

Pollution Prevention Grant Program DRAFT Proposal Outline: Grease Sludge Waste in Establishments on Onsite Sewage Treatment and Disposal Systems Generating Commercial Strength Sewage Waste

Important facts about the grant:

- cost sharing / match: 50% which may include dollars, in-kind goods and services (such as volunteered time, photocopying, printing services, etc.) and/or third party contributions
- not longer than three years
- \$20,000 - \$180,000
- Due April 6, 2010

Overall goals of the Pollution Prevention (P2) grant:

- help businesses identify better environmental strategies and solutions for reducing or eliminating waste at the source
- support state technical assistance programs that address the reduction or elimination of pollution by businesses across all environmental media: air, water and land
- assist businesses in adopting P2 practices that reduce pollution at the source, including the conservation of water and energy
- In support of:
 - Technical assistance
 - Training
 - Outreach and education
 - Identifying and addressing regulatory and nonregulatory barriers and incentives to pollution prevention

Objectives:

- Develop and verify best management practices for grease reduction and reuse in facilities generating commercial strength sewage waste
- Need for grant: establishments on utility owned centralized wastewater collection systems have requirements to install certain precautions to prevent oil and grease from entering the collection system. OSTDS also have certain precautions required but the idea of protecting the system may not be foremost on the business owners mind. They often do not have the expertise to know how they can prevent their system from failing by performing simple daily tasks to reduce the amount of oil and grease entering the system.
- Reduce grease in OSTDS, causes sewer backups
- Grease is a barrier for sewage disposal, blocks ability for soil to treat the effluent properly

Tasks:

1. Identify Target Group
 - a. Find existing commercial strength sewage systems
 - i. Query EHD
 1. operating permits
 2. construction permits
 3. pumpers
 4. sanitary nuisances

- ii. GIS component
 - 1. update inventory
 - 2. Identify the scope of the problem
 - a. Perceptions:
 - i. Survey existing commercial system users and commercial system designers / installers / inspectors (engineers / contractors / DOH)
 - 1. FSU Survey Research Lab assistance?
 - b. Literature review:
 - i. Commercial effluent (including UF restaurant study)
 - ii. Benefits of pumping
 - iii. Other studies looking at this issue (performance of bacteria decreases, etc.)
 - iv. Best management practices in other locations
 - c. Data:
 - i. Query EHD to find failures for commercial strength systems and causes
 - ii. Query EHD to find sanitary nuisances
 - iii. Find out way to track annual operating permits that have grease disposal contracts and measure gallons of grease hauled off for reuse vs. direct disposal
 - iv. Sample effluent from failing systems for grease content
 - 1. Sample before and after repair
 - v. Sample commercial systems throughout the state
 - 1. sludge judge?
 - vi. Estimating sewage flows (Get with UF)
 - vii. Grease characteristics (lower animal fat and increased vegetable oil, changes consistency of the "grease")
 - 1. when did this switch happen? Look at before and after
 - 2. how does the grease layer in the tank?
3. Process and procedure modifications
 - a. Identify methods to recover grease
 - i. Grease removal
 - 1. Grease recycling, rendering companies (accept oil, grease, etc. turning a nuisance waste material into a beneficial product)
 - ii. Centrifuge on pump tank
 - iii. Identify current efforts / best practices for businesses on DEP regulated systems
 - 1. Cash for grease program (find businesses that do this)
 - a. how do they market their services?
 - b. Identify methods to intercept grease
 - i. Tank design and sizing
 - 1. Certified sewer tanks vs. DOH tanks
 - 2. Grease collection devices undersized and not maintained?
 - 3. Outlet requirement of 8-inches from the bottom of the tank being consistently installed? What happens if a regular septic tank is used?
 - 4. Filter requirements
 - 5. Benefits from having a tank that is deeper than it is wide to allow for better separation
 - 6. Larger first chamber in the septic tank to handle the excess grease that comes from the interceptor
 - 7. Florida Building Code tie-in

- ii. Characterizing grease interceptor effectiveness
- iii. Installing tanks further away from building to allow for cooling
- iv. Under the sink grease trap may lead to less grease getting out to the drainfield
- v. Effects of hot dishwasher water on the system (put system further away to allow for cooling)
- vi. Influences from business practices
 - 1. Cleaning agents like degreasers making it into the system and causing emulsification of the grease
- vii. Making sure new and existing OSTDS are approved to accept grease
 - 1. Approval of new restaurants on existing systems (work with local business license issuers)
- c. Identify disposal methods for surplus waste
 - i. OSTDS treatment after grease interceptor
 - ii. Water reuse (drip irrigation)
 - iii. Emulsification issues
- 4. Identify methods to improve the identified problems (reactive (sanitary nuisances, repairs) vs. proactive)
 - a. Evaluate and recommend policy changes (RRAC / TRAP involvement) (proactive)
 - i. Mandatory inspections
 - 1. pump out every 3-months with option to reduce frequency after 1-year with recommendation by certified pumper
 - 2. needs “teeth” to ensure compliance
 - 3. Different methods:
 - a. regular inspection program and pumping based on condition of system
 - b. specific frequency for cleaning
 - c. leave it up to the owner to determine the frequency but require pumping logs
 - d. require regular sampling and monitoring of the discharge to determine compliance
 - e. require testing when system fails (where to pull a sample?)
 - ii. Surcharge program
 - 1. If high BOD, TSS, and FOG charge a fee (what will the fee pay for?)
 - 2. Systems on a centralized sewer collection system pay a fee on their utility bill to cover disposal of wastes, no such fee for septic systems. Require establishments that generate commercial strength sewage waste to pay a fee that will help with the disposal of wastes.
 - 3. Effective incentive to establishment to maintain their system
 - iii. Grease control training program (based on EPA and WEF’s program)
 - 1. enforcement of limits (what limits? Strength and volume? Not to exceed percentage?)
 - 2. proper interceptor, septic tank, and drainfield sizing
 - 3. developing maintenance programs for commercial sewage waste generators
 - 4. public education programs
 - 5. start with this as what we want to implement (as a pilot for a best practice, until we find out if it would make good regulations)

- b. Procedural changes (data entry, inspections, etc.) (proactive)
 - i. Inspection form for annual operating permit inspections
 - ii. Requirement for testing
 - iii. Standardize food establishment inspections to include grease generating equipment
 1. collaboration between DOH/DACS/DBPR
- c. Education campaign (proactive)
 - i. Target groups:
 1. Business owners and employees
 2. System designers
 3. DOH
 - ii. Methods (multimedia approach to encourage states to work toward P2 program goals and encouraging applicants to engage in partnerships):
 1. Manuals
 2. Checklists (Do's and Don'ts (did you clean the undersink grease trap today?))
 3. Presentations at statewide/national conferences
 4. In person training in source reduction techniques
 5. Publication on the project in statewide journals
 6. Collaboration with food managers and food handlers certificate program
 - a. List of approved certification programs on DOH website
 - iii. Specific technical assistance will be made available to businesses seeking information about grease / oil reduction opportunities. County health departments throughout the state will be provided with information to educate business owners. On-site technical advice will be provided to businesses by the certified Environmental Health Professionals throughout the state (FEHA/FOWA involvement)
- d. Best management practices checklist / pamphlet
 - i. Pre-portioned packages of cleaning products causes less issues with accidental overdose of harmful cleaning products into system

Letters of support:

- FEHA
- FOWA (?) sent email 3/12/10
- FSU = No letter but willing to help with the survey
- UF (?)
- Orange County Utilities (?) sent email 3/11/10
- DBPR (?)
- DACS (?)
- FL Association of Restaurants (?)
- Home Building Association (?)
- FL Association of Realtors (?)
- RRAC (?)