**Section 905.100 Aerobic Treatment Plants** **and NSF International/ANSI Standard 40 Wastewater Treatment Systems**

a) General. Aerobic treatment plants and NSF International/ANSI Standard 40 wastewater treatment systems shall be tested and listed by NSF International or a laboratory approved by ANSI and certified compliant with the International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) Guide 65 to determine compliance with the requirements of NSF International/ANSI Standard 40, Residential Wastewater Treatment Systems. To assure compliance with certification requirements and the Act and this Part, the Department will obtain and retain from NSF International a complete list of approved systems, approved components and approved component parts for each NSF International/ANSI Standard 40 wastewater treatment system installed or currently existing within the State. Until the Department receives the NSF approval information, the system shall not be considered approved in accordance with the Act and this Part. Standard 40 is a standard that covers an organized and coordinated system of components that functions to treat wastewater generated by individual residences. This Part shall allow approved aerobic treatment plants and NSF International/ANSI Standard 40 wastewater treatment systems to serve residential property that is occupied on a year-round or full-time basis. Aerobic treatment plants shall not be used to serve residential property that is used as a seasonal, weekend or part-time residence.

b) Class II Effluent. Aerobic treatment systems listed by NSF International or a laboratory approved by ANSI to determine compliance with NSF International/ANSI Standard 40 for Class II effluent shall discharge to one of the following:

1) A subsurface seepage system designed and constructed in accordance with the requirements of Section 905.60.

2) A sand filter designed and constructed in accordance with the requirements of Section 905.70 or 905.80.

3) A waste stabilization pond designed and constructed in accordance with the requirements of Section 905.90.

c) Class I Effluent. NSF International/ANSI Standard 40 wastewater treatment systems listed by NSF International or a laboratory approved by ANSI to determine compliance with NSF International/ANSI Standard 40 for Class I effluent shall discharge to one of the following:

1) A subsurface seepage field designed and constructed to be at least ⅔ the size determined necessary by Section 905.60. The subsurface system shall be installed as shallow as possible while maintaining a minimum of 6 inches of cover. There shall be at least 12 inches between the bottom of the subsurface seepage system (soil interface) and the shallowest limiting layer.

2) A surface discharge in accordance with Section 905.110.

d) Sizing. Aerobic treatment plants that are listed by NSF International or a laboratory approved by ANSI to determine compliance with NSF International/ANSI Standard 40 as Class I and rated at 500 gallons per day will be allowed for the treatment of sewage from residential property having up to and including 4 bedrooms. Other aerobic treatment plants that are listed by NSF International or a laboratory approved by ANSI to determine compliance with NSF International/ANSI Standard 40 as Class I shall be sized as follows:

|  |  |
| --- | --- |
|  | Minimum Rated Treatment |
| Bedrooms | Capacity-Gallons |
|  |  |
| 1 | 400 |
| 2 | 400 |
| 3 | 500 |
| 4 | 500 |
| 5 | 750 |
| 6 | 900 |
| 7 | 1000 |
| 8 | 1200 |
| 9 | 1350 |
| 10 | 1500 |

e) Installation. All components of aerobic treatment plants shall be installed at the time of the original installation. If this is not possible, a solid end cap shall be securely placed over the end of the discharge line until the system can be completed. This will prevent the discharge of raw sewage to the ground surface.

f) Accessibility for Inspection and Maintenance. The aerobic treatment plants or NSF International/ANSI Standard 40 wastewater treatment systems shall be equipped with one or more grade-level access manholes having a minimum inside dimension of 18 inches that extend to 3 inches or more above the ground surface. The manhole shall be equipped with a lid that is secured in compliance with Section 5.7.2 of NSF International/ANSI Standard 40. These manholes shall be located to permit periodic physical inspection and maintenance of all compartments and component parts. Component parts include submerged bearings, moving parts, tubes, intakes, slots, filters, and other devices.

g) Service. Devices falling within the scope of NSF International/ANSI Standard 40 require periodic maintenance to achieve performance consistent with demonstrated capabilities. Implicit in NSF International/ANSI Standard 40 is the recognition that assured professional service is imperative. NSF International/ANSI Standard 40 and this Part require a 2-year service policy to be provided as part of the initial service agreement. (Note: The following initial service policy includes items not included in the NSF International/ANSI Standard 40 service policy.)

1) Initial service policy. The private sewage disposal installation contractor, through the manufacturer or the distributor of the aerobic treatment unit, shall furnish a 2-year initial service policy to the purchaser. This policy shall provide for:

A) Four inspection/service calls, at least one every 6 months, that include inspection, adjustment and servicing of the mechanical and the applicable component parts to ensure proper function;

B) An effluent quality inspection consisting of a visual check for color, turbidity, scum overflow, and an examination for odors;

C) Reporting to the owner immediately any improper operation that cannot be corrected at the time of the inspection or service call. This shall be followed by a written report to the owner that includes the date by which the condition will be corrected.

2) Continuing service policy. Each manufacturer shall make available for purchase by the owner a continuing service policy with terms equal to the initial service policy.

3) Standby parts. The local distributor shall stock standby mechanical and electrical component parts for use when the plant's mechanical or electrical components must be removed from the site for repairs.

4) Component parts. The mechanical and electrical component parts shall be guaranteed against any defects in materials and workmanship as warranted.

5) Service. Service shall be available within 2 working days following a request.

6) Owner's manual. The manufacturer shall provide an owner's manual with each unit. The manual shall include the following information:

A) Model numbers;

B) Functional description of unit, including a statement of minimum performance requirements as established by test;

C) Design and flow diagrams;

D) Warranty;

E) Replacement policy and service policy;

F) Installation instructions;

G) Detailed operation and maintenance requirements (including user responsibility, parts and service);

H) Rated service flow in GPM (gallons per minute) or GPD (gallons per day);

I) Energy source and energy required for proper operation of the plant; and

J) Specification of models tested under NSF International/ANSI Standard 40.

7) Service label. A clearly visible, permanently attached label or plate giving instructions for obtaining service shall be placed at the audible and visual alarm.

8) Responsibility of property owner. The property owner shall be responsible for maintaining and operating the plant in accordance with this Part and the manufacturer's specifications.

h) Operation. Aerobic treatment plants and NSF International/ANSI Standard 40 wastewater treatment systems shall produce an effluent meeting the physical, chemical and biological requirements of Section 905.110. Under normal operation and, if an electrical or mechanical failure or other performance failure or malfunction occurs, the design and construction of the aerobic treatment plant or NSF International/ANSI Standard 40 wastewater treatment systems shall prevent the discharge of wastewater from any opening that is not part of the designed flow path of the entire treatment process and shall prevent the discharge of wastewater that is not in compliance with Section 905.110.

i) Maintenance. If a routine service call indicates an electrical, mechanical or performance failure or malfunction or if routine laboratory test results indicate improper treatment, the property owner shall immediately take action to bring the aerobic treatment plant or NSF International/ANSI Standard 40 wastewater treatment systems into compliance with this Part.

j) Non-residential Use. Aerobic treatment plants and NSF International/ANSI Standard 40 wastewater treatment systems that are listed by NSF International or a laboratory approved by ANSI to determine compliance with NSF International/ANSI Standard 40 as Class I will be considered for use to serve a non-residential property, provided that all of the following are met:

1) Total daily flows from the wastewater source into the plant are at least 75% of the rated hydraulic capacity and do not exceed the rated hydraulic capacity of the plant.

2) Wastewater influent shall not exceed the manufacturer's design specifications for BOD5 loading as established by NSF International or a laboratory approved by ANSI to determine compliance with NSF International/ANSI Standard 40 during testing of the plant.

3) Hourly flows from the wastewater source into the plant are less than or equal to the treatment capacity of the plant divided by 24. This may require the installation of a flow equalization device.

4) A buried sand filter sized with a surface area equal to 2 gallons per square foot per day and dosed at least once but not more than 4 times per day shall immediately follow the aerobic treatment plant.

k) Splitting of Flows. Splitting of flows from a wastewater source or the use of multiple aerobic treatment plants or NSF International/ANSI Standard 40 wastewater treatment systems shall be prohibited unless subsurface disposal of the effluent is used. Where allowed, splitting of flows shall be done by pumps.

l) Private sewage disposal installation contractors or homeowners who maintain or service aerobic treatment plants and NSF International/ANSI Standard 40 wastewater treatment systems shall be required to maintain the integrity of the NSF International seal or the seal of a laboratory approved by ANSI to determine compliance with NSF International/ANSI Standard 40. Only component parts approved for use in an individual plant may be used. No design changes or component part changes may be made that will void the NSF International seal or the seal of a laboratory approved by ANSI to determine compliance with NSF International/ANSI Standard 40. Any person who voids the NSF International seal or the seal of a laboratory approved by ANSI to determine compliance with NSF International/ANSI Standard 40 shall be responsible for repairing the plant so it can bear the NSF International seal or the seal of a laboratory approved by ANSI to determine compliance with NSF International/ANSI Standard 40 or shall replace the plant with an approved private sewage disposal system.

(Source: Amended at 37 Ill. Reg. 14994, effective August 28, 2013)