



**Florida Department of Health
Bureau of Onsite Sewage Programs
Research Review and Advisory Committee Meeting**

DATE AND TIME: November 5, 2010 at 9:30 a.m. EDT

PLACE: Florida Department of Health Southwood Complex
Betty Easley Center
4075 Esplanade Way, Room #178
Tallahassee, FL 32399

Or via conference call / web conference:

Toll free call in number: 1-888-808-6959

Conference code: 1454070

Website: <http://connectpro22543231.na5.acrobat.com/rrac/>

This meeting is open to the public

AGENDA: FINAL

1. Introductions and Housekeeping
2. Review Minutes of Meeting June 10, 2010
3. DEP Nitrogen Modeling Presentation – Dr. Ming Ye, FSU
4. Nitrogen Study
 - a. Discussion on draft legislative report (due February 1, 2011)
 - b. Comment on deliverables and next steps
5. DEP Studies on OSTDS Nutrient Removal
 - a. Bold and Gold Study – Dr. Marty Wanielista and Dr. Ni-Bin Chang, UCF
 - b. Wakulla PBTS Study by DEP/FSU
6. Update on Study of Performance of Advanced Systems in Florida
7. Update on Town of Suwannee Study
8. Discussion on Continuation of Inventory of OSTDS
9. Alternative Drainfield Products Discussion
10. Other Business
11. Public Comment
12. Closing Comments, Next Meeting, and Adjournment

Research Review and Advisory Committee for the Bureau of Onsite Sewage Programs

Approved Minutes of the Meeting held at the Betty Easley Conference Center, Tallahassee, FL
November 5, 2010

In attendance:

- **Committee Members and Alternates:**

- In person:**

- Bob Himschoot (member, Septic Tank Industry)
 - Bill Melton (member, Consumer)
 - Eanix Poole (alternate, Consumer)
 - Patti Sanzone (member, Environmental Interest Group)
 - Clay Tappan (chairman, member, Professional Engineer)

- Via teleconference:**

- Quentin (Bob) Beitel (alternate, Real Estate Profession)
 - Kim Dove (member, Division of Environmental Health)
 - Tom Higginbotham (alternate, Division of Environmental Health)
 - Kriss Kaye (alternate, Home Building Industry)
 - Carl Ludecke (vice-chairman, member, Home Building Industry)
 - Jim Peters (alternate, Professional Engineer)
 - John Schert (member, State University System)
 - Pam Tucker (member, Real Estate Profession)

- Absent members and alternates:**

- Sam Averett (alternate, Septic Tank Industry)
 - John Dryden (alternate, State University System)
 - Geoff Luebkekmann (member, Restaurant Industry)
 - Mike McInarnay (alternate, Septic Tank Industry)
 - Susan McKinley (alternate, Restaurant Industry)
 - Jim Oskowis (member, Local Government)
 - Vincent Seibold (alternate, Local Government)

- **Visitors:**

- In person:**

- Damann Anderson (Hazen and Sawyer)
 - Robert Arredondo (DCA)
 - Josefin Edeback (Hazen and Sawyer)
 - Raoul Fernandes (FSU)
 - Richard Hicks (DEP)
 - Paul Lee (DEP)
 - Fernando Rios (FSU)
 - Shanin Speas-Frost (DEP)
 - Ellen Vause (Florida Septic, FOWA)
 - Liying Wang (FSU)
 - Ming Ye (FSU)

- Via teleconference:**

- Neil Campbell
 - Kim Dinkins (Marion County)
 - Dana ____ (unidentified)
 - Daniel Dooley (Marion CHD)
 - Sarah Fowler
 - Bruce French (York)
 - Karl Henry (Seminole CHD)
 - Daniel Smith (AET)
 - Ron Suchecki (Hoot Systems)
 - Marty Wanielista (UCF)

- **Department of Health (DOH), Bureau of Onsite Sewage Programs:**

- In person:**

- Kara Loewe, Distributed Computer Systems Consultant
 - Eberhard Roeder, Professional Engineer
 - Elke Ursin, Environmental Health Program Consultant

- Via teleconference:**

- Paul Booher, Professional Engineer
 - Kim Duffek, Environmental Health Program Consultant

1. **Introductions** – Eight out of ten groups were present, representing a quorum. Chairman Tappen called the meeting to order at 9:35 a.m. Introductions were made and some housekeeping issues were discussed.
2. **Review of Previous Meeting Minutes** – The minutes of June 10, 2010 were reviewed.

Motion by Carl Ludecke and seconded by Bill Melton to approve the minutes. All were in favor with none opposed and the motion passed unanimously.

3. **DEP Nitrogen Modeling Presentation** – Dr. Ming Ye, with Florida State University (FSU) provided an introduction on the nitrogen modeling study that they are doing for DEP. They are developing a GIS-based software program for estimating nitrate fate and transport in surficial aquifers from septic systems to surface water bodies. Rick Hicks gave an overview of the project. This is a two-year project that is about half completed. Paul Lee provided the project background, motivations, and objectives. The goal of the project is to develop a scientifically defensible and user-friendly GIS-based simplified model that is ultimately to be available in public domain. Dr. Ye presented on the development of groundwater flow and nitrate fate and transport models. It was stressed that this model is just an estimate; it is a static model and is not site specific. The groundwater table was estimated based on the topography. Fernando Rios gave a real-time demonstration of how the GIS-based software works. Dr. Ye ended the presentation outlining the remaining research to be done for the grant and what future research is needed. Paul Lee requested input and feedback from the RRAC on the project. A question was asked to Damann Anderson about how this study impacts the nitrogen study, and he said that there is a good opportunity for collaboration on this. Eberhard Roeder stated that some of the nitrogen study work will go into developing soil treatment numbers which could then go into this model. John Schert provided the name and link to a study for the researchers to review. A copy of the presentation made at this meeting is available on the Department's website.

4. Nitrogen Study

- a) **Discussion on draft legislative report** – Elke Ursin introduced the study. The interim legislative report, as outlined in the legislative language in this year's budget, is due on February 1, 2011 and will need to be routed internally at least a month prior to be completed on time. The main change from previous similar reports is that it is much shorter, keeping to the high level overview of the project and pointing readers to the website to find more detailed information. Patti Sanzone stated that she would like to see more detail on what has been accomplished, what is remaining to be done with the current funding, and what additional funding will be used for. She suggested adding in more details like the number of field sites, the number of samples, etc. Pam Tucker suggested adding in the legislative language. Bob Himschoot wanted a strong case to be made for needing the money. John Schert requested that staff get with the budget office to see what funds were submitted to the governor and what the proposed cuts are.

John Schert made a motion, seconded by Bob Himschoot, to have staff send a memo to the Department of Health budget office and cc: the Surgeon General, to ask for the budget numbers earmarked for the nitrogen study and what is proposed to be cut. All were in favor, none opposed, and the motion passed.

A conference call meeting will be scheduled for sometime in December to discuss the revised legislative report.

- b) **Comment on deliverables and next steps** – Elke Ursin gave an overview outlining what has happened since the last meeting. A lot of work has occurred since the last meeting, and numerous reports were sent in the meeting material packets. There have been two sampling events at the passive nitrogen reduction system phase II test site. The flow rates to all the biofilters were within 10% of the target. Nine out of ten stage 1 unsaturated biofilters had

ammonia concentrations of 0.01 mg/L or less. Seven out of nine Stage 2 saturated biofilters had a nitrate level of 0.17 mg/L or less. Recommendations to tweak the facility are outlined in the report and are being addressed between DOH and Hazen and Sawyer. The contract amendment to add change-order allowances is being executed. The latest progress report was also discussed. A tour of the GCREC test facility will be held on December 10th at 1 p.m. An attempt to combine this with the next RRAC meeting will be made.

5. DEP Studies on OSTDS Nutrient Removal

a) Bold and Gold Study – Dr. Marty Wanielista presented on the UCF research study on passive, cost-effective OSTDS, which is ending in December. An overview of the project was given. Several questions were answered. RRAC was directed to submit any comments on this report to Dr. Wanielista. A copy of this presentation is available on the Department's website.

b) Wakulla PBTS Study by DEP/FSU – Richard Hicks provided a brief overview of the study, where effluent was monitored monthly at 7 performance-based systems in Wakulla County. The field work is completed and an interim report was available about a year ago and the final report should be completed by the end of the year. When the final report is available it will be sent to the RRAC.

6. Update on Study of Performance of Advanced Systems in Florida – Elke Ursin gave an update on the status of this study. A request for a no-cost time-only extension until September 2011 was submitted with the quarterly progress report in October. The possibility of shifting some funds between different categories is being looked into. The draft summary report for the Monroe County portion of this project is being written. Bill Melton asked if any sampling has been done on this project and Elke Ursin said that there has not due to delays in getting the quality assurance project plan (QAPP) completed. The database is mostly complete and identifies 16,802 advanced systems in the state. Summary statistics are being developed. The database includes detailed system information to allow for analysis of many different items. An evaluation of each of the systems that are selected for sampling will be done that is similar to what is scored by the program evaluators when they do their county evaluations. Surveys were sent to various interest groups and the results are being tabulated and analyzed. Currently, an intern is working on analyzing the open ended questions in the surveys for any trends. A table showing the response rate was discussed. Some of the preliminary survey results for the installers and the regulators were discussed. The QAPP for the sampling portion of this project is being finalized. The contract with the lab to evaluate the samples has been executed. Permit file reviews on the selected systems is ongoing. Staff is evaluating the possibility of using county health department staff in different regions to help with the sampling effort. An evaluation tool to look at management practices is being developed as this project continues.

7. Town of Suwannee Study – This study is mostly complete. The final report was submitted and was included in the meeting packet. They also wrote a draft journal manuscript, which was included in the packet. Send comments to Elke Ursin by the end of November so that this can be finished. There was a discussion on the use of fecal coliforms as indicator bacteria, and whether that is an appropriate indicator.

8. Discussion on Continuation of Inventory of OSTDS – A website showing the results of this inventory has been developed and is up and running for the public to access. The website is: <http://gis.doh.state.fl.us/FLWasteWater/default.aspx>. RRAC directed staff at the last meeting to get with Gerald regarding the direction for the inventory. Gerald has indicated that he would like the inventory to continue. There appears to be a lot of interest in keeping this inventory up-to-date. Shanin Speas-Frost asked if there was anything that DEP could do to help with gathering the WWTP data, and Elke Ursin indicated that this would be very helpful. Elke Ursin asked how the RRAC would like to move forward with this project and presented some proposed next steps, including updating the Environmental Health Database, updating the data with the latest Department of Revenue information and figuring out a method of automating this task, updating

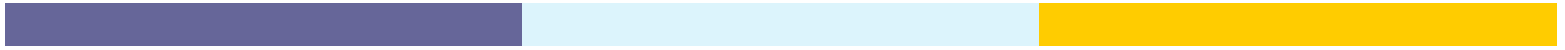
the database with the latest DEP data on permitted wastewater treatment plants (WWTP), resending out letters to the WWTP requesting customer information to update the database, and using county health departments to resolve some of the unknowns. Bob Himschoot recommended coordination between DOH and Carmody to consolidate information. The RRAC directed staff to include this project on the list of potential projects to be prioritized at the next RRAC meeting.

9. **Alternative Drainfield Products Discussion** – Availability of data on the longevity and effectiveness of alternative drainfield products is limited. At the last RRAC meeting RRAC directed staff to wait to see what is going to happen with the SB 550 inspection program to see if there could be any overlap in the data that is collected. At this point it does not look like alternative drainfield products will be included in the inspection. Elke Ursin presented a scope of work and wanted to hold off developing a detailed budget until RRAC directs staff on what they would like to see be done. Three different phases were proposed. Phase I would be performing an evaluation of existing data and the cost of this phase would be staff time. Phase II would be creating an advisory group with product manufacturers, contractors, and CHD's to get an idea of how to gather the information gaps found after Phase I. Phase III would be to go out and gather the data to fill in the data gaps. Staff was given the go-ahead to start with Phase I, doing it in-house with minimal cost. Once the data gaps are identified then the direction on how to move forward with this project can be scoped out.
10. **Other Business** – Elke Ursin brought up that the pollution prevention grant proposal that was submitted on April 5, 2010 was not awarded. This project will be included on the list of proposed research priorities to be discussed at the next RRAC meeting.

Eanix Poole brought up a potential research project to look into the effectiveness of outlet filters. Outlet filters started to be required in tanks in the early 1990s. These filters often clog, which leads to unnecessary pumpouts. He suggests a study to look at what works and what does not work, even looking at the differences between different types of outlet filters. Bob Himschoot stated that a filter can go 12-36 months before needing to be cleaned. The smaller the screen the more easily it is clogged. He stated that clogging was a good thing, which means the filter is keeping solids out of the drainfield. Eanix Poole stated that this may be something that SB 550 takes care of, and Elke Ursin stated that this is one of the items on the inspection form.

11. **Public Comment** – The public were allowed to comment throughout the meeting. There was no additional public comment.
12. **Closing Comments, Next Meeting, and Adjournment** – The next meeting will be scheduled for December 10th at 10 a.m. at the GCREC and as a teleconference. Those attending the meeting in person have an opportunity to tour the test facility at the GCREC site. The focus of the next meeting will be to discuss the RRAC priorities and the draft interim legislative report.

Bill Melton made a motion to adjourn, seconded by Patti Sanzone, and the meeting adjourned at 2:08 p.m.



Department of Health
Bureau of Onsite Sewage Programs
Research Review and Advisory Committee

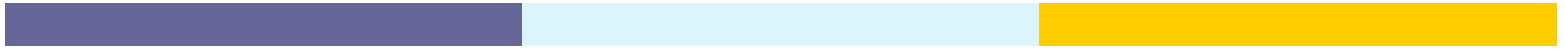
Friday November 5, 2010

9:30 am - 3 pm



Agenda:

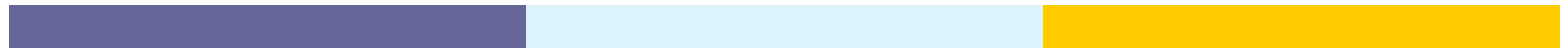
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- Update on Study of Performance of Advanced Systems in Florida
- Update on Town of Suwannee Study
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- Public Comment
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Introductions & Housekeeping

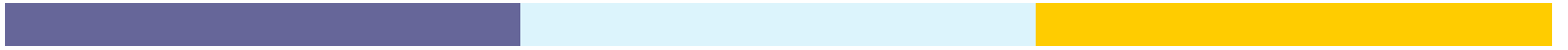
- Roll call
- Identification of audience
- How to view web conference
- DO NOT PUT YOUR PHONE ON HOLD!!!!
- Download reports:

<http://www.myfloridaeh.com/ostds/research/Index.html>



Review Minutes of Meeting June 10, 2010

- See draft minutes



DEP Nitrogen Modeling Presentation

Dr. Ming Ye



Florida Onsite Sewage Nitrogen Reduction Strategies Study

Purpose: Develop passive strategies for nitrogen reduction that complement use of conventional onsite sewage treatment and disposal systems, and further develop cost-effective nitrogen reduction strategies



Florida Onsite Sewage Nitrogen Reduction Strategies Study

- Legislative report due February 1, 2011



Florida Onsite Sewage Nitrogen Reduction Strategies Study

Two sampling events at the PNRS II site

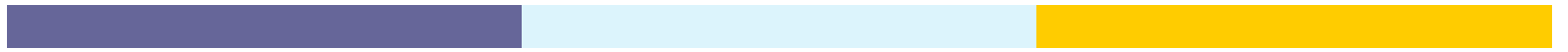
- Flowrates to all biofilters within 10% of target
- Nine out of ten Stage 1 unsaturated biofilters with ammonia of 0.01 mg/L or less
- Seven out of nine Stage 2 saturated biofilters with nitrate of 0.17 mg/L or less

Recommendations are outlined in the report and are being addressed between DOH and Hazen and Sawyer



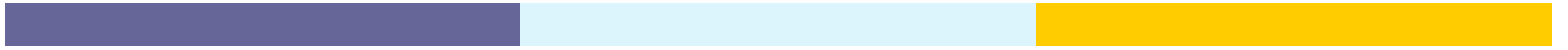
Florida Onsite Sewage Nitrogen Reduction Strategies Study

- Contract amendment to add change-order allowances being executed
- Discuss progress report

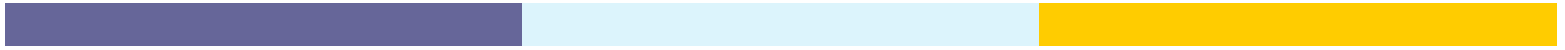


DEP Nutrient Removal: Bold and Gold Study

Dr. Marty Wanielista and
Dr. Ni-Bin Chang



DEP Nutrient Removal: Wakulla PBTS Study by DEP/FSU

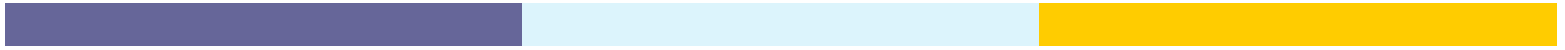


319 Project on Performance and Management of Advanced Onsite Systems

Purpose: Assess water quality protection by advanced OSTDS throughout Florida

Progress:

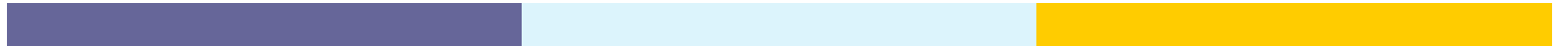
- Submitted request for a no-cost time-only extension until September 2011
- Monroe County Project
 - Draft summary report being drafted



319 Project on Performance and Management of Advanced Onsite Systems

Progress cont. :

- Database
 - Mostly complete
 - 16,802 identified advanced systems in the state
 - Summary statistics to be developed
- Surveys of interest groups
 - Survey results being tabulated and analyzed
 - Intern analyzing open ended questions for trends



Survey

Sent to: # Sent # Complete # Valid

| | | | |
|---------------------|--------------|------------|------------|
| System users | 3,000 | 660 | 660 |
|---------------------|--------------|------------|------------|

| | | | |
|-------------------|-----------|-----------|-----------|
| Regulators | 67 | 67 | 56 |
|-------------------|-----------|-----------|-----------|

| | | | |
|-------------------|------------|-----------|-----------|
| Installers | 709 | 53 | 27 |
|-------------------|------------|-----------|-----------|

| | | | |
|----------------------|------------|-----------|-----------|
| Manufacturers | 118 | 14 | 10 |
|----------------------|------------|-----------|-----------|

| | | | |
|-----------------------------|------------|-----------|-----------|
| Maintenance entities | 226 | 32 | 32 |
|-----------------------------|------------|-----------|-----------|

| | | | |
|------------------|------------|-----------|-----------|
| Engineers | 164 | 13 | 13 |
|------------------|------------|-----------|-----------|



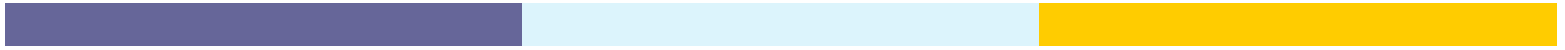
Preliminary Survey Results for Installers:

- Main reasons for installing advanced systems:
 - Lot size restraints
 - Environmental issues
 - Systems work well
- % of annual revenue received from installing advanced systems $\leq 10\%$
- Most (92%) are also the maintenance entity
- Highest rated causes for failure: homeowner misuse, power turned off, dosing pump failure
- Lowest rated causes for failure: engineer design and installation issues



Preliminary Survey Results for Regulators:

- Activities included during county inspection:
 - general overall system appearance
 - power is on
 - changes in site conditions
 - smells and sounds from system
 - checking for wetness in the drainfield
- Enforcement:
 - 10% of advanced systems need enforcement
 - 50% of those require multiple actions before being resolved



319 Project on Performance and Management of Advanced Onsite Systems

Progress cont. :

- Sampling
 - QAPP is being finalized
 - Contract with lab has been executed
 - Permit file reviews are ongoing
 - Evaluating possibility of using CHD staff in regions to help with sampling effort
- Management Practices
 - Evaluation tool developed to evaluate CHD's



Town of Suwannee Study

Purpose: Test the difference in water quality after central sewer has been installed in an area previously served by onsite sewage systems

Progress:

- Final report submitted
- Draft journal manuscript submitted - comments/edits/corrections due to Elke Ursin by end of November so that manuscript can be finalized
- Comments on report due by end of June



FL Wastewater Demonstration: Results of Inventory Available to the Public

<http://gis.doh.state.fl.us//FLWasteWater/default.aspx>



FL Wastewater



Bureau of
Onsite
Sewage

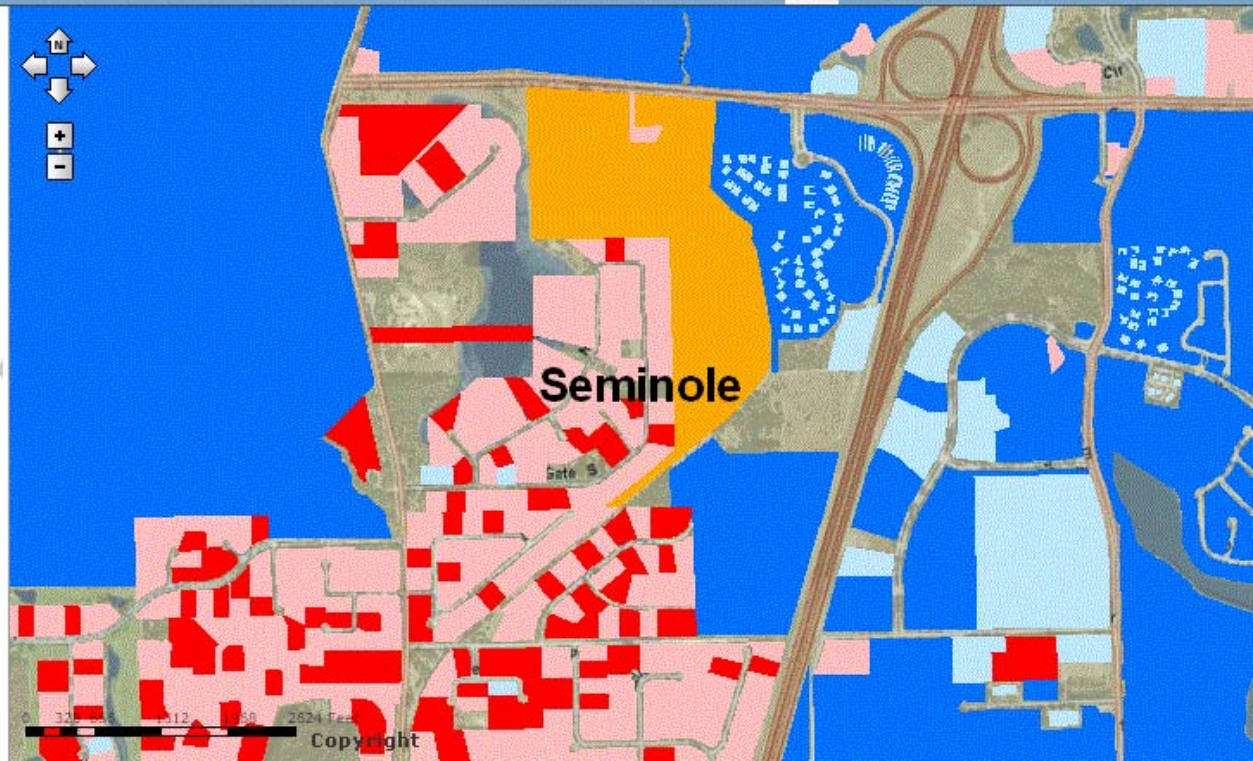
Contact | Help | FAQ

Print | Search Attributes

Results

Map Contents

- OSCEOLA
- PALMBEACH
- PASCO
- PINELLAS
- POLK
- PUTNAM
- SANTAROSA
- SARASOTA
- SEMINOLE
 - SEMINOLE Known Wastewater Method
 - SEMINOLE Developed -- Unknown
 - SEMINOLE Estimated Wastewater Method
 - Developed -- Not Estimated
 - Estimated Septic
 - Septic
 - Estimated Sewer
 - Sewer
- STJOHNS
- STLUCIE
- SUMTER





Continuation of Inventory

History: RRAC directed staff to get with Gerald regarding the direction for the inventory. Gerald has indicated that he would like the inventory to continue.

Proposed process:

- EHD updating
- DOR updating
- DEP data update
- Letters to WWTP
- CHD's to resolve unknowns



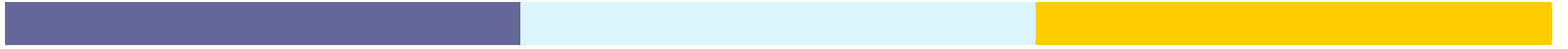
Alternative Drainfield Products

Problem statement: Since approximately 2004 alternative drainfield products are installed at rates higher than aggregate. System field longevity and effectiveness of minimum drainfield size are untested. Availability of data is limited.

Study history: RRAC directed staff to wait to see what is going to happen with the SB 550 inspection program. At this point it does not look like Alternative DF products will be included in the inspection.

Proposed scope of work:

1. Evaluate existing data
2. Create an advisory group with product manufacturers, contractors, and CHD
3. Fill in blanks from data evaluation by doing detailed surveys on repairs utilizing contractors and CHD staff



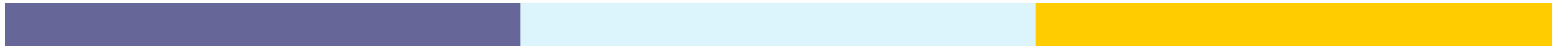
Other Business



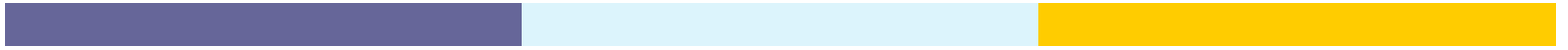
Pollution Prevention Grant Proposal

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

- **Objective:** Develop and verify best management practices for grease reduction and reuse in facilities generating commercial strength sewage waste
- Grant proposal submitted on April 5, 2010
- Grant was not awarded
- Next steps?



Public Comment



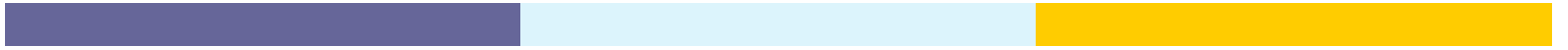
Next Meeting

Upcoming meeting topics:

- RRAC Priorities

Proposed dates for next meeting:

- Suggestions?



Closing Comments and Adjournment