

PROGRESS REPORT FORM

DEP Agreement No.:	G0239		
Grantee Name:	Florida Department of Health		
Grantee Address:	Division of Environmental Health, 4052 Bald Cypress Way, Bin #A-08, Tallahassee, FL 32399-1713		
Grantee's Grant Manager:	Elke Ursin	Telephone No.:	850-245-4070 x 2708
Quarterly Reporting Period:	July 1, 2011 – September 30, 2011		
Project Number and Title:	G0239 Department of Health Assessment of Water Quality Protection by Advanced Onsite Sewage Treatment and Disposal Systems: Performance, Management, Monitoring Project		

Provide a summary of project accomplishments to date. (Include a comparison of actual accomplishments to the objectives established for the period. If goals were not met, provide reasons why.)

- Grant was executed on August 6, 2008.
- Task 1: Monroe County Project (in kind match)
 - Monroe County Health Department was selected to perform the sampling.
 - Sampling protocol report has been completed.
 - Presentations made on some of the preliminary results at the Florida Environmental Health Association's Annual Education Conference in August 2008, at the Water Environment Federation's Annual Technical Exhibition and Conference (WEFTEC) in October 2008, in October 2009, and in October 2010. Copies of the presentations have been submitted with previous quarterly reports.
 - All sampling has been completed for this task. Quality control of collected data has been completed. Sampling results have been included in previous progress reports.
 - The employee who did the sampling for this task trained the new employee hired to do the statewide sampling during the week of August 10, 2009.
 - Draft report is mostly completed and will be presented to the Department of Health's Research Review and Advisory Committee for comment at the November 15, 2011 meeting. Anticipated final report will be submitted prior to the end of November.
 - *This task is slightly behind schedule per the grant amendment executed February 3, 2011.*
- Task 2: Database
 - Decision to hire an outside contractor for the data gathering and database development was made initially to obtain the most cost efficient solution to obtaining the end result.
 - Request for Quotes was advertised, responses were received and scored, and negotiations with the highest scored applicant were made. The proposed contractor withdrew their proposal.
 - This task is being completed by bureau staff. During the previous quarters it became apparent that the originally anticipated volunteer effort could not be incorporated into the work-flow.
 - Preliminary surveys and telephone inquiries were made to the County Health Departments to determine the method for recording operating permit data. The responses have been tabulated.
 - Data has been gathered from the state databases, county specific databases, and Carmody.
 - Initial assessments have shown that there is very limited overlap between operating

permits in the state database and in Carmody, complicating efforts to develop a comprehensive database with uniform fields. Much time during previous quarters has been spent identifying duplicate data, cleaning up and combining the records. The approach that was taken focused on the physical address of a system as the identifying characteristic. Duplication of addresses (e.g. for repairs) in the state permitting (EHD) database was remedied by selecting generally the most recent permit and combining construction and operating permits. Carmody records were screened to eliminate operating permits from non-advanced systems such as a conventional system for a restaurant or in an industrial/manufacturing zone. EHD and Carmody records were linked to each other based on address and permit information. Approximately 16,000 distinct records were the results of this work. The addresses have been geocoded, which serves as an additional data quality check.

- Data fields and database structure have been selected and designed by DOH and contract staff. The database of the system records is complete. A description of the data fields and structure has been developed and will be submitted prior to the end of November. Supplemental information is being gathered in the database to capture information outside of the general system information that was gathered from the permitting databases. This supplemental information is anticipated to include tables on the permit review, physical evaluation of the system, sample results, construction information, and the county evaluation of management practices.
- Tools and methods to streamline data entry and ensure data quality have been developed. These tools and forms ensure accuracy and consistency with regards to data entry. A significant amount of time in past quarters was spent designing queries and forms to capture system details to assist with data analysis later on.
- For those records where sufficient information existed, treatment component technologies have been categorized and this information linked to the system record based on the type of technology installed. The treatment technologies have been grouped as either: unsaturated fixed media, combined media, and extended aeration. Additionally, aeration technology for combined media and extended aeration was subcategorized into diffuser and aspirator approaches. Records were selected to represent each of the different technology approaches. Numbers of samples for each manufacturer were proportional to the logarithm of the number of systems in the same category. The record selection used a similar approach as the overall random sample, by selecting the records with the lowest n random numbers that fulfilled the criteria. Details on this can be found in Table 1.

Technology Approach	Manufacturer	Product	Aeration_sub type	Product sample	suptype sample	Approach sample
Combined	Bio-Microbics	FAST	Diffuser	35	35	70
	Jet	Jet	Aspirator	35	35	
Extended aeration	Acquired Wastewater Technologies	Alliance	Diffuser	2	35	70
	Ecological Tanks, Inc.	Aqua Aire	Diffuser	2		
	Ecological Tanks, Inc.	Aqua Safe	Diffuser	2		
	Aqua-Klear	Aqua-Klear	Diffuser	4		
	American Wastewater	B.E.S.T. 1	Diffuser	3		
	Acquired Wastewater Technologies	Cajun Aire	Diffuser	3		
	Clearstream	Clearstream	Diffuser	3		
	Delta	DF or UC	Diffuser	3		
	Hoot	Hoot	Diffuser	4		
	Hydro-Action	Hydro-Action	Diffuser	2		
	H.E. McGrew	Mighty Mac	Diffuser	3		
	Consolidated	Nayadic	Diffuser	4		
	Consolidated	Multi-Flo	Aspirator	15	35	
	Consolidated	Enviro-Guard	Aspirator	3		
Norweco	Singular	Aspirator	17			
Fixed media	Orenco	AdvanTex		6		70
	Quanics	Aerocell		4		
	Quanics	Biocoir		4		
	Premier Tech	EcoFlo		9		
	EcoPure	EcoPure		8		
	Earthtek	EnviroFilter		14		
	Klargester	Klargester		2		
	Rotodisk	Rotodisk		3		
	Ruck	Ruck		7		
	NoMound	NoMound		8		
	Sandfilter	Sandfilter		5		

Table 1. Technology of Components Sample Selection

- Summary statistics on the database will be submitted prior to the end of November.
- *The task as outlined in the February 3, 2011 grant amendment is slightly behind schedule and is mostly complete.*
- Task 3: Surveys
 - Request for Quotes was sent out to several universities and state contract providers to perform the survey.
 - Two proposals were received and the evaluation was completed with the Florida State University Survey Research Laboratory selected as the successful provider.
 - Development of the six surveys has been completed. There have been several meetings between DOH, DEP, and FSU staff to go over the content of the draft surveys prior to reaching the final version. The surveys ranged from 5 pages long to 10 pages long depending on the user group. The surveys have been submitted in a previous quarterly report.
 - The surveys were sent out to the target interest groups during the beginning of 2010. Some time after the first wave of surveys were mailed out, a second round of follow-up surveys were sent to the non-responders.
 - 100% of the population size will be surveyed for the Onsite Regulators, Installers, Engineers, Manufacturers, and Maintenance Entities. 3,795 of the System Owners have been sampled based on a sampling scheme that was agreed to by all parties. This sampling scheme was designed to send surveys to all identified innovative system owners, oversample commercial systems with approximately 15% of the surveys, and to oversample PBTS' by a factor of 2 relative to ATUs. The oversampling will serve to provide more data on smaller groups to allow comparison to the large group of residential ATUs.
 - FSU reported that a significant fraction of the surveys were returned as undeliverable. 914 of the system user surveys were returned to the department. Surveys were originally sent to the physical property address in order to capture the

user's point of view. The main reasons for the inability to deliver to many of these addresses was because the property was vacant, there was no mail receptacle at the location, that is was not deliverable as addressed, or that the mail was unable to be forwarded. After individually searching each address in the corresponding county property appraiser's database, 825 were resent to the property owner; the remaining 89 addresses could not be located in the property appraiser's database. 103 of these letters with the updated owners address have been returned back as being vacant, undeliverable as addressed, etc.

- FSU has completed all of the data entry on all of the submitted surveys. Quality assurance on the data has been completed.
- A DOH intern was utilized to categorize some of the open ended questions on the surveys. DOH sent FSU a list of categories for analysis for the surveys, which have been included in the final report.
- Data analysis has been completed. The final report from FSU has been submitted to DOH and was included as a deliverable in a previous quarterly report.
- *This task is complete.*
- Task 4: Assessment of Operational Status and Performance
 - In November 2008 investigations began into the method of procurement for a contract staff position to complete this task, as well as several other tasks associated with this project. DOH has two contractors that provide contract staff: Tallahassee Community College (TCC) and Nitelines USA, Inc. Initially we anticipated utilizing TCC, but in mid February 2009 TCC informed the grant manager that they are no longer taking on new contracts. The process immediately began to utilize Nitelines as the provider with advertising being done in March 2009, interviews being performed in April 2009, and final selection being completed in May 2009.
 - The contract staff position began on June 1, 2009 with much of their time initially being devoted to development of the project database in Task 2. Subsequently that staff's time was spent on developing the QAPP, obtaining permit files and doing data entry associated with permit review. Contract staff became certified in OSTDS in December of 2009 as stipulated in the grant agreement. Staff has also attended GIS mapping training.
 - On March 30, 2011 the employee submitted their resignation.
 - The draft Quality Assurance Project Plan has been written, presented to the DOH Research Review and Advisory Committee (RRAC), revised, and was finalized on April 1, 2011. The original QAPP was submitted to the grant manager at DEP. Delays in getting this QAPP in a final format were to make it as robust and detailed as possible to eliminate any mistakes that could occur later.
 - Criteria regarding site selection were presented and discussed at the RRAC meeting on December 16, 2009. There were many of pros and cons from the system selection strategies list that RRAC discussed. DOH created a flow chart to illustrate the site selection process. This flow chart was finalized and was submitted with a previous quarterly report. The main sample selection was done by taking a random sample of the entire population of advanced systems. This sample will give a snapshot of the operational status and management of all systems. In addition to a pure random sample, the site selection has been modified to ensure treatment comparison samples are included (70 each fixed media, combined media, and extended aeration). Overlap with the initial random sample was maximized, so that a total of 796 sites were targeted for assessment. After performing the initial file review it appeared that approximately 60% of the systems reviewed were not an active advanced system either because the system was abandoned, a conventional system, connected to sewer, etc. After this review, we selected an additional 204

system for a total of 1000 systems: 700 primary sample sites and 300 reserve sites in the event that a primary site is not accessible or no longer exists. Subsequently, several sites were added based on three reasons: to increase the number of sites at which the meeting of fecal coliform standards could be assessed; to designate cases of mistaken identity, that is, the system was not part of the selected sites, but mistaken by the samplers for one; and to include three innovative treatment installations where sites were conveniently located. This resulted in a total of 1014 selected systems as of end of October 2011 (additional cases of mistaken identity may still be discovered during quality control).

- In summary, the counties with the most systems to be assessed were Monroe with 260 systems, Brevard with 133 systems, Charlotte with 126 systems, Lee with 62 systems, and Franklin with 60 systems. A total of 57 out of the 67 counties in Florida have at least one system that will be reviewed as part of this project. An illustration of the distribution of sample sites is shown in Figure 1.

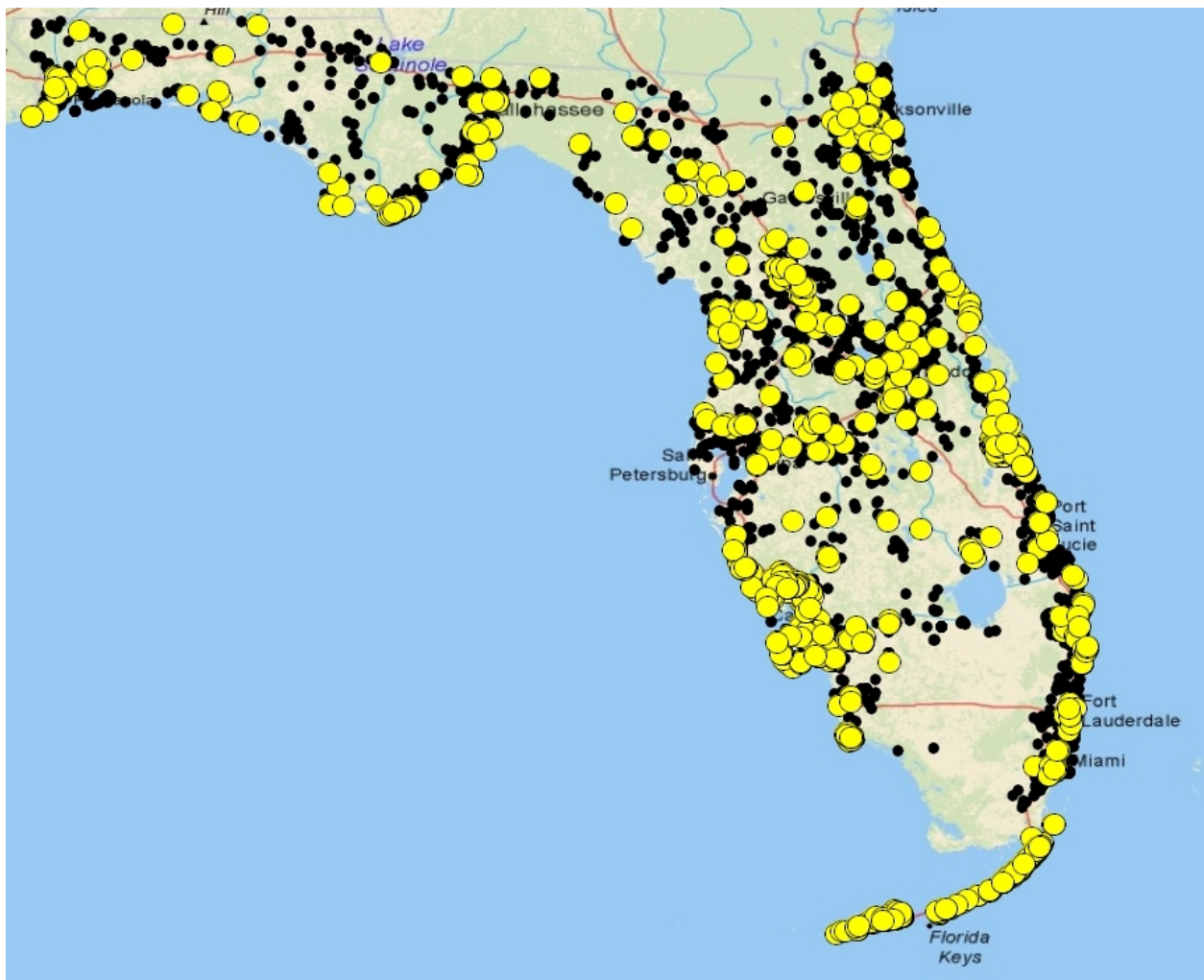


Figure 1. Distribution of Sample Sites

- Nearly all of the permit files have been gathered. Outstanding permit files will be collected as data entry continues. Data entry for approximately 600 permit files has occurred to date. This data entry includes detailed information on the construction permit, the operating permit, and other information. A total of 114 system records were final reviewed during this quarterly reporting period. A spreadsheet listing permits for Task 4 and Task 5 reviewed by month is included with this quarterly report. A separate spreadsheet including all of the quality control lab results is

included with this quarterly report. Data entry will not be done for any non-advanced systems.

- Due to the contract employee resigning in March 2011, data entry into the database has slowed down significantly. Efforts are being made to utilize bureau staff to perform this work at no cost to the grant.
- Numerous attempts were made to contact Carmody to set-up user names and passwords to access the system, which contains maintenance and inspection records. There has been no response from Carmody, so any data that is contained in the Carmody system will only be used in as far as it is accessible and County Health Department staff access and print it for the purposes of this project.
- Quality assurance has been done, and will continue, for the data being entered.
- Contract staff placed calls to manufacturers to locate a contact and learn about specific suggestions for sampling. In the event a question arises while in the field those individuals would be a point of contact. Contract staff has collected product manuals to assist with sampling.
- An Invitation to Bid for the analytical laboratory services was advertised in December of 2009 and 15 responses were received. A final decision and purchase order was executed during a previous quarter. The selected lab is Florida Testing Services, LLC DBA Xenco Laboratories. An amendment to the contract was done during this quarter to increase the number of samples to be analyzed to match the anticipated number to be gathered with this project.
- Lab reports sent to the department will include a spreadsheet of data fields that will be imported into the database. A method has been developed to automate this process and eliminate the potential for data entry mistakes.
- Included with this quarterly report is a report containing the data fields specified in the Quality Assurance Requirements For Federally Funded NPS BMP Monitoring Agreements. This report combines both the lab data and the field data measurements.
- Negotiations with Monroe, Charlotte, Lee, Volusia, and Wakulla County Health Departments resulted in their assistance with the sampling effort and a state funding increase memo was submitted and approved. Having multiple samplers operating simultaneously will allow for the sampling portion of this project to be completed in a shorter timeframe.
- Charlotte, Lee, and Monroe Counties will sample systems in their counties. Volusia County will sample systems in both Volusia and Brevard Counties, and Wakulla County will sample the remainder of the systems throughout Florida. This coordinated effort has proven to be extremely successful.
- Field training and quality assurance evaluations have been completed for all samplers working on the project. Bureau staff traveled to each of the locations providing hands-on training on how to conduct the sampling.
- Equipment and supplies have been purchased for the field kits. The equipment and supply purchasing is now complete.
- A total of 554 systems were sampled once for Task 4.
- *This task is on schedule per the February 3, 2011 grant amendment and is now complete.*
- Task 5: Assessment of Annual Variability of Performance
 - The Quality Assurance Project Plan has been executed.
 - Finding suitable Task 5 sites proved to be difficult due mostly in part to limited access to influent. Due to the limited sampling time, the priority for samplers was to take as many Task 4 samples as possible, which also affected the number of Task 5 samples that were taken.

- Twenty-eight of the systems sampled in Task 4 were sampled twice, and two were sampled three times.
- *This task is on schedule per the February 3, 2011 grant amendment and is now complete.*
- Task 6: Management Practices
 - Contract staff compiled data as it became available.
 - Tables, queries, and forms have been created to capture County Health Department management practices and files have been gathered.
 - Contract staff went along with department staff to perform a program evaluation in Gilchrist County. Available files that were selected for sampling for this county were pulled and evaluated.
 - A review will be performed on the last three program evaluation cycles for each of the county health departments. These data have been tabulated and will be evaluated to provide background information on the strengths and weaknesses of each county program.
 - A database was created linking the program evaluations that have been recorded over the past 10 years with the survey results from Task 3 for the regulators and the system owners. Analysis has been done on several potential correlations and the results will be summarized in the final task report.
 - Finalization of this task will not occur until analysis for the final report in Task 7 has been conducted. This will allow for linking between program evaluations, regulator and owner survey responses, and actual system performance from the sampling effort providing a multi-faceted analysis on management practices.
 - *This task is behind schedule per the February 3, 2011 grant amendment.*
- Task 7: Project administration
 - *This task is ongoing and is behind schedule. The only outstanding deliverable for this task is the final project report which is anticipated to be complete in the next few months. Once a draft is available, the Department of Health's Research Review and Advisory Committee will meet to discuss the results in a public meeting and the report will be finalized and submitted to the Department of Environmental Protection.*

Provide an update on the estimated time for completion of the project and an explanation for any anticipated delays.

The grant funding is now complete with deliverables in Task 6 and Task 7 still outstanding. The reason for this is due to delays in getting the QAPP written and approved as well as due to the contract staff resigning which required a complete redesign of how to accomplish the sampling effort. Data analysis and report writing is an in-kind contribution from Bureau of Onsite Sewage Program Staff.

Provide any additional pertinent information including, when appropriate, analysis and explanation of cost overruns or high unit costs.

None to report.

Identify below, and attach copies of, any relevant work products being submitted for the project for this reporting period (e.g., report data sets, links to on-line photographs, etc.)

- Permit review report for the project listing permits for Task 4 reviewed by month
- Examples of all Task 4 and Task 5 forms used for recording and reporting
- Three of each type of form completed with actual Task 4 data
- Table of lab results for samples taken during the project for Task 4
- Three of each type of form completed with actual Task 5 data
- Table of lab results for samples taken during the project for Task 5
- Table of the quality control lab results (both Task 4 & Task 5)

Summarize and provide supporting documentation regarding your efforts in meeting the MBE/WBE requirements contained in paragraph 5.B. of the Agreement

Nitelines USA, Inc. is a MBE. The contract employee that has been hired is a female of minority origin. The contracted lab, Florida Testing Services, LLC dba Xenco Laboratories, is also a MBE/WBE. The contracted lab, Ackuritlabs is a MBE/WBE. The contracted lab Benchmark EnvironAnalytical Inc. is a MBE. No new procurements were made during this quarter.

Attachment MBE/WBE Procurement Reporting Form has been included with this quarterly report.