Homeowner Agreement

To Participate in Florida Onsite Sewage Nitrogen Reduction Strategies Study

Nitrogen is an important concern for water quality. Animals, crops, ecosystems, and human health can be adversely impacted by the presence of nitrogen in water supplies. The environmental effects of nitrogen on groundwater and surface water can ultimately lead to the degradation of surface waters in watershed systems that have strong groundwater/surface water interactions. Nitrogen that enters surface water bodies via these interactions can lead to algal blooms and eutrophication. These processes lead to oxygen depletion in surface waters which can be harmful to natural aquatic life. In Florida, the protection of watersheds, in particular surface water bodies, has led to the legislation of protection of these areas (i.e., the Wekiva River Protection Act).

A research study to examine nitrogen reduction strategies for onsite sewage treatment and disposal systems in the State of Florida is underway. The project is being conducted by Hazen and Sawyer, P.C an environmental engineering firm under contract with the Florida Department of Health (FDOH).

One element of this research project is to prioritize nitrogen removal technologies under field conditions. To reach this goal, field-testing of nitrogen reducing technologies at home sites is needed to compare various treatment systems for their ability to remove nitrogen. Monitoring nitrogen reduction of the systems will occur at various locations in the State of Florida. In addition, the research project includes subsurface and groundwater monitoring which will be used to assess the current level of nitrogen reduction obtained by Florida soils and to assess groundwater impacts due to conventional and nitrogen removal systems.

The participation of select homeowners is essential for the success of this research program. Therefore, we are looking for volunteers to allow their onsite wastewater systems to be used for this project. All homeowners will remain anonymous in all data analysis and reporting. The study will last up to two years with all site visits scheduled at the homeowner’s convenience. The work at each property may include:

- Property walkovers to characterize land uses and features
- Collection of information from the owner regarding water use and wastewater system data
- Installation of new wastewater treatment equipment
- Soil borings
- Installation of monitoring wells
- Collection of wastewater samples
- Monitor energy used and other operational costs

Hazen and Sawyer, P.C. will be responsible for: application for permits, modifications, operation, maintenance, monitoring, inspections, and removal or leaving the system in place at study termination. The project funds will cover the cost of any permits required, any new technology installed, maintenance costs, and restoration of property to original condition. All project payments will terminate upon site closure. The homeowner shall agree to not tamper with the system during the monitoring period. The site will be restored to the original condition upon completion of the study if desired by the homeowner. All homes participating in the study will receive a $250 cash incentive.

If you are interested in becoming involved in this important research project, please fill in the information below and sign where indicated. We will coordinate all our activities with you and give you any additional information you require prior to beginning work at your property.
Thank you for taking the time to consider this request, and we look forward to your response.

Very truly yours,
Hazen and Sawyer, P.C.

HOMEOWNER

encl.: Residential Evaluation Survey
RESIDENTIAL EVALUATION SURVEY

Name: __________________________ Date: _______________ Time: ___________

Street Address: __________________________ City: Lake Wales State: FL Zip Code: 33898

Mailing Address (if different from above):

Daytime Phone (Work or Cell): __________________________

Evening Phone (Home or Cell): __________________________

Parcel #: __________________________

Designer: __________________________

Installer: __________________________ City: __________________________ State: _________

Property Size (acres or sq. ft.): 2.27 acres

A. Home/Residents

1. Is this your first home with an on-site wastewater treatment system? YES / NO

2. Did you receive any septic system user information? YES / NO

3. Did you receive the as-built drawing for the system? YES / NO

4. Any additions to the home since septic system was built?
   Bedrooms __________________________
   Bathrooms __________________________
   Other __________________________

5. Type of use: Permanent / Seasonal Rental Property
   If seasonal, number of months used ________
   a. Number of people living in the home: Adults (18-65): 1 M 2 F
       Seniors (>65): 2 M 3 F
       Children (<13): 4 M 5 F
       Teenagers (13-17): 6 M 7 F
   b. Guests (Approximate number and frequency): __________________________
   c. Number of bedrooms: 3 Number of bathrooms: 2
   d. Number of pets: Dogs 1 Cats ______ Number of pet baths per month: ______

6. Number of showers per week: ______ Number of baths per week: ______

7. Water supply: Private well / Centralized system / Other supply ______

8. Do you have an in-home business? YES / NO
   If "yes", what type? __________________________
9. Do you use septic system additives?  **YES / NO**
   If “yes”, what products? ___________________________ Frequency: _______________________

10. Type of pretreatment system:  
   - Septic tank  
   - ATU  
   - Media filter  
   - Constructed wetland  
   a. Specific type of system ______________________________________________________
   b. Make and Model ____________________________________________________________

11. How old is the system? __50__ years  
    Date of last pump out: **September 2008**

12. Has the system ever backed up?  **YES / NO**

13. Have the baffles ever been plugged?  **YES / NO**

14. Effluent screen in septic tank outlet?  **YES / NO**

15. Has effluent screen ever plugged?  **YES / NO**  
   Date(s): _______________________

16. Has the system ever been repaired?  **YES / NO**
   Record of System’s Service: ____________________________________________________

17. Has effluent ever surfaced?  **YES / NO**

18. Has the alarm ever sounded?  **YES / NO**

19. Soil type – at drain field depth or lower: **sand**

20. Type of distribution/dispersal system:  
   - **Gravity**  
   - Trench  
   - Pressure dose  
   - Mound  
   - Drip  
   - Spray  
   - Other: ____________________________________________

21. Control system:  Demand / Timed

22. Design rate for system: _____________ (GPD)

23. Septic tank size: **Not sure** (gallons)  
   Pump tank: _____________ (gallons)

24. Sludge levels in septic tank:  
   - 1st compartment accumulation ________________________________
   - Floating materials _________________________________________
   - 2nd compartment accumulation ________________________________
   - Floating materials _________________________________________

25. Sludge level in pump tank:  
   - Accumulated ________________________________
   - Floating materials ________________________________

26. Is the pump working?  **YES / NO**

27. Duration of pump cycle: ________ (minutes)  
   Pump drawdown: _____________________________________________
C. Water Use

28. Actual indoor water use (GPD): Average: ________ High: ________ Low: ________
   Reading this data from: ________ cycle counter
   ________ hour meter on pump
   ________ water meter
   ________ other

29. Actual outdoor water use (GPD): Average: ________ High: ________ Low: ________
   Reading this data from: ________ cycle counter
   ________ hour meter on pump
   ________ water meter
   ________ other

D. Additional Information (completed by homeowner or at site visit and evaluation)

30. Water supply:
      TDS ________ (ppm) pH ________ Chlorine (total or free) ________ (ppm)
   b. Other Water Quality characteristics:
      Hydrogen Sulfide ________ (ppm) Sulfates ________ (ppm) Alkalinity ________
      Other 1 ________ Other 2 ________ Other 3 ________
      Other Comments __________________________

31. Water treatment device(s):
   a. Is a water softener used? YES / NO Back flushes to: _______________________
      Brand __________________ Model/Year Installed ___________________
      Regeneration Method? Timer / Demand Initiated Regeneration (Meter or Sensor)
      Softening Regenerant? NaCl / KCl Salt per Regeneration (lbs) ________
      Salt Purchased (lbs per month) ___________________
      Estimated Brine Volume ________ (gallons) Combined Discharge TDS ________ (ppm)
      Backwash Time ________ (min) Backwash Flow Rate ________ (gpm)
      Backwash Volume ________ (gallons) Fast Rinse Time ________ (min)
      Fast Rinse Flow Rate ________ (gpm) Fast Rinse Volume ________ (gallons)
      Total Regeneration Water ________ (gallons) Total Time for Regeneration ________ (min)
      Avg. Flow to Drain during Regeneration ________ (gpm) Regenerations per month ________
      Average Daily Drain Water ________ (gallons)
   b. Reverse osmosis? YES / NO Discharges to: _______________________
      Brand __________________ Model/Year Installed ___________________
      Auto Shut Off? YES / NO Rated Capacity ________ (gallons/day)
Daily water consumed _______ (gallons)  Stated Recovery Ratio ______________

Estimated Daily Water to Drain _______ (gallons)

c. Backwashing Water Filter (iron, sediment, etc)?   YES / NO

Back flushes to: ___________________________  Brand ___________________________

Model/Year Installed ______________________ Regenerant (if any) ________________

Regeneration Frequency _________________ Backwash Time ________________ (min)

BW Flow Rate ________________ (gpm)  BW Volume ________________ (gallons)

Fast Rinse Time ________________ (min)  FR Flow Rate ________________ (gpm)

FR Volume ________________ (gallons)  Total Regenerant Water ________________ (gallons)

Total Time for Regeneration __________ (min)  Avg. Flow to Drain ________________ (gpm)

Regenerants Per Month ______________ Average Daily Drain Water ________________ (gallons)

d. Other Water Treatment Devices: ____________________________

e. Treated Water Quality Characteristics:

   Hardness _______ (gpg)  Iron _______ (ppm)

   TDS _______ (ppm)  pH _______  Chlorine (free) _______ (ppm)

   Other Water Quality characteristics:

   Hydrogen Sulfide _______ (ppm)  Sulfates _______ (ppm)  Alkalinity ______________

   Other 1 _______  Other 2 _______  Other 3 _______

   Other Comments __________________________________________________________

32. Is there an outside power supply?  YES / NO

   If yes, does it have its own breaker? _______

   How many amps? _______

33. Is there an outside water spigot?  YES / NO

   If yes, does it require a key? _______