



Promoting Advanced Wastewater Technology!

Presents the

Hoot Treatment System

Residential • ADU • Commercial • Municipal •
Subdivision

NSF
Certified to NSF/ANSI
Standard 40

NSF
Certified to NSF/ANSI
Standard 245

NSF
Onsite Monitoring Ready

HOOT TREATMENT SYSTEM

For over 40 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**, authorized Distributor for the quality **Hoot Treatment System**.

Essentially a residential-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 hundreds of thousands of applications across the United States, including sensitive and high-profile sites where performance and reliability are non-negotiable.

Superior On-Site Solutions has installed over **500 Hoot Systems in California**, and the Hoot System is approved for use in over **55 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** (underground aquifers, 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** and a **THREE-YEAR WARRANTY** that transfers to new owners
- **COST-EFFECTIVE** alternative to costly, complex filtration systems
- Exceptional **SERVICE & SUPPORT** from Hoot Systems and Superior On-Site Solutions

RESIDENTIAL TREATMENT SOLUTIONS (500–2,000 GPD)

With treatment solutions 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 on the level of performance required:

BASIC Nitrogen Reduction Series (BNR-Series)

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

Certified to **NSF/ANSI Standard-40**, the Hoot BNR-Series provides up to a 98% reduction of both 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, and 1,000 GPD sizes
- Optional ultraviolet disinfection light

ADVANCED Nitrogen Reduction Series (ANR-Series)

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

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

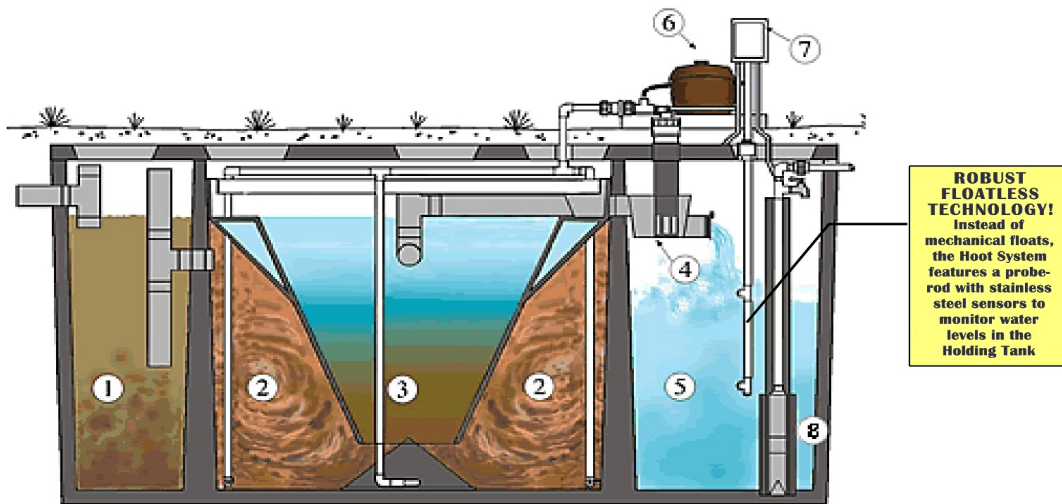
NSF Performance Test Summary

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, and 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 & 1,000 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 the 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, and safe effluent is stored for discharge
- 6) **Aerator/Blower pump** — super-quiet, energy-efficient blower located above ground
- 7) **Hoot Control Center** — advanced computer and NSF modem monitor and control the system
- 8) **Discharge pump** — discharges effluent to the chosen method of disposal

The **pretreatment tank** begins the anaerobic decomposition of the influent and holds any non-biodegradables inadvertently added to the system.

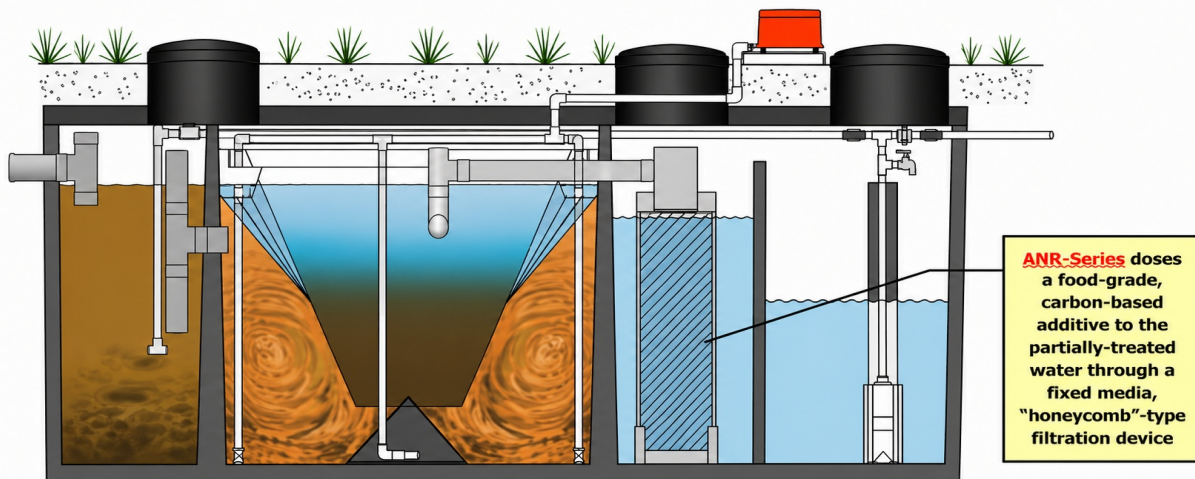
The **aeration chamber** is the "heart" of this activated sludge sewage treatment system, where oxygen is introduced into the sewage by a long-life, above-ground aerator blower/pump. Aeration mixes organic materials with the bacterial population, allowing the bacteria to naturally attack, process, and 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 through 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 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 **NSF/ANSI Standard-245**, which requires minimum nitrogen reduction of at least 50%.

Together with advanced aeration and timed recirculation, the Hoot ANR-Series uses 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 managed by a computer controller that monitors system flow to ensure proportional dosing based on need, providing reliable Nitrogen Reduction performance for a range of TN influent strengths from 35–75 mg/L.



COMMERCIAL TREATMENT SYSTEMS (2,500 – 250,000+ GPD)

For larger wastewater project needs, SOS and Hoot offer a complete line of commercial treatment plants handling flows from 2,500 GPD to 250,000 GPD and beyond.

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.



HOOT CONTROL CENTER

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

- System Alarm** — audible alarms alert you to any problem (water over-use, broken pressure lines, clogged pumps), then "reminds" you after 16 hours if uncorrected
- Smart Effluent Pump** — prior to an alert, the system attempts 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 resumes where it stopped
- Discharge System Choices** — the controller supports subsurface drip or low-pressure dosing
- Modem Output** — allows remote monitoring and contacts service personnel in the event of a problem
- Replace UV-Light (optional)** — indicator comes on when the UV-light fails



As an added benefit, Superior On-Site Solutions utilizes an **Onsite Monitoring Program** that 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, this program provides homeowners and regulatory officials a convenient, reliable way to monitor the service status of each Hoot System, resulting in total confidence in long-term system performance and 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 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 Hoot Systems, LLC protocols).

Because of the single-tank design with landscape drip field, locating the tank on a property is simple and straightforward, generally resulting in lower engineering, construction, and installation costs 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 the NSF Monitoring Program.

The Hoot BNR tank measures 13'6"L × 6'W × 6'H. Drip lines are buried 6–10 inches 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 drip irrigation with the **Geoflow Subsurface Drip System (GSDS)** as the most effective hydro-dispersal option.

This efficient, eco-friendly reuse of 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 homeowners ultimate flexibility in landscape design.

The principle of subsurface drip disposal, a concept that has been around for over 60 years, is that a single pulse of water is applied subsurface, then trickles into the soil by capillary action laterally and vertically as well as downward. The GSDS typically has emitter lines placed 6–10 inches below surface grade to irrigate surface plant material via evapotranspiration (for colder climates prone to frost or freezing, lines can be buried up to 18 inches below grade). Closer line and/or emitter spacing of 12 inches may be used on heavy clay soils or very coarse sands where lateral movement of treated water is restricted.

The shallow depth of installation is an advantage of the subsurface drip field concept, since topsoil is generally the most biologically active and permeable layer for accepting water. Topsoil also dries the fastest after a rainfall event and maintains the highest water absorption rate.

Advantages of Subsurface Drip

- Minimizes health risks associated with exposure to reclaimed/treated water
- Minimizes pollution of storm water runoff
- Eliminates odor, ponding, and runoff problems
- Can be used under difficult circumstances — high water tables, tight soils, or steep slopes
- Does not require minimum effective soil coverage
- Maximizes disposal of water via evapotranspiration by plants
- Increases opportunities to reuse clean, safe, treated water
- Minimizes deep percolation, resulting in an easier installation process
- Increases consumption of nitrates by plant material
- GSDS is durable with a long life expectancy
- Drip field layout can be designed for creative or practical uses — endless landscape solutions
- Fully automated — 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 two-year service policy** covering the first two years of system operation ("Treatment System Initial Service Policy"). During this period, the homeowner is entitled to all service, sample collection, and inspection calls required by local regulatory officials.

At each service visit, an authorized Hoot Service Provider performs 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 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 is California's only authorized distributor of the Hoot Treatment System, providing advanced residential and commercial wastewater solutions to septic professionals throughout California.

Superior On-Site Solutions

3643 Bradshaw Road #311

Sacramento, CA 95827

TOLL-FREE: (877) 888-4668

LOCAL: (916) 436-8457

www.sosonsiteca.com

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 believe the best way to preserve our future is through strong environmental regulation, enforcement, and local involvement.