECTION. DOES NOT INCLUDE ANY REPAIRS.
- * GOOD BUT EXPENSIVE DON'T INCLUDE NOTHING WITH THESE SOURCE
- * I AM THE MAINT. ENTITY
- * I FEEL I AM FORCED TO USE ONLY ONE SO THERE IS NO COMPETITION
- * I WILL BE CHANGING PROVIDERS ON 6/1/10
- * IT HAS IMPROVED WITH NEW CONTRACTOR
- * JUST SIGNED UP WITH NEW COMPANY
- * MY CONTRACTOR TRIED TO CHARGE ME FOR WORK NOT NEEDED.
- * N/A
- * NEVER SURE THAT ANIMAL INSPECTION TOOK PLACE
- * NO INSPECTION REPORT PROVIDED
- * OLD COMPANY-TERRIBLE NEW COMPANY-SATISFIED
- * ONLY ONE
- * PLEASE HELP MAN QUALIFY TO DO THE JOB--SOMETIME HE DON'T KNOW WELL ABOUT THE JOB
- * SATISFIED WITH ENTITY, VERY DISSATISFIED WITH PUNITIVE LAWS THAT ARE NOT NECESSARY.
- * SELF
- * STILL BROKEN PARTS
- * THE NEW ONE IS SATISFIED OLD WAS VER DISSATISFIED
- * THEY ARE LOCATED ABOUT 70 MILES AWAY VERY INCONVENIENT
- * THEY CAME RIGHT AWAY EARLY ON WHEN PROBLEM ARISES BUT NO ONE TOLD US ABOUT
COST UNTIL WE GOT A BILL 2 YEARS LATER
- * TOLD US TO PUMP AND WAS NOT NECESSARY. WE WERE TOLD THIS BY THE PERSON WHO
PUMPED.
- * TOO COSTLY MONOPOLY SHOULD HAVE OTHERS
- * TOO EXPENSIVE
- * TOO EXPENSIVE FOR TWO INSPECTIONS A YEAR
- * USELESS IT IS MANDATED.
- * WE HAVE A MAINTENANCE SUPPORT COMPANY BUT NO CONTRACTOR
- * WE HAVE PUMPED OUT BY ANOTHER CO.
- * WITH SERVICES NOT COST
- * WITH THE NEW ONE

20. When your current agreement comes up for renewal will you:

[Please ✓ all that apply.] (n=607)

- 67% Renew maintenance agreement with same entity
- 7% Switch to a different maintenance entity because of price
- 4% Switch to a different maintenance entity because of low level of service
- 15% I would like to switch but there is no alternative
- 15% Other *[Please Specify.]* _____

20. When your current agreement comes up for renewal will you: (n=607)

OTHER 15% *[Please Specify]*

- * A 500.00 PER YEAR IS COSTLY - BUT I DON'T KNOW ANYONE ELSE TO CALL
- * ALTERNATIVE MORE EXPENSIVE AND NOT READILY AVAILABLE.
- * AM NOT SURE YET
- * ATTEMPT TO BECOME MY OWN MAINTENANCE ENTITY SO I CAN LEGALLY INSPECT MY PERSONAL SYSTEM AND SAVE MONEY. IF I CANNOT, THEN SHOP AROUND FOR THE LOWEST PRICED MAINTENANCE ENTITY, EVEN IF IT IS MY CURRENT ENTITY
- * BECOME SELF CERTIFIED
- * CHANGE THAT LAW SO I CAN DO IT MYSELF.
- * CITY ALLOWS ONLY ONE ENTITY TO HAVE MAINT. CONTRACT WITH. I WISH I HAD OTHER COMPANIES TO CHOOSE FROM.
- * CITY SEWER SERVICE IS IMMINENT AND FEES HAVE BEEN PAID FOR HOOK UP. OTHERWISE I WOULD RENEW MAINTENANCE AGREEMENT.
- * COMPANY PRICE
- * CONNECT TO CENTRAL SEWER
- * DO NOT KNOW
- * DO NOT THINK I HAVE AN AGREEMENT
- * DO WITH OUT
- * GET A REGULAR SEPTIC TANK THAT DO NOT NEED A PUMP JUST GET IT PUMPED OUT EVERY 3 MONTHS.
- * GO WITH INSTALLER
- * HAVE HEALTH DEPT. INSPECT! MAINTENANCE CO. DOES NOTHING ELSE BUT INSPECT.
- * HAVE NO CHOICE
- * HAVE NO CHOICE AS FAR AS I KNOW
- * HOOKED UP TO COUNTY SEWER
- * HOUSE IS FOR SALE DON'T KNOW
- * I AM A RENTER-LANDLORD HANDLES THAT.
- * I AM FORCED TO HAVE A CONTRACT WITH THE CITY AND A MAINTENANCE COMPANY. THIS SHOULD BE ILLEGAL
- * I DON'T WANT TO SWITCH- I WANT TO QUIT ALL THE NONSENSE. I LIVE ALONE- THIS SYSTEM WAS BUILT FOR 3 BEDROOM HOUSE.
- * I HAVE BEEN TRYING TO GET OTHER COMPANIES CERTIFIED
- * I HAVE JUST SWITCHED FROM XXX. TO XXX PLUMBING. SUN WAS CERTIFIED THIS PAST YEAR.
- * I KNOW OF NO OTHER ENTITIES. I WILL HAVE TO USE THE ORIGINAL PEOPLE.
- * I MAINTAIN IT MYSELF
- * I RENT
- * I WILL SHOP AROUND
- * I WOULD HAVE SWITCHED THERE TO UNTRUSTWORTHY PEOPLE. NO NEED FOR A MAINTENANCE ENTITY-GOING TO BE HOOKED UP TO SEWER SEPTUM
- * I WOULD LIKE TO DO IT MYSELF
- * I WOULD LIKE TO GET RID OF IT BUT I CAN'T
- * I WOULD LIKE TO MAINTAIN MY OWN SYSTEM. I AM VERY CAPABLE.
- * JUST HIRED MAINTENANCE
- * KEEP EVERYTHING THE SAME/ NO MAINTENANCE CONTRACT

20. When your current agreement comes up for renewal will you: (n=607)

OTHER 15% *[Please Specify]*

- * LEAVE THE COUNTY
- * MUST ONLY COMPANY CERTIFIED W/SYSTEM INSTALLED.
- * N/A
- * NEW SYSTEM BEING INSTALLED
- * NO AGREEMENT
- * NO COMPETITION IN THE FLORIDA KEYS.
- * NO I WILL NOT RENEW
- * NO LONGER NEEDED CENTRAL SEWER FCAA
- * NO NEED
- * NONE
- * NOT ALLOWED TO SWITCH
- * NOT AN ISSUE
- * NOT DECIDED
- * NOT HAVE ONE
- * NOT HAVE TO PAY SO MUCH A YEAR.
- * NOT UP TO ME
- * NOTHING
- * NOW ON CITY SEWER
- * ON CITY SEWER NOW
- * ONE ALTERNATIVE EXACT SAME PROBLEM
- * ONLY ONE COMPANY THAT MAINTAINS THIS.
- * ONLY ONE ENTITY CERTIFIED-NO CHOICE
- * ORGANIZING AGAINST COUNTY COMMISSIONER WITH MANY OTHER HOMEOWNERS TO STOP UNCONSTITUTIONAL PERMIT AND MAINTENANCE CONTRACTING ESPECIALLY IF THERE HAS NOT BEEN ANY EVIDENCE THAT DAMAGE IF ANY IS FROM HOMEOWNERS
- * PROBABLY WILL RENEW BUT WOULD PREFER TO HAVE AN ALTERNATIVE SOURCE IN LOCAL AREA FOR COMPETITIVE REASONS AND CHOICE. ONLY 1 PROVIDER IN NE FLORIDA.
- * REVIEW COST/ BENEFIT RATES
- * SHOP AROUND FOR SERVICES
- * SHOP AROUND TO TRY AND FIND A BETTER PRICE
- * SHOULD HAVE CITY SEWER BY THEN
- * SINCE I ONLY USE THE SYSTEM 4 TO 5 WEEKS A YEAR, I WOULD LOVE TO SEE SOME LENIENCE WITH SEASONAL RESIDENTS
- * SWITCH TO THE MAN I TRUST
- * SWITCHED LAST YEARS DUE TO PRICE AND LACK OF INSPECTIONS
- * SYSTEM DISCONTINUED IN 2008. NOW IN CITY SEWER
- * TAKE IT OVER
- * THERE IS NO ALTERNATIVE
- * THIS SYSTEM IS A WASTE OF MONEY AND TIME
- * THOUGHT I HAD NO CHOICE
- * UNSURE OF COMPETITION IN OUR AREA BUT MAY SHOP
- * WANT TO DO IT MYSELF- STATE LAW SAYS NO, SO INDEPENDENT CONTRACTORS MAKE OUT.
- * WE ARE GETTING SEWER
- * WE DON'T HAVE A MAINTENANCE CONTRACT
- * WE DON'T HAVE AN AGREEMENT MY HUSBAND DOES THE MAINT.
- * WE HAVE TO HAVE IT. WE WILL KEEP WHAT WE HAVE
- * WE WERE TOLD WE HAVE TO STAY WITH COMPANY THAT INSTALLED THE SYSTEM, OTHERWISE I WOULD LIKE TO SHOP AROUND FOR SOMEONE ELSE.
- * WILL BE ABANDONING OUR SYSTEM.
- * WOULD LIKE TO DO IT MYSELF
- * WOULD LIKE TO STOP THIS OVERPRICED RIP OFF.
- * YOU CAN TAKE THE SYSTEM MAINTENANCE AND COUNTY FEES AND SHOVE IT

21. If you had your choice, who would you PREFER TO DEAL WITH the permitting and maintenance of your advanced onsite system?

[Please ✓ One.] (n=611)

- 11% Utility-type entity owns the system and charges monthly cost that includes all maintenance, repairs, replacement, operating permit, etc.
- 11% Utility-type entity charges monthly cost that includes all maintenance, repairs, replacement, operating permit, etc. You remain the owner of the system.
- 10% Maintenance entity that charges monthly cost for standard maintenance and operating permits. Repairs are extra.
- 29% Maintenance entity that charges for maintenance and operating permits in one lump sum when they are due. Repairs are extra.
- 33% Do-it-yourself, with help by contractors as needed.
- 6% Other *[Please Specify.]* _____

21. If you had your choice, who would you PREFER TO DEAL WITH the permitting and maintenance of your advanced onsite system? (n=611)

OTHER 6% *[Please Specify]*

- * AS NEEDED-WE ARE NOT
- * CENTRAL SEWER
- * CITY SEWER
- * CONTINUE WITH SAME COMPANY
- * CURRENT SYSTEM - MINUS COUNTY PERMIT
- * DEPENDS ON COST FACTOR
- * DON'T KNOW
- * GO BACK TO THE OLD SYSTEM OR USE CITY, UTILITIES
- * HAPPY WITH WHAT I HAVE
- * I AM GOING TO CALL AROUND FOR CHEAPER COMPANY
- * I DON'T HAVE A CLUE
- * I JUST DON'T LIKE THE AEROBIC SYSTEM AND WOULD CHOOSE ANY OTHER ALTERNATIVE
- * I THINK THAT REPAIRS SHOULD BE INCLUDED IN THE MAINT. FEE. BASICALLY THE CITY + THE COMPANY EACH GET MONEY AND DO NOTHING.
- * I WANT TO BE LIKE OTHERS
- * IF IT WAS UP TO ME I WOULD NOT HAVE A SYSTEM LIKE THIS
- * JUST TO GET RID OF THIS ADVANCE SEPTIC TANK AND GOT ONE THE HAS BEEN USED FOR YEARS A CONVENTIONAL ONE.
- * LEAVE WELL ENOUGH SHARE
- * MAINTENANCE ENTITY OF MY CHOICE, I OWN SYSTEM.
- * MAINTENANCE ENTITY SHOULD REVIEW MONOPOLISTIC PRICING.
- * MUNICIPAL IF RATES ARE REASONABLE.
- * MUNICIPAL SEWAGE
- * N/A
- * NEW DRAIN FIELD
- * NO GOVERNMENT CONTROL
- * NO ONE AT ALL
- * NONE- WOULD RATHER GET RID OF IT
- * NONE OF THE ABOVE JUST GO BACK TO THE OLD SYSTEM THAT WORK
- * NOT AT ALL
- * NOW ON CITY SEWER
- OTHER CHECKED: PREFER COUNTY SEWER; LIKE MY COUNTY WATER LINE, MY IRRIGATION
- * WELL, MY APPLIANCES, MY ELECTRIC SERVICE, MY AIR CONDITIONER, MY FPL LIGHT ON ALLEY POLE, MY SECURITY SYSTEM, ECT, ECT.
- * PUBLIC UTILITY FOR #12 HAVE
- * REPAIRS SHOULD BE PART OF MAINTENANCE
- * SAME AS #4 BUT REPAIRS ARE INCLUDED
- * SEE COMMENTS BOX
- * SEWER HOOK-UP
- * SHOULD BE AT CITY LEVEL (MOVED ISLAND)
- * THE FIRST WITH OUT THE MONTHLY COST
- * THE WAY I HAVE IT NOW.
- * THEY ARE ALL THE SAME.
- * UTILITY-TYPE ENTITY-EVERY TWO YEAR SERVICE CONTRACT OPERATING PERMIT
- * WANT PUBLIC SEWERS
- * WHAT IS THIS
- * WHAT MAINTAIN, IT IS A PLASTIC BOX
- * WHATEVER IS LEAST EXPENSIVE
- * WHY DO I HAVE TO HAVE A PERMIT FOR A SYSTEM THAT IS A PROBLEM
- * WHY IS THERE AN OPERATING PERMIT THIS IS ANOTHER EXAMPLE OF EXCESS GOVERNMENT INVOLVEMENT
- WHY SHOULD I HAVE PAY FOR A SYSTEM AND A PERMIT TO THE CITY WHEN I AM NOT HOOKED
- * UP TO THE CITY SEWER OR CITY WATER. IT IS TAXING ME WITHOUT PROVIDING ME WITH SERVICE.
- * WOULD PREFER TO DO OWN/WITH SOME EDUCATION.

GENERAL COMMENTS

22. Please tell us about any changes or improvements you would like to see related to the regulation, permitting and management of advanced onsite sewage treatment and disposal systems in the State of Florida:

Appendix B contains the specific comments identified by 206 owners and users.

Number of Owners/ Users (n=206)	Comments
45	Regulation/Management
45	Cost
31	Contractors/Maintenance Entities
21	Sewer
17	System Performance
13	Owner System Maintenance
13	Other
9	Inspections
7	Consumer Information/Education
5	Satisfied

BACKGROUND INFORMATION

In what COUNTY is your system located? (n=632)

County	Percent	Number	County	Percent	Number
ALACHUA	0.3%	2	LEE	9.0%	57
BAKER	0.2%	1	LEON	1.1%	7
BAY	0.2%	1	LEVY	0.3%	2
BREVARD	13.3%	84	MANATEE	0.2%	1
BROWARD	0.3%	2	MARION	0.2%	1
CHARLOTTE	11.6%	73	MARTIN	0.2%	1
CITRUS	4.1%	26	MIAMI-DADE	1.9%	12
CLAY	0.3%	2	MONROE	17.2%	109
COLLIER	6.6%	42	OKALOOSA	0.2%	1
DIXIE	0.2%	1	ORANGE	1.7%	11
DUVAL	3.0%	19	OSCEOLA	0.3%	2
ESCAMBIA	0.9%	6	PALM BEACH	1.4%	9
FLAGLER	1.1%	7	PASCO	0.3%	2
FRANKLIN	3.3%	21	PINELLAS	0.3%	2
GADSDEN	0.2%	1	POLK	2.7%	17
GLADES	0.2%	1	SANTA ROSA	1.6%	10
GULF	0.2%	1	SARASOTA	1.9%	12
HERNANDO	0.2%	1	SEMINOLE	1.9%	12
HIGHLANDS	0.2%	1	ST JOHNS	0.8%	5
HILLSBOROUGH	1.9%	12	ST LUCIE	0.2%	1
INDIAN RIVER	0.3%	2	SUMTER	0.2%	1
JEFFERSON	0.2%	1	VOLUSIA	2.7%	17
LAKE	0.8%	5	WAKULLA	4.4%	28

How many months of the year is this SYSTEM IN USE? (n=617)

<1%	Less than 1 month	4%	7 -9 Months
1%	1 - 3 Months	88%	10 - 12 Months
6%	4 - 6 Months		

Do you OWN OR RENT the property?

(n=641)

96%	Own
4%	Rent

Are you a FULL TIME or SEASONAL resident? (n=626)

85%	Full Time
15%	Seasonal

HOW MANY people use your system? (n=546)

7%	1 Person
47%	2 People
29%	3 – 4 People
17%	5 or more People

Your SYSTEM SERVES a...(n=629)

83%	Single family house
2%	Duplex/ apartment/ condominium
2%	Modular/ Mobile home
11%	Business
2%	Other <i>[Please Specify.]</i> :

You are: (n=604)

34% Female
66% Male

In what year were you BORN?

Years of Age (n=531)
4% 17-30
18% 31-45
40% 46-60
25% 61-70
13% 71+

What is the highest grade or year of school you have COMPLETED? (n=597)

<1% 8 years or less
2% 9 to 11 years
15% High school
10% Business or technical school
13% Community college
33% Completed college
27% Graduate or professional school

Which of the following best describes your TOTAL HOUSEHOLD INCOME in 2009? (n=491)

4% Under \$15,000
5% \$ 15,000 to \$25,000
12% \$25,001 to \$45,000
19% \$45,001 to \$65,000
9% \$65,001 to \$85,000
11% \$85,001 to \$100,000
41% Over \$100,000

Appendix A

Appendix A contains the specific topics identified by 104 owners and users.

16. Please tell us about topics related to advanced onsite systems that you would like to learn more about.

Survey of Owners: Education about Advanced System

Topics Would Like to Learn About	County	Manufacturer
Operating Instructions		
* HAD TO TEACH MYSELF ON THE WHOLE OPERATION A DVD DISC WOULD HAVE BEEN VERY HELPFUL ON HOW THE SYSTEM ACTUALLY WORKS.		
* HOW THE SYSTEM WORKS		
* HOW TO EXTEND ITS LIFE - OTHER THAN NOT INTRODUCING DAMAGING MATERIAL		HOOT SYSTEM
* SERVICE ISSUES- DOS AND DON'TS	CHARLOTTE	HOOT
* HOW SYSTEM OPERATES HOW HOMEOWNER CAN BEST MAINTAIN THIS COMPLICATED SYSTEM	CHARLOTTE	
* HOW THEY WORK	COLLIER	HOOT
* WHAT DOES IT EXACTLY DO	COLLIER	HOOT
* BIOLOGICAL ADDITIVES TO ENHANCE OPERATION. HINTS EXTENDING USEFUL LIFE OF SYSTEM. REASONABLE TIME INTERVAL FOR PUMP OUTS. HOW EFFICIENT MY SYSTEM IS COMPARED TO A CENTRAL SEWER SYSTEM.	COLLIER	HOOT
* HOW IT WORKS, WHAT TO DO, WHAT NOT TO DO,ETC. EVERYTHING.	DUVAL	HOOT
* HOW THEY WORK	LEE	ECO PURE

Topics Would Like to Learn About	County	Manufacturer
Environmental Issues		
* EFFECTIVE WAYS TO KEEP DRAIN FIELD CLEAR		
* IMPACT TO ENVIRONMENT		WHITEWATER
* PASSIVE PHOSPHATE & NITRATE REDUCTIONS	BREVARD	ADVANCED WASTEWA
* IF THE H2O CAN USE FOR IRRIGATION.	LEE	
* PLANTING AROUND DRAIN FIELD/WHAT IS OR IS NOT ALLOWED.	LEE	
* ARTIFICIAL WETLANDS	LEVY	5 HYDROACTION AND 1
* THE FEEDING OF THE GRASS AND IT WE CAN PLANT TREES.	MIAMI-DADE	HOOT AEROBI SYSTEM,
* IF THE DRAINAGE IS REALLY CLEAN WHY IS THE GRASS SO MUCH GREENER OVER THE DRAIN FIELD?	MIAMI-DADE	
* ANY ENVIRONMENTAL IMPACTS OF THESE SYSTEMS	MONROE	
* MORE IMPROVEMENT; ADVANTAGE OF WATER SAVINGS	MONROE	
* HOW DOES THIS SYSTEM HELP OVERALL ENVIRONMENT?	ORANGE	HOOT MODEL H-600
* HOW THE WASTE WATER DISCHARGE COULD BE USED FOR IRRIGATION OF SHRUBS AND LAWN	POLK	

Topics Would Like to Learn About	County	Manufacturer
Owner Maintenance		
* HOW TO CHECK IF MAINTENANCE RESERVING IS ADEQUATE OR IF I SHOULD BE DOING INSPECTION MYSELF	BREVARD	CLEARSTREAM
* PROTECTING YOUR SYSTEM. REDUCING PROBLEMS. PERFORMING SIMPLE (SELF) INSPECTIONS.	BREVARD	CLEAR STREAM
* GENERAL MAINTENANCE/PREVENTIVE	CHARLOTTE	AK
* HOW WE COULD MAINTAIN OUR SYSTEMS OURSELVES THE COUNTY COULD COME BY AN APPOINTMENT TO WATCH. IT ONLY TAKES 10-15 MINUTES, AND HE COMES ONCE A YEAR ANYWAY.	CHARLOTTE	WHITE WATER DF SERI
* HOW TO AVOID PROBLEMS. HOW NOT TO HAVE TO HAVE THE DRAIN FIELD REPLACED (HASN'T HAPPENED YET)	CLAY	
* MORE INFORMATION CONCERNING OWNER MAINTENANCE AND TIPS TO KEEP SYSTEM WORKING PROPERLY- DOS AND DON'TS	COLLIER	HOOT
* SELF MAINTENANCE.	DUVAL	HOOT
* WHAT WE CAN AND CANT USE (PRODUCTS)-WE'VE NEVER GOTTEN ANY INFO ABOUT PROPER USAGE AND WE BOUGHT THE HOUSE NEW.	DUVAL	HOOT
* IF I CAN SERVE UNIT AND OBTAIN OPERATING PERMIT MYSELF	FRANKLIN	
* HOW TO WORK ON IT OURSELVES.	HILLSBOROUGH	HOOT
* HOW TO TROUBLE SHOOT THE UNITS	HILLSBOROUGH	HOOT
* HOW TO DETECT PROBLEMS AND LEARN TO SOLVE THEM.	LEE	HOOT
* MAINTENANCE/ADDITIVES THAT WILL KEEP SYSTEM FUNCTIONING PROPERLY (I.E. BACTERIA, ETC)	LEON	

Topics Would Like to Learn About	County	Manufacturer
* SELF MAINTENANCE	LEVY	CLEARSTREAM
* BASIC OPERATION-TO REPAIR MYSELF.	MONROE	MULTI-FLOW
* HOW TO INSPECT YOUR OWN SYSTEM AND SAVE THE \$600.00 FEE.	MONROE	FAST
* MAINTAINING, INSPECTING MY SYSTEM MYSELF.	ORANGE	
* HOW TO TEST AND MONITOR BIOCHEMICAL OXYGEN DEMAND, TOTAL DISSOLVED SOLIDS AND PH.	POLK	JET INC.
* HOW TO DO IT MYSELF	POLK	HOOT
* MAINTENANCE	SEMINOLE	HOOT
* HOW I CAN SERVICE MY OWN SYSTEM AND NOT PAY THE \$400/YEAR MAINTENANCE FEE. I MIGHT HAVE NOT INSTALLED A SEPTIC TANK IF I KNEW I WOULD BE REQUIRED TO PAY THIS RIDICULOUS FEE. SO MUCH FOR COST SAVINGS.	SEMINOLE	HOOTS
* I WANT TO FIND OUT IF I PERSONALLY CAN DO MY OWN INSPECTIONS THAT THE COUNTY NEEDS FOR OPERATOR PERMIT. I PAY A COMPANY A RIDICULOUS AMOUNT OF MONEY EVERY YEAR FOR A "MAINTENANCE" CONTRACT THAT I AM NOT SURE THEY EVEN COME, BUT THE COUNTY SAYS I HAVE TO HAVE IT.	VOLUSIA	HOOTE H-600
* OWNER SELF MAINTENANCE	WAKULLA	HOOT
* PREVENTATIVE MAINTENANCE	WAKULLA	
* I JUST PURCHASED THIS HOUSE AND HAVE NEVER HAD A SEPTIC SYSTEM. ANY INFO WOULD BE HELPFUL, REGARDING MAINTENANCE	WAKULLA	

Topics Would Like to Learn About	County	Manufacturer
System Performance		
* HOW TO NOT HAVE METHANE SMELL WHEN SYSTEM HAS HEAVY USE.		
* HOW TO MAKE IT MORE QUIET THE CONSTANT HUM/BUZZ VIBRATION IS DRIVING ME INSANE.	BREVARD	HOOT
* WOULD LIKE TO HAVE CONSUMER REPORT COMPARING SYSTEMS.	BREVARD	MULTI-FLO
* SUPPOSEDLY ADVANTAGES	BREVARD	
* WHAT MAKES THIS SYSTEM (AEROBIC) BETTER THEN A PROPERLY WORKING CONVENTIONAL SEPTIC SYSTEM.	CHARLOTTE	
* I HAVE HAD SEPTIC TANKS OVER 30 YEAR IN CHARLOTTE COUNTY NEVER ONCE DID I HAVE ANY PROBLEMS UNTIL THIS AEROBIC SYSTEM, THEN IT'S BEEN ONE PROBLEM AFTER ANOTHER!	CHARLOTTE	
* WE WERE NEVER INFORMED OF ANYTHING ABOUT THIS SYSTEM WASN'T HOOK UP PROPERLY TO START WITH. NINE MONTHS LATER AFTER 2ND INSPECTION DID WE KNOW IT WASN'T TOTALLY INSTALLED.	CHARLOTTE	DELTA WHITE WATER
* HAD ISSUES BEFORE THE HOUSE WAS A YEAR OLD	CHARLOTTE	
* WHY IS THERE ORDER AT TIMES?	CHARLOTTE	AQUA CLEAR
* WHY THESE SYSTEM HAVE SO MANY PROBLEMS? WITH ODOR-ETC?	CHARLOTTE	
* EFFICIENCY/MAINTENANCE/COST BENEFITS	COLLIER	HOOT AEROBIC TREAT
* WHY DOES THE BACKYARD HAVE TO BE UNEVEN - (BIG HUMP IN YARD)	DUVAL	NORWECO SINGULAIR
* "ENVIRONMENTALLY FRIENDLY" SYSTEMS THAT WORK BETTER AND COST A WHOLE LOT LESS.	LEE	ECO-FLO TREATMENT

Topics Would Like to Learn About	County	Manufacturer
* IF THE SIZE COULD BE MADE SMALLER TO NOT TAKE UP SO MUCH OF MY YARD.	MONROE	JET CO
* SCIENTIFIC DATA FROM QUALIFIED SOURCES THAT EXPLAINS THE DIFFERENCES IN WATER QUALITY: 1.CENTRAL SEWAGE TREATMENT VS. 2. AEROBIC SYSTEM/ ADVANCED TREATMENT VS. 3. TRADITIONAL TANK/MOUND SYSTEM. NOT OPINIONS-FACTS.	MONROE	
* WHY HAVE NOT MORE SYSTEMS LIKE THIS BEEN USED VS. TRADITIONAL SEPTIC/ DRAIN FIELDS	PALM BEACH	PREMIER TECH
* I WOULD LIKE TO KNOW WHAT MY OPTIONS ARE IF THIS SYSTEM TOTALLY FAILS AND NEEDS TO BE REPLACED.	SARASOTA	CONSOLIDATED TREAT
* CAN THE AIR PUMP'S BE REBUILT AND BY WHO	VOLUSIA	HHYDRO-ACTION
* HOW TO KEEP THE SMELL DOWN	WAKULLA	

Topics Would Like to Learn About	County	Manufacturer
Permitting/Regulation		
* THEY ARE A NUISANCE. IT'S REALLY A BIG SCAM. I USED TO HAVE A CONVENTIONAL SEPTIC SYSTEM WITH NO PROBLEM. LIVED AT THE HOUSE 15 YEARS AND HAD IT PUMPED ONCE. NO \$350-400 COST PER YEAR LIKE NOW.	CHARLOTTE	
* 3 WEEKS AGO I WAS NOTIFIED MY OPERATING PERMIT WAS OUT OF DATE. I NEVER HEARD OF AN O.P. TODAY- ALONG WITH YOUR LETTER I GOT A NASTY LETTER FROM FL DEPT OF HEALTH SAYING MY O.P WAS OUT OF DATE. I WAS BROUGHT UP TO DATE 3 WEEKS AGO BEING A CITY BOY I DIDN'T KNOW I NEEDED AN O.P BUT I PAID THE MONEY. NOW I HATE MY SEPTIC TANK TO THE FL DEPT OF HEALTH.	CHARLOTTE	
* WHEN ARE THEY JOIN, TO REQUIRE OTHERS IN MY AREA TO CONVERT TO OSTDS?	CITRUS	
* ALL NEW CHANGES	CITRUS	NOWECO
* HOW TO AVOID UNNECESSARY COST AND GOVERNMENT INTRUSION. WHY THEY CAN BE MANDATED IN AREAS IDEALLY SUITED TO CONVENTIONAL SEPTIC SYSTEMS.	CITRUS	CLEAR STREAM
* THE SYSTEM APPEARS TO TRY TO PUNISH THE HOMEOWNER WHO IS DOING THINGS THE RIGHT WAY	COLLIER	HOOT SYSTEM
* I HAD NO CHOICE OF SYSTEM. COUNTY REQUIRED THIS TYPE OF SYSTEM WHICH IS OKAY WITH ME. MAIN PROBLEM FOR FIRST YEAR OR TWO WAS FALSE ALARM TRIPS DUE TO FAULTY GFI. GFI REMOVED BY MAINTENANCE CONTRACTOR AND NO PROBLEMS SINCE.	FLAGLER	NAYADIC 600 GPD
* WHY ARE THESE AEROBIC SYSTEMS MANDATED.	LEE	
* UPDATES	MONROE	BIO- MICROBICS FAST
* I THINK IT WOULD HELP TO KEEP US INFORMED ON LAWS	OSCEOLA	MULTI-FLOW
* I WAS FORCED INTO THIS TYPE OF SEPTIC SYSTEM BY THE HEALTH OFFICIALS. 9 HOUSES ON OUR ROAD AND IM THE ONLY ONE WITH THIS TYPE OF SYSTEM. EVERYONE ELSE HAS A CONVENTIONAL SYSTEM WITH NO PROBLEMS AND I OWN THE LARGEST PARCEL OF PROPERTY ON THE STREET.	SANTA ROSA	NAYDECK INC

Topics Would Like to Learn About	County	Manufacturer
Contractors/Maintenance Entities		
* MORE ALTERNATIVE ENTITY TO QUOTE	BREVARD	CONSOLIDATED
* HOW TO GET A RELIABLE COMPANY TO DO THE MAINTENANCE. THE COMPANY WE USE NOW WAS REFERRED BY THE HEALTH DEPARTMENT.	COLLIER	HOOT
* NEED INFO ON AVAILABLE MAINTENANCE ENTITY IN AREA AND AVAILABILITY OF AIR PUMPS.	FLAGLER	NYADIC
* VERY FEW SEPTIC Cos HAVE KNOWLEDGE FOR INSPECTIONS/REPAIRS- ONLY 2 IN CENTRAL FL. THEY CHARGE INCREDIBLE FEE TO SERVICE AND ARE NOT REPUTABLE	LAKE	ECOPURE
* WHY ARE THERE NO COMPETING MAINT. COMPANIES?	LEE	PREMIER TECH ENVIR
* THE MAINT. ENTITY WE PAY 600.00 AS LEAD TO CALL 1ST - DOGS IN YARD - NEVER GOT A CALL - JUST NOT ON FENCE THAT THEY WERE HERE. HARD TO BELIEVE WITH TWO DOGS. CONTRACT WAY OVER PRICED.	MONROE	
* AUDITS OF MAINTENANCE ENTITY WHEN DO THEY SHOW UP OR DO THEY SHOW UP, PRICE GOUGING.	MONROE	MULTI-FLO
* HOW TO ALLOW ALL SEPTIC TANK CONTRACTORS TO WORK ON THEM AND BE CERTIFIED THERE IS A MONOPOLY ON THE BUSINESS	SANTA ROSA	MULTI FLO
* NAME OF COMPANIES WHO ARE AUTHORIZED TO WORK/REPAIR/INSPECT THE SYSTEM	VOLUSIA	FLASH SYSTEM
* 1. AN AEROBIC TREATMENT UNIT AND PERFORMANCE BASED TREATMENT SYSTEM 2. THE ROLE OF MAINTENANCE ENTITIES	VOLUSIA	
* WHY THERE IS ONLY ONE APPROVED COMPANY THAT WE CAN USE? WE HAVE NO CONTROL ON SELECTION OF COMPANY AND HAVE NO OPTIONS TO LOWER COSTS.	VOLUSIA	HYDRO-ACTION

Topics Would Like to Learn About	County	Manufacturer
Cost		
* WHY DO WE HAVE TO PAY THE HEALTH DEPT \$150.00 WHEN WE ARE FOLLOWING THE RULES BY HAVING MAINTENANCE ENTITY AND IS THIS A ONE TIME FEE? DO WE HAVE TO KEEP A MAINTENANCE ENTITY?	BREVARD	AQUA KLEAR, INC MOD
* WHEN WILL THIS \$2000 + BILL CEASE? I SPEND 6 MONTHS TO A YEAR HERE AND 6 ELSEWHERE DUE TO HEALTH REASONS.	BREVARD	HEINKLE AND SONS
* WHY DOES IT COST SO MUCH TO GET SERVICED- ALSO IT IS MANDATORY IN MY COUNTY. I PAY A LOT OF MONEY, I DO NOT THINK IT SHOULD BE THIS WAY.	BREVARD	
* NONE, SAVE 71K SAVE MONEY!!	BROWARD	
* WHY ARE PERMITS SO EXPENSIVE AND DUE FOR 2 YEARS TIME? WHY AREN'T MAINTENANCE CONTRACTOR EQUAL IN FEES? \$200 PER YEAR FOR 2 INSPECTIONS IS ROBBERY.	CHARLOTTE	DELTA WHITEWATER
* TOO EXPENSIVE	CHARLOTTE	
* WHY THE MAINTENANCE CONTRACT ARE SO HIGH WHEN ALL THEY DO IS DO A 10 MINUTE CHECK 2 TIMES A YEAR AND STILL HAVE TO PAY FOR REPAIRS AND PARTS.	CHARLOTTE	
* VERY HIGH COST FOR CHARLOTTE COUNTY PERMIT AND REQUIRED MAINTENANCE CONTRACT. IF ONE CARES ENOUGH ABOUT ENVIRONMENTAL QUALITY AND ABSORBS THE COST, ONE SHOULD NOT BE SQUEEZED BY THE GOVERNMENT FOR DOING SO.	CHARLOTTE	DELTA WHITEWATER
* WHY CHARLOTTE COUNTY IS THE MOST EXPENSIVE COUNTY IN FLORIDA TO HAVE MY TYPE OF SYSTEM	CHARLOTTE	WHITEWATER
* WHY DO WE NEED A PERMIT EVERY TWO YEARS? WHY IS MAINTENANCE AGREEMENT SO EXPENSIVE?	CHARLOTTE	
* WHY DO WE PAY \$350 A YEAR AND PEOPLE WITH NON-AEROBICS PAY \$115 EVERY 5 YEARS	CHARLOTTE	DELTA ENVIRONMENTA
* ANY HELP WITH INITIAL COST OF INSTALLING SYSTEM.	CITRUS	HOOT AEROBIC SYSTE
* HIGH COST, LOW QUALITY, REPAIRS.	HILLSBOROUGH	

Topics Would Like to Learn About	County	Manufacturer
* TOO EXPENSIVE. HAVE TO HAVE COUNTY PERMIT AND MAINTENANCE AGREEMENT 500T A YEAR. WHY NOT EVERYONE.	LEE	
* I HAVE REMOVED THE SEPTUM AND REPLACED WITH A REGULAR SEPTIC SYSTEM DUE TO GOING COST.	LEE	FIESTA ENVIRONMENT
* NONE-TOO COSTLY TO REPLACE.	LEE	KLARGESTER
* HOW DID THIS SYSTEM COME TO BE SUCH IF COST TO THE HOME OWNER	LEE	

Topics Would Like to Learn About	County	Manufacturer
Sewer Hook-Up		
* NONE-PREFER TO HOOK UP TO CITY WATER AND SEWER.	BREVARD	NORCO
* NEED SHORE PIPE AND CITY WATER COME SOON	BREVARD	
* WHEN ARE WE GOING TO GET OUR COUNTY SEWAGE SYSTEM AND CITY WATER	BREVARD	
* WE ARE BEING FORCED TO GO TO CITY SEWER - RIP OFF!	COLLIER	NAYADIC
* I WOULD LIKE TO KNOW WHAT GIVES A CITY LIKE MARCO ISLAND THE RIGHT TO STOP PEOPLE FROM USING AN ON-SITE SYSTEM I THINK THEY HAVE SOME NERVE. I GUESS THERE IS NO MONEY IN IT FOR THEM.	COLLIER	HOOT AEROBIC SYSTE
* WHY WOULD I HAVE TO HOOK UP TO SEWERS WHEN I HAD TO SPEND \$12,000 TO HAVE AEROBIC PUT IN TO BE 2012 COMPLIANT-I DON'T HAVE MONEY TO HAVE HOOKUPS PUG.	MONROE	
* DON'T NEED ANY SINCE I'M GOING TO THE MUNICIPAL COUNTY SEWER SYSTEM	MONROE	
* NONE-CURRENTLY IN PROCESS TO CONVENT KEY LARGO TO SEWER SYSTEM.	MONROE	AQUAKLEAR
* I REALLY WISH I COULD STAY WITH MY SYSTEM NOW, BUT WE ARE FORCED INTO SEWERS. MY MIGHTY MAC HAS NEVER GIVEN ME ANY TROUBLE OVER THE PAST 12 YEARS. I HOPE MY SEWER WILL BE JUST AS GOOD.	MONROE	MIGHTY MAC FIBER GL
* WHY DO I HAVE TO HOOK UP TO CENTRAL SEWERS.	MONROE	
* I PREFER TO HAVE COUNTY SEWER SYSTEM	POLK	AVERETT
* HOW TO GET COUNTY UTILITY SEWAGE SYSTEM INSTALLED IN OUR COMMUNITY	WAKULLA	HOOT AEROBIC SYSTE
* I WAS TOLD THAT EVEN THOUGH I LOVE THIS SYSTEM, ONE DAY THE COUNTY MIGHT TELL ME TO HOOK UP TO A SEWER SYSTEM ANYWAY.	WAKULLA	BIO MICROBICS

Topics Would Like to Learn About Satisfied	County	Manufacturer
* ALL IS OK.	CITRUS	
* MY YARD IS BEAUTIFUL! THE HEATED WATER IS DISPERSED INTO YARD KEEPING IT GREEN.	HILLSBOROUGH	HOOTS
* I AM WELL INFORMED ON THIS SYSTEM. I INSTALLED BECAUSE THE "CONTRACTOR" WAS TOO BUSY!	MONROE	WHITEWATER
* I KNOW ALL ABOUT ITS WORKINGS AND FUNCTIONS.	MONROE	
* I HAVE A MANUAL- THAT'S ALL I NEED	SARASOTA	DELTA ENVIROMENTAL
* NOT A THING	SARASOTA	HOOT
* SATISFIED AS THINGS ARE	SUMTER	WARREN SEPTIC LAKE

Topics Would Like to Learn About	County	Manufacturer
Other		
* HOW CAN I DIRECT MY SEPTIC WASTE DIRECTLY TO OBAMA & PETA'S OFFICE?		
* WHERE WE LIVE WE DON'T GET COUNTRY WATER OR SEWER. WE DON'T GET CABLE TV OR BROADBAND INTERNET. WE DON'T GET DSL, CELL PHONE SERVICE. WHAT WE DO GET IS INCREDIBILITY HIGH PROPERTY TAXES AND HIGH PROPERTY ASSESSMENTS. THEN, THE HEALTH DEPARTMENT, WHO CANT FIND OUT SYSTEM WANTS TO PUT THEIR HAND INTO OUR POCKETS TOO.		HOOT
* DO NOT WANT IT ANYMORE.	BREVARD	NORWECO SINGULAR 5
* NONE - BUT I HAVE NEVER BEEN NOTIFIED OF THE CITY INSPECTING MY SYSTEM BUT PAID THEM \$150.00 TO PERFORM THOSE ACTIVITIES. THIS IS CALLED EXTORTION!	BREVARD	
* NOTHING THE SYSTEM IS TERRIBLE AND THIS IS JUST ANOTHER WAY OF THE STATE MAKING MONEY	CHARLOTTE	
* THAT YOU ARE DOING AWAY WITH THE MONITORING OF SUCH SYSTEMS AND LET THE HOMEOWNER TAKE CARE OF IT ON THEIR OWN.	CHARLOTTE	HOOTIE
* HOW TO GET RID OF IT!	CHARLOTTE	CLEAR WATER
* I WOULD LIKE TO KNOW HOW MANY OTHER PEOPLE HAVE THE SAME PROBLEMS THAT I DO SO WE CAN GET TOGETHER AND HOLD SOMEONE ACCOUNTABLE FOR LL MONEY WE HAVE TO SPEND AND THE GRIEF AND AGGRAVATION WE HAVE TO GO THROUGH	DIXIE	EARTHTECH
* HOW TO GET RID OF IT.	DUVAL	SINGULAIR BIO-KINETI
* I WOULD LIKE TO KNOW IS THE MARINES HARBOR HOMEOWNERS SEPTIC FIELD IS INSPECTED REGULARLY, WHEN, AND THE RESULTS OF THE INSPECTION?	FRANKLIN	NAYADIC INC.
* UPGRADES	LEON	
* NONE. I DON'T THINK THAT SYSTEMS WORK ANY BETTER THAN TRADITIONAL SYSTEMS, OR HAVEN'T SEEN ANY INFORMATION THAT PROVES THIS.	LEON	

Topics Would Like to Learn About**County****Manufacturer**

* KNOWLEDGE, EDUCATION.	MONROE	MIGHTY MAC
* WHY WOULD ANYONE PUT THIS UNDER MY (IN ROOM) WHY NOT OUTSIDE. I'VE SEEN OTHER SYSTEMS NOT ENCLOSED. THEY SMELL -	MONROE	MULTI - FLO
* WHEN YOU BUY ONE YOU SHOULD EDUCATE YOURSELF FIRST- THEY ARE NOT CHEAP-INTERNET-OTHER OWNERS.	SANTA ROSA	MULTI-FLO AEROBIC S
* YOU CAN TAKE THIS SYSTEM AND SHOVE IT	WAKULLA	HOOT

Appendix B

Appendix B contains the specific comments identified by 206 owners and users.

22. Please tell us about any changes or improvements you would like to see related to the regulation, permitting and management of advanced onsite sewage treatment and disposal systems in the State of Florida:

Survey of Owners: General Comments

Changes and Improvements: Regulation/Management	County	Manufacturer
* I WOULD LIKE TO HAVE THE ANNUAL PERMIT FEE STOPPED. YOU SHOULD SPEND YOUR TIME INSPECTING STD SEPTIC TANKS. PEOPLE WHO INSTALL AN EXPENSIVE AEROBIC TREATMENT SYSTEM ARE NOT THE PROBLEM. SEPTIC TANK ARE THE PROBLEM. MYSELF, AND OTHERS THAT HAVE AEROBIC SYSTEMS FEEL THAT YOU TARGET US FOR ANNUAL INSPECTION FEES, BECAUSE WE ELECTED TO INSTALL A MORE EXPENSIVE SYSTEM IN THUS MAY BE MORE AFFECTIVE.		HOOT
* I DON'T THINK I SHOULD BE FORCED BY THE CITY AND THE MAINT. COMPANY TO PAY FOR ??? WHAT AM I GETTING?	BREVARD	
* WE BOUGHT THIS HOUSE BRAND NEW. THE SELLER NEVER TOLD US ABOUT THE ATU OR COSTS AND PERMITS. THERE NEEDS TO BE BETTER DOCUMENTATION TO PROVE THAT PERVIOUS OWNER KNEW ABOUT THE FEES AND PERMITS- EVEN DURING THE FIRST 2 YRS WHEN THE MANUFACTURER PAYS THE FEES.	BREVARD	CLEARSTREAM
* NO REGULATION PERMITTING FEAR MORE GOVERNMENT	BREVARD	HOOT 500
* CUT THE HEALTH DEPARTMENT OUT! THEY DON'T KNOW WHAT THEY'RE DOING AND SEND YOU A BILL AND PEOPLE KNOCKING ON YOUR DOOR WHEN BILLS HAVE BEEN PAID.	CHARLOTTE	
* SHOULD DO AWAY WITH IT. CONVENTIONAL SYSTEMS ARE VERY EFFICIENT AND NOT COSTLY FOR THE OWNER. I CAN SEE THE GOVERNMENT WASN'T GETTING ANY MONEY THAT WAY, SO A SCAM WAS CREATED. "ADVANCED ONSITE SEWAGE" SCAM!	CHARLOTTE	
* HAVE APPROVED SYSTEMS MAINTENANCE AS LOW PRESSURE SYSTEMS BY COUNTY AND CHANGE OWNER SMALL MONTHLY FEE.	CHARLOTTE	AQUA CLEAR
* REGULATION SHOULD BE FAIR TO ALL HOMEOWNERS	CHARLOTTE	DELTA ENVIRONMENTA
* WE SHOULD BE REQUIRED TO HAVE A MAINTENANCE CONTRACT WITH A STATE CERTIFIED CONTRACTOR, BUT WE SHOULD NOT BE REQUIRED TO PAY THE COUNTY FOR ADDITIONAL OPERATING PERMIT. PEOPLE THAT DON'T MAINTAIN MAINTENANCE CONTRACT COULD BE FINED BY THE STATE/ COUNTY.	CHARLOTTE	DELTA WHITE WATER
* SOME EXCEPTIONS FOR SEASONAL RESIDENCE NOT A SUITABLE SYSTEM. TURN OFF AND PLUG UP. LEAVE ON AND BURN OUT FROM LOW WATER.	CHARLOTTE	DELTA WHITEWATER
* ONCE A PERMIT IS ISSUED AND OK'D AFTER INSTALLED-CUSTOMER OWNS AND PERMITS DO NOT NEED REISSUE.	CHARLOTTE	MARTIN SEPTIC
* KEEP SEPTIC SYSTEM	COLLIER	
* WHAT DOES A COUNTY PERMIT ADD TO THE SYSTEM - THEY DO NOTHING	COLLIER	HOOT/INSTALLED BY A

Changes and Improvements: Regulation/Management

County

Manufacturer

* RETURN MORE PEOPLE TO THE SUPPORTERS OF THIS 2 ALLEY SYSTEM DUE TO ENVIRONMENTAL CONCERN. ALSO WILL LOWER THE 3X COST OF THIS SYSTEM.	DUVAL	HOOT
* I THINK IT IS LUDICROUS THAT I AM FORCED TO PAY \$450.00 PER YEAR TO HAVE MAINT. ENTITY COME LOOK AT MY SYSTEM 2x PER YEAR TO VERIFY THAT IT IS STILL WORKING, WHEN THOSE WITH STANDARD SEPTIC TANKS REQUIRE NO SUCH FEES OR INSPECTIONS	ESCAMBIA	
* I HAD NO ISSUES WITH THE COUNTY ON THIS. I THINK THE COUNTY DOES A GOOD JOB OVERALL. THERE ARE TOO MANY REGULATIONS/INTERPRETATIONS SO IT IS IMPOSSIBLE FOR THE AVERAGE PERSON TO WORK THROUGH THE MAZE. SIMPLIFY!	FLAGLER	NAYADIC 600 GPD
* ALLOW SEPTIC SYSTEMS	FRANKLIN	
* SYSTEMS ARE INSTALLED ACCORDING TO A CERTAIN HOME CAPACITY. (NUMBER THAT THE HOUSE WILL SLEEP?) SITE INSPECTIONS SHOULD BE DONE TO RESTRICTS THE NUMBER OF BEDS IN SOME ON GOING MANNER. RENTAL HOMES DO NOT FOLLOW REGULATIONS.	FRANKLIN	
* I WOULD LIKE TO KNOW THAT SEWAGE TREATMENT FOR ALL OF SAINT GEORGE ISLAND IS BEING PERFORMED ON A PRESCRIBED BASIS AND IF THERE ARE PROBLEMS BE NOTIFIED IN A PUBLIC MANOR	FRANKLIN	NAYADIC INC.
* NONE. DO AWAY WITH SEPTIC SYSTEMS.	HILLSBOROUGH	HOOT
* I DON'T THINK SYSTEM REQUIREMENTS SHOULD BE BASED ON SQUARE FOOTAGE. IT SHOULD BE BASED ON THE NUMBER OF BATHROOMS.	LEE	
* WHEN MAINTENANCE CO COMES THEY HAVE TO DIG UP A SPOT IN YARD WOULD LIKE TO SEE REQUIRED EXTENSIONS OR THAT PIPE TO BRING IT UP TO GROUND LEVEL.	LEE	
* GET RID OF ALL SYSTEMS IN FLORIDA	LEE	
* HEALTH DEPT. TO BE MORE KNOWLEDGEABLE ABOUT PERMITTING AND INSTALLATION REQUIREMENTS. HAD TO DIG OUT DRAIN FIELD JUST LIKE A SEPTIC SYSTEM. \$150/YR HEALTH DEPT. FEE IS TOO HIGH	LEE	BEST
* I WOULD LIKE TO SEE ALL HOMEOWNERS REGULATED. (SEPTICS) NOT SOME REGULATED AND OTHERS ALLOWED TO DUMP THEIR "GRAY" WORK INTO THE CANAL OR YARDS	LEE	HOOT
* QUIT MAKING RESIDENTS USE THESE SYSTEMS WHEN THERE IS NO PROOF THAT THEY WORK, BECAUSE IT IS A WASTE OF MONEY. BUREAUCRATS SHOULDN'T BE ABLE TO MANDATE THE USE OF THESE SYSTEMS BASED ON THEIR PERSONAL OPINION THAT THEY WORK BETTER THAN A STANDARD SYSTEM.	LEON	
* ALLOW ARTIFICIAL WETLAND TREATMENT OPTION. ALLOW STAFF TO CONDUCT MINOR REPAIRS IF TRAINED BY MAINT. ENTITY OR MANUFACTURER. HYDRATION FILTERS AND DIFFUSERS NEEDS LOTS OF CLEANING. UNITS OVERLOOKED.	LEVY	5 HYDROACTION AND 1

Changes and Improvements: Regulation/Management**County****Manufacturer**

* I FIND THE PERMIT SYSTEM INCOMPREHENSIBLE	MIAMI-DADE	
* NO REQUIREMENT TO HOOK UP TO CENTRAL SYSTEM IF I HAVE ADVANCED SYSTEM NOW.	MONROE	
* DON'T THINK RESIDENTS SHOULD HAVE TO KEEP BUYING OPERATING PERMITS OVER AND OVER AGAIN.	MONROE	
* WOULD LIKE TO SEE ADEQUATE SOLUTIONS FOR LONG TERM SEWAGE TREATMENT THAT ARE NOT COST PROHIBITIVE HATE TO SEE THINGS OVER ENGINEERED. THERE IS ALWAYS BETTER TECHNOLOGY AROUND THE CORNER, DOESN'T NEED TO BE IMPLEMENTED EVERY TIME, EVERY YEAR ETC.	MONROE	
* SET UP A UTILITY TO HANDLE SERVING AND DO NOT PUT UP SERVICES.	MONROE	
* NO NEED FOR HEALTH PERMIT AND MAINTENANCE AGREEMENT ON A NEW SEPTUM. OLDER SYSTEMS DON'T NEED THEM AND MORE LIKELY TO BE OK.	MONROE	AQUAKLEAR
* PAID PERMIT FEES TO INSTALL, THEN YEARS LATER COUNTY CHARGED OPERATION PERMIT YET MAINTENANCE WAS APPROVED BY COUNTY HEALTH DEPARTMENT.	MONROE	JET CO
* MORE GOVERNMENT EDUCATION.	MONROE	MIGHTY MAC
* KEEP THE STATE OF FLORIDA OUT OF IT. COST ARE HIGH ENOUGH ALREADY. STATE INSPECTOR, NEVER SHOWS UP TO LOOK! PERMIT COSTS ARE RIDICULOUSLY EXPENSIVE	POLK	
* WE NEED SEWAGE SYSTEM IT WILL KEEP FLORIDA MORE CLEANER	POLK	AVERETT
* LESS HASSLE TO GET PERMIT	SANTA ROSA	
* REQUIRE FOR RESIDENTS NEAR WATER	SANTA ROSA	SOUTHERN AEROBIC
* IT'S JUST A TAX BASED FUND-DOES NOTHING IN BENEFITS	SARASOTA	
* USE COMMON SENSE. YOU FORCED ME TO PUT IN A SYSTEM I DON'T NEED!!! LEAVE PEOPLE ALONE-QUIT COSTING PEOPLE MONEY THEY DON'T HAVE	SARASOTA	HOOT
* SHOULD NOT BY TREATED ANY DIFFERENT THEN NORMAL SEPTIC SYSTEM	ST JOHNS	HOOT
* TOO MUCH OVERKILL IN GENERAL	SUMTER	WARREN SEPTIC LAKE

Changes and Improvements: Regulation/Management

County

Manufacturer

* FIND A WAY TO MEASURE USAGE

WAKULLA

* THESE SYSTEMS IF MANDATED LIKE WAKULLA COUNTY SHOULD HAVE AN AUTHORITY TO INSTALL AND MAINTAIN.

WAKULLA

NORWECO

Changes and Improvements: Inspections**County****Manufacturer**

* I WOULD LIKE TO SEE INSPECTION OF OUTLET LINE OR DISPOSAL SYSTEM	BREVARD	
* BETTER ON SITE INSPECTION OF SYSTEM AFTER INSTALLATION	CHARLOTTE	
* A STATE FORMATTED INSPECTION SHEET USED BY MAINTENANCE COMPANY, AND MANDATORY COPIES PROVIDED TO HOMEOWNER AT THE TIME OF INSPECTION.	LEE	MULTI-FLO
* THERE SHOULD NOT BE AN OPERATING PERMIT/FEE. THERE SHOULD NOT BE REINSPECTIONS BY COUNTY HEALTH DEPT. MAINTENANCE CONTRACTORS ARE LICENSED PROFESSIONALS. INSPECTORS KNOW NOTHING, DO NOTHING, AND CONSUME OWNER TAX DOLLARS. ADVANCED TREATMENT (REMOVAL OF NUTRIENTS) SHOULD NOT BE MANDATED. TOO EXPENSIVE AND TOTALLY UNNECESSARY. DIFFERENCE IS MINISCULE, PLUS YOU CANNOT CONTROL ANIMAL WASTE, FERTILIZER,ETC.	MONROE	
* HEALTH DEPARTMENT MAKES PERMITTING THESE SYSTEMS VERY DIFFICULT AND INSPECTORS ARE NOT VERY HELPFUL ABOUT GIVING INFORMATION TO MAKE INSPECTIONS EASIER.	SEMINOLE	
* LESS REQUIRED INSPECTIONS FOR BUSINESS/COMMERCIAL USE	SEMINOLE	HOOT
* THE HEALTH DEPARTMENT DOES NOT INSPECT THE SYSTEM THAT YOU HAVE.	VOLUSIA	
* I THINK THEY SHOULD BE INSPECTED BETTER I HAVE HAD MULTIPLE SINK HOLES CREATED BY AN UNDERGROUND LEAK THAT I CAN NOT GET ANYONE TO DO ANYTHING ABOUT.	WAKULLA	
* BETTER INSPECTIONS.	WAKULLA	SINGULAIR TNT

Changes and Improvements: Contractors/Maintenance Entities	County	Manufacturer
* HAVE MORE SERVICE PROVIDERS AVAILABLE TO CHOOSE FROM IN JACKSONVILLE.		HOOT
* WHEN I CONTRACTED WITH THE NO MOUND PEOPLE TO HAVE MY SYSTEM INSTALLED, I SPECIFICALLY ASKED THE SALES ENGINEER (PE REGISTERED IN FLORIDA) WHETHER ANY CONTINUING PERMITS BEYOND THE INITIAL INSTALLATION PERMIT WOULD BE REQUIRED, I WAS TOLD NO. UNFORTUNATELY, I WAS SMART ENOUGH TO ASK BUT NOT SMART ENOUGH TO GET IT IN WRITING. IN FACT, AS I FOUND OUT LATER I WAS LIED TO, AND WHEN I LATER CONTACTED NO MOUND ABOUT THIS, THEY ESSENTIALLY SAID "OOPS". IN OTHER WORDS, I WAS LIED TO AND THEY INTENDED TO DO NOTHING ABOUT IT.	BAY	NO MOUND
* I WOULD LIKE TO KNOW WHAT THEY ARE DOING WHEN THEY SERVICE I PAY ALL THIS MONEY BUT DON'T KNOW WHAT THEY DO.	BREVARD	
* I WOULD LIKE FOR THEM TO CHARGE MONTHLY INSTEAD OF THE HIGH PRICES AGREEMENT CONTRACT.	BREVARD	
* BACKGROUND CHECK ON COMPANIES FOR LAWSUITS, LIENS, BBB, ETC. BEFORE LICENSING THEM OR A DATABASE THAT KEEPS TRACK OF ISSUES WITH THE COMPANIES.	BREVARD	CLEARSTREAM
* CERTIFICATION OF MORE CONTRACTORS TO CHOOSE FROM. ALLOW HOMEOWNERS TO PULL PERMIT AND MANAGE OWN SYSTEM CHECKS. CURRENTLY MANDATORY ON HEALTH DEPT CAN CHARGES PENALTY FOR NONE COMPLIANCE	CHARLOTTE	AK500 AEROBIC TREAT
* GET RID OF THE ENTITIES, THEY DON'T DO THEIR JOB AND CHARGE A FORTUNE. THERE IS ONLY ONE ENTITY FOR MY SYSTEM SO THEY CHARGE WHATEVER THEY WANT (RIP OFF!). HAVE THE COUNTY DO THE INSPECTIONS AND LET HOMEOWNER MAKE MINOR REPAIRS AND USE CONTRACTOR FOR MAJOR ONES.	CHARLOTTE	BIOLOGICALLY EFFECT
* 1.MORE COMPANIES LICENSED TO PROVIDE SERVICE/MAINTENANCE TO DELTA SYSTEM, SO THERE IS NO MONOPOLIES, COMPANY PRICE FOR COMPANIES, COMPETITION FOR YOUR BUSINESS. 2. LOWER COUNTY PERMIT PRICE.	CHARLOTTE	DELTA WHITEWATER
* MORE OPTIONS FOR MAINTENANCE PEOPLE.	CITRUS	
* MAINTENANCE COMMITTED FRAUD.	COLLIER	HOOT
* THE HOMEOWNER WANTS TO DO THE RIGHT THING, THE GOVERNMENT SHOULD HELP IN THIS PROCESS AND WEED OUT BAD COMPANIES WHO TAKE ADVANTAGE OF HOMEOWNERS.	COLLIER	HOOT SYSTEM
* COMPETITION AMONG CONTRACTORS	COLLIER	NAYADIC
* BETTER OVERSIGHT BY HEALTH AUTHORITIES OVER CONTRACTORS	GULF	
* KEEP COMPETITION-NO UTILITIES. PRIVATE CONTRACTORS ARE COMPETITION.	HILLSBOROUGH	HOOTS

Changes and Improvements: Contractors/Maintenance Entities	County	Manufacturer
* I WOULD LIKE TO HAVE THE CHOICE OF MAINTENANCE ENTITIES. I FEEL I AM GETTING RIPPED OFF BY CURRENT MAINTENANCE ENTITY BUT HAVE NO CHOICE BECAUSE THEY ARE THE ONLY MAINTENANCE ENTITY LICENSED TO WORK ON OUR SYSTEM.	LEE	
* WE SHOULD BE ABLE TO CHANGE/ CHOOSE OUT MAINTENANCE COMPANY.	LEE	ECO-PURE
* HAVE MORE THAN ONE ENTITY TO CHOOSE FROM RE:MAINTENANCE TO DISCOURAGE PRICE-GOUGING ETC.	LEE	ECO PURE
* CHANGE TESTING TO ONCE A YEAR TO HELP OWNERS REDUCE THEIR MONOPOLISTIC COST. THERE IS NO REASON TO ALLOW THE MAINTENANCE FIRM ACTION CONCERNS WITH THE PERMITTING REGULATION ENTITIES.	LEE	ECO-FLOW AEROBIC S
* THE COMPANY (DISTRIBUTOR) TAKES ADVANTAGE OF CLIENT MONETARY WISE.	LEE	FIESTA ENVIRONMENT
* VERY EXPENSIVE FOR SERVICE AND MAINTENANCE CONTRACT, ONLY ONE COMPANY DOES THIS, THEY HAVE A MONOPOLY. I WOULD NOT USE THIS SYSTEM IF I DID NOT HAVE IT TOO EXPENSIVE TO MAINTAIN.	MIAMI-DADE	
* BETTER COMMUNICATION W/ MAINT. ENTITY PROOF THEY PHYSICALLY INSPECTED SYSTEM.	MONROE	
* SHOULD BE MORE THAN ONE CONTRACTOR. NEED COMPETITION	MONROE	
* NO CONTRACTS / COUNTY INSPECTION ONLY.	MONROE	MULTI-FLO
* OVERSIGHT ON MAINTENANCE ENTITY COST.	MONROE	MULTI-FLOW
* I WOULD LIKE TO SEE SOMEONE INSPECT THE INSPECTORS (MAINTAINED) FOR OUR FOUR YEARS I HAD CONTRACT WITH A LOCAL CO. THEN SWITCHED TO CHEAPER CO. AND THEIR INSPECTION SHOWED THAT MY SYSTEM WAS NEVER TOUCHED. TO BRING THE SYSTEM UP TO OPERATING STATUS COSTS 1480. WHO INSPECTS THE INSPECTORS?????	MONROE	WHITE WATER
* ALL CONTRACTORS SHOULD BE ALLOWED TO WORK ON SYSTEM AND CREATE A FAIR MAINT. PRICE.	SANTA ROSA	MULTI FLO
* NOT TO BE MANDATED TO HAVE A MAINTENANCE/ SERVICE ENTITY	SEMINOLE	HOOT
* CONTRACTORS NEED TO BE INFORMED ABOUT THE INSTALLATION OF THE VENT STACK.	WAKULLA	
* WANT MAINTENANCE ENTITY TO PROVIDE ME WITH A DETAILED INSPECTION REPORT ABOUT THE OVERALL FUNCTIONING OF MY SYSTEM INCLUDING ANY SPECIFIC PROBLEMS THAT I MAY NEED TO HAVE REPAIRED	WAKULLA	

Changes and Improvements: Contractors/Maintenance Entities

County

Manufacturer

* MAINTENANCE ENTITY NEEDS PROPER TRAINING, SYSTEM SHOULD HAVE BEEN TESTED FIRST, I FEEL LIKE A GUINEA PIG, BI-ANNUAL FEE THAT IS MANDATORY IS TOO HIGH, PURPOSE OF SYSTEM FOR SMALL HOUSEHOLDS IS USELESS.

WAKULLA

BIO MICROBICS

* THE BIGGEST CHANGE THAT I WOULD LIKE TO HAVE HAPPEN IS FOR THE STATE TO GET RID OF THE REQUIREMENT OF A MAINTENANCE ENTITY FOR PERFORMANCE BASED TREATMENT SYSTEMS.

WAKULLA

NORWECO

Changes and Improvements: System Performance

County

Manufacturer

* BETTER FILTRATION	BREVARD	DRILLING + IRRIGATION
* ALL SYSTEMS SHOULD BE HOOKED TO WWTP	BREVARD	NAYDAC
* WOULD LIKE TO SEE COMPARATIVE ANALYSIS REGARDING AEROBIC VS NONAEROBIC SYSTEMS. NOT SURE THERE IS AN ENVIRONMENTAL ADVANTAGE TO AEROBIC SYSTEM WHICH INCLUDES MORE MAINTENANCE AND FEES AND MORE MOVING PARTS	CHARLOTTE	
* GET RID OF AEROBIC SYSTEMS!	CHARLOTTE	
* WE DO NOT NEED DUVAL COUNTY TO TELL US OUR SYSTEM IS NOT WORKING PROPERLY. IT IS QUITE EVIDENT ON ITS OWN.	DUVAL	EARTHTEC
* TO BE ABLE TO HANDLE RESTAURANT WASTE GREASE + CERTAIN CHEMICALS SEEM TO MAKE SYSTEM MALFUNCTION	LAKE	HOOT
* I WOULD LIKE TO SEE PROOF THAT THEY ARE ANY BETTER THAT A PROPERLY MAINTAINED SEPTIC SYSTEM AND FIELD.	LEE	
* KEEP THE PASSIVE SYSTEMS-LOW NITROGEN OUTPUT, MUCH LESS EXPENSIVE THEN PBTS,ETC,RARELY NEEDS REPLACEMENT.	LEE	KLARGESTER
* STATE NEEDS TO LOOK AT AREAS IT IS REQUIRING SYSTEM AND NOT TELL PROPERTY OWNERS HOW THEY HAVE TO USE THEIR PROPERTY; SYSTEM DOES NOT WORK WELL IN OUR AREA....HIGH WATER TABLE, LOT SIZE,....	MIAMI-DADE	
* THE SMELLS ARE BAD! PLEASE FIX!	MONROE	
* GET RID OF THESE AEROBIC SYSTEMS	MONROE	MULTI - FLO
* THESE CHROMO GLASS SYSTEMS HAVE BEEN IN USE FOR 20 YEARS THEY CONTINUE TO FUNCTION WELL AND OUT PERFORM SEPTIC TANKS	PALM BEACH	CHROMOGLASS
* SYSTEM IS CLEAR AND DISCHARGE CLEAN. IF ALL NEW HOMES WERE REQUIRED TO HAVE AEROBIC SYSTEMS COST WOULD COME DOWN. ALSO FIND WAY OF ADDING PUMP ON OTHER DEVICES TO OLD STYLE SEPTIC TANK TO IMPROVE DISCHARGE.	SANTA ROSA	MULTI-FLO AEROBIC S
* I WOULD LIKE TO SEE THE AIR PUMP OUTSIDE. MINE IS LOCATED INSIDE THE GARAGE AND IS NOISY-ALSO THE SERVICE PEOPLE CAN NOT SERVICE IT WHEN I AM NOT THERE	SARASOTA	DELTA ENVIROMENTAL
* THIS SYSTEM SHOULD NOT BE A PERFORMANCE BASED SYSTEM.	SEMINOLE	HOOT

Changes and Improvements: System Performance

County

Manufacturer

* HAD NO PROBLEMS W/OLD SYSTEM AND NO COSTS

VOLUSIA

* DOES THIS SYSTEM WORK ANY BETTER THAN A REGULAR LEACH FIELD. IT BREAKS DOWN TOO OFTEN THE PUMP ARE EXPENSIVE YOU STILL HAVE TO PUMP THE TANK OUT EVERY TWO YEARS.

VOLUSIA

HHYDRO-ACTION

Changes and Improvements: Cost**County****Manufacturer**

* DON'T UNDERSTAND WHY I PAY THE STATE FOR NOTHING!	BREVARD	
* I DON'T UNDERSTAND WHY IT COST SO MUCH EVERY 2 YEARS WHEN NO-ONE COMES OUT & REPAIRS ARE NOT COVERED.	BREVARD	
* IF I DO NOT HAVE A MAINTENANCE AGREEMENT THEN FINE ME, BUT THE CITY SHOULD NOT MAKE ME PAY A PERMIT FINE WHEN THE CITY DOES NOT MAINTAIN THE SYSTEM. \$ 150.00 FOR TWO YEARS FOR DOING NOTHING IS B.S.	BREVARD	
* STOP THIS PERMIT FEE, PLEASE.	BREVARD	
* LESS COST	BREVARD	
* WE PUT IN AN ENVIRONMENTALLY FRIENDLY SYSTEM AT A GREAT EXPENSE AND WE ARE FORCED TO PAY OUTRAGEOUS AMOUNTS OF MONEY.	BREVARD	BIOMICROBICS INC.
* FEEL THE COSTS TO HAVE IT AR EVERY HIGH. I DON'T HAVE A CHOICE AS TO WHETHER I HAVE THE SYSTEM - IT'S REQUIRED BY THE COUNTY. TAX MONEY SHOULD PAY FOR SOME OF IT SINCE IT IS REQUIRED AND IS TO THE BETTERMENT OF THE ENVIRONMENT	BREVARD	CLEARSTREAM
* ENCOURAGE USE SO THAT MORE HOMES INSTALL AND THE NUMBER OF MAIN ENTITIES INCREASES, THUS REDUCING COSTS.	BREVARD	ECOFLOW
* THE COST IS PROHIBITIVE OVER TIME. ALSO, I AM SURE IF I EVER TRY TO SELL MY HOME IT WILL BE A PROBLEM DUE TO THE COST.	BREVARD	HOOT
* THE COST IS TOO HIGH	BREVARD	NAYADIC, INC.
* I PAY THE BREVARD CO. HEALTH DEPT. \$150.00 FOR DOING WHAT???	BREVARD	NORWECO SINGULAR 5
* MAKE IT MORE AFFORDABLE	BREVARD	PENCE
* I WOULD LIKE TO SEE "NO FEE PERMIT."	CHARLOTTE	
* CHARLOTTE COUNTY PERMITS ARE TO LIGHTLY PRICED.	CHARLOTTE	
* LOWER THE COST FOR OPERATING PERMITS FOR ATU SYSTEMS.	CHARLOTTE	

Changes and Improvements: Cost**County****Manufacturer**

- | Changes and Improvements: Cost | County | Manufacturer |
|---|-----------|----------------------|
| * I THINK HAVING TO APPLY FOR A NEW PERMIT EVERY 2 YEARS ON SOMETHING I HAVE ALREADY PAID FOR IS OUTRAGEOUS. I PAID FOR THE LAND, HOME AND SEPTIC SYSTEM AND A PERMIT TO HAVE IT INSTALLED. I PAY MY TAXES A LONG WITH THAT. I SHOULD NOT HAVE TO PAY \$150.00 FOR PERMITS. | CHARLOTTE | |
| * NO PERMITTING AND MANAGEMENT COST | CHARLOTTE | |
| * INSPECTING THE SYSTEM IS TOO COSTLY | CHARLOTTE | |
| * OPERATING PERMIT. ISSUED EVERY TWO YEARS. TO REDUCE COST ISSUE EVERY 5 YEARS AND COLLECT FEES THRU PROPERTY TAXES | CHARLOTTE | AK 500 AEROBIC TREAT |
| * THE COST IS TOO HIGH FOR A MAINTENANCE AGREEMENT + PERMIT THAT DOESN'T COVER ANY REPAIRS AND THEY ONLY COME OUT TWICE A YEAR. A PERMIT SHOULD ONLY BE REQUIRED WHEN THE UNIT IS INSTALLED, NOT EVERY YEAR. | CHARLOTTE | AQUAKLEAR |
| * \$400 PER YEAR IS A JOKE! RIP OFF THE COUNTRY! THIS IS ANOTHER EXAMPLE OF GOV'T GETTING INVOLVED IN SOMETHING AND SCREWING IT UP. THESE SYSTEMS ARE B.S. | CHARLOTTE | CLEAR WATER |
| * LOWER PERMITS FEELS, COUNTY ONLY MAKES ONE INSPECTION. | CHARLOTTE | CLEARSTREAM |
| * THE FEES CHARGED ARE EXCESSIVE. MY HOME WAS VACANT FOR ALMOST A YEAR. WHEN I PURCHASED IT. ITEMS NEEDED REPAIR AND IT WAS ALMOST 7 MOS. BEFORE I RECEIVED ANY NOTIFICATIONS FROM HEALTH DEPARTMENT IT NEEDED REPAIR. IT WAS UNDER CONTRACT. WHO VERIFIES MAINTENANCE OPERATORS ARE DOING THEIR "INSPECTIONS" AT \$100 EACH? ALSO, THERE IS NO OTHER COMPANY AVAILABLE TO TRY AND GET A BETTER PRICE OR SERVICE. | CHARLOTTE | DELTA WHITEWATER |
| * NOT CHANGING SO MUCH MONEY | CHARLOTTE | HOOT AEROBIC SYSTE |
| * ASK CHARLOTTE COUNTY WHY THEY CHARGE SO MUCH | CHARLOTTE | WHITEWATER |
| * COLLIER COUNTY PERMIT COST \$150/ YEAR AND PROVIDES NO VALUE ADDED. THIS CHARGE SHOULD BE DRAMATICALLY REDUCED. MAINTENANCE ENTITY CHARGES \$350.00 YEAR FOR 2 INSPECTIONS BUT THIS TAKES 20 MINUTES/INSPECTION. THIS IS LOCAL GOVERNMENT SPONSORED THIEVERY. | COLLIER | HOOT |
| * INSPECTION FEES & PERMIT FEES ARE TOO EXPENSIVE | COLLIER | MULTI-FLO |
| * ADVANCED WEATHER TREATMENT SYSTEM IS VERY EXPENSIVE MY SYSTEM COST ME ABOUT \$15,000 AND IS A BIG REASON I HAVE NOT BEEN ABLE TO SAVE THE HOME SINCE I BUILT IN 2007. | DUVAL | EARTHTEC |
| * IF THE AEROBIC SYSTEM IS SOS GOOD WHY DO I HAVE TO PAY THE STATE 175.00 EVERY TWO YEARS FOR A PERMIT AND OVER 500.00 PER YEAR TO GET IT CHECKED 2-3 TIMES PER YEAR. IT IS VERY COSTLY | ESCAMBIA | |

Changes and Improvements: Cost**County****Manufacturer**

* PERMITS + SERVICE WAY TOO EXPENSIVE	FRANKLIN	
* LOWER INSPECTION AND MAINTENANCE FEES.	LEE	
* TOO EXPENSIVE	LEE	AQUA SAFE
* I THINK THE MAINTENANCE COST ARE WAY TOO HIGH. ALL THEY DO IS A VISUAL TWICE A YEAR FOR \$1,500. THAT IS A TOTAL RIP-OFF! I WOULD DO THAT MYSELF.	LEE	AQUA SAFE
* I WOULD LIKE TO KNOW WHY I HAVE TO HAVE A \$500.00/YEAR PERMIT TO OPERATE A RESIDENTIAL SYSTEM. WHICH IS BETTER THAN A CONVENTIONAL SYSTEM? (SEPTIC) (STATE DEPT. OF HEALTH) (OVER)	LEE	MULTI-FLOW
* LOWER COST ASSOCIATE WITH THE INSTALLATION OF MANDATORY PERFORMANCE BASED SYSTEM OR SOME GOVERNMENTAL ASSISTANCE.	LEON	
* REDUCED RATES	MONROE	
* NONE, LOWER PRICE.	MONROE	BIO- MICROBICS FAST
* RIDICULOUSLY HIGH "MAINTENANCE FEES" SHOULD BE CAPPED	MONROE	F.A.S.T.
* I WOULD LIKE TO SEE THE FEES LOWERED.	MONROE	FAST
* REMOVE PERMIT FEES-SHOULD BE A ONE TIME COST.	MONROE	JET
* GET THE CONTRACTORS OUT OF THE POCKETS OF HOMEOWNERS! THEY DO NOTHING! 5 YEARS AND THEY NEVER ONCE CLEANED THE AIR FILTER. 3 VISITS AS THE CONTRACT RUNS OUT, NOTHING FOR 20 MONTHS PRIOR. IF I DID NOT DO THE MAINTENANCE IT WOULD NOT GET DONE. STATE LAW ALLOWS THIS PRACTICE MORE ABUSE AND NO CHOICE FOR HOMEOWNERS.	MONROE	WHITEWATER
* PRICE IS OUTRAGEOUS \$18,000 TO REPLACE A TROUBLE FREE SEPTIC SYSTEM WAS A MIND (AND BANK) BLOWER.	ORANGE	KOONTZ
* LESS PERMITTING FEE + LESS ANNUAL FEE	POLK	JET
* LOWER PERMITTING COSTS	SANTA ROSA	NAYDECK INC
* COST NEED TO BE LESS	WAKULLA	

Changes and Improvements: Consumer Information/Education**County****Manufacturer**

- | | | |
|--|------------|------------------|
| * WE PREFER SOMETHING BETTER AND EASY TO WORK WITH. BEFORE MAKING NEW REGULATIONS GIVE US A NOTICE OF WHAT YOU WILL DO AND TELL US OF THE EXTRA MONEY | BREVARD | |
| * CHANGES IN COST OF MAINTENANCE/PERMITS INFORM HOMEOWNERS OF SYSTEM DURING HOME BUYING. | DUVAL | HOOT |
| * THE HEALTH DEPT. NEEDS MORE EDUCATION ON BEAUTY SALON DISPOSAL. I DO NOT FEEL IT IS MY PLACE TO MAKE THEM UNDERSTAND OR SUPPLY THEM WITH DATA ON THE DILUTION OF THE PRODUCTS WE USE. | ESCAMBIA | |
| * I WISH SOMEONE WOULD HAVE GIVEN MOE UPFRONT INFO ON SYSTEM DID NOT KNOW I HAD TO PAY \$500 EVERY TWO YEARS FOR OPERATING PERMIT. THERE IS A PUMP/AERATOR THAT RUNS NON STOP, CAUSES HIGHER ELECTRIC BILL. I DID NOT KNOW HOW MUCH MAINTENANCE WAS INVOLVED, VERY COSTLY. | LEE | HOOT |
| * CENTRAL STATE CLEARING HOUSE FOR ALL AOSTDS FOR QUESTIONS, PERMITS AND FEES | ORANGE | HOOT MODEL H-600 |
| * OFFER SMALL BUSINESS AND HOMEOWNER TRAINING | PALM BEACH | CHROMO GLASS |
| * COUNTY WORKSHOPS, COUNTY HELP LINE | POLK | JET INC. |

Changes and Improvements: Owner System Maintenance

County

Manufacturer

- * WOULD LIKE TO ELIMINATE MAINTENANCE CONTRACT AND MAINTAIN MY OWN SYSTEM. BREVARD HOOT AEROBIC SYSTE
- * ALLOW ME TO BE CERTIFIED TO INSPECT WITH FOLLOW UP CHECK BY COUNTY OR STATE. CHARLOTTE
- * I DON'T THINK I SHOULD HAVE TO PAY ANY LONGER FOR THE PERMIT. PERHAPS THE SYSTEM SHOULD BE CHECKED BY A COMPANY OR I CHECKED IN QUESTION #21 UT SHOULD BE OK TO DO IT MYSELF! CHARLOTTE CLEARSTREAM
- * LET OWNERS MAINTAIN THEIR OWN SYSTEM. DUVAL HOOT
- * THE SYSTEM IS VERY NOISY. AEROBICS ARE NOT NECESSARY. QUIET PUMP IS AVAILABLE BUT NOT SPECIFIED BY THE MANUFACTURER. PERMIT SHOULD NOT BE REQUIRED. AS AN OPERATOR SHOULD BE ABLE TO PROVIDE FEEDBACK TO MANUFACTURER ABOUT OPERATION. SHOULD HAVE OPERATOR MANUAL/GUIDE PROVIDED. FLAGLER
- * SELF MAINTENANCE LEVY CLEARSTREAM
- * I FEEL THAT YOU SHOULD LET THE HOMEOWNERS MAINTAIN THERE OWN SYSTEMS WITH A YEARLY INSPECTION BY THE HEALTH DEPARTMENT. THAT WOULD JUSTIFY \$100.00 FEE WE PAY THE HEALTH DEPT. IT SHOULD BE \$25.00. WE PAY AN ABSORBING FEE OF \$30.00+\$100.00 A YEAR FOR THE HEALTH DEPT. TO MAINTENANCE COMPANIES FOR DOING NOTHING. YOU GET NOTHING FOR A LOT OF YOUR MONEY. IF SOMETHING BREAKS, THEY GORGE YOU FOR THE REPAIR BECAUSE THEY KNOW THAT THEY GOT YOU. THIS IS A LOT OF MONEY FOR US RETIRED FOLKS. I WAS ABLE TO CHANGE FROM 3RD GENERATION TO PINEWOOD WASTEWATER TO SAVE MONEY BUT NOW I JUST GOT A LETTER SAYING THAT THEY SOLD OUT 3RD GENERATION. THERE IS NO COMPETITION TO THE LOWER KEYS WHICH IS WHY WE GET GORGED. SOMEONE NEEDS TO GET THESE PRICES LOWED FOR US HOMEOWNERS. MY AEROBIC TREATMENT SYSTEM WAS INSTALLED 15 YEARS AGO AND I NEVER HAD A PROBLEM WITH IT BECAUSE I DO ALL THE MAINTENANCE ON IT MYSELF. THE AERATOR PUMP IS STILL THE ORIGINAL ONE INSTALLED WHEN PURCHASED. OVER THE 15YRS I WAS FORCED TO PAY FOR HIGH MAINTENANCE CONTRACTS TO COMPANIES WHO DID NOTHING BUT COLLECT THE MONEY. I'VE EVEN HEARD THAT DURING INSPECTIONS, THE COMPANIES WOULD DESTROY A MAJOR COMPONENT OF THE AEROBIC TREATMENT SYSTEM JUST TO GENERATE MONEY ON THESE OVERPRICED SYSTEM PARTS. I DON'T PERMIT ANYONE TO INSPECT MY SYSTEM UNLESS IM PRESENT. MONROE MULTI FLO
- * Q12: COMMENT: INSPECT/CLEAR IN LINE FILTER. I WOULD LIKE TO BE ALLOWED TO MAINTAIN MY SYSTEM MYSELF, MAINTAIN PERMIT INSTEAD OF BEING TIED TO A CERTIFIED MAINTENANCE COMPANY. ORANGE
- * I KNOW MORE ABOUT SYSTEM THAN PEOPLE SERVICING OR COUNTY AND HAD TO TEACH THEM HOW IT OPERATES. I THINK AFTER 12 YEARS I SHOULD NOT HAVE TO PAY A MAINTENANCE ENTITY. OSCEOLA MULTI-FLOW
- * I SHOULD BE ABLE TO MAINTAIN THIS SYSTEM AS I KNOW MORE ABOUT IT NOW THEN THE INSTALLERS DID. THE ALARM IS LOCAL AND AS SOON AS IT GOES OFF I AM TROUBLE SHOOTING. NOW MOST BUGS CAUSED BY THE INSTALLER HAVE BEEN FIXED BY ME AND THE SYSTEM HAS BEEN WORKING. PALM BEACH ENVIROTEK

Changes and Improvements: Owner System Maintenance

County

Manufacturer

- | | | |
|--|----------|-------------------|
| * PAYING A YEARLY \$100 PERMIT FEE TO THE HEALTH DEPT. IS RIDICULOUS. I SHOULD BE ALLOWED TO SERVICE MY OWN SYSTEM. | SEMINOLE | HOOTS |
| * LET RESIDENTS INSPECT THEIR OWN SYSTEMS LIKE THEY DO IN TEXAS. BI-ANNUAL INSPECTIONS COST TOO MUCH ESPECIALLY FOR SINGLE FAMILIES. | ST JOHNS | HOOT SYSTEMS, LLC |
| * I SHOULD BE ABLE TO DO INSPECTIONS IF I WANT TO. | VOLUSIA | HOOTE H-600 |

Changes and Improvements: Satisfied

County

Manufacturer

* SYSTEM HAS E.P.A. PERMIT AND MAINTENANCE CONTRACT (WORKS FOR ME)	BREVARD	MULTI-FLO
* EVERYTHING IS OK	CITRUS	
* MY SYSTEM HAS WORKED QUITE WELL AND THE SERVICE PROVIDER HAS BEEN ADEQUATE.	DUVAL	
* SO FAR THE SYSTEM IS DOING LUST FINE. I AM AFRAID THAT AS SOON AS IT GETS OLDER , PROBLEMS MIGHT DEVELOP.	LEE	HOOT
* NO COMPLAINTS CURRENT METHOD IS GOOD	MONROE	

Changes and Improvements: Sewer**County****Manufacturer**

* I WOULD LIKE TO SEE SEWAGE SYSTEMS OBSOLETE AND ALL RESIDENTS IN MY AREA CONNECTED TO THE COUNTY SEWER SYSTEM	BREVARD	
* PUT IN REASONABLE RATE CITY SEWER.	BREVARD	AQUA KLEAR ATU PUM
* THE SYSTEM WORKS BUT IS VERY COSTLY, SMELLS AT TIMES. WOULD BE CHEAPER TO CONNECT TO CITY AND COSMETICALLY WOULD LOOK BETTER. ALSO, BEING ON THE WATER WOULD BE MORE ENVIRO-FRIENDLY.	CHARLOTTE	
* WE WOULD LIKE TO BE HOOKED UP TO SEWER.	CHARLOTTE	
* I WANT A COUNTY SEWER HOOKUP- I'M ACROSS THE STREET FROM NEW SCHOOL- WHAT ARE THEY USING?	CHARLOTTE	CAJUN AIR
* WE WOULD RATHER HAVE CITY WATER AND SEWER	CHARLOTTE	CLEARSTREAM WASTE
* ALLOW US TO KEEP IT AND NOT FORCE US TO HOOK UP THE CITY SEWER	COLLIER	
* WHEN POSSIBLE, EVERYONE SHOULD BE OFF SEPTIC AND ON SEWER.	COLLIER	
* MARCO ISLAND BY LAW GIVES US ONLY 8 MORE YEARS UNTIL MANDATORY HOOKUP IS REQUIRED TO CITY SEWERS	COLLIER	MULTIFLO
* WHY AREN'T WE ON CITY SEWER? (NO LINE AVAILABLE) I AM NOT SURE I WOULD BUY THIS SYSTEMS AGAIN.	LEE	ECO-FLO TREATMENT
* WOULD PREFER SEWER SYSTEM HOOK-UP IF THIS IMPROVES WATER QUALITY GENERALLY IN THE KEYS.	MONROE	
* THAT WE CAN KEEP OUR SYSTEM WITHOUT CONNECTING TO THE COUNTY SEWER THAT WE WILL HAVE TO PAY \$15,000 TO CONNECT TO. MAYBE I WILL LIVE LONG ENOUGH FOR MONROE COUNTY TO GET THIS GOING.	MONROE	
* ABOUT TO HOOK UP TO SEWER.	MONROE	
* LET WORKING SYSTEMS AT HOMEOWNERS STAY INTACT. DO NOT FORCE SWITCH TO SEWERS.	MONROE	
* OUR PUBLIC SEWER SYSTEM WILL BE IN 8 MONTHS AND WE CAN GET RID OF THE AEROBIC SYSTEM.	MONROE	AQUA KLEAR
* SINCE MONROE WAS MANDATED FOR CENTRAL SEWER THE EXPENSIVE AEROBIC SYSTEM WAS DESTROYED IT SHOULD HAVE BEEN ALLOWED TO CONTINUE USE IF YOU EXPAND ONSITE TO OTHER COUNTIES THOSE RESIDENTS WILL EVENTUALLY FACE DOUBLE THE EXPENSE ALSO	MONROE	JET

Changes and Improvements: Sewer

County

Manufacturer

- * THE KEYS WE ARE UNDER UNREALISTIC MANDATE TO CENTRALIZE SEWERS. I HOPE MU SYSTEM WILL REMAIN LEGAL UNTIL COUNTY GETS ITS ACT TOGETHER. WOULDN'T WE GET MORE BANG FOR MILLIONS OF AND UPGRADING, WHERE POPULATION IS DENSE - I.E. MIAMI
- * I WOULD RATHER BE HOOKED UP TO A COUNTY SEWER SYSTEM.
- * PROVIDE MORE MUNICIPAL SEWAGE SYSTEMS
- * NEED OTHER COMPANIES TO CHOOSE FROM AND MORE OPTION TO LOWER COSTS. PRIOR HOME OWNED HAD CITY SEWER WHICH WAS LESS COSTLY AND LESS MAINT. REQUIRED.
- * WE WANT CITY SEWAGE

MONROE

JET INC

MONROE

MULTIFLOW

SANTA ROSA

CLEARSTREAM

VOLUSIA

HYDRO-ACTION

WAKULLA

HOOT

Changes and Improvements: Other**County****Manufacturer**

* HAVE SYSTEM INSTALLED IN BACK YARD. MINE IS IN FRONT YARD AND LOOKS DEGRADING AND CHEAPS THE FRONT YARD.	BREVARD	
* REMOVE ALL PARKED BOATS FROM GOODLAND BAY. THE BOATS ARE NOT HOOKED UP TO ANYTHING BUT GOODLAND BAY. I KNOW NOT YOUR JOB, BUT YOU ASKED.	COLLIER	HOOT
* USE ORIGINAL PLANS	DIXIE	EARTHTECH
* NONE. I THINK THE NO-MOUND SYSTEM IS A "CROCK OF S*," BUT IT KEPT ME FROM HAVING A 4FT MOUND IN THE YARD.	HILLSBOROUGH	NO -MOUND
* IT WAS FAIRLY EASY IF I REMEMBER CORRECTLY	LEE	
* ALL NEW DEVELOPMENT INCLUDE UNDERGROUND UTILITIES EXTEND OWNED SYSTEMS TO ALL DEVELOPED AREAS..	LEE	
* NEIGHBORHOOD SCALE SYSTEMS INSTEAD OF INDIVIDUAL	MONROE	
* NEW WASTE WATER SYSTEM BEING INSTALLED NOW.	MONROE	
* I HAD TO BUY A SEPTIC CREDIT TO BUILD ON MY OWN LAND. IT COST ME \$14,000.00. I WANT THAT BACK SO I CAN PUT IT TO GOOD USE ON MY SYSTEM.	MONROE	
* STOP THE CORRUPTION THE ONLY SYSTEM ALLOWED IS THE FA\$T SYSTEM	MONROE	FA\$T
* THIS NEW VACUUM SYSTEM IS ALREADY PREPOSED 'NOT TO WORK' IT WILL BACK UP INSIDE PEOPLES HOMES. HORRORS!!! THE PEOPLE OF THE KEYS ARE CAPABLE OF TAKING CARE OF THEMSELVES + NO LONGER NEED TO BE ON AREA OF STATE CRITICAL CONCERN. THAT WAS SUPPOSE TO BE ONLY FOR 2YRS NOT FOR 30YRS. THIS HAPPENED ABOUT 1976. LET US FEND FOR OURSELVES.	MONROE	MIGHTY MAC SEARS
* BETTER DRAINAGE IN RURAL AREAS FOR STORM WATERS	SEMINOLE	HOOT
* OPERATING COSTS IS ABOUT 25-30 DOLLARS A MONTH. I WOULD LIKE TO SEE IF SOLAR PANELS CAN BE USED "TOTALLY SELF CONTAINED"	WAKULLA	

**USER PERCEPTIONS OF ADVANCED
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS (OSTDS)
IN FLORIDA
FLORIDA DEPARTMENT OF HEALTH**

SURVEY RESULTS

Owners and Users

Crosstabulations

**FSU Survey Research Laboratory
College of Social Science Data Center
Florida State University**

Cross-Tab Analysis-Owners/Users Survey

Table #	Question 1	by	Question 2
1	Q1 (type of system)		Actual dataset of type of system
2	Q3 (age of system)		Q4 (problems over past year)
3	Q3 (age of system)		Q9 (overall satisfaction)
4	Q4 (problems over past year)		Large vs. small county*
5	Q4 (problems over past year)		Q9 (overall satisfaction)
6	Q4 (problems over past year)		Commercial vs residential
7	Q9 (overall satisfaction)		Actual dataset of type of system
8	Q9 (overall satisfaction)		County
9	Q9 (overall satisfaction)		Commercial vs. residential
10	Q23c (Full-time / seasonal)		Q4 (problems over past year)
11	Q23c (Full-time / seasonal)		Q9 (overall satisfaction)
12	Q8 (how satisfied with the way problems are handled)		Q7 (who fixes problem)
13	Q9 (overall satisfaction)		Q11 (stay on advance or go to sewer)
14	Q12 (inspect your own system)		Q9 (overall satisfaction)
15a;15b	Q14 (informed of results of inspections)		Large vs. small county*
16	Q18a (cost of operating permits and maintenance contract)		Q9 (overall satisfaction)
17	Q18b (cost of repairs not covered by contract)		Q9 (overall satisfaction)
18a-18d	Q19 (satisfaction with maintenance entity)		Q20 (what will be done when current agreement expires)
19	Q23d (how many people use the system)		Q4 (problems over past year)
20	Q23f (level of education)		Q9 (overall satisfaction)

* Large county = Monroe, Brevard, and Charlotte; Small county = all the others

Cross-Tab Analysis Owners/Users and Regulators Survey Results

Table #	Question 1		Question 2
21	REGQ17a and 17b. (# systems required compliance enforcement and %of these systems needing multiple enforcement efforts)	County	HOQ9 (owner/user overall satisfaction with advanced system)

Respondent Identification of Aerobic Treatment Units and Performance Based Treatment Systems Matches the DOH Dataset in a Majority of Cases.

#1		Q 1 What type of system do you have?								Total
		ATU	PBTS	Sand or Gravel	Innovative	Other	No System	Not Advanced	Don't Know	
		N=516	N=49	N=10	N=8	N=21	N=2	N=1	N=48	N=655
Type of septic system (Actual Data Set)	ATU	78%	20%	70%	0%	43%	50%	0%	44%	69%
	Innovative	1%	0%	20%	0%	5%	0%	0%	15%	2%
	PBTS	22%	80%	10%	100%	52%	50%	100%	42%	29%
		100%	100%	100%	100%	100%	100%	100%	100%	100%

The small number of responses for some system types limits comparison across these groups, however, in most cases, respondents' system identification matched the Department of Health dataset for both Aerobic Treatment Units (78%) and Performance Based Treatment Systems (80%).

The Frequency of System Problems is Similar for Systems of Different Ages

#2		Q 3 When was your system installed?						Total
		past year	2 to 3 years	4 to 5 years	6 to 10 years	10+ years	Don't know	
		N=29	N=183	N=152	N=153	N=94	N=18	N=629
Q 4: Times experienced system problems in PAST YEAR	Never	62%	51%	57%	57%	52%	44%	54%
	Once or Twice	28%	32%	33%	31%	40%	33%	33%
	Several Times	7%	14%	11%	10%	7%	22%	11%
	Weekly	3%	2%	0%	2%	0%	0%	1%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The small number of responses for some of the installation times limits comparison across these groups, however the pattern is similar. With the exception of those respondents who indicated they do not know when their system was installed, at least a majority in each group reported they had "Never" experienced system problems in the past year. Among the twenty-nine respondents with a system installed in the past year, two-thirds (62%) said their system had "Never" had a problem. About a third in each group said "Once or Twice." The percentage of owners/users who reported they had experienced problems "Several Times" ranged across the different installation times from seven percent to fourteen percent. The percentage for "Weekly" problems ranged from zero to three percent.

The satisfaction rate for systems installed more than ten years ago is similar to the rate for newer systems.

#3		Q 3: When was your system installed?						Total
		Past Year	2 to 3	4 to 5	6 to 10	10+	Don't know	
		N=28	N=187	N=154	N=151	N=96	N=16	N=632
Q 9 Overall satisfaction with system	Very Satisfied	46%	36%	36%	38%	45%	6%	38%
	Satisfied	39%	40%	45%	42%	36%	69%	42%
	Dissatisfied	7%	10%	9%	12%	13%	13%	11%
	Very Dissatisfied	7%	14%	10%	8%	6%	13%	10%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The twenty-eight systems installed within the past year had the highest satisfaction rate with eighty-five percent of owners/users reporting they were “Very Satisfied” or “Satisfied.” However the small number of systems in this group limits comparison with other groups. The pattern for the other groups suggests that owners/users of older systems are at least as satisfied as those with systems installed more recently. Seventy-six percent of owners/users of systems installed “2 to 3 years ago” reported they are “Very Satisfied” or “Satisfied” with their system, while the rate for those with systems installed four to ten or more years ago was at least eighty percent.

Owners/users of Advanced Systems in Large Counties Reported Less Frequent System Problems Over the Past year.

#4		Large vs. Small Counties (Large county = Monroe, Brevard, and Charlotte; Small county = all the others)		
		Large N =270	Small N=366	Total Number of Respondents N=636
Q 4: Times experienced system problems in PAST YEAR	Never	61%	50%	55%
	Once or Twice	29%	36%	33%
	Several Times	9%	13%	11%
	Weekly	1%	2%	1%
		100%	100%	100%

“Large County” owners/users of advanced systems reported experiencing problems with their system in the past year at a lower rate than “Small County” respondents. Sixty-one percent of “Large County” respondents said they had “Never” experienced problems with their system, compared to fifty percent for owners/users of advanced systems in all small counties. Similarly, “Large County” respondents reported experiencing system problems “Once or Twice” at a lower rate (29%) than “Small County” respondents (36%.)

Owners/Users who “Never” experienced problems with their system over the past year report they are “Very Satisfied” with their system at twice the rate of those who experienced problems “Once or Twice.”

#5		Q 4: How many times have you experienced problems with your sewage system over the PAST YEAR?				
		Never N= 340	Once or Twice N= 209	Several Times N= 70	Weekly N= 8	Total N= 627
Q 9 Overall satisfaction with system	Very Satisfied	54%	26%	0%	0%	38%
	Satisfied	39%	53%	30%	0%	42%
	Dissatisfied	3%	15%	34%	13%	11%
	Very Dissatisfied	4%	6%	36%	88%	9%
		100%	100%	100%	100%	100%

Comparison across all groups is limited by the number of responses for the response categories “Several Times” (n=70) and “Weekly” (n=8), however the overall pattern suggests that owners/users with less frequent system problems tend to report higher levels of satisfaction. A majority of owners/users who reported they had “Never” experienced problems with their system over the past year (54%) said they were “Very Satisfied” with their system. Only twenty-six percent of those who experienced problems “Once or Twice” said they were “Very Satisfied.” As would be expected none of those who had experienced problems “Several Times” or “Weekly” were “Very Satisfied.”

A Similar Percentage of Residential and Commercial Property Respondents Report They “Never” Experienced System Problems or Only “Once or Twice”

#6		Commercial vs. Residential Property (Actual Dataset)			
		Commercial	Residential	Unknown	Total
		N=101	N=426	N=109	N=636
Q 4: Times experienced system problems in PAST YEAR	Never	44%	57%	56%	55%
	Once or Twice	41%	30%	37%	33%
	Several Times	16%	11%	6%	11%
	Weekly	0%	2%	1%	1%
		100%	100%	100%	100%

Eighty-seven percent of residential system respondents said that over the past year they had “Never” experienced problems with their system or only experienced problems “Once or Twice.” A similar percentage of those with commercial property systems (85%) reported problems “Once or Twice” or “Never.” (Note that the pattern for those respondents with an “Unknown” type of property is similar, with over ninety percent reporting they experienced system problems no more than two times in the past year.)

Respondents Expressed Overall Satisfaction with Aerobic Treatment Units (ATU) and Performance Based Treatment Systems (PBTS) at a Similar Rate.

#7		Type of Septic System (Actual Data Set)			
		ATU	Innovative	PBTS	Total
		N=435	N=14	N=190	N=639
Q 9 Overall satisfaction with system	Very Satisfied	39%	21%	35%	38%
	Satisfied	42%	50%	42%	42%
	Dissatisfied	11%	7%	10%	10%
	Very Dissatisfied	8%	21%	13%	10%
		100%	100%	100%	100%

Over a third of respondents with an Aerobic Treatment Unit (39%) and over a third of those with a Performance Based Treatment System (35%) said they were “Very Satisfied” with their system. The dissatisfaction rate for these systems was also similar. Respondents with an Aerobic Treatment Unit said they were “Dissatisfied” or “Very Dissatisfied” with their system at a slightly lower rate (19%) than those with a Performance Based Treatment System (23%.)

**Overall Satisfaction with Advanced System by County
(Number of Respondents)**

#8	Q9 How would you describe your overall satisfaction with your advanced onsite sewage system?				
County	Very satisfied	Satisfied	Dissatisfied	Very Dissatisfied	Total
Alachua	1	1	0	0	2
Bay	0	0	0	1	1
Brevard	30	39	7	8	84
Charlotte	17	35	8	14	74
Citrus	15	11	1	0	27
Clay	0	1	1	0	2
Collier	23	15	2	4	44
Dade	1	9	3	1	14
Dixie	0	0	0	1	1
Duval	4	8	2	5	19
Escambia	3	2	1	0	6
Flagler	4	2	1	0	7
Franklin	9	9	1	2	21
Gadsden	1	0	0	0	1
Glades	1	0	0	0	1
Gulf	0	1	0	0	1
Highlands	1	0	0	0	1
Hillsborough	3	6	2	1	12
Indian River	2	0	0	0	2
Jefferson	1	0	0	0	1
Lake	3	0	1	1	5
Lee	16	30	6	7	59
Leon	4	1	2	0	7
Levy	0	2	0	0	2
Manatee	0	0	1	0	1
Marion	1	0	0	0	1
Martin	1	0	0	0	1
Monroe	55	39	16	6	116
Okaloosa	0	1	0	0	1
Orange	4	5	1	0	10
Osceola	0	1	0	0	1
Palm Beach	5	3	1	0	9
Pasco	1	0	1	0	2
Pinellas	0	3	0	0	3

#8	Q9 How would you describe your overall satisfaction with your advanced onsite sewage system?				
County	Very satisfied	Satisfied	Dissatisfied	Very Dissatisfied	Total
Polk	7	6	1	2	16
Putnam	1	0	0	0	1
Santa Rosa	6	1	2	1	10
Sarasota	4	3	1	1	9
Seminole	5	6	1	0	12
St. Johns	3	2	0	0	5
St. Lucie	1	0	0	0	1
Sumter	1	0	0	0	1
Volusia	3	11	1	1	16
Wakulla	4	14	3	8	29
Total	N=241	N=267	N=67	N=64	N=639

Commercial and Residential Property Respondents Expressed Satisfaction with Their Advanced Septic System at a Similar Rate

#9		Commercial vs. Residential Property (Actual Dataset)			
		Commercial N=101	Residential N=427	Unknown N=111	Total N=639
Q 9 Overall satisfaction with system	Very Satisfied	39%	37%	41%	38%
	Satisfied	46%	42%	36%	42%
	Dissatisfied	9%	9%	16%	10%
	Very Dissatisfied	7%	12%	6%	10%
		100%	100%	100%	100%

The level of satisfaction reported by respondents with a system on a commercial property and those with a system on a residential property was similar. Thirty-nine percent of commercial property respondents and thirty-seven percent of residential property respondents said they were “Very Satisfied” with their system. The percentage who said they were “Dissatisfied” was the same for both groups (9%).

Seasonal Residents Report They Never Experienced System Problems in the Past Year at a Higher Rate than Full-Time Residents

#10		Q 23c Full Time or Seasonal Resident		
		Full Time N=516	Seasonal N=90	Total N=606
Q 4: Times experienced system problems in PAST YEAR	Never	53%	61%	54%
	Once or Twice	33%	33%	33%
	Several Times	12%	4%	11%
	Weekly	1%	1%	1%
		100%	100%	100%

Eighty-five percent of owners/users (n=606) who responded to this survey item were identified as “Full-Time” residents, compared to only ninety (15%) identified as “Seasonal.” While this difference in number limits comparison, sixty-one percent of seasonal residents said they had “Never” experienced a system problem in the past year, compared to fifty-three percent of full-time residents. A third (33%) for both groups said they had experienced problems only “Once or Twice.” Relatively few seasonal residents (4%) reported experiencing problems several times, compared to full-time (12%). The rate for problems “weekly” (1%) was the same for both groups.

Seasonal Residents (87%) Reported Overall Satisfaction with Their System at a Higher Rate than Full-Time Residents (78%)

#11		Q 23c Full Time or Seasonal Resident		
		Full Time	Seasonal	Total
		N=520	N=90	N=610
Q 9 Overall satisfaction with system	Very Satisfied	38%	41%	38%
	Satisfied	40%	46%	41%
	Dissatisfied	11%	8%	11%
	Very Dissatisfied	11%	6%	10%
		100%	100%	100%

While the difference in the number of respondents in the two groups limits comparison, “Seasonal” residents reported they were “Very Satisfied” at a slightly higher rate (41%) than those who said they were “Full-Time” residents (38%). The percentage gap among those who said they were “Satisfied” is larger with forty-six percent of “Seasonal” residents said they were “Satisfied” with their system, compared to forty percent of “Full-Time” residents.

**Among Respondents Who Rely on Themselves to Fix Problems
Dissatisfaction with Results is Higher Than for Those Who Rely on Others.**

#12		Q 7 Who do you usually rely on to fix problems with your system?					
		Self N=58	Maintenance Entity N=196	Contractor or Plumber N=277	County Health Dept N=5	Other N=31	Total N=567
Q8 Satisfaction with the way problems are handled	Very Satisfied	21%	38%	35%	40%	23%	34%
	Satisfied	40%	43%	42%	60%	13%	41%
	Dissatisfied	5%	7%	7%	0%	3%	6%
	Very Dissatisfied	28%	5%	7%	0%	3%	8%
	Other	7%	8%	9%	0%	58%	11%
		100%	100%	100%	100%	100%	100%

While the difference in the number of respondents in each group limits comparison, respondents who fix problems with their system themselves report less satisfaction than those who rely on maintenance entities, contractors, plumbers, or the County Health Department. A third of those who rely on themselves were dissatisfied with the way problems are handled. Dissatisfaction was lower among respondents who rely on maintenance entities (12%) and a contractor/plumber (14%). Sixty-one percent of those respondents who rely on themselves said they were “Very Satisfied” or “Satisfied” with the way problems are handled, compared to eighty-one percent who rely on a maintenance entity and seventy-seven percent who rely on a contractor/plumber. Five respondents said they rely on the County Health Department and they were all “Very Satisfied” or “Satisfied.”

Almost All Respondents Who Prefer to Continue with their Advanced System Expressed Overall Satisfaction with Their System

#13		Q11 If cost was equal, would you prefer to...?			Total
		Continue with Advanced System N=206	Hook up to Municipal/County Sewer N=361	Use Conventional Septic System & Pay savings into Trust fund N=46	
Q 9 Overall satisfaction with system	Very Satisfied	63%	27%	17%	38%
	Satisfied	33%	50%	24%	42%
	Dissatisfied	2%	13%	24%	10%
	Very Dissatisfied	2%	10%	35%	9%
		100%	100%	100%	100%

Almost all (96%) of respondents who said that if cost were equal they would prefer to continue with their advanced system said they were “Very Satisfied” or “Satisfied” with their system. About three-fourths (77%) of those who would prefer to hook up to a municipal or county sewer were “Very Satisfied” or “Satisfied” with their system. Among respondents who expressed a preference for using a conventional system and paying savings into a trust fund a higher percentage expressed dissatisfaction (59%), than satisfaction (41%).

The Satisfaction Rate is Slightly Higher for Respondents Inspecting System Less Frequently or Not At All

#14		Q12 Do you periodically inspect your own system?			
		No, Not at All	At Least Every Few Months	Once or Twice a Year	Total
		N=258	N=210	N=154	N=622
Q 9 Overall satisfaction with system	Very Satisfied	36%	37%	42%	38%
	Satisfied	43%	40%	42%	42%
	Dissatisfied	12%	12%	6%	11%
	Very Dissatisfied	9%	10%	10%	10%
	Total	100%	100%	100%	100%

There is not much difference in the level of satisfaction reported by respondents who inspect their system more or less often, or not at all. However, the percentage who said they were “Very Satisfied” or “Satisfied” was highest among respondents who inspect their system only “Once or Twice a Year” (82%), followed by those who do not inspect their system at all (79%). Respondents who said they inspect their system “At Least Every Few Months” expressed satisfaction at the lowest rate (77%).

The Percentage of System Owners/users in Large or Small Counties Informed of Inspection Results by their County Health Department is Similar

#15a		Large vs. Small Counties		
		(Large county = Monroe, Brevard, and Charlotte; Small county = all the others)		
		Large	Small	Total
		N=188	N=262	N=450
Q14a Informed of Inspection Results by County Health Dept	No	46%	48%	47%
	Yes	54%	52%	53%
	Total	100%	100%	100%

Among respondents in the three “Large” counties the percentage who said their County Health Department informed them of inspection results (54%) was only slightly higher than the percentage for those in all the other counties (52%).

A Higher Percentage of System Owners/Users in Large Counties Informed by Maintenance Entity of Inspections Results

#15b		Large vs. Small Counties		
		(Large county = Monroe, Brevard, and Charlotte; Small county = all the others)		
		Large	Small	Total
		N=250	N=331	N=581
Q14b Informed of Inspection Results by Maintenance Entity	No	13%	24%	19%
	Yes	87%	76%	81%
	Total	100%	100%	100%

Among respondents in the three “Large” counties the percentage who said their maintenance entity informed them of inspection results (87%) was higher than among those in all the other counties (76%).

Across all the Cost Ranges a Large Majority of System Owners/Users are “Very Satisfied” or “Satisfied” with Their System

#16	Q18a What do you estimate is the COST of your operating permits and maintenance contract for one Year?	\$0	\$1-\$199-	\$200-\$499	\$500-\$999	\$1000+
		N=10	N=48	N=286	N=146	N=35
Q 9 Overall satisfaction with system	Very Satisfied	40%	46%	36%	40%	34%
	Satisfied	50%	35%	43%	38%	37%
	Dissatisfied	0%	8%	12%	11%	17%
	Very Dissatisfied	10%	11%	9%	11%	12%
	Total	100%	100%	100%	100%	100%

Across all the cost ranges a large majority of system owners/users (90% to 71%) are “Very Satisfied” or “Satisfied” with their system. The small number of respondents for some of the cost ranges limits comparison across these groups with only two of the cost ranges including more than 50 respondents. The percentage of satisfied system owners/users in these two groups is similar. The percentage of satisfied owners/users who estimate the cost of their operating permits and maintenance contracts between \$200 and \$499 was seventy-nine percent and for those who estimate their cost between \$500 and \$999 the percentage was seventy-eight.

A Majority of Respondents with Repair Costs \$300 or Less are Satisfied with Their System

#17		Q18b What do you estimate is the COST of your repairs and other items not covered by your maintenance contract last year?					
		\$0	\$1-\$100	\$101-\$300	\$301-\$999	\$1000+	
		N=66	N=31	N=60	N=51	N=31	
Very Satisfied		59%	39%	28%	14%	13%	
Satisfied		33%	51%	42%	33%	55%	
Q 9 Overall satisfaction with system		Dissatisfied	6%	7%	17%	28%	26%
		Very Dissatisfied	2%	3%	13%	26%	7%
Total		100%	100%	100%	100%	100%	

Although the rate declines as estimated repair costs increase, satisfaction remains fairly high for costs up to \$300. Among respondents who estimated repair and other costs \$100 dollars or less at least ninety percent said they were “Very Satisfied” or “Satisfied” with their system. A majority (70%) of those who estimated costs between \$101 and \$300 expressed overall satisfaction with their system. For respondents who estimated the cost of repairs and other items not covered by their maintenance contract from \$301 to \$999, less than half (47%) expressed satisfaction, with only fourteen percent who said they were “Very Satisfied.”

Respondents Who are Satisfied with Their Maintenance Entity Say They Will Renew Their Agreement

#18a		Q19 How would You Rate Your Satisfaction with the Services Provided by Your Maintenance Entity?						Total
		Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	No Basis to Judge	Other	
		N=168	N=265	N=45	N=45	N=56	N=18	N=597
Q20a. Renew Maintenance Agreement with Same Entity	not checked	5%	23%	84%	80%	66%	56%	32%
	checked	95%	77%	16%	20%	34%	44%	68%
		100%	100%	100%	100%	100%	100%	100%

Over two-thirds (68%) of the 597 respondents said that they planned to renew their agreement with their current maintenance entity. Nearly all respondents (95%) who reported they were “Very Satisfied” with the services provided by their maintenance entity say they will renew their agreement with them. Similarly, over three-fourths (77%) of those who are “Satisfied” say they plan to renew.

Among Satisfied and Dissatisfied Customers Relatively Few Said They Would Switch to a Different Entity Because of Price

#18b		Q19 How would You Rate Your Satisfaction with the Services Provided by Your Maintenance Entity?						Total
		Very Satisfied N=168	Satisfied N=265	Dissatisfied N=45	Very Dissatisfied N=45	No Basis to Judge N=56	Other N=18	
Q20b. Switch Because of Price	not checked	97%	94%	76%	93%	93%	89%	93%
	checked	3%	6%	24%	7%	7%	11%	7%
		100%	100%	100%	100%	100%	100%	100%

Overall, only seven percent of the 597 survey respondents indicated they would switch to a different maintenance entity because of price. Comparison across levels of satisfaction is limited due to differences in the number of respondents in each category. Twenty-four percent of those who said they were “Dissatisfied” (n=45) indicated they would switch because of price. For the other levels of satisfaction the percentage ranged from three percent to seven percent.

Respondents Who Are Satisfied with Their Maintenance Entity Do Not Want to Switch Entities

#18c		Q19 How would You Rate Your Satisfaction with the Services Provided by Your Maintenance Entity?						Total
		Very Satisfied N=168	Satisfied N=265	Dissatisfied N=45	Very Dissatisfied N=45	No Basis to Judge N=56	Other N=18	
Q20c. Switch Because of Low Level of Service	not checked	100%	100%	71%	73%	98%	100%	95%
	checked	0%	0%	29%	27%	2%	0%	5%
		100%	100%	100%	100%	100%	100%	100%

Overall, only five percent of 597 respondents said they would switch to another entity because of low level of service. As would be expected, respondents who expressed satisfaction with the performance of their maintenance entity are not interested in switching to another entity. Less than a third of the owners who were dissatisfied (29%) or very dissatisfied (27%) with their maintenance entity indicated they would switch because of the low level of service.

About a Third of Dissatisfied and Half of Very Dissatisfied Maintenance Entity Customers Would Like to Switch Entities But Cannot Find Alternative

#18d		Q19 How would You Rate Your Satisfaction with the Services Provided by Your Maintenance Entity?						Total
		Very Satisfied N=168	Satisfied N=265	Dissatisfied N=45	Very Dissatisfied N=45	No Basis to Judge N=56	Other N=18	
Q20d. Would Like to Switch but no Alternative	not checked	99%	89%	64%	49%	80%	67%	85%
	checked	1%	11%	36%	51%	20%	33%	15%
		100%	100%	100%	100%	100%	100%	100%

Overall, only fifteen percent of the 597 respondents indicated they would like to switch to a different maintenance entity but there was no alternative. Few “Very Satisfied” (1%) or “Satisfied” (11%) maintenance entity customers reported they would like to switch but there is no alternative. Among the forty five respondents who said they were “Dissatisfied”, about a third (36%) said they would like to switch but there was no alternative. Half of the forty-five respondents who said they were “Very Dissatisfied” with the services provided by their maintenance entity said this was the case for them.

Systems Used By Fewer People Tend to Have Less Frequent Problems

		Q23 d. How many people use your system?							Total
		1	2	3 -5	6 -10	11-20	20-50	51+	
		N=35	N=250	N=190	N=29	N=11	N=6	N=11	N=532
Q4. Times problems with system over Past year	Never	57%	61%	47%	52%	55%	50%	9%	54%
	Once or Twice	29%	33%	34%	34%	36%	50%	45%	33%
	Several Times	9%	6%	17%	14%	9%	0%	45%	11%
	Weekly	6%	0%	2%	0%	0%	0%	0%	1%
Total		100%	100%	100%	100%	100%	100%	100%	100%

While the difference in the number of respondents in each group limits comparison, the pattern suggests that systems used by fewer people tend to have fewer problems. Sixty-one percent of those Respondents with systems used by two people (N= 250) reported they “Never” had a problem over the past year, compared to forty-seven percent of those with systems used by three to five people (N=190.)

Rate for Overall Satisfaction with System Slightly Higher Among Respondents Who Completed College or Graduate School

#20		Q23 f. What is the highest grade or year of school you have completed?							Total
		8 years or less	9-11 years	High School	Business or Technical	Community College	College	Graduate or Professional	
		N=2	N=12	N=85	N=58	N=77	N=193	N=153	580
Q 9 Overall satisfaction with system	Very Satisfied	0%	33%	34%	45%	35%	39%	42%	39%
	Satisfied	50%	58%	41%	33%	40%	42%	41%	41%
	Dissatisfied	50%	0%	11%	9%	14%	10%	10%	11%
	Very Dissatisfied	0%	8%	14%	14%	10%	8%	7%	9%
Total		100%	100%	100%	100%	100%	100%	100%	100%

The majority of the survey respondents (60%) reported completing college or graduate/professional school. The percentage of college-level respondents who said they were “Very Satisfied” or “Satisfied” was eighty-one percent. Similarly, for those who attended graduate/professional school the percentage was eighty-three. The satisfaction rate was similar among those who completed high school (75%), business or technical school (78%) or community college (75%).

Owner/User System Satisfaction And Systems Requiring Compliance Enforcement by County

	Survey of Owners/Users-					Survey of Regulators	
	Q.9 Owner/User Overall Satisfaction with Their Advanced System					Q17a and Q17b	
County	Total Number Responding	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	Number of Advanced Systems in County Required Compliance Enforcement in Past Year	Percentage of Number That Required Multiple Enforcement or Corrective Action
Alachua	2	50%	50%	0%	0%	1	100%
Bay	1	0%	0%	0%	100%	0	0%
Brevard	84	36%	46%	8%	10%	500	60%
Charlotte	74	23%	47%	11%	19%	267	75%
Citrus	27	56%	41%	4%	0%	0	0%
Clay	2	0%	50%	50%	0%	1	100%
Collier	44	52%	34%	5%	9%	40	10%
Dade	14	7%	64%	21%	7%	100	50%
Dixie	1	0%	0%	0%	100%	6	50%
Duval	19	21%	42%	11%	26%	175	60%
Escambia	6	50%	33%	17%	0%	8	75%
Flagler	7	57%	29%	14%	0%	17	94%
Franklin	21	43%	43%	5%	10%	466	-
Gadsden	1	100%	0%	0%	0%	0	0%
Glades	1	100%	0%	0%	0%	NA	NA
Gulf	1	0%	100%	0%	0%	3	-
Highlands	1	100%	0%	0%	0%	0	0%
Hillsborough	12	25%	50%	17%	8%	15	75%
Indian River	2	100%	0%	0%	0%	1	8%
Jefferson	1	100%	0%	0%	0%	---	---
Lake	5	60%	0%	20%	20%	0	---
Lee	59	27%	51%	10%	12%	480	80%
Leon	7	57%	14%	29%	0%	4	25%
Levy	2	0%	100%	0%	0%	0	0%
Manatee	1	0%	0%	100%	0%	0	0%

	Survey of Owners/Users-					Survey of Regulators	
	Q.9 Owner/User Overall Satisfaction with Their Advanced System					Q17a and Q17b	
County	Total Number Responding	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	Number of Advanced Systems in County Required Compliance Enforcement in Past Year	Percentage of Number That Required Multiple Enforcement or Corrective Action
Marion	1	100%	0%	0%	0%	0	0%
Martin	1	100%	0%	0%	0%	8	20%
Monroe	116	47%	34%	14%	5%	625	10%
Okaloosa	1	0%	100%	0%	0%	0	0%
Orange	10	40%	50%	10%	0%	74	---
Osceola	1	0%	100%	0%	0%	0	---
Palm Beach	9	56%	33%	11%	0%	5	80%
Pasco	2	50%	0%	50%	0%	0	NA
Pinellas	3	0%	100%	0%	0%	0	NA
Polk	16	44%	38%	6%	13%	1	0%
Putnam	1	100%	0%	0%	0%	3	0%
Santa Rosa	10	60%	10%	20%	10%	15	50%
Sarasota	9	44%	33%	11%	11%	51	44%
Seminole	12	42%	50%	8%	0%	140	100%
St. Johns	5	60%	40%	0%	0%	12	83%
St. Lucie	1	100%	0%	0%	0%	3	100%
Sumter	1	100%	0%	0%	0%	0	0%
Volusia	16	19%	69%	6%	6%	25	30%
Wakulla	29	14%	48%	10%	28%	25	100%
Total	639	38%	42%	11%	10%		