

FY 10 Pollution Prevention Grant Program
EPA-HQ-OPPT-2010-03

Fats, Oils, and Grease Waste Pollution Prevention Project

The proposed project will reduce fats, oils, and grease waste and increase reuse. This goal will be accomplished by providing technical assistance and education to small businesses, with a focus on restaurants, which are served by onsite sewage treatment and disposal systems. Effectiveness will be assessed by comparison of before and after intervention.

Total Project Funding: \$150,764
Requested Funding: \$75,382

Elke Ursin,
Environmental Health Program Consultant
Florida Department of Health
Bureau of Onsite Sewage Programs
4052 Bald Cypress Way, Bin A08
Tallahassee, Florida 32399-1713
Tel: 850-245-4070 x 2708
Fax: 850-922-6969
Email: Elke_Ursin@doh.state.fl.us

Roger Twitchell,
Bureau Chief, Revenue Management
Florida Department of Health
Bureau of Revenue Management
4042 Bald Cypress Way, Bin B20
Tallahassee, Florida 32399-1729
Tel: 850-245-4503
Fax: 850-488-2519
Email: Roger_Twitchell@doh.state.fl.us

Fats, Oils, and Grease Waste Pollution Prevention Project

Establishments generating fats, oils, and grease (FOG) such as restaurants and commercial kitchens face particular challenges with their waste and wastewater disposal. Utility-owned centralized wastewater collection systems often have utility-specific requirements to install certain precautions to prevent FOG from entering the collection system. Onsite sewage treatment and disposal systems (OSTDS) are regulated state-wide but have fewer required continued preventative measures. Often these business owners do not have the expertise or resources to know how they can prevent their sewage system from failing by performing simple daily tasks to reduce the amount of FOG entering the system.

The objective of this project is to reduce FOG waste and increase reuse among these small businesses by providing technical assistance and education. To reach this objective, the project will begin by identifying the scale of the problem/opportunity in Florida. Next a survey will be conducted to better understand current practices and opportunities for improvement. Then approximately 25 businesses will be selected for a more in depth characterization, which will then lead to recommending and implementing changes in practices, and monitoring the outcomes over time. A final component of this project will be to provide education and outreach to industry professional organizations as well as to business owners and their employees.

Programmatic Capability and Past Performance

FDOH is charged with protecting the health of the public. Basic sanitation is a primary public health function and is vitally important to the health and safety of all Floridians. The onsite sewage program of the department works to ensure properly designed, installed, and maintained onsite sewage systems. FDOH is a statewide operation consisting on 67 individual county health department offices and a centralized headquarters located in Tallahassee. The onsite sewage treatment and disposal program requires close coordination with local building departments and contractors. County-level offices and staff provide for cost-effective, convenient, face-to-face service to the public. Florida continues to be recognized nationally for its onsite systems program. In the fall of 2008, Mrs. Joyce Hudson, Senior Engineer with the U.S. Environmental Protection Agency wrote an article for the National Onsite Recycling Association Onsite Journal and stated “Florida provides for renewable performance-based operating permits for engineered systems as well as maintenance contracts and annual inspections. The state also has one of the best inventory systems among the states reviewed”.

The project goals of this proposal are aligned with the statutory mission of the department’s research program to research and improve the performance of onsite systems, and to research and reduce the environmental and public health impact of such systems. Our vision is to make the Florida onsite sewage program a model for the nation using research as the cornerstone to develop science-based regulations. Finally, bureau staff members in general provide technical assistance and information to county health department staff, other state agencies, regulated entities, and the general public. This grant will increase our capability of providing this technical assistance as it relates to water quality and public health.

FDOH staff members have the project management experience to successfully execute this project and have a record of past performances with similar grants by EPA and other federal agencies. Project team members have 76-years of combined experience managing grants and contracts. Elke Ursin has been the coordinator for the bureau’s research program and managing research grants and contracts since 2006. Dr. Eberhard Roeder is a Professional Engineer III and has been working in designing, implementing, and assessing onsite sewage research projects since 2004. Paul Booher is the programs engineering administrator and has been working with industry managed contracts with government functions since 1969 and currently works for the department in rule promulgation, design, and training for OSTDS systems. Gerald Briggs is the Chief of the Bureau of Onsite Sewage Programs and has been working in the environmental health field for 25 years. This project team has successfully completed four federal grants within the past three years and is currently working on one federal grant. For each of these grants staff successfully managed the agreements and completed each of these projects.

Quarterly reports were submitted on time along with the required MBE/WMBE reports. Final technical reports were submitted within the timeframe allowed under the grant agreement. Each quarterly report adequately documented and reported all progress towards achieving the expected results.

Federal Program Funding Agency	Grant Agreement #	Years	Funding Amount	Grant Title
Environmental Protection Agency 319 Nonpoint Source Management Program	C9-99451505-0 (subrecipient)	July 2008 – present	\$308,354.50 federal funding, \$200,000.00 match from DOH	Assessment of Water Quality protection by Advanced Onsite Sewage Treatment and Disposal Systems: Performance, Management, Monitoring
National Oceanic and Atmospheric Administration Office of Ocean and coastal Resource Management	NA-08NOS4190415 (subrecipient)	July 2008 – September 2009	\$68,000.00 federal funding, \$11,800.00 match from DOH	Evaluating the Environmental Impacts of Onsite Sewage Systems in the Town of Suwannee
Environmental Protection Agency Gulf of Mexico Program	MX-96423005-4	September 2004 – July 2009	\$90,000.00 federal funding, \$22,920.00 match from DOH	Remote Sensing of Onsite Sewage Systems Impacts on Surface Water Quality
Environmental Protection Agency Gulf of Mexico Program	MX-97450302-6	October 2002 – June 2009	\$48,150.00 federal funding	Reducing Onsite Sewage Impacts
Environmental Protection Agency Gulf of Mexico Program	MZ-97433201-6	September 2001 – June 2008	\$80,000.00 federal funding	Coastal Community Coliform and Nutrient Control

As an additional benefit, the department will draw for review of project reports by the department’s Onsite Sewage Research Review and Advisory Committee, which has been in existence since 1986. It consists of representatives from environmental health, the septic tank industry, the home building industry, environmental interest groups, the state university system, professional engineers, the real estate profession, the restaurant industry, local governments, and consumers. This committee advises on directions for new research, reviews and ranks proposals for research contracts, and reviews and comments on draft research reports.

Project Strategy

The focus of this project will be on FOG generated by most food service establishments that prepare hot foods and are served by OSTDS. It is commonly known that it is important to keep FOG out of sewage collection and treatment systems to keep them from failing. Nationally, there appears to be a regulatory trend towards more management of FOG from food service establishments. Such programs in Florida are mainly administered by local utilities, with a focus on maintaining sewer networks. Grease is also a barrier for sewage disposal in onsite systems by blocking the ability for the soil to treat wastewater properly. Sanitary nuisances caused by improperly maintained OSTDS affect public health and the environment through the direct exposure to raw wastewater. Avoiding failure of the sewage system is one incentive for managing FOG.

Historically business owners have had to pay to get rid of FOG. Now with fuel costs soaring, alternative fuels such as biodiesel are becoming more valuable. When business owners are in a position to receive revenue for this “waste” product, it creates a positive incentive for FOG management.

The Florida Department of Health (FDOH) regulates establishments that generate up to 5,000 gallons per day of commercial strength sewage waste served by an onsite sewage system. We estimate that there are approximately 9,700 such food establishments in Florida. In Florida an operating permit is required for the commercial strength sewage waste if there is a change in occupancy or if the OSTDS is installed or repaired. Currently 2,153 (18%) of the existing establishments are being managed by FDOH. Key elements of these regulations are the requirement for outside grease interceptor tanks to collect and retain FOG, and the requirement for an operating permit. This operating permit approach includes an annual inspection to see if the system is still functioning as permitted. The rules in place for the installation of these systems and the management of these systems have not changed much since 1983. In the meantime, there have been changes in business practices. For example, the use of animal fats has decreased and the use of vegetable oil has increased. A byproduct of the project will be a better understanding of the current FOG composition and the development of methods to handle the problem.

The proposed project consists of five major tasks.

Task 1. Identify scale of problem / opportunity in Florida

In this task we will estimate the amount of fats, oils, and grease that are currently wasted and review opportunities based on past and current information to reduce that amount.

This will involve the following subtasks:

- a) A determination of the target audience, the number of businesses that are dealing with this issue and are the target audience, will be done first. This will be based on a review of OSTDS permits. Commercial establishments are required to obtain an annual operating permit. This permit, as well as the original construction permit for the onsite system, contains information on the type of business and on design variables. The result will be a tabulation of systems in Florida that are likely to produce FOG.
- b) A characterization of FOG quantity and quality will be done and a review of current management practices will be performed. Based on literature reviews and interviews with onsite system owners, installers, maintainers, disposal / reuse companies, and utilities we will develop a characterization of FOG quantity, quality, and management practices. Depending on the information gathered, this may warrant a categorization of businesses into different types. Various treatment approaches, such as waste avoidance, grease interceptors and other methods to capture grease, and additional treatments for high strength waste, and their cost-effectiveness will be examined. Current management practices for waste disposal vs. reuse will be examined. Specifically, we will research how to keep the onsite system working, management programs in other locations, identification of regulatory and nonregulatory barriers and ways to address these barriers, and incentives to pollution prevention,. After the literature review and interviews have been completed, opportunities for solutions will be summarized and factors for a business to consider will be developed.

Deliverables: Summary statistics of the results of the permit review; characterization of outcomes of the literature review and interviews in report format

Task 2. Survey current practices from both businesses on OSTDS and businesses on centralized sewer

In this task we will conduct a survey to targeted user groups in order to identify current business practices in the following manner:

A random sample from the identified target population on OSTDS and a random sample of businesses on centralized sewer will be sent a survey to complete that will summarize their current business practices as

they relate to how much grease they generate and what they do with the waste grease. For the businesses on sewer, information may be gathered to allow for comparisons between the differences with or without a management program in place and also for the availability of rendering facilities. A third party will undertake the implementation of surveys. Questions and the detailed methodological approach will be developed by the vendor in coordination with bureau staff with some common questions complemented by user group specific questions. The exact number of surveys and the format for distribution will be determined after Task 1. Initial contact has been made with state university system survey labs for purposes of verifying costs and timelines.

Deliverables: Survey forms; raw survey results; analysis of results

Task 3. Case studies / intervention analysis

In this task we will develop individual case studies for approximately 25 systems where we will perform a detailed pre-analysis, recommend changes, implement the changes, characterize the effectiveness of the changes, and analyze the results.

This will involve the following subtasks:

- a) An evaluation protocol will be developed based on the results of Tasks 1 and 2. This tool will encompass many different aspects of how to measure variables of interest that characterizes FOG generation and management in an establishment. This will include a Quality Assurance Project Plan (QAPP) for the sampling portion.
- b) Approximately 25 food establishment businesses on OSTDS will be recruited by either advertising for volunteers and/or contacting businesses that are currently going through the repair permit process for a failing system. The existing systems will be characterized by sampling and through a detailed usage survey. Changes will be recommended based on the evaluation protocol developed in subtask a). Some examples of changes may include changes in cleaning routines, utilizing pre-rinse stations, installing floor drains, installing under the sink grease separators, increasing the frequency the tanks are pumped-out, monitoring of grease in the interceptor, and/or executing a contract with a grease recycler. These changes will be implemented and then the effectiveness of these changes will be measured after 1-month, 3-months, and 6-months with the option of continued monitoring. A final post survey will be given to measure the likelihood of the business to continue with these practices. The collected data will be analyzed.
- c) A final report summarizing results of this task will be developed.

Deliverables: QAPP, usage surveys, sampling, tabulation of sampling results, post surveys, and characterization outcomes in report format

Task 4. Education and outreach

In this task we will perform extensive, broad reaching, education and outreach to targeted business owners as well as to industry associations and periodicals.

This will involve the following subtasks:

- a) Presentations will be given at national and statewide industry association conferences such as the Florida Environmental Health Association, the Florida Restaurant and Lodging Association, the Florida Onsite Wastewater Association, the National Onsite Wastewater Recyclers Association, and/or the National

Environmental Health Association. For purposes of the budget, presentations at two statewide conferences and two national conferences are proposed.

- b) At least one article will be submitted for publication in a statewide journal such as the Florida Journal of Environmental Health.
- c) An informational brochure/fact sheet will be developed outlining the results of the project. This brochure will be sent in hard copy format to all the surveyed businesses on OSTDS and the brochure will be uploaded to the DOH website.

Deliverables: Print-out of all presentations, meeting agenda's, all submitted manuscripts, final brochure

Task 5. Project administration

Administrative responsibilities will include project oversight, financial accounting, invoicing, and grant reporting to the US EPA. The final project report will include: a description of the project; a summary of the survey results; problems encountered during the project; and a detailed financial accounting of the project costs, including grant and match funding. Copies of scientific or technical publications resulting from this project will be included in quarterly reports. Other work products that are to be submitted to EPA with the final report or as separate items include sampling results associated with this grant project, copies of related press releases and meeting agendas, fact sheets, or other materials distributed to the public as a direct result of this project.

Deliverables: Quarterly progress reports and invoices submitted to EPA; preliminary (draft) report; and final project report (paper copy and an electronic version); copies of scientific or technical publications resulting from this project (to be included with quarterly progress reports); all other work products associated with this project

This proposal provides a workable framework to address sustainability, business efficiency, and P2 integration activities. The work plan presents a comprehensive and coordinated approach of the issue of FOG pollution prevention starting with identification of the scale of the problem, then moving to identify current business practices, performing detailed case studies to evaluate the effectiveness of strategic changes, and finally performing education and outreach of the results of this project. The end result of this project will include a cost-effective way of meeting or exceeding state regulatory requirements for grease and oil waste.

This project will be consistent with the applicable EPA regulations and grant policies.

The main target audiences for this project are business owners of food service establishments on OSTDS in Florida and their employees. In addition, agencies such as the Florida Department of Business and Professional Regulation (DBPR), Florida Department of Agriculture and Consumer Services, and the Florida Department of Health will be targeted as these regulators have direct contact with the main target audience. Industry professional organizations such as the Florida Environmental Health Association, the Florida Onsite Wastewater Association, and the Florida Restaurant and Lodging Association will also be targeted. The main targeted group will benefit from the P2 technical assistance proposed in this project by being able to implement changes that will extend the life of their OSTDS and to identify potential revenue making options for recycling FOG waste. Once the cost benefits have been developed and presented the target audience will be well prepared to implement these source reduction practices.

At the end of this project, targeted business owners will be provided with useable information to apply common sense practices and simple solutions to effectively reduce and reuse their FOG and increase the lifespan of their OSTDS. Lessons learned from this project will be evaluated to see if any policy changes are necessary to make the results of the project easier to implement. The extensive public outreach and education described in the work plan will allow for the transfer of knowledge among business owners, industry professionals, and regulators.

Threshold Requirements

The following proposal meets the threshold program requirements to receive consideration for funding. Specifically the proposal addresses all five of the national criteria, all four of the Region 4 priorities, meets all three of the P2 programmatic criteria, does not extend beyond 3-years, and consists of outcomes and outputs that align with EPA's strategic plan.

This project addresses all five of the goals of the national focus areas for the P2 plan:

- **Reduce the generation of greenhouse gas (GHG) emissions to mitigate climate change:** Project activities will promote the conservation and recycling of waste grease and oil which can be used as an alternative fuel for cars, for livestock feed, for soap manufacturing, and other uses. These types of establishments are increasingly being paid for this waste product. Biodiesel fuels can be used to offset the demand for petroleum based products which reduces the generation of greenhouse gas emissions.
- **Reduce the manufacture and use of hazardous materials to improve human and ecological health:** Project activities will result in opportunities to reduce the occurrence of sanitary nuisances such as the discharge of raw sewage waste onto the ground surface or into the groundwater. This will affect public health through a reduction of exposure to hazardous sewage wastes and will reduce environmental impacts of untreated sewage entering the groundwater supply.
- **Reduce the use of water and conserve other natural resources to protect ecosystems:** The reuse of waste grease as a natural resource for fuel and other uses allows for the conservation of natural resources. Also, identification and quantification of business practices may lead to options for water conservation that will reduce the amount of waste being generated by the establishment.
- **Create business efficiencies that derive economic benefits and improve environmental performance:** Food service establishments would benefit economically by obtaining cash for their grease as well as providing an avenue to reuse what was originally considered a waste product which improves environmental performance. This grant will identify ways that this type of program could be implemented in Florida for businesses on OSTDS.
- **Institutionalize and integrate pollution prevention practices through government services, policies, and initiatives:** One of the potential end results of this project could be to establish the need and generate language to change the Florida Administrative Code and the Florida Statutes as it relates to the design and management of oil and grease from food service establishments. Government services could be expanded and improved if a grease control training program, inspection program, or surcharge program is initiated.

This grant also addresses all four of the Region 4 priorities. Specifically, this project will integrate P2 and compliance assistance objectives by keeping the OSTDS functioning properly and keeping the grease interceptor functional. Pollution prevention will occur with grease waste avoidance and recovery. This project will maintain and strengthen coordinated state P2 programs by incorporating similar approaches to existing and past Florida P2 programs. Advice will be solicited from the Florida Pollution Prevention Roundtable, Inc. P2 assistance will be directly given to businesses as part of the case studies and public education components of this project which addresses another of the regions priorities. Reuse of grease waste in the hospitality sector provides opportunities for energy conservation and is a renewable energy source which is another Region 4 priority.

This project will align with all three of the programmatic criteria that apply for P2 grants. Methods will be identified to reduce the amount of waste oil and grease prior to treatment and disposal. This will in turn reduce the hazards to public health and the environment. Through proper identification of the problem areas methods can be developed to reduce the release of this pollutant to the environment while providing an economic benefit to business owners through revenue generation (selling of waste oil/grease) and decreased costs (increased system longevity = less repair costs). This project will help businesses identify better environmental strategies and solutions for reducing or eliminating FOG wastes at the source.

This grant will also assist businesses in adopting P2 practices that reduce FOG pollution at the source by supporting business activities that encourage water conservation and recycling of wastewater byproducts.

Environmental Measures

DOH will track and report on expected P2 outcomes and outputs and project activities will directly support one or more of the four strategic targets listed in EPA’s 2009-2014 Strategic Plan Change Document.

Project title: Fats, Oils, and Grease Waste Pollution Prevention;

Outputs: The project will perform a preliminary assessment of current business practices to targeted user groups. System performance for 25 food service establishments will be measured, changes will be implemented to apply P2 activities, measurements will occur at 1-month, 3-months, and 6-months after implementation, and a final post survey will be given to measure the likelihood of the business to continue with these practices. Project status will be presented to at least four different state and national groups, published in industry publications, and a final project fact-sheet / brochure will be developed and distributed.

Behavioral measures: Number of business owners that respond to the targeted user group surveys; number of case study business owners that indicate on their post survey that they will continue their P2 efforts

Partners: Florida Environmental Health Association, Florida Onsite Wastewater Association, Florida Department of Health’s Research Review and Advisory Committee

Sectors: Hospitality businesses

Data collection description: The P2 measurements will be collected by gathering data from the literature review, pre/post surveys, sampling, and other project activities. The literature review will provide background information for the estimate of the amount of fats, oils, and grease that are currently wasted and review opportunities based on past and current information to reduce that amount. Surveys will be sent to both business owners on OSTDS and central sewer to measure any differences and/or trends. Pre/post surveys will be given to the 25 selected case study sites to measure the differences caused by the implementation of P2 activities. Samples of the effluent pre and post implementation of P2 activities will also be analyzed to determine any differences.

Estimated P2 Outcomes for the Fats, Oils, and Grease Waste Pollution Prevention Project

P2 Effort	Pounds of Hazardous Materials Reduced					Resources Conserved			
	Haz. Inputs	Haz. Waste	Air Poll.	Waste Water	Total Lbs	Solid Waste	MTCO2e	Gallons	Dollars
1. Reduction of FOG in the drainfield				1,313	1,313				
2. Grease recycling								16,219	\$649
Total:				1,313	1,313			16,219	\$649

Descriptions of outcomes:

- Reduction of FOG in the drainfield:** The average flow, derived from the FDOH permitting database, of OSTDS generating commercial strength sewage waste in the last two years is 1,639 gallons per day (gpd). Assuming that the calculations used to size the system is 100% more than the actual to cover peak flows; the actual average flow comes to 819.5 gpd. Per a FDOH study done in 2000 (Determination of Properties and the Long Term Acceptance Rate of Effluents from Food Service Establishments that Employ Onsite Sewage Treatment) the median FOG values can be broken out into high (50 mg/L FOG), medium (27 mg/L FOG), and low (9 mg/L FOG) categories. The goal is to have each system improve by one category (go from high to medium or medium to low) which comes respectively to either a 46% or a 67% reduction. Through basic unit conversions, the mg/L can be converted to lbs/gallon, then multiplied by 819.5 gpd, and converted to year to come up with 124.8 lbs/year/system for the high category and 67.4 lbs/year/system for the low category. It is assumed that 15 of the case study systems are currently in the high category and 10 of the case

study systems are in the medium category. The total high category FOG generated by the case study systems comes to 1,872 lbs/year and the total medium category FOG generated by the case study systems comes to 674 lbs/year, which comes to a total of 2,546 lbs of FOG generated by the 25 case study systems. Taking the 47% reduction for the high category systems to move them into the medium category and a 67% reduction for the medium category systems to move them into the low category, the reduction of FOG comes to 861 lbs/year and 452 lbs/year respectively. By summing these two numbers, the total pounds of FOG reduction estimated for this project comes to 1,313 lbs.

2. **Grease recycling:** The total average gallons of waste grease/restaurant/year per the National Renewable Energy Laboratory are at least 2,000 gallons/restaurant/year. There are a total of 25 case study sites proposed with this project. The current volume of grease currently generated by these sites is estimated at 50,000 gallons. The size of the grease recycling container averages 150 gallons and is pumped on average 17.3 times per year. 50% of the grease in these containers is usable for biodiesel or other rendering purposes, and the average price per pound is \$0.04. The total grease that could be recycled would be 150 gallons x 17.3 pumpouts a year x 25 systems, which totals 64,875 gallons. Only 50% is useable, so the total potential usable recycled grease is 32,437 gallons, which at \$0.04 per gallon comes to \$1,297 of potential income to the business owners. The goal is to have 50% of the potential usable grease generated from these facilities recycled, which comes to 16,219 gallons. The goal for direct cost savings to the business owner for the grease waste is \$649.

Some other expected outcomes and outputs include:

- Number of dollars saved through pollution prevention improvements listed by categories such as reduced number of pumpouts and reduced likelihood of system failure
- Water pollution measurements such as the number of pounds of TSS / CBOD₅ before and after intervention for the case study sites
- Number of workshops, presentations, publications
- Number of readers that were sent publications regarding this project
- Number of fact sheets / brochures developed and distributed
- Estimates of achievable FOG reduction and recycling rates as a result of the research on current and improved management practices

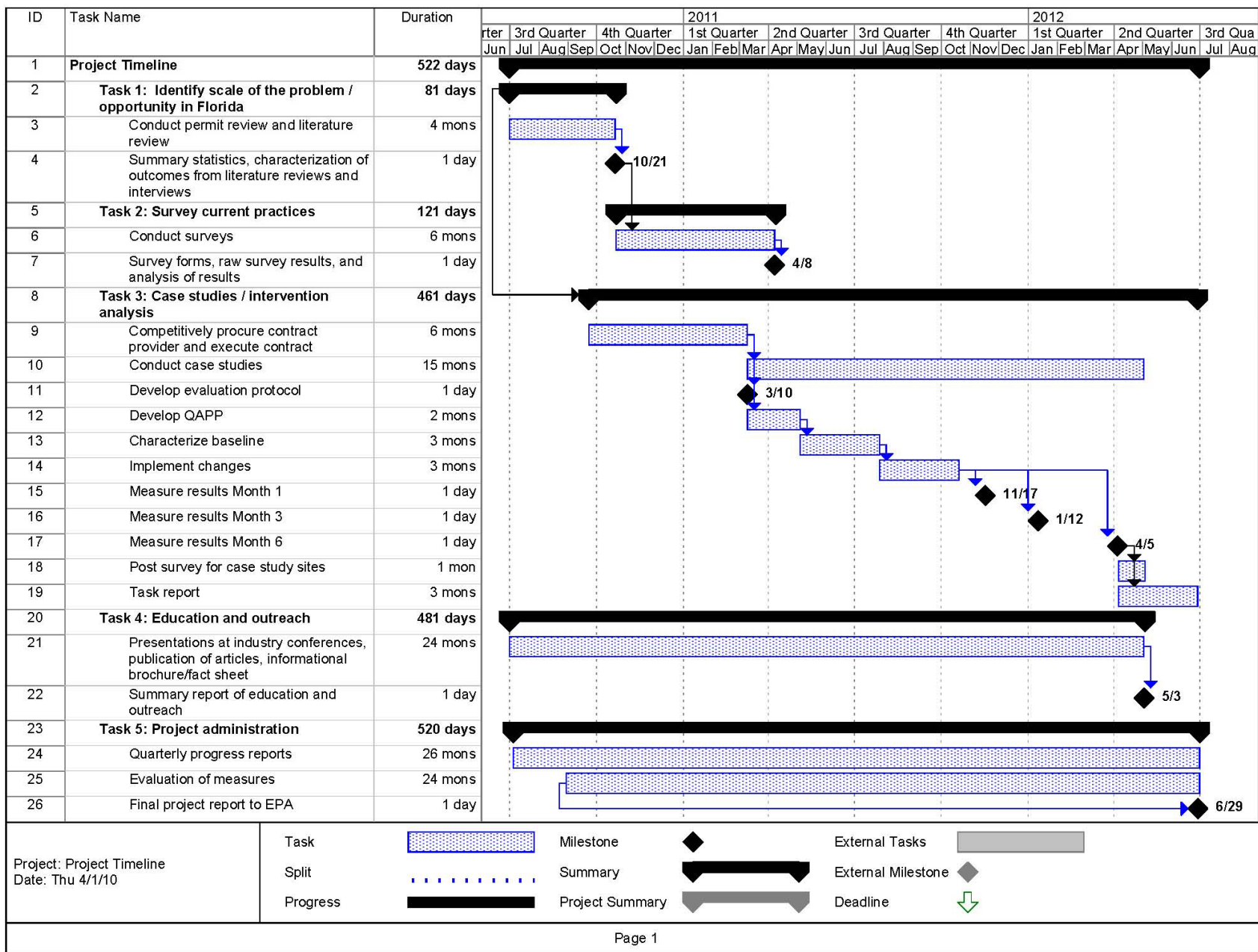
These outcomes and outputs will be measured and tracked as the project progresses and % completion will be submitted along with the quarterly progress reports to EPA. A spreadsheet will be created at the beginning of the project to record the measures and milestones, and will be utilized and updated throughout the project time line.

Conclusion

This proposal will allow for cooperation between many of the regulatory agencies that have jurisdiction over the food service establishment. The data collected through this grant will enhance other programs within the Department of Health and may be of interest to other state agencies such as the Department of Business and Professional Regulation, the Department of Environmental Protection, and the Department of Agriculture and Consumer Services.

This project will allow for business owners to better understand ways to prolong the life of their OSTDS, leading to cost savings, and possibly cost reimbursements, in the future.

PROJECT TIME LINE



PROJECT BUDGET

Project Funding Category	Detailed Description	Grant Amount	Matching Contribution	Total
Personnel	Program Consultant @ \$21.76/hr x 520 hrs	\$0	\$11,315	
	Engineer III @ \$30.82/hr x 440 hrs	\$0	\$13,561	
	Computer Consultant @ \$21/hr x 40 hrs	\$0	\$840	\$25,716
Fringe Benefits	Program Consultant @ \$286.04/wk x 13 wks	\$0	\$3,719	
	Engineer III @ \$348.54/wk x 11 wks	\$0	\$3,834	
	Computer Consultant @ \$277.10/wk x 1 wk	\$0	\$277	\$7,830
Travel	Site Visits to Case Study Locations			
	mileage (25 trips x 514 miles per trip x \$0.445/mile)		\$5,718	
	hotel (\$90/night x 29* nights)		\$2,610	
	meals (lunch @ \$11 x 29* days + dinner @ \$19 x 29* days)		\$870	
	per diem (\$80/day x 29* days)		\$2,320	
	In State Conference Travel x 2 trips x \$500/trip	\$0	\$1,000	
Out of State Conference Travel x 2 trips x \$1500/trip	\$3,000	\$0	\$15,518	
Equipment		\$0	\$0	\$0
Supplies	1000 brochures for community members @ \$2 each	\$0	\$2,000	
	Reports (28 x 50 page reports & 28 x 200 page reports @ \$0.10/page)	\$0	\$700	\$2,700
Contractual	Scale of Issue Contract with University or Contracted Staff	\$12,000	\$0	
	Survey of Practices Contract with University or Contracted Staff	\$14,000	\$8,000	
	Case Studies Competitively Procured Contract	\$46,382	\$18,618	\$99,000
Construction		\$0	\$0	\$0
Other		\$0	\$0	\$0
Total Direct Charges		\$75,382	\$75,382	\$150,764
Indirect Charges	No indirect charges	\$0	\$0	\$0
GRAND TOTAL		\$75,382	\$75,382	\$150,764

* This estimate is based on a total of 21 one-person trips and 4 two-person trips to total 29 total trips

Measurement: Expenditures to measure P2 outcomes include personnel costs of \$2,675.28 to compile and report on project results listed in the measurement section of this proposal. This includes salary and fringe for the Program Consultant (salary: \$21.76/hr x 40 hrs = \$870.40, fringe: \$286.04/wk x 1 wk) and the Engineer III (salary: \$30.82/hr x 40 hrs = \$1,232.80, fringe: \$286.04/wk x 1 wk).



Florida Onsite Wastewater Association, Inc.

April 2, 2010

Ms. Pamela Swingle
Region 4 Pollution Prevention Program Coordinator
Environmental Protection Agency
61 Forsyth Street SW
Atlanta, GA 30303

RE: EPA-HQ-OPPT-2010-03 – Fiscal Year 2010 Pollution Prevention Grant Program

Dear Ms. Swingle:

It is our pleasure to endorse the Florida Department of Health's (FDOH) efforts to secure EPA funding for the Fats, Oils, and Grease Waste Pollution Prevention Project. Florida's environmental health professionals are often called upon to address the public's concerns regarding the possible association between environmental exposures and health effects. This project can assist with the prevention of sanitary nuisances as well as increase the amount of managed sewage waste.

The Florida Onsite Wastewater Association is involved with every aspect of the onsite industry. We are concerned with the health and well being of Florida residents. Improving the knowledge of people working in the onsite sewage industry as well as our customers is critical to protecting public health and the environment. Management of onsite systems is a key issue that the organization is supporting in Florida's 2010 Legislative Session.

FOWA strongly supports this proposal. Specifically, FOWA will provide support for the education and outreach task of this project. FOWA currently has a class on High Strength Waste and many of the results of this project can be incorporated into the curriculum. We can also provide assistance by publishing articles in our monthly periodical (The VOICE) as well as providing an opportunity for the project staff to present at a future convention and trade show.

Thank you for supporting such an important pollution prevention project.

Sincerely,

Roxanne Groover
Executive Director

Administrative/Business Office
P. O. Box 950368
Lake Mary, FL 32795-0368
Phone: (321) 363-1590 ♦ Fax: (877) 832-9434
Email: admin@fowaonsite.com

Training Center
5115 State Road 557
Lake Alfred, FL 33850-7202
Phone: (863) 956-5540 ♦ Fax: (877) 832-9434
Email: trainingcenter@fowaonsite.com

Website: www.FOWAonsite.com

FLORIDA ENVIRONMENTAL HEALTH ASSOCIATION, INC.

An affiliate of the
National Environmental
Health Association



Organized
October 12, 1947

A non-profit association serving the environmental health profession in the State of Florida

April 2, 2010

Ms. Pamela Swingle
Region 4 Pollution Prevention Program Coordinator
Environmental Protection Agency
61 Forsyth Street SW
Atlanta, GA 30303

RE: EPA-HQ-OPPT-2010-03

Dear Ms. Swingle:

Please accept this letter of support for the Florida Department of Health's (FDOH) efforts to secure EPA funding for the Fats, Oils, and Grease Waste Pollution Prevention Project. This project will empower business owners to manage their wastes and will provide for a solid framework for reducing the environmental and public health impacts from failing onsite sewage treatment and disposal systems.

The knowledge gained as a result of this project will assist public health officials, industry experts, business owners, and their employees with pollution prevention activities and will improve on current business practices.

The Florida Environmental Health Association's (FEHA) purpose is to preserve, protect, and improve the quality of life for Florida's residents and visitors. This is accomplished through applying and promoting scientific principles and by educating both environmental health professionals and the public. FEHA publishes a journal which keeps its readers up to date with the latest available information regarding health impacts related to environmental factors. The Journal, the association's website, and FEHA's numerous educational opportunities throughout the year would provide an excellent venue for disseminating the information gathered with this project to a wide audience. We would be pleased to assist FDOH in their efforts to increase their capacity in this area.

Specifically, FEHA will provide support regarding the education and outreach task of this proposal. Examples of what FEHA will support include publishing a manuscript of the project in the Florida Journal of Environmental Health and providing the venue for project staff to present on this project at the associations annual education meeting.

I strongly support this proposal and thank EPA for supporting this important public health initiative. By developing pollution prevention programs such as this one at a statewide level, we ensure a better understanding of the possible benefits of reducing and recycling waste products.

Sincerely,

Scott Turner, MPA, RS
President

Charlie Liem, Interim Secretary

Charlie Crist, Governor

April 2, 2010

Ms. Pamela Swingle
Region 4 Pollution Prevention Program Coordinator
Environmental Protection Agency
61 Forsyth Street SW
Atlanta, GA 30303

RE: EPA-HQ-OPPT-2010-03 – Fiscal Year 2010 Pollution Prevention Grant Program

Dear Ms. Swingle:

I am writing this letter in support of the Florida Department of Health's (FDOH) efforts to secure EPA funding for a pollution prevention project looking at fats, oils, and grease waste generated by food service establishments on onsite sewage treatment and disposal systems.

The Division of Hotels and Restaurants inspects and regulates over 80,000 hotels and restaurants throughout Florida in order to protect the health and safety of the public. Exposure to raw wastewater from failing onsite sewage treatment and disposal systems is a hazard that should be prevented. The work performed as part of the grant proposal from FDOH will include solutions to reduce and eliminate these types of exposures.

The division is in support of this significant project. It is important to provide business owners with ways to prevent pollution. Thank you in advance for supporting such a critical project.

Sincerely,



Diann S. Worzalla, RS. MPA
Deputy Director



Utilities Water Reclamation Division

March 23, 2010

Elke Ursin
Environmental Health Program Consultant
Florida Department of Health, Bureau of Onsite Sewage Programs

Re: Grease Sludge Waste in Establishments on Onsite Sewage Treatment and Disposal Systems Generating Commercial Strength Sewage Waste

Regarding your grant proposal, I would be happy to assist you with information on how grease interceptors/traps can reduce the maintenance activities and cost for wastewater systems. I can also provide some visual information on what is actually found in grease interceptors/traps and how lack of interceptor/trap cleaning can cause clogs, which created overflows in facilities and onto the ground which can impact surface and ground water.

I may also be able to assist you with information on oil and grease recycling programs and the products that can be derived from these efforts. Also I will give information on how a maintenance or cleaning frequency monitoring program can reduce overflows and with septic systems drainfield clogging and frequent system repairs.

This information and expertise will be provided in kind with the intent of helping to convey information from an administrator of an existing Fats Oils & Greases program operating within a functioning POW utility reclaimed water division.

The above mentioned services and information will be provided in kind only asking that as a representative of Orange County Utilities that I and my company be mentioned as contributors of information relevant to this project.

If you have any further questions or requests regarding my intent and commitment to assisting with this project please contact me utilizing the information below.

Jorean F. Washington, R.S.
Environmental Specialist II
Orange County Utilities
4760 Sand Lake Rd.
Orlando, FL. 32819
407-254-7750 (Office)
407-254-7780 (Fax)
Jorean.Washington@ocfl.net

UTILITIES DEPARTMENT, WATER RECLAMATION DIVISION
South Water Reclamation Facility
4760 Sand Lake Road ■ Orlando, Florida 32819
Phone: (407) 254-7701 ■ Fax: (407) 254-7780

DAVID C. CARTER

Consulting Engineers, LLC

(863) 294-6965
FAX (863) 294-7460
dcarte4@tampabay.rr.com

137 Fifth Street, N.W. • Winter Haven, FL 33881

April 2, 2010

Ms. Pamela Swingle
Region 4 Pollution Prevention Program Coordinator
Environmental Protection Agency
61 Forsyth Street SW
Atlanta, GA 30303

RE: EPA-HQ-OPPT-2010-03 – Fiscal Year 2010 Pollution Prevention Grant Program

Dear Ms. Swingle:

Please accept this letter of support for the Florida Department of Health's (FDOH) Fats, Oils, and Grease Waste Pollution Prevention Project. High strength waste has previously been researched by FDOH with assistance by the Research Review and Advisory Committee (RRAC), and it is a component of wastewater that can lead to sanitary nuisances that can negatively effect public health.

FDOH is required by 381.0065(4)(o) of the Florida Statutes to have a Research Review and Advisory Committee, which reviews and ranks proposals for research contracts and reviews draft research reports and makes comments. Our committee is made up of ten representatives from various interest groups such as environmental health, the septic tank industry, the home building industry, environmental interest groups, the state university system, professional engineers, the real estate profession, the restaurant industry, local governments, and consumers.

RRAC will specifically support this project through the contribution of in-kind services. The committee will perform its statutory responsibilities by reviewing and ranking the proposals for any competitively procured contracts and will review and comment to the project staff on project reports.

In conclusion, RRAC supports this proposal as it relates to protecting public health and the environment through pollution prevention activities and we commit to work closely with the project staff to build consensus on the principles of the study and the interpretation of the findings. Please feel free to contact me if further information is needed.

Sincerely,



David C. Carter, P.E.
Chairman