

**ENVIRONMENTAL PROTECTION**

**PINELANDS COMMISSION**

**Pinelands Comprehensive Management Plan**

**Pilot Program for Alternate Design Wastewater Treatment Systems**

**Proposed Amendments: N.J.A.C. 7:50-6.84, 10.22 and 10.23**

Authorized By: New Jersey Pinelands Commission, Nancy Wittenberg, Executive Director

Authority: N.J.S.A. 13:18A-6j

Calendar Reference: See Summary below for explanation of exception to calendar requirement

Proposal Number:

A **public hearing** concerning this proposal will be held on:

August 29, 2018 at 9:30 A.M.  
Richard J. Sullivan Center  
15C Springfield Road  
New Lisbon, New Jersey

Submit written comments by regular mail, facsimile or e-mail by September 14, 2018 to:

Susan R. Grogan, P.P., AICP  
Chief Planner  
Pinelands Commission  
P.O. Box 359  
New Lisbon, NJ 08064  
Facsimile: (609)894-7330  
E-mail: [planning@pinelands.nj.gov](mailto:planning@pinelands.nj.gov) or through the Commission's website at  
<http://nj.gov/pinelands/home/contact/planning.shtml>

The name and mailing address of the commenter must be submitted with all public comments. Commenters who do not wish their names and affiliations to be published in any notice of adoption subsequently prepared by the Commission should so indicate when they submit their comments.

The agency proposal follows:

### **Summary**

The New Jersey Pinelands Commission (Commission) proposes to amend subchapters 6, Management Programs and Minimum Standards; and 10, Pilot Programs of the Pinelands Comprehensive Management Plan (CMP). The Pinelands CMP has been guiding land use and development activities in the Pinelands since it took effect on January 14, 1981. Since that time, the CMP has been amended a number of times, most recently in March 2018 through a set of amendments related to fees, escrows, application requirements and procedures, public notice and mailing requirement, water quality standards, landfill closure, signs and the Pilot Program for Alternate Design Wastewater Treatment Systems (see 50 N.J.R. 969(a)).

The amendments now being proposed by the Commission relate solely to the Pilot Program for Alternate Design Wastewater Treatment Systems. They are intended to modify the standards of this long-standing pilot program to allow for continued installation of certain wastewater treatment technologies in the Pinelands Area. A more detailed description of the pilot program and proposed amendments follows.

In 2000, the Pinelands Commission formed a special Ad Hoc Septic System Committee to research alternate septic system technologies that might better meet the water quality standards of the Comprehensive Management Plan (N.J.A.C. 7:50-6, Part VIII) for residential development on lots smaller than 3.2 acres, where such lots were already authorized pursuant to

N.J.A.C. 7:50-5. In its research efforts, the Committee consulted wastewater engineering professionals, state and regional on-site technology demonstration projects, alternate treatment system technology manufacturers, Pinelands Area county health departments and other state and local agencies. Based on this research, the Committee identified five technologies that it determined could be expected to meet Pinelands water quality standards for residential development on lots smaller than 3.2 acres in size. The identified technologies were the Amphidrome, Ashco RFS<sup>III</sup>, Cromaglass, Bioclere and FAST treatment systems. Based upon nitrogen removal expectations and the Pinelands Septic Dilution Model, the Committee concluded the Amphidrome, Cromaglass, Bioclere and FAST systems could be permitted on lots of at least one acre and that the Ashco RFS<sup>III</sup> system could be allowed on residential lots of at least 1.5 acres. All of the identified systems utilize proven biological nutrient removal processes to reduce nitrogen levels in treated wastewater. The water quality requirements of N.J.A.C. 7:50-6, Part VIII, include provisions that are aimed at controlling the amount of nitrogen that enters the environment because nitrogen itself is a significant pollutant and because it often serves as an indicator of changes in overall water quality.

The Ad Hoc Septic System Committee unanimously recommended that an interim program be developed for the approval, installation and monitoring of the five identified wastewater treatment technologies and that the interim program include conditions and safeguards to govern their use. To implement these recommendations, the Pinelands Commission adopted a set of amendments to the Comprehensive Management Plan that authorized the use of the technologies through the establishment of the Alternate Design Treatment Systems Pilot Program (see 34 N.J.R. 2804(b)). These Comprehensive Management Plan amendments, which took effect on August 5, 2002, are codified at N.J.A.C. 7:50-10, Part IV. The Pilot Program was

implemented to provide a means to test whether the five identified technologies could be maintained and operated so as to meet the water quality standards of the Comprehensive Management Plan in a manner that a homeowner can be reasonably expected to follow.

Implementation of the Pilot Program commenced on August 5, 2002, with the first pilot program treatment system installed in 2004. As of June 2017, a total of 305 pilot program systems have been installed in association with single-family residential development in 28 different Pinelands municipalities.

N.J.A.C. 7:50-10.23 of the Comprehensive Management Plan requires that the Executive Director review the Alternate Design Treatment Systems Pilot Program periodically and report the findings of that evaluation to the Pinelands Commission in a program implementation report. The criteria by which the Pilot Program is periodically evaluated are set forth at N.J.A.C. 7:50-10.23(b)1 through 6. The Executive Director issued program implementation reports in 2006, 2009 and 2012. Links to all reports may be found on the Commission's web site at [www.nj.gov/pinelands](http://www.nj.gov/pinelands). In response to the recommendations set forth in these reports, the Commission adopted amendments to the Comprehensive Management Plan to:

- Authorize the installation of Pilot Program technologies in all Pinelands municipalities;
- Provide the ability to install more than 10 of any Pilot Program technology in the same residential development;
- Grant permanent approval status to three Pilot Program technologies (Amphidrome, Bioclere and FAST) in recognition of their demonstrated ability to meet CMP water quality standards;
- Remove one technology (Ashco RFS<sup>III</sup>) from the Pilot Program due to its commercial unavailability in the Pinelands Area;

- Remove one technology (Cromaglass) from the Pilot Program due to its inability to meet CMP water quality standards;
- Provide the Executive Director with the authority to impose an immediate suspension on all new installations of a Pilot Program technology that is not adhering to the requirements of the program or meeting CMP water quality standards;
- Provide an opportunity for additional prescreened technologies to enter the Pilot Program; and
- Continue the Pilot Program by allowing installation of new systems through August 5, 2018.

The above-referenced CMP amendments took effect in 2006, 2007, 2010, 2014 and 2018 and may be found at 38 N.J.R. 1829(b), 39 N.J.R. 5077(b), 42 N.J.R. 2422(a), 46 N.J.R. 1877(a) and 50 N.J.R. 969(a).

The Executive Director completed a fourth Implementation Report in November 2017, last revised in April 2018

(<http://www.nj.gov/pinelands/landuse/current/altseptic/Final%20April%2027%202018%20%202018%20ImplementationReport.pdf>). In this report, the Executive Director found that:

- The continued use of advanced on-site treatment technologies is essential to the efficient use and orderly development of the growth-oriented areas of the Pinelands Area;
- The Pilot Program provides an appropriate means to test whether technologies can be maintained and operated so as to meet CMP water quality standards in a manner that a homeowner can reasonably be expected to follow.

- The Pilot Program has been successful in identifying technologies that achieve compliance with Pinelands water quality standards when used for residential development on appropriately-sized lots.
- Landowners in the Pinelands Area benefit when new technologies are accepted into the Pilot Program, expanding choices and stabilizing prices.
- Proper operation and maintenance remains crucial to the long-term performance of the Pilot Program technologies.

Based on these findings, the Executive Director recommended that the Commission continue to monitor and evaluate the four technologies currently in the Pilot Program and issue another implementation report in November 2019. The Executive Director further recommended that two new technologies be added to the Pilot Program in 2018. Finally, the Executive Director recommended that the Commission amend the CMP to remove the current August 5, 2018 installation deadline for Pilot Program technologies.

The Commission is now proposing amendments to the CMP to revise the Pilot Program in response to the findings and recommendations set forth in the 2017 implementation report. Specifically, N.J.A.C. 7:50-10.22(a)4 and 10.23(h) are deleted in order to remove the August 5, 2018 deadline for installation of pilot program technologies. The Commission believes the installation deadline is no longer necessary, given that the Executive Director has the authority pursuant to N.J.A.C. 7:50-10.22(a)4 (previously (a)5) to immediately suspend all installations of a particular technology if monitoring data shows the system is not meeting CMP water quality standards. Likewise, the Executive Director may suspend installations if it becomes evident that a technology vendor is not complying with the terms of the Pilot Program. The Executive Director may also require an increased lot size for a particular technology if monitoring results

indicate a larger land area is necessary to meet CMP water quality standards. Because sufficient safeguards exist, a fixed installation deadline is not needed. It is worth noting that a fixed deadline has also proven over time to be difficult to administer. It often impacts development applications in progress and can only be changed upon completion of a lengthy rulemaking process.

In addition to removal of the installation deadline, N.J.A.C. 7:50-10.22(a)5 (previously (a)6) is amended to clarify the required certifications that must be provided to the Commission as a condition for use of an alternate design pilot program treatment system. This section previously required that the manufacturer of each system (or the manufacturer's agent) certify to the Commission and the county board of health that installation of each system has been properly completed. An amendment is being made to require that the certification be made by both the manufacturer and a New Jersey licensed professional engineer, and that the certification relate not only to proper installation of the system but also to its proper operation. These amended certification requirements will now be fully consistent with those already set forth in N.J.A.C. 7:50-6.84(a)5v for advanced treatment systems that have been permanently authorized for use in the Pinelands Area. To avoid confusion, the Commission believes it important that certification requirements for all systems be identical.

N.J.A.C. 7:50-6.84(a)5iv(2)(F) and (3)(F) are amended to update the cross-references in these sections to the Pilot Program requirements that will be recodified at N.J.A.C. 7:50-10.22(a)5.

As the Commission has provided a 60-day comment period for this notice of proposal, this notice is excepted from the rulemaking calendar requirement, pursuant to N.J.A.C. 1:30-3.3(a)5.

### **Social Impact**

No adverse social impact is anticipated as a consequence of the adoption of the proposed amendments. Society as a whole benefits from the protection of the Pinelands and the proposed amendments are designed to do just that. Any social impacts that do result are expected to be positive. Conversely, a negative social impact might result should the proposed amendments not be adopted. This stems from the fact that the existing rules, at N.J.A.C 7:50-10.22(a)4 and 10.23(h), prohibit the installation of pilot program treatment systems after August 5, 2018. Absent adoption of the proposed amendments, pilot program systems could no longer be used after that date for residential development on unsewered properties of less than 3.2 acres in the Pinelands Area. Even with the proposal of these amendments, there will be a period of several months after August 5 when installation of new pilot program systems cannot proceed because the rulemaking process will not yet be complete.

### **Economic Impact**

The economic impact of the proposed amendments to the Pilot Program for Alternate Design Wastewater Treatment systems will clearly be positive for those landowners seeking to develop their one to 3.2 acre properties in unsewered areas of the Pinelands Area. Without the proposed amendments, use of pilot program technologies would not be permitted after August 5, 2018. Landowners would then have limited options available to them; they could only use one of the three permanently-approved advanced treatment technologies. Reduced choices could drive up the prices of these three approved technologies. Non-adoption of the amendments would also create a problem for landowners and homebuilders with applications in progress if they were unable to install their proposed pilot program systems prior to August 5, 2018. The Commission is seeking to minimize negative economic impacts by proposing the amendments at



this time, so as to shorten the time period within which pilot program system installations will not be permitted and limit the number of negatively affected property owners and applicants.

### **Environmental Impact**

Elimination of the installation deadline associated with the Alternate Design Wastewater Treatment Systems Pilot Program is expected to provide environmental benefit. Elimination of the deadline provides a continued opportunity for installation of new systems, which carries with it the opportunity for the Commission to collect data and monitor existing pilot program technologies and authorize new prescreened advanced wastewater treatment systems to enter the program and be installed and monitored. The installation of additional systems will result in more monitoring and testing of effluent, and this will ultimately provide the Commission with more data to be evaluated as part of the pilot program. Provided they are maintained properly, these systems provide the potential for improved water quality when compared with conventional septic systems.

### **Federal Standards Statement**

Section 502 of the National Parks and Recreation Act of 1978 (16 U.S.C. §471i) called upon the State of New Jersey to develop a comprehensive management plan for the Pinelands National Reserve. The original plan adopted in 1980 was subject to the approval of the United States Secretary of the Interior, as are all amendments to the plan.

The Federal Pinelands legislation sets forth rigorous goals that the plan must meet, including the protection, preservation and enhancement of the land and water resources of the Pinelands. The proposed amendments are designed to meet those goals by allowing for the continued installation and monitoring of alternate design wastewater treatment systems for residential development through a highly successful pilot program.

There are no other Federal requirements that apply to the subject matter of these amendments.

### **Jobs Impact**

Elimination of the impending deadline in the pilot program provides a continued opportunity for new home construction in areas that are zoned for such use but are not served by public sewerage infrastructure. The proposed amendments may therefore result in the creation of jobs associated with new home construction. Conversely, non-adoption of the proposed amendments could have a negative impact on job creation by limiting the options of a small number of residential homebuilders in the unsewered portions of the Pinelands Area.

### **Agriculture Industry Impact**

The proposed amendments are not expected to impact the agriculture industry in the Pinelands.

### **Regulatory Flexibility Analysis**

The proposed amendments allow for installation of certain wastewater treatment technologies for residential development in the Pinelands Area beyond the August 5, 2018 deadline currently specified in the CMP. They also clarify certification requirements involving such technologies for purposes of ensuring consistency throughout the CMP. All of the other reporting, recordkeeping and compliance requirements of the Pilot Program continue to apply to the manufacturers of alternate design wastewater treatment systems authorized for use in the Pinelands Area. It is believed that at least some of these manufacturers may be small businesses, as defined under the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq. In meeting the standards for use of the authorized technologies that would continue to be authorized under the Pilot Program, these businesses may continue to incur costs relative to ensuring compliance with

the maintenance and monitoring requirements of N.J.A.C. 7:50-10.22(a)5 (previously (a)6). It is unlikely, however, that engaging professional services will be necessary in order to do so. The design of systems for approval by County health departments and other agencies requires the services of a professional engineer under existing State law; that requirement is not changed by the proposed amendments. Furthermore, the requirements at N.J.A.C. 7:50-10.22(a)6 merely involve the provision of certain manuals, maintenance guarantees and other documents that the manufacturers already have on hand, as well as the provision of resources for the collection and analysis of effluent sampling. This is not to say that the requirements represent insignificant costs for the manufacturers, particularly for the five-year non-cancellable maintenance contract required by N.J.A.C. 7:50-10.22(a)6vii. However, these requirements are a critical part of the proposed pilot program and the Commission would not be able to extend or expand the program without them. In any case, it is likely that the associated costs will be passed on to the homeowner by the manufacturers. These costs represent a relatively small price to pay for the opportunity to develop lots that would otherwise not be developable.

No differing requirements have been established for small businesses under the pilot program. Instead, the same maintenance and monitoring requirements will continue to be imposed relative to the authorized technologies, regardless of business size. This is necessary to balance protection of Pinelands resources with the Commission's desire to provide a continued opportunity for residential development on lots that are less than 3.2 acres in size in unsewered areas of the Pinelands. In fact, the Commission has identified proper system maintenance as the primary factor in ensuring that the alternate technologies will function in a manner that is consistent with CMP water quality standards. It is therefore critical that the requirements continue to be imposed on all of the manufacturers or their agents.

The proposed amendments impose no other reporting, recordkeeping or compliance requirements on small businesses, as defined under the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq.

### **Housing Affordability Impact Analysis**

The proposed amendments have the potential to reduce the cost of alternate design treatment systems for those landowners seeking to develop homes on lots between one and 3.2 acres in size in the unsewered portions of the Pinelands Area. With the removal of the installation deadline for such systems, current and future technologies participating in the Pilot Program may continue to be used. A range of options for landowners is thereby preserved, perhaps leading to increased competition among the vendors of existing and new pilot program technologies, resulting in decreased costs of the systems for homeowners.

While the proposed amendments may result in a decrease in the costs of alternate design treatment systems, and therefore a decrease in the average cost of housing utilizing such systems, it is important to note that these systems are being installed in the unsewered portions of the Pinelands Area and primarily in the Regional Growth Areas, Pinelands Villages and Pinelands Towns. Permitted densities in the unsewered portions of these management areas are relatively low, ranging from one unit per acre to one unit per 3.2 acres. Housing units in those portions of the Pinelands Area within which most affordable housing is targeted or anticipated would not be affected as such units are typically expected to be served by public sanitary sewer.

### **Smart Growth Development Impact Analysis**

The proposed amendments allow for the continued installation and monitoring of alternate design treatment systems for residential development in the Pinelands Area through the Commission's

Pilot Program. These systems are used by landowners in the unsewered portions of the Pinelands Area that are zoned for residential development on lots of less than 3.2 acres in size. These areas are primarily located in Regional Growth Areas, Pinelands Villages and Pinelands Towns, management areas designated for development by the CMP, equivalent to designated centers under the State Development and Redevelopment Plan. The proposed amendments do not increase the amount of permitted residential development in these management areas; rather, they provide a continued opportunity for the development of housing in accordance with municipal zoning plans that were previously approved by the Commission. Thus, the proposed amendments are not expected to result in any changes in housing production within designated centers or in any other portions of the Pinelands Area. There will be no effect on new construction in Planning Areas 1 and 2 as designated by the State Development and Redevelopment Plan as these State Planning Areas do not exist in the Pinelands Area.

### **Racial and Ethnic Impact Statement**

The Commission has evaluated this rulemaking and determined that it will not have an impact on pretrial detention, sentencing, probation, or parole policies concerning adults and juveniles in the State. Accordingly, no further analysis is required.

**Full text** of the proposal follows (additions indicated with underlines thus; deletions indicated in brackets [thus]):

7:50-6.84      Minimum standards for point and non-point source discharge

(a)      The following point and non-point sources may be permitted in the Pinelands:

1.-4.      (No change.)

5. Individual on-site septic waste water treatment systems that are intended to reduce the level of nitrate/nitrogen in the waste water, provided that the following standards are met:

i.-iii. (No change.)

- iv. The design of the system and its discharge point, and the size of the entire contiguous parcel on which the system or systems is located, will ensure that ground water exiting from the entire contiguous parcel or entering a surface body of water will not exceed two parts per million nitrate/nitrogen calculated pursuant to the Pinelands dilution model dated December, 1993, as amended, (Appendix A) subject to the provisions of (a)5v below and based on the following assumptions and requirements. For purposes of this section, the entire contiguous parcel may include any contiguous lands to be dedicated as open space as part of the proposed development but may not include previously dedicated road rights-of-way or any contiguous lands that have been deed restricted pursuant to N.J.A.C. 7:50-5.30 or 5.47:

(1) (No change.)

(2) For Amphidrome, Bioclere and FAST systems:

(A)-(E)(No change.)

(F) The manufacturer or its agent shall provide to each owner an operation and maintenance manual and shall provide a five-year warranty consistent with the requirements of N.J.A.C. 7:50-[10.22(a)6viii]10.22(a)5viii;

(G)-(J) (No change.)

- (3) Other on-site septic waste water treatment systems shall only be credited with reducing total nitrogen concentration to the extent authorized by an experimental monitoring program approved by the Pinelands Commission. Such an experimental monitoring program shall only be approved if:

(A)-(E) (No change.)

(F) The system meets all the requirements in N.J.A.C. 7:50-  
[10.22(a)6i]10.22(a)5i through x; and

(G) (No change.)

## **SUBCHAPTER 10 PILOT PROGRAMS**

### **PART IV – ALTERNATE DESIGN TREATMENT SYSTEMS PILOT PROGRAMS**

#### **7:50-10.22 General standards**

- (a) Alternate design pilot program treatment systems shall be authorized for residential use in all municipalities provided that the following standards are met:

1.-3. (No change.)

[4. The USEPA ETV or NSF/ANSI Standard 245 technologies approved by the Commission for participation in the pilot program pursuant to N.J.A.C. 7:50-10.23(b) are authorized to be installed until August 5, 2018.]

[5]4. The Executive Director shall submit an annual report to the Commission describing installation, maintenance and performance data for each technology. The Executive Director also shall submit an interim report to the Commission if it

is determined there is a significant installation, maintenance or performance issue with one or more technologies that needs to be addressed before the issuance of the next annual report. Copies of each annual and interim report shall be provided to each manufacturer and agent of a technology that is discussed in that report. If it is determined in a report either that a manufacturer or its agent is not adhering to any of the requirements of this pilot program or that any one of the technologies, based on maintenance or installation issues or on an evaluation of all the monitoring results for that technology under this pilot program, is not meeting the minimum water quality standards in N.J.A.C. 7:50-6.83 or the two parts per million total nitrogen requirement in [(a)6x] (a)5x below on all lots smaller than 3.2 acres or on lots smaller than a particular size because the effluent exiting the system is higher than was anticipated in establishing the lot sizes in (a)3 above:

i.-ii. (No change.)

[6]5. Conditions for the use of alternate design pilot program treatment systems are as follows:

i.-iv. (No change.)

v. The manufacturer or its agent and a New Jersey licensed professional engineer shall certify to the Commission and the local board of health that installation of each system has been properly completed and that the system and all of its components are operating properly. The manufacturer or its agent [and] shall include in the certification the cost of the



installation and a description of any problem encountered during the installation;

vi.-xi (No change.)

**7:50-10.23 Pinelands Commission approval and evaluation**

(a)-(g) (No change.)

[(h) Nothing in this section shall be construed to authorize the installation of any USEPA ETV and NSF/ANSI Standard 245 treatment technology approved by the Commission for participation in the pilot program after August 5, 2018 as set forth in N.J.A.C. 7:50-10.22(a)4, unless a rule has been adopted by the Commission which expressly authorizes such installation pursuant to (f) or (g) above.]