



PHILIP D. MURPHY  
Governor  
SHEILA Y. OLIVER  
Lt. Governor

State of New Jersey  
THE PINELANDS COMMISSION  
PO Box 359  
NEW LISBON, NJ 08064  
(609) 894-7300  
www.nj.gov/pinelands



SEAN W. EARLEN  
Chairman  
NANCY WITTENBERG  
Executive Director

General Information: [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov)  
Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

## NEW JERSEY PINELANDS COMMISSION MEETING AGENDA

Friday, September 14, 2018

Richard J. Sullivan Center for Environmental Policy and Education

Terrence D. Moore Conference Room

15C Springfield Road

New Lisbon, New Jersey

**9:30 a.m.**

### 1. Call to Order

- Open Public Meetings Act Statement
- Roll Call
- Pledge Allegiance to the Flag

### 2. Adoption of Minutes

- August 10, 2018 (open and closed session)

### 3. Committee Chairs' and Executive Director's Reports

### 4. Matters for Commission Consideration *Where the Record is Closed*

#### A. Permitting Matters

- Office of Administrative Law
  - None
- Review of Local Approval
  - None
- Update on the Status of Public Development Projects
  - Application Number 1990-0868.029 (tree clearing to restore visibility from the Bass River State Forest Fire Tower)

- Public Development Projects and Waivers of Strict Compliance

- Approving With Conditions an Application for Public Development (Application Number 1983-9146.005) (Demolition of a 40,680 square foot commercial shopping center in Pemberton Township)
- Approving With Conditions an Application for Public Development (Application Number 1993-0465.003) (Construction of a basketball court, a hockey rink and a 7,650 square foot playground in Waterford Township)

B. Planning Matters

- Municipal Master Plans and Ordinances

- None

- CMP Amendments

- None

5. Public Comment on Public Development Applications and Waivers of Strict Compliance (see attached list) and Resolutions ***Where the Record is Not Closed*** (to ensure adequate time for all members of the public to comment, we will respectfully limit comments to three (3) minutes. Questions raised during this period may not be responded to at this time but where feasible, will be followed up by the Commission and its staff.)

6. Master Plans and Ordinances Not Requiring Commission Action

- Atlantic County 2018 Master Plan
- Barnegat Township Housing Element and Fair Share Plan
- Barnegat Township Ordinances 2018-15, 2018-16 and 2018-19
- Buena Borough Ordinance 669
- Corbin City Ordinance 4-2018
- Galloway Township Ordinance 1995-2018
- Lakehurst Borough Ordinance 2018-09
- Winslow Township Ordinance O-2018-015
- Woodbine Borough Housing Element and Fair Share Plan
- Woodbine Borough Ordinance 576-2018

7. Presentations

- Annual Update on Permanent Land Protection in the Pinelands Area

8. General Public Comment (to ensure adequate time for all members of the public to comment, we will respectfully limit comments to three (3) minutes. Questions raised during this period may not be responded to at this time but where feasible, will be followed up by the Commission and its staff.)

9. Resolution to Retire into Closed Session (if needed) – Personnel, Litigation and Acquisition Matters (*The Commission reserves the right to reconvene into public session to take action on closed session items.*)
10. Adjournment

### **Upcoming Meetings**

Unless otherwise noted, all meetings/events are conducted at the offices of the Pinelands Commission in New Lisbon

Fri., Sept. 28, 2018	Policy and Implementation Committee Meeting (9:30 a.m.)
Fri., Oct. 12, 2018	Pinelands Commission Meeting (9:30 a.m.)

### **Upcoming Office Closures**

Monday, October 8, 2018 Columbus Day



*Pinelands Commission and Committee meeting agendas are posted on the Commission's Web site and can be viewed at [www.nj.gov/pinelands/](http://www.nj.gov/pinelands/). The agendas are also posted and can be viewed at the Pinelands Commission Offices, 15 Springfield Road, New Lisbon, New Jersey or for more information on agenda details, e-mail the [Public Programs Office](mailto:Info@pinelands.nj.gov) at [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov) or call (609) 894-7300.*



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## MEMORANDUM

To: Members of the Commission

From: Nancy Wittenberg   
Executive Director

Date: September 7, 2018

Subject: Summary of the September 14, 2018 Meeting Packet

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### Minutes

The August 10, 2018 Commission Meeting minutes (open and closed session) and attachments are included in your packet.

### Public Development Applications

Included in your packet is a letter from Deputy Attorney General Mark Collier regarding the New Jersey Department of Environmental Protection application to restore visibility at the Bass River State Forest Fire Tower (**Application Number 1990-0868.029**).

The following public development applications are being recommended for approval with conditions:

1. **Application Number 1983-9146.005/Pemberton Township**, Pemberton Township, Regional Growth Area, Demolition of an existing structure (40,680 square foot commercial shopping center), 50 years old or older.
2. **Application Number 1993-0465.003/Waterford Township**, Waterford Township, Regional Growth Area, Construction of a basketball court, a hockey rink and a 7,650 square foot playground.

### Waiver of Strict Compliance

There are no Waiver of Strict Compliance applications on this month's agenda.

**Letter of Interpretation**

No Pinelands Development Credit (PDC) Letters of Interpretations were issued since the last Commission meeting.

**Off-Road Vehicle Event Route Map Approval**

No Off-Road Vehicle Event Route Map Approvals were issued since the last Commission meeting.

**Master Plans and Ordinances Not Requiring Commission Action**

We have included a memorandum on 12 master plan and ordinance amendments that we reviewed and found to raise no substantial issues with respect to Comprehensive Management Plan (CMP) standards. These amendments were submitted by Atlantic County, Barnegat Township, Buena Borough, Corbin City, Galloway Township, Lakehurst Borough, Winslow Township and Woodbine Borough.

**Other Items**

Also included in this month's packet is:

1. A list of pending Public Development and Waiver of Strict Compliance Applications for which public comment will be accepted at the September 14, 2018 Commission meeting.
2. A copy of the 2018 Annual Report on the Alternate Design Treatment Systems Pilot Program.

**Closed Session**

The Commission may need to convene into closed session.

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Please note that future meetings and office closure dates, as well as any Pinelands-related activities of interest, are listed at the bottom of the agenda.

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PINELANDS COMMISSION MEETING  
Richard J. Sullivan Center  
Terrence D. Moore Conference Room  
15 Springfield Road  
New Lisbon, New Jersey

MINUTES

**August 10, 2018**

Commissioners Present

Alan W. Avery Jr., Bob Barr, Giuseppe Chila, Jordan P. Howell, Ed Lloyd, Mark Lohbauer, William Pikolycky, Richard Prickett and Chairman Sean Earlen. Also present were Executive Director Nancy Wittenberg, Governor's Authorities Unit representative Craig Ambrose and Deputy Attorney General (DAG) Bruce Velzy.

Commissioners Participating by Phone

Candace Ashmun, Jane Jannarone and Paul E. Galletta.

Commissioners Absent

D'Arcy Rohan Green and Gary Quinn.

Chairman Earlen called the meeting to order at 9:34 a.m.

DAG Velzy read the Open Public Meetings Act Statement.

Executive Director Nancy Wittenberg called the roll and announced the presence of a quorum. (There were 12 Commissioners who participated in the meeting.)

The Commission and public in attendance pledged allegiance to the Flag.

#### Election of the Vice-Chairman

Chairman Earlen said at this time the Commission needs to nominate and elect a Vice Chairman.

Vice Chair Galletta said that based on issues in his personal life, he will be stepping down as Vice Chair. He said it been a pleasure to serve and appreciated the opportunity. He nominated Commissioner Avery to serve as Vice Chairman. Commissioner Ashmun seconded the motion.

Commissioner Avery thanked Commissioner Galletta for serving as Vice Chair and said he would accept the nomination.

The Commission all voted in favor of Commissioner Avery serving as Vice Chair.

#### Committee Assignments

Chairman Earlen announced that Committee assignments would remain the same.

#### Minutes

Chairman Earlen presented minutes from the July 13, 2018 Commission meeting. Commissioner Lohbauer moved the adoption of the minutes. Commissioner Barr seconded the motion.

The July 13, 2018 Commission meeting minutes were adopted by a vote of 11 to 0. Commissioner Avery abstained from the vote.

#### Committee Chairs' Reports

Chairman Earlen provided an update on the July 24, 2018 Policy and Implementation (P&I) Committee meeting:

The Committee adopted the minutes of the May 18, 2018 meeting. The Committee recommended Commission certification of Egg Harbor Township Ordinances 12-2018 and 19-2018.

The Committee received a presentation on the Pinelands Infrastructure Trust Fund. Staff will be seeking input from the counties/ municipalities with sufficient remaining development potential in their Regional Growth Areas (RGA) as to their needs and will consider expanding funding projects beyond wastewater, refining the ranking criteria and developing a funding formula.

The Committee received an update on the 2004 Memorandum of Agreement (MOA) with the South Jersey Transportation Authority (SJTA) in preparation for a presentation by SJTA next month. During the next P&I meeting, SJTA will discuss its proposal to relocate critical bird habitat at the Atlantic City Airport away from the runway.

Executive Director's Reports

ED Wittenberg updated the Commission on the following:

- Staff met with the Communication Workers of America Local 1040 regarding contract negotiations.
- The joint site visit to inspect existing bird habitat at the Atlantic City Airport is scheduled for August 15, 2018. The following agencies will be participating in that site visit: the Federal Aviation Association (FAA), South Jersey Transportation Authority (SJTA), the New Jersey Department of Environmental Protection (NJDEP), Fish and Wildlife and the Pinelands Commission. SJTA will be attending the August 24<sup>th</sup> Policy and Implementation Committee meeting.

ED Wittenberg introduced new Commission employee Dane Ward, who joined the Science office in late July.

Director Larry Liggett updated the Commission on the following matters:

- Staff sent a letter out to counties and municipalities that outlined information about the Pinelands Infrastructure Trust Fund. Monies are only available for projects in Pinelands Regional Growth Areas. Because the letter did not generate much interest, staff has been contacting certain counties and municipalities by telephone. Staff spoke with the Atlantic County Utilities Authority and Egg Harbor Township which has a large Regional Growth Area. Egg Harbor Township has a number of road improvements projects that it would like to undertake.
- Staff met with Tabernacle Township officials to discuss a property owner's proposal to install a solar field at the former Haas mining site. The parcel is located in an infill area in the Preservation Area District. Staff has made suggestions about ordinance adjustments to the Township's infill area.

Director Chuck Horner provided information on the following Regulatory matters:

- Staff met with Woodland Township representatives on July 25, 2018, including its threatened and endangered species consultant, to discuss the town's interest in developing a site on Route 72. The parcel is located in an infill area that permits both residential and/or commercial development.

Chairman Earlen asked Director Horner to explain infill areas.

Director Horner said within the Preservation Area District are infill areas that were created to acknowledge pockets of existing development that were too small to be Pinelands Villages. He added an infill area is a zoning district that permits specific uses.

Chief Planner Susan Grogan added that three Pinelands municipalities have designated infill areas: Woodland, Shamong and Tabernacle townships. She said that most of the infill areas are small, with the exception of the Haas pit that Director Liggett mentioned and the Route 72 site in Woodland Township that Director Horner noted.

Director Horner continued his update:

- Staff met with Mullica Township officials on August 8, 2018 to discuss a violation matter stemming from the construction of a structure along the Mullica River. He said the development is in violation of the wetland and wetland buffers standards of the Comprehensive Management Plan and the Mullica Township Ordinance.
- Mullica Township is interested in placing a solar facility on a landfill.
- Staff has been receiving inquiries about growing marijuana and whether it is permitted in the Pinelands.
- Staff is currently reviewing the Heritage Minerals application, which is located in the Pinelands Nation Reserve and outside of the state-designated Pinelands Area in Manchester Township. The Commission has a Memorandum of Agreement (MOA) with the NJDEP through which the Commission staff provides comments regarding consistency of the development as related to the CMP. The NJDEP uses the Commission's comments as part of its review process.

Commissioner Avery asked about the status of the settlement for Heritage Minerals.

Ms. Stacey Roth said the settlement is still in effect, however the matter is currently with a magistrate judge in federal court. She said the Commission moved forward with rezoning a Forest Area to a Regional Growth Area as part of that settlement agreement. The applicant submitted a new application for the site proposing a great number of residential units. After many extensions to the settlement agreement, the NJDEP refused to extend the settlement agreement any further. The property was never deed restricted as required by the original settlement agreement. She added that she believes the magistrate judge is waiting for a decision to be made on the pending CAFRA (Coastal Area Facilities Review Act) permit.

Commissioner Avery said that Ocean County was required to amend its Water Quality Master Plan to designate the Heritage Minerals site as a sewered area. He asked if Manchester Township adopted an ordinance change consistent with the settlement agreement.

Chief Planner Grogan said the Township adopted an ordinance many years ago to recognize the settlement agreement. She added that more recently, Manchester Township asked the Commission to review and certify its Master Plan for the Pinelands National Reserve which is an optional process in the CMP.

Ms. Roth added that Manchester Township is not part of the litigation.

Communications Officer Paul Leakan updated the Commission on the following:

- The 2018 Summer Pinelands Short Course was a success with over 100 attendees. The tour of the Atlantic Blueberry Company's farm in Hammonton was very well received.
- The Pinelands Orientation for Newly Elected Officials held in combination with the Pinelands Municipal Council meeting had over 30 attendees.

- Staff has been working with Split Rock Studios, the exhibit fabricator, to ensure that the various interactive exhibits will function properly.

#### Public Development Projects and Other Permit Matters

Chairman Earlen presented a resolution recommending approval of an application to clear 16.4 acres at the Bass River State Forest to improve the visibility from the fire tower.

DAG Velzy said three Commissioners circulated a memo by email on July 26, 2018. The memo presents a conflict with the Open Public Meeting Act and could not be included in the Commission packet because at the time it was circulated, the record for Application # 1990-0868.029 was closed. A copy of the email and memo will be attached to these minutes.

Commissioner Lohbauer made a motion to table Application # 1990-0868.029 until staff can meet with the NJDEP to discuss the alternatives to cutting down trees to restore visibility to the fire tower.

Chairman Earlen asked ED Wittenberg what would happen if the Commission chooses not to take action on the application.

ED Wittenberg said she has spoken to the NJDEP about delaying the application and they are not willing to request an extension. She said that if the Commission chooses not to take action or the resolution fails to have enough votes to carry the motion the application will be transmitted the Office of Administrative Law (OAL).

DAG Velzy said the CMP states that if the Commission fails to take an action the Executive Director's recommendation shall be referred to OAL for a hearing. He said its unclear how the litigation would proceed.

Commissioner Lohbauer said he is requesting that the application be put on hold to give staff and the applicant time to research alternate firefighting technologies that were raised by the public. He said he and two other Commissioner raised questions in two memos which were shared with this Commission. He said he believes there is a technology that can assist the Forest Fire Service that has not been addressed

Chairman Earlen said he understands Commissioner Lohbauer's position but this Commission needs to make a decision on the application today. He said its unfair to the applicant to not vote on the matter.

Commissioner Lohbauer said the Commission is an autonomous body and he is not going to be railroaded into making a decision.

ED Wittenberg said she had spoken with the NJDEP about the memos and the department does not agree with the suggestions outlined in the memos.

Commissioner Lloyd said he believes Application # 1990-0868.029 violates the CMP. He read a portion of the CMP related to tree clearing. He said the Forest Fire Service can do

their job without clearing the trees surrounding the fire tower. He said he would prefer to table the application so additional work on the application can be done. He noted that 23 years ago the Forest Fire Service made a very similar application to clear 4.6 acres and that application did go to OAL. He said at OAL a settlement permitted the clearing of 2.7 acres.

Chairman Earlen asked for a second on the motion to table Application # 1990-0868.029. Commissioner Ashmun seconded the motion to table the application.

Before ED Wittenberg called the roll, Director Horner discussed how the staff administers the CMP forest clearing requirement. Director Horner indicated that when the staff reviews an application, the staff ensures that the proposed development meets all CMP standards and that any proposed forest clearing is the minimum necessary to accommodate the proposed development. If an application meets all CMP standards, the Commission staff does not require that an applicant further evaluate whether there are other feasible alternate to the proposed development that will require less forest clearing.

Commissioner Lloyd said staff is interpreting the CMP incorrectly. He said this Commission is here to protect the Pinelands. He supports tabling the application.

Ed Wittenberg said she is frustrated by the process. She said she had extensive conversations with the NJDEP and cannot share that information with the Commission. She said that an op-ed ran this morning about this very matter.

Commissioner Lohbauer said he believes tabling the application makes sense. He said he needs more information regarding the questions raised by the public, the alternative technologies to firefighting, the recent reduction to tree clearing and the cost analysis of the fire tower replacements compared to the tree cutting.

ED Wittenberg said that the reduction in acreage stemmed from a stakeholder process initiated by the NJDEP.

Commissioner Jannarone said she had to get off the call but agreed with Commissioner Lohbauer.

Ms. Stacey Roth reminded Commissioners that per Roberts rules tabling actually means to continue to another day. She added that the CMP states if the Commission fails to approve the Executive Directors report the matter is sent to OAL.

Commissioner Lohbauer amended his motion to table the application to a motion to continue discussion on Application # 1990-0868.029. Commissioner Ashmun seconded the motion.

ED Wittenberg called the roll.

Commissioner Ashmun yes

Commissioner Avery no

Commissioner Barr no  
Commissioner Chila no  
Commissioner Galletta no  
Commissioner Howell yes  
Commissioner Lloyd yes  
Commissioner Lohbauer yes  
Commissioner Pikolycky no  
Commissioner Prickett yes  
Chairman Earlen no

The motion to continue the application did not pass.

Chairman asked for a motion on Application # # 1990-0868.029

Commissioner Avery moved the adoption of a resolution Approving With Conditions an Application for Public Development and Certificate of Appropriateness (Application Number 1990-0868.029) (See Resolution # PC4-18-22A). Commissioner Barr seconded the motion.

Commissioner Avery said it was his understanding that both the detection of fire and command center activities happen at the Bass River State Forest Fire Tower.

Director Horner confirmed that fire spotting and coordination efforts of the forest fire service take place at the Bass River State Forest Fire Tower.

Director Horner suggested adding language to the resolution that recognizes the Commission's request for Commission staff to meet with NJDEP staff to address questions raised during the discussion of this application related to forest fire fighting efforts and directs staff to report back with answers.

Commissioner Lloyd said he doesn't think that is necessary today but he is interested in meeting with the forest fire service to discuss how they plan to meet their firefighting needs while remaining consistent with the CMP. He said he believes the use of cameras will solve the command center activities in addition to 24/7 monitoring of the forest

Commissioner Avery said there is value in camera technology in terms of fire detection, however the forest should be cleared for the command aspect associated with the Bass River fire tower. He said the area in question is a heavily forested and the trees to be removed are non-native. He said he does not want to put the first responders fighting the fire or the public in danger. He said this application does meet the standards of the plan.

Commissioner Lohbauer said he supports the forest fire service and all he is requesting is additional information regarding the use of camera technology. He said the public raised the same concerns now as they did back in 1995.

ED Wittenberg said she spoke with the Assistant Commissioner of Natural and Historic Resources about the cameras in Monmouth and Ocean Counties. She said they were installed a water tower was built in front of fire tower which prohibited views. She said she was told that the cameras have not been successful. She added the forest fire service directs firefighting activities from the Bass River fire tower.

DAG Velzy reminded Commissioners that although the conversation related to this application is helpful the decision needs to be limited to the June 22, 2018 Executive Director's report.

Commissioner Lloyd said its hard not to factor in the discussion that has taken place.

Chairman Earlen said its unfair to the applicant to require different information at this point, not just this applicant, but any applicant. If this Commission wants to require that an applicant submit different information we need to change the rules. He said we preserve and protect the Pinelands by enforcing the CMP. He added that he agrees with Vice Chairman Avery's points. He said the forest fire service is the expert and they determined that trees need to be cleared surrounding the fire tower.

Commissioner Ashmun said this application needs additional work before its approved.

Commissioner Lloyd said the CMP is very clear related to protecting the forest. He added that just because the CMP was interpreted a certain way in the past does not mean the Commission needs to continue doing it that way.

Commissioner Prickett said he would like to see a long term plan to manage the forested area around the fire tower developed in conjunction with the NJDEP and the forest fire service. He said he would also like to see rotational clear cutting so the landscape does not suffer from a dramatic change. He said rotational cutting would be beneficial to species living in the forest. He suggested that a survey be undertaken for old growth trees.

The Chairman requested that the ED call the Roll

Commissioner Ashmun no  
Commissioner Avery yes  
Commissioner Barr yes  
Commissioner Chila yes  
Commissioner Galletta yes  
Commissioner Howell abstain  
Commissioner Lloyd abstain  
Commissioner Lohbauer abstain  
Commissioner Pikolycky yes  
Commissioner Prickett abstain  
Chairman Earlen yes

The Commission failed to adopt the resolution.



Chairman Earlen asked about the next steps.

DAG Velzy said this is an unprecedented action which will need to be sorted out.

Commissioner Galletta said he could no longer participate in the meeting.

Chairman Earlen presented a resolution recommending approval of three public development applications (demolition of the Grist Mill Lean-to at Batsto Village, installation of an elevated solar panel canopy on a parking area at Joint Base McGuire-Dix-Lakehurst and the reconstruction of the Carol Ida Dam in Medford.)

Commissioner Lohbauer said he was pleased that the solar application is being proposed over a parking lot.

Commissioner Prickett said he hopes that the Lean-to at the Grist Mill can be restored in the future.

Commissioner Ashmun suggested that each Public Development application be acted on separately rather than grouped together.

Commissioner Lloyd said the applications are grouped together to be more efficient.

Commissioner Lohbauer moved the adoption of a resolution Approving With Conditions Applications for Public Development (Application Numbers 1985-0160.011, 1985-1053.008 & 1989-0781.005) (See Resolution # PC4-18-23). Commissioner Lloyd seconded the motion.

The Commission adopted the resolution by a vote of 10 to 0.

Chairman Earlen presented a resolution approving two Waivers of Strict Compliance, both for the construction of single family dwellings.

Commissioner Lloyd moved the adoption of a resolution Approving With Conditions Applications for Waivers of Strict Compliance (Application Numbers 2003-0456.001 & 2004-0352.001) (See Resolution # PC4-18-24). Commissioner Lohbauer seconded the motion.

The Commission adopted the resolution by a vote of 10 to 0.

Chairman Earlen presented a resolution denying an application for a Waiver of Strict Compliance.

Commissioner Lloyd moved the adoption of a resolution Denying an Application for a Waiver of Strict Compliance (Application Number 2007-0398.001)(See Resolution # PC4-18-25). Commissioner Ashmun seconded the motion.

The Commission adopted the resolution by a vote of 10 to 0.

Planning Matters

Chairman Earlen presented a resolution to certify Egg Harbor Township Ordinances 12-2018 and 19-2018.

Commissioner Lloyd moved the adoption of a resolution Issuing an Order to Certify Ordinances 12-2018 and 19-2018, Amending Chapter 225 (Zoning) of the Code of Egg Harbor Township (See Resolution # PC4-18- 26). Commissioner Barr seconded the motion.

The Commission adopted the resolution by a vote of 9 to 0. Commissioner Howell abstained from the vote.

Public Comment on Public Development Applications and Items where the record is open  
No one from the public spoke.

Ordinances Not Requiring Commission Action

Chairman Earlen asked if any Commissioners had questions regarding the ordinances not requiring Commission action:

- Berkeley Township Ordinance 18-22-OAB
- Egg Harbor Township Ordinance 34-2018
- Hamilton Township Ordinance 1879-2018
- Lacey Township Ordinance 2018-20
- Waterford Township Ordinance 2018-13
- Weymouth Township Ordinance 563-201
- Woodbine Borough Ordinance 574-2018

No members of the Commission had questions.

Other Resolutions

Chairman Earlen presented a resolution recommending approval of the Fiscal Year (FY) 2019 Budgets.

Commissioner Ashmun moved the adoption of a resolution To Adopt the Pinelands Commission's Fiscal Year 2019 Budgets for the Operating Fund, the Kirkwood Cohansey Aquifer Assessment Study Fund, Katie Trust Fund and the Pinelands Conservation Fund (See Resolution # PC4-18-27). Commissioner Lohbauer seconded the motion.

ED Wittenberg said the FY 2019 consists of four budgets, and the state appropriation increased by 150,000. She said the state supplemental fund has remained the same this year and does not cover the fringe benefit costs that continue to increase. She said application fees were consistent with the budgeted amount last year. Applications fees are already strong this fiscal year. She added that the grants line item is higher because of two

grants the Commission will be participating in. She proceeded to review the Kirkwood Cohansey Budget, which may be depleted this fiscal year. She reviewed the goals of the Katie Trust Fund. She reviewed the Pinelands Conservation Fund. Lastly, she reviewed initiatives for FY 19. See the budget presentation slides attached to the minutes for further details.

Commissioner Avery said the Personnel and Budget Committee was briefed on the FY 19 budget in June and offered its full support.

The Commission adopted the resolution by a vote of 10 to 0.

Chairman Earlen presented a resolution recommending approval of the 2017 Annual Report.

Commissioner Lohbauer moved the adoption of a resolution To Approve the New Jersey Pinelands Commission's 2017 Annual Report (See Resolution # PC4-18-28).  
Commissioner Prickett seconded the motion.

Commissioner Prickett asked about the distribution of the Annual Report.  
Mr. Leakan said the report is posted to the website and will be shared with the Pinelands Municipal Council.

The Commission adopted the resolution by a vote of 10 to 0.

#### General Public Comment

Carol Bitzberger of Bass River Township questioned if the public was allowed to be involved in the Office of Administrative Law process. She said she was able to view a link of the Oregon forest utilizing camera technology.

DAG Velzy said his office will look into the role of the public as the next steps are determined regarding Application # 1990-0868.029.

Rose Sweeney of Bass River Township said she appreciated the conversation between the Commissioners about the Bass River Forest fire tower application and hopes the delay will allow for discussions of other fire prevention measures.

Commissioner Ashmun signed off at 11:27 a.m.

Jeff Tittel of the Sierra Club said thermal imaging can detect hot spots in a forest better than a human eye can spot smoke. He said the Commission should have worked out a compromise on Application # 1990-0868.029. He said growing marijuana in greenhouses has a number of negative environmental impacts, including: the use of water and energy and production of air and ground pollution. He suggested the Commission create a sub-committee to look at marijuana growing facilities. He asked about the Commission's efforts to reduce the effects of climate control.

Katie Smith of the Pinelands Preservation Alliance distributed a letter dated August 2, 2018 (see attached) regarding the Woodmansie resource extraction application. She said the Commission should require a threatened and endangered species survey regardless of the deed restriction. She also said the mine is not in compliance with the CMP's restoration standards based on aerials she viewed. As for the Heritage Minerals site, she said the NJDEP recently issued a letter to the applicant raising the following concerns: threatened and endangered species, impervious coverage and wet borrow pit regulations.

Emile DeVito of the New Jersey Conservation Foundation said he appreciates the Commission's efforts to find the best outcome for the Woodmansie mine site but he said a deed restriction will not work. He said he was shocked to learn that years after the Heritage Minerals settlement agreement the land has still not been deed restricted. He said the property on Route 72 owned by Woodland Township is almost entirely threatened and endangered bird habitat and the parcel should be purchased by the New Jersey Natural Lands Trust.

Margit Meissner-Jackson, Acting Chair of Ocean County Sierra Club, said when trees are cut in the Pinelands it loosens the soil and the soil eventually washes down into the Barnegat Bay. She said it is causing problems for Viking Yacht in New Gretna. She raised concerns about running out of water. She said it is unknown how many gallons are currently in the Kirkwood Cohansey aquifer.

Jay Mounier of Franklin Township said he has been attending meetings at the Commission for quite a while. He said over 10 years ago the Commission started allowing Commissioners who could not attend a meeting to participate by phone. He noted that Commissioner Ashmun said she could not hear several times today. He recommended that the Commission either fix the phone system or not permit Commissioners to participate by telephone.

#### Other matters

Chairman Earlen agreed with Mr. Mounier's assessment of the phone system.

Commissioner Lloyd said he also agreed with Mr. Mounier, and agreed it is difficult to hear while participating by phone. He asked if watching the live stream of the meeting would help.

Commissioner Howell said he tried the live stream while participating by phone during the July Commission meeting and there is a two to three second delay.

Commissioner Lloyd asked ED Wittenberg for an update on the Woodmansie mine application. He added that only the Commissioners who attended the July P&I Committee meeting heard the information.

ED Wittenberg said there is no new information to report regarding the Woodmansie mine application since the P&I Committee Meeting. She said she would provide an overview of

the application for the benefit of all Commissioners. She said an application was submitted to mine a 40-acre portion of the Woodmansie site in Woodland Township. She said the applicant is required to meet the environmental standards of the CMP in order to continue to mine the site. The applicant surveyed the 40 acres and found no threatened and endangered species. She said rather than have the applicant continue to apply piece by piece and rather than use a habitat conservation plan, staff opted to offer a larger piece for the applicant to mine and a permanent deed restriction on the remainder of the parcel.

Chairman Earlen said if staff needs assistance related to resource extraction including deed language, Commissioners can offer guidance.

Commissioner Prickett said he has been conducting his own research on the loblolly pine tree. He said he found a very old article that stated the loblolly reaches its northern limit in Cape May County. He also said the loblolly pine establishes diversity in the forest.

Commissioner Avery said years ago there were hours of debate that spanned months, over whether the loblolly should be considered a native species. The Commission ultimately voted that loblolly pines were not native to the Pinelands.

Commissioner Earlen said the Commission will be meeting in closed session but will not be taking any action.

#### Resolution to Retire into Closed Session

DAG Velzy read a resolution to enter into closed session to discuss a personnel matter and to provide advice on anticipated litigation.

Commission Barr made a motion to enter into closed session. Commissioner Avery seconded the motion. The Commission agreed to retire into closed session by a vote of 9 to 0, beginning at 12:02 p.m.

#### Return to Open Session

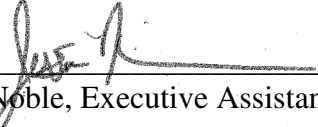
The Commission entered back into open session at 1:46 p.m.

DAG Velzy said that in closed session the Commission discussed litigation with an employee and compliance with the OPMA. No action was taken.

#### Adjournment

Commissioner Lohbauer moved to adjourn the meeting. Commissioner Prickett seconded the motion. The Commission agreed to adjourn at 1:48 p.m.

Certified as true and correct:

  
\_\_\_\_\_  
Jessica Noble, Executive Assistant

Date: August 23, 2018



Motion Failed

# RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION

NO. PC4-18- 22A

**TITLE:** Approving With Conditions an Application for Public Development and Certificate of Appropriateness (Application Number 1990-0868.029)

Commissioner Avery moves and Commissioner Barr seconds the motion that:

WHEREAS, the Pinelands Commission has reviewed the Public Development Application Report and Certificate of Appropriateness and the recommendation of the Executive Director that the following application be approved with conditions:

1990-0868.029

Applicant:

NJDEP, Division of Parks and Forestry

Municipality:

Bass River Township

Management Area:

Pinelands Preservation Area District

Date of Report:

June 22, 2018

Proposed Development:

Tree clearing to restore visibility from the Bass River State Forest fire tower.

WHEREAS, no request for a hearing before the Office of Administrative Law concerning the Executive Director's recommendation has been received for this application; and

WHEREAS, the Pinelands Commission hereby adopts the Conclusion of the Executive Director for the proposed development; and

WHEREAS, the Pinelands Commission hereby determines that the proposed public development and Certificate of Appropriateness both conform to the standards for approving an application for public development set forth in N.J.A.C. 7:50-4.57 and the standards for approving a Certificate of Appropriateness set forth in N.J.A.C. 7:50-6.156 if the conditions recommended by the Executive Director are imposed; and

WHEREAS, pursuant to N.J.S.A. 13A-5h, no action authorized by the Commission shall have force or effect until ten (10) days, Saturdays, Sundays and public holidays excepted, after a copy of the minutes of the meeting of the Commission has been delivered to the Governor for review, unless prior to expiration of the review period and Governor shall approve same, in which case the action shall become effective upon such approval.

NOW, THEREFORE BE IT RESOLVED that Application Number 1990-0868.029 for public development and a Certificate of Appropriateness is hereby **approved** subject to the conditions recommended by the Executive Director.

## Record of Commission Votes

	AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*
Ashmun		X			Howell				A	Prickett				A
Avery	X				Jannarone			X		Quinn			X	
Barr	X				Lloyd				A	Rohan Green			X	
Chila	X				Lohbauer				A	Earlen	X			
Galletta	X				Pikolycky	X								

\*A = Abstained / R = Recused

Adopted at a meeting of the Pinelands Commission

Date: \_\_\_\_\_

Nancy Wittenberg  
Executive Director

Sean W. Earlen  
Chairman



## RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION

NO. PC4-18- 23

**TITLE:** Approving With Conditions Applications for Public Development (Application Numbers 1985-0160.011, 1985-1053.008 & 1989-0781.005)

Commissioner Lohbauer moves and Commissioner Lloyd  
seconds the motion that:

WHEREAS, the Pinelands Commission has reviewed the Public Development Application Reports and the recommendation of the Executive Director that the following applications for Public Development be approved with conditions:

**1985-0160.011**

<b>Applicant:</b>	<b>NJ Department of Environmental Protection</b>
<b>Municipality:</b>	Washington Township
<b>Management Area:</b>	Pinelands Preservation Area District
<b>Date of Report:</b>	July 19, 2018
<b>Proposed Development:</b>	Demolition of the Grist Mill Lean-To, 50 years old or older, at Batsto Village;

**1985-1053.008**

<b>Applicant:</b>	<b>NJ Army National Guard</b>
<b>Municipality:</b>	Springfield Township Borough of Wrightstown
<b>Management Area:</b>	Pinelands Military/Federal Installation Area
<b>Date of Report:</b>	July 19, 2018
<b>Proposed Development:</b>	Installation of a 17,856 square foot elevated solar panel canopy above an existing stone parking area; and

**1989-0781.005**

<b>Applicant:</b>	<b>Medford Township</b>
<b>Municipality:</b>	Medford Township
<b>Management Area:</b>	Pinelands Preservation Area District Pinelands Special Agricultural Production Area
<b>Date of Report:</b>	July 19, 2018
<b>Proposed Development:</b>	Reconstruction of Carol Ida Dam.

WHEREAS, no request for a hearing before the Office of Administrative Law concerning the Executive Director's recommendation has been received for any of these applications; and

WHEREAS, the Pinelands Commission hereby adopts the Conclusion of the Executive Director for each of the proposed developments; and

WHEREAS, the Pinelands Commission hereby determines that each of the proposed public developments conform to the standards for approving an application for public development set forth in N.J.A.C. 7:50-4.57 if the conditions recommended by the Executive Director are imposed; and

WHEREAS, pursuant to N.J.S.A. 13A-5h, no action authorized by the Commission shall have force or effect until ten (10) days, Saturdays, Sundays and public holidays excepted, after a copy of the minutes of the meeting of the Commission has been delivered to the Governor for review, unless prior to expiration of the review period and Governor shall approve same, in which case the action shall become effective upon such approval.

NOW, THEREFORE BE IT RESOLVED that Application Numbers 1985-0160.011, 1985-1053.008 & 1989-0781.005 for public development are hereby **approved** subject to the conditions recommended by the Executive Director.

#### Record of Commission Votes

	AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*
Ashmun	X				Howell	X				Prickett	X			
Avery	X				Jannarone			X		Quinn			X	
Barr	X				Lloyd	X				Rohan Green			X	
Chila	X				Lohbauer	X				Earlen	X			
Galletta			X		Pikolycky	X								

\*A = Absented / R = Recused

Adopted at a meeting of the Pinelands Commission

Date:

August 10, 2018

Nancy Wittenberg  
Executive Director

Sean W. Earlen  
Chairman





PHILIP D. MURPHY  
Governor  
SHEILA Y. OLIVER  
Lt. Governor

State of New Jersey  
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SEAN W. EARLEN  
Chairman  
NANCY WITTENBERG  
Executive Director

General Information: [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov)  
Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

July 19, 2018

William White (via email)  
NJ Department of Environmental Protection  
31 Batsto Road  
Hammonton, NJ 08037

Re: Application # 1985-0160.011  
Block 8, Lot 1  
Washington Township

Dear Mr. White:

The Commission staff has completed its review of this application for demolition of the Grist Mill Lean-To, 50 years old or older, at Batsto Village. Enclosed is a copy of a Public Development Application Report. On behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission approve the application with conditions at its August 10, 2018 meeting.

Any interested party may appeal this recommendation in accordance with the appeal procedure attached to this document. If no appeal is received, the Pinelands Commission may either approve the recommendation of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.

Prior to any development, the applicant shall obtain any other necessary permits and approvals.

Sincerely,

Charles M. Horner, P.P.  
Director of Regulatory Programs

Enc: Appeal Procedure

c: Secretary, Washington Township Planning Board (via email)  
Washington Township Construction Code Official (via email)  
Secretary, Burlington County Planning Board (via email)





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Governor  
SHEILA Y. OLIVER  
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NANCY WITTENBERG  
Executive Director

General Information: [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov)  
Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

## **PUBLIC DEVELOPMENT APPLICATION REPORT**

July 19, 2018

William White (via email)  
NJ Department of Environmental Protection  
31 Batsto Road  
Hammonton, NJ 08037

Application No.: 1985-0160.011  
Block 8, Lot 1  
Washington Township

This application proposes demolition of the Grist Mill Lean-To, 50 years old or older, at Batsto Village located on the above referenced 1962.4 acre parcel in Washington Township.

The lean-to occupies 460 square feet and is an open sided roof structure supported by approximately six posts and attached to an existing building.

### **STANDARDS**

The Commission staff has reviewed the proposed demolition for consistency with all standards of the Pinelands Comprehensive Management Plan (CMP). The following reviews the CMP standards that are relevant to this application:

#### **Land Use (N.J.A.C. 7:50-5.22)**

The parcel is located in the Pinelands Preservation Area District. An application to the Commission is required for the demolition of any structure 50 years old or older. The CMP permits the demolition of structures anywhere in the Pinelands Area.

#### **Cultural Resource Standards (N.J.A.C. 7:50-6.151)**

The proposed demolition was reviewed by both the Commission staff cultural resource planner and the New Jersey Historic Preservation Office (NJHPO).

The Grist Mill Lean-To is located in the Batsto Historic Village. The Batsto Historic Village is listed on both the State and National Registers of Historic Places.

The lean-to is attached to a building known as the Grist Mill. The Grist Mill was built in 1825 and used to process grain into flour for Village residents. The lean-to was subjected to significant structural repair and maintenance modifications in the 1960's and the 1980's and does not retain its original historic integrity. Based upon these repair and maintenance modifications, the lean-to does not constitute a significant historic resource.

A cultural resource survey was not required for the proposed demolition because it does not retain its original historic integrity. The lean-to was previously documented in accordance with the Secretary of the Interior's Standards and Guidelines for Archeological and Engineering Documentation and extensively photo-documented by a consultant retained by Batsto Village at the request of NJHPO.

As part of the demolition plan, the applicant proposes to identify any surviving 19<sup>th</sup> century material that may remain on the lean-to, such as nails and hardware, and store that material in the event of future reconstruction.

### **PUBLIC COMMENT**

The CMP defines the proposed demolition as "minor" development. The CMP does not require notice for minor public development applications. The application was designated as complete on the Commission's website on June 27, 2018. The Commission's public comment period closed on July 13, 2018. No public comment was submitted to the Commission regarding this application.

### **CONDITIONS**

1. Disposal of any demolition debris may only occur at an appropriately licensed facility.
2. Prior to any demolition, the applicant shall obtain any other necessary permits and approvals.
3. Prior to any demolition, the applicant shall identify and preserve all surviving 19<sup>th</sup> century material on the lean-to.
4. Any proposed reconstruction of the lean-to shall require the completion of an application with the Commission.

### **CONCLUSION**

As the proposed demolition conforms to the standards set forth in N.J.A.C. 7:50-4.57, it is recommended that the Pinelands Commission **APPROVE** the proposed demolition subject to the above conditions.



Philip D. Murphy  
Governor

Sheila Y. Oliver  
Lt. Governor

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General Information: [Info@njpines.state.nj.us](mailto:Info@njpines.state.nj.us)  
Application Specific Information: [AppInfo@njpines.state.nj.us](mailto:AppInfo@njpines.state.nj.us)



Sean W. Earlen  
Chairman

Nancy Wittenberg  
Executive Director

## **PINELANDS COMMISSION** **APPEAL PROCEDURE**

The Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal any determination made by the Executive Director to the Commission in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. Any such appeal must be made in writing to the Commission and received at the Commission's offices no later than 4:00 PM on August 6, 2018 and include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. the date on which the determination to be appealed was made;
4. a brief statement of the basis for the appeal; and
5. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

Within 15 days following receipt of a notice of valid appeal, the Executive Director shall initiate the procedures for assignment of an Administrative Law Judge to preside at the hearing pursuant to the Administrative Procedures Act, N.J.S.A. 52:14B-1 et seq., and the procedures established by the Office of Administrative Law. The time, date and location of such hearing shall be designated by the Office of Administrative Law.



PHILIP D. MURPHY  
Governor  
SHEILA Y. OLIVER  
Lt. Governor

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Chairman  
NANCY WITTENBERG  
Executive Director

General Information: [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov)  
Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

July 19, 2018

Michael Lyons, Col., LG (via email)  
NJ Army National Guard  
NJARNG 101 Eggerts Crossing Road  
Lawrenceville, NJ 08648

Re: Application # 1985-1053.008  
Block 1802, Lot 1  
Springfield Township  
Block 201, Lot 1  
Borough of Wrightstown

Dear Mr. Lyons:

The Commission staff has completed its review of this application for installation of a 17,856 square foot elevated solar panel canopy above an existing stone parking area. Enclosed is a copy of a Public Development Application Report. On behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission approve the application with conditions at its August 10, 2018 meeting.

Any interested party may appeal this recommendation in accordance with the appeal procedure attached to this document. If no appeal is received, the Pinelands Commission may either approve the recommendation of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.

Prior to any development, the applicant shall obtain any other necessary permits and approvals.

Sincerely

Charles M. Horner, P.P.  
Director of Regulatory Programs

Enc: Appeal Procedure

c: Secretary, Springfield Township Planning Board (via email)  
Springfield Township Construction Code Official (via email)  
Secretary, Borough of Wrightstown Planning Board (via email)



Borough of Wrightstown Construction Code Official (via email)  
Secretary, Burlington County Planning Board (via email)  
Harry Strano (via email)



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SHEILA Y. OLIVER  
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NANCY WITTENBERG  
Executive Director

General Information: [Info@pinlands.nj.gov](mailto:Info@pinlands.nj.gov)  
Application Specific Information: [AppInfo@pinlands.nj.gov](mailto:AppInfo@pinlands.nj.gov)

## **PUBLIC DEVELOPMENT APPLICATION REPORT**

July 19, 2018

Michael Lyons, Col., LG (via email)  
NJ Army National Guard  
NJARNG 101 Eggerts Crossing Road  
Lawrenceville, NJ 08648

Application No.: 1985-1053.008  
Block 1802, Lot 1  
Springfield Township  
Block 201, Lot 1  
Borough of Wrightstown

This application proposes installation of a 17,856 square foot elevated solar panel canopy above an existing stone parking area at Joint Base McGuire Dix Lakehurst located on the above referenced 66.14 acre parcel in Springfield Township and the Borough of Wrightstown.

The proposed solar energy facility will provide power to an existing New Jersey Army National Guard building located on the parcel.

### **STANDARDS**

The Commission staff has reviewed the proposed development for consistency with all standards of the Pinelands Comprehensive Management Plan (CMP). The following reviews the CMP standards that are relevant to this application:

#### **Land Use (N.J.A.C. 7:50-5.29)**

The Pinelands Protection Act designates the boundaries of the 938,000 acre Pinelands Area. Within the boundaries of the Pinelands Area, the Pinelands Protection Act also designates the 366,000 acre Pinelands Preservation Area and the 572,000 acre Pinelands Protection Area. The CMP then establishes Management Areas such as Regional Growth Management Areas, Rural Development Management Areas and Military and Federal Installation Management Areas that overlay the entire Pinelands Area.

The parcel subject of this application is located in a Military and Federal Installation Management Area. The CMP permits any proposed use associated with the function of a federal installation in a Military and Federal Installation Management Area provided four conditions are met. The first condition is that, where feasible, proposed development in a Military and Federal Installation Management Area shall be located in the Pinelands Protection Area portion of the Pinelands Area. The proposed solar energy

facility will be located in the Pinelands Protection Area portion of the Pinelands Area. The second condition is the use shall not require any development, including public service infrastructure, in the Preservation Area District or in a Forest Management Area. The proposed solar energy facility use will not require any development in a Forest Management Area or the Preservation Area District. The third condition is not applicable to the proposed solar energy facility. The fourth condition is that any proposed development by the Federal government must substantially meet the standards of the CMP. The solar energy facility is proposed by the New Jersey Army National Guard, a State agency, and meets all standards of the CMP.

#### Wetlands Standards (N.J.A.C. 7:50-6.14)

There are wetlands located on the parcel. The proposed solar energy facility will be located approximately 290 feet from wetlands and no closer to wetlands than an existing stone parking area. The proposed development will not result in a significant adverse impact on the wetlands.

#### Vegetation Management Standards (N.J.A.C. 7:50-6.23 & 6.26)

The proposed development will be located above an existing stone parking area. The proposed soil disturbance is limited to that which is necessary to accommodate the proposed development.

The Landscaping and Revegetation guidelines of the CMP recommend the use of grasses that are tolerant of droughty, nutrient poor conditions. As the proposed development will be located above an existing stone parking area, no revegetation is proposed.

#### Stormwater Management Standards (N.J.A.C. 7:50-6.84(a)6)

The State of New Jersey enacted legislation in 2010 to prohibit the Pinelands Commission from including the actual solar panels as impervious surface or impervious cover in any stormwater management calculation in the Pinelands Area. The solar panel mounting posts and associated development will disturb less than 5,000 square feet. Based upon this limited disturbance, the application is not required to address the CMP stormwater management standards.

### **PUBLIC COMMENT**

The applicant has provided the requisite public notice. Newspaper public notice was completed on June 20, 2018. The application was designated as complete on the Commission's website on June 26, 2018. The Commission's public comment period closed on July 13, 2018. No public comment was submitted to the Commission regarding this application.

### **CONDITIONS**

1. Except as modified by the below conditions, the proposed development shall adhere to the plan, consisting of four sheets, prepared by ARMM Associates, Inc., all sheets dated July 24, 2017.
2. Disposal of any construction debris or excess fill may only occur at an appropriately licensed facility.
3. Prior to any development, the applicant shall obtain any other necessary permits and



approvals.

### **CONCLUSION**

As the proposed development conforms to the standards set forth in N.J.A.C. 7:50-4.57, it is recommended that the Pinelands Commission **APPROVE** the proposed development subject to the above conditions.



Philip D. Murphy  
Governor

Sheila Y. Oliver  
Lt. Governor

## State of New Jersey

THE PINELANDS COMMISSION

PO Box 359

NEW LISBON, NJ 08064

(609) 894-7300

[www.nj.gov/pinlands](http://www.nj.gov/pinlands)



Sean W. Earlen  
Chairman

Nancy Wittenberg  
Executive Director

General Information: [Info@njpines.state.nj.us](mailto:Info@njpines.state.nj.us)  
Application Specific Information: [AppInfo@njpines.state.nj.us](mailto:AppInfo@njpines.state.nj.us)

### **PINELANDS COMMISSION** **APPEAL PROCEDURE**

The Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal any determination made by the Executive Director to the Commission in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. Any such appeal must be made in writing to the Commission and received at the Commission office no later than 4:00 PM on August 6, 2018 and include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. the date on which the determination to be appealed was made;
4. a brief statement of the basis for the appeal; and
5. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

Within 15 days following receipt of a notice of valid appeal, the Executive Director shall initiate the procedures for assignment of an Administrative Law Judge to preside at the hearing pursuant to the Administrative Procedures Act, N.J.S.A. 52:14B-1 et seq., and the procedures established by the Office of Administrative Law. The time, date and location of such hearing shall be designated by the Office of Administrative Law.



PHILIP D. MURPHY  
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Executive Director

General Information: [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov)  
Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

July 19, 2018

Kathy Burger, Clerk (via email)  
Medford Township  
17 North Main Street  
Medford, NJ 08055

Re: Application # 1989-0781.005  
Jackson Road  
Block 6802, Lot 1  
Medford Township

Dear Ms. Burger:

The Commission staff has completed its review of this application for reconstruction of Carol Ida Dam. Enclosed is a copy of a Public Development Application Report. On behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission approve the application with conditions at its August 10, 2018 meeting.

Any interested party may appeal this recommendation in accordance with the appeal procedure attached to this document. If no appeal is received, the Pinelands Commission may either approve the recommendation of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.

Prior to any development, the applicant shall obtain any other necessary permits and approvals.

Sincerely,

Charles M. Horner, P.P.  
Director of Regulatory Programs

Enc: Appeal Procedure

c: Secretary, Medford Township Planning Board (via email)  
Medford Township Construction Code Official (via email)  
Medford Township Environmental Commission (via email)  
Secretary, Burlington County Planning Board (via email)  
Chris Noll, PE, PP, CME (via email)





PHILIP D. MURPHY  
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Executive Director

General Information: [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov)  
Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

## **PUBLIC DEVELOPMENT APPLICATION REPORT**

July 19, 2018

Kathy Burger, Clerk (via email)  
Medford Township  
17 North Main Street  
Medford, NJ 08055

Application No.: 1989-0781.005  
Jackson Road  
Block 6802, Lot 1  
Medford Township

This application proposes reconstruction of Carol Ida Dam located within the above referenced right-of-way in Medford Township. The Jackson Road right-of-way, containing an existing sand road, crosses the crest of the dam embankment. The proposed improvements to the dam within the Jackson Road right-of-way include the replacement of the existing weir, construction of a 25 square foot concrete pad, regrading of the dam embankment and the placement of rip-rap on both sides of the dam.

An existing pipe passes under the dam and discharges water from Lady Lake onto Block 6802, Lot 1. This water discharge has created soil erosion on Block 6802, Lot 1. To address this existing soil erosion, the application also proposes to place approximately 180 square feet of rip-rap on Block 6802, Lot 1.

The Pinelands Development Credits (PDCs) allocated to Block 6802, Lot 1 have been severed and a PDC deed restriction has been imposed on the lot limiting the future use of the lot to agriculture, forestry, and low intensity recreational uses. The proposed rip-rap on Block 6802, Lot 1 is addressing a pre-existing soil erosion condition on the lot.

### **STANDARDS**

The Commission staff has reviewed the proposed development for consistency with all standards of the Pinelands Comprehensive Management Plan (CMP). The following reviews the CMP standards that are relevant to this application:

#### **Land Use (N.J.A.C. 7:50-5.22 & 5.25)**

The proposed development will be located partially in the Preservation Area District and partially in a Special Agricultural Production Area. The CMP permits the reconstruction of existing structures in the Pinelands Area.

### Wetlands Standards (N.J.A.C. 7:50-6.13)

There are wetlands located within the project area. The CMP prohibits most development in wetlands and requires a buffer of up to 300 feet to wetlands.

The dam reconstruction will be located partially in wetlands and the required buffer to wetlands. The proposed development will result in the disturbance of approximately 0.019 acres of wetlands. The CMP permits linear improvements, such as dams supporting road crossings, in wetlands and the required buffer to wetlands provided an applicant demonstrates that certain conditions are met. The applicant has demonstrated that there is no feasible alternative for the proposed development that does not involve development in wetlands and the required buffer to wetlands or that will result in a less significant adverse impact to wetlands. In addition, the proposed development will not result in a substantial impairment of the resources of the Pinelands. With the conditions recommended below, all practical measures will be taken to mitigate the impact on wetlands and the required buffer to wetlands. The applicant has demonstrated that based upon the need to maintain the use of Jackson Road for vehicular traffic, the need for the proposed development overrides the importance of protecting the concerned wetlands.

### Vegetation Management Standards (N.J.A.C. 7:50-6.23 & 6.26)

The proposed development will be located within open water, developed areas, and vegetated areas. The proposed clearing and soil disturbance is limited to that which is necessary to accommodate the proposed development.

The Landscaping and Revegetation guidelines of the CMP recommend the use of grasses that are tolerant of droughty, nutrient poor conditions. The applicant proposes to utilize a seed mixture which meets that recommendation.

## **PUBLIC COMMENT**

The CMP defines the proposed development as “minor” development. The CMP does not require public notice for minor public development applications. The application was designated as complete on the Commission’s website on June 26, 2018. The Commission’s public comment period closed on July 13, 2018. No public comment was submitted to the Commission regarding this application.

## **CONDITIONS**

1. Except as modified by the below conditions, the proposed development shall adhere to the plan prepared by Environmental Resolutions, Inc. and dated April 4, 2018.
2. Disposal of any construction debris or excess fill may only occur at an appropriately licensed facility.
3. Any proposed revegetation shall adhere to the "Vegetation" standards of the CMP. Where appropriate, the applicant is encouraged to utilize the following Pinelands native grasses for revegetation: Switch grass, Little bluestem and Broom-sedge.
4. Prior to any development, the applicant shall obtain any other necessary permits and approvals.

5. Prior to the construction of any portion of the proposed development which will result in the disturbance of any wetland area, a Freshwater Wetland Permit shall be obtained pursuant to the New Jersey Freshwater Wetlands Protection Act.
6. Appropriate measures shall be taken during construction to preclude sedimentation from entering wetlands and shall be maintained in place until all development has been completed and the area has been stabilized.

### **CONCLUSION**

As the proposed development conforms to the standards set forth in N.J.A.C. 7:50-4.57, it is recommended that the Pinelands Commission **APPROVE** the proposed development subject to the above conditions.



Philip D. Murphy  
Governor

Sheila Y. Oliver  
Lt. Governor

State of New Jersey  
THE PINELANDS COMMISSION  
PO Box 359  
NEW LISBON, NJ 08064  
(609) 894-7300  
[www.nj.gov/pinelands](http://www.nj.gov/pinelands)

General Information: [Info@njpines.state.nj.us](mailto:Info@njpines.state.nj.us)  
Application Specific Information: [AppInfo@njpines.state.nj.us](mailto:AppInfo@njpines.state.nj.us)



Sean W. Earlen  
Chairman

Nancy Wittenberg  
Executive Director

## **PINELANDS COMMISSION** **APPEAL PROCEDURE**

The Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal any determination made by the Executive Director to the Commission in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. Any such appeal must be made in writing to the Commission and received at the Commission office no later than 4:00 PM on August 6, 2018 and include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. the date on which the determination to be appealed was made;
4. a brief statement of the basis for the appeal; and
5. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

Within 15 days following receipt of a notice of valid appeal, the Executive Director shall initiate the procedures for assignment of an Administrative Law Judge to preside at the hearing pursuant to the Administrative Procedures Act, N.J.S.A. 52:14B-1 et seq., and the procedures established by the Office of Administrative Law. The time, date and location of such hearing shall be designated by the Office of Administrative Law.



## RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION

NO. PC4-18- 24

**TITLE:** Approving With Conditions Applications for Waivers of Strict Compliance (Application Numbers 2003-0456.001 & 2004-0352.001)

Commissioner Hayel moves and Commissioner Lehman seconds the motion that:

WHEREAS, the Pinelands Commission has reviewed each of the Findings of Fact, Conclusion and the recommendation of the Executive Director that the following applications for Waivers of Strict Compliance be approved with conditions:

**2003-0456.001**

**Applicant:** Kenny Austin  
**Municipality:** Lacey Township  
**Management Area:** Pinelands Village  
**Date of Report:** July 20, 2018  
**Proposed Development:** Single family dwelling; and

**2004-0352.001**

**Applicant:** Lisa Gassert  
**Municipality:** Evesham Township  
**Management Area:** Pinelands Regional Growth Area  
**Date of Report:** July 20, 2018  
**Proposed Development:** Single family dwelling.

WHEREAS, no request for a hearing before the Office of Administrative Law concerning the Executive Director's recommendation has been received for any of these applications; and

WHEREAS, the Pinelands Commission hereby adopts the Findings of Fact and Conclusion of the Executive Director for each of the proposed developments; and

WHEREAS, the Pinelands Commission hereby determines that the requested Waivers conform to the standards for approving an application for a Waiver of Strict Compliance based on extraordinary hardship as set forth in N.J.A.C. 7:50-4.62, N.J.A.C. 7:50-4.63 and N.J.A.C. 7:50-4.65 if the conditions recommended by the Executive Director are imposed; and

WHEREAS, pursuant to N.J.S.A. 13A-5h, no action authorized by the Commission shall have force or effect until ten (10) days, Saturdays, Sundays and public holidays excepted, after a copy of the minutes of the meeting of the Commission has been delivered to the Governor for review, unless prior to expiration of the review period and Governor shall approve same, in which case the action shall become effective upon such approval.



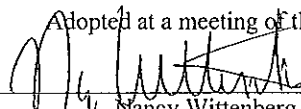
NOW, THEREFORE BE IT RESOLVED that Application Numbers 2003-0456.001 & 2004-0352.001 for Waivers of Strict Compliance are hereby **approved** subject to the conditions recommended by the Executive Director.

#### Record of Commission Votes

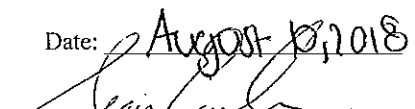
	AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*
Ashmun	X				Howell	X				Prickett	X			
Avery	X				Jannarone			X		Quinn			X	
Barr	X				Lloyd	X				Rohan Green			X	
Chila	X				Lohbauer	X				Earlen	X			
Galletta			X		Pikolycky	X								

\*A = Abstained / R = Recused

Adopted at a meeting of the Pinelands Commission

  
Nancy Wittenberg  
Executive Director

Date:

  
Sean W. Earlen  
Chairman



State of New Jersey  
THE PINELANDS COMMISSION  
PO Box 359  
New Lisbon, NJ 08064  
(609) 894-7300  
www.nj.gov/pinelands



PHILIP D. MURPHY  
Governor  
SHEILA Y. OLIVER  
Lt. Governor

General Information: Info@pinelands.nj.gov  
Application Specific Information: AppInfo@pinelands.nj.gov

SEAN W. EARLEN  
Chairman  
NANCY WITTENBERG  
Executive Director

## **REPORT ON AN APPLICATION FOR A WAIVER OF STRICT COMPLIANCE**

July 20, 2018

Kenny Austin  
2514 Hurry Road  
Bamber Lake, NJ 08731

Re: Application # 2003-0456.001  
Block 4108, Lot 5  
Lacey Township

Dear Mr. Austin:

The Commission staff has completed its review of the above referenced application for a Waiver of Strict Compliance ("Waiver") proposing the development of a single family dwelling on the above referenced parcel. Based upon the facts and conclusions contained in this Report, on behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission approve the application with conditions at its August 10, 2018 meeting.

### **FINDINGS OF FACT**

This application is for the development of a single family dwelling served by an alternate design onsite septic system on the above referenced 0.46 acre parcel in Lacey Township. The parcel is located in a Pinelands Village Management Area and in Lacey Township's Village Residential (VR) zoning district. In this zoning district, Lacey Township's certified land use ordinance establishes a minimum lot size of 1.0 acre to develop a single family dwelling that is served by an alternate design onsite septic system.

As no Commission accepted alternate design onsite septic system will meet the two parts per million average nitrogen concentration in the groundwater at the property line of the 0.46 acre parcel, the applicant is requesting a Waiver from the groundwater quality standard contained in the CMP (N.J.A.C. 7:50-6.84(a)5iv).

The parcel has been site inspected by a member of the Commission's staff. Additionally, the appropriate resource capability maps and data available to the staff have been reviewed.

On January 4, 2016, the Lacey Township Zoning Board of Adjustment adopted a Resolution for Appeal # 15-16 approving a residential lot size variance to develop a dwelling on the parcel.



The parcel includes all contiguous land in common ownership on or after January 14, 1981. The proposed single family dwelling will be the sole principal use of the entire contiguous parcel. A single family dwelling can be developed on the parcel without violating any of the criteria contained in N.J.A.C. 7:50-4.65(b).

Only if the parcel is developed in accordance with the conditions recommended below will the adverse impacts on groundwater quality be minimized.

### **PUBLIC COMMENT**

The applicant has provided the requisite public notices. Public notice to all property owners within 200 feet of the parcel was completed on March 30, 2018. Newspaper public notice was completed on April 11, 2018. The application was designated as complete on the Commission's website on May 22, 2018. The Commission's public comment period closed on July 13, 2018. No public comment was received by the Commission regarding this application.

### **CONCLUSION**

The CMP (N.J.A.C. 7:50-4.62) sets forth the standards which must be met before a Waiver can be approved. The CMP (N.J.A.C. 7:50-4.62(a)) requires that for a Waiver application to be approved based on extraordinary hardship, the applicant must demonstrate that the conditions of either N.J.A.C. 7:50-4.63(a) or (b) have been met.

N.J.A.C. 7:50-4.63(a) sets forth five conditions which must be met for an applicant to qualify for an extraordinary hardship pursuant to that subsection.

The first condition is that the only relief sought is from one or more of the standards contained in N.J.A.C. 7:50-6 for certain specified development. One of the specified types of development is a single family dwelling on a parcel within a Regional Growth Area, Pinelands Town or Pinelands Village which is at least 20,000 square feet, excluding road rights-of-way, in size and is not served by a centralized waste water treatment system. This application is for a Waiver from the groundwater quality standards contained in N.J.A.C. 7:50-6. The applicant is proposing to develop a single family dwelling served by an alternate design onsite wastewater treatment system on a 0.46 acre (20,038 square foot) parcel. The parcel contains more than 20,000 square feet, excluding road rights-of-way and is located in a Pinelands Village Management Area. As a result, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)1v.

The second condition is that the parcel includes all contiguous land in common ownership on or after January 14, 1981, including lands which are contiguous as a result of ownership of other contiguous lands. Since the parcel includes all such contiguous land, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)2.

The third condition is that the proposed use will be the sole principal use on the entire contiguous parcel, except as expressly provided in N.J.A.C. 7:50-5.1(c). As the proposed single family dwelling will be the sole principal use on the parcel, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)3.

The fourth condition is that all necessary municipal lot area and density variances have been obtained if the parcel is located in a municipality whose master plan and land use ordinance have been certified by the Pinelands Commission. Lacey Township's master plan and land use ordinance have been certified

by the Pinelands Commission. On January 4, 2016, the Lacey Township Zoning Board of Adjustment adopted a Resolution for Appeal # 15-16 approving a residential lot size variance to develop a dwelling on the parcel. As a result, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)4.

The fifth condition is that the development of the parcel will not violate any of the criteria contained in N.J.A.C. 7:50-4.65(b). N.J.A.C. 7:50-4.65(a) precludes the granting of a Waiver which permits a parcel to be developed unless such development will be consistent with the purposes and provisions of the Pinelands Protection Act, the Federal Act and the CMP and will not result in a substantial impairment of the resources of the Pinelands Area. N.J.A.C. 7:50-4.65(b) sets forth the circumstances which do not comply with N.J.A.C. 7:50-4.65(a). With the conditions recommended below, the proposed development will not violate any of the circumstances contained in N.J.A.C. 7:50-4.65(b). As a result, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)5.

Since the applicant meets all five conditions set forth in N.J.A.C. 7:50-4.63(a), the applicant has demonstrated that an extraordinary hardship exists pursuant to N.J.A.C. 7:50-4.62(a).

As required by N.J.A.C. 7:50-4.62(b), the proposed dwelling will not result in substantial impairment of the resources of the Pinelands or be inconsistent with the provisions of the Pinelands Protection Act, the Federal Act or the CMP in accordance with the criteria set forth in N.J.A.C. 7:50-4.65.

As required by N.J.A.C. 7:50-4.62(c) and with the conditions recommended below, the proposed dwelling will not involve trespass or create a public or private nuisance by being materially detrimental or injurious to other property or improvements in the area in which the parcel is located, increase the danger of fire or endanger public safety.

The CMP (N.J.A.C. 7:50-4.62(d)) requires that the Waiver only grant the minimum relief necessary to relieve the extraordinary hardship. The proposed single family dwelling is the minimum relief necessary to relieve the extraordinary hardship which has been shown to exist.

The CMP (N.J.A.C. 7:50-4.62(d)1iii) requires the acquisition and redemption of 0.25 Pinelands Development Credits (PDCs) whenever a Waiver provides relief from one or more of the standards of N.J.A.C. 7:50-6. As the applicant is obtaining a Waiver from the groundwater quality standard (N.J.A.C. 7:50-6.84(a)5iv.) a condition is included to require the applicant to purchase the requisite 0.25 PDCs.

The CMP (N.J.A.C. 7:50-4.62(d)1ii)) also requires the acquisition and redemption of any PDCS that are otherwise required pursuant to N.J.A.C. 7:50-5.27, 5.28 or 5.32. The CMP (N.J.A.C. 7:50-5.27(c)) provides that any local approval in a Pinelands Village, including variances, which grants relief from density or lot area requirements shall require that PDCs be used for all dwelling units or lots in excess of that otherwise permitted, unless a Waiver for the dwelling unit or lot has been approved by the Commission. As indicated above, the applicant previously received a municipal variance granting relief from the lot area requirement for the proposed dwelling. However, since the applicant qualifies for a Waiver, no PDCs are required for the municipal lot area variance.

To meet the requirements of N.J.A.C. 7:50-4.62, N.J.A.C. 7:50-4.63(a) and N.J.A.C. 7:50-4.65, the Pinelands Commission staff has determined that the parcel must be developed in accordance with the following conditions:

1. Except as modified by the below conditions, the proposed development shall adhere to the plot plan prepared by Accutech Engineering, dated March 7, 2015 and last revised July 18, 2016.
2. The septic system must be located in an area where the seasonal high water table is at least five feet below the natural ground surface.
3. The proposed dwelling must utilize an alternate design wastewater system authorized pursuant to the CMP on a 1.0 acre lot and approved for use by the Pinelands Commission and the New Jersey Department of Environmental Protection.
4. Except as provided in N.J.A.C. 7:50-5.1(c), the single family dwelling approved herein shall be the sole principal use of the parcel.
5. Prior to Commission issuance of a letter advising that any municipal or county permit or approval may take effect, the Commission must receive a letter from the Pinelands Development Credit Bank indicating that the requisite 0.25 PDCs have been acquired and submitted to the PDC Bank for redemption.
6. This Waiver shall expire August 10, 2023 unless all necessary construction permits have been issued by that date. The Waiver shall also expire if any construction permit is allowed to expire or lapse after August 10, 2023 or if any renewal or extension of any permit or approval or issuance of a new construction permit is necessary after that date.
7. Prior to Commission issuance of a letter advising that any municipal or county permit or approval may take effect, a copy of a recorded deed containing all of the above conditions shall be submitted to the Pinelands Commission. The deed shall specify that the conditions are being imposed pursuant to a Waiver of Strict Compliance referring to the application number. The deed shall also state that the conditions are enforceable by the Pinelands Commission, Lacey Township and any other party of interest.

### **APPEAL**

The CMP (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal this recommendation in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. Any such appeal must be made in writing to the Commission and received at the Commission offices no later than 4:00 PM on August 7, 2018 and include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. a brief statement of the basis for the appeal; and
4. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

If no appeal is received, the Pinelands Commission may either approve the determination of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.



Recommended for Approval by: \_\_\_\_\_

Charles M. Horner, P.P., Director of Regulatory Programs

- c:      Secretary, Lacey Township Planning Board (via email)  
         Lacey Township Construction Code Official (via email)  
         Lacey Township Environmental Commission (via email)  
         Secretary, Ocean County Planning Board (via email)  
         Ocean County Health Department (via email)



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General Information: Info@pinelands.nj.gov  
Application Specific Information: AppInfo@pinelands.nj.gov

SEAN W. EARLEN  
Chairman  
NANCY WITTENBERG  
Executive Director

## **REPORT ON AN APPLICATION FOR A WAIVER OF STRICT COMPLIANCE**

July 20, 2018

Lisa Gassert (via email)  
1720 Old Marlton Pike E  
Marlton, NJ 08053

Re: Application # 2004-0352.001  
Block 114, Lot 1.01  
Evesham Township

Dear Ms. Gassert:

The Commission staff has completed its review of the above referenced application for a Waiver of Strict Compliance ("Waiver") proposing the development of a single family dwelling on the above referenced parcel. Based upon the facts and conclusions contained in this Report, on behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission approve the application with conditions at its August 10, 2018 meeting.

### **FINDINGS OF FACT**

This application is for the development of a single family dwelling serviced by public sanitary sewer on the above referenced 5.2 acre parcel in Evesham Township. The parcel is located within a Pinelands Regional Growth Area and in Evesham Township's Regional Growth 1 (RG-1) zoning district. In this zoning district, Evesham Township's certified land use ordinances require a residential density of one dwelling unit per 17,424 square feet for a single family dwelling serviced by public sanitary sewer.

On October 9, 2009, the Pinelands Commission approved a Waiver for the development of a single family dwelling serviced by public sanitary sewer on the parcel. An application for development of the proposed dwelling was subsequently completed with the Commission and a Certificate of Filing was issued on August 26, 2011. The Pinelands Comprehensive Management Plan (CMP, N.J.A.C. 7:50-4.70(c)) specifies that a Waiver expires five years after the date of Commission approval unless all necessary construction permits have been issued within the five year period, the authorized work is commenced within 12 months after issuance of the construction permits and no such permit becomes invalid after the five year period.

No information has been provided to the Commission staff demonstrating that a construction permit was issued by October 9, 2014 or, if any such construction permit was issued, that the permit remains valid.



By letter dated April 29, 2018, a new owner of the parcel contacted the Commission regarding the prior Waiver. By letter dated May 7, 2018, the Commission staff notified the new owner of the parcel that the Waiver approved by the Commission on October 9, 2009 expired on October 9, 2014. On June 1, 2018, the current application for a new Waiver was completed with the Commission.

The parcel has been site inspected by a member of the Commission's staff. Additionally, the appropriate resource capability maps and data available to the staff have been reviewed.

A portion of the parcel is wetlands as defined in N.J.A.C. 7:50-6.5(a)2. The wetlands continue onto adjacent lands. Any development of the parcel would be located within 300 feet of these wetlands. The applicant has submitted no information to demonstrate that the proposed development will not cause a significant adverse impact on the wetlands. Based on the quality and location of the wetlands, the proposed development will cause a significant adverse impact on the wetlands. As there will be a significant adverse impact on wetlands located within 300 feet of the proposed development, the applicant is requesting a Waiver from the buffer to wetlands standard contained in the CMP (N.J.A.C. 7:50-6.14).

The parcel includes all contiguous land in common ownership on or after January 14, 1981. The proposed single family dwelling will be the sole principal use of the entire contiguous parcel. The development of a single family dwelling on the parcel does not require a lot area or density variance pursuant to Evesham Township's certified land use ordinances. A single family dwelling can be developed on the parcel without violating any of the criteria contained in N.J.A.C. 7:50-4.65(b) if the conditions recommended below are imposed.

Only if the parcel is developed in accordance with the conditions recommended below will the adverse impacts on wetlands be minimized.

### **PUBLIC COMMENT**

The applicant provided the requisite public notice. Public notice to all property owners within 200 feet of the parcel was completed on May 31, 2018. Newspaper public notice was completed on June 7, 2018. The application was designated as complete on the Commission's website on June 1, 2018. The Commission's public comment period closed on July 13, 2018. The Commission staff received one written comment (attached) regarding this application:

**Written Commenter #1:** The commenters are concerned about the impact of the proposed development on wetlands, stormwater runoff and property maintenance.

**Staff Response:** The Commission staff appreciates the commenters' interest in the Pinelands. The proposed development will maintain a minimum buffer to wetlands of 50 feet. The proposed buffer to wetlands ranges from 50 feet to approximately 150 feet. The Commission regulations do not require an application for a single family dwelling to address stormwater runoff. However, this Waiver recommendation is conditioned upon provision of certain measures that will reduce stormwater runoff. The Commission's Waiver regulations are designed to provide all property owners with at least a minimum beneficial use of a parcel consistent with the constitutional requirements. The applicant has demonstrated that the proposed dwelling meets the minimum CMP standards to qualify for a



Waiver. The commenter may wish to discuss with an appropriate municipal official their stormwater management and property maintenance concerns.

### **CONCLUSION**

The CMP (N.J.A.C. 7:50-4.62) sets forth the standards which must be met before a Waiver can be approved. The CMP (N.J.A.C. 7:50-4.62(a)) requires that for a Waiver application to be approved based on extraordinary hardship, the applicant must demonstrate that the conditions of either N.J.A.C. 7:50-4.63(a) or (b) have been met.

N.J.A.C. 7:50-4.63(a) sets forth five conditions which must be met for an applicant to qualify for an extraordinary hardship pursuant to that subsection.

The first condition is that the only relief sought is from one or more of the standards contained in N.J.A.C. 7:50-6 for certain specified development. One of the specified categories of development is a single family dwelling on a parcel within a Pinelands Regional Growth Area, Pinelands Town or a Pinelands Village which will be served by a centralized wastewater treatment system.

This application is only for a Waiver from the wetland buffer standard of the CMP. The parcel is located in a Pinelands Regional Growth Area. The applicant is seeking to develop a single family dwelling served by a centralized wastewater treatment system on the parcel. As a result, the applicant meets the criteria set forth in N.J.A.C. 7:50- 4.63(a)1iv.

The second condition is that the parcel includes all contiguous land in common ownership on or after January 14, 1981, including lands which are contiguous as a result of ownership of other contiguous lands. Since the parcel includes all such contiguous land, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)2.

The third condition is that the proposed use will be the sole principal use on the entire contiguous parcel, except as expressly provided in N.J.A.C. 7:50-5.1(c). As the proposed single family dwelling will be the sole principal use on the parcel, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)3.

The fourth condition is that all necessary municipal lot area and density variances have been obtained if the property is located in a municipality whose master plan and land use ordinances have been certified by the Pinelands Commission. Evesham Township's master plan and land use ordinances have been certified by the Pinelands Commission. The certified ordinance does not require a lot area or density variance. As a result, the applicant meets the criteria set forth in N.J.A.C. 7:50- 4.63(a)4.

The fifth condition is that the development of the parcel will not violate any of the criteria contained in N.J.A.C. 7:50-4.65(b). N.J.A.C. 7:50-4.65(a) precludes the granting of a Waiver which permits a parcel to be developed unless such development will be consistent with the purposes and provisions of the Pinelands Protection Act, the Federal Act and the CMP and will not result in a substantial impairment of the resources of the Pinelands Area. N.J.A.C. 7:50-4.65(b) sets forth the circumstances which do not comply with N.J.A.C. 7:50-4.65(a). With the conditions recommended below, the proposed development will not violate any of the circumstances contained in N.J.A.C. 7:50-4.65(b). As a result, the applicant meets the criteria set forth in N.J.A.C. 7:50-4.63(a)5.

Since the applicant meets all five conditions set forth in N.J.A.C. 7:50-4.63(a), the applicant has demonstrated that an extraordinary hardship exists pursuant to N.J.A.C. 7:50-4.62(a).

As required by N.J.A.C. 7:50-4.62(b), the proposed dwelling will not result in substantial impairment of the resources of the Pinelands or be inconsistent with the provisions of the Pinelands Protection Act, the Federal Act or the CMP in accordance with the criteria set forth in N.J.A.C. 7:50-4.65.

As required by N.J.A.C. 7:50-4.62(c) and with the conditions recommended below, the proposed dwelling will not involve trespass or create a public or private nuisance by being materially detrimental or injurious to other property or improvements in the area in which the parcel is located, increase the danger of fire or endanger public safety.

The CMP (N.J.A.C. 7:50-4.62(d)) requires that the Waiver only grant the minimum relief necessary to relieve the extraordinary hardship. The proposed single family dwelling is the minimum relief necessary to relieve the extraordinary hardship which has been shown to exist.

The CMP (N.J.A.C. 7:50-4.62(d)1iii) requires the acquisition and redemption of 0.25 Pinelands Development Credits (PDCs) whenever a Waiver provides relief from one or more of the standards of N.J.A.C. 7:50-6. The applicant is obtaining a Waiver from the required buffer to wetlands standard (N.J.A.C. 7:50-6.14). The Commission staff received notification from the Pinelands Development Credit Bank that the prior Waiver applicant acquired and redeemed the requisite 0.25 PDCs. The applicant meets the requirement contained in N.J.A.C. 7:50-4.62(d)1iii.

To meet the requirements of N.J.A.C. 7:50 4.62, N.J.A.C. 7:50 4.63(a) and N.J.A.C. -7:50 4.65, the Pinelands Commission staff has determined that the parcel must be developed in accordance with the following conditions:

1. Except as modified by the below conditions, the proposed development shall adhere to the plot plan prepared by Clancy & Associates, Inc., dated October 6, 2005 and last revised November 18, 2010.
2. Appropriate measures, such as silt fencing or comparable alternative, shall be taken during construction to preclude sedimentation from entering wetlands.
3. All development, including clearing and land disturbance, shall be located within the proposed development envelope as shown on the above referenced plan. No development, including clearing and land disturbance, is permitted within 50 feet of wetlands.
4. Sufficient dry wells or a comparable alternative shall be installed to contain all stormwater runoff from the house.
5. The driveway shall be constructed of crushed stone or other permeable material.
6. Except as provided in N.J.A.C. 7:50-5.1(c), the single family dwelling approved herein shall be the sole use of the parcel.
7. This Waiver shall expire August 10, 2023 unless all necessary construction permits have been issued by that date. The Waiver shall also expire if any construction permit is allowed

to expire or lapse after August 10, 2023 or if any renewal or extension of any permit or approval or issuance of a new construction permit is necessary after that date.

8. A copy of a recorded deed containing all of the above conditions shall be submitted to the Pinelands Commission prior to Commission issuance of a letter advising that any submitted municipal or county permit or approval may take effect. The deed shall specify that the conditions are being imposed pursuant to a July 20, 2018 Pinelands Commission Report on an Application for a Waiver of Strict Compliance ("Waiver Report") for App. No. 2004-0352.001. The deed shall indicate that the conditions previously required by the September 28, 2009 Waiver Report for App. No. 2004-0352.001, approved by the Pinelands Commission on October 9, 2009, have since expired and are superseded by the conditions required by the July 20, 2018 Waiver Report approved by the Pinelands Commission on August 10, 2018. The deed shall also indicate that the conditions are enforceable by the Pinelands Commission, Evesham Township and any other party of interest.

With the above conditions, the applicant qualifies for a Waiver of Strict Compliance from the requirements of N.J.A.C. 7:50-6.14.

Since the applicant meets the provisions of N.J.A.C. 7:50-4.62, N.J.A.C. 7:50-4.63 and N.J.A.C. 7:50-4.65 for the development of one single family dwelling on the subject lot, it is recommended that the Pinelands Commission **APPROVE** the requested Waiver of Strict Compliance subject to the above conditions.

### **APPEAL**

The CMP (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal this recommendation in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. . Any such appeal must be made in writing to the Commission and received at the Commission offices no later than 4:00 PM on August 7, 2018 and include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. a brief statement of the basis for the appeal; and
4. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

If no appeal is received, the Pinelands Commission may either approve the determination of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.



Recommended for Approval by: \_\_\_\_\_

Charles M. Horner, P.P., Director of Regulatory Programs

- c: Secretary, Evesham Township Planning Board (via email)  
Evesham Township Construction Code Official (via email)  
Evesham Township Environmental Commission (via email)  
Secretary, Burlington County Planning Board (via email)  
Matt & Fran Davis (via email)

Pinelands Commission  
PO Box 359  
New Lisbon, NJ 08064

Matt and Fran Davis  
1626 Roosevelt Ave  
Marlton, NJ 08053

Dear Pinelands Commission;

First thank you for giving us an opportunity to have an input in this decision. My house and property has a branch of the Rancocas that runs thru it and every storm we have to worry about flooding. With all the available area in Marlton sprouting buildings more water now runs off to the stream creating more issues for the properties that are already on the stream. Technically we are part of the "Pinelands" but we are within the boundary that was set by the commission and we are concerned that what happens here definitely effects the pinelands.

This area is considered wetlands which is fragile. Wetlands help filter out water and refill our aquifers to give us clean drinking water and aid in flooding by slowing run off. As the Pinelands and Wetlands commission, you are charge with protecting this very unique ecosystem. This area of Marlton already has to be concerned with flooding. Adding a house to this property decreases the area that water can naturally adsorb into the ground. Since the ground can't absorb the water this creates more run off.

A major concern of mine is the property that the owner already owns. The property is not maintained now. The trash is never cleaned up and there are piles of debris everywhere. The property owners even needed a farm tractor this weekend to cut the lawn do to neglect. Their tree and yard trimmings are left lying around and the dirt that runs off of the property block the storm drains causing flooding.

With all of our concerns for flooding and the environment we do not believe it is a wise decision to allow a house to be built on this property.

Thank you for your concern,

Matt and Fran Davis



# RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION

NO. PC4-18- 25

**TITLE:** Denying an Application for a Waiver of Strict Compliance (Application Number 2007-0398.001)

Commissioner Lloyd moves and Commissioner Ashmun seconds the motion that:

WHEREAS, the Pinelands Commission has reviewed each of the Findings of Fact, Conclusion and the recommendation of the Executive Director that the following application for Waiver of Strict Compliance be denied:

**2007-0398.001**

**Applicant:** Brian Tomasino  
**Municipality:** Galloway Township  
**Management Area:** Pinelands Town  
**Date of Report:** July 20, 2018  
**Proposed Development:** Single family dwelling.

WHEREAS, no request for a hearing before the Office of Administrative Law concerning the Executive Director's recommendation has been received for this application; and

WHEREAS, the Pinelands Commission hereby adopts the Findings of Fact and Conclusion of the Executive Director for the requested Waiver of Strict Compliance; and

WHEREAS, the Pinelands Commission hereby determines that the requested Waiver does not conform to the standards for approving an application for a Waiver of Strict Compliance based on extraordinary hardship as set forth in N.J.A.C. 7:50-4.62, N.J.A.C. 7:50-4.63 and N.J.A.C. 7:50-4.65 if the conditions recommended by the Executive Director are imposed; and

WHEREAS, pursuant to N.J.S.A. 13A-5h, no action authorized by the Commission shall have force or effect until ten (10) days, Saturdays, Sundays and public holidays excepted, after a copy of the minutes of the meeting of the Commission has been delivered to the Governor for review, unless prior to expiration of the review period and Governor shall approve same, in which case the action shall become effective upon such approval.

**NOW, THEREFORE BE IT RESOLVED** that Application Number 2007-0398.001 for a Waiver of Strict Compliance is hereby **denied**.

## Record of Commission Votes

AYE	NAY	NP	A/R*	AYE	NAY	NP	A/R*	AYE	NAY	NP	A/R*
Ashmun	X			Howell	X			Prickett	X		
Avery	X			Jannarone		X		Quinn		X	
Barr	X			Lloyd	X			Rohan Green		X	
Chila	X			Lohbauer	X			Earlen	X		
Galletta		X		Pikolycky	X						

\*A = Abstained / R = Recused

Adopted at a meeting of the Pinelands Commission

Date: August 10, 2018

Nancy Wittenberg  
 Executive Director

Sean W. Earlen  
 Chairman



State of New Jersey  
THE PINELANDS COMMISSION  
PO Box 359  
New Lisbon, NJ 08064  
(609) 894-7300  
www.nj.gov/pinelands



PHILIP D. MURPHY  
Governor  
SHEILA Y. OLIVER  
Lt. Governor

General Information: [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov)  
Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

SEAN W. EARLEN  
Chairman  
NANCY WITTENBERG  
Executive Director

## **REPORT ON AN APPLICATION FOR A WAIVER OF STRICT COMPLIANCE**

July 20, 2018

Brian Tomasino  
4 Brookview Lane  
Granby, CT 06035

Re: Application # 2007-0398.001  
Block 134.01, Lot 4  
Block 134.02, Lot 3  
Block 146, Lot 3  
Block 152, Lot 3  
Galloway Township

Dear Mr. Tomasino:

The Commission staff has completed its review of this application for a Waiver of Strict Compliance ("Waiver") proposing development of one single family dwelling on the above referenced parcel. Based upon the facts and conclusions contained in this Report, on behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission deny the application at its August 10, 2018 meeting.

You have expressed an interest in the New Jersey Department of Environmental Protection acquiring the parcel under the Commission's Limited Practical Use Program. One of the requirements to qualify for the LPU Program is Pinelands Commission denial of a Waiver application.

### **FINDINGS OF FACT**

This application is for the development of one single family dwelling, served by a conventional onsite septic system, on the above referenced 4.15 acre parcel in Galloway Township. The parcel is located in Galloway Township's TR zoning district within the Pinelands Town of Egg Harbor City. The applicant could meet the requirement of the Galloway Township land use ordinance that allows the development of a dwelling served by a conventional onsite septic system on a 3.2 acre parcel in the TR zoning district.

The parcel has been site inspected by a member of the Commission's staff. In addition, the appropriate resource capability maps and data available to the staff have been reviewed.



The CMP (N.J.A.C. 7:50-6.84(a)4iv) requires that if development is proposed to be served by an onsite septic system, the proposed onsite wastewater disposal field must be located in an area where the depth to seasonal high water table is at least five feet below the natural ground surface. The Atlantic County Soils Survey indicates that the soils on this parcel have a seasonal high water table of less than two feet below the natural ground surface. The applicant has submitted no information to demonstrate that the septic system could be located in an area where the seasonal high water table is at least five feet below the natural ground surface. Since the available information indicates the seasonal high water table on the entire parcel is less than five feet below the natural ground surface, the applicant is requesting a Waiver from the seasonal high water table requirement for an onsite wastewater disposal field contained in the CMP (N.J.A.C. 7:50-6.84(a)4iv).

The CMP (N.J.A.C. 7:50-6.6) prohibits most development in wetlands. Available information indicates that a portion of the parcel is wetlands. The wetlands on the parcel do not meet the CMP definition of an impaired wetlands (N.J.A.C. 7:50-2.11). The applicant has not demonstrated that no development would be located on these wetlands. The CMP (N.J.A.C. 7:50-6.14) also prohibits most development within 300 feet of wetlands unless it is demonstrated that the proposed development will not result in a significant adverse impact on wetlands. Available information indicates that the portion of the parcel that is not wetlands is located in the required 300 foot buffer to these wetlands. The applicant has not demonstrated that no development would be located within 300 feet of wetlands. The applicant has submitted no information to demonstrate that proposed development within 300 feet of wetlands would not cause a significant adverse impact on the wetlands. Based on the quality and location of the wetlands, the proposed development will cause a significant adverse impact on the wetlands. As there will be a significant adverse impact on wetlands, the applicant is requesting a Waiver from the wetlands and wetlands buffer requirements contained in the CMP (N.J.A.C. 7:50-6.6 and N.J.A.C. 7:50-6.14).

The CMP (N.J.A.C. 7:50-6.27) prohibits development unless it is designed to avoid irreversible adverse impacts on the survival of any local population of plants designated by the New Jersey Department of Environmental Protection as endangered plant species and those plants designated in the CMP as threatened or endangered. The applicant has submitted no information to demonstrate that the proposed development could be designed to avoid irreversible adverse impacts on the survival of any local population of plants designated by the New Jersey Department of Environmental Protection as endangered plant species and those plants designated in the CMP as threatened or endangered. As the applicant has not demonstrated there will not be a significant adverse impact on threatened and endangered species, the applicant is requesting a Waiver from the CMP threatened and endangered species protection standard (N.J.A.C. 7:50-6.27).

### **PUBLIC NOTICE**

The applicant has provided the requisite public notice. Public notice to all property owners within 200 feet of the parcel was completed on May 25, 2018. Newspaper public notice was completed on May 24, 2018. The application was designated as complete on the Commission's website on June 20, 2018. The Commission's public comment period closed on July 13, 2018. No public comment regarding this application was submitted to the Commission.

### **CONCLUSION**

The CMP (N.J.A.C. 7:50-4.62) sets forth the standards which must be met before a Waiver can be approved. N.J.A.C. 7:50-4.62(a) requires that for a Waiver to be approved based on extraordinary



hardship, an applicant must demonstrate that the conditions of either N.J.A.C. 7:50-4.63(a) or (b) have been met.

N.J.A.C. 7:50-4.63(a) sets forth five conditions which must be met for an applicant to qualify for a Waiver based on an extraordinary hardship pursuant to that subsection.

The first condition is that the only relief sought is from one or more of the standards contained in the CMP (N.J.A.C. 7:50-6) for certain specified types of development. A single family dwelling on a parcel within a Regional Growth Area, Pinelands Town or Pinelands Village which is at least 20,000 square feet, excluding road rights of way, in size and will not be served by a centralized wastewater treatment system is one of the specified categories of development. As the parcel contains 4.15 acres in a Pinelands Town that will not be served by a centralized wastewater treatment system, the application meets the condition set forth in N.J.A.C. 7:50-4.63(a)1v.

The second condition is that the parcel includes all contiguous land in common ownership on or after January 14, 1981, including lands which are contiguous as a result of ownership of other contiguous lands. Since the parcel includes all such contiguous lands, the application meets the condition set forth in N.J.A.C. 7:50-4.63(a)2.

The third condition is that the proposed use will be the sole principal use on the entire contiguous parcel, except as expressly provided in N.J.A.C. 7:50-5.1(c). As the proposed single family dwelling would be the sole principal use on the parcel, the application meets the condition set forth in N.J.A.C. 7:50-4.63(a)3.

The fourth condition is that all necessary municipal lot area and density variances have been obtained if the parcel is located in a municipality whose master plan and land use ordinances have been certified by the Pinelands Commission. Galloway Township's master plan and land use ordinances have been certified by the Pinelands Commission. The certified ordinances do not require a municipal lot area or density variance for the development of a single family dwelling on this 4.15 acre parcel. The application meets the condition set forth in N.J.A.C. 7:50-4.63(a)4.

The fifth condition is that the development of the parcel will not violate any of the criteria contained in N.J.A.C. 7:50-4.65(b). N.J.A.C. 7:50-4.65(a) precludes the granting of a Waiver which permits a parcel to be developed unless such development will be consistent with the purposes and provisions of the Pinelands Protection Act, the Federal Act and the CMP and will not result in substantial impairment of the resources of the Pinelands Area. N.J.A.C. 7:50-4.65(b) provides that the following circumstances will result in substantial impairment of the resources of the Pinelands Area and do not comply with N.J.A.C. 7:50-4.65(a):

- |                        |   |
|------------------------|---|
| N.J.A.C. 7:50-4.65(b)5 | The development of a single family dwelling and associated improvements in wetlands unless that wetland is an impaired wetland;       |
| N.J.A.C. 7:50-4.65(b)7 | Any development which will violate the threatened and endangered species protection requirements contained in N.J.A.C. 7:50-6.27; and |
| N.J.A.C. 7:50-4.65(b)8 | Any development which will require the location of an onsite wastewater disposal field in an area where the seasonal high water       |

table is within two feet of the natural ground surface or within 50 feet of any surface water body.

The proposed development is not permitted in wetlands. The wetlands on the parcel do not meet the CMP definition of “impaired wetlands.” The applicant has not demonstrated that proposed development will not be located on wetlands as required by N.J.A.C. 7:50-4.65(b)5. As a result, the applicant has not demonstrated that the proposed development will not violate the criteria contained in N.J.A.C. 7:50-4.65(b)5.

The applicant has not demonstrated that the proposed development could be designed to avoid irreversible adverse impacts on the survival of any local population of plants designated by the New Jersey Department of Environmental Protection as endangered plant species and those plants designated in the CMP as threatened or endangered. As a result, the applicant has not demonstrated that the proposed development will not violate the criteria contained in N.J.A.C. 7:50-4.65(b)7.

The applicant has not demonstrated that a proposed onsite wastewater disposal field will not be located in an area where the seasonal high water table is within two feet of the natural ground surface or within 50 feet of any surface water body. As a result, the applicant has not demonstrated that the proposed development will not violate the criteria contained in N.J.A.C. 7:50-4.65(b)8.

The application does not meet the condition set forth in N.J.A.C. 7:50-4.63(a)5.

As the application does not meet all five conditions set forth in N.J.A.C. 7:50-4.63(a), the applicant does not qualify for a Waiver pursuant to that subsection.

N.J.A.C. 7:50-4.63(b) sets forth four conditions which must be met for an applicant to qualify for a Waiver based on an extraordinary hardship pursuant to that subsection.

The first condition is that the parcel includes all contiguous lands in common ownership on or after January 14, 1981, including lands which are contiguous as a result of ownership of other contiguous lands. As concluded above, the concerned parcel includes all contiguous lands that were in common ownership on or after January 14, 1981. The application meets the condition contained in N.J.A.C. 7:50-4.63(b)1.

The second condition is that the parcel includes all contiguous land with no substantial improvements which is available for purchase at fair market value, including lands which are contiguous as a result of the acquisition of other contiguous lands. There is vacant land bordering the concerned parcel. The applicant has not demonstrated that the vacant land is not available for purchase at fair market value. The application does not meet the condition set forth in N.J.A.C. 7:50-4.63(b)2.

The third condition is that the parcel, including all contiguous lands which are available pursuant to N.J.A.C. 7:50-4.63(b)1 and 2, may not have a beneficial use considering five factors.

The first factor to be considered is the value of any existing development or use of the overall parcel, including any allocation of Pinelands Development Credits (PDCs). The overall parcel is vacant and no use has been established on the parcel. PDCs are not allocated to lands in a Pinelands Town.

The second factor to be considered is the value of any use or development of the parcel that is authorized by the provisions of the CMP. The applicant has submitted no information to address the value of any use or development of the parcel that is authorized by the provisions of the CMP.

The third factor to be considered is the ability of the property owner to sell the parcel to the owner of a contiguous parcel, any governmental agency or to a nonprofit conservation group for its fair market value. The applicant has offered to sell the parcel to the New Jersey Department of Environmental Protection. The applicant provided a letter from the NJDEP Green Acres Program which declined the offer. The applicant also submitted a letter from the Atlantic County Department of Regional Planning and Development declining the offer to acquire the parcel. The applicant submitted no additional information to demonstrate that the parcel cannot be sold for its fair market value to any other governmental agency or to a nonprofit conservation group for its fair market value.

The fourth factor is the ability of the property owner to either buy noncontiguous land or to sell the parcel to a noncontiguous property owner under a residential density transfer provision contained in a certified municipal land use ordinance or pursuant to the CMP (N.J.A.C. 7:50-5.30). Galloway Township's certified land use ordinances do not contain a residential density transfer provision that applies to lands in Galloway Township's TR zoning district.

The fifth factor to be considered is whether any inability to have a beneficial use relates to or arises out of the characteristics of the concerned parcel and results from unique circumstances peculiar to the parcel which are not the result of any personal situation of the applicant and are not the result of any action or inactions by the application or any predecessor in title. The minimum depth to seasonal high water table for an onsite septic system wastewater disposal field, threatened and endangered species protection requirements and wetland protection requirements apply to all other vacant parcels in the area. Any hardship which does exist is a result of the applicant's personal circumstances and their actions and inactions.

Based on these five factors, the application does not meet the condition set forth in N.J.A.C. 7:50-4.63(b)3.

The fourth condition is that the development of the parcel will not violate any of the criteria contained in N.J.A.C. 7:50-4.65(b). As concluded above, the applicant has not demonstrated that a single family dwelling can be developed on the concerned parcel without violating N.J.A.C. 7:50-4.65(b)5, 7 and 8. As a result, the applicant does not meet the condition contained in N.J.A.C. 7:50-4.63(b)4.

As the applicant does not meet all the conditions for demonstrating extraordinary hardship contained in N.J.A.C. 7:50-4.63(b), the applicant does not qualify for a Waiver pursuant to that subsection.

As N.J.A.C. 7:50-4.63(a) and (b) are the exclusive means of establishing extraordinary hardship, the applicant does not qualify for a Waiver.

As a result, it is recommended that the Pinelands Commission **DENY** the requested Waiver of Strict Compliance.

### **APPEAL**

The CMP (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal this recommendation in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by

someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. Any such appeal must be made in writing to the Commission and received at the Commission offices no later than 4:00 PM on August 7, 2018 and include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. a brief statement of the basis for the appeal; and
4. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

If no appeal is received, the Pinelands Commission may either approve the determination of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.

Recommended for Denial by: \_\_\_\_\_

  
Charles M. Horner, P.P., Director of Regulatory Programs

c: Secretary, Galloway Township Planning Board (via email)  
Galloway Township Construction Code Official (via email)  
Galloway Township Environmental Commission (via email)  
Atlantic County Department of Regional Planning and Development (via email)  
Atlantic County Division of Public Health (via email)  
Betsy Piner

**From:** Edward Lloyd  
**Sent:** Thursday, July 26, 2018 8:57 PM  
**To:** Sean W. Earlen; Wittenberg, Nancy  
**Cc:** Mark Lohbauer; Rick Prickett  
**Subject:** July 26, 2018 memo regarding the tree clearing proposal

TO: Sean Earlen, Nancy Wittenberg  
COPY: Rick Prickett, Mark Lohbauer  
BC: Pinelands Commissioners  
SUBJECT: Bass River Fire Tower application

Commissioners Prickett and Lohbauer submitted an earlier memo to all Commissioners on the above application prior to our July Commission meeting. Since then, we have taken the opportunity to do further research about it. We would like to share what we have learned with you and the other Commissioners. We ask that the attached memo be included in the Commissioners' packets for the upcoming meeting on August 10th, so they may consider this additional information when we review that application. We are blind copying all Commissioners so that we can discuss this memo at the August 10 Commission meeting and do not inadvertently violate the Open Public Meetings Act by using the "reply all" option. I had difficulty attaching two aerial views referenced in the memo. We will bring hard copies of the aerial view tomorrow so that they can be included in the Board packet.

Thank you.

Ed Lloyd  
Mark Lohbauer  
Rick Prickett

To: Sean Earlen, Chairman  
Nancy Wittenberg, Executive Director

Bcc. Members of the Pinelands Commission

Note: We are blind copying all Commissioners so that we can discuss this memo at the August 10 Commission meeting and do not inadvertently violate the Open Public Meetings Act by using the “reply all” option.

From: Commissioners Lloyd, Lohbauer, and Prickett

Re: Application Number 1990-0868.029/NJ State Forest Fire Service, Bass River Township, Preservation Area District, Clearing of 16.4 acres of trees to restore visibility from the Bass River State Forest fire tower.

Date: July 26, 2018

We expect that this application will be on the agenda of the Pinelands Commission for approval on August 10, 2018. The application proposes to clear-cut 16.4 acres of Bass River State Forest to restore visibility to the 86-foot tall fire tower in the forest. The application notes that tall stands of trees have grown above the height of the tower, and obscure views to the north, east, and south of the tower, hindering fire detection. The applicant proposes to clear-cut those trees (including shortleaf pines that DEP is working to expand in the Pinelands) to restore a full 360° view of the horizon around the tower. Several dozen commenters have opposed the clear-cutting, and contend that other means are available to the applicant to restore (and even enhance) views for fire detection.

We recognize the paramount importance of the fire detection service provided by the applicant, and the critical need for unobscured views to provide that service. We also recognize that the applicant has relied on its system of staffed fire towers for early wildfire detection extending as far back as the creation of the Forest Fire Service in 1906. We note that the applicant has applied to the Pinelands Commission in the past in order to clear cut trees that obstruct views from their towers in the Pinelands; in fact, the Commission approved an application from the Service in 1995 to clear-cut 4 acres around the same tower that is the subject of this application. We know that with each clear-cutting effort, habitat for plant and animal species—some of those threatened or endangered species—is destroyed. We believe that it is our duty as Commissioners to balance the needs of the applicant, with our obligation to preserve and protect forests in the Preservation Area, and the habitat within them. For that reason, we suggest that the Service may be able to accomplish the necessary fire detection in the Pinelands Preservation Area equally effectively without clear-cutting 16.4 acres of trees.

The New Jersey State Police own and operate a 240-foot communications tower at their Bass River State Police Station located at milepost 60.3 of the Garden State Parkway. See attached Google Earth view labeled NJSP Comm Tower GSP 60.3. The NJSP tower is located 0.48 miles south of the Bass River State Park fire tower which is the subject of the application before the Commission. See attached Google Earth view labeled Bass River FT to NJSP CT 0.48 miles.pdf.

We believe that placing two video cameras on the NJSP Communications Tower would fully provide the fire detection service that the 86-foot Bass River State Forest tower provides without any obstruction of visibility by trees. The Service could install the cameras at a height of approximately 130' to 200' above the ground, and below the current communications systems array on the NJSP Tower just one half mile from the Bass River tower. We believe that such a camera system at the appropriate height (far above the existing 86' tall Bass River State Forest tower) would address the needs that prompted the application to the Pinelands Commission.

Further, we note that the applicant has over 15 months of active experience using a video camera system for the detection of wildfires in New Jersey. In April, 2017 they installed video camera arrays at the Monmouth County Sheriff's complex, and in Brick Township Police Department. They installed both of these systems on public safety communications towers, and the systems are directly connected to the N.J. Forest Fire Service's Division B headquarters building in New Lisbon. We understand that adding more camera systems to the current installations would make the system more efficient, and better able to justify an employee position to observe the multiple camera feeds into Division B.

Moreover, we note that the installation of such video camera systems have obviated the need for staffed fire observation towers in the State of Oregon, without any loss of effective detection of wildfires, and management of ground resources during a wildfire. Finally, we also note that the installation of one camera system from the vendor now under contract with N.J. Forest Fire Service is about \$40,000.

We are writing to request that the the Pinelands Commission staff work with the Fire Service to explore the possibility of locating cameras on the NJSP Communications Tower to avoid the necessity to clear-cut trees in the Pinelands. We do not believe that the applicant has justified the removal of native species, nor the removal of native plant and animal habitat for the purpose of fire detection, without first examining other viable, less invasive options.

We further recommend that the Commission ask the N.J. Forest Fire Service consider deferring its application to the Pinelands Commission to clear-cut the 16.4 acres of trees near the Bass River State Forest fire tower until the Commission and the Service have thoroughly explored an alternate course of action.

We also believe that the information presented above demonstrates that there is no need to clear trees to accommodate the fire detection services provided by the fire tower under N.J.A.C. 7:50-6.23(a) of the Pinelands Comprehensive Management Plan (CMP). N.J.A.C. 7:50-6.23(a) provides that "all clearing . . . shall be limited to that which is necessary to accommodate an activity, use, or structure which is permitted by this Plan." Based upon the foregoing, we do not

believe that any clearing is “necessary to accommodate” the fire detection activity sought in the permit application. We also believe that pursuant to this CMP provision, it is practical to avoid clearing any wooded areas.

We encourage the Pinelands Commission staff and the N.J. Forest Fire Service to meet to facilitate joint proposals to be incorporated into a State Forest Management Plan, and an East Plains Fireshed Management Plan.

Finally, we request that the Pinelands Commission staff include this memorandum in the Board packet for the August 10, 2018 meeting of the Pinelands Commission.

Thank you for your consideration of these matters.



**Pinelands Commission  
Fiscal Year 2019  
Budgets  
August 10, 2018**

**BUDGETS**

- Operating Fund - \$5,915,074
- Kirkwood-Cohansey Aquifer Assessment Study Fund - \$115,270
- Katie Trust Fund - \$15,000
- Pinelands Conservation Fund - \$863,397

## Operating Fund Revenue

	FY16 Audited	FY17 Unaudited	FY18 Unaudited	FY19 Anticipated
State Appropriation	\$2,499,000	\$2,649,000	\$2,649,000	\$2,799,000
State Supplemental Funding	\$687,000	\$687,000	\$687,000	\$687,000
Application Fees	\$425,000	\$500,000	\$340,000	\$430,000
Grants/Special Purpose	\$385,152	\$250,700	\$745,700	\$1,191,241
Other	\$4,000	\$2,500	\$7,600	\$35,200
Fund Balance/Reserves	\$641,560	\$552,512	\$596,538*	\$772,633*
<b>TOTAL</b>	<b>\$4,641,712</b>	<b>\$4,641,712</b>	<b>\$5,025,838</b>	<b>\$5,915,074</b>

\* Includes:

- \$570,563 from the Undesignated Fund Balance
- \$142,070 Reserves – Computer, Facilities & Microfilm
- \$60,000 PCF Administrative Assessment

## Operating Fund Expenditures

	FY16 Audited	FY17 Unaudited	FY18 Unaudited	FY19 Anticipated
Salary and Wages	\$2,473,705	\$2,540,554	\$2,691,781	\$3,031,731
Fringe Benefits	\$1,539,755	\$1,448,268	\$1,594,542	\$1,808,212
Supplies	\$75,261	\$80,135	\$81,060	\$105,459
Professional Services	\$235,000	\$284,465	\$278,715	\$630,582
Other Services	\$174,228	\$203,820	\$212,116	\$224,512
Maintenance and Rent	\$96,200	\$62,250	\$122,400	\$82,050
Improvements and Acquisitions	\$47,563	\$22,220	\$45,224	\$32,528
<b>Total Expenditures</b>	<b>\$4,641,712</b>	<b>\$4,641,712</b>	<b>\$5,025,838</b>	<b>\$5,914,074</b>

## Kirkwood-Cohansey Expenditures

	FY16 Audited	FY17 Unaudited	FY18 Unaudited	FY19 Anticipated
Salary and Wages	\$31,490	\$37,100	\$32,100	\$26,000
Fringe Benefits	\$17,475	\$17,066	\$16,692	\$13,260
Professional Services	\$175,000	\$98,000	\$114,000	\$70,000
Other	\$2,000	\$950	\$1000	\$6,010
Total Expenditures	\$225,965	\$153,116	\$163,792	\$115,270
Fund Balance	\$225,815	\$152,816	\$162,792	\$114,270

## Katie Fund Expenditures

	FY18 Unaudited	FY19 Anticipated
Ground Supplies	\$9,638	\$4,000
Professional Services	\$10,000	\$10,000
Acquisitions – Furniture	\$1,000	\$1,000
Total Expenditures	\$20,638	\$15,000
Fund Balance	\$20,638	\$15,000

### Pinelands Conservation Fund Expenditures

	FY16 Audited	FY17 Unaudited	FY18 Unaudited	FY19 Anticipated
<b>Land Acquisition</b>				
•Personnel	\$126,409	\$17,987	\$18,240	\$ 7,550
•Professional Services	25,000	0	0	0
•Land Acquisition	750,000	600,000	500,000	276,457
•Other Expenditures	<u>21,600</u>	<u>21,000</u>	<u>20,225</u>	<u>0</u>
<b>Total</b>	<b>\$923,009</b>	<b>\$638,987</b>	<b>\$538,465</b>	<b>\$284,007</b>
<b>Conservation Planning /Research</b>				
•Personnel	\$336,333	\$415,786	\$351,120	\$237,070
•Professional Services	100,000	0	0	70,000
•Other Expenditures	<u>109,944</u>	<u>176,176</u>	<u>87,506</u>	<u>27,540</u>
<b>Total</b>	<b>\$546,277</b>	<b>\$591,962</b>	<b>\$438,626</b>	<b>\$334,610</b>
<b>Community Planning /Design</b>				
•Personnel	\$94,127	\$89,060	\$98,800	\$93,620
•Professional Services	0	0	0	0
•Aid to Municipalities	0	0	0	0
•Other Expenditures	<u>23,220</u>	<u>21,920</u>	<u>42,473</u>	<u>21,489</u>
<b>Total</b>	<b>\$117,347</b>	<b>\$110,980</b>	<b>\$141,273</b>	<b>\$115,109</b>
<b>Education and Outreach</b>				
•Personnel	\$52,540	\$58,400	\$73,720	\$67,950
•Other Expenditures	<u>372,621</u>	<u>416,463</u>	<u>106,991</u>	<u>61,721</u>
<b>Total</b>	<b>\$425,161</b>	<b>\$474,863</b>	<b>\$180,711</b>	<b>\$129,671</b>
<b>Total PCF Expenditures</b>	<b>\$2,011,794</b>	<b>\$1,816,792</b>	<b>\$1,299,075</b>	<b>\$863,397</b>

### Staffing Levels

	Authorized	FY2016	FY2017	FY2018	FY2019
Executive	7.5	4.5	5.5	5.5	6
Land Use & Technology	12	5	8	8	8
MIS & GIS	6	6	6	6	6
Regulatory Programs	20.5	11.5	11.5	10.5	11
Science	9	5	4	4	5
Business Services	9	7	6	5	5
Public Programs	2	2	2	2	2
<b>Total</b>	<b>66</b>	<b>41</b>	<b>43</b>	<b>41</b>	<b>43*</b>

\* FY2019 staffing level: 43 full time

## Salary and Wages Expenditures

Current Staff (43 FTEs; 23 unfunded FTEs)	
43 Full time employees	\$3,325,731
Estimated Overtime	1,000
	<u>\$3,326,731</u>

Operating Fund Budget	\$3,031,731
Kirkwood Cohansey Study Budget	26,000
Pinelands Conservation Fund Budget	
Land Acquisition	5,000
Conservation Planning & Research	157,000
Community Planning & Design	62,000
Education & Outreach	45,000
	<u>\$3,326,731</u>

## FY2019 Initiatives

- Completion of the Visitors Center and Katie Garden
- Rules:
  - Propose: Black Run, Kirkwood Cohansey/Water Supply, PDC Enhancement
  - Review Forest and Rural Development Area cluster rules
- Pinelands Infrastructure Trust Fund
- Long Term Economic Monitoring Program – new website/revised indicators/special studies
- Cultural Resources
  - Field School in Shamong with the Archaeological Society of New Jersey
- Barnegat Bay Stormwater Research Project



PINELANDS  
PRESERVATION  
ALLIANCE



New Jersey Conservation  
FOUNDATION

August 2, 2018

Chairman Sean Earlen and Members of the Commission  
The New Jersey Pinelands Commission  
PO Box 359  
New Lisbon, NJ 08064

**Re: Woodmansie mine expansion, 1980-0029.001**

Dear Chairman Earlen, Members of the Commission, and Executive Director Wittenberg

We are writing as a follow-up to our public comment at the Policy and Implementation Committee meeting on July 27 and our July 23 letter regarding the proposed Woodmansie mine expansion in threatened and endangered species habitat in Woodland Township. As we stated, the Pinelands Commission cannot determine that the project meets threatened and endangered species protections without surveying the parcel. Further, the project does not meet restoration standards outlined both in the Comprehensive Management Plan and in the permits continuously issued to Clayton for resource extraction.

The site in Woodland Township is located between Brendan Byrne State Forest to the northwest and Greenwood Wildlife Management Area to the northeast. It is documented habitat for corn snake, Northern pine snake, timber rattlesnake, Pine Barrens treefrog, bobcat, barred owl, bald eagle, and red headed woodpecker. In terms of threatened and endangered species, the applicants surveyed only the 40 acres into which they intended to expand, not the rest of the site that would be impacted by such an expansion. The applicant and the Commission staff now propose a 132 acre expansion without surveying that acreage. An applicant cannot satisfy threatened and endangered species protections in the CMP without a survey of the area on which they intend to develop.

The current resource extraction operation is also in violation of restoration requirements. Both the original resource extraction permit and the Comprehensive Management Plan require continuous restoration of a resource extraction operation, which has not occurred at this mine. The 1981 resource extraction permit states that "[r]estoration shall be a continuous process and each portion of the parcel shall be restored within 2 years after resource extraction is completed for that portion." The Comprehensive Management Plan also requires that restoration requires "tree cover established within three years after resource extraction is completed for each portion of the site mined" N.J.A.C. 7:50-6.69.

A review of aerial photography available on Google Earth shows that no restoration has taken place since at latest 1995, the date of the earliest aerial photograph. This indicates that Clayton is clearly in violation of the CMP and its resource extraction permit. Per N.J.A.C. 7:50-6.64(a), failure to adhere to the terms and conditions of a permit "shall constitute sufficient cause for revocation of the permit." Thus, not only must the Commission deny the expansion request, the Commission is well within its rights to initiate revocation proceedings.

We are also concerned with the concept of a deed restriction if the Commission does approve the project. As Emile DeVito suggested at the July 27, 2018 Policy and Implementation Committee meeting, it would be more beneficial for the public and the Pinelands Commission if the applicant transferred any land which they do not intend to mine to the state or state-approved nonprofit organization. This would prevent any unforeseen complications or attempts to unravel the deed restriction by the current or future landowner.

We urge you to review this situation as a full Commission and determine whether it is compliant with the Comprehensive Management Plan. Please feel free to contact us with any questions.


Sincerely,



Katherine Smith  
Policy Advocate  
Pinelands Preservation Alliance



Ryan Rebozo, Ph.D  
Director of Conservation Science  
Pinelands Preservation Alliance



Emile DeVito, Ph.D  
Director of Science and Stewardship  
New Jersey Conservation Foundation



PHILIP D. MURPHY  
*Governor*

SHEILA Y. OLIVER  
*Lt. Governor*

*State of New Jersey*  
OFFICE OF THE ATTORNEY GENERAL  
DEPARTMENT OF LAW AND PUBLIC SAFETY  
DIVISION OF LAW  
25 MARKET STREET  
PO Box 093  
TRENTON, NJ 08625-0093

GURBIR S. GREWAL  
*Attorney General*

MICHELLE L. MILLER  
*Director*

August 23, 2018

VIA ELECTRONIC MAIL

Nancy Wittenberg, Executive Director  
Pinelands Commission  
PO Box 359  
15 Springfield Road  
New Lisbon, New Jersey 08064

Re: Application # 1990-0868.029  
Bass River State Forest Fire Tower

Dear Executive Director Wittenberg:

Please be advised that the undersigned represents the New Jersey Department of Environmental Protection (NJDEP) in the above-mentioned matter.

On May 8, 2018, NJDEP submitted a Public Development Application (Application) in an effort to restore visibility in all directions from the Bass River State Forest Fire Tower. On June 22, 2018, Pinelands Commission staff on behalf of the Commission's Executive Director issued to NJDEP a Public Development Application Report and Certificate of Appropriateness, which determined that the Application conformed with N.J.A.C. 7:50-4.57 and contained a recommendation that the Pinelands Commission approve the Application subject to certain conditions.

At a subsequent public meeting which took place on August 10, 2018, we understand that the Commission did not approve the determination of the Executive Director or refer the determination of the Executive Director to the Office of Administrative Law. Pursuant to N.J.A.C. 7:50-4.56, if the Commission fails to take any action on an application for public development, "the





August 23, 2018

Page 2

determination of the Executive Director shall be referred to the Office of Administrative Law unless an extension of time for the Commission to act is approved pursuant to N.J.A.C. 7:50-4.4". N.J.A.C. 7:50-4.4 permits extensions upon agreement between the Executive Director and the applicant.

Please be advised that NJDEP would welcome the opportunity at the Commission's next meeting to brief the Commission on the Bass River State Forest Fire Tower proposal and answer any questions that members may have. As such, NJDEP requests an extension of time for the Commission to act for the purposes of allowing such a briefing to take place.

Should this request be denied, NJDEP respectfully requests that the determination of the Executive Director be referred to the Office of Administrative Law in accordance with N.J.A.C. 7:50-4.56.

Please do not hesitate to contact me should you have any questions.

Respectfully submitted,

GURBIR S. GREWAL  
ATTORNEY GENERAL OF NEW JERSEY

By: \_\_\_\_\_

  
Mark Collier  
Deputy Attorney General



RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION

NO. PC4-18-\_\_\_\_\_

TITLE: Approving With Conditions an Application for Public Development and Certificate of Appropriateness (Application Number 1990-0868.029)

Commissioner \_\_\_\_\_ moves and Commissioner \_\_\_\_\_ seconds the motion that:

WHEREAS, the Pinelands Commission has reviewed the Public Development Application Report and Certificate of Appropriateness and the recommendation of the Executive Director that the following application be approved with conditions:

1990-0868.029

Applicant: NJDEP, Division of Parks and Forestry

Municipality: Bass River Township

Management Area: Pinelands Preservation Area District

Date of Report: June 22, 2018

Proposed Development: Tree clearing to restore visibility from the Bass River State Forest fire tower.

WHEREAS, no request for a hearing before the Office of Administrative Law concerning the Executive Director’s recommendation has been received for this application; and

WHEREAS, the Pinelands Commission hereby adopts the Conclusion of the Executive Director for the proposed development; and

WHEREAS, the Pinelands Commission hereby determines that the proposed public development and Certificate of Appropriateness both conform to the standards for approving an application for public development set forth in N.J.A.C. 7:50-4.57 and the standards for approving a Certificate of Appropriateness set forth in N.J.A.C. 7:50-6.156 if the conditions recommended by the Executive Director are imposed; and

WHEREAS, pursuant to N.J.S.A. 13A-5h, no action authorized by the Commission shall have force or effect until ten (10) days, Saturdays, Sundays and public holidays excepted, after a copy of the minutes of the meeting of the Commission has been delivered to the Governor for review, unless prior to expiration of the review period and Governor shall approve same, in which case the action shall become effective upon such approval.

NOW, THEREFORE BE IT RESOLVED that Application Number 1990-0868.029 for public development and a Certificate of Appropriateness is hereby approved subject to the conditions recommended by the Executive Director.

Record of Commission Votes

AYE NAY NP A/R*					AYE NAY NP A/R*					AYE NAY NP A/R*				
Ashmun					Howell					Prickett				
Avery					Jannarone					Quinn				
Barr					Lloyd					Rohan Green				
Chila					Lohbauer					Earlen				
Galletta					Pikolycky									

\*A = Abstained / R = Recused

Adopted at a meeting of the Pinelands Commission Date: \_\_\_\_\_

Nancy Wittenberg  
Executive Director

Sean W. Earlen  
Chairman



State of New Jersey  
THE PINELANDS COMMISSION  
PO Box 359  
New Lisbon, NJ 08064  
(609) 894-7300  
www.nj.gov/pinelands



PHILIP D. MURPHY  
Governor  
SHEILA Y. OLIVER  
Lt. Governor

General Information: [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov)  
Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

SEAN W. EARLEN  
Chairman  
NANCY WITTENBERG  
Executive Director

June 22, 2018

New Jersey Department of Environmental Protection  
Division of Parks and Forestry  
New Jersey State Forest Fire Service  
501 East State Street  
P.O. Box 420  
Mail Code 501-04  
Trenton, NJ 08625-0420

Re: Application # 1990-0868.029  
Bass River State Forest Fire Tower  
Block 48, Lots 1 & 2  
Block 49, Lot 12  
Bass River Township

Dear Applicant:

The Commission staff has completed its review of this application for tree clearing to restore visibility from the Bass River State Forest fire tower. Enclosed is a copy of a Public Development Application Report and Certificate of Appropriateness. On behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission approve the application with conditions at its July 13, 2018 meeting.

Any interested party may appeal this recommendation in accordance with the appeal procedure attached to this document. If no appeal is received, the Pinelands Commission may either approve the recommendation of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.

Any persons that provided written and/or verbal public comments regarding this application and either a mailing address or an email address are receiving a copy of this recommendation.

Public comment on this application raised questions regarding the future use of fire towers in the Pinelands Area and identified alternatives to tree clearing for fire towers. Our staff will contact NJDEP to initiate discussions on this matter.



Please do not hesitate to contact me with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. M. Horner', with a long horizontal flourish extending to the right.

Charles M. Horner, P.P.

Director of Regulatory Programs

Encls: Appeal Procedure  
Public Comments

c: Secretary, Bass River Township Planning Board (via email)  
Bass River Township Construction Code Official (via email)  
Secretary, Burlington County Planning Board (via email)  
Jeremy Webber (via email)  
Sally Bourguignon (via email)  
Timothy MacDonald (via email)  
Karl Swanseen (via email)  
Carol Bitzberger (via email)  
Andrew and Rosemary Anderson (via email)  
Eileen Brower (via email)  
Robyn and Jeffrey Firth (via email)  
Sonny Basore (via email)  
Leslie & Earl Brower (via email)  
Steve Lange (via email)  
Lee Ann Blake (via email)  
Sean Wilson (via email)  
Chad Clarke (via email)  
Samantha Ryan (via email)  
Dianne Worthington (via email)  
Benjamin Brower (via email)  
Katie Jaeckel (via email)  
Lindsey Brower (via email)  
Michael & Kristie Masucci (via email)  
Christopher Brower (via email)  
Arthur Albine (via email)  
Bill Brash (via email)  
Amanda Somes, Bass River Township Clerk (via email)  
Jarrod Miller (via email)  
Edward & Ann Marie Hoffman (via email)  
Todd Tally (via email)  
Christine Tally (via email)  
Nancy Reid (via email)  
John DiGiacomo  
Richard Buzby, Chief of Little Egg Harbor Township Police Department  
Frank Runzol, Acting Fire Chief of Little Egg Harbor Township



State of New Jersey  
THE PINELANDS COMMISSION  
PO Box 359  
NEW LISBON, NJ 08064  
(609) 894-7300  
www.nj.gov/pinelands



PHILIP D. MURPHY  
Governor  
SHEILA Y. OLIVER  
Lt. Governor

General Information: [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov)  
Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

SEAN W. EARLEN  
Chairman  
NANCY WITTENBERG  
Executive Director

**PUBLIC DEVELOPMENT APPLICATION REPORT AND CERTIFICATE OF  
APPROPRIATENESS**

June 22, 2018

New Jersey Department of Environmental Protection  
Division of Parks and Forestry  
New Jersey State Forest Fire Service  
501 East State Street  
P.O. Box 420  
Mail Code 501-04  
Trenton, NJ 08625-0420

Application No.: 1990-0868.029  
Bass River State Forest Fire Tower  
Block 48, Lots 1 & 2  
Block 49, Lot 12  
Bass River Township

This application proposes clearing of 16.4 acres of trees from the above referenced 436 acre parcel located in Bass River State Forest in Bass River Township. The 86 foot tall Bass River State Forest fire tower is located on the parcel. The purpose of the tree clearing is to restore visibility in all directions from the fire tower.

The applicant represents that the fire tower covers an area of visibility of approximately 200 square miles for detecting and suppressing wildfire. The applicant further represents that a public safety threat is currently posed to communities such as New Gretna, Ocean Acres, Smithville and Tuckerton due to obstructed views from the fire tower.

The 16.4 acres proposed for tree clearing are comprised of seven separate areas surrounding the fire tower. All trees within the seven areas will be removed. The seven areas range in size from one acre to four acres. All seven areas are located within approximately 1,400 linear feet of the fire tower and contain trees in excess of 90 feet tall.

An application for tree clearing of 2.7 acres on Block 48, Lot 1 and Block 49, Lot 12 in Bass River Township was approved by the Commission in 1995 (App. No. 1995-1054.001). The clearing occurred in Bass River State Forest, immediately adjacent to the fire tower.

## **STANDARDS**

The Commission staff has reviewed the proposed tree clearing for consistency with all standards of the Pinelands Comprehensive Management Plan (CMP). The following reviews the CMP standards that are relevant to this application:

### **Land Use (N.J.A.C. 7:50-5.22)**

The parcel is located in the Pinelands Preservation Area District. The existing fire tower is a permitted land use as an accessory structure to Bass River State Forest. The CMP allows the proposed clearing of trees, with conditions, provided the clearing is necessary to accommodate a permitted land use.

### **Vegetation Management Standards (N.J.A.C. 7:50-6.23)**

The CMP (N.J.A.C. 7:50-6.23(a)) requires that the proposed tree clearing be limited to that which is necessary to accommodate the use of the fire tower. Based upon a Commission staff site inspection, including observation from the fire tower, the proposed tree clearing is limited to that which is necessary to accommodate the use of the fire tower. The CMP (N.J.A.C. 7:50-6.23(b)) also requires that, where practical, all clearing activities associated with a permitted use shall avoid wooded areas. The applicant has demonstrated that it is not practical to avoid clearing the wooded areas.

After the proposed tree clearing, the application proposes site preparation of the 16.4 acres by drum chopping, wood disking. The application has been amended to eliminate the proposed use of herbicides.

After site preparation, the application proposes replanting of trees in the 16.4 acres proposed to be cleared. Native tree seedlings will be planted. In addition, Loblolly pine, a non-native species previously existing in the cleared areas, will be planted. White pine, a non-native species previously existing in the cleared areas, will not be replanted due to its fast rate of growth.

### **Threatened and Endangered Species Standards (N.J.A.C. 7:50-6.27 & 6.33)**

Available information identifies known sightings of threatened and endangered (T&E) animal and plant species in the vicinity of the proposed tree clearing. The Commission staff reviewed the proposed tree clearing to determine whether it was designed to avoid irreversible adverse impacts on habitats that are critical to the survival of any local populations of T&E animal species and irreversible adverse impacts on the survival of any local populations of T&E plant species. The New Jersey Department of Environmental Protection Endangered and Nongame Species Program staff also reviewed the proposed tree clearing to determine impacts on T&E animal and plant species.

To avoid potential irreversible adverse impacts on any T&E avian species, prior to undertaking the proposed tree clearing, the applicant proposes to conduct visual surveys to identify and mark any trees containing cavities or nests for potential T&E avian species. Any trees containing potential T&E avian species cavities or nests will be marked and left standing.

To avoid any irreversible adverse impacts on habitats that are critical to the survival of any local populations of T&E snake species, the applicant proposes to utilize only low ground pressure equipment for any tree clearing, drum chopping or wood disking undertaken between November 1 and April 30.

The proposed tree clearing is designed to avoid irreversible adverse impacts on habitats that are critical

to the survival of any local populations of T&E animal species.

The applicant has demonstrated that no suitable habitat exists for any T&E plant species of concern.

Cultural Resource Standards (N.J.A.C. 7:50-6.151)

The 16.4 acres proposed for tree clearing are part of pine plantations established in Bass River State Forest between the years 1933 and 1942 by the Civilian Conservation Corps (CCC). The New Jersey Historic Preservation Office (NJHPO) determined in 2004 that Bass River State Forest was eligible for designation on the New Jersey and National Register of Historic Places as the (BRFHD). The NJHPO made this determination of eligibility based upon the Bass River State Forest's association with Franklin D. Roosevelt's New Deal CCC program. Approximately 4,500 acres of trees were planted in Bass River State Forest by the CCC.

In accordance with the CMP (N.J.A.C. 7:50-6.154), the Commission staff has determined that the trees proposed for removal constitute a significant historic resource. The CMP (N.J.A.C. 7:50-6.156) requires that a Certificate of Appropriateness be issued by the Commission that identifies the required treatment of significant historic resources from among three alternatives: preservation of the resource in place, if possible; preservation of the resource at another location, if preservation in place is not possible; or recordation.

Based upon review of the application, the Commission staff has determined that preservation in place is not technically feasible because obscuring the line of sight from the Bass River Fire Tower will result in a risk to public safety.

The Commission staff has determined that recordation is the appropriate treatment of the significant historic resource. This Certificate of Appropriateness requires recordation of the significant historic resource in accordance with the CMP (N.J.A.C. 7:50-6.156(c)). Recordation will be accomplished through a combination of photo-documentation prior to and subsequent to tree removal, GIS mapping, updating of known documentary records on CCC planted stands, and, if appropriate, interpretive signage.

No disturbance will occur greater than six inches below the ground surface. Based upon its review, the Commission staff determined that, since the proposed tree clearing will result in minimal ground disturbance, a cultural resource survey is not required.

The Forest Fire Service represented that NJHPO recommended planting of tree seedlings that would maintain the character of the historic pine plantations. The applicant proposes to replant the area after clearing with native tree seedlings and non-native species that existed in the previous plantation, except White pine, which will not be replanted due to its fast rate of growth.

**PUBLIC COMMENT**

The applicant has provided the requisite public notices. Notice to required land owners within 200 feet of the 16.4 acres proposed for tree clearing was completed on May 9, 2018. Newspaper public notice was completed on May 11, 2018. The application was designated as complete on the Commission's website on May 29, 2018. The Commission's public comment period closed on June 8, 2018. The Commission received verbal comments from 11 individuals at its June 8, 2018 meeting and 31 written comments (attached) regarding this application.

- Verbal Commenter 1: Tom Dougherty: The commenter opposes the proposed tree clearing because they use the trails going through the pine plantation where the existing forest fire tower and proposed clearing is located. The commenter supports the use of alternative forest fire detection technologies, such as drones. The commenter also supports finding funding for a new tower.
- Verbal Commenter 2: Richard Buzby, Chief of Little Egg Harbor Township Police Department and Office of Emergency Management: The commenter supports the proposed tree clearing. The commenter indicated that funding is a problem for raising the tower. The commenter further indicated that new forest fire detection technologies may have a role in the future. The commenter indicated that the pine plantation was planted, and the forest fire tower was built, in memory of past firefighters who died in the line of duty fighting wildfires in the Pinelands. This verbal commenter submitted written material(s) at the Commission meeting. That material(s) is attached to this Report as Document A.
- Verbal Commenter 3: Carl Swanseen: The commenter opposes the tree clearing and supports the use of alternative technologies, such as cameras on towers and camera monitoring systems for wildfire detection instead of a manned fire tower. The commenter also favored replacing the existing tower with a 120 foot high tower. The commenter indicated that the acreage proposed for tree clearing is the “gateway” to the community. The commenter also indicated that the life expectancy of the existing tower may be 10 additional years. This verbal commenter submitted written material(s) at the Commission meeting. That material(s) is attached to this Report as Documents B and F.
- Verbal Commenter 4: Bill Brash: The commenter is in support of the tree clearing. The commenter indicated that current drone technology is not compatible with aerial assets necessary to put out forest fires. The commenter further indicated that a fire observer in a tower is vital in providing information to others during a forest fire. This verbal commenter submitted written material(s) at the Commission meeting. That material(s) is attached to this Report as Document C.
- Verbal Commenter 5: Carol Bitzberger: The commenter opposes the tree clearing. The commenter noted that the tower is not manned at night like a continuous video camera feed could be.
- Verbal Commenter 6: Rickie Lasowitz: The commenter opposes the proposed tree clearing and noted the aged condition of the tower. The commenter indicated that the Pinelands is a global asset. The commenter indicated that replacing the tower would decrease the acre of trees to be destroyed. The commenter supports the use of alternative technologies, such as cameras on towers, for wildfire detection. The commenter also opposes herbicide use in the State Forest. The commenter referenced a 1927 State Forest Plan for Bass River and noted that the State Forest is pro-timber industry. This verbal commenter submitted written material(s) at the Commission meeting. That material(s) is attached to this Report as Documents D and G.



- Verbal Commenter 7: Frank Runzol, Acting Fire Chief of Little Egg Harbor Township: The commenter supports the proposed tree clearing for the fire tower. The commenter indicated that, to date, alternate technologies don't work. This verbal commenter submitted written material(s) at the Commission meeting. That material(s) is attached to this Report as Document E.
- Verbal Commenter 8: April Walsh: The commenter opposes the proposed tree clearing for the forest fire tower. The commenter indicated that the fire tower constructed in 1939 is failing and poses a safety hazard to personnel using it.
- Verbal Commenter 9: Cathy Gardener: The commenter opposes the proposed tree clearing. The commenter indicated that they volunteer to lead hikes in the State Parks and that this forest is invaluable for public recreation.
- Verbal Commenter 10: John Ryan: The commenter opposes the proposed tree clearing and the resulting habitat loss. The commenter indicated that the recent State Forest clearing at Lake Absegami and at Wharton's Harrisville Lake are examples of overly drastic clearing used by the State and the commenter does not want that repeated at the fire tower. The commenter indicated there are less intrusive alternatives.
- Verbal Commenter 11: S. Anderson: The commenter opposes the tree clearing.

### **Written Comments**

- Written Commenter 1: Sally Bourguignon: The commenter opposes the proposed tree clearing for the forest fire tower. The commenter suggests topping of the concerned trees. The commenter is concerned about impacts to wildlife. The commenter favors funding a new tower or raising the existing tower.
- Written Commenter 2: Timothy MacDonald: The commenter opposes the proposed tree clearing for the fire tower. The commenter supports alternatives. The commenter requests that the Forest Service provide a list of alternatives that they have considered. The commenter indicated the existing tower has exceeded its life expectancy.
- Written Commenter 3: Karl Swanseen (dated 4/18): The commenter believes that the trees proposed for clearing, magnificent old and majestic pines, are historic plantations and living monuments. The commenter indicated that the forest is enjoyed by visitors to the forest. The commenter believes that the proposed tree clearing will be highly visible. The commenter supports the use of alternative technologies for wildfire detection.
- Written Commenter 4: Karl Swanseen (dated 6/8/18): The commenter indicated that the recent forest clearing by the State at Harrisville Lake was much larger than necessary. The commenter believes that the trees are part of historic pine plantations. The commenter indicated that the existing tower is beyond its expected useful life. The commenter supports construction of a new tower

or the use of alternative technologies for wildfire detection. The commenter believes that alternate technologies would allow more accurate tracking of both firefighters and a forest fire. The commenter poses numerous questions such as why did the Forest Fire Service originally propose to clear trees from 82 acres, the cost of clearing 82 acres, why the Forest Fire Service did not consider a smaller tower in a more appropriate location and why undertake tree clearing if the life expectancy of the tower has passed. The commenter also questions the economic impact of the tree clearing on camping and the recreational economies.

Written Commenter 5:

John DiGiacomo: The commenter opposes the tree clearing. The commenter enjoys the scenic beauty of the trees. The commenter is concerned about impacts to wetlands. The commenter believes the existing fire tower is outdated. The commenter supports the use of camera systems to monitor for forest fires.

Written Commenter 6:

Carol Bitzberger (Bass River Beautification Club): The commenter opposes the proposed tree clearing. The comment appreciates the scenic beauty of the forest. The commenter indicated that the trees proposed for removal are part of an historic plantation. The commenter believes there are alternatives to clearing the trees. The commenter supports the use of alternative technologies, such as cameras.

Written Commenter 7:

Andrew and Rosemary Anderson: The commenters oppose the proposed tree clearing. The commenters are concerned about impact of the proposed tree removal on those that visit the forest and its impact on wildlife. The commenter supports alternative approaches such as replacing the existing tower with a taller tower and the use of alternative technologies, such as cameras on towers and camera monitoring systems, for wildfire detection.

Written Commenter 8:

Todd Tally: The commenter opposes the proposed tree clearing. The commenter supports the use of alternative technologies for wildfire detection. The commenter believes that the existing tower is beyond its expected service life. The commenter believes that the existing trees have historical significance.

Written Commenter 9:

Christine Tally: The commenter opposes the proposed tree clearing. The commenter believes the existing trees are a beautiful and unique piece of nature. The commenter supports the use of alternative technologies for wildfire detection. The commenter questions the cost of the proposed tree clearing, the remaining life span of the tower and the maintenance costs for the tower.

Written Commenter 10:

Eileen Brower: The commenter opposes the proposed tree clearing. The commenter supports the use of alternative technologies for wildfire detection.

Written Commenter 11:

Robyn Firth: The commenter opposes the proposed tree clearing. The commenter believes that the forest is historical and beautiful. The

commenter is concerned with the impact of proposed tree removal on those that visit the forest. The commenter supports the use of alternative technologies for wildfire detection. The commenter believes that the existing tower is beyond its expected service life.

- Written Commenter 12: Jeffery Firth: The commenter opposes the proposed tree clearing. The commenter believes that the forest is historical and beautiful. The commenter is concerned with the impact of proposed tree removal on those that visit the forest. The commenter supports the use of alternative technologies for wildfire detection. The commenter believes that the existing tower is beyond its expected service life.
- Written Commenter 13: Sonny Basore: The commenter opposes the proposed tree clearing. The commenter supports the use of alternative technologies for wildfire detection. The commenter believes that the existing tower is beyond its expected service life. The commenter believes that the existing trees have historical significance.
- Written Commenter 14: Leslie and Earl Brower: The commenters oppose the proposed tree clearing. The commenters believe that the forest is historical and beautiful. The commenter is concerned with the impact of proposed tree removal on those that visit the forest. The commenter supports the use of alternative technologies for wildfire detection. The commenter believes that the existing tower is beyond its expected service life.
- Written Commenter 15: Steve Lange: The commenter opposes the proposed tree clearing. The commenter supports the use of alternative technologies for wildfire detection. The commenter believes that clearing the forest to save the forest is counterproductive.
- Written Commenter 16: Lee-Ann Blake: The commenter opposes the proposed tree clearing. The commenter supports the use of alternative technologies for wildfire detection. The commenter believes the existing trees constitute beautiful and unique woodland. The commenter believes the existing tower is beyond its expected service life. The commenter is concerned with costly upkeep and ultimate replacement of the existing tower. The commenter believes the forest is a testament to the heritage and history of the area.
- Written Commenter 17: Sean Wilson: The commenter opposes the proposed tree clearing. The commenter supports the use of alternative technologies for wildfire detection. The commenter believes the existing trees are a beautiful and unique woodland. The commenter believes the existing tower is beyond its expected service life. The commenter is concerned with costly upkeep and ultimate replacement of the existing tower. The commenter believes the forest is a testament to the heritage and history of the area.
- Written Commenter 18: Chad Clarke: The commenter opposes the proposed tree clearing. The commenter supports the use of alternative technologies for wildfire detection. The commenter believes the existing trees are a beautiful and

unique woodland. The commenter believes the existing tower is beyond its expected service life. The commenter is concerned with costly upkeep and ultimate replacement of the existing tower. The commenter believes the forest is a testament to the heritage and history of the area.

Written Commenter 19:

Samantha Ryan: The commenter opposes the proposed tree clearing. The commenter appreciates the natural beauty of the area. The commenter supports the use of alternative technologies for wildfire detection. The commenter opposes forest clear cutting. The commenter favors replacing the existing fire tower.

Written Commenter 20:

D. Worthington: The commenter opposes the proposed tree clearing. The commenter is concerned with the impact of proposed tree removal on those that visit the forest. The commenter hopes an alternative solution can be identified.

Written Commenter 21:

Benjamin Brower: The commenter opposes the proposed tree clearing. The commenter appreciates the beauty of the white pine plantations and that the tree clearing will destroy history. The commenter supports the use of alternative technologies for wildfire detection. The commenter supports heightening the existing tower. The commenter is concerned with the impact of proposed tree removal on those that visit the forest. The commenter appreciates the history of the tree plantations that were planted by the Civilian Conservation Corps in the 1930's.

Written Commenter 22:

Katie Jaeckel: The commenter opposes the proposed tree clearing. The commenter supports the use of alternative technologies for wildfire detection. The commenter believes the existing trees are beautiful. The commenter believes the existing tower is antiquated. The commenter supports a new and higher fire tower.

Written Commenter 23:

Lindsey Brower-Hagar: The commenter opposes the proposed tree clearing. The commenter supports the use of alternative technologies for wildfire detection. The commenter appreciates the splendor of the existing trails through the trees.

Written Commenter 24:

Michael and Kristie Masucci: The commenters oppose the proposed tree clearing. The commenters live adjacent to the fire tower and are concerned with the visual impact of the tree clearing on their parcel. The commenters are concerned with the impact of herbicide use on their onsite potable water well.

Written Commenter 25:

Christopher Brower: The commenter opposes the proposed tree clearing. The commenter lives down the street from the proposed clear cut. The commenter believes that the forest has significant historical and aesthetic value to the community. The commenter believes that existing trails will be devastated by the clear cutting. The commenter supports other ways for the Forest Fire Service to achieve its goal.

- Written Commenter 26: Arthur Abline, Manchester Township Fire Safety Council Chairman: The Manchester Township Fire Safety Council supports the proposed tree clearing. The commenter believes that the public safety benefits of an unobstructed view of the area have obvious health and safety advantages. The commenter believes that the white pines were originally planted for harvesting. The commenter believes that a manned fire tower serves the vital function of coordinating resources during a forest fire.
- Written Commenter 27: William F. Brash, Jr, President New Jersey Fire Safety Council: The New Jersey Fire Safety Council supports the proposed tree clearing. The commenter believes that the public safety benefits of an unobstructed view of the area have obvious health and safety advantages. The commenter believes that the white pines were originally planted for harvesting. The commenter believes that a manned fire tower serves the vital function of coordinating resources during a forest fire.
- Written Commenter 28: Nancy Reid, Chair, Firewise Committee, Horizon at Barnegat Community: The Horizon at Barnegat Firewise Committee supports the proposed tree clearing. The commenter believes that the fire tower provides the first line of defense for detection of wildfires. The commenter believes that a manned fire tower serves the vital function of coordinating resources during a forest fire. The commenter believes that the concerned trees are not native trees.
- Written Commenter 29: Bass River Board of Commissioners: The Bass River Board of Commissioners opposes the proposed tree clearing. At its meeting of April 2, 2018, the Bass River Board of Governors adopted Resolution 2018-36 opposing the proposed clearing of trees and the associated use of herbicides due to the risk posed to residents of Bass River Township and the unsightly general appearance.
- Written Commenter 30: Jarrod Miller: The commenter opposes the proposed tree clearing. The commenter believes the Pine Barrens are a precious asset. The commenter believes that the forest is historical and beautiful to those who hike and walk through the area. The commenter supports the use of alternative technologies for wildfire detection. The commenter is concerned with the impact of the tree clearing on wildlife.
- Written Commenter 31: Ann Marie Hoffman: The commenter opposes the proposed tree clearing. The commenter believes the clear cutting would destroy the white pine plantations planted by the Civilian Conservation Corps. The commenter believes that the tree removal would destroy a beautiful portion of a trail. The commenter believes the existing tower is antiquated. The commenter supports the use of alternative technologies for wildfire detection. The commenter supports a higher replacement tower.

Staff Response to Verbal and Written Comments:

The Commission staff appreciates the interest in the Pinelands Area of all members of the public who offered comments regarding the application.

The Commission staff reviews proposed development, including tree clearing, in accordance with the regulations contained in the CMP. The standards addressed in this Report are the CMP regulations applicable to the proposed tree clearing.

If proposed development, including tree clearing, meets the regulations contained in the CMP, the CMP does not require an applicant to identify and consider alternative approaches (e.g. alternative technologies) to proposed development, including tree clearing.

As discussed in this Report, the CMP limits clearing to that which is necessary to accommodate the existing fire tower. The CMP also requires that, where practical, all clearing activities associated with the development shall avoid forested areas. The Commission staff has concluded that the proposed tree removal is limited to that which is necessary to accommodate the use of the fire tower. The Commission staff has also concluded that it is not practical for the proposed clearing to avoid wooded areas.

There are no wetlands on or within 300 feet of the proposed clearing.

The proposed tree clearing is consistent with the threatened and endangered species protection standards of the CMP.

The trees proposed for removal constitute a significant historic resource. The CMP requires that a Certificate of Appropriateness be issued by the Commission that identifies the required treatment of significant historic resource. Based upon review of the application, the Commission staff has determined that preservation in place is not technically feasible because obscuring the line of sight from the Bass River Fire Tower will result in a risk to public safety. The Commission staff has determined that recordation is the appropriate treatment of the significant historic resource. Recordation will be accomplished through a combination of photo-documentation prior to and subsequent to tree removal, GIS mapping, updating of known documentary records on CCC planted stands, and, if appropriate, interpretive signage.

The CMP does not directly regulate the visual appearance of the cleared acreage. The applicant proposes the replanting of the cleared acreage with tree seedlings.

The CMP does not regulate the structural integrity of either existing or proposed structures, such as the fire tower. However, the Commission staff does conduct “due diligence” in its review of applications. The

existing forest fire tower is still in use.

As indicated in this Report, the applicant has amended the application to eliminate the proposed use of herbicides.

### **CONDITIONS**

1. Except as modified below, the proposed tree clearing shall adhere to the "Proposal for Silvicultural Activity on State Forest and Park lands, New Jersey State Forest Fire Service" submitted to the Pinelands Commission and dated February 13, 2018.
2. Prior to any tree clearing, the applicant shall obtain any other necessary permits and approvals.
3. To avoid irreversible adverse impacts on habitats that are critical to the survival of any local populations of T&E avian species, prior to any tree clearing, the applicant shall complete a visual survey of the above referenced 16.4 acres proposed for tree clearing for potential avian T&E species cavities or nests. Any trees containing potential avian T&E species cavities or nests shall be marked and left standing.
4. To avoid irreversible adverse impacts on habitats that are critical to the survival of any local populations of T&E snake species, only low ground pressure equipment shall be used for any tree clearing undertaken between November 1 and April 30.
5. Prior to any clearing of the 16.4 acres, a copy of the cultural resource recordation report shall be submitted to the Commission staff. Recordation will be accomplished through a combination of photo-documentation prior to and subsequent to tree removal, GIS mapping, updating of known forestry documentary records on CCC planted stands, and, if appropriate, installation of interpretive signage.

### **CONCLUSION**

As the proposed development conforms to the standards set forth in N.J.A.C. 7:50-4.57, it is recommended that the Pinelands Commission **APPROVE** the proposed tree clearing subject to the above conditions.



Philip D. Murphy  
Governor

Sheila Y. Oliver  
Lt. Governor

## State of New Jersey

THE PINELANDS COMMISSION

PO Box 359

NEW LISBON, NJ 08064

(609) 894-7300

[www.nj.gov/pinelands](http://www.nj.gov/pinelands)



Sean W. Earlen  
Chairman

Nancy Wittenberg  
Executive Director

General Information: [Info@njpines.state.nj.us](mailto:Info@njpines.state.nj.us)  
Application Specific Information: [AppInfo@njpines.state.nj.us](mailto:AppInfo@njpines.state.nj.us)

### **PINELANDS COMMISSION** **APPEAL PROCEDURE**

The Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal any determination made by the Executive Director to the Commission in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. Any such appeal must be made in writing to the Commission and received by the Commission's office no later than 5:00 PM on July 10, 2018. The appeal must include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. the date on which the determination to be appealed was made;
4. a brief statement of the basis for the appeal; and
5. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

Within 15 days following receipt of a notice of valid appeal, the Executive Director shall initiate the procedures for assignment of an Administrative Law Judge to preside at the hearing pursuant to the Administrative Procedures Act, N.J.S.A. 52:14B-1 et seq., and the procedures established by the Office of Administrative Law. The time, date and location of such hearing shall be designated by the Office of Administrative Law.





RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION

NO. PC4-18-\_\_\_\_\_

TITLE: Approving With Conditions an Application for Public Development (Application Number 1983-9146.005)

Commissioner \_\_\_\_\_ moves and Commissioner \_\_\_\_\_ seconds the motion that:

WHEREAS, the Pinelands Commission has reviewed the Public Development Application Report and the recommendation of the Executive Director that the following application for Public Development be approved with conditions:

1983-9146.005

Applicant: Pemberton Township

Municipality: Pemberton Township

Management Area: Pinelands Regional Growth Area

Date of Report: August 23, 2018

Proposed Development: Demolition of an existing 40,680 square foot commercial shopping center, 50 years old or older.

WHEREAS, no request for a hearing before the Office of Administrative Law concerning the Executive Director’s recommendation has been received for this application; and

WHEREAS, the Pinelands Commission hereby adopts the Conclusion of the Executive Director for the proposed development; and

WHEREAS, the Pinelands Commission hereby determines that the proposed public development conforms to the standards for approving an application for public development set forth in N.J.A.C. 7:50-4.57 if the conditions recommended by the Executive Director are imposed; and

WHEREAS, pursuant to N.J.S.A. 13A-5h, no action authorized by the Commission shall have force or effect until ten (10) days, Saturdays, Sundays and public holidays excepted, after a copy of the minutes of the meeting of the Commission has been delivered to the Governor for review, unless prior to expiration of the review period and Governor shall approve same, in which case the action shall become effective upon such approval.

NOW, THEREFORE BE IT RESOLVED that Application Number 1983-9146.005 for public development is hereby approved subject to the conditions recommended by the Executive Director.

Record of Commission Votes

AYE NAY NP A/R*					AYE NAY NP A/R*					AYE NAY NP A/R*				
Ashmun					Howell					Prickett				
Avery					Jannarone					Quinn				
Barr					Lloyd					Rohan Green				
Chila					Lohbauer					Earlen				
Galletta					Pikolycky									

\*A = Abstained / R = Recused

Adopted at a meeting of the Pinelands Commission Date: \_\_\_\_\_

Nancy Wittenberg  
Executive Director

Sean W. Earlen  
Chairman



PHILIP D. MURPHY  
Governor  
SHEILA Y. OLIVER  
Lt. Governor

State of New Jersey  
THE PINELANDS COMMISSION  
PO Box 359  
NEW LISBON, NJ 08064  
(609) 894-7300  
www.nj.gov/pinlands



SEAN W. EARLEN  
Chairman  
NANCY WITTENBERG  
Executive Director

General Information: [Info@pinlands.nj.gov](mailto:Info@pinlands.nj.gov)  
Application Specific Information: [AppInfo@pinlands.nj.gov](mailto:AppInfo@pinlands.nj.gov)

August 23, 2018

David Benedetti, PP AICP (via email)  
Pemberton Township  
500 Pemberton Browns Mills Road  
Pemberton, NJ 08068

Re: Application # 1983-9146.005  
Block 775, Lot 19  
Pemberton Township

Dear Mr. Benedetti:

The Commission staff has completed its review of this application for demolition of an existing 40,680 square foot commercial shopping center. Enclosed is a copy of a Public Development Application Report. On behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission approve the application with conditions at its September 14, 2018 meeting.

Any interested party may appeal this recommendation in accordance with the appeal procedure attached to this document. If no appeal is received, the Pinelands Commission may either approve the recommendation of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.

Prior to any development, the applicant shall obtain any other necessary permits and approvals.

Sincerely,

Charles M. Horner, P.P.  
Director of Regulatory Programs

Enc: Appeal Procedure

c: Secretary, Pemberton Township Planning Board (via email)  
Pemberton Township Construction Code Official (via email)  
Pemberton Township Environmental Commission (via email)  
Secretary, Burlington County Planning Board (via email)





PHILIP D. MURPHY  
Governor  
SHEILA Y. OLIVER  
Lt. Governor

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SEAN W. EARLEN  
Chairman  
NANCY WITTENBERG  
Executive Director

General Information: [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov)  
Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

## **PUBLIC DEVELOPMENT APPLICATION REPORT**

August 23, 2018

David Benedetti, PP AICP (via email)  
Pemberton Township  
500 Pemberton Browns Mills Road  
Pemberton, NJ 08068

Application No.: 1983-9146.005  
Block 775, Lot 19  
Pemberton Township

This application proposes demolition of an existing 40,680 square foot commercial shopping center, 50 years old or older, located on the above referenced 6.4 acre parcel in Pemberton Township.

The submitted Pinelands application form represents that the parcel is owned by Pemberton Township. The Township has provided a copy of a Final Judgement approved by the Superior Court of Burlington County determining that the Township has duly exercised its powers of eminent domain to acquire the parcel.

### **STANDARDS**

The Commission staff has reviewed the proposed demolition for consistency with all standards of the Pinelands Comprehensive Management Plan (CMP). The following reviews the CMP standards that are relevant to this application:

#### **Land Use (N.J.A.C. 7:50-5.28)**

The parcel is located in a Pinelands Regional Growth Area. The demolition of a building is permitted in the Pinelands Area.

#### **Cultural Resource Standards (N.J.A.C. 7:50-6.151)**

The Commission staff reviewed the application for evidence of cultural resources on the parcel. Based upon the lack of potential for significant cultural resources on the parcel, a cultural resource survey was not required.

### **PUBLIC COMMENT**

The applicant has provided the requisite public notices. Notice to required land owners within 200 feet

of the above referenced parcel was completed on July 27, 2018. Newspaper public notice was completed on July 31, 2018. The application was designated as complete on the Commission's website on July 31, 2018. The Commission's public comment period for this application closed on August 10, 2018. No public comment was submitted to the Commission regarding this application.

### **CONDITIONS**

1. Disposal of any construction debris or excess fill may only occur at an appropriately licensed facility.
2. This application is for the proposed demolition only. Any future development of the parcel shall be governed by Pemberton Township's certified land use ordinance and the CMP.
3. Prior to any demolition, the applicant shall obtain any other necessary permits and approvals.

### **CONCLUSION**

As the proposed demolition conforms to the standards set forth in N.J.A.C. 7:50-4.57, it is recommended that the Pinelands Commission **APPROVE** the proposed demolition subject to the above conditions.



Philip D. Murphy  
Governor

Sheila Y. Oliver  
Lt. Governor

State of New Jersey  
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General Information: [Info@njpines.state.nj.us](mailto:Info@njpines.state.nj.us)  
Application Specific Information: [AppInfo@njpines.state.nj.us](mailto:AppInfo@njpines.state.nj.us)



Sean W. Earlen  
Chairman

Nancy Wittenberg  
Executive Director

## **PINELANDS COMMISSION** **APPEAL PROCEDURE**

The Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal any determination made by the Executive Director to the Commission in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. Any such appeal must be made in writing to the Commission and received at the Commission office no later than 4:00 PM on September 11, 2018 and include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. the date on which the determination to be appealed was made;
4. a brief statement of the basis for the appeal; and
5. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

Within 15 days following receipt of a notice of valid appeal, the Executive Director shall initiate the procedures for assignment of an Administrative Law Judge to preside at the hearing pursuant to the Administrative Procedures Act, N.J.S.A. 52:14B-1 et seq., and the procedures established by the Office of Administrative Law. The time, date and location of such hearing shall be designated by the Office of Administrative Law.



RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION

NO. PC4-18-\_\_\_\_\_

TITLE: Approving With Conditions an Application for Public Development (Application Number 1993-0465.003)

Commissioner \_\_\_\_\_ moves and Commissioner \_\_\_\_\_ seconds the motion that:

WHEREAS, the Pinelands Commission has reviewed the Public Development Application Report and the recommendation of the Executive Director that the following application for Public Development be approved with conditions:

1993-0465.003  
Applicant: Waterford Township  
Municipality: Waterford Township  
Management Area: Pinelands Regional Growth Area  
Date of Report: August 23, 2018  
Proposed Development: Construction of recreational facilities at the George W. Ritter Recreation Complex.

WHEREAS, no request for a hearing before the Office of Administrative Law concerning the Executive Director’s recommendation has been received for this application; and

WHEREAS, the Pinelands Commission hereby adopts the Conclusion of the Executive Director for the proposed development; and

WHEREAS, the Pinelands Commission hereby determines that the proposed public development conforms to the standards for approving an application for public development set forth in N.J.A.C. 7:50-4.57 if the conditions recommended by the Executive Director are imposed; and

WHEREAS, pursuant to N.J.S.A. 13A-5h, no action authorized by the Commission shall have force or effect until ten (10) days, Saturdays, Sundays and public holidays excepted, after a copy of the minutes of the meeting of the Commission has been delivered to the Governor for review, unless prior to expiration of the review period and Governor shall approve same, in which case the action shall become effective upon such approval.

NOW, THEREFORE BE IT RESOLVED that Application Number 1993-0465.003 for public development is hereby approved subject to the conditions recommended by the Executive Director.

Record of Commission Votes

AYE NAY NP A/R*					AYE NAY NP A/R*					AYE NAY NP A/R*				
Ashmun					Howell					Prickett				
Avery					Jannarone					Quinn				
Barr					Lloyd					Rohan Green				
Chila					Lohbauer					Earlen				
Galletta					Pikolycky									

\*A = Abstained / R = Recused

Adopted at a meeting of the Pinelands Commission Date: \_\_\_\_\_

Nancy Wittenberg  
Executive Director

Sean W. Earlen  
Chairman



PHILIP D. MURPHY  
Governor  
SHEILA Y. OLIVER  
Lt. Governor

State of New Jersey  
THE PINELANDS COMMISSION  
PO Box 359  
NEW LISBON, NJ 08064  
(609) 894-7300  
www.nj.gov/pinelands



SEAN W. EARLEN  
Chairman  
NANCY WITTENBERG  
Executive Director

General Information: [Info@pinelands.nj.gov](mailto:Info@pinelands.nj.gov)  
Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

August 23, 2018

William Richardson, Jr., Mayor (via email)  
Waterford Township  
2131 Auburn Avenue  
Atco, NJ 08004

Re: Application # 1993-0465.003  
Block 1017, Lot 1  
Waterford Township

Dear Mayor Richardson:

The Commission staff has completed its review of this application for construction of recreational facilities at the George W. Ritter Recreation Complex. Enclosed is a copy of a Public Development Application Report. On behalf of the Commission's Executive Director, I am recommending that the Pinelands Commission approve the application with conditions at its September 14, 2018 meeting.

Any interested party may appeal this recommendation in accordance with the appeal procedure attached to this document. If no appeal is received, the Pinelands Commission may either approve the recommendation of the Executive Director or refer the application to the New Jersey Office of Administrative Law for a hearing.

Prior to any development, the applicant shall obtain any other necessary permits and approvals.

Sincerely,

Charles M. Horner, P.P.  
Director of Regulatory Programs

Enc: Appeal Procedure

c: Secretary, Waterford Township Planning Board (via email)  
Waterford Township Construction Code Official (via email)  
Waterford Township Environmental Commission (via email)  
Secretary, Camden County Planning Board (via email)  
John Helbig, PP, AICP (via email)





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## **PUBLIC DEVELOPMENT APPLICATION REPORT**

August 23, 2018

William Richardson, Jr., Mayor (via email)  
Waterford Township  
2131 Auburn Avenue  
Atco, NJ 08004

Application No.: 1993-0465.003  
Block 1017, Lot 1  
Waterford Township

This application proposes the construction of a basketball court, a hockey rink and a 7,650 square foot playground at the George W. Ritter Recreation Complex located on the above referenced 7.14 acre parcel in Waterford Township.

### **STANDARDS**

The Commission staff has reviewed the proposed development for consistency with all standards of the Pinelands Comprehensive Management Plan (CMP). The following reviews the CMP standards that are relevant to this application:

#### **Land Use (N.J.A.C. 7:50-5.28)**

The parcel is located in a Pinelands Regional Growth Area. The proposed recreational facilities are a permitted land use in a Pinelands Regional Growth Area.

#### **Vegetation Management Standards (N.J.A.C. 7:50-6.23 & 6.26)**

The development subject of this application will be located over existing developed and maintained grassed areas. The proposed soil disturbance is limited to that which is necessary to accommodate the development.

The Landscaping and Revegetation guidelines of the CMP recommend the use of grasses that are tolerant of droughty, nutrient poor conditions. The applicant proposes to utilize a seed mixture which meets that recommendation.

#### **Stormwater Management Standards (N.J.A.C. 7:50-6.84(a)6)**

The applicant has demonstrated that the development is consistent with the stormwater management



standards of the CMP. To meet the stormwater management standards, the application proposes to construct a stormwater infiltration basin on the parcel.

### **PUBLIC COMMENT**

The applicant has provided the requisite public notices. Notice to required land owners within 200 feet of the above referenced parcel was completed on May 2, 2018. Newspaper public notice was completed on May 4, 2018. The application was designated as complete on the Commission's website on July 31, 2018. The Commission's public comment period closed on August 10, 2018. No public comment was submitted to the Commission regarding this application.

### **CONDITIONS**

1. Except as modified by the below conditions, the proposed development shall adhere to the plan, consisting of 13 sheets, prepared by Adams, Rehmann & Heggan and dated as follows:  
  
 Sheets 1, 6 & 13 - April 2018; revised to July 13, 2018  
 Sheets 2-4 & 7-12 - April 2018; revised to April 27, 2018  
 Sheet 5 - April 2018; revised to June 15, 2018
2. Disposal of any construction debris or excess fill may only occur at an appropriately licensed facility.
3. Any proposed revegetation shall adhere to the "Vegetation" standards of the CMP. Where appropriate, the applicant is encouraged to utilize the following Pinelands native grasses for revegetation: Switch grass, Little bluestem and Broom-sedge.
4. Prior to any development, the applicant shall obtain any other necessary permits and approvals.

### **CONCLUSION**

As the proposed development conforms to the standards set forth in N.J.A.C. 7:50-4.57, it is recommended that the Pinelands Commission **APPROVE** the proposed development subject to the above conditions.



Philip D. Murphy  
Governor

Sheila Y. Oliver  
Lt. Governor

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Chairman

Nancy Wittenberg  
Executive Director

## **PINELANDS COMMISSION** **APPEAL PROCEDURE**

The Pinelands Comprehensive Management Plan (N.J.A.C. 7:50-4.91) provides an interested party the right to appeal any determination made by the Executive Director to the Commission in accordance with N.J.A.C. 7:50-4.91. An interested party is someone who has a specific property interest sufficient to require a hearing on constitutional or statutory grounds. Only appeal requests submitted by someone meeting the definition of an interested party will be transmitted to the New Jersey Office of Administrative Law for a hearing. Any such appeal must be made in writing to the Commission and received at the Commission office no later than 4:00 PM on September 11, 2018 and include the following information:

1. the name and address of the person requesting the appeal;
2. the application number;
3. the date on which the determination to be appealed was made;
4. a brief statement of the basis for the appeal; and
5. a certificate of service (a notarized statement) indicating that service of the notice has been made, by certified mail, on the clerk of the county, municipal planning board and environmental commission with jurisdiction over the property which is subject of this decision.

Within 15 days following receipt of a notice of valid appeal, the Executive Director shall initiate the procedures for assignment of an Administrative Law Judge to preside at the hearing pursuant to the Administrative Procedures Act, N.J.S.A. 52:14B-1 et seq., and the procedures established by the Office of Administrative Law. The time, date and location of such hearing shall be designated by the Office of Administrative Law.



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Executive Director

**Pending Public Development and Waiver of Strict Compliance Applications  
accepting public comment at the September 14, 2018 Commission Meeting**

**Public Development Applications**

***Application No. 1982-2731.011 – Ocean County Board of Chosen Freeholders***

Received on: November 13, 2017

Project: Construction of an 18,400 square foot bus garage, a 9,000 square foot office building, a 30,000 square foot warehouse and a 3.9 acre leaf composting facility.

Municipality: Manchester Township

Block 72, Lot 7

***Application No. 2001-0236.001 – Monroe Township***

Received on: May 1, 2001

Project: Construction of four recreational fields and a 193 space parking lot

Municipality: Monroe Township

Block 13001, Lots 16 & 28

**Waiver of Strict Compliance Applications**

***Application No. 1985-0713.002 – Allen***

Received on: March 28, 1991

Project: Single family dwelling

Municipality: Southampton Township

Block 1702, Lot 26



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## MEMORANDUM

To: Members of the Pinelands Commission

From: Susan R. Grogan   
Chief Planner

Date: August 31, 2018

Subject: No Substantial Issue Findings

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During the past month, we reviewed 12 master plan and ordinance amendments that we found to raise no substantial issues with respect to the standards of the Pinelands Comprehensive Management Plan. These amendments were:

**Atlantic County Planning Advisory Board Resolution 2018-2** - adopts the Atlantic County Master Plan, including an Open Space and Recreation Plan and Farmland Preservation Plan as appendices. The 2018 Master Plan updates the County's overall planning goals that were previously adopted in the 2000 County Master Plan. It provides updated information, goals and objectives in the areas of land use, housing, transportation, and infrastructure. The plan also includes a new analysis of the County's sustainability and resiliency, along with goals, objectives and implementation strategies for promoting further sustainability and resiliency. The Open Space and Recreation Plan includes updated goals and objectives as well as an updated inventory of existing open space and recreational facilities. The plan also includes a needs analysis as well as recommendations for implementation. The Farmland Preservation Plan includes updated goals and objectives as well as updated information on the County's agricultural industry and land base, the County's Farmland Preservation program, and strategies for implementing the County's objectives related to future farmland preservation, agricultural economic development, natural resource conservation, and the promotion of sustainable agriculture.

**Barnegat Township's 2018 Housing Element and Fair Share Plan** - contains updated data and analysis on the Township's current and projected demographic, housing stock, and employment characteristics as well as an updated Fair Share Plan for the cumulative period of 1987-2025. The Township's Fair Share Plan indicates a rehabilitation obligation of 86 units, a prior round obligation of 329 units and a third round prospective need of 367 units. Also included in the Fair Share Plan are detailed descriptions of the residential development projects, both completed and anticipated, that address the municipality's obligation. In the Pinelands Area, these projects include one that has been fully constructed (Four Seasons at Mirage), one that is under construction (Paramount) and two (Vernon/Shoreline and Compass Point) that are the subject of a new redevelopment plan. In that portion

of the Pinelands National Reserve outside the Pinelands Area, a larger number of projects are cited, including accessory apartments, group homes, rental units and owner-occupied inclusionary projects. All of the affordable housing sites discussed in the Fair Share Plan, both those in the Pinelands Area and those in the Pinelands National Reserve, are located in a Regional Growth Area.

**Barnegat Township Ordinance 2018-15** - adopts affordable housing set-aside requirements for multi-family and single-family attached residential developments that are permitted at a density of six units per acre or more. A fifteen percent set-aside is required for rental developments and a 20 percent set-aside is required for for-sale developments. These set-aside requirements apply only to projects of five or more units. Ordinance 2018-15 also adopts provisions relating to rehabilitation, accessory apartments, new construction guidelines, affirmative marketing, occupancy standards and other administrative and enforcement matters related to affordable housing.

**Barnegat Township Ordinance 2018-16** - amends Chapter 55 (Land Use) of the Township's Code in order to clarify that accessory apartments permitted in the TC-CV and TC-CPHD Districts are required to be affordable units and must be deed restricted as such. The TC-CV and TC-CPHD Districts are located in a Regional Growth Area, within that portion of the municipality in the Pinelands National Reserve outside the Pinelands Area.

**Barnegat Township Ordinance 2018-19** - adopts a redevelopment plan for the Sweet Jenny Redevelopment Area (Block 195, Lots 5 and 6.01). Permitted uses in the Redevelopment Area include multi-family market rate and affordable family apartments at a density of 20 units per acre. A minimum of 92 affordable family units are required. The Sweet Jenny Redevelopment Area is located in a Regional Growth Area, within that portion of the municipality in the Pinelands National Reserve outside the Pinelands Area.

**Buena Borough Ordinance 669** - amends Chapter 150 (Land Use) of the Borough's Code by establishing Section 150-63C, which specifies that the duration of final approval of a major subdivision or major site plan is the same as the period of zoning protection as specified in Section 150-63 A and B. The ordinance also repeals and replaces Section 150-64 in order to revise the types of site improvements for which the Borough may require a performance or maintenance guaranty to be paid by a developer as well as requirements for the submission of as-built plans prior to the release of a performance guaranty. The ordinance also establishes Section 150-118.1, which specifies the duration that use variances, bulk variances, conditional use permits, and zoning permits are valid.

**Corbin City Ordinance 4-2018** - amends Chapter 82 (Pinelands Area) of the City's Code in response to amendments to the CMP. These amendments include revisions to definitions, the types of development exempt from application to the Commission, notice requirements and installation of advanced wastewater treatment systems.

**Galloway Township Ordinance 1995-2018** - amends Chapter 233 (Land Management) of the Township's Code by revising the types of site improvements for which the Township will require a performance guaranty or maintenance guaranty to be paid by a developer. The ordinance also provides procedures for establishing both the amount of the guaranty as well as the release of the guaranty. Lastly, the ordinance provides procedures for the payment of fees related to the inspection of site improvements by Township professionals.

**Lakehurst Borough Ordinance 2018-09** - amends Chapter XXV (Land Development) of the Borough's Code in response to amendments to the CMP. These amendments include revisions to definitions, the types of development exempt from application and notice requirements.

**Winslow Township Ordinance O-2018-015** - amends Chapter 40 (Land Use Procedures), Chapter 232 (Site Plan Review), Chapter 246 (Subdivision of Land) and Chapter 297 (Stormwater Control) of the Township's Code by revising procedures for assessing fees for the inspection of site improvements by Township professionals as well as procedures for estimating improvement costs by the Township Engineer. The ordinance also revises the types of site improvements for which the Township may require a developer to post a performance or maintenance guaranty as well as procedures for establishing the amount to be posted. Finally, Section 297-30 is revised to require that maintenance guaranties for stormwater facilities be provided in accordance with Chapters 232 and 246.

**Woodbine Borough Planning Board Resolution 4-8-18** - adopts the 2018 Housing Element and Fair Share Plan as part of the Borough's Master Plan. The Housing Element contains updated data and analyses pertaining to the Borough's current and projected demographics, housing stock, and employment. The Township's Fair Share Plan, covering the cumulative period of 1987-2025, indicates: a rehabilitation obligation of 18 units, a prior round obligation of 88 units, and a third round prospective need of 70 units. The Fair Share Plan also provides information on past efforts to provide affordable housing, mechanisms that will facilitate attainment of the Borough's affordable housing obligation, and a spending plan for collected development fees.

**Woodbine Borough Ordinance 576-2018** - implements the Borough's Fair Share Plan by amending Chapter XXV (Development Fees) and Chapter XXVI (Zoning) of the Borough's Code. The ordinance establishes residential and non-residential development fees, procedures for the collection of development fees, an affordable housing trust fund and eligible expenditures of development fees collected. Ordinance 576-2018 also creates an affordable housing overlay zone encompassing those residential districts within the Pinelands Town management area, which includes the ATR, R-1, R-2, and PD Zones. Within this overlay zone, qualifying development projects will have an obligation to construct affordable housing units. Ordinance 576-2018 also adopts design requirements for affordable housing construction, affordable unit controls and requirements and an affirmative marketing plan.



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## MEMORANDUM

To: Members of the Pinelands Commission

From: Edward Wengrowski   
Environmental Technologies Coordinator

Date: September 4, 2018

Subject: 2018 Annual Report on the Alternate Design Treatment Systems Pilot Program

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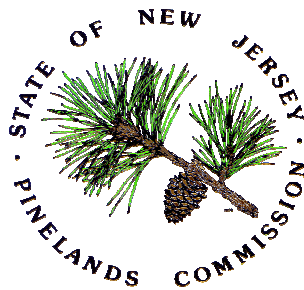
Please find attached the sixteenth Annual Report on the Alternate Design Wastewater Treatment Systems Pilot Program covering the period of July 2017 through June 2018. The report discusses the basis for controlling nitrogen releases to the environmentally sensitive Pinelands ecosystem, provides background information on the development of the pilot program, and includes technical details on each of the pilot program wastewater treatment technologies.

The pilot program has provided the Commission with the opportunity to evaluate six different nitrogen reducing technologies through the installation of 320 advanced treatment systems in the Pinelands Area. These technologies allow residential development to take place in an environmentally appropriate manner, consistent with densities authorized in the CMP.

The Commission's pilot program has attracted national attention and continues to serve as a model for the control of nitrogen in nutrient sensitive environments.

**ANNUAL REPORT  
TO THE NEW JERSEY PINELANDS COMMISSION**

**ALTERNATE DESIGN TREATMENT SYSTEMS  
PILOT PROGRAM**



**August 5, 2018**



## Executive Summary

In March of 2002 the Pineland Commission convened an ad hoc committee to evaluate the feasibility of using high performance septic system as a way for residential development to meet Pinelands water quality standards where the proposed development parcel is not large enough for the water quality standard to be met through dilution.

The ad hoc committee determined that high performance septic systems were commercially available and that several of these technologies were purported to remove nitrogen to the extent necessary, in combination with dilution, to meet the Pinelands water quality standard.

Acting on the ad hoc committee's recommendation, in August 2002 the Pinelands Commission authorized an amendment to the Pinelands Comprehensive Management Plan (CMP) to establish a pilot program to determine whether specifically authorized technologies could be installed, operated and maintained by homeowners in a manner that meets the water quality objectives.

During the intervening 16 year period since the establishment of the pilot program, the Commission has identified three technologies that are capable of meeting the Pinelands ground water quality standard of 2 mg/l total nitrogen when used on appropriately sized parcels. Specifically, the Amphidrome and Bioclere treatment technologies can meet the standard when used on minimum 1 acre parcels and the FAST treatment technology can meet the standard when used on minimum 1.4 acre parcels.

Two technologies were removed from the pilot program; the Ashco RSF<sup>III</sup> system because its manufacturer could not supply units to the Pinelands Area and the Cromaglass technology for its inability to remove nitrogen to the degree necessary to meet the water quality standard. The BioBarrier and SeptiTech technologies continue to be tested to determine if they can meet the standard and if they can, the minimum parcel size required for them to do so. Two other technologies, the Hoot ANR and Busse GT are authorized for use in the pilot program but as of the date of this report, none has been installed. Through June 2018, there are 320 residential alternate design treatment systems installed in the Pinelands Area.

Pursuant to the pilot program rules, all of these advanced wastewater treatment technologies are subject to warranty, deed notice, and system operation and maintenance requirements.

In addition to the advanced treatment systems serving residential development in the Pinelands Area, the Commission has also successfully authorized commercial development to use similar systems to meet Pinelands water quality standards.

The Commission will continue to monitor the performance of the technologies that are in the piloting stage and will release a pilot program implementation report in November 2019 that will include future program recommendations.

## Background

The Federal National Parks and Recreation Act (1978) and New Jersey Pinelands Protection Act (1979) call for the preservation, protection and enhancement of the unique Pinelands ecosystem and its land and water resources. The exceptional quality of Pinelands water resources is protected and maintained through the control of development and other land uses and through close cooperation and coordination between local, state and federal agencies. To safeguard Pinelands water resources, the water quality provisions of the Pinelands Comprehensive Management Plan (CMP), (available for download at <http://www.state.nj.us/pinelands/cmp/>) focus on controlling the amount of nitrogen that enters the environment. Nitrogen is a significant point and nonpoint source pollutant due to its role in the eutrophication of surface water bodies. It is a useful indicator of overall Pinelands water quality and ecosystem health because it is naturally present in very low concentrations in the Pinelands environment. In recent years, there has been much attention focused on the role that excessive nitrogen has played in the decline of the Barnegat Bay ecosystem. The Pinelands Area accounts for 33% of Barnegat Bay's Watershed and efforts to control nitrogen releases in the Pinelands Area can have a significant impact on both the Pinelands and Barnegat Bay. The Pinelands CMP has long recognized the importance of controlling nitrogen on both local and regional scales and provides for the establishment of land use policies and engineering solutions to protect the region's sensitive ecology.

The Commission's land use program discourages development in important ecological and agricultural areas while directing growth towards more suitable areas. While some of the designated growth areas are served by central sewer systems, others are not. In these unsewered growth areas, municipalities may zone for residential development on lots as small as one acre. One acre lots are also permitted in non-growth areas if certain cultural housing and grandfathered ownership conditions are met. In very limited instances, waivers of strict compliance allow for development of unsewered dwellings on lots as small as 20,000 square feet.

The CMP's water quality standards permit the use of on-site septic systems (individual subsurface sewage disposal systems) provided that the design of the system and the size of the parcel on which the system is located will ensure that the concentration of nitrogen in the ground water exiting the parcel or entering a surface water body will meet the Commission's water quality standard of two parts per million (ppm). The CMP uses the Pinelands Septic Dilution Model to calculate nitrogen loading to groundwater from septic systems and to confirm that proposed loadings do not exceed the assimilative capacity of the environment. When standard values for home occupancy, wastewater volume, wastewater strength and rainfall infiltration are used in solving the model, the model calculates that a minimum 3.2 acre parcel is required to dilute nitrogen to the required two ppm concentration when conventional septic system technology is used. Conventional septic system technology, typically consisting of a septic tank and effluent dispersal field (and sometimes a pump and dosing tank), effectively removes pathogens from wastewater when properly designed, sited and maintained. However, this technology does not remove or attenuate nitrogen in wastewater. Thus, unsewered residential development using conventional septic system technology is permitted only on minimum 3.2 acre parcels where sufficient land area is available to meet nitrogen-based water quality standards through dilution.

In order to comply with the Pinelands water quality standard, unsewered residential development on parcels smaller than 3.2 acres requires the use of high performance or advanced denitrifying wastewater treatment technology. If the mass of nitrogen contained in wastewater discharged from an on-site septic system is sufficiently reduced through the use of an advanced treatment system, the Pinelands Septic Dilution Model calculates that the minimum parcel size required to meet the 2 ppm nitrogen concentration may be reduced from 3.2 acres down to a minimum 1.0 acre.

The basic principles of biological nitrogen reduction (BNR) in wastewater treatment are well documented in the scientific and engineering literature. In fact, biological nitrification and denitrification is now routinely employed at many large scale regional sewage treatment plants, especially those that discharge treated effluent to environmentally sensitive receiving waters. These treatment facilities employ professionally trained and licensed operators and have the ability to enhance nitrogen removal through the use of chemical feed equipment and to make real time process modifications in response to changing influent wastewater characteristics.

The use of biological denitrification technologies at the much smaller scale of individual onsite systems is a relatively recent development. The US EPA as well as a number of individual states and regions have developed and are

currently administering programs to study the effectiveness of onsite wastewater denitrification treatment technologies. The Ad Hoc Committee On Alternative Septic Systems, convened by the Pinelands Commission in March 2000, conducted a thorough review of this ongoing work to evaluate alternate treatment technologies nationwide, consulted with officials from other state and university programs involved with advanced on-site septic system technologies and management strategies, retained an engineering consultant to assess the performance of selected technologies, met with treatment system manufacturers and county health officials, and coordinated research efforts with the New Jersey Department of Environmental Protection (NJDEP). After completing this work, the Pinelands Commission's Committee on Alternative Septic Systems recommended the establishment of a pilot program to test five specific onsite wastewater treatment technologies. (The pilot program has subsequently been expanded to test an additional four advanced treatment technologies). The Alternative Design Wastewater Treatment Systems Pilot Program detailed in the CMP at N.J.A.C. 7:50-10.21 is authorized as a means to test whether these advanced treatment technologies can be operated and maintained in a manner that meets Pinelands water quality standards, with maintenance requirements that a homeowner can reasonably be expected to follow.

Abridged timeline for the Pinelands Alternate Design Wastewater Treatment Systems Pilot Program:

Aug. 5, 2002	Effective date of the pilot program; residential development applications received after this date for parcels smaller than 3.2 acres that are not served by public sewer are required to use a Pinelands alternate design wastewater treatment system. Completed applications received prior to this date were permitted to use a pressure dosing septic system, provided the installation was completed by August 5, 2004.
Nov. 3, 2006	Executive Director's Implementation Report issued to the Commission (available at: <a href="http://www.state.nj.us/pinelands/images/pdf%20files/Final_110306_Pilot_Septic_Implem_Rpt_.pdf">http://www.state.nj.us/pinelands/images/pdf%20files/Final_110306_Pilot_Septic_Implem_Rpt_.pdf</a> .) The report recommended the removal of the Ashco RFS <sup>III</sup> system from the pilot program due to its commercial unavailability, imposition of a temporary suspension of new Cromaglass installations based upon non-attainment of effluent total nitrogen targets and the establishment of various pilot program deadlines to allow continued installation of the pilot program systems.
June 15, 2009	Publication of proposed CMP amendments (N.J.A.C. 7:50-2.11, 3.39 and 6.85) addressing septic system management.
Nov. 5, 2009	Executive Director's second Implementation Report issued to the Commission (available at <a href="http://www.state.nj.us/pinelands/landuse/waste/Final_Nov%202009_ImplementationReport.pdf">http://www.state.nj.us/pinelands/landuse/waste/Final_Nov%202009_ImplementationReport.pdf</a> ). The report discussed the nitrogen removal efficiencies of the treatment technologies, system maintenance requirements, treatment technology costs and system operational issues. The Report also contained an evaluation of the number of systems installed and a determination as to the adequacy of that number to render a final determination on the effectiveness of the treatment technologies in meeting the purposes and objectives of the State and Federal Pinelands Protection Acts.
June 7, 2010	Effective date of CMP amendments that established requirements for the long-term management of Pinelands alternate design wastewater treatment systems.
Oct. 18, 2010	Effective date of CMP amendment authorizing permanent approval of the Amphidrome and Bioclere technologies to serve residential development on minimum 1 acre parcels. The amendment also authorized the addition of up to four new NSF 245 USEPA ETV certified treatment technologies to the pilot program for installation through August 5, 2016.
Dec. 5, 2011	Notice published in the New Jersey Register announcing acceptance of the four "new" technologies (BioBarrier, Busse Green, Hoot ANR and SeptiTech) for participation in the pilot program.

Nov. 5, 2012	Executive Director's third Implementation Report issued to the Commission (available at: <a href="https://www.nj.gov/pinelands/landuse/current/altseptic/Final%20Nov%202012_ImplementationReport.pdf">https://www.nj.gov/pinelands/landuse/current/altseptic/Final%20Nov%202012_ImplementationReport.pdf</a> ). The report recommended an extension of the deadline to install FAST and Cromaglass treatment systems to determine if retrofits to these technologies would result in improved nitrogen attenuation.
Sept. 2, 2014	Effective date of CMP amendments to eliminate the Cromaglass technology from the pilot program and to extend until August 5, 2018, the last day to install a FAST, BioBarrier, Busse GT, Hoot ANR and SeptiTech treatment technology.
March 5, 2018	Effective date of CMP amendment authorizing permanent approval of the FAST technology to serve residential development on minimum 1.4 acre parcels.
April 27, 2018	Executive Director's issuance of the Nov. 5, 2017 fourth Implementation Report (updated through April 27, 2018) which is available at: <a href="https://www.nj.gov/pinelands/landuse/current/altseptic/Final%20April%2027%202018%20%202018_ImplementationReport.pdf">https://www.nj.gov/pinelands/landuse/current/altseptic/Final%20April%2027%202018%20%202018_ImplementationReport.pdf</a> . This report recommended elimination of the August 5, 2018 installation deadline, with the discontinuation of any non-compliant technology effectuated by action of the Executive Director; the continued piloting of the SeptiTech and BioBarrier technologies (on minimum 1.7 acre parcels) to evaluate if nitrogen attenuation has improved due to actions undertaken by the technology vendors; that a follow-up implementation report be issued in November 2019; that consideration be given to suspending the Busse GT technology if no Busse GT systems are installed by Nov. 5, 2019 ; that consideration be given to introducing additional NSF 245 / USEPA ETV certified technologies to the pilot program; and that the Commission continue to assist the Pinelands Area Health Departments in their compliance with NJDEP's requirement for tracking the operation and maintenance of advanced wastewater treatment systems.
July 16, 2018	Rule proposal published in the New Jersey Register to allow for continued installation of BioBarrier, Busse GT, Hoot ANR and SeptiTech wastewater treatment technologies in the Pinelands Area beyond the current deadline of August 5, 2018.
August 5, 2018	Last day to install the BioBarrier, Busse GT, Hoot ANR and SeptiTech treatment technologies unless the Commission adopts an amendment to the CMP that expressly authorizes such installations beyond this date.
December 2018	Anticipated effective date of the rule proposed on July 16, 2018 to permit the continued installation of BioBarrier, Busse GT, Hoot ANR and SeptiTech wastewater treatment beyond the current deadline of August 5, 2018.

## Introduction

Amendments to the CMP establishing the Pinelands Alternate Design Wastewater Treatment System Pilot Program became effective on August 5, 2002. The rule requires that the Executive Director submit an annual report to the Commission describing activity to date on the installation, maintenance and performance of each of the alternate design wastewater treatment technologies. This sixteenth annual report is submitted to fulfill the annual reporting requirement.

Before any of the approved technologies could be used within the Pinelands Area, the manufacturer of each treatment technology had to first submit and the Executive Director had to first approve detailed engineering plans and system specifications, details on the automatic remote malfunction alarm system, a wastewater sampling protocol, an operation and maintenance manual, a sample five year warranty, a sample five year operation and maintenance

contract, and a sample deed notice. In addition, the New Jersey Department of Environmental Protection (NJDEP) had to first issue a Treatment Works Approval (TWA) authorizing local/county health departments to approve such systems pursuant to N.J.A.C 7:9A Standards for Individual Subsurface Sewage Disposal Systems (7:9A-3.9(a)4).

Use of the high performance alternative onsite wastewater treatment systems is now authorized in each of the Pinelands Area municipalities as a result of amendments to the CMP that became effective on December 3, 2007. Prior to that amendment, the pilot program technologies were only authorized for use in municipalities that had adopted an ordinance to implement the pilot program. Although most municipalities had adopted the requisite ordinance (34 of 40), the Commission found that applicants in the non-adopting municipalities were unable to proceed with their applications and as a result, were subjected to considerable hardship. The December 3, 2007 amendments provided applicants in those municipalities with needed relief as they are now permitted to use a pilot program treatment system on an otherwise developable parcel. Details of this amendment are discussed below.

The CMP also requires that each technology manufacturer or its agent submit a semi-annual report to the Executive Director. Such reports must include information on the number of systems installed, a discussion on the installation of systems, an analysis and evaluation of wastewater monitoring results to date, and a discussion of any operational or maintenance issues experienced.

## **Summary of Program Activity**

The Pinelands Alternate Design Wastewater Treatment Systems Pilot Program was made possible as a result of two consecutive funding grants provided by the NJDEP (Grant Identifiers RP02-012 and RP05-056). In May 2009, Commission staff satisfied the final grant deliverable by providing the NJDEP, Division of Watershed Management with the Final Report on the “Atlantic Coastal Watershed Region Program Grant: Decentralized Wastewater Management in the Mullica River Basin and Other Pinelands Watersheds”. The pilot program is now financed solely by the Pinelands Commission. The Commission posts the findings of the pilot program on its website to further the technology transfer goals of the program and to share relevant information with other entities engaged in protecting ecologically sensitive regions. The Commission also distributes copies of its annual report to the NJDEP and to the seven Pinelands Area county health departments having jurisdiction in the Pinelands Area.

## **Septic System Management Initiatives**

### **Pinelands Commission [N.J.A.C 7:50] Pinelands Comprehensive Management Plan**

Since its inception, the Pinelands Commission has recognized the environmental benefits of periodic septic system maintenance. The CMP has long required that septic systems in the Pinelands be inspected and pumped at least once every three years and that written proof of maintenance be submitted to the local boards of health. In June 2009, the Commission proposed several amendments to the CMP at N.J.A.C. 7:50-2.11, 3.35, and 6.85 to further address septic system management. Those proposed amendments were related to the management of both conventional septic systems as well as advanced pilot program treatment systems. The rule proposal aimed to establish a framework for institutional or governmental programs to ensure the proper long-term operation and maintenance of all onsite wastewater systems in the Pinelands.

The Commission received extensive public comment on the septic system management rule proposal. A great number of the comments were opposed to requirements for the management of conventional septic systems. Responding to public opposition, the Commission withdrew the section of the proposal related to conventional septic systems and adopted only those portions of the proposal that required long term management of the advanced pilot program technologies. This action resulted in the continuation of the existing CMP rule related to the triennial inspection and pumping of conventional septic systems. In April of 2012, NJDEP adopted comprehensive amendments to the Standards for Individual Subsurface Disposal Systems (see N.J.A.C 7:9A-8.3 and 12.3, discussed in more depth below). These amendments addressed the long-term management of advanced pretreatment systems, including the Pinelands alternate design treatment systems. In light of the adoption of duplicative NJDEP regulations, in July 2017, the Commission approved proposed amendments to the CMP to eliminate the Commission’s now redundant

septic system management requirements, aiming to unify and simplify the statewide management of advanced wastewater treatment systems under NJDEP's equally protective rules.

In April 2013, Commission staff organized, hosted and led an interagency meeting between Commission staff, NJDEP and representatives of the seven Pinelands Area Health Departments to review the NJDEP's septic system management requirements. This meeting was instrumental in clarifying the applicable rules and in raising awareness of the management obligations of the participating regulatory entities.

The Commission has continued its efforts to inform the county health departments of their responsibilities under N.J.A.C 7:9A-7:9A-8.3(e) and N.J.A.C 7:9A-12.3, aimed at ensuring that advanced treatment systems are properly operated and maintained. The Commission's staff has further worked to inform the advanced treatment system service providers of their own obligations specified at N.J.A.C 7:12.3(d). This NJDEP regulation requires the service providers to notify the county health officials when a service contract has lapsed, so that the health officials can follow-up with the system owners. Pilot program systems that are not covered by a service contract with an authorized service provider are deemed by NJDEP's rules to be non-compliant systems. In the Pinelands Area, county health officials are charged with enforcing these NJDEP's regulations.

### **NJDEP [N.J.A.C. 7:15] Water Quality Management Plan**

In addition to the septic system management requirements contained in N.J.A.C 7:9A, additional septic system management requirements are specified in NJDEP's Water Quality Management Planning (WQMP) rules (N.J.A.C 7:15-4.5(c)1.vi), last amended on November 7, 2016. These state-wide rules require that municipalities demonstrate that areas served by septic systems are subject to a mandatory maintenance program, such as an ordinance, to ensure that all septic systems are functioning properly. The applicability of this NJDEP rule was discussed during the April 2013 interagency management meeting.

### **NJDEP [N.J.A.C. 7:9A] Standards for Individual Subsurface Sewage Disposal Systems**

In April 2012, the NJDEP readopted state-wide Standards for Individual Subsurface Sewage Disposal Systems (Standards) (N.J.A.C 7:9A). These rules require that local/county health departments provide operation and maintenance information triennially to septic system owners whose systems were approved after January 1, 1990. The comprehensive notices must include:

1. A general outline of how septic systems work and the potential impact of improper operation on ground and surface water quality and public health;
2. The recommended frequency of septic tank and grease trap pumping and instructions on how to determine when pumping is necessary;
3. A list of materials containing toxic substances that are prohibited from being disposed of into a septic system;
4. A list of inert or non-biodegradable substances that should not be disposed of into a septic system;
5. Proper practices for maintaining the area of the septic leach field;
6. Negative impacts to a septic system resulting from excessive water use; and
7. Warning signs for poor system performance or malfunctions and recommended or required corrective actions.

The NJDEP Standards, as amended on April 2, 2012, for the first time, authorize the state-wide use of advanced onsite wastewater treatment systems for new construction without first requiring a Department-issued TWA permit, provided the technology is not being used to meet a state or federal water quality standard. Where the treatment technology is being proposed to meet a state or federal water quality standard, a TWA permit is required. The NJDEP Standards require that local or county health departments maintain records on each advanced treatment system in their jurisdiction and provide annual reports to the NJDEP with respect to the following:

- i. The type of advanced wastewater treatment device installed;
- ii. The location of each installed device;
- iii. The type of use (e.g., residential or commercial);
- iv. The type of disposal area (e.g., bed, trench, drip dispersal);
- v. The date of installation and startup; and
- vi. The date of each inspection and maintenance call.

The NJDEP's system management Standards are, in many ways, similar to those of the Commission's pilot program. For example, the owner of each advanced treatment system must have a service contract in place throughout the life of the system with an authorized service provider. The NJDEP Standards require system owners to provide the local or county health department with a copy of the service contract prior to the health department's initial approval of the system. In the event that a property owner enters into a contract with a different service provider upon expiration of an existing contract, the homeowner must provide the health department with the new contract within 14 days of making the change. Importantly, if a property owner fails to renew a service contract, the previously authorized service provider is required to provide written notice to the health department within 30 days of the contract expiration. Authorized service providers must provide copies of system inspection forms to the health department within 30 days of the inspection. Pursuant to the NJDEP Standards, the failure of a property owner to maintain a service contract on an advanced treatment system constitutes a violation of the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., and constitutes a noncompliance violation of N.J.A.C 7:9A.

The NJDEP Standards that are related to the installation and use of advanced treatment systems apply state-wide to all advanced treatment systems, including the Pinelands alternate design pilot program wastewater treatment systems.

The county health departments have reported that since April 2012, they have approved a significant number of advanced treatment systems for use outside of the Pinelands pilot program. These advanced systems are often proposed to reduce the size and perhaps most commonly the height of disposal field installations by taking advantage of a 2.5 foot reduction in the minimum vertical separation distance required to the seasonal high water table. As a result, the county health departments must ensure proper operation and maintenance is conducted on all advanced treatment systems, not only those authorized for use through the Pinelands pilot program.

Commission staff and NJDEP staff from the Bureau of Nonpoint Pollution Control continue to work to ensure that the Pinelands Area health departments, Pinelands alternate design treatment system manufacturers and service providers are aware of the NJDEP's April 2, 2012 rule adoption, particularly with respect to the NJDEP's operation and maintenance contract requirements and health department enforcement provisions.

## **Educational Resources**

The Commission staff continues to provide assistance to Pinelands Area municipalities and health departments to help them comply with the NJDEP's (N.J.A.C. 7:15 and N.J.A.C. 7:9A) septic system management requirements. The Commission has produced a number of useful educational documents for use by residents and public health officials.

Municipalities and health departments are encouraged to consult the *Onsite Wastewater Systems Management Manual for the New Jersey Pinelands*, (prepared by Stone Environmental, Inc. under contract to the Commission) [http://www.state.nj.us/pinelands/landuse/current/septic/WW%20Mgt%20Manual\\_2008.09.05.pdf](http://www.state.nj.us/pinelands/landuse/current/septic/WW%20Mgt%20Manual_2008.09.05.pdf) for guidance on the establishment of septic system management programs. This manual explores several management models for municipalities and others to consider and provides flexibility in the selection of any single model or any combination of model elements that are locally appropriate. In addition, municipalities and health departments are also encouraged to consult the report entitled *Legal Basis and Regulatory Framework of Onsite Wastewater Management in the New Jersey Pinelands* (also prepared by Stone Environmental, Inc. under contract to the Commission). [http://www.state.nj.us/pinelands/landuse/current/septic/Pinelands\\_OWTS\\_Legal\\_Framework\\_Final.pdf](http://www.state.nj.us/pinelands/landuse/current/septic/Pinelands_OWTS_Legal_Framework_Final.pdf) These reports, as well as other related materials, including an informative septic system maintenance guidance document directed at homeowners, are posted on the Commission's website at [www.nj.gov/pinelands](http://www.nj.gov/pinelands). In addition, Commission staff produces and distributes training materials at the Rutgers Onsite Wastewater Treatment Systems seminars offered each year through Rutgers University's Office of Continuing Professional Education.

## **Pilot Program Amendments**

Since the original adoption of the pilot program in August 2002, several pilot program-related amendments to the CMP have been adopted. These include:

1. A remedy for land owners in municipalities that had not yet adopted ordinances to implement the pilot program;
2. Removal of one technology (Ashco RFS<sup>III</sup>) from the pilot program due to the manufacturer's inability to provide the technology to Pinelands residents;
3. Providing for management of pilot program treatment systems beyond the original five year mandatory maintenance contract period;
4. Extending the period of the pilot program to better evaluate both existing and new treatment technologies;
5. Granting permanent approval status to three of the pilot program technologies (Amphidrome, Bioclere and FAST);
6. Eliminating Cromaglass from the pilot program due to its inability to meet Pinelands water quality standards;
7. Authorizing the Commission to approve up to four new pre-screened NSF International / American National Standards Institute (ANSI) Standard 245 and/or United States Environmental Protection Agency - Environmental Technology Verification (USEPA ETV) certified technologies to participate in the pilot program. The Commission has approved the BioBarrier, SeptiTech, Hoot ANR and Busse Green GT systems to participate in the pilot program;
8. Requiring that local /county boards of health withhold certificates of compliance or similar authorizations which would permit the occupancy of a building served by an alternative design wastewater treatment system until such time as the Pinelands Commission provides written authorization to the local board of health that such a system may be authorized for use;
9. Extending the duration of the pilot program until August 5, 2018; and
10. Simplifying the requirements for the management of advanced treatment systems by removing the duplicative requirements in the CMP and relying instead on the NJDEP's comprehensive advanced system management requirements contained in N.J.A.C 7:9A.

In addition, the Commission is currently proposing a CMP amendment to permit the installation of pilot program technologies indefinitely in recognition of the Executive Director's ability to increase the minimum required parcel size or to suspend any technology's participation in the pilot program for failure to comply with the program requirements.

## **NJDEP Treatment Works Approvals**

The NJDEP has provided welcome assistance to the Commission throughout the development and implementation of the pilot program. As noted above, the NJDEP reissued a Generic TWA to expedite local health department approvals of all of the Pinelands pilot program systems. The TWA permit allows the use of the Pinelands pilot program systems without individual applicants being subject to the standard \$850 NJDEP permit fee or the standard 90 day review period. The expedited NJDEP Generic TWA Permit has been well received by both the regulatory and development community. It has proven to be an effective instrument by allowing individual applications to be approved directly by the Pinelands county health departments, resulting in significant time and expense savings to



applicants.

Importantly, the generic TWA applies only to residential development that proposes to use a pilot program treatment system. Commercial development that proposes to use an advanced wastewater treatment system in order to meet Pinelands water quality standards must attain an individual TWA from NJDEP, pursuant to the requirements at N.J.A.C 7:9A-3.9(a)4.

### **Local and Regional Training and Technology Transfer**

Throughout the duration of the pilot program, Commission staff has participated in a number of local, regional, and national educational conferences to share the Commission's experiences. Staff has developed targeted training sessions for each of the Pinelands Area Health Departments to review Pinelands and NJDEP septic system regulations, fundamentals of biological nutrient removal, and design, operation and maintenance requirements for advanced onsite treatment technologies. Representative regional training sessions include a USEPA conference in Mt. Kisco, NY, multiple New Jersey Environmental Health Association conferences in Atlantic City, NJ, a National Environmental Health Association conference in Atlantic City, NJ, a Massachusetts Health Officers Association conference in Springfield, MA, a New England Interstate Water Pollution Control Commission conference in Groton, CT, a National Environmental Health Association conference in Tucson, AZ, a Central Pine Barrens (Long Island) Joint Planning Commission conference in Brookhaven, NY, a Peconic Bay (Long Island) Advanced Wastewater Treatment Systems Water Quality Symposium in Hauppauge, NY, and a keynote address at the Onsite Water Protection Conference at North Carolina State University in Raleigh, N.C.

Commission staff has met with each of the Pinelands Area health departments to facilitate implementation of the pilot program and to assist the health departments in their review of plans and applications and to train inspectors on the alternative treatment technologies. In addition, Commission staff presents annually at the Rutgers/NJDEP Onsite Wastewater Treatment Systems Seminars held in New Brunswick and Bordentown, NJ. The Rutgers/ NJDEP program provides classroom training to professionals engaged in the onsite wastewater industry including state, local, regional and state-agency public health professionals, advanced treatment system manufacturers, septic system design engineers, system installers, and onsite system service providers. In addition, staff assists Pinelands Area residents by responding to questions related to the care and use of onsite wastewater systems. Moreover, Commission staff has conducted evening workshops throughout the Pinelands Area to enhance awareness of the connection between septic system maintenance and clean water, property values and public health. Lastly, commission staff regularly provides telephone assistance to homeowners, builders, developers and consulting engineers in complying with the requirements of the pilot program.

### **Treatment Technologies Installation Summary**

The Alternate Design Treatment Systems Pilot Program was adopted through an August 5, 2002 amendment to the CMP. The pilot program originally included the first five technologies listed below. It has since been expanded to include four additional NSF Standard 245 and USEPA ETV certified treatment technologies. The complete list of pilot program technologies includes:

1. ~~Ashco RFS<sup>III a</sup>~~
2. Amphidrome<sup>b</sup>
3. Bioclere<sup>b</sup>
4. ~~Cromaglass<sup>c</sup>~~
5. FAST<sup>d</sup>
6. BioBarrier
7. Hoot ANR
8. Busse GT
9. SeptiTech

Notes:

<sup>a</sup>Amendments to the CMP, effective December 3, 2007, removed the Ashco RFS<sup>III</sup> from the pilot program due to the manufacturer's failure to make the system commercially available in the Pinelands during the initial five year period of the pilot program and to otherwise demonstrate the ability or intention for future participation in the program.

<sup>b</sup>Amendments to the CMP, effective October 18, 2010, permanently approved the Amphidrome and Bioclere technologies for use on minimum 1.0 acre parcels.

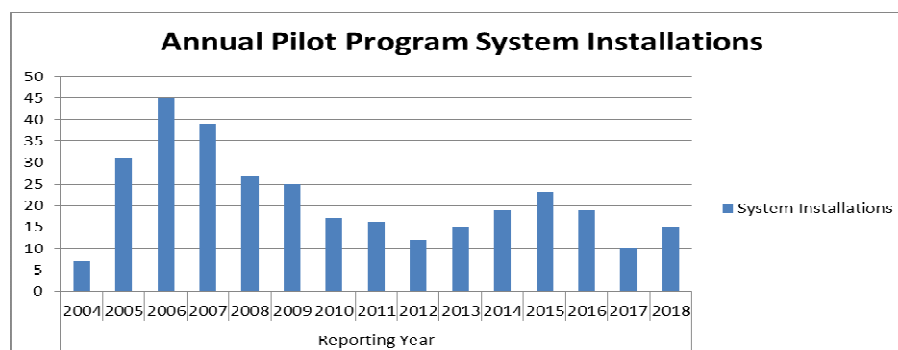
<sup>c</sup>Amendments to the CMP, effective September 2, 2014, removed the Cromaglass technology from the pilot program due to the technology's inability to meet Pinelands water quality standards and to otherwise demonstrate the ability or intention for future participation in the program. Installation of the Cromaglass technology ceased before that date as the result of a temporary suspension instituted by the Commission in 2006. Sixteen applicants with prior construction approvals were permitted to install the Cromaglass system after the imposition of the temporary suspension.

<sup>d</sup>Amendments to the CMP, effective March 5, 2018, permanently approved the FAST technology for use on minimum 1.4 acre parcels.

Three hundred and twenty (320) Pinelands alternate design treatment systems have been installed and activated through June 5, 2018. The first pilot program system came online in April 2004. Fifteen systems were installed during the current reporting period (July 2017 through June 2018). The following tables and figures summarize annual installations of each technology and their location.

## Installed Pilot Program Technologies by Year of Installation

Technology	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total Installed
Amphidrome	7	10	10	27	12	7	5	8	4	5	1	1	4	2	5	108
Bioclere	0	2	11	9	7	9	6	5	5	5	8	4	4	1	1	77
Cromaglass	0	19	24	3	6	4	3	0	0	0	0	0	0	0	0	59
FAST	0	0	0	0	2	5	3	3	3	5	2	2	0	0	3	28
SeptiTech	Admitted into pilot program in 2013										3	9	11	7	5	35
BioBarrier	Admitted into pilot program in 2013										5	7	0	0	1	13
Total	7	31	45	39	27	25	17	16	12	15	19	23	19	10	15	320

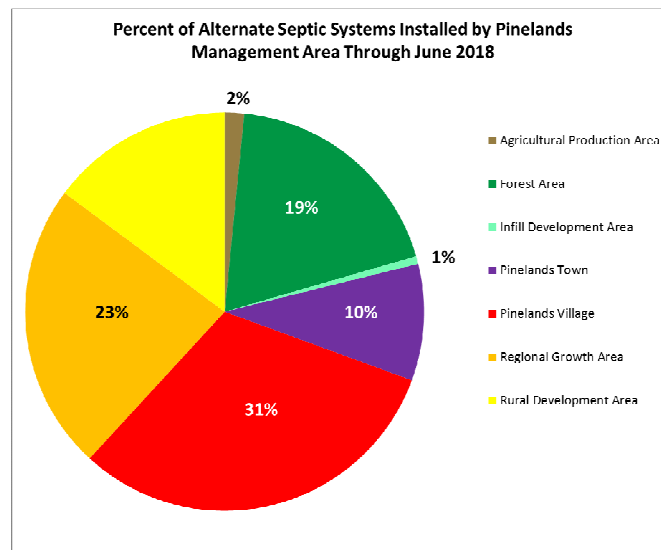


## Installed Pilot Program Technologies by County and Municipality

County	Municipality	Technology						Total
		Amphidrome	Bioclere	Cromaglass	FAST	SeptiTech	BioBarrier	
Atlantic	Egg Harbor Twp	2	5		2			9
	Estell Manor		4					4
	Folsom	5	3	1	1			10
	Galloway	1	1		1			3
	Hamilton	15	21	4	1			41
	Hammonton	4	2					6
	Mullica	3	5			1		9
	Port Republic				1			1
Burlington	Evesham	1	1					2
	Medford	3			2	5		10
	Pemberton	12	12	23				47
	Shamong	2						2
	Tabernacle	3	5	1	1	2	1	13
	Washington	1	1					2
	Woodland	1	3		3	1		8
	Bass River							0
Camden	Chesilhurst		1					1
	Waterford	3						3
	Winslow	8	5	4	6	15		38
Cape May	Dennis	1						1
	Upper	2	2					4
	Woodbine		1					1
Gloucester	Franklin	1		1	3			5
	Monroe				2			2
Ocean	Jackson	15	2	16	5	10	12	60
	Lacey	1						1
	Manchester	19	2	9		1		31
	Stafford	5	1					6
		108	77	59	28	35	13	320

Note: The majority of systems installed in Pemberton Township are located in the Presidential Lakes subdivision, which was the subject of a prior Commission approval that required the use of pressure dosing septic systems. Pinelands alternate design treatment systems were not required but were used voluntarily by the developer in response to local water quality concerns.

## Alternate Design Systems Installations by Pinelands Management Area



## **Administrative Approval of Technologies**

In accordance with N.J.A.C 7:50-10.22, prior to being certified for use, the manufacturer of each alternate design treatment system had to submit specific documents to the Executive Director for review and approval. These documents included detailed engineering plans and specification, a Homeowners Manual on the proper use and operation of the system, a service provider's Operation and Maintenance Manual, a sample five year warranty, a sample five year operation and maintenance service contract, wastewater sampling and analysis protocols, and a sample deed notice to be filed with the County Clerk prior to the operation of each system to alert future property owners of the need to maintain the pilot program system. Upon approval by the Executive Director, these record documents were distributed to each of the seven Pinelands Area health departments and are on file at the Commission's headquarters.

### **Technology Approvals – First Round**

**Ashco-A-Corporation** provided the required documentation and based upon a detailed review by Commission staff, the Executive Director approved the **Ashco RFS<sup>III</sup> system** effective May 15, 2003. However, as noted above, the Ashco RFS<sup>III</sup> was subsequently eliminated from the pilot program due to the firm's inability to supply treatment units to the region.

**F.R Mahony & Associates**, the manufacturer of the **Amphidrome system**, provided the required documentation and, based upon a detailed review by Commission staff, the Executive Director approved the single family Amphidrome system effective July 24, 2003. Based upon the Pinelands Septic Dilution Model, each Amphidrome system must be located on a parcel containing at least one acre for each dwelling unit to be served by the system. As noted above, the Amphidrome treatment technology has been released from the pilot program and granted permanent approval status in the CMP for residential use on minimum **1.0 acre** parcels. As a result, F.R. Mahony & Associates is no longer required to submit monitoring and operational data to the Commission. The Amphidrome technology must still be designed to accommodate effluent sampling, certified prior to and after construction by the manufacturer or agent and by a NJ licensed professional engineer to be properly designed and operational, equipped with local and remote alarm functionality, sold with a five-year warranty and covered under a renewable operation and maintenance contract for as long as the system is in active use.

**Aquapoint, Inc.**, the manufacturer of the **Bioclere system**, provided the required documentation and, based upon a detailed review by Commission staff, the Executive Director approved the single family Bioclere system effective November 18, 2003. Based upon the Pinelands Septic Dilution Model, each Bioclere system must be located on a parcel containing at least one acre for each dwelling unit to be served by the system. As noted above, the Bioclere treatment technology has been released from the pilot program and granted permanent approval status in the CMP for residential use on minimum **1.0 acre** parcels. As a result, Aquapoint is no longer required to submit monitoring and operational data to the Commission. The Bioclere technology must still be designed to accommodate effluent sampling, certified prior to and after construction by the manufacturer or agent and by a NJ licensed professional engineer to be properly designed and operational, equipped with local and remote alarm functionality, sold with a five-year warranty and covered under a renewable operation and maintenance contract for as long as the system is in active use.

**Cromaglass, Inc.**, the manufacturer of the **Cromaglass system**, provided the required documentation and, based upon a detailed review by Commission staff, the Executive Director approved the Cromaglass system effective December 29, 2004. Based upon the Pinelands Septic Dilution Model, the pilot program originally required that each Cromaglass system be located on a parcel containing at least one acre for each dwelling unit to be served by the system. As discussed herein, the Cromaglass technology was placed under a temporary suspension in November 2006 as a result of the technology's inability to meet expected total nitrogen concentrations in treated effluent. That

suspension prohibited future installations of the Cromaglass technology. Effective September 2, 2014, the Cromaglass technology was removed from the pilot program due to the technology's inability to meet Pinelands water quality standards and the manufacture's failure to comply with the requirements of the pilot program. Homeowners in the Pinelands Area that currently use a Cromaglass system are not required to replace it. They have the option to continue to use the system in a manner consistent with the operation and maintenance requirements of N.J.A.C 7:9A-12.3 or, if they choose, they may replace the Cromaglass treatment tank with a conventional septic tank meeting the current requirements of NJDEP's Standards for Individual Subsurface Sewage Disposal Systems.

**Bio-Microbics, Inc.**, the manufacturer of the **FAST system**, provided the required documentation and, based upon a detailed review by Commission staff, the Executive Director approved the FAST system effective June 9, 2005. Based upon the Pinelands Septic Dilution Model, the pilot program originally provided that each FAST system could be located on a parcel containing at least one acre for each dwelling unit to be served by the system. Based upon a comprehensive analysis of all effluent monitoring data collected to date, the FAST system has produced a grand median total nitrogen concentration of **18.2 mg/l**. Application of the Pinelands Septic Dilution Model indicates that the FAST system can be expected to meet the Commission's 2 mg/l total nitrogen standard when it is used to serve residential development on a minimum **1.4 acre** parcel. Accordingly, effective March 5, 2018 the CMP was amended to permanently approve the FAST technology for use on minimum 1.4 acre parcels. The FAST technology must still be designed to accommodate effluent sampling, certified prior to and after construction by the manufacturer or agent and by a NJ licensed professional engineer to be properly designed and operational, equipped with local and remote alarm functionality, sold with a five-year warranty and covered under a renewable operation and maintenance contract for as long as the system is in active use.

#### **Technology Approvals – Second Round**

**Hoot Systems, LLC**, the manufacturer of the **Hoot ANR system**, provided the required documentation (including the NSF Standard 245 certification report) and, based upon a detailed review by Commission staff, the Executive Director approved the single family Hoot ANR system effective September 14, 2011. Based upon the Pinelands Septic Dilution Model, each Hoot ANR system must be located on a parcel containing at least **1.0 acre** for each dwelling unit to be served by the system. There have been no installations of the Hoot technology in the Pinelands Area to date.

**SeptiTech, LLC**, the manufacturer of the **SeptiTech system**, provided the required documentation (including the NSF Standard 245 certification report) and, based upon a detailed review by Commission staff, the Executive Director approved the single family SeptiTech system effective September 14, 2011. As originally approved, based upon the Pinelands Septic Dilution Model and NSF testing data, each SeptiTech system needed to be located on a parcel containing at least one acre for each dwelling unit to be served by the system. As discussed in more detail below, based upon effluent monitoring data, new applications proposing to use the SeptiTech technology are now required to provide a minimum 1.7 acre parcel. This parcel size increase is in effect on an interim basis and is subject to increase or decrease based on the results of additional monitoring. The latest evaluation of the SeptiTech data demonstrates improved performance since release of the August 5, 2017 annual report, evidently resulting from microprocessor programming modifications. The Commission will continue to monitor the technology's performance, reevaluate the data, and adjust the minimum required parcel size accordingly.

**Bio-Microbics, Inc.**, the manufacturer of the **BioBarrier system**, provided the required documentation (including the NSF Standard 245 certification report) and, based upon a detailed review by Commission staff, the Executive Director approved the single family BioBarrier system effective September 14, 2011. As originally approved, based upon the Pinelands Septic Dilution Model and NSF testing data, each BioBarrier system needed be located on a parcel containing at least one acre for each dwelling unit to be served by the system. As discussed in more detail below, based upon effluent monitoring data, new applications proposing to use the BioBarrier technology are now required to provide a minimum 1.7 acre parcel. This parcel size increase is in effect on an interim basis and is subject to increase or decrease based on the results of additional monitoring. The latest evaluation of the BioBarrier data has not demonstrated improved nitrogen attenuation performance. The Commission will continue to monitor the technology's performance, reevaluate the data, and adjust the minimum required parcel size accordingly.

**Busse Green Technologies, Inc.**, the manufacturer of the **Busse GT system**, provided the required documentation

(including the NSF Standard 245 certification report) and, based upon a detailed review by Commission staff, the Executive Director approved the single family Busse Green MBR system effective September 14, 2011. Based upon the Pinelands Septic Dilution Model, each Busse Green MBR system must be located on a parcel containing at least **1.0 acre** for each dwelling unit to be served by the system. There have been no installations of the Busse GT technology to date in the Pinelands Area.

## **System Permitting and Local Approvals**

The pilot program relies upon the cooperation of local construction code officials, county health officials, treatment system manufacturers, system installers, certifying engineers and Pinelands staff to coordinate the approval of wastewater system engineering plans, the issuance of building permits, the approval of wastewater system installations and the issuance of certificates to occupy residences served by the alternative treatment technologies. Prior to any Pinelands alternative treatment system receiving a final operational approval, the Pinelands Area health departments and the Pinelands Commission are to receive an executed five year maintenance contract, five year warranty, three year wastewater sample and analysis protocol (for systems being piloted), deed notice, as-built plan and construction certification from the technology manufacturer and a NJ licensed engineer. While these documents have been received in the majority of cases, there have been instances where certificates of occupancy were issued before all required documentation was received by the health department and the Pinelands Commission. In these cases, Pinelands staff has to work with the technology vendors, homeowners and agency officials to obtain the needed documentation after the fact, often a difficult and time consuming task. Pinelands staff continue to work with the local agencies to educate them on the importance of assuring that all necessary documents are on file before issuing local approvals for home occupancy. To further help address this issue, amendments to the CMP were adopted in October 2010 to specifically require that local boards of health withhold certificates of compliance or similar authorizations which would permit the occupancy of a building served by an alternative design wastewater treatment system until such time as the Pinelands Commission provides written authorization to the local board of health that such a system is authorized for use.

## **Operation and Maintenance Summary**

The manufacturer of the Amphidrome system, F.R. Mahony Associates, has instituted an effective program to assist contractors and engineers on the proper installation of the technology. The firm offers installer training with each system delivered and provides ongoing technical support to address contractor inquiries through its authorized service provider, Site Specific Design, Inc.

Aquapoint, the manufacturer of the Bioclere system, has also instituted an effective program to assist contractors and engineers on the proper installation of the technology and has utilized the services of Advanced Nitrate Solutions in the local sale, installation, operation and maintenance of the Bioclere technology.

During the period of 2005-2009, Cromaglass systems were installed and serviced exclusively by Mid State Electric, Cromaglass' authorized treatment system installation and servicing contractor. Cromaglass Corporation discontinued using Mid-State as its serving agent and until going out of business, was servicing the units directly. Cromaglass is reportedly no longer servicing its treatment units. Pursuant to the CMP, owners of existing Cromaglass units may contract with service providers that hold a NJDEP public wastewater treatment system operator's license at the S2 level or higher. Alternately, these homeowners may elect to replace the Cromaglass treatment tank with a conventional septic tank that meets the requirements of N.J.A.C 7:9A-8.2.

Bio-Microbics, the manufacturer of the FAST and BioBarrier systems, has designated Site Specific Design, Inc. as its authorized service agent for the servicing of the FAST and Bio Barrier technologies. Site Specific Design reports no alarm related events during the current reporting period. The firm has previously repaired or replaced airlifts on eleven previously installed FAST systems and extended recycling troughs on five systems to enhance the return of nitrified wastewater to the unit's anoxic chambers. Subsequent to these system repairs, the firm has addressed airlift issues during eight subsequent system installations. After system modifications, the Bio-Microbics FAST system has achieved an overall median total nitrogen concentration of 18.2 mg/l in treated effluent leading to its permanent authorization on 1.4 acre parcels. Bio-Microbics is required, under the terms of the pilot program, to trouble shoot

the inadequate nitrogen attenuation performance of existing BioBarrier systems and must do so until the existing systems achieve total nitrogen concentrations of less than or equal to 14.0 mg/l.

SeptiTech, the manufacturer of the SeptiTech technology has designated both Site Specific Design, Inc. and South Jersey Engineers as authorized service agents providing operation and maintenance service on SeptiTech systems. In order to be authorized for use on minimum one acre parcels, (down from the current authorization for use on minimum 1.7 acre lots) SeptiTech is required, under the terms of the pilot program, to trouble shoot the performance of existing SeptiTech systems such that the existing systems achieve total nitrogen concentrations of less than or equal to 14.0 mg/l in treated effluent. To that end, SeptiTech has adjusted software controls on its systems and has made considerable progress in improving the treatment systems performance.

In addition to the servicing agents that are authorized by the technology manufacturers, both the Commission's and NJDEP's rules authorize individuals that possess a S2 or higher NJ Wastewater Treatment Plant Operator's License to provide operation and maintenance services on the Pinelands pilot program systems. In an effort to facilitate consumer choice and competition, Commission staff continues to encourage the New Jersey Water Environment Association (the professional association representing NJ's licensed wastewater operators) to alert its member to business opportunities that would expand the number of licensed individuals that offer operation and maintenance services on the pilot program systems.

## **Cost Summary**

The pilot program requires the collection and reporting of cost data for each treatment technology. To facilitate monitoring of treatment system costs, the CMP requires the technology vendors to report the cost of each individual treatment system installation to the Commission.

The total cost of an onsite wastewater treatment system consists of at least three components. These include the cost of the treatment unit, its installation and its 5 year service package, the cost of the soil absorption system and its installation (e.g., excavation, replacement soil, stone and pipe), and the cost of engineering, surveying, and other permit and inspection services. The treatment unit manufacturers can readily provide the Commission with information on the cost of their equipment and related support services, which in the case of the Pinelands pilot program includes a five year maintenance contract, five year warranty, and three years of quarterly effluent analysis (for systems being piloted). The vendors, however, do not have direct knowledge of the cost of the soil absorption field installation, other installation and labor costs, or the cost for engineering (soil testing, system design, as-built plans, etc.) of the system. This site specific information is typically supplied by the homeowner or builder to the treatment system vendor who in turn supplies it to the Commission.

Table 1 on the following page summarizes average treatment system costs based upon information provided to the Commission by the system vendors, as supplemented by the homeowner or builder. Actual treatment unit costs, including equipment, five year operation and maintenance service contracts, five year warranties and the three year sampling program have remained relatively stable or have declined since the inception of the pilot program. Both FR Mahony and AquaPoint report that they have lowered the cost for their equipment since having attained permanent approval status and the discontinuation of required wastewater effluent sampling and reporting to the Commission. Figure 1 provides system cost comparisons during 2006, 2009, 2012 and 2017, the years in which pilot program implementation reports were issued.

Annual fluctuations in the average total system installation cost (including construction related expenses) have occurred since the inception of the pilot program. This variability is generally attributable to differences in the cost of non-treatment unit components, including material quantities and labor that vary on a system by system basis. Rarely are two individual system designs and material quantities identical. Variability in the cost and quantity of replacement soil, (select fill) stone aggregate, pipe, geo-textiles, labor, excavation, trucking, engineering, etc.) is common on a system by system basis. As a rule, larger and deeper systems typically cost more to construct than smaller, shallower systems. Average overall costs will be higher in a year in which a greater number of larger systems were installed than in a year when a greater number of smaller systems were built.

In time, the overall construction cost of advanced treatment systems may decline as system designers take advantage

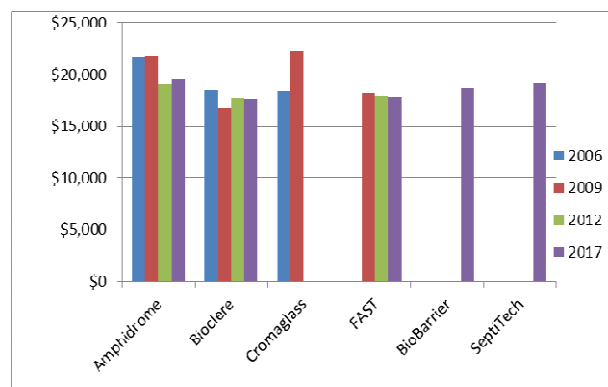
of disposal field size reductions that are now incorporated in the NJDEP's April 2012 revisions to N.J.A.C. 7:9A. The allowable size reductions are permitted due to the relatively high quality effluent quality (e.g. reduced BOD and TSS levels) produced by advanced onsite treatment technologies in comparison to standard septic tank systems. It is possible that additional long-term cost savings will result from the use of these advanced treatment technologies due to the significantly "cleaner" effluent that these systems produce, extending disposal field longevity.

Table 1. Average Total Cost of Pinelands Alternate Design Wastewater Treatment Systems  
Note: Cost information is derived from a variety of sources and should be viewed as approximate.

Name of Treatment System Technology	No. of Systems included in this cost analysis	Average Reported Cost per Treatment Unit with 5 year warranty and 5 year operation and maintenance service.	Average Reported Cost for Engineering, Soil Absorption Field Installation, Electrical Connections, etc. <sup>(8)</sup>	Average Reported Total Cost of the Advanced Onsite Treatment Systems
Amphidrome	72	\$19,512	\$12,050	\$31,562 <sup>(1)</sup>
Bioclere	61	\$17,474	\$10,012	\$27,486 <sup>(2)</sup>
Cromaglass	42	\$23,553	\$11,712	\$35,265 <sup>(3)</sup>
FAST	28	\$17,179	\$11,325	\$28,504 <sup>(4)</sup>
BioBarrier	13	\$18,744	\$10,031	\$28,775 <sup>(5)</sup>
SeptiTech	31	\$19,140	\$9,274	\$28,414 <sup>(6)</sup>
Busse GT <sup>(7)</sup>	N/A	\$24,000	N/A	N/A
Hoot ANR <sup>(7)</sup>	N/A	\$14,500	N/A	N/A

- 1) Based on the reported cost of the Amphidrome system during the period of 2004 through June 2018.
- 2) Based on the reported cost of the Bioclere system during the period of 2005 through June 2018.
- 3) Based on the reported cost of the Cromaglass system during the period of 2005 through 2010, the last year of installation.
- 4) Based on the reported cost of the FAST system during the period of 2008 through June 2018.
- 5) Based on the reported cost of the BioBarrier system during the period of 2015 through June 2018.
- 6) Based on the reported cost of the SeptiTech system during the period of 2014 through June 2018.
- 7) Information as provided by the system vendor. There have been no Busse GT or Hoot ANR systems installed in the Pinelands Area to date.
- 8) Includes reported cost of the treatment system, treatment tanks if not supplied by system vendor, engineering, excavation, electrical, and effluent dispersal field components and system installation.

Figure 1. Average Total Comparative Cost of Pinelands Alternate Design Wastewater Treatment System during 2006, 2009, 2012 and 2017, the years in which pilot program implementation reports were issued.  
Note: Cost information is derived from a variety of sources and should be viewed as approximate.

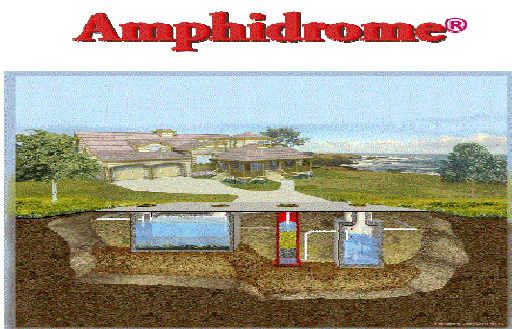




## Treatment System Nitrogen Attenuation Summary

The pilot program requires that the technology suppliers arrange for samples of treated effluent to be collected from each system on at least a quarterly basis [approximately every ninety (90) days] for at least three years, yielding a total of at least 12 samples per system. Pursuant to the pilot program sampling and testing protocols, samples of treated effluent are collected from a sample collection port located between the treatment unit and the soil dispersal field. Sample procurement must comply with the latest version (currently Aug. 2005 with updates through April 2011) of the NJDEP Field Sampling Procedures Manual. The laboratory analysis of effluent samples must be performed by laboratories certified by the NJDEP employing analytical methodologies accepted by NJDEP. To permit the establishment of microbial cultures necessary for the treatment process to develop and stabilize, no samples are required during the first ninety days from system start-up. In most instances, technology vendors have adjusted sampling schedules to provide for more efficient, synchronized sample collection from multiple systems.

As discussed previously, a total of 320 Pinelands alternate design wastewater treatment systems have been installed and activated in the Pinelands Area to date.



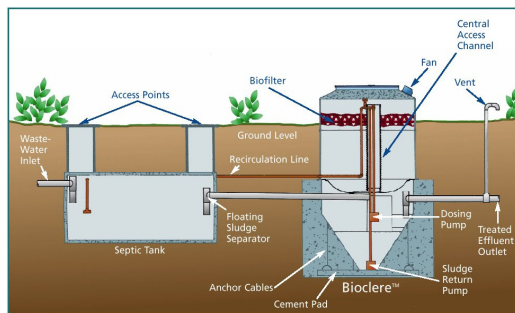
## Amphidrome Technology

The Amphidrome process is an advanced biological treatment that utilizes an attached growth treatment concept and is an example of a biologically aerated filter system. This is a patented treatment system. The system is pre-engineered and designed for the removal of soluble organic nitrogen, and for the nitrification and denitrification processes to occur simultaneously in a single reactor. The process begins operating in an aerobic mode and gradually progresses to an anoxic mode. The cyclical action is created by allowing a batch of wastewater to pass from the anoxic/equalization tank through the granular biological filter into the clear well. The batch of wastewater is then pumped back from the clear well up through the filter, where it overflows into a trough that carries it back to the anoxic/equalization tank. These cycles are repeated multiple times, while the treatment is allowed to progress from aerobic to anoxic conditions within the filter. Once sufficient cycles have been repeated to insure the degree of treatment required, a batch of effluent is discharged. A control system operates the system based on predetermined settings. The Amphidrome reactor consists of: an underdrain, support gravel, filter media, and backwash trough. The underdrain is located at the bottom of the reactor and provides support for the media and distribution of liquid into the reactor during a reverse flow or backwash. It is also designed as a manifold to distribute air evenly over the entire filter bottom during the aerobic portion of the cycle. On top of the underdrain is approximately 18" of gravel. Several layers of different size gravel are used. Above the gravel is a deep bed of coarse, round silica sand. The deep bed filter design employed in this manner significantly reduces suspended solids and allows for adequate growth of microorganisms for treating wastewater. In order to achieve the necessary degree of nitrogen reduction under a wide range of conditions, this system is equipped with chemical addition pumps that allow the addition of alkalinity for nitrification and/or methanol for denitrification, when necessary.

**The Amphidrome technology is no longer subject to effluent TN concentration analysis and reporting as a**

**result of its successful release from the pilot program.** It is now authorized for permanent use one minimum one acre parcels subject to the provisions of N.J.A.C 7:50-6.84(a)5iv(3). Table 2 provides the running median and grand median values for total nitrogen concentrations (mg/l) from 68 monitored Amphidrome units. The Amphidrome technology produced a grand median total nitrogen concentration of **11.9 mg/l**, satisfying the Commission's 14.0 total nitrogen standards for use on minimum one-acre parcels.

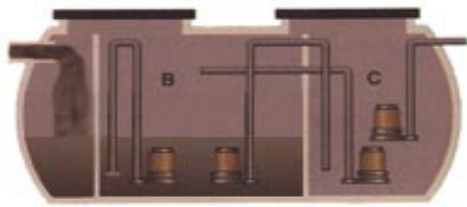
## Bioclere



### Bioclere Technology

The Bioclere system utilizes an attached growth trickling filter concept for wastewater treatment for residential or commercial facilities. A trickling filter typically consists of a bed of highly permeable media to which microorganisms are attached and through which wastewater is percolated. The Bioclere unit utilizes a patented plastic media in a randomly packed configuration. The incoming wastewater is passed from the primary settling tank to a baffled area in the sump of the Bioclere in which a dosing pump is located. The dosing pump doses the trickling filter at a predetermined frequency. A forced draught ventilation system provides adequate airflow for maintaining aerobic conditions in the trickling filter. In the trickling filter unit, the organic material present in the wastewater is degraded by microorganisms attached to the filter media. Organic material from the wastewater is converted into bio-mass or a slime layer. As the organisms grow, the thickness of slime layer increases and diffused oxygen is consumed before it can penetrate the full depth of the slime layer. Thus, an anaerobic condition is developed near the surface of the media and the microorganisms near the surface of the media enter into an endogenous phase of their growth and lose their ability to cling to the media. Eventually, the wastewater washes the slime off the media while a new slime layer starts establishing and the process continues. The excess bio-mass or the slime would settle in the bottom and the sludge return pump would pump it back to the primary settling tank. Sludge return also acts to combine nitrates to with a carbon source in the primary tank, facilitating denitrification and achieving a reduction in total nitrogen concentration.

**The Bioclere technology is no longer subject to effluent TN concentration analysis and reporting as a result of its successful release from the pilot program.** It is now authorized for permanent use on minimum one acre parcels subject to the provisions of N.J.A.C 7:50-6.84(a)5iv(3). Table 3 provides the running median and grand median values for total nitrogen concentrations (mg/l) from 38 monitored Bioclere units. The Bioclere technology produced a grand median total nitrogen concentration of **11.2 mg/l**, satisfying the Commission's 14.0 total nitrogen standards for use on minimum one-acre parcels.



## Cromaglass Technology

In August 2013, the Executive Director recommended that the Cromaglass technology be removed from the Pilot Program entirely, with no further installations permitted. Prior to its permanent removal from the program, a temporary suspension barring new installations of the Cromaglass technology had been imposed in November 2006. This suspension came about as a result of the Commission's prior finding that the Cromaglass technology had not met CMP groundwater quality standards. The Cromaglass technology produced a grand median total nitrogen concentration of 31.5 mg/l, failing to meet the CMP's 14.0 mg/l total nitrogen standard for unsewered residential development on a minimum one acre parcel.

The Alternate Design Treatment Systems Pilot Program requires technology manufacturers to troubleshoot and remediate substandard treatment system performance. At the Commission's direction, Cromaglass undertook studies to determine the cause of inadequate nitrogen attenuation and recommended a number of remedial measures to improve nitrogen attenuation in its existing Pinelands treatment units. After reviewing Cromaglass' findings and recommendations, the Commission issued correspondence in 2011 requiring that Cromaglass implement a two-phase remediation program. Phase I was to include the retrofitting of 28 systems by March 1, 2012. Effluent sampling of the Phase I retrofit systems was to commence within two months of the completion of the Phase I retrofits and was to continue every two months for a total of six samples per system.

Cromaglass completed the Phase I retrofits by the March 1, 2012 deadline but did not fully comply with the system sampling requirements. The first round samples were collected on May 2, 2012 and produced a grand median total nitrogen value of 18.0 mg/l. The second round samples were collected five months later, included only 20 systems and resulted in a grand median total nitrogen value of 19.2 mg/l. In summary, Cromaglass was delinquent in sampling the retrofitted systems and failed to demonstrate the Cromaglass technology's capability to meet CMP water quality standards.

The Commission afforded the Cromaglass Corporation multiple opportunities to improve the technology's nitrogen attenuation. However, Cromaglass Corporation's inconsistent compliance with the pilot program's sampling and reporting requirements remained problematic. Further, the company failed to fully comply with the Commission's sampling and reporting requirements applicable to retrofitted Cromaglass units. The Commission therefore had no choice but to find that the Cromaglass Corporation's participation in the pilot program was not in substantial compliance with the sampling and reporting requirements of the CMP. Further the Cromaglass technology had not made satisfactory progress in attaining compliance with CMP water quality standards. **As a result, the Executive Director recommended and the Pinelands Commission approved the discontinuation of the Cromaglass technology's participation in the pilot program.**

The Executive Director's recommendations were discussed at three public meetings of the CMP Policy & Implementation Committee in November 2012, February 2013 and August 2013. All of the input that the Committee received at these public meetings was in support of the Pilot Program, its further extension and the removal of the Cromaglass technology. The Commission then proceeded to adopt amendments to the CMP in June of 2014 to implement the Executive Director's recommendations. Specifically, N.J.A.C. 7:50-2.11 was amended to remove the Cromaglass technology from the definition of "alternate design pilot program treatment system". Similarly,

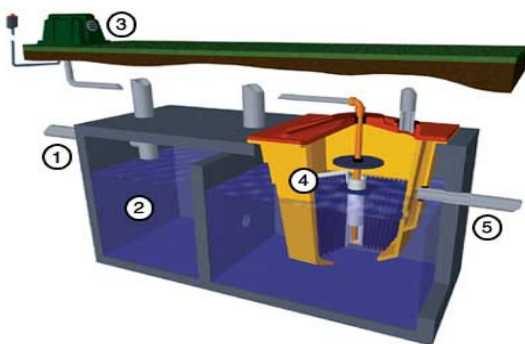
N.J.A.C. 7:50-10.21(c) and 10.22(a)3 were amended to reflect the removal of the Cromaglass technology from the pilot program. N.J.A.C. 7:50-10.22(a)4 and 10.23(i) were also amended to remove the Cromaglass technology.

The Cromaglass system is a Sequencing Batch Reactor (SBR) that is designed as a continuously fed activated sludge process with clarifiers that are operated on a batch basis. Treatment is achieved by turbulent aeration of incoming wastewater, and batch treatment of bio-mass (sludge) in a separate aeration and quiescent settling chamber within a single vessel. Cromaglass systems are capable of achieving denitrification with the addition of an anoxic cycle following aeration. Air and mixing are provided by submersible pumps with venturi aspirators that receive air through a pipe intake from the atmosphere. Anoxic conditions are created by closing the air intakes of aeration pumps with electric valves, thus stopping aeration but the system continues mixing. Per-batch cycling time is 120 to 240 minutes and there are five cycles to and discharge. The system is operated using a programmable logical control (PLC) that can store a record of all operational functions, thus providing information on each function of each cycle to the operator.

Table 4 presents sample results for 59 Cromaglass systems through July 5, 2010. Total reported nitrogen values for each of these Cromaglass systems represents the sum of reported laboratory values for total Kjeldahl nitrogen plus nitrite nitrogen plus nitrate nitrogen. The Cromaglass technology produced a grand median total nitrogen concentration of **31.5 mg/l**, failing to meet the Commission's 14.0 total nitrogen standard for unsewered residential development on a minimum one acre parcel.

**The Executive Director recommended and the Pinelands Commission approved a policy that provides for homeowners who are presently using the Cromaglass technology to be given the option to continue to use it in a manner that is consistent with NJDEP's operation and maintenance requirements or if they so choose, to convert the system to function as a septic tank or to otherwise replace it the Cromaglass tank with a conventional septic tank meeting the requirements of the NJDEP's Standards for Individual Subsurface Sewage Disposal Systems.**

## FAST

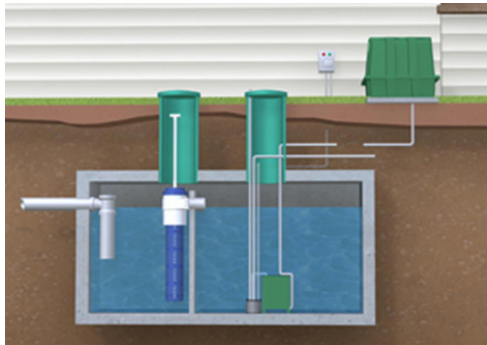


### FAST Technology

The FAST (Fixed Activated Sludge Treatment) system is a pre-engineered modular system designed to treat wastewater from a single home, a group of homes, or commercial facilities. FAST is a fixed film, aerated system utilizing a combination of attached and suspended growth treatment principles capable of achieving nitrification and denitrification in a single tank. This combination offers the stability of fixed film media and the effectiveness of activated sludge treatment principles. A typical FAST system provides adequate volume for microorganisms in the aerated media chamber to treat wastewater. The attached growth system functioning on and around the plastic media assures that microorganisms remain inside the system instead of being flushed out, even during the peak hydraulic flow conditions. During the times of low flow, the large volume of thriving microorganisms prevent a dying-off of the system, making the system well suited to intermittent use applications.

**The FAST technology is no longer subject to effluent TN concentration analysis and reporting as a result of its successful release from the pilot program.** It is now authorized for permanent use on minimum 1.4 acre parcels subject to the provisions of N.J.A.C 7:50-6.84(a)5iv(3). Table 5 provides the running median and grand median values for total nitrogen concentrations (mg/l) from 25 monitored FAST units. The FAST technology produced a grand median total nitrogen concentration of **18.2 mg/l**, demonstrating that it can meet the Commission's 2 mg/l total nitrogen standard when used on minimum 1.4 acre parcels.

## BioBarrier



### BioBarrier Technology

The BioBarrier® MBR is a membrane bioreactor that combines activated sludge treatment processes with solids separation via membrane filter technology. The system employs flat sheet membranes with pore sizes ranging between of 0.02 to 1.4  $\mu\text{m}$ . The membranes are housed in an aerated membrane cartridge which is submerged in the wastewater. The membranes provide a barrier that retains wastewater microorganisms within the treatment unit. The large mass of retained microbes provides an effective buffer against shock loadings to the system. The long microbial residence time in the treatment system allows the microorganisms to undergo endogenous respiration, reducing the total amount of solids produced by the treatment process.

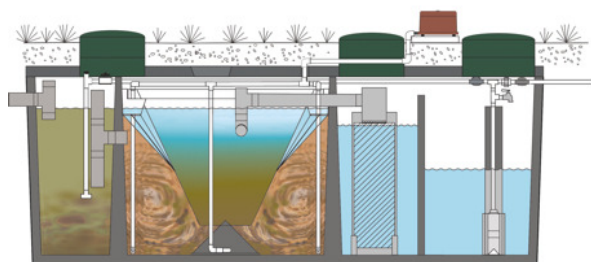
The system consists of a tank with three compartments. The first compartment provides primary treatment – sedimentation and separation of floatables and solids, and is equipped with a proprietary outlet screening device. A solid wall separates the first compartment from the second, in which the system's nitrogen reduction capabilities may be enhanced under anoxic conditions. The third compartment, the “aeration/membrane zone”, is separated from the anoxic zone by a baffle wall with openings between the two zones. The BioBarrier® Membrane module is located in the third compartment. Aeration is provided to the third compartment by a blower which serves two functions. First, the blower provides mixing of the wastewater and biomass to allow complete contact between the bacteria and organic material in the wastewater, while supplying oxygen that is critical to the process. Second, the positioning of the aeration under the membrane sheets helps to remove solids that collect on the surface of the sheets. The membranes sheets, having microscopic pore size openings, separate the water from the solids in the aeration zone. An effluent pump provides a slight negative pressure on the “clean” side of the membrane, pulling filtered water through the membrane. The solids that are sloughed by aeration and membrane cleaning are retained in the aeration compartment.

As illustrated in Table 6, sample results have been evaluated from 12 BioBarrier systems to date. A total of 156 samples have been used to evaluate these 12 BioBarrier systems. Total nitrogen (TN) values for each of the BioBarrier systems represents the sum of reported laboratory values for total Kjeldahl nitrogen plus nitrite nitrogen and nitrate nitrogen. The BioBarrier technology has produced a grand median total nitrogen concentration of **24.9 mg/l** based upon all samples to date. This grand median total nitrogen value is higher than the 24.4 mg/l TN concentration presented in the Commission's 2017 annual report. As previously noted, the technology must attain a grand median total nitrogen concentration no greater than 14.0 mg/l in order to meet Pinelands water quality

standards when used to serve residential development on a minimum one acre parcel.

**Because the BioBarrier technology has not yet been demonstrated to meet the 14.0 mg/l TN concentration as required for use on one acre parcels, on October 3, 2016, the Commission imposed a restriction on the future use of the BioBarrier system, requiring that it be limited to parcels containing at least 1.7 acres, (subject to increase or decrease based upon additional sampling data), as determined by the Pinelands Septic Dilution Model. Further, Bio-Microbics instituted a voluntary moratorium on the sale and installation of all new BioBarrier systems in the Pinelands Area effective February 2015. In addition to troubleshooting the mechanical operation of the system, BioMicrobics has instituted a homeowner education program aiming to eliminate the use of cleaning products containing quaternary ammonia, a nitrogen-based sanitizer known to disrupt biological nutrient reducing wastewater treatment processes. The Commission continues to monitor the technology's performance and may move to impose additional restrictions if improvement is not realized.**

## Hoot



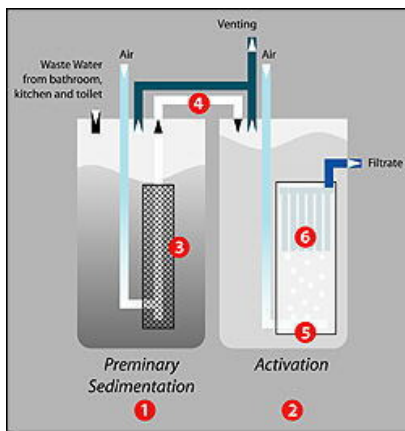
### Hoot ANR Technology

The Hoot ANR treatment system is an extended aeration/activated sludge treatment process coupled with anaerobic denitrification. The unit is comprised of five principal components, a Pretreatment Tank, Aeration Chamber, Clarifier, Media Tank and Final Clarifier/Pump Tank.

The Pre-Treatment tank provides separation and anaerobic digestion of influent solids and functions much like a septic tank by reducing up to 50% Total Settable Solids (TSS) and approximately 25% of Biochemical Oxygen Demand (BOD5). Liquid waste flows out of the pretreatment tank through a baffled outlet and into the aeration chamber. The activated sludge treatment process occurs in the aeration chamber through the introduction of oxygen into the mixed liquor to enable the conversion of soluble material into biomass. In addition, oxygen enables nitrifying bacteria to convert ammonia-nitrogen to nitrate-nitrogen. Wastewater then flows to a clarifier for additional solids settling. From the clarifier, wastewater is transferred to a media tank where an attached growth treatment process occurs. Here, a proprietary carbon source is added. In the presence of the supplemental carbon source, denitrifying bacteria release free nitrogen to the atmosphere. A final clarifier/pump tank constitutes the last treatment component before discharge to the soil absorption field. A portion of the daily flow of the system is recirculated from this chamber to the pre-treatment tank where it is reprocessed through the system. As there are currently no Hoot ANR systems operating in the Pinelands Area, the Commission has no performance data to report at this time.



## Busse GT

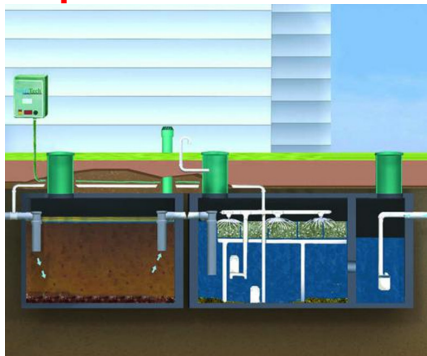


### Busse GT MBR Technology

The Busse Innovative Wastewater Treatment System is a small scale membrane bioreactor. The Busse system provides treatment in a 3-stage, 4 tank process. Wastewater enters an intermittently aerated first tank and is then transferred by an airlift through a mesh filter to an identical second tank. Wastewater in the second tank is divided evenly between two membrane tanks, again with a screened airlift transfer. The membrane bioreactor tanks house 24 Kubota flat sheet membranes. The Kubota membranes units are comprised of two sections: the lower section contains the air piping and the upper section contains the membrane panels. The membrane units are submerged in activated sludge within the reactor tanks. The tanks are aerated by coarse and fine bubbles that provide a cross flow of liquid over the surface of the membrane panels. Cross flow circulation reduces membrane fouling and provides oxygen for microbial degradation of wastewater organics. The liquid head above the membrane drives permeate from the wastewater mixture through the membrane, where it flows via a manifold through the tank wall and is discharged. A return sludge airlift is activated by a programmable logic controller and is controlled by level sensors located in tanks two through four. A third air pump provides aeration to the airlifts in the first two tanks.

The bioreactor provides an aerobic environment where microorganisms present in the wastewater remove soluble contaminants, using them as a source of energy for growth and production of new microorganisms. The organisms flocculate and form aggregations that further physically entrap particulate organic matter. The organic matter is attacked by extracellular enzymes that solubilize the solids to make them available to the microorganisms as a food source. The conversion of the organic matter from soluble to biological solids allows for removal of the organic matter by settling and filtration of the solids in the treatment process. As there are currently no Busse GT systems operating in the Pinelands Area, the Commission has no performance data to report at this time.

## SeptiTech



### SeptiTech Technology

The SeptiTech® wastewater treatment system is a two-stage treatment technology, based on a fixed film trickling filter, using a patented highly permeable hydrophobic media. The first stage of treatment occurs in the primary tank in which the solids are settled and partially digested. The second stage of the system is a processor that provides secondary wastewater treatment. Microorganisms present in the wastewater grow within the media, using nutrients and organic materials provided by the constant supply of fresh wastewater to form new cell mass. Air is drawn into the system via an air intake pipe at the top of the SeptiTech® System. Venturis located in the sprinkler head distribution piping aerate the wastewater sprayed onto the media. The system operates without a fan or compressor.

The SeptiTech® System is designed to remove total nitrogen from wastewater by nitrification and denitrification. Nitrification occurs in the second stage of the system, where ammonia –nitrogen is converted to nitrite and nitrate (predominately nitrate), while denitrification occurs in the anaerobic/anoxic primary tank. Denitrification also occurs in a stacked media module that floats in the reservoir below the aerobic media.

Wastewater from the primary tank flows by gravity to the processor reservoir section, located below the filter media. The second and third pumps are used to return wastewater and solids from the reservoir back to the primary tank. The forth pump is used to discharge treated wastewater to the disposal location.

As illustrated in Table 7(a), sample results have been evaluated from 34 SeptiTech systems to date. A total of 262 samples have been collected from these 34 SeptiTech systems producing a grand median total nitrogen concentration of **16.1 mg/l**. This analysis includes samples that were collected from systems that were erroneously installed without the denitrification cycle activated in the systems software. When the software error was discovered by the technology manufacturer, the systems were reprogrammed. Table 7(b) presents the results from these same 34 SeptiTech systems using only the sample results obtained from systems that were either installed without the programming error or from systems that were reprogrammed to eliminate the error. The edited data presented in Table 7(b) indicates that 213 sampling events from these 34 systems produced a grand median total nitrogen concentration of **11.9 mg/l**. In both analyses, the total nitrogen (TN) values for each of the SeptiTech systems represents the sum of reported laboratory values for total Kjeldahl nitrogen plus nitrite nitrogen and nitrate nitrogen. The post-reprogramming data value of 11.9 mg/l is significantly lower than the 15.7 mg/l TN concentration presented in the Commission's 2016 annual report which included the pre-reprogramming data. Commission staff will continue to closely monitor the technology's performance to ensure that the improved system performance is maintained as a result of the software correction. As previously noted, the technology must attain a grand median total nitrogen concentration no greater than 14.0 mg/l in order to meet Pinelands water quality standards when used to serve residential development on a minimum one acre parcel.

**While the SeptiTech technology appears to be capable of meeting the 14.0 mg/l TN standard as a result of software corrections, additional monitoring is required to demonstrate it is capable of consistently maintaining that level of treatment. Accordingly, the Commission will retain the temporary restriction on new installations, requiring new systems to be limited to parcels containing at least 1.7 acres, (subject to increase or decrease based upon additional sampling data), as determined by the Pinelands Septic Dilution**



**Model.** This restriction will be lifted if the SeptiTech technology is confirmed to be capable of sustainably meeting Pinelands water quality standards on lots that are smaller than 1.7 acres.

## **Household Variability and Concentration vs. Mass Loading**

When evaluating data from single family wastewater treatment systems, it is important to recognize that the number of home occupants, water use, pharmaceutical use and cleaning and laundry product usage may vary greatly from one residence to another. These and other variables can markedly impact the concentration of nitrogen in wastewater and can adversely affect the ability of a treatment system to meet established discharge limits. The number of individuals occupying a dwelling can result in abnormally high or low levels of nitrogen in wastewater given that each person contributes approximately 9 lbs. of nitrogen to the system annually. Water conservation, while encouraged and desirable, has the potential to cause higher concentrations of pollutants in the wastewater (but not greater mass loading) because less water is available to dilute the pollutants. As a result of significant advances in water conservation, including the use of water conserving fixtures and appliances as well as behavior modifications, assumed values for total nitrogen concentration in domestic effluent, established during the 1960's and 1970's at approximately 40 mg/l, may under-estimate the actual average TN concentration in domestic wastewater streams. It is important to note however, that estimates of the total mass of nitrogen expelled by humans' remains constant at approximately 9 lbs. per person per year. It is evident from wastewater analyses conducted for the pilot program that there is a wide range in the concentration of total nitrogen in septic tank effluent. However, even if the concentration of nitrogen in domestic wastewater frequently exceeds 40 mg/l, the total mass of nitrogen is likely consistent with estimated values used in the Pinelands septic dilution model. As a result, even where effluent values exceed assumed post treatment concentrations, system discharges may still be meeting total nitrogen mass loading targets, even if the observed concentrations do not.

At the outset of the pilot program, four of the five original treatment technologies (Amphidrome, Bioclere, Cromaglass and FAST) were assigned an estimated total nitrogen removal efficiency of 65%. The fifth technology (Ashco RSF<sup>III</sup>) was assigned an estimated total nitrogen removal efficiency of 50%. The four new technologies added to the pilot program in 2013 (BioBarrier, Busse GT, Hoot ANR and SeptiTech) each have an assumed nitrogen removal efficiency of 65% based upon third party certifications. Using these estimates, if the total nitrogen contained in the raw influent is 40 mg/l, a 65% reduction would result in a concentration of 14 mg/l in the treated effluent (and a 50% reduction would result in a concentration of 20 mg/l). These effluent concentrations would be reduced to 2 mg/l at the parcel line of a one acre lot based upon the Pinelands septic dilution model. Similarly, if influent nitrogen levels range up to 80 mg/l, the same 65% removal efficiency would result in effluent concentrations of 28 mg/l. By monitoring only the effluent concentration and determining that it meets the required 14 ppm, the pilot program is able to conservatively ensure compliance with the Commission's 2 mg/l standard at the parcel boundary without regard to influent concentrations.

Use of certain cleaning (sanitizing) and laundry products as well as the use of certain medications can stress the bacteria that provide biological nitrification and denitrification. Because of this, education of system users is an important component of any wastewater management program.

In recognition of these factors, all of the alternative treatment system vendors have developed homeowner user manuals that provide critical information to the owners of the alternative treatment systems. In addition, several vendors have developed and provided system owners with questionnaires that are aimed at identifying laundry and cleaning product usage and any other condition that might lead to non-compliant sample results. Staff encourages all of the technology vendors to collect and analyze this type of information to better understand user characteristics and to enhance compliance with effluent discharge limits.

## **Effluent Monitoring Data**

Effluent sampling data submitted to date have been analyzed and presented in this report. Tables 2, 3, 4, 5, 6, 7(a) and 7(b) provide the running median and grand median values for total nitrogen concentrations (mg/l)<sup>1</sup> and the

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<sup>1</sup> One (1) mg/l = one (1) ppm

number of samples taken for the Amphidrome, Bioclere, Cromaglass, FAST, BioBarrier and SeptiTech wastewater treatment systems respectively. The Commission does not yet have effluent monitoring data for the Busse GT and Hoot wastewater systems. The analysis indicates a grand median of 11.9 mg/l for the Amphidrome system and 11.2 mg/l for the Bioclere system. Both of these grand median concentrations are below the 14 mg/l target, which is based upon the Pinelands septic dilution model and an influent concentration of approximately 40 mg/l. These technologies have been granted permanent approval status for residential use on minimum 1 acre parcels and are no longer subject to required effluent TN analysis and reporting. The TN grand median concentration for the Cromaglass system is 31.5 mg/l, and as a result of this value and Cromaglass Corporation's failure to comply with the requirements of the pilot program, new installations of the Cromaglass technology are no longer permitted in the Pinelands Area. The TN grand median concentration for the FAST system is 18.2 mg/l. While not meeting the Commission's required TN concentration for residential use on one-acre parcels, the FAST system has been demonstrated to meet the Commission's water quality standard if used on minimum 1.4 acre parcels. As noted, the FAST system has been advanced from the pilot program and is now permanently approved for residential use on minimum 1.4 acre parcels. The BioBarrier and SeptiTech technologies are relatively new to the pilot program. BioBarrier has produced a TN grand median concentration of 24.9 mg/l. Commission staff continues to recommend that future use of this technology be limited to minimum 1.7 acre parcel size until such time as the manufacture demonstrates improved and sustained performance. If that demonstration is not made, the Commission staff may recommend the imposition of further restrictions. SeptiTech has produced a TN grand median concentration of 16.1 mg/l when all samples are included in the analysis and 11.9 mg/l when samples affected by a system programming error are excluded. Commission staff will closely monitor the reprogrammed SeptiTech systems to determine if the improved performance is sustained before making a recommendation to lift the current minimum 1.7 acre parcel size.

**Table 2. Amphidrome running median of total nitrogen (mg L-1) by number of sampling events for each wastewater treatmentsystem. The grand median, 25th percentile, 75th percentile, and number of systems sampled (N) per event are provided. (See Appendix 1 for discussion of data editing.)**

Total Nitrogen Running Median		Number of Sampling Events													Grand Median
Technology	System	1	2	3	4	5	6	7	8	9	10	11	12	13	
Amphidrome	1	18.5	25.3	32.1	25.3	20.7	19.6	18.5	17.7	16.9	16.0	16.9			18.5
Amphidrome	2	9.5	9.1	9.4	2.5	9.5	9.7	9.5	9.5	9.4	9.4	9.4	9.5		9.5
Amphidrome	3	18.4	12.1	18.4	50.4	18.4	14.9	12.6	12.0	11.5	12.0	12.6	12.9		12.7
Amphidrome	4	35.2	29.2	23.2	16.4	9.7	8.4	7.8	7.5	7.2	7.5	7.8	7.6		8.1
Amphidrome	5	10.0	42.3	51.3	31.8	12.3	31.8	17.8	16.0	15.8	16.8	15.8	16.2	15.8	16.2
Amphidrome	6	6.0	33.8	6.9	9.8	12.7	14.8	12.7	11.1	9.5	11.1	12.1	10.8		11.1
Amphidrome	7	12.7	11.8	11.0	9.2	8.5	9.6	9.5	10.1	10.7	10.8	10.7	10.1		10.4
Amphidrome	8	15.2	19.3	15.2	12.1	9.1	9.5	9.1	9.0	8.9	9.0	8.9	8.7		9.1
Amphidrome	9	143.9	79.5	15.1	12.5	9.8	10.1	10.3	10.1	9.8	10.1	10.3	10.1	10.3	10.3
Amphidrome	10	5.8	4.9	5.8	6.6	7.0	6.7	7.0	7.1	7.0	7.2	7.3			7.0
Amphidrome	11	14.9	10.1	6.0	8.4	10.8	12.2	10.8	9.8	10.0	9.5	8.9	8.4		9.9
Amphidrome	12	18.8	27.6	36.4	33.6	36.4	39.3	36.4	33.6	30.8	24.8	30.8			33.6
Amphidrome	13	4.7	5.4	4.7	5.2	5.7	5.2	5.3	5.5	5.7	5.8	5.7	5.8		5.4
Amphidrome	14	24.5	17.2	9.8	9.7	9.5	9.4	9.4	9.4	9.5	9.4				9.5
Amphidrome	15	4.0	6.3	5.3	5.4	5.3	5.4	5.5	5.4	5.5	5.7	5.9			5.4
Amphidrome	16	11.7	16.7	11.7	11.4	11.2	11.4	11.7	12.5	13.3	12.5	11.7	11.8		11.7
Amphidrome	17	47.2	47.2	58.2	56.5	54.8	54.5	54.2	54.0	53.8	53.1	52.3			54.0
Amphidrome	18	11.1	12.9	11.1	10.3	9.4	10.3	11.1	11.8	12.3	12.4	12.3	12.1	11.9	11.8
Amphidrome	20	16.0	13.4	16.0	14.9	16.0	14.9	16.0	14.9	13.9	14.9	16.0			14.9
Amphidrome	21	7.5	8.1	8.8	10.3	11.9	13.0	11.9	10.6	11.9	13.0	14.0			11.9
Amphidrome	22	36.8	48.3	55.0	45.9	36.8	28.1	19.5	19.4	19.5	23.0	26.6			28.1
Amphidrome	23	25.4	16.2	11.0	10.3	11.0	11.3	11.6	11.9	12.3	11.9	11.6	11.5	11.5	11.6
Amphidrome	24	7.3	5.7	6.5	6.9	6.5	6.2	6.5	6.9	7.3	6.9				6.7
Amphidrome	25	11.6	13.5	15.3	15.7	15.9	16.0	16.1	16.4	16.1	16.4	16.8	16.4	16.8	16.1
Amphidrome	26	14.2	19.1	23.9											19.1
Amphidrome	28	32.6		41.4	32.6	23.9	23.3	23.9							23.9
Amphidrome	29	7.6	17.6	7.6	9.1	7.6	7.5	7.6	7.5	7.4	6.8	6.3			7.6
Amphidrome	30	97.1	53.2	9.3	9.0	9.3	9.9	9.3	9.0	9.3	9.9	9.3	9.0	9.3	9.3
Amphidrome	31	11.8	13.5	12.3	12.9	13.5	12.9	12.3	12.6	12.3	12.3	12.3	12.1		12.3
Amphidrome	32	7.4	7.7	8.0	11.3	8.0	9.8	8.0	7.7	7.4	7.7				7.8
Amphidrome	33	6.4	5.0	6.4	6.4	6.4	6.1	6.3	6.4	6.5	6.6				6.4
Amphidrome	34	13.9	20.0	13.9	18.3	18.3	16.1	18.3	20.5	22.7	20.5	18.3			18.3
Amphidrome	35	9.0	11.5	13.9	16.0	13.9	12.8	13.9	16.0	13.9	16.0	18.1			13.9
Amphidrome	36	11.7	12.9	13.6	12.9	13.6	13.8	14.1	14.1	14.1	14.1	14.1	13.8		13.8
Amphidrome	37	9.9	9.5	9.9	10.8	11.7	11.2	10.6	11.2	11.7	11.3	11.7	11.8	11.7	11.2
Amphidrome	38	17.3	13.9	10.5	13.2	10.5	9.1	7.7	7.0	7.7					10.5
Amphidrome	41	27.4	26.7	25.9	26.7	25.9	22.0	19.1	18.6	19.1	19.1				24.0
Amphidrome	43	17.2	17.5	17.2	17.5	17.8	19.0	20.1	19.0	17.9	18.1	18.3	18.5	18.7	18.1
Amphidrome	44	11.9	13.6	15.3	15.9	16.5	15.9	15.3	15.1	15.0	13.4	13.7	14.3		15.1
Amphidrome	45	26.6	16.7	20.4	22.9	20.4	14.9	15.4	12.4	9.5	9.5	9.6	10.2	10.9	14.9
Amphidrome	46	9.0	9.7	10.4	10.9	10.4	10.4	10.4	10.4	10.4	10.8	10.4			10.4
Amphidrome	47	15.2	16.2	15.2	13.5	11.8	13.5	11.8	11.8	11.8	11.8	11.8			11.8
Amphidrome	48	37.6	28.3	24.2	23.8	24.2	23.8	23.4	23.8	24.2	23.8				24.0
Amphidrome	49	12.0	21.5	14.7	15.0	15.2	16.8	15.2							15.2
Amphidrome	50	22.9	19.0	22.9	25.1	27.3	25.6	22.9	25.6	23.9	23.4				23.9
Amphidrome	51	82.0	75.1	68.2	39.1	22.5	17.0	12.6							39.1
Amphidrome	53	12.0	13.9	12.6	12.3	12.0	10.0	12.0	10.1						12.0
Amphidrome	54	9.8	9.5	9.3	9.5	9.3	9.5	9.8							9.5
Amphidrome	55	23.2	18.6	16.6	15.3	14.0	14.0								15.9
Amphidrome	56	18.3	28.7	20.9	27.8	20.9	27.8								24.4
Amphidrome	57	56.0	50.7	56.0	52.5	49.0									52.5
Amphidrome	58	31.8	38.3	31.8	22.0	15.1									31.8
Amphidrome	59	28.1	30.6	33.0	32.6	32.3									32.3
Amphidrome	60	18.1	15.6	14.2	16.1	18.1	16.1								16.1
Amphidrome	61	6.7	7.9	8.2	8.2	8.2	8.1								8.0
Amphidrome	62	3.7	9.7	12.6	9.5										9.6
Amphidrome	63	5.9	6.0	6.0	8.6										6.0
Amphidrome	64	8.3	8.7	9.1	8.7										8.7
Amphidrome	65	48.0	27.3	47.5	29.2	34.4									34.4
Amphidrome	66	13.1	41.4	51.4	37.3										39.4
Amphidrome	67	18.8	15.8	16.1											16.1
Amphidrome	68	10.0	9.4	10.0											10.0
Amphidrome	69	52.1	30.5												41.3
Amphidrome	70	25.5													25.5
Amphidrome	71	5.8	7.7	6.3											6.3
Amphidrome	72	36.0	38.8												37.4
Amphidrome	73	24.2	22.4	20.5											22.4
Amphidrome	74	7.2													7.2
Sample # Median		14.6	16.5	14.0	13.2	12.7	12.9	11.9	11.8	11.7	11.8	11.8	11.5	11.7	11.9
25th Percentile		9.4	9.8	9.4	9.5	9.5	9.6	9.5	9.3	9.3	9.3	9.4	9.5	10.6	9.5
75th Percentile		24.7	28.1	23.0	24.4	19.4	16.4	16.0	16.1	15.6	16.1	15.9	12.6	14.3	16.1
n		68	66	64	59	55	51	47	44	42	40	35	21	11	

Table 3. Bioclere running median of total nitrogen (mg L<sup>-1</sup>) by number of sampling events for each wastewater treatment system. The grand median, 25th percentile, 75th percentile, and number of systems sampled (N) per event are provided. (See Appendix 1 for discussion of data editing.)

Total Nitrogen Running Median		Number of Sampling Events												Grand Median
Technology	System	1	2	3	4	5	6	7	8	9	10	11	12	
Bioclere	1	22.3	13.4	8.8	8.9	8.8	7.8	8.8	7.8	7.8				8.8
Bioclere	2	10.7	9.8	8.9	9.8	8.9	9.8	10.7	10.8	10.7				9.8
Bioclere	6	17.0	11.4	17.0	12.7	14.4	13.3	12.2	10.3					13.0
Bioclere	7	10.4	14.9	10.4	10.2	10.4	10.8	10.4	10.2	10.1	10.2	10.4	10.8	10.4
Bioclere	8	11.2	9.6	10.5	9.3	8.6	9.6	10.5	9.6	10.4				9.6
Bioclere	9	8.6	8.4	8.6	9.5	10.4	10.7	10.4	9.5	10.4				9.5
Bioclere	10	8.4	8.4	8.4	9.9	9.2	9.7	10.1	9.8	9.6	9.5	9.4	9.5	9.5
Bioclere	11	25.0	17.8	15.4	13.2	15.4	13.2	13.8	14.6	13.8	12.4	10.9		13.8
Bioclere	12	52.8	55.5	52.8	33.0	13.1	12.3	13.1	12.3	13.1	12.3	13.1	13.5	13.1
Bioclere	13	14.2	14.2	14.2	11.4	11.9	11.1	11.9	11.5	11.1	11.2			11.7
Bioclere	14	16.2	24.7	16.2	17.1	16.2	14.5	12.9	12.2	11.4	11.0	10.7	11.0	13.7
Bioclere	15	5.2	13.2	10.6	13.0	10.6	13.0	15.3	13.8	15.3	13.8			13.1
Bioclere	16	28.1	25.0	22.0	18.5	15.1	18.5	15.1	14.3	13.4	14.3	13.4	14.3	15.1
Bioclere	17	79.8	48.0	16.2	16.2	16.2	16.1	16.0	14.4	12.8	12.9	12.785		16.1
Bioclere	18	13.2	10.5	10.3	9.3	10.3	9.7	9.2	9.3	9.4	9.8	9.5	9.9	9.8
Bioclere	19	29.4	30.2	29.4	19.6	9.8	12.5	11.9	13.6	11.9				13.6
Bioclere	20	52.8	42.2	31.6	26.4	21.2	26.4	21.2	17.8	14.5				26.4
Bioclere	21	10.2	10.2	10.3	11.7	10.3	10.2	10.2	9.6					10.2
Bioclere	22	9.7	9.8	10.0	10.1	10.0	9.8	9.7	9.8	10.0	10.1	10.1		10.0
Bioclere	23	27.3	18.2	9.1	11.1	9.1	8.8	9.1						9.1
Bioclere	24	2.4	2.5	2.5										2.5
Bioclere	25	25.9	16.7	9.7	11.3	9.7	11.3	12.8						11.3
Bioclere	26	1.9	18.9	4.9	8.5	12.1	8.5	10.3						8.5
Bioclere	27	34.6	23.9	13.2	13.1	13.1	12.7	12.3						13.1
Bioclere	28	24.8	17.3	11.6	10.7	9.7	10.7							11.2
Bioclere	29	10.3	13.1	11.0	12.2	12.0								12.0
Bioclere	30	24.9	21.5	18.0	14.1	13.3								18.0
Bioclere	31	4.5	23.1	5.8	9.2									7.5
Bioclere	32	47.0	42.1	37.3	26.5									39.7
Bioclere	33	48.1	31.2	14.3	13.2	13.1								14.3
Bioclere	34	20.8	17.7	14.6	13.8									16.1
Bioclere	35	7.3	19.0	18.2										18.2
Bioclere	36	5.1												5.1
Bioclere	37	12.0												12.0
Bioclere	38	13.8												13.8
Bioclere	39	8.5												8.5
Bioclere	40	11.9												11.9
Bioclere	41	12.3												12.3
Sample # Median		13.5	17.5	11.3	12.0	10.6	11.0	11.9	10.8	11.1	11.2	10.7	10.9	11.2
25th Percentile		9.8	11.2	9.6	9.9	9.8	9.8	10.2	9.7	10.1	10.1	10.1	10.1	10.0
75th Percentile		25.7	24.1	16.4	14.0	13.2	13.0	13.0	13.7	13.1	12.6	12.8	12.9	13.1
n		38	32	32	30	27	24	23	19	17	11	9	6	

Table 4. **Cromaglass** running median of total nitrogen (mg L<sup>-1</sup>) by number of sampling events for each wastewater treatment system. The grand median, 25th percentile, 75th percentile, and number of systems sampled (N) per event are provided. (See Appendix 1 for discussion of data editing.)

Total Nitrogen Running Median		Number of Sampling Events												Grand Median
Technology	System	1	2	3	4	5	6	7	8	9	10	11	12	
Cromaglass	1	140.1	78.6	17.1	32.2	26.3	36.9	43.6	41.0	38.5	35.5	32.5		36.9
Cromaglass	2	49.0	45.0	49.0	45.0	49.0	45.0	41.0	43.8	44.9	43.0	44.9	43.0	45.0
Cromaglass	3	76.5	58.2	50.4	45.2	50.4	47.6	50.4	55.9	50.4	47.6	44.9		50.4
Cromaglass	4	77.2	55.7	77.2	64.4	77.2	83.6	78.8	78.0	77.2	69.1	61.0		77.2
Cromaglass	5	110.6	99.0	87.4	71.8	56.2	45.7	35.1	30.3	25.5	26.5	25.5		45.7
Cromaglass	6	61.6	44.7	47.3	39.0	47.3	50.0	52.7	50.0	47.3	47.3	47.3	47.7	47.3
Cromaglass	7	67.5	52.3	37.1	50.1	42.6	47.8	46.8	49.9	53.0	49.9	51.3		49.9
Cromaglass	8	85.5	61.9	38.3	37.0	38.3	39.9	40.7	41.1	40.7	41.1			40.7
Cromaglass	9	19.7	39.7	19.7	19.6	19.7	19.6	19.5	18.5	19.5	18.5	17.6		19.6
Cromaglass	10	58.5	61.3	58.5	42.2	25.9	23.0	20.1	18.1	20.1	18.1	20.1	18.634	21.5
Cromaglass	11	35.1	47.2	35.1	34.3	35.1	34.3	35.1	37.4	39.8	40.1	40.5		35.1
Cromaglass	12	30.6	26.5	22.5	19.5	22.5	26.5	22.5	19.5	16.5	15.0	13.6		22.5
Cromaglass	13	17.4	10.8	12.4	14.9	17.4	16.0	14.6	14.0	13.5	14.0	13.5	14.0	14.0
Cromaglass	14	31.7	28.7	31.7	30.9	30.0	29.9	29.7	27.7	25.8	26.6			29.8
Cromaglass	15	18.0	64.0	32.1	38.3	32.1	30.1	28.2	30.1	32.1	30.1	28.2		30.1
Cromaglass	16	25.5	17.1	14.4	17.2	14.4	14.3	14.2	14.3	14.2	13.3			14.4
Cromaglass	17	43.5	56.7	43.5	32.4	43.5	41.6	43.5	52.9	62.3	66.2			43.5
Cromaglass	18	104.4	85.3	66.1	57.6	66.1	60.6	56.3	55.7	55.2	52.1	49.0	40.9	56.9
Cromaglass	19	67.5	71.7	67.5	42.8	67.5	62.8	58.1	39.6	21.1	39.6	31.1	26.1	50.4
Cromaglass	20	46.3	32.5	18.6	15.2	18.6	28.8	39.0	31.2	23.4	27.3			28.1
Cromaglass	21	45.9	64.2	45.9	38.4	30.9	21.8	14.7	22.8	14.7	15.6	14.7	14.0	22.3
Cromaglass	22	57.6	49.7	41.7	31.0	41.7	40.2	41.7	40.2	38.7	38.2	37.8		40.2
Cromaglass	23	37.4	73.3	37.4	32.7	28.1	32.7	37.4	32.7	37.4	43.7	37.4	32.7	37.4
Cromaglass	24	31.8	32.6	33.5	32.6	31.8	31.2	30.6	28.0	25.5	19.5	24.8	19.2	30.9
Cromaglass	25	52.8	42.8	32.8	35.0	37.3	42.6	47.9	50.3	52.8	53.1			45.3
Cromaglass	26	74.3	68.7	63.2	43.5	23.7	20.2	16.8	16.5	16.8				23.7
Cromaglass	27	90.3	73.2	56.1	70.7	56.1	54.9	56.1	57.7	59.3	60.4			58.5
Cromaglass	28	86.7	56.8	29.6	29.1	28.6	27.8	28.6	29.1	29.6	38.0			29.3
Cromaglass	29	23.5	20.7	23.5	21.1	18.7	18.4	18.7	18.4	18.0	18.4	18.7		18.7
Cromaglass	30	103.3	64.6	25.9	29.6	25.9	29.6	33.4	32.2	31.0	32.2	33.4	32.2	32.2
Cromaglass	31	7.4	34.6	61.9	37.3	32.4	38.5	44.7	44.8	44.7	41.8			40.2
Cromaglass	32	78.3	63.0	50.6	49.1	47.7	34.5	25.3	23.3	21.3	23.3			41.1
Cromaglass	33	76.1	48.0	31.6	25.8	31.6	31.7	31.7	31.7	31.6				31.7
Cromaglass	34	49.5	114.9	49.5	47.8	49.5	51.6	53.8	61.0	68.3	74.1			52.7
Cromaglass	35	43.0	42.9	43.0	47.4	43.0	43.8	44.6	43.8	44.6	43.8			43.8
Cromaglass	36	100.1	90.1	80.1	78.9	77.8	78.9	77.8	63.7	77.8	76.3	74.8		77.8
Cromaglass	37	24.1	21.7	19.3	18.7	18.0	18.7	18.0	18.0	18.0	17.3	16.7		18.0
Cromaglass	38	61.3	49.0	36.8	35.1	33.4	24.5	15.7	16.0	16.3				33.4
Cromaglass	39	11.3	26.3	24.9	26.3	27.7	28.0	28.4	34.8	31.6	30.0	31.6		28.0
Cromaglass	40	17.2	13.5	17.2	18.9	17.2	18.9	17.2	15.5	17.2	17.9			17.2
Cromaglass	41	35.8	23.3	35.8	23.3	15.1	13.1	11.2	12.9	11.2	12.9			14.1
Cromaglass	42	48.2	29.2	10.2	11.6	10.2	11.6	13.1	11.6	10.2	11.6			11.6
Cromaglass	43	79.2	46.9	79.2	47.2	31.4	23.3	15.2	14.9	15.2				31.4
Cromaglass	44	8.3	11.5	14.6	14.6	14.6	14.6	14.5	12.6	10.6	9.8	9.1	9.9	12.0
Cromaglass	45	69.1	46.2	30.6	27.0	23.3	16.8	23.3	27.0	23.3	16.8	23.3		23.3
Cromaglass	46	29.1	24.0	29.1	29.7	29.1	29.7	30.3	31.8	33.4	38.4			29.7
Cromaglass	47	75.1	56.7	38.3	33.7	32.6	35.4	38.3	45.5	52.7	53.7			41.9
Cromaglass	48	30.1	48.0	65.9	48.0	52.7	59.3	52.7	54.6	56.5	60.6			53.7
Cromaglass	49	46.6	26.7	6.8	21.0	28.3	22.7	17.2	22.7					22.7
Cromaglass	50	18.0	22.0	18.0	21.1									19.5
Cromaglass	51	51.6	36.3	21.0	23.0	25.1	23.0	21.0						23.0
Cromaglass	52	18.1	16.6	18.1	29.0									18.1
Cromaglass	53	8.9	8.3	8.9	15.2									8.9
Cromaglass	54	21.2												21.2
Cromaglass	55	22.0	22.3											22.1
Cromaglass	56	21.5												21.5
Cromaglass	57	11.7	17.3	11.9	17.3									14.6
Cromaglass	58	7.1	16.6	26.1										16.6
Cromaglass	59	18.4	18.1	18.4	18.3	18.4								18.4
Sample # Median		45.9	45.0	33.1	32.4	31.4	30.7	31.1	31.7	31.3	36.7	31.3	26.1	31.5
25th Percentile		21.7	24.0	19.6	21.1	23.5	22.8	18.9	18.5	18.0	18.3	19.0	16.3	19.3
75th Percentile		71.7	61.3	49.1	43.1	43.2	43.5	44.3	44.8	45.5	47.4	43.8	36.8	44.6
n		59	57	56	55	51	50	50	49	48	44	26	11	

Table 5. **FAST** running median of nitrogen (mg total L<sup>-1</sup>) by number of sampling events for each wastewater treatment system. The grand median, 25th percentile, 75th percentile, and number of systems sampled (N) per event are provided. (See Appendix 1 for discussion of data editing.)

Total Nitrogen Running Median		Number of Sampling Events																										
Technology	System	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	Grand Median
FAST	1	31.3	45.4	37.9	34.6	37.9	37.4	37.0	34.1	31.3	30.7	30.0	28.4	26.8	28.4	26.8	25.7	24.6	23.9	23.1	21.8	23.1	21.8	20.5	20.5	20.6		28.4
FAST	2	27.1	25.8	27.1	34.6	27.1	27.7	27.1	27.7	28.2	27.7	27.1	26.1	25.0	24.8	24.5	24.1	24.1	23.4	23.1	22.1	20.7	19.3	18.1	17.8	18.2	18.1	24.9
FAST	3	39.3	34.5	29.6	29.6	29.6	27.2	29.6	29.6	29.6	29.6	29.6	28.5	29.6	28.5	27.4	26.1	24.8	24.5	24.2	24.1	24.0	23.2	22.4	21.3		28.5	
FAST	4	32.4	23.0	23.9	25.1	23.9	18.9	15.9	15.5	15.9	15.5	15.0	15.5	15.9	17.5	15.9	15.5	15.0	14.4	13.8	13.7	13.8	13.7	13.6	13.5		15.5	
FAST	5	30.1	24.4	30.1	24.9	19.6	20.6	20.7	20.2	19.6	19.2	18.7	19.2	18.7	18.5	18.2	18.0	17.7	17.6	17.5	17.3	17.1	17.3	17.1			18.7	
FAST	6	12.4	16.6	20.7	21.4	20.8	21.4	22.0	22.3	22.0	22.2	22.4	22.5	22.4	22.2	22.0	21.4	20.8	20.8	20.8	20.7	20.3	19.8	18.0			21.1	
FAST	7	33.3	30.6	27.8	24.6	21.3	17.1	12.9	11.9	12.2	12.6	12.9	13.4	12.9	13.4	13.9	13.4	13.9	15.0	16.1	16.0	15.9	14.9				14.4	
FAST	8	48.6	40.7	32.7	29.5	29.8	31.0	29.8	29.4	29.8	31.0	32.2	31.0	29.8	29.4	28.9	27.6	26.2	26.2	26.1	20.9	15.6	15.5	15.4			29.5	
FAST	9	28.1	29.6	28.1	25.7	23.2	25.5	23.2	21.4	19.6	19.0	18.3	16.9	17.0	17.7	17.0	16.3	15.5	16.3	15.5	15.1	14.7					18.3	
FAST	10	16.5	17.1	17.6	24.7	17.6	17.1	17.6	17.1	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5								16.5	
FAST	11	21.9	22.0	21.9	20.4	21.9	20.4	18.8	18.7	18.6	17.5	16.3	15.4	14.5	13.4	12.3	11.9	11.4									18.6	
FAST	12	44.5	27.4	13.1	19.9	25.2	19.2	15.4	20.3	22.1	18.8	22.1	18.8	15.4	18.8	20.7											19.9	
FAST	13	23.2	19.3	23.0	23.1	23.2	23.1	23.0	19.2	15.4	15.0	15.4	19.2	15.4	15.0	15.4											19.2	
FAST	14	13.5	11.0	13.5	18.0	15.9	14.7	13.5	14.7	13.5	11.0	13.5	14.0	14.5	14.0	14.5											14.0	
FAST	15	14.2	14.2	14.2	13.1	14.2	13.7	14.2	14.3	14.4	14.6	14.7	16.0	16.8	17.0	16.8											14.3	
FAST	16	28.6	17.5	28.6	31.3	30.9	29.8	28.6	29.8	28.6	21.8	15.0	14.5														28.6	
FAST	17	29.2	32.6	29.2	22.7	17.8	17.8	17.8	17.9	17.8	17.9	17.8	17.8	17.7													17.8	
FAST	18	25.2	16.4	13.7	19.5	13.7	12.2	11.1	12.4	11.1	12.4	13.7	12.4														13.1	
FAST	19	29.6	20.3	10.9	10.9	10.9	11.0	10.9	11.0	10.9	10.9	10.8	10.8	10.8													10.9	
FAST	20	20.8	21.0	21.1	22.8	21.1	21.0	20.8	18.8	16.8	13.9	11.0	13.9														20.8	
FAST	21	23.9	20.3	22.6	23.3	22.6	21.5	20.3	18.5	17.4	17.2	16.9	16.6														20.3	
FAST	22	26.3	35.0	26.3	19.2	18.5	15.3	18.5	15.3	12.2	12.1	12.2	12.2														16.9	
FAST	23	18.7	13.5	8.2	8.1	8.0	8.1	8.2	9.7	11.1	10.4	11.1	11.1														10.0	
FAST	24	6.5	7.5	8.4	14.5	8.4	8.6	8.7	14.4	9.4	9.5	9.4	9.5														9.1	
FAST	25	17.1	13.6	17.1	19.2	17.1	13.6	14.4	15.8	14.4	14.3	14.2	14.3														14.4	
Sample# Median		26.3	21.0	22.6	22.8	21.1	19.2	18.5	18.5	16.8	16.5	15.4	16.0	16.8	17.7	17.0	18.0	17.7	19.2	20.8	20.8	17.1	18.3	18.1	18.0	19.4	18.1	18.2
25th Percentile		18.7	16.6	14.2	19.2	17.1	14.7	14.2	14.7	13.5	12.6	13.5	13.9	15.4	15.7	15.7	15.9	15.3	16.3	16.1	16.0	15.6	15.4	16.3	17.8	18.8	18.1	15.7
75th Percentile		30.1	29.6	28.1	25.1	23.9	23.1	23.0	21.4	22.0	19.2	18.7	19.2	22.4	23.5	23.3	24.9	24.4	23.8	23.1	21.8	20.7	20.6	20.1	20.5	20.0	18.1	22.7
n	25	25	25	25	25	25	25	25	25	25	25	25	25	22	17	15	15	11	11	10	9	9	9	8	7	5	2	1

Table 6. **BioBarrier** running median of total nitrogen (mg L<sup>-1</sup>) by number of sampling events for each wastewater treatment system. The grand median, 25th percentile, 75th percentile, and number of systems sampled (N) per event are provided. (See Appendix 1 for discussion of data editing.)

Total Nitrogen Running Median																		
		Number of Sampling Events																
Technology	System	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Grand Median
BioBarrier	1	14.1	20.6	14.9	21.0	27.1	29.0	30.8	31.1	31.3	31.1	30.8	31.1	31.3	33.0	34.7		30.8
BioBarrier	2	13.8	12.1	12.6	13.2	12.6	11.5	12.6	13.2	13.8	13.2	13.8	15.7	17.5	19.1	20.6		13.2
BioBarrier	3	19.9	15.9	19.9	31.3	19.9	30.3	26.8	23.4	22.3	24.6	26.8	30.7	34.6	37.6			25.7
BioBarrier	4	20.4	21.9	23.4	25.8	23.4	25.8	28.2	25.8	27.5	25.6	27.5	27.9	28.2	28.8			25.8
BioBarrier	5	20.8	21.8	22.8	22.9	22.9	22.9	22.8	22.9	22.9	24.3	25.7	27.9	30.1	31.6			22.9
BioBarrier	6	18.9	28.4	32.0	27.5	32.0	32.8	33.6	32.8	32.0	32.8	33.6	35.7	37.8	40.4			32.8
BioBarrier	7	28.4	36.4	40.8	34.6	28.4	34.6	28.4	24.8	21.2	24.8							28.4
BioBarrier	8	13.3	25.8	38.3	25.8	13.3	22.4	31.1	31.3	31.1	31.3							28.5
BioBarrier	9	13.6	14.3	15.0	14.4	15.0	23.3	15.0	23.3	31.6	23.3	31.6	29.3	31.6	31.6	31.6	32.2	23.3
BioBarrier	10	11.8	10.0	8.1	8.9	9.6	9.7	9.8	10.8	11.8	12.7	13.6	16.5					10.4
BioBarrier	11	28.4	16.7	10.8	19.6	10.8	19.6	28.4	31.3	34.2	38.4	42.6						28.4
BioBarrier	12	33.1	19.6	33.1	33.3	33.4	33.3	33.1	30.7	33.1	33.3	33.1						33.1
Sample# Median		19.4	20.1	21.4	24.3	21.4	24.6	28.3	25.3	29.3	25.2	29.2	28.6	31.3	31.6	31.6	32.2	24.9
25th Percentile		13.8	15.5	14.3	18.3	13.1	21.7	20.9	23.2	22.0	24.1	26.0	25.0	29.2	30.2	26.1	32.2	22.6
75th Percentile		22.7	22.9	32.3	28.4	27.4	30.9	30.9	31.1	31.7	31.6	32.7	30.8	33.1	35.3	33.2	32.2	31.4
n		12	12	12	12	12	12	12	12	12	12	10	8	7	7	3	1	

Table 7a. **SeptiTech** running median of total nitrogen (mg L-1) for all samples by number of sampling events for each wastewater treatment system. The grand median, 25th percentile, 75th percentile, and number of systems sampled (N) per event are provided. (See Appendix 1 for discussion of data editing.)

Total Nitrogen Running Median																
		Number of Sampling Events												Grand Median		
Technology	System	1	2	3	4	5	6	7	8	9	10	11	12			
SeptiTech	1	8.7	8.8	8.7	8.7	8.7	8.8	8.7	8.7	8.7	8.7	8.7	8.7		8.7	
SeptiTech	2	33.4	31.1	28.8	26.7	28.8	26.7	24.5	20.3	16.1	15.0	13.8	13.8		25.6	
SeptiTech	3	24.6	19.0	15.2	15.2	15.2	15.2	15.1	14.2	13.3	13.3	13.3	10.7		15.1	
SeptiTech	4	19.9	17.9	19.9	20.7	19.9	20.7	19.9	17.9	15.9	12.9	9.8	9.7		18.9	
SeptiTech	5	18.5	20.1	18.5	13.9	10.2	9.7	10.2	10.1	10.0	9.6	10.0			10.2	
SeptiTech	6	17.2	22.4	27.6	22.4	23.6	20.4	23.6	20.4	17.2	14.8	12.4			20.4	
SeptiTech	7	33.5	34.8	33.5	30.7	27.9	24.7	21.5	19.1	16.6	14.6	12.5			24.7	
SeptiTech	8	32.8	24.9	17.0	12.0	14.5	12.3	10.0	10.4	10.8	10.4	10.4			12.0	
SeptiTech	9	4.1	5.4	6.1	6.4	6.1	6.0	6.1	6.0	5.8					6.0	
SeptiTech	10	30.9	26.8	29.0	26.7	24.3	23.5	22.7	21.5	22.3					24.3	
SeptiTech	11	25.2	31.4	37.6	38.5	37.6	31.4	25.8	31.7	37.6					31.7	
SeptiTech	12	10.7	16.0	21.3	16.0	10.7	12.0	13.0	11.9	12.9	13.0	13.0	13.1	13.2	13.1	
SeptiTech	13	13.1	15.0	13.1	11.4	9.6	9.5	9.4	9.5	9.6	11.4	13.1	13.8	14.4	13.8	
SeptiTech	14	33.3	23.8	19.2	26.3	19.2	26.3	19.2	26.3	19.2	19.0				21.5	
SeptiTech	15	26.0	19.0	12.8	12.4	11.9	11.5	11.3							12.4	
SeptiTech	16	19.9	16.5	19.9	34.8	19.9	19.8	19.6	18.8						19.8	
SeptiTech	17	9.4	11.9	14.4	15.5	16.5	16.7	16.8	16.7						16.0	
SeptiTech	18	38.8	44.1	38.8	38.4	38.8	38.4	38.0	35.9						38.6	
SeptiTech	19	9.3	12.6	15.9	21.3	15.9	16.7	17.4	19.4						16.3	
SeptiTech	20	21.9	22.4	21.9	18.1	16.2	16.1								20.0	
SeptiTech	21	14.2	36.5	31.7	25.9	20.0	18.5	20.0							20.0	
SeptiTech	22	39.4	45.1	39.4	39.2	39.0	38.0	36.9							39.2	
SeptiTech	23	29.7	36.2	31.2	36.9	31.2	36.9	31.2							31.2	
SeptiTech	24	7.5	6.6	5.7	5.9	6.1									6.1	
SeptiTech	25	28.9	20.2	11.4	11.3	11.4									11.4	
SeptiTech	26	9.2	8.7	8.1	8.7	9.2									8.7	
SeptiTech	27	17.9	10.7	8.4	7.6										9.6	
SeptiTech	28	5.5	6.7	7.3	7.6	7.6									7.3	
SeptiTech	29	4.3	4.5	4.6	5.1										4.5	
SeptiTech	30	7.4	8.6	9.7											8.6	
SeptiTech	31	11.5	10.6	11.5											11.5	
SeptiTech	32	16.4	12.2	12.2											12.2	
SeptiTech	33	57.4													57.4	
SeptiTech	34	28.5													28.5	
Sample# Median		19.2	18.4	16.5	16.0	16.2	18.5	19.4	18.4	14.6	13.0	12.5	11.9	13.8	13.4	16.1
25th Percentile		9.7	10.7	11.0	11.3	10.5	12.1	11.7	10.8	10.2	10.9	10.1	10.0	13.5	13.3	10.8
75th Percentile		29.5	25.4	27.9	26.7	24.0	25.5	23.4	20.4	17.1	14.7	13.1	13.6	14.1	13.6	21.9
n		34	32	32	29	27	23	22	18	14	11	10	6	2	2	

Table 7(b). **SeptiTech** running median of total nitrogen (mg L-1) for only software-activated denitrification cycle samples by number of sampling events for each wastewater treatment system. The grand median, 25th percentile, 75th percentile, and number of systems sampled (N) per event are provided. (See Appendix 1 for discussion of data editing.)

Total Nitrogen Running Median		Number of Sampling Events													Grand Median	
Technology	System	1	2	3	4	5	6	7	8	9	10	11	12			
SeptiTech	1	8.7	8.8	8.7	8.7	8.7	8.8	8.7	8.7	8.7	8.7	8.7	8.7		8.7	
SeptiTech	2	13.8	15.0	13.8	11.9	13.2	11.6	11.3							13.2	
SeptiTech	3	5.3	5.1	5.3	6.7	5.3	5.3	5.3							5.3	
SeptiTech	4	8.3	19.1	9.0	9.4	9.0	8.8	9.0	8.8						9.0	
SeptiTech	5	7.7	8.5	9.2	8.9	9.2	9.6	9.2	8.9	9.2					9.2	
SeptiTech	6	7.5	15.6	11.9	17.8	12.4	12.2	11.9	10.8						12.0	
SeptiTech	7	16.6	14.6	16.6	14.6	12.5	11.9	11.3	10.2						13.5	
SeptiTech	8	17.0	11.1	7.0	10.8	10.0	8.5	10.0	10.4	10.0					10.0	
SeptiTech	9	4.1	5.4	6.1	6.4	6.1	6.0	6.1	6.0	5.8					6.0	
SeptiTech	10	29.0	26.7	24.3	22.3	20.3	17.0	20.3							22.3	
SeptiTech	11	25.2	31.4	37.6	38.5	37.6	31.4	25.8	31.7	37.6					31.7	
SeptiTech	12	10.7	16.0	21.3	16.0	10.7	12.0	13.0	11.9	12.9	13.0	13.0	13.1	13.2	13.1	
SeptiTech	13	13.1	15.0	13.1	11.4	9.6	9.5	9.4	9.5	9.6	11.4	13.1	13.8	14.4	13.8	
SeptiTech	14	344.1	181.4	18.7											181.4	
SeptiTech	15	26.0	19.0	12.8	12.4	11.9	11.5	11.3							12.4	
SeptiTech	16	19.6	18.8	18.0											18.8	
SeptiTech	17	9.4	11.9	14.4	15.5	16.5	16.7	16.8	16.7						16.0	
SeptiTech	18	24.3	27.9												26.1	
SeptiTech	19	9.3	12.6	15.9	21.3	15.9	16.7	17.4	19.4						16.3	
SeptiTech	20	21.9	22.4	21.9	18.1	16.2	16.1								20.0	
SeptiTech	21	14.2	36.5	31.7	25.9	20.0	18.5	20.0	20.0						20.0	
SeptiTech	22	15.2	14.1												14.7	
SeptiTech	23	29.7	36.2	31.2	36.9	31.2	36.9	31.2							31.2	
SeptiTech	24	7.5	6.6	5.7	5.9	6.1									6.1	
SeptiTech	25	28.9	20.2	11.4	11.3	11.4									11.4	
SeptiTech	26	9.2	8.7	8.1	8.7	9.2									8.7	
SeptiTech	27	17.9	10.7	8.4	7.6										9.6	
SeptiTech	28	5.5	6.7	7.3	7.6										7.0	
SeptiTech	29	4.3	4.5	4.6	5.1										4.5	
SeptiTech	30	7.4	8.6	9.7	9.8										9.2	
SeptiTech	31	11.5	10.6	11.5											11.5	
SeptiTech	32	16.4	12.2												14.3	
SeptiTech	33	57.4													57.4	
SeptiTech	34	28.5													28.5	
Sample# Median		14.0	14.3	11.9	11.3	11.7	11.9	11.3	10.4	9.6	11.4	13.0	13.1	13.8	13.4	11.9
25th Percentile		8.4	8.7	8.4	8.7	9.2	9.2	9.3	8.9	9.0	10.0	10.9	10.9	13.5	13.3	9.2
75th Percentile		23.7	19.3	18.0	17.3	16.1	16.7	17.3	16.7	11.5	12.2	13.1	13.4	14.1	13.6	16.4
n		34	32	29	26	22	19	18	13	7	3	3	3	2	2	

## Other Issues in 2018

### Residential Pilot Program

Ensuring that homeowners maintain their advanced wastewater treatment systems remains a priority in 2018. Periodic maintenance is not only critical to the effective removal of nitrogen, it is also important in extending the longevity of the treatment system and maintaining adequate hydraulic conductivity in receiving soils. It is for these reasons that both the Pinelands program and the latest NJDEP regulations require that operation and maintenance contracts remain in place throughout the life of each advanced treatment system.

On April 2, 2012, the NJDEP adopted amendments to N.J.A.C 7:9A, the statewide Standards for Individual Subsurface Sewage Disposal Systems. The amendments require perpetual professional management of advanced wastewater pretreatment components, including the Pinelands Alternate Design Wastewater Treatment Systems. Details of the DEP's rule adoption may be viewed on the DEP's web site at <http://www.nj.gov/dep/dwq/pdf/njac79a.pdf>.

In addition to the mandatory septic system management requirements that are contained in the Standards for Individual Subsurface Sewage Disposal Systems, additional septic system management requirements are contained in the New Jersey Water Quality Management Planning (WQMP) rules adopted by the NJDEP at N.J.A.C 7:15-4.5(c)1.vi.

The DEP's latest rules elevate the importance of maintaining operation and maintenance contracts in perpetuity by

now declaring the absence of such a contract to be a violation of the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.). Further, NJDEP's rules now define unmanaged advanced treatment systems to be in violation of N.J.A.C 7:9A-3.4. Each of the seven Pinelands Area county health departments are charged with enforcing both the Act and the Regulation.

Collectively, the NJDEP's rules provide the county health departments with a variety of administrative tools to ensure compliance with these requirements. N.J.A.C 7:9A-8.3(e) requires that administrative authorities (health departments) track and manage all advanced wastewater treatment systems with respect to the type and location of system, the date of system startup and the inspection and maintenance calls conducted on each system. The rule requires that this information be reported to the NJDEP annually. Further, while enforcement action is always taken as a last resort, provisions of the Water Pollution Control Act provide health departments with the ability to seek compliance with the requirement for operation and maintenance contract through the courts.

Commission staff was successful in working with the NJDEP to secure generic treatment works approvals (TWA) for the four new NSF Standard 245 advanced treatment systems that have been authorized to participate in the Commission's pilot program. The revised TWA authorizes local administrative authorities (generally County Health Departments) to approve the use of those advanced treatment technologies that are authorized for participation in the Commission's pilot program and requires that the systems be periodically serviced by qualified personnel. The Commission appreciates the cooperation it continues to receive from NJDEP in all aspects of administering the pilot program.

The Commission remains committed to working with each of the Pinelands Area municipalities and the Pinelands Area County Health Departments to assist them in complying with these requirements.

### **Non-Residential Activities**

The Alternate Design Wastewater Treatment Systems Pilot Program is limited to determining the capability of advanced treatment technologies to attenuate nitrogen in domestic (residential) wastewater. This is due to the Pinelands Ad Hoc Septic System Committee's determination that insufficient data were available to establish specific nitrogen removal efficiencies in treating commercially generated wastewater, due to the highly variable nature of non-residential (commercial and institutional) wastewater (i.e. variable flow and constituent concentrations). The CMP allows applicants for non-residential development in unsewered Pinelands growth areas to propose the use of an advanced treatment system (in lieu of dilution based upon parcel size alone) on a case by case basis. Both existing and new commercial development in Pinelands growth areas, that are without public sewer service could benefit from the use of pre-approved alternative treatment technologies because land parcels in these management areas are frequently too small to allow commercial establishments to meet Pinelands water quality standards through dilution alone.

Currently four advanced onsite wastewater treatment systems (Amphidrome Plus) are in use by commercial operations in the Pinelands Area to meet ground water quality standards in unsewered Regional Growth Areas and Pinelands Towns. Two systems are serving retail pharmacies, (Tabernacle and Jackson Townships), one system is serving a retail store (Woodbine Borough) and one system is serving a combined retail store and drive through restaurant (Folsom Borough). Each of these systems is under the operation of NJDEP licensed wastewater treatment plant operators. Monitoring of the two Amphidrome systems serving retail pharmacies demonstrates that these systems are meeting Pinelands water quality standards. Monitoring of the remaining two systems has not yet commenced as these systems have not yet been operating for six months; effluent monitoring commences after six months of operation to allow for the establishment of microbial treatment populations.

In addition to permitting the individual use of advanced treatment systems for residential use through the pilot program and on a case by case basis for commercial development, the Commission continues to encourage the use of community treatment systems to serve clusters of residences and/or commercial establishments. Community systems (also known as decentralized systems) can treat wastewater from groups of businesses and/or residences, often more economically than can be done by using multiple individual treatment systems. The Folsom Borough Amphidrome Plus system discussed above is an example of a community treatment system that will serve a retail



store and a separate drive through restaurant.

On March 5, 2018 the Pinelands Commission adopted set CMP amendments, including an amendment that provides an opportunity for certain existing nonresidential uses in specific Pinelands Management Areas to use advanced wastewater treatment systems as a means to meet Pinelands water quality standards. Under previous CMP provisions, advanced wastewater treatment systems could be used to meet water quality standards by nonresidential development only in the growth-oriented areas of the Pinelands. Under the adopted rule amendment, certain existing commercial facilities located in an infill area within the Preservation Area District or Rural Development, Forest, and Agricultural Production Areas are permitted to expand by up to 50% of the existing floor area or up to 50% of the existing capacity provided an advanced treatment system is used such that the proposed use would meet Pinelands water quality standards. In addition, these pre-existing uses can change to another permitted use, provided an advanced wastewater treatment system is used so that the new facility meets Pinelands water quality standards, where such a change would otherwise not meet water quality standards by dilution alone. On the basis of the successful performance of commercially used advanced treatment systems, the Commission staff believes that this CMP amendment will result in improved water quality and a greater likelihood that existing uses will remain viable.

### **Cooperation with Local Government and Health Departments**

The Commission continues to affirm its desire to assist the Pinelands Area municipalities in complying with the new NJDEP WQMP rules and the NJDEP Standards for Individual Subsurface Sewage Disposal Systems. These rules require all New Jersey municipalities to implement septic system management programs, for both traditional/conventional septic systems as well as advanced treatment technologies. Locally administered management programs help to ensure proper operation and maintenance of alternative treatment technologies as well as conventional or traditional septic systems. In the absence of septic system management programs, homeowners and businesses may neglect to perform the maintenance necessary to attain maximum longevity of their wastewater systems.

To advance the transfer of information acquired through the Pinelands alternate design treatment systems pilot program, Commission staff continues to share data with NJDEP and posts data from the annual reports on the Commission's web site.

Commission staff will continue to work with the local government officials, especially the Pinelands Area health officials and construction code officials, to achieve the objectives of the pilot program and assure required documentation is received prior to the issuance of construction approvals and certificates of occupancy. In addition, Commission staff will continue to work with the alternate design treatment systems technology vendors and their agents to assure adherence to the requisite sampling, analysis and reporting requirements of the pilot program.

Questions related to the Pinelands Alternate Design Treatment Systems Pilot Program should be directed to Ed Wengrowski, Environmental Technologies Coordinator, at [ed.wengrowski@pineland.nj.gov](mailto:ed.wengrowski@pineland.nj.gov) or 609-894-7300.

## Appendix 1

### Data Editing

Total nitrogen (TN) is defined in the Pinelands CMP and in this report as the sum of total Kjeldahl nitrogen (TKN) plus nitrate nitrogen plus nitrite nitrogen. It should be noted that the retained data set includes instances where analyses for multiple parameters (from a single sampling event) were performed by different (DEP certified) laboratories under subcontract, i.e. nitrate and nitrite by one lab and total Kjeldahl nitrogen by another lab, and where different (DEP approved) methodologies were used on various sampling dates from a single system location. In all of these instances, both the laboratories and analytical methods used were DEP approved and/or certified. In some instances, these state certified laboratories reported total Kjeldahl nitrogen values (sum on ammonia nitrogen plus organic nitrogen) at higher levels than ammonia nitrogen values. Laboratory managers consistently reported that such variation is consistent with standard laboratory reporting protocols and does not constitute lab error. In instances where TKN concentration values were reported as less than ammonia nitrogen concentration values, the data used to calculate TN values consisted of the highest reported TKN or ammonia nitrogen concentration, plus nitrate nitrogen plus nitrite nitrogen. Where laboratories reported analyte values as “Not Detected” the Commission’s analysis assigned a concentration of one-half the laboratory reporting limit to that parameter when computing the total nitrogen concentration in the sample.

Prior to conducting the data analysis, data were edited, sorted and evaluated by Commission staff. Where obvious errors in the data were evident, i.e. exceeding a maximum sample holding time or a lab reporting error, such data were discarded. When values for the various nitrogen parameters, (e.g. nitrate, nitrite, total Kjeldahl nitrogen) were not collected during a single sampling event, the results of the individual parameters were not used in computing total nitrogen concentrations. After discarding such data and consulting with NJDEP’s Office of Quality Assurance and Division of Water Quality, Bureau of Nonpoint Pollution Control, more than 85 % of the submitted laboratory results were retained for analysis. The Commission continues to see improved conformance by analytical laboratories with regard to data reporting.

### Data Accuracy

It is typical for a regulatory pilot program of this nature to generate data that would not meet the rigorous standards required of a peer reviewed research project. Because of the uncontrolled variables associated with such a pilot program, the reader should understand that a pilot program is not research. Uncontrolled variables are significant and numerous where treatment technologies are operating under real world conditions. Apart from these real world pilot programs, a number of technology test centers (National Sanitation Foundation (NSF), US Environmental Protection Agency Environmental Technology Verification (ETV)) routinely conduct benchmark tests to determine what a treatment system is capable of doing. Such trials are conducted under rigidly controlled conditions. While these benchmark studies measure what a technology is capable of achieving, they do not assess what a technology actually achieves in widely ranging real world applications. Moreover, while standard assessment protocols are well developed for test center benchmark trials, there are currently no known similar standard assessment protocols for evaluating actual field performance of treatment technologies. In December 1999, New Jersey, Massachusetts and Pennsylvania, acting under a Memorandum of Understanding (MOU) originally entered into in June 1996, agreed to work on the development of a standard protocol for approving innovative and alternate onsite wastewater treatment technologies. In its September 2005 report, released as a result of that MOU, this multi-state consortium acknowledged the dearth of third-party peer-reviewed, replicable data related to field trials of onsite wastewater systems. The group advises however, that even in the absence of “pure” data, regulators should exercise caution before throwing out “imperfect” data while assessing onsite system performance. The consortium instead recommends that regulators rank data on the basis of a hierarchy of strength, and to not to allow the perfect to be the enemy of the good. The consortium produced a report for the New England Interstate Water Pollution Control Commission, entitled *Variability and Reliability of Test Center and Field Data: Definition of Proven Technology From a Regulatory Program Viewpoint*. In its report, the consortium concludes that all non-fraudulent field performance data on alternate design wastewater treatment systems is valuable in regulatory decision making, even

if that data is not gathered in a completely controlled study.<sup>2</sup>

On April 16, 2007, the NJDEP, Division of Watershed Management, Bureau of Environmental Analysis and Restoration issued a technical report entitled Nitrate as a Surrogate of Assessing Impact of Development Using Individual Subsurface Sewage Disposal Systems on Ground Water Quality. In that report, NJDEP relied upon datasets from the USGS National Water Information System (NWIS) and the New Jersey Ambient Ground Water Quality Monitoring Network (AGWQMN) to establish an ambient nitrate concentration of 2 mg/L in NJ groundwater. In that analysis, DEP acknowledges retaining data with questionable precision, rather than abandoning data, to conduct its analysis.

In assessing onsite wastewater treatment technologies, the Pinelands pilot program's methodology necessarily includes multiple uncontrolled variables. These include unique residential occupancies and personal practices, multiple private (NJDEP certified) laboratories conducting effluent analyses, various operation/maintenance firms, and multiple wastewater technology vendors. These variables represent real world conditions and reflect standard industry and marketplace practices. Some of these practices are regulated, such as laboratory certifications and analytical methods, while others are not. As a result of these real world circumstances, it should be emphasized that the monitoring provisions of this pilot program do not rise to the level of peer-reviewed, journal-published research, but instead are intended to provide a statistically sound measure of the field performance of the pilot program systems. Specific examples of variables that were not controlled in the pilot program assessment include variability in the make up of households serviced by the systems, variability of wastewater flow and strength characteristics, variability in raw water supplied to the residence (e.g. pH, alkalinity, etc.) variability in individuals involved in sample collection, variability in laboratories performing the analyses (including subcontracting between laboratories), and variability in laboratory personnel, equipment and analytical methods. Additionally, all samples were collected as grab samples (as opposed to composite samples) and are thus greatly affected by wastewater usage conditions that prevailed just prior to the sampling event and do not necessarily characterize long term effluent characteristics.

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<sup>2</sup> Groves, T.W., F. Bowers, E. Corriveau, J. Higgins, J. Heltshe, and M. Hoover. 2005. Variability and Reliability of Test Center and Field Data: Definition of Proven Technology From a Regulatory Program Viewpoint. Project No. WU-HT-03-35. Prepared for the National Decentralized Water Resources Capacity Development Project, Washington University, St. Louis, MO, by the New England Interstate Water Pollution Control Commission

Disclaimer

These minutes reflect the actions taken by the Commission during its September 14, 2018 meeting. Although these minutes have been approved by the Commission, no action authorized by the Commission during this meeting, as reflected in these minutes, shall have force or effect until ten (10) days, Saturdays, Sundays and public holidays excepted, after a copy of these minutes has been delivered to the Governor for review, unless prior to expiration of the review period the governor approves same, in which case the action shall become effective upon such approval. These minutes were delivered to the Governor on September 28, 2018.

PINELANDS COMMISSION MEETING  
Richard J. Sullivan Center  
Terrence D. Moore Conference Room  
15 Springfield Road  
New Lisbon, New Jersey

MINUTES

**September 14, 2018**

Commissioners Present

Alan W. Avery Jr., Bob Barr, Paul E. Galletta, Jordan P. Howell, Jane Jannarone, Ed Lloyd, Mark Lohbauer, William Pikolycky, Richard Prickett, Gary Quinn and Chairman Sean Earlen. Also present were Executive Director Nancy Wittenberg, Governor's Authorities Unit representative Craig Ambrose and Deputy Attorney Generals (DAG) Kristen Heinzerling and Bruce Velzy.

Commissioners Participating by Phone  
D'Arcy Rohan Green.

Commissioners Absent  
Candace Ashmun and Giuseppe Chila.

Chairman Earlen called the meeting to order at 9:37 a.m.

DAG Velzy read the Open Public Meetings Act Statement (OPMA).

Executive Director Nancy Wittenberg called the roll and announced the presence of a quorum. (There were 12 Commissioners who participated in the meeting.)

The Commission and public in attendance pledged allegiance to the Flag.

Chairman Earlen said that the New Jersey Department of Environmental Protection (NJDEP) will not be attending today's meeting to discuss the Bass River Fire Tower application or any matter.

#### Minutes

Chairman Earlen presented the open session minutes from the August 10, 2018 Commission meeting. Commissioner Lohbauer moved the adoption of the minutes. Commissioner Jannarone seconded the motion.

Chairman Earlen said he would be voting no on the minutes. He felt that the inaction by the Commission related to Bass River Fire Tower application did not comply with the Comprehensive Management Plan (CMP). He added that the OPMA was violated and new information was added into the record when the record was closed.

The August 10, 2018 Commission meeting minutes were adopted by a vote of 9 to 1. Commissioner Barr and Commissioner Quinn abstained from the vote.

Chairman Earlen presented the closed session minutes from the August 10, 2018 Commission meeting. Commissioner Howell left the dais. Commissioner Lohbauer moved the adoption of the minutes. Commissioner Avery seconded the motion.

The August 10, 2018 closed session Commission meeting minutes were adopted by a vote of 10 to 0. Commissioner Howell recused from the vote and Commissioner Quinn abstained.

Commissioner Howell returned to the dais.

#### Committee Chairs' Reports

Chairman Earlen provided an update on the August 24, 2018 Policy and Implementation (P&I) Committee meeting:

The Committee adopted the minutes of the July 27, 2018 meeting.

The Committee met with representatives from the South Jersey Transportation Authority (SJTA) and the Atlantic City Airport regarding the 2004 Memorandum of Agreement (MOA) and safety concerns regarding the grassland habitat conservation plan. The Committee was informed of the FAA requirements that due to safety concerns, the grassland habitat had to be located at least 10,000 feet from the runways. The Committee agreed to recommend to the full Commission, that staff be directed to engage in further discussion with SJTA regarding the relocation of the grassland habitat and developing an amended or new MOA. The Committee requested an opportunity to see the current habitat first-hand prior to seasonal mowing. *(Several Commissioners visited the site on September 4, 2018)*

The Committee received a presentation on a proposal to be submitted jointly with the United States Geological Survey (USGS) to the New Jersey Department of Environmental Protection (NJDEP) to evaluate the effectiveness of pollutant removal by various stormwater facilities located in the Barnegat Bay watershed.

#### Oral Motion

Stacey Roth said that the process for considering an Intergovernmental Agreement was revised in February of 2016. She said an oral motion from the full Commission is needed to authorize staff to work with SJTA to create either a new or amended Memorandum of Agreement (MOA) to address the relocation of grassland habitat at the Atlantic City Airport.

Commissioner Galletta made a motion authorizing staff to work with SJTA on an amended MOA. Commissioner Pikolycky seconded the motion. All were in favor and the motion carried.

#### Executive Director's Reports

ED Wittenberg said Commissioners who participated by phone during the August Commission meeting had difficulty hearing the proceedings. She said the company who originally installed the microphones and recording system met with staff and discussed options to resolve the issue. She said the ceilings are high and the integrated systems are not compatible.

Director Larry Liggett said he has been in contact with 25 Pinelands towns that have Regional Growth Areas, notifying municipal officials about Pinelands Infrastructure Trust Fund monies that are available for certain types of projects. He said staff recently met with Jackson and Manchester townships about two projects: a sewer line and water line. The projects may meet the qualifications of the Pinelands Infrastructure Trust Fund.

Director Chuck Horner provided information on the following regulatory matters:

- On August 15, 2018 staff accompanied Mullica Township officials to an Atlantic County Agriculture Development Board meeting regarding a commercial use that was established at a farm. After the Board was briefed, it determined that the Board did not have jurisdiction and it was a Pinelands Commission matter. The matter was referred back to municipal court and is scheduled to be heard in October.
- A development application was recently submitted to the Commission for the development of 360 dwelling units and a hotel in South Toms River. A redevelopment plan that was certified by the Commission required that Pinelands Development Credits be used on 25% of the market rate units.

Communications Officer Paul Leakan said that Drill Construction expects to be complete with their work around mid-October, at which point the fabricator can begin to install the exhibits.

#### Update on Application Number 1990-0868.029

ED Wittenberg said the Commission did not approve the Bass River Fire Tower public development application during its August 10, 2018 meeting. She said the NJDEP's application proposes to clear non-native trees to maintain visibility at the fire tower. She said when the Commission fails to approve a public development application, the Comprehensive Management Plan states that the matter must be referred to the Office of Administrative Law (OAL). On August 17, 2018, the Division of Law sent a letter advising of the DAGs assigned to this matter. On August 23, 2018, a letter was received from DAG Mark Collier, who is representing the NJDEP, requesting an extension of time. The extension, if approved, would place a hold on the matter being sent to OAL.

#### Resolution to Retire into Closed Session

DAG Heinzerling read a resolution to enter into closed session to provide attorney-client advice related to the Bass River Fire Tower matter.

Commission Barr made a motion to enter into closed session. Commissioner Avery seconded the motion. The Commission agreed to retire into closed session by a vote of 12 to 0, beginning at 9:54 a.m.

Commissioner Rohan Green ended her participation from the meeting during closed session. Commissioner Jannarone left the meeting at the end of closed session.

#### Return to Open Session

The Commission briefly entered back into open session at 11:43 a.m.

ED Wittenberg said the Commissioners engaged in a lengthy discussion. The NJDEP's request for an extension of time was granted. She said Commissioners will provide their questions to her in writing, which will in turn be provided to the NJDEP. The NJDEP will answer the questions in writing and they will be discussed at a future Commission meeting. She advised that the record for Application Number 1990-0868.029 will remain closed.

Chairman Earlen said the Commission needs to enter back into closed session to discuss another matter.

#### Resolution to Retire into Closed Session

DAG Velzy read a resolution to discuss pending litigation regarding Summerfields West and a potential settlement agreement.

Commissioner Avery made a motion to enter into closed session. Commissioner Lohbauer seconded the motion. The Commission agreed to retire into closed session by a vote of 10 to 0, beginning at 11:45 a.m.

#### Return to Open Session

The Commission entered back into open session at 11:49 a.m.

DAG Velzy said that the Commission was briefed on Summerfields West during the closed session. He said the application is currently with the Office of Administrative Law. The applicant is seeking to develop a mobile home community in Monroe Township. He said

the settlement agreement specifies that 3.75 Pinelands Development Credits must be purchased for application number 1981-0880.004.

Commissioner Avery made a motion to authorize a settlement agreement with Summerfields West. Commissioner Lohbauer seconded the motion. All were in favor.

Public Development Projects and Other Permit Matters

Chairman Earlen presented a resolution recommending approval for the demolition of a commercial shopping center in Pemberton Township.

Commissioner Prickett said he would be recusing from voting on this application. He left the dais.

Commissioner Avery moved the adoption of a resolution Approving With Conditions an Application for Public Development (Application Number 1983-9146.005) (See Resolution # PC4-18-29). Commissioner Lloyd seconded the motion.

Commissioner Lohbauer said he was pleased that Pemberton Township would be removing the dilapidated structure.

The Commission adopted the resolution by a vote of 9 to 0.

Commissioner Prickett returned to the dais.

Chairman Earlen presented a resolution recommending approval for the construction of recreational facilities at the George W. Ritter Recreation Complex in Waterford Township.

Commissioner Lohbauer moved the adoption of a resolution Approving With Conditions an Application for Public Development (Application Number 1993-0465.003) (See Resolution # PC4-18-30). Commissioner Barr seconded the motion.

The Commission adopted the resolution by a vote of 10 to 0.

Public Comment on Public Development Applications and Items where the record is open

No one from the public spoke.

Ordinances Not Requiring Commission Action

Chairman Earlen asked if any Commissioners had questions regarding the ordinances not requiring Commission action:

- Atlantic County Planning Advisory Board Resolution 2018-2
- Barnegat Township's 2018 Housing Element and Fair Share Plan
- Barnegat Township Ordinances 2018-15, 2018-16 & 2018-19
- Buena Borough Ordinance 669
- Corbin City Ordinance 4-2018
- Galloway Township Ordinance 1995-2018



- Lakehurst Borough Ordinance 2018-09
- Winslow Township Ordinance O-2018-015
- Woodbine Borough Planning Board Resolution 4-8-18
- Woodbine Borough Ordinance 576-2018

No members of the Commission had questions.

#### Presentation

The Permanent Land Protection presentation will be postponed until the October 12, 2018 Commission meeting.

Commissioner Galletta left the meeting at 11:45 a.m.

#### General Public Comment

Chairman Earlen reminded the public that the comment period for the Bass River Fire Tower application is closed and additional comments cannot be submitted.

Jonathan Peters said the Commission should take a balanced approach regarding rules and regulations related to growing marijuana.

Karl Swanseen of Bass River Township disagreed with the decision to allow the NJDEP to add to the record but not allow the public to comment.

Chairman Earlen said NJDEP's response to questions asked by Commissioners will be shared at a future Commission meeting.

Carol Bitzberger of Bass River Township said she was disappointed that the public cannot add to the record.

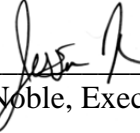
Jamie Zaccaria and Don Gant both said they would not be commenting since the Bass River Fire Tower application record is closed.

#### Adjournment

Commissioner Lohbauer said he regrets that the public cannot comment on the Bass River Fire Tower application. He also said that he hopes this Commission can develop climate change policy.

Commissioner Barr moved to adjourn the meeting. Commissioner Lohbauer seconded the motion. The Commission agreed to adjourn at 12:00 p.m.

Certified as true and correct:

  
\_\_\_\_\_  
Jessica Noble, Executive Assistant

Date: September 27, 2018