

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:	October 1, 2010 – December 30, 2010		
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 are included in this progress report.
 - 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.
 - Reports summarizing this project are expected to reach draft form by the end of the next quarter.
 - *This task is behind schedule. This delay does not result in a delay to the overall project.*
- 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 mostly complete. A description of the data fields and structure will be developed over the next quarters. We propose to delay submitting the database descriptions until the database design is complete. The basic database information as outlined in the grant is complete. 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	Singulair	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 developed over the next quarter.
- For this task future quarters will be spent adding data regarding the sampling to be performed in later tasks and continued cleaning up of the records.
- *The task as originally outlined in the grant agreement is mostly complete. Additional work gathering and displaying the supplemental information is delaying completion of this task. The end result will provide more information that was originally anticipated. This task is behind schedule due to the addition of this supplemental information. These delays are not affecting other project tasks.*
- 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 out 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. To date, 101 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 will be completed in the next quarter.
- Data analysis will be done once the data has been QA checked. Preliminary results have been submitted to DOH. Final data analysis will be completed over the next quarter.
- A DOH intern was utilized to categorize some of the open ended questions on the surveys. Analysis and completion of this review will be completed over the next quarter.
- *This task is behind schedule to allow for inclusion of as many surveys as possible, and to ensure quality data has been entered. After discussions with the contract provider, an extension to the end date has been given to include more of the surveys that are currently being received and to allow for more time to do QA on the data. The delays associated with this task do not affect the project as a whole.*
- 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.
 - The draft Quality Assurance Project Plan has been written, presented to the DOH Research Review and Advisory Committee (RRAC), revised, and will be finalized, with an anticipated completion during the next quarter. Delays in getting this QAPP in a final format are to make it as robust and detailed as possible to eliminate any mistakes that could occur later.
 - Contract staff became certified in OSTDS in December of 2009 as stipulated in the grant agreement. Staff has also attended GIS mapping training.
 - 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. A total of 700 systems were selected which included 600 primary sample sites and 100 reserve sites in the event that a primary site is not accessible or no longer exists. 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 has been maximized, so that a total of 796 sites are currently targeted for assessment.

- The random sample has been pulled and Monroe County was over-represented by 2.7%, which comes to 19 systems. Upon discussions internally and with the grant manager at DEP it was decided to make the representation for Monroe County equal. In summary, the top counties were Monroe with 148 systems, Brevard with 99 systems, Charlotte with 95 systems, and Franklin with 47 systems. A total of 53 out of the 67 counties in Florida have at least one system that will be sampled as part of this project. An illustration of the distribution of sample sites is shown in Figure 1.



Figure 1. Distribution of Sample Sites

- 439 permit files have been gathered out of the 796 with most of the counties having responded to our requests for data and a few still needing further reminders. This data gathering will continue in subsequent quarters. Data entry on 107 permit files has been completed to date. This data entry includes detailed information on the construction permit, the operating permit, and other information. During this gathering, Monroe County provided information that 55 of the 148 selected systems are scheduled to be abandoned due to connection to

sewer. Data entry will not be done for this 55 systems.

- Contract staff placed initial calls to manufacturers in an effort 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.
- *This task is behind schedule due to minimal staff time available, delays getting contract staff hired, and delays in getting the QAPP in a final form. The delays associated with this task do put the project behind schedule. At this point the project appears to be significantly behind schedule and is dependant on when the QAPP is approved by all parties. A grant amendment is being initiated to address this issue. Negotiations with Monroe County Health Department staff are being completed to utilize their staff to help complete the sampling associated with this task and Task 5. Other counties will be contacted over the next quarter to see if the sampling effort could be further spread out to allow for more sampling to be done in a shorter time period.*
- Task 5: Assessment of Annual Variability of Performance
 - The draft Quality Assurance Project Plan is being developed with an anticipated completion during the next quarter.
 - *This task is behind schedule due to minimal staff time available, delays getting contract staff hired, and delays in getting the QAPP in a final form. The delays associated with this task do put the project behind schedule. At this point the project appears to be significantly behind schedule and is dependant on when the QAPP is approved by all parties. A grant amendment is being initiated to address this issue. Negotiations with Monroe County Health Department staff are being completed to utilize their staff to help complete the sampling associated with this task and Task 4. Other counties will be contacted over the next quarter to see if the sampling effort could be further spread out to allow for more sampling to be done in a shorter time period.*
- Task 6: Management Practices
 - Contract staff has been compiling data as it becomes 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.
 - *This task is on schedule.*
- Task 7: Project administration
 - *This task is ongoing and is on schedule.*

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

Currently several tasks are behind schedule due largely to staffing delays and time estimation errors. Development of the project database and the development of the Quality Assurance

Project Plan have taken longer than anticipated to complete and has put the project behind schedule. These delays translate to delays in the completion time of the project. A no-cost amendment to this grant is being initiated to extend the project to September 2011.

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

None

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.)

Copy of sampling results for Task 1 (Monroe County sampling)

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.

Provide a project budget update, comparing the project budget to actual costs to date.

Budget Category	Total Project Budget	Expenditures Prior to this Reporting Period	Expenditures this Reporting Period	Project Funding Balance
Salaries	\$0	\$0	\$0	\$0
Travel	\$52,552.50	\$1,841.42	\$0	\$50,711.08
Equipment	\$0	\$0	\$0	\$0
Supplies/Other Expenses	\$3,618	\$258.41	\$1,157.69	\$2,201.90
Contractual Services:				
Surveying	\$25,000	\$16,233.44	\$0	\$8,766.56
Monitoring	\$127,925	\$1,800.00	\$0	\$126,125
Public Education	\$5,000	\$0	\$0	\$5,000
TCC/Niteline Contract	\$94,259	\$55,774.23	\$11,654.57	\$26,830.20
Total:	\$308,354.50	\$75,907.50	\$12,812.26	\$219,634.74

This report is submitted in accordance with the reporting requirements of DEP Agreement No. G0239 and accurately reflects the activities and costs associated with the subject project.

Signature of Grantee's Grant Manager

Date