

# **SJRA Implementing Recommendations** to Protect Water Quality in Lake Conroe

By: Jace Houston

## **Lake Conroe Watershed Protection Plan**

Lake Conroe is one of our region's most valuable natural resources, and it now contributes to the county's drinking water supply to augment existing groundwater sources. It is vital to preserve the quality of this precious natural resource.

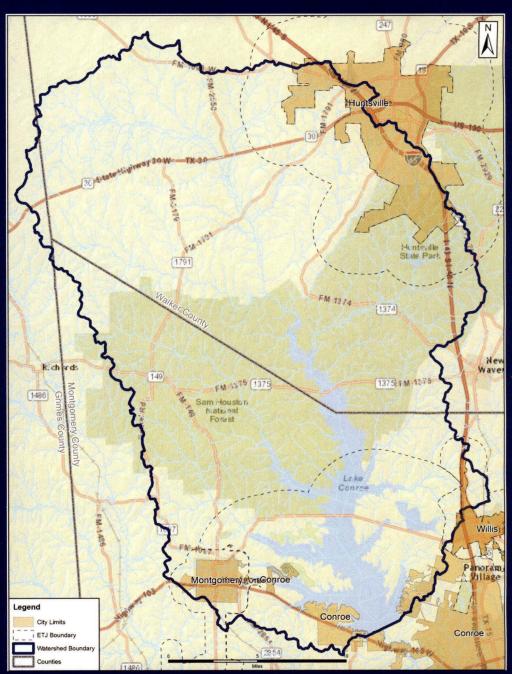
The area around Lake Conroe has undergone steady urban development, and the lake's location within the Houston metropolitan area will continue to attract heavy recreational use. Fortunately, and unlike some of the reservoirs in Texas, the water quality in Lake Conroe remains excellent and is generally unimpaired by this urban development around its perim-

Anticipated growth and continued recreational use will present significant challenges to maintaining Lake Conroe's current excellent water quality. In an effort to maintain and, when appropriate, improve the excellent water quality condition currently present in Lake Conroe, SJRA recently completed a Watershed Protection Plan (Plan).

As part of the development of this Plan, SJRA first characterized the current conditions within the watershed in greater detail and assessed the specific sources of potential pollution that may threaten the watershed in the future. Based on this assessment, various water quality management activities were studied.

To assist SJRA in the development of the Plan and the selection of appropriate water quality strategies, a stakeholder committee was formed. The stakeholder committee was made up of individuals representing various interests or other local agencies. There were representatives from Montgomery County's environmental services department, various local cities, local businesses, marinas, chambers of commerce, the US Forest Service, fishing and recreational use organizations, and a number of other interested groups.

The stakeholder committee provided advice and input to SJRA throughout the process of developing the Plan. Specifically, the stakeholder committee strongly recommended that SJRA make improvements to its rules related to On-Site Sewer Facilities (OSSFs), commonly referred to as septic systems.



**Figure 2.1. Lake Conroe Watershed** 

#### **On-Site Sewer Facilities**

A primary source of potential bacterial pollution identified in the Plan was bacteria from sanitary sewer overflows, pet and wildlife waste, and malfunctioning septic systems. Septic systems in Montgomery County are generally regulated by the county, however, state rules adopted by

the Texas Commission on Environmental Quality (TCEQ) specifically provide that OSSFs within 2,075 feet of the shoreline of a reservoir will be regulated by the reservoir owner/operator, who is referred to as TCEQ's "authorized agent." SJRA is the authorized agent for Lake Conroe.

The Watershed Protection Plan stakeholder committee unanimously agreed with SJRA staff's recommendation that SJRA's OSSF rules be amended to provide similar standards as Montgomery and Walker counties. Specifically, SJRA's recommendations included more stringent design criteria for new OSSFs and increased requirements for inspection of aerobic septic systems.

The proposed changes were put out for public comment during the summer and fall of 2015 and were adopted by SJRA's board of directors at their December meeting. A copy of the revised rules can be found on SJRA's website.

# Annual Aerobic Septic System Inspections

The most significant improvement to the rules is the requirement that all aerobic septic systems be inspected at least once every four months by a properly-licensed individual. This requirement has been in place in Montgomery County for many years, and in most cases, homeowners fulfill this requirement by signing an annual inspection contract with a licensed OSSF inspector.

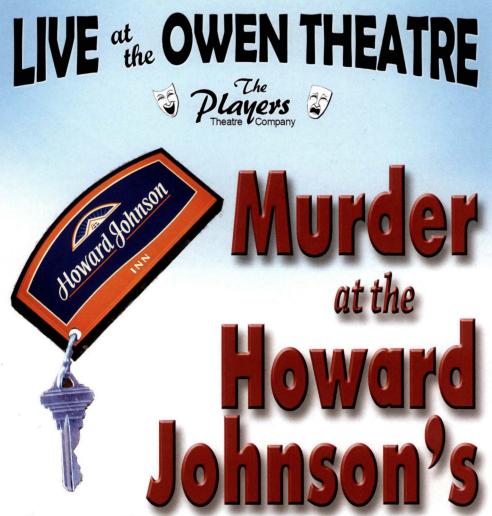
SJRA is not proposing any fee associated with this new requirement, however, a typical annual contract with an inspector costs approximately \$200 and includes the three required inspections and any associated reporting. If a homeowner does not wish to pay a third-party inspector, SJRA's rules allow them to conduct their own inspections if they take certain training or meet certain requirements. Here is the actual rule:

The inspection and maintenance of all OSSFs identified as Aerobic Treatment Units must be performed by a maintenance provider, licensed by the TCEQ, under a written contract between the property owner served by the OSSF and such TCEQ-licensed maintenance provider, with one exception. If the OSSF serves a single family dwelling that is the primary residence of the property owner, the property owner may conduct the maintenance, provided:

- A. the property owner is a maintenance provider licensed by the TCEQ;
- B. the property owner holds a valid Class D or higher wastewater treatment license;
- C. the property owner has satisfactorily completed a TCEQapproved Basic Maintenance Provider Course; or

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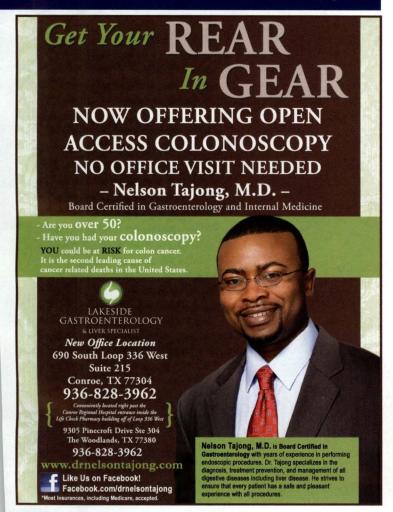


### **Figure 2. Aerobic Treatment Unit** (Source: www.flower-mound.com)

D. the property owner has satisfactorily completed the OSSF - Aerobic/Surface **Application System Orientation** and Maintenance Course entitled - General Guidance for **Monitoring Aerobic Treatment** Units, Disinfection Units, and Spray Fields in Texas (B-6235) offered by the Agrilife Extension, Texas A&M System.

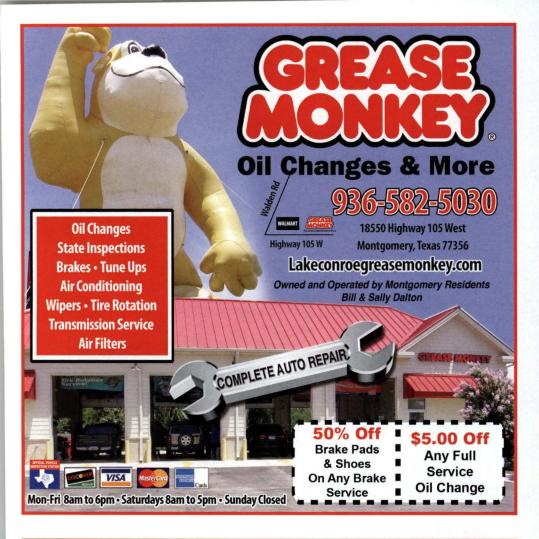
Overview of OSSFs: There are two basic types of OSSFs (see figures): (1) Conventional OSSF Systems (Figure 1) which separate liquids from solids in a septic tank and then send

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that liquid to a drain field by means of underground pipes or other proprietary products; and (2) Aerobic Treatment Units (Figure 2) which add oxygen to the process of treating wastewater by using any of several types aeration or "fine air bubble" systems to increase the level of treatment in the tank by encouraging aerobic bacteria growth and allows sedimentation and disinfection to occur before discharge of the liquid. Aerobic systems produce a better quality wastewater effluent for final treatment and disposal. The TCEQ sets the minimum standards, issues operator licenses, delegates permitting and enforcement to local governmental entities, and periodically reviews their programs. SJRA is the authorized agent for TCEQ within 2,075 feet horizontally of the Lake Conroe shore at elevation of 201 feet (MSL).

#### How do I permit a new OSSF?

For new OSSFs, the recently adopted amendments made only minor technical changes to the design criteria, such as the types of components that must be used if the site is in a flood plain.

The procedures for applying for a permit to install a new septic system have not changed. If a homeowner is installing a new septic system, the following items must be submitted to SJRA for review before a permit to install the new system can be issued:

- 1. Professional Design of the system performed by a Professional **Engineer or a Registered** Sanitarian.
- 2. Soil and Site Analysis performed by a Professional Engineer or a Registered Site Evaluator.
- 3. Maintenance contract signed by both the installer and the homeowner (only applicable to aerobic treatment units).
- 4. Receipt of an Affidavit to the Public filed at the County Clerk's office in which the property is located.
- 5. SJRA OSSF Application completed by the homeowner.
- 6. Permit Fee.

Important Links and Contact Information:

For more information on the Lake Conroe Watershed Protection Plan or the OSSF program, visit: www.sjra.net/lakeconroe/ or call 936-588-1111. ◆