



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

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### GENERAL USE CERTIFICATION

Pursuant to Title 5, 310 CMR 15.00

Name and Address of Applicant:

Hoot Systems, LLC  
2885 Highway 14 East  
Lake Charles, LA 70607

Trade name of Technology and Models: H – Series Hoot System; H500A, H600A, H750 and H1000 (hereinafter called the “System”). Schematic Drawings illustrating each System, a design and installation manual, an owner’s manual, an operation and maintenance manual, and an inspection checklist are part of this Approval.

Transmittal Number: X225364

Date of Issuance: revised February 19, 2013

#### Authority for Issuance

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental, Protection hereby issues this General Use Certification to: Hoot Systems, LLC 2885 Highway 14 East, Lake Charles, LA 70607 (hereinafter “the Company”), certifying the System described herein for General Use in the Commonwealth of Massachusetts. The sale, design, installation, and use of the System are conditioned on compliance by the Company, the Designer, the Installer, the Service Contractor, and the System Owner with the terms and conditions set forth below. Any noncompliance with the terms or conditions of this Certification constitutes a violation of 310 CMR 15.000.

David Ferris, Director  
Wastewater Management Program  
Bureau of Resource Protection

February 19, 2013

Date

## Description of the Technology

The H-Series Hoot System provides for enhanced reduction of organics and solids in residential strength wastewater prior to the discharge to a conventional soil absorption system. The purpose of providing enhanced reduction in organics and solids is to ensure longer term reliability of the soil absorption system and on-site wastewater disposal. The H-Series Hoot System consists of a pretreatment tank, Aeration Chamber and Clarifier, described as follows.

**Pretreatment or Trash Trap:** Aides in the anaerobic decomposition of the influent and provides a storage volume for non-biodegradable matter which are inadvertently added to the system. This tank functions like a septic tank, providing a space for floatables (mainly things such as fats, oils, and grease) and a place for things to settle. A reduction of at least 50% of the Total Suspended Solids (TSS) occurs within this tank and approximately 25% of the Biochemical Oxygen Demand (BOD5). This pre-treatment chamber contains a mid-level, baffled crossover to allow the liquid waste effluent to leave the compartment and enter into the aeration chamber.

**Aeration Chamber:** By means of the Troy Air Blower, oxygen is incorporated into the sewage. This introduction of oxygen is done in such manner as to intimately mix the organics of the sewage with the indigenous bacteria populations in the aeration chamber. Reduction of the organics is accomplished by these organisms. Movement of sewage in the aeration chamber causes the activated sludge that settled in the final clarifier to be re-introduced into the aeration chamber:

**Clarifier:** A still chamber located within the Aeration Chamber provides a quiescent zone where clarified effluent rises to the outlet, located 6 inches below the surface of the clarifier. This Chamber holds approximately 12 hours capacity of effluent which discharges to a soil absorption system (SAS) installed in accordance with 310 CMR 15.000 and this Approval.

## Conditions of Approval

The H-Series Hoot System is certified for General Use to provide enhanced treatment, but is not certified to provide full secondary treatment. As of this time, the Company has not provided sufficient data, generated by field use of the System on a broad scale, to demonstrate that the System consistently produces effluent meeting secondary treatment standards of 30 mg/l or less of BOD5 and TSS. However, as an aerobic treatment process, the Department has included within the Hoot General Use Certification the majority of the Standard Conditions for Secondary Treatment Units with important exceptions. The exceptions to the Standard Conditions are identified in the Hoot Special Conditions.

In summary, the General Use Certification for the Hoot System does not allow a reduction in the effective leaching area for the soil absorption system and the System must meet the requirements for a conventional system, except for approved changes to septic tank requirements contained in these Special Conditions. Additionally, monitoring for the Hoot System is reduced from the requirements in the Standard Conditions for Secondary Treatment Units.

The term “System” refers to the Hoot System in combination with the other components of an on-site treatment and disposal system that may be required to serve a facility in accordance with 310 CMR 15.000.

The term “Approval” refers to the technology-specific Special Conditions, the attached Standard Conditions (for Secondary Treatment Units) applicable to the Hoot System, the General Conditions of 310 CMR 15.287, and any other Attachments.

### **Special Conditions**

1. The purpose of this Certification is to allow the use of the System in Massachusetts on a General Use basis to enhance and maintain the performance of a properly functioning Soil Absorption System (SAS). The installed soil absorption system shall meet the Title 5 requirements for new construction.
2. In addition to the Special Conditions contained in this Approval, the System shall comply with all the attached Standard Conditions for Secondary Treatment Units, except where stated otherwise in these Special Conditions,
3. The System is approved for facilities generating residential strength wastewater with a design of 1000 gallons per day (gpd) or less and where a conventional system with a reserve area exists or can be built on-site in full compliance with the new construction requirements of 310 CMR 15.000 and has been approved by the local approving authority.
4. System models H500A and H600A include a built-in pretreatment tank. These units, when properly selected for the design flow of the residential facility to be served, shall be installed in series between the building sewer and the soil absorption system (SAS).
5. The System model H750 does not include a built-in pretreatment tank and must be installed with an additional 600 to 800 gallon septic tank for pretreatment prior to the unit. The septic tank must be designed and installed in accordance with the Company specifications. The septic tank (pretreatment tank) and the unit shall be installed in series between the building sewer and the SAS.
6. The System model H1000 does not include a built-in pretreatment tank and must be installed with an additional 800 to 1000 gallon septic tank for pretreatment prior to the unit. The septic tank must be designed and installed in accordance with the Company specifications. The septic tank (pretreatment tank) and the unit shall be installed in series between the building sewer and the SAS
7. The System models covered by this Approval are exempt from the requirements for a standard Title 5 septic tank designed in accordance with 310 CMR 15.223 and 15.228, provided that:
  - a. the aeration chamber is preceded with the appropriate pretreatment capacity (septic tank), as described in this Approval; and

- b. the record drawings, on file with the local approving authority, shall clearly indicate an area where a septic tank meeting the requirements of Title 5 can be installed in the future, if needed. The System Owner shall not construct any permanent buildings or structures or disturb the site in any manner that would prevent the installation of a Title 5 septic tank in the future, if needed.
8. Prior to the sale and prior to the submission of an application for a Disposal System Construction Permit (DSCP), for any nonresidential system, the Company or its authorized agent shall submit to the Designer and the System Owner, a certification by the Company or its authorized agent that the design conforms to the Approval and all Company requirements and that the proposed use of the System is consistent with the System's capabilities. The authorized agent of the Company responsible for the design review shall have received technical training in the Company's products.
9. Upon submission of an application for a Disposal System Construction Permit (DSCP), the Designer shall provide to the local Approving Authority for any proposed non-residential System, the certification by the Company as specified in Paragraph 8
10. The Company must maintain programs of training and continuing education for Designers. Training shall be provided at least annually. The Company or its authorized agent shall institute programs of training and continuing education that is separate from or combined with the training for Service Contractors. The Company or its authorized agent shall maintain, annually update, and make available by February 15th of each year, lists of trained Designers. The Company or its authorized agent shall certify that the Designers on the list have taken the appropriate training and passed the Company's training qualifications.
11. The System is exempt from the effluent standards of Paragraph II.1 and the sampling/monitoring requirements of Paragraphs III.4 to III.7 of the Standard Conditions for General Use Certification of Secondary Treatment Units. Any other references to effluent sampling and field testing shall not apply, as well.
12. The System shall not be entitled to the reduction in leachfield size provided in Paragraph II.4 of the Standard Conditions for General Use Certification of Secondary Treatment Units, and Paragraph II.5 shall not apply.