



Presenting the Hoot Treatment System

Residential • Commercial



Certified to
NSF/ANSI
Standard 40



Certified to
NSF/ANSI
Standard 245



Onsite
Monitoring
Ready

9175 Kiefer Blvd #199 • Sacramento, CA 95826 • Phone (877) 888-4668
www.sosonsite.net

HOOT TREATMENT SYSTEM

For over thirty years, [Hoot Systems, LLC](#) (Lake Charles, Louisiana) has been servicing challenging on-site wastewater needs, ranging from **residential** installations to very large-scale **commercial and municipal** systems in excess of one million gallons per day.

Now, the finest and most technologically-advanced aerobic treatment unit is available in California through [Superior On-Site Solutions, LLC](#), authorized Distributor for the quality **Hoot Treatment System**.

Essentially a residentially-sized municipal wastewater treatment plant, the patented **Hoot Treatment System** is a complete five-stage, activated-sludge aerobic treatment unit that uses advanced aeration and timed-recirculation to effectively process and treat wastewater. The safe, clean, treated water is then reused for landscape irrigation with subsurface drip tubing or any other chosen method of hydro-dispersal.

The concrete Hoot System is a suitable application for distressed properties with steep slopes or structurally deficient soils, and can be used at home sites in close proximity to water sources, such as underground aquifers, lakes, rivers and oceans.

It has been successfully utilized in not only single-family homes, but also entire **subdivisions, developments and communities**, as well as commercial locations including **churches, camps, schools, wineries, prisons, office complexes, golf courses, and hotels**. Additionally, subject to design restrictions, one Hoot System can service multiple residences.

The Hoot System has been successfully installed in **over 150,000** residential and commercial applications throughout the United States, including, after much scrutiny and evaluation, [President Bush's ranch in Crawford, Texas](#).

In just over six years, Superior On-Site Solutions has installed over **250 Hoot Systems in California**, and the Hoot System is **approved for use in over 35 California counties**.

Hoot System Highlights

- **RESIDENTIAL** and **COMMERCIAL** solutions from 500 GPD to over one million GPD
- Certified to the **NSF/ANSI STANDARD-40 & STANDARD-245** (*nitrogen reduction*)
- Environmentally **SAFE & RESPONSIBLE** – *treated water exceeds Federal drinking water standards for Total Nitrogen*
- Can be used in close proximity to **WATER SOURCES** (i.e. underground, lakes, rivers)
- Suitable for **DISTRESSED PROPERTIES** with steep slopes or difficult soils
- Safe & clean treated water is **RECYCLED & REUSED** for landscape irrigation
- Single concrete tank is **EASY TO INSTALL** and can be placed under a driveway
- **ENERGY EFFICIENT** components save money
- **REMOTE MONITORING** alerts service personnel in the event of a system alarm
- Includes a **TWO-YEAR SERVICE & MAINTENANCE POLICY THREE-YEAR WARRANTY** transfers to new owners
- **COST-EFFECTIVE** alternative to costly & complex filtration systems
- Exceptional **SERVICE & SUPPORT** from Hoot Systems & Superior On-Site Solutions

RESIDENTIAL TREATMENT SOLUTIONS (500-2,000 gpd)

With treatment solutions of up to 2,000 gallons per day, the **Hoot System** residential line is ideally suited for single and multi-family dwellings as well as light commercial uses such as churches, hotels and office complexes.

Hoot offers two **NSF-Certified** treatment models depending of the level of performance required:



- **BASIC Nitrogen Reduction Series (BNR-Series)**

The Hoot BNR-Series provides a high level of performance at a price better than any other performance-based system. The Hoot BNR-Series is best suited for applications with reduced organic soil content, some surface plant growth and/or a reduced depth to groundwater.

Certified to the **NSF/ANSI Standard-40**, the Hoot BNR-Series provides up to a 98% reduction of both the BOD and TSS while reducing **Total Nitrogen by up to 60%**

NSF Performance Test Summary *

BNR-SERIES	INFLUENT	EFFLUENT	% REDUCTION
CBOD₅	196.1 mg/L	2.2 mg/L	98.9%
TSS	194.3 mg/L	1.5 mg/L	99.2%
Total Nitrogen	26.3 mg/L	9.6 mg/L	63.4%

- Available in either pumped distribution or gravity flow discharge
- Available in 600, 750 & 1000 gpd sizes
- *Optional* ultraviolet disinfection light

- **ADVANCED Nitrogen Reduction Series (ANR-Series)**

The Hoot ANR-Series is suitable for *the most sensitive environments* with little or no organic content and minimum separation to the seasonal high water table or groundwater. The high level of treatment performance gives the most Nitrogen Reduction and ensures a healthy aquatic and drinking water environment

The Hoot ANR-Series is certified to the **NSF/ANSI Standard-245** and provides the same high quality BOD and TSS treatment while reducing the **Total Nitrogen by up to 85%**

NSF Performance Test Summary

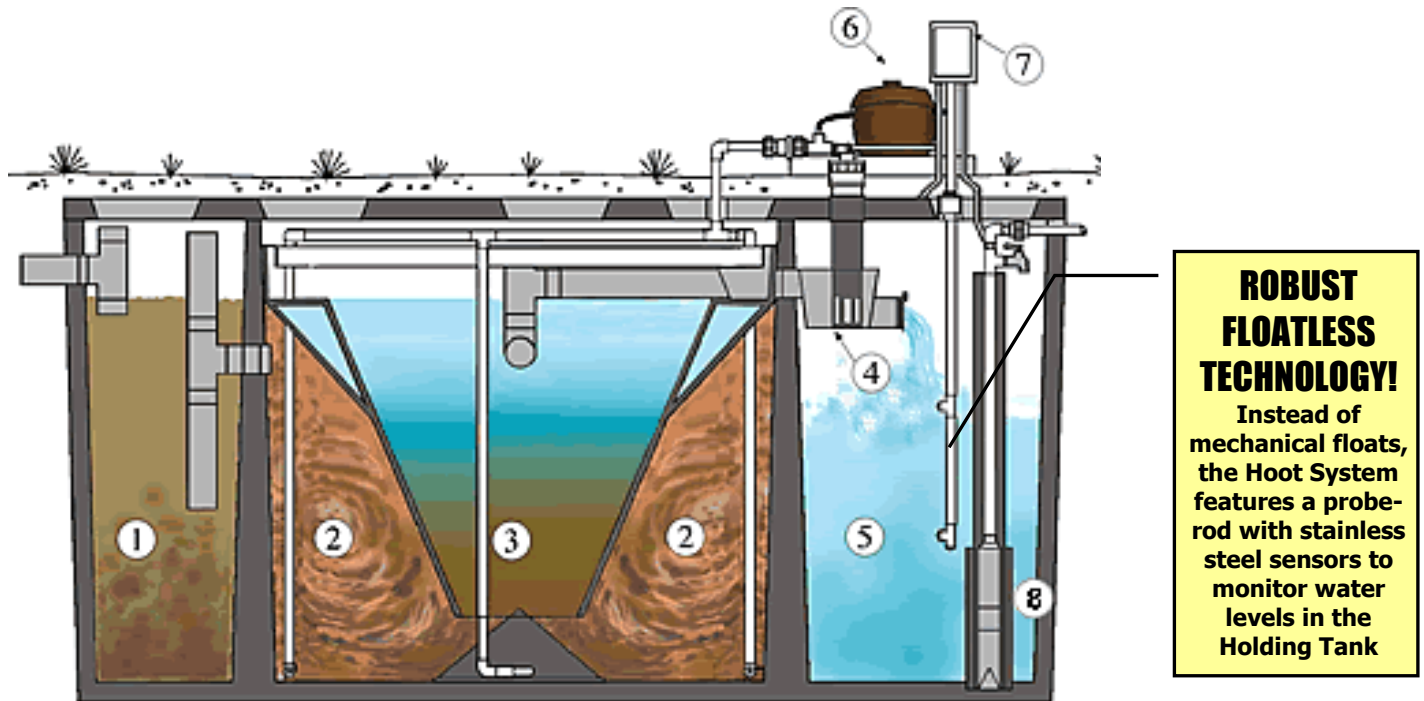
ANR-SERIES	INFLUENT	EFFLUENT	% REDUCTION
CBOD₅	~240 mg/L	<6 mg/L	98%
TSS	~300 mg/L	<4 mg/L	99%
Total Nitrogen	~35-75 mg/L	<6 mg/L	84%

- Made for efficient pumped disposal
- Available in 450, 675 & 900 gpd sizes
- *Optional* ultraviolet disinfection light

* as shown on page 31 of the December 14, 2001 ANSI/NSF Standard 40-2000 Report from Baylor University

HOW IT WORKS: BNR-SERIES (600, 750 & 1000 gpd)

Manufactured and assembled in California, the popular residential **Hoot BNR-Series** (basic nitrogen reduction) is a single pre-cast concrete tank featuring the following components:



Hoot System BNR-Series for Basic Nitrogen Reduction

- 1) **Pretreatment tank** - where influent (waste stream) enters
- 2) **Aeration chamber** - the "heart" of system where oxygen is pumped into the wastewater
- 3) **Final clarifier** - where the effluent rises
- 4) **Ultraviolet light (optional)** - treated effluent passes through for final disinfection
- 5) **Holding tank** - where the clear, treated & safe effluent is stored for discharge
- 6) **Aerator/Blower pump** - super quiet & energy efficient blower is located aboveground
- 7) **Hoot Control Center** - advanced computer & NSF modem monitors & controls the system
- 8) **Discharge pump** - discharges effluent to chosen method of disposal

The **pretreatment tank** begins the anaerobic decomposition of the influent and also holds any nonbiodegradables inadvertently added to the system.

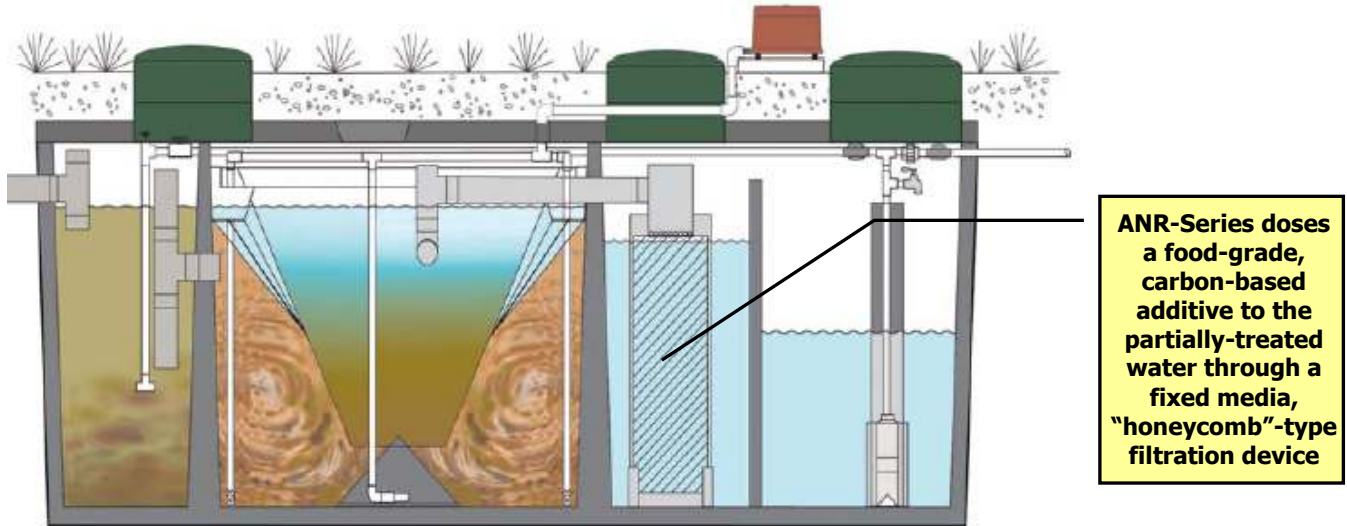
The **aeration chamber** is the "heart" of this activated sludge sewage treatment system where oxygen is introduced into the sewage by a long-life, above-ground **aerator blower/pump**. The aeration mixes the organic materials with the bacterial population allowing the bacteria to naturally attack, process and reduce the organic materials. Nitrifying bacteria present in the **aeration chamber** convert ammonia to nitrate. Any activated sludge settling in the **final clarifier** chamber is reintroduced into the **aeration chamber** by sewage movement within the **aeration chamber**.

As solids settle in the **final clarifier**, a clear, odorless effluent rises. This nitrified effluent passes through an optional **ultraviolet light** for final disinfection and into the **holding tank** for storage and discharge through the chosen method of disposal, typically a subsurface drip system. The **holding tank** then returns a portion of the daily flow back to the **pretreatment tank** for exposure to the untreated anaerobic influent.

HOW IT WORKS: ANR-SERIES (450, 675 & 900 gpd)

After six years of development and millions of dollars spent in research and testing, Hoot Systems proudly introduced the **Hoot ANR-Series** (advanced nitrogen reduction) in early 2008. The latest technological addition to the Hoot wastewater treatment product line, the ANR-Series is not only certified by NSF International to the Standard-40, it is also certified to the newly adopted **NSF/ANSI Standard-245**, which requires **minimum nitrogen reduction of at least 50%**.

Together with advanced aeration and timed recirculation, the **Hoot ANR-Series** utilizes a patent-pending process that adds a food-grade, carbon-based additive to provide the necessary off-gassing of Nitrogen. The entire additive dosing process is effectively managed by a computer-controller that monitors system flow to ensure proportional dosing based on need, and provides reliable Nitrogen Reduction performance for a range of TN influent strengths from 35-75 mg/L.



COMMERCIAL TREATMENT SYSTEMS (2,500 – 250K+ gpd)

For larger wastewater project needs, SOS and Hoot offer a complete line of commercial treatment plants that handle flows from 2,500 GPD to 250,000 GPD *and larger!*

We work closely with the local engineer to design the proper equipment based on the size of the system and discharge requirements addressing BOD/CBOD/COD, TSS, Total Nitrogen, Phosphorus and fecal/e-Coli reduction.



Pictured above is a 125,000 GPD system, featuring Equalization, Extended Aeration, Clarification and a surface single pass sand filter which produces effluent results below 5/5 that is permitted for direct discharge located in Reddell, Louisiana.

HOOT CONTROL CENTER

Each Hoot System has a solid-state, long-life computer control center that runs and monitors the entire system, including the blower and discharge pump. The user-friendly features include:

- **System Alarm** – audible alarms alert you to any problem (i.e. water over-use, broken pressure lines, clogged pumps) then “reminds” you after 16 hours if the problem has not been corrected
- **Smart Effluent Pump** – prior to an alert, the system will attempt to clear a clogged pump by electrically “jogging” it
- **Air Pressure Sensor** – alerts you if there is a problem with the aerator
- **Battery Backup** – alerts you to a power failure, while maintaining all timing so when power is restored, the system will restart where it stopped
- **Discharge System Choices** – the controller is able to run subsurface drip or low-pressure dosing
- **Modem Output** – allows the system to be monitored remotely and will contact service personnel in the event of a problem
- **Replace UV-Light** (optional) – comes on when the UV-light fails



Auto-dialer/modem

As an added benefit, Superior On-Site Solutions utilizes an **Onsite Monitoring Program** which allows public health officials and maintenance service providers to monitor each Hoot System, including alarm status, **24 hours a day, 7 days a week**. Using an auto-dialer/modem (shown left), this program provides homeowners and regulatory officials a convenient and reliable means to monitor the service status of each Hoot System, resulting in total confidence of long-term system performance and a greater assurance of environmental and public health protection. A two-year subscription to the monitoring service is included with the purchase of each Hoot System.

INSTALLATION

Each Hoot System, including the drip field calculations and layout, is designed for optimal on-site placement by a licensed engineer or authorized septic designer and installed and inspected by an SOS-Certified installer (certified to the Hoot Systems, LLC protocols).

Because of the single-tank design with landscape drip field, locating the tank on a piece of property is a simple and straightforward process that generally results in lower engineering, construction and installation costs when compared to multiple-tank systems. A complete Hoot System installation averages only 2-3 days. At each installation, a certified manufacturer’s representative thoroughly reviews the features of the Hoot System with the homeowner, including a comprehensive overview of the controller and NSF Monitoring Program.



Single concrete tank with risers & supply/return lines to dripfield (the Hoot BNR tank measures 13'6" L x 6' W x 6' H)



Installation of dripfield – drip lines are buried 6-10" below grade

WATER-DISPERSAL METHODS

The Hoot System efficiently treats and recycles all of the water feeding the system and can disperse it into the soil through various disposal methods, including **conventional gravity feed, low-pressure dosing, mound system, or subsurface drip**. Because the treated water is so clean and safe, Hoot Systems, LLC and Superior On-Site Solutions recommend the use of the drip irrigation with **Geoflow Subsurface Drip System** (GSDS) as the *most effective hydro-dispersal option*.



This efficient and eco-friendly reuse of the treated water provides needed irrigation to plants, shrubs, trees and grasses, allowing the homeowner to significantly reduce, if not entirely eliminate, the need for additional clean water irrigation. Additionally, the Hoot System's controller can be programmed for multiple irrigation zones, giving a homeowner the ultimate flexibility in their landscape design.



The principle of subsurface drip disposal, a concept that has been around for over 30 years, is that a single pulse of water is applied subsurface, which trickles out into the soil by capillary action, laterally and vertically as well as downwards. The GSDS usually has emitter lines placed at depths of 6-10" below surface grade to irrigate surface plant material via evapotranspiration (for colder climates prone to frost/freezing, the lines can be buried up to 18" below surface grade). Additionally, closer line and/or emitter spacing of 12" may be used on heavy clay soils or very coarse sands where lateral movement of the treated water is restricted.

The shallow depth of installation is an advantage of the subsurface dripfield concept since the topsoil or surface soil is generally the most biologically active and permeable soil for accepting water. The topsoil also dries the fastest after a rainfall event and will maintain the highest water absorption rate.

Advantages of Subsurface Drip

- Health risks associated with exposure to reclaimed/treated water are minimized
- Pollution of storm water runoff is minimized
- Eliminates odor, ponding and runoff problems
- Can be used under difficult circumstances of high water, tight soils, or steep slopes
- Does not require minimum effective soil coverage
- Disposal of water by means of evapotranspiration by the plants is maximized
- Opportunities to reuse the clean, safe, treated water are increased
- Deep percolation is minimized, resulting in an easier installation process
- Consumption of nitrates by plant material is increased
- The GSDS is durable and has a long-life expectancy
- The dripfield layout can be designed for creative or practical uses, providing endless landscape solutions
- System is fully-automated and the Hoot System controller can be programmed for timing and zones, just like a sprinkler system

PAY FOR YOUR WATER ONCE – GET TO USE IT TWICE!

WARRANTY AND MAINTENANCE

All new Hoot Systems come with a three-year manufacturer's product warranty, which is not prorated and transfers to new property owners ("Limited Warranty and Registration").

Additionally, all new Hoot Systems feature an initial maintenance service policy, covering the first two years of system operation ("Treatment System Initial Service Policy"). During the first two years of system ownership, the homeowner is entitled to all service, sampling collection and inspection calls required by local regulatory officials.

At each service visit, an authorized Hoot Service Provider performs various tasks listed on the "Service & Maintenance Checklist", including a complete inspection of each component of the Hoot System and any necessary adjustments or servicing to any electrical, mechanical and other component parts to ensure proper function.

At the end of the two-year maintenance agreement, the property owner can continue their maintenance and service agreement with the authorized Hoot Service Provider or contract with any other aerobic-trained maintenance company they choose. We believe in comprehensive homeowner education to ensure proper long-term use of the system.



In accordance with many County requirements, Superior On-Site Solutions is a
"CERTIFIED ONSITE WASTEWATER TREATMENT SYSTEM INSPECTOR"

(by COWA/NAWT)

COMPANY & CONTACT INFORMATION

[Superior On-site Solutions, LLC](#), California's only authorized distributor of the quality Hoot Treatment System, provides advanced residential and commercial wastewater solutions to septic professionals throughout California.



Superior On-Site Solutions

9175 Kiefer Blvd #199
Sacramento, CA 95826

TOLL FREE (877) 888-4668

www.sosonsite.net



SOS Mission Statement: Central to our beliefs is the protection of a pristine and safe environment that we can pass on to future generations. Along with technological advancements, we feel the best way to preserve our future is through strong environmental regulation, enforcement and local involvement.