



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

LAURA E. MATOS  
 Chair  
 SUSAN R. GROGAN  
 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, March 10, 2023 - 9:30 a.m.

**This meeting will be held in-person and virtually**

Richard J. Sullivan Center for Environmental Policy and Education  
 Terrence D. Moore Conference Room  
 15C Springfield Road  
 New Lisbon, New Jersey

Watch the meeting on the Pinelands Commission YouTube channel:

[www.youtube.com/c/PinelandsCommission](https://www.youtube.com/c/PinelandsCommission)

To Provide Public Comment, Please Dial: 1-929-205-6099 Meeting ID: 817 8170 7201

1. Call to Order

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

2. Adoption of Minutes

- February 10, 2023

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 Approvals
  - None
- Public Development Projects and Waivers of Strict Compliance:

Resolution Approving With Conditions (3) Applications for Public Development:

- Application No. 1985-0204.010 - Greater Egg Harbor Regional High School District Installation of an artificial turf field at Oakcrest High School

## Hamilton Township

- Application No. 2022-0135.001 - Monroe Township  
Two lot subdivision and no further development  
Monroe Township
- Application No. 1989-0349.023 - Burlington County  
Demolition of a juvenile detention building, 50 years old or older  
Pemberton Township

## B. Planning Matters

- Municipal Master Plans and Ordinances
  - None
- Other Resolutions
  - None
- CMP Amendments
  - None

5. Public Comment on Public Development Applications and Waivers of Strict Compliance *Where the Record is Not Closed*

## A. Public Development Projects

- Application No. 1981-0809.010 - New Jersey Department of Transportation  
Replacement of an existing access road bridge at the NJDEP Forest Research Center  
Jackson Township
- Application No. 2005-0232.006 - Borough of South Toms River  
Five lot subdivision, construction of an 800 square foot building addition and the expansion of an existing parking lot  
South Toms River Borough

## B. Waivers of Strict Compliance

- Application No. 1988-1096.001 - Wildman  
Single family dwelling  
Pemberton Township
- Application No. 2000-0528.001 - Golden Bison Investment  
Single family dwelling  
Pemberton Township

6. Master Plans and Ordinances Not Requiring Commission Action

- Buena Vista Township 2022 Master Plan Reexamination Report
- Buena Vista Township Ordinances 123-2022 & 124-2022
- Corbin City Ordinance 13-2022
- Hamilton Township Ordinances 1963-2021, 1989-2022 & 2023-2022
- Maurice River Township Ordinances 718 & 720

7. Other Resolutions

- To approve the Pinelands Commission's 2022 Annual Report

8. General Public Comment

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**

Tue., March 21, 2023	Personnel & Budget Committee Meeting (9:30 a.m.)
Fri., March 31, 2023	Policy & Implementation Committee Meeting (9:30 a.m.)
Fri., April 14, 2023	Pinelands Commission Meeting (9:30 a.m.)

To ensure adequate time for all members of the public to comment, we will respectfully limit comments to three 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.

Pinelands Commission and Committee meeting agendas are posted on the Commission's Website and can be viewed at [www.nj.gov/pinelands/](http://www.nj.gov/pinelands/) 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).

PINELANDS COMMISSION MEETING

MINUTES

February 10, 2023

*All participants were either in-person or present via Zoom conference and the meeting was livestreamed through YouTube: <https://www.youtube.com/watch?v=si7oW7YyUo>*

Commissioners Participating in the Meeting

Nicholas Asselta, Alan W. Avery Jr., Dan Christy, John Holroyd, Jerome H. Irick, Ed Lloyd, Mark Lohbauer, Mark Mauriello, Jonathan Meade, William Pikolycky and Chair Laura E. Matos. Also participating were Executive Director Susan R. Grogan, Deputy Attorney General (DAG) Nicolas Seminoff and Governor's Authorities Unit representative Janice Venables.

Commissioners Absent

Theresa Lettman and Douglas Wallner

Call to Order

Chair Matos called the meeting to order at 9:30 a.m.

DAG Seminoff read the Open Public Meetings Act Statement (OPMA).

DAG Seminoff administered the oath of office to Nicholas Asselta, who was appointed by the Cumberland County Commissioners to serve on the Commission.

Commissioner Asselta thanked Cumberland County for appointing him to the Commission. He said he has worked in both the public and private sector. He said he served in the New Jersey Legislature, first in the Assembly and then the Senate. He said he also served as a Commissioner on the Board of Public Utilities. He said he proposed legislation to reduce the number of members present in order for the Pinelands Municipal Council to reach a quorum. He said he also serves on the New Jersey Vietnam Veteran Memorial Board. He

said all his public service has been dedicated to his brother who died in the Vietnam War. He expressed his thanks to Senator Mike Testa, who took his seat in the Senate.

Acting Executive Director (ED) Grogan called the roll and announced the presence of a quorum. Eleven Commissioners participated in the meeting.

The Commission pledged allegiance to the Flag.

### Minutes

Chair Matos presented the minutes from the Commission's January 13, 2023 and January 27, 2023 meetings. Commissioner Pikolycky moved the adoption of the minutes. Commissioner Lohbauer seconded the motion.

The minutes from the both the January 13, 2023 and January 27, 2023 Commission meetings were adopted by a vote of 11 to 0.

### Appointment of the Executive Director

Chair Matos introduced a resolution to appoint Susan R. Grogan as Executive Director of the Commission.

Commissioner Lloyd made a motion To Appoint Susan R. Grogan as Executive Director of the New Jersey Pinelands Commission (See Resolution # PC4-23-06). Commissioner Avery seconded the motion.

Chair Matos said Ms. Grogan has an incredible history in Pinelands knowledge, including a strong working relationship with Pinelands municipalities and its residents. She said in the past year, Ms. Grogan has been an invaluable resource to work with. She said she is thrilled that the Commission is taking action to formally appoint Ms. Grogan as Executive Director.

Commissioner Lloyd said this is the easiest and most important resolution that he has probably ever voted on. He said Ms. Grogan has been preparing for this role for decades and been performing the job for the last 19 months. He said Ms. Grogan has been successfully guiding this Commission and staff through complicated matters. He said he is very pleased to be voting on this resolution and it is a great day.

Commissioner Lohbauer said Ms. Grogan was a pillar of strength when this Commission was left without an Executive Director, following the passing of Nancy Wittenberg. He said Ms. Grogan has managed to keep this Commission moving forward with her experience. He said he is very happy for Ms. Grogan and the Pinelands.

Commissioner Avery said he has served on this board for a long time and he has seen employees come and go. He said he remembered when Ms. Grogan began her career at the Pinelands Commission. He said Ms. Grogan has ably performed her job over the years and

done outstanding work as Acting Executive Director. He introduced the following people who came to show their support for Ms. Grogan today: former Commissioner Ed McGlinchey, former Executive Director of the Pinelands Commission, Terrence Moore, and former Pinelands Commission employee, Maureen “Fritz” Olson. He thanked Janice Venables from the Governor’s office for her assistance with personnel matters.

Commissioner Lohbauer said he forgot to note that somewhere Commissioner Candace Ashmun is smiling because of today’s news. He said Commissioner Ashmun was very supportive of Ms. Grogan.

The resolution was adopted by a vote of 11 to 0.

Executive Director (ED) Grogan expressed her sincere thanks to the Commission and staff for their support. She said she looks forward to moving on and doing great work.

Chair Matos said the Commission has been given authorization to fill the Director of Planning position that Ms. Grogan held and continued to hold while she was Acting ED. The Commission will also be hiring a Climate Resiliency Coordinator in order for the Commission to comply with the state’s climate initiatives.

#### Committee Reports

Chair Matos provided a summary of the January 27, 2023 Policy and Implementation (P&I) Committee meeting:

The Committee approved the minutes of the November 30, 2022 meeting.

Staff presented a recommendation to approve an amendment of the 1998 Memorandum of Agreement (MOA) with Atlantic County. The amendment will allow a revision to the active use area described in the deed of conservation at Lake Lenape Park in Hamilton Township. Atlantic County wishes to amend the deed restricted area of the lake so that it can reconfigure an existing dock and alleviate ongoing safety issues at the lake. As an offset, the County would deed restrict a similarly sized area in another portion of the Park. The Committee voted to recommend approval of the amendment by the full Commission in February.

The Committee heard a progress report on the Alternate Design Treatment Systems Pilot Program with data through the end of 2022. The pilot program was established in 2001 to allow development on small (1 acre) lots without causing degradation in water quality. The presentation described the program, the success of different technologies, the location of the advanced treatment septic systems by municipality and management area, and future steps for the program. No formal action was taken by the Committee.

The Committee was updated on the status of the Kirkwood-Cohansey (K-C) water management amendments. Staff made changes to the rule language following the public comment period last fall. After discussion of the changes with the P&I Committee at its

November 2022 meeting, staff met with New Jersey Department of Environmental Protection (NJDEP) and the aggregate industry to gather further information on the water allocation permitting process and regulation of water quality. The Committee also received an updated timeline on the re-proposal process. The staff noted the Notice of Substantial Change is under review by the Governor's office and will require approval by the full Commission before proceeding to publication. The Committee confirmed that water quality concerns associated with the resource extraction industry's non-consumptive use of water would be addressed through the NJDEP process.

### Executive Director's Report

ED Grogan provided information on the following matters:

- The Governor's office has completed its review of the Kirkwood-Cohansey water management amendments and the re-proposal is on today's agenda.
- Planning staff has created and distributed stormwater model ordinances for each town. The ordinances were tailored for each municipality to streamline the adoption process.
- Marc Paalvast, the new staff Archaeologist, was introduced. He will be working with the consultant that is in the process of creating a preservation plan for Fenwick Manor. During the last week of February, the consultant will be doing some investigative work in the two front rooms of Fenwick to confirm what they believe is causing the cracks in the walls. The preservation plan will be used as a basis for the submission of a capital grant this coming spring.
- Interviews with outside labor counsel were completed in preparation for upcoming union contract negotiations. The Deputy Attorney General's office is in the process of reviewing the contract and preparing the retainer.
- A few members of Commission staff attended a virtual meeting held by the NJDEP to review the results of a survey in which approximately 1,700 respondents shared input on how the public uses Wharton State Forest.
- Chair Matos attended a meeting with staff and representatives of Pemberton Township regarding a new MOA that would facilitate paved trails around a lake in the Township. The next step in the process is for the town to bring the proposal to an upcoming P&I Committee meeting.

Chuck Horner, Director of Regulatory Programs, provided information on the following regulatory matters:

- On February 6<sup>th</sup> staff met with Berkeley Township officials to discuss their outstanding land development violations. Subsequently, staff issued a letter

scheduling a public hearing to the applicant proposing a solar facility on Berkeley's landfill, due to the outstanding violations at the municipal site.

- Staff met with representatives from South Toms River Borough regarding the closure of its landfill. The Borough has some minor violations that they are in the process of curing. The Borough has plans to develop affordable housing on the same parcel as its landfill.
- The January Management report summarizes 15 different development applications. There are very few applications that can be classified as straightforward, as time goes on, each application displays its own complexities.

Paul Leakan, Communications Officer, said there are over 300 people signed up for the 34<sup>th</sup> Annual Pinelands Short Course. He added that all offices are providing information to compile the 2022 Annual Report, which will be on the Commission's March meeting agenda for approval.

#### Planning Matters

Chair Matos introduced a resolution to approve an amendment to an existing Memorandum of Agreement (MOA) between the Commission and Atlantic County.

Commissioner Irick made a motion Authorizing the Acting Executive Director to Execute the First Amendment to the March 4, 1998 Memorandum of Agreement Between the Pinelands Commission and Atlantic County Regarding Development on the Western Lakeshore of Lake Lenape Park (See Resolution # PC4-23-07). Commissioner Lohbauer seconded the motion.

Stacey Roth, Chief, Legal & Legislative Affairs, said the proposed amendment to the MOA will permit the replacement of the current dock configuration with a new floating dock system at Lake Lenape Park. She said the offset will consist of a 1.39-acre rectangular shaped deed restricted area in an undeveloped portion of the western lakeshore of Lake Lenape.

The resolution was adopted by a vote of 11 to 0.

Chair Matos introduced a resolution that would allow the Executive Director to commence the process to amend the CMP.

Commissioner Pikolycky made a motion To Authorize the Executive Director to Propose Substantial Changes Upon Adoption to the Proposed Amendments to the Comprehensive Management Plan Related to Water Management in Accordance with the Administrative Procedure Act (See Resolution # PC4-23-08). Commissioner Holroyd seconded the motion.



ED Grogan said the Kirkwood-Cohansey rule proposal was published in the New Jersey Register in September of 2022. There was a 60-day public comment period and two public hearings. She said a number of the public comments stated that the rules did not consider non-consumptive water use for the resource extraction industry in the Pinelands Area. She said staff drafted revisions to the amendments in response to comments received from the mining industry. Staff presented those revisions to the P&I Committee, which then led to additional modifications. Staff spent a great deal of time in December speaking with NJDEP staff and representatives from the aggregate industry. ED Grogan noted that because the changes were substantive in nature, a Notice of Substantial Change had to be filed and the rule making process must restart. ED Grogan reviewed the revisions, definitions and clarifications. Lastly, she reviewed the new timeline with an anticipated rule adoption date of August 2023. (Link to the Water Management Rule Proposal Presentation: <https://www.nj.gov/pinelands/home/presentations/K-C%202-10-2023.pdf>)

Commissioner Irick said he missed the January P&I Committee but watched the meeting on YouTube. He thanked staff for addressing his concerns and said he would be voting in favor of the Water Management amendments.

Commissioner Mauriello said he was not directly involved with the Kirkwood-Cohansey rules but he commended staff and Commissioners for revising the rules based on public comment. He said when comments are reasonable, and an agency is responsive while maintaining the integrity of the rules, it shows that an agency is listening and provides credibility.

The resolution was adopted by a vote of 11 to 0.

#### Public Comment on Development Applications and Items Where the Record is Open

No comment was provided.

#### Ordinances Not Requiring Commission Action

Chair Matos read the list of Ordinances:

- Folsom Borough Ordinance 12-2022
- Jackson Township Ordinance 30-22
- Pemberton Township Ordinance 25-2022
- Upper Township Ordinance 026-2022
- Winslow Township Ordinance O-2022-032

ED Grogan said Jackson Township is changing its maximum height limitation in the RG-3 zone for multi-story affordable housing units. She said Pemberton Township is adopting a redevelopment plan associated with a number of scattered lots in its Regional Growth Area. She said Upper Township included a provision in its ordinance encouraging pervious paving systems. Lastly, the Winslow Township ordinance conditionally permits the development of convenience stores with gas pumps in certain zoning districts.

### Science Office Update

John Bunnell, the Commission Chief Scientist, gave a presentation on Science Office research. He discussed past research topics and described the recently completed Endocrine Disruption Study and the Microorganism Study. He also discussed ongoing environmental monitoring projects that focus on measuring forest groundwater and pond surface water levels, the sampling of a group of streams for water quality monitoring, and vocalization surveys for frogs and toads. He then described the multifaceted snake research program that includes studies of snake genetics, snake fungal disease, and in-depth studies of corn snakes and kingsnakes with a goal of establishing a long-term monitoring program for rare snakes. Lastly, he described a new initiative to study eastern box turtles. (Link to the presentation: <https://www.nj.gov/pinelands/home/presentations/PC%20Research%20February%2010,%202023%20PC%20Meeting.pdf>)

Commissioner Irick asked if prescribed burning has impacted the snake dens or study areas.

Chief Scientist Bunnell said fire is good for the habitat in the Pine Barrens. He said that prescribed burning typically occurs while the snakes are in their dens and they have not seen any mortality. He said he hopes that they can conduct a test with a cluster of turtles in the vicinity of a controlled burn to see how the turtles react. He said a friend went out immediately after the Mullica fire that scorched 13,000 acres. He found turtles that were alive and did not find any burned turtle shells, which was a telling and good sign.

Commissioner Mauriello asked if the submission of Threatened and Endangered (T&E) species reports as part of development applications are useful to the Science office.

Chief Scientist Bunnell said most often the Science office does not see those reports unless the Regulatory Programs staff asks for guidance or has a question. He said drift fences and box traps give them their data, for the most part. He noted that the design and maintenance of drift fence and box trap surveys matters. He explained that NJDEP dictates design requirements and that he would recommend the use of taller drift fences.

### General Public Comment

Heidi Yeh, Pinelands Preservation Alliance (PPA), said Carleton Montgomery and Jaclyn Rhoads could not be here today but wanted to express their support in appointing Susan Grogan as Executive Director of the Pinelands Commission. She said D.R. Horton, the developer of a large residential development in Egg Harbor Township, is using the Permit Extension Act to get out of purchasing Pinelands Development Credits (PDCs). She added that the developer and municipality need to be held accountable for the affordable housing obligation. She said the Commission should not compromise or make unwarranted concessions. Lastly, she said PPA is disappointed that Commission staff reviewed Winslow Township Ordinance O-2022-032 and found it consistent. She said there was

local opposition to the ordinance and the Commission should not be permitting the development of new gas stations but rather seeking ways to mitigate climate change. (See attached written comments.)

Terrence Moore, former Executive Director of the Pinelands Commission and resident of Shamong, NJ, commended the Commission for appointing Susan Grogan as Executive Director. He said he remembered when John Stokes said that he wanted to hire Ms. Grogan in the late 1980's. He said Susan seemed to be bright, articulate and a very nice person. He said Ms. Grogan has held every position in the non-development review side of the Commission. He said he brings a message from one of Ms. Grogan's former employees, Betsy Piner. He said Betsy asked him to please give Ms. Grogan a hug. He said Betsy also said that she was so proud to have been her (Susan's) student. Terry said that is a quality that will serve the staff and the Commission well. He offered Ms. Grogan some advice: do what you think is the right thing and stay true to the statute.

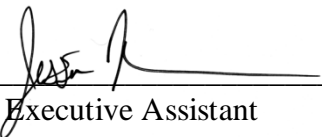
Ed McGlinchey, former Pinelands Commissioner, said the day after he left the Navy in 1972 he began his career working for Winslow Township. He said he later served as Director of the Department of Public Works and Zoning officer. He said when the Pinelands Commission was created in 1979, it was Commission staff who helped him understand the rules. He said he later served as a Commissioner and really enjoyed that role. He said he is so happy to be here today and although it took a long time, he is very happy that Ms. Grogan has been appointed Executive Director.

Fred Akers of the Great Egg Harbor Watershed said he was excited that Ms. Grogan is the Executive Director and congratulated her on her new position. He said former Pinelands Chairman Jim Florio is also smiling somewhere today. He said he was happy to hear that the Commission sent out stormwater guidance to Pinelands municipalities.

### Adjournment

Commissioner Pikolycky moved to adjourn the meeting. Commissioner Irick seconded the motion. The Commission agreed to adjourn at 11:21 a.m.

Certified as true and correct:

  
\_\_\_\_\_  
Executive Assistant

Date: February 15, 2023



# ***RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION***

**NO. PC4-23- 06**

**TITLE:** To Appoint Susan R. Grogan as Executive Director of the New Jersey Pinelands Commission

**Commissioner Lloyd moves and Commissioner Avery  
seconds the motion that:**

**WHEREAS**, the position of Executive Director of the Pinelands Commission became vacant on June 24, 2021; and

**WHEREAS**, on June 24, 2021, in accordance with Article III, Section 5 of the Pinelands Commission's By-Laws, then-Chairman Richard Prickett designated Susan R. Grogan as Acting Executive Director and authorized her to exercise all powers delegated to the Executive Director by the Commission's By-Laws, actions of the Commission or otherwise granted pursuant to the provisions of the Pinelands Protection Act and the Pinelands Comprehensive Management Plan; and

**WHEREAS**, Ms. Grogan has worked at the Pinelands Commission since August 1988. She served as the Commission's longtime Chief Planner and was promoted as the Director of Planning in 2020. In her capacity as Chief Planner, Ms. Grogan authored many amendments to the Pinelands Comprehensive Management Plan, reviewed thousands of municipal ordinances and master plans to ensure conformance with Pinelands regulations, implemented the Pinelands Conservation Fund land acquisition program that has preserved nearly 9,000 acres to date and supervised Planning Office staff and a wide variety of projects; and

**WHEREAS**, Ms. Grogan has also served as the Executive Director of the Pinelands Development Credit Bank since 2011; and

**WHEREAS**, Ms. Grogan has demonstrated extraordinary skill in advancing numerous initiatives since being designated as the Commission's Acting Executive Director, including the adoption of amendments to the Pinelands Comprehensive Management Plan (CMP) that will better protect Pinelands resources by requiring the use of green infrastructure and other more stringent standards to manage stormwater, as well as proposing rule changes pertaining to the Kirkwood-Cohansey aquifer, working to prepare the Commission for future rule changes aimed at addressing climate change, recruiting and hiring several staff members to fill vacant positions, providing invaluable guidance to longtime and new Commission members, securing funding to help refurbish the historic Fenwick Manor farmhouse, overseeing the implementation of office-wide policies pertaining to COVID-19, and furthering efforts to reduce the Commission's carbon footprint at its headquarters; and

**WHEREAS**, prior to joining the Commission, Ms. Grogan was the Assistant Land Use Coordinator for Burlington County's Office of Economic Development, where she was responsible for implementing the county's farmland preservation program, among other responsibilities. Ms. Grogan holds a Masters of City and Regional Planning from Rutgers University and a Bachelors of Arts in Government and Sociology from the College of William and Mary. She is a licensed New Jersey Professional Planner and a member of the American Institute of Certified Planners; and

**WHEREAS**, the Acting Executive Director designation was to remain valid until such time as a quorum of the Commission acted to appoint an Executive Director; and

**WHEREAS**, the Pinelands Commission now wishes to appoint Susan R. Grogan as its Executive Director; and

**WHEREAS**, pursuant to N.J.S.A. 13:18A-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 the Governor shall approve same, in which case the action shall become effective upon such approval.

**NOW, THEREFORE, BE IT RESOLVED** that the Pinelands Commission hereby appoints Susan R. Grogan to fill the position of Executive Director, with all terms of employment to be in accordance with the Personnel Policies of the Commission.

**BE IT FURTHER RESOLVED** that the Chair is authorized to offer the Executive Director position to Susan R. Grogan at her current level of compensation until such time as the Personnel & Budget Committee meets to determine an appropriate salary and salary range for the position, at which time any authorized increase in salary shall be retroactive to the date of this resolution.

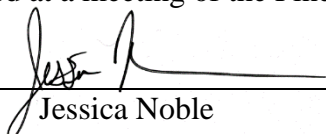
**Record of Commission Votes**

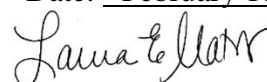
	AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*
Asselta	X				Lettman			X		Pikolycky	X			
Avery	X				Lloyd	X				Wallner			X	
Christy	X				Lohbauer	X				Matos	X			
Holroyd	X				Mauriello	X								
Irick	X				Meade	X								

\*A = Abstained / R = Recused

Adopted at a meeting of the Pinelands Commission

Date: February 10, 2023

  
 \_\_\_\_\_  
 Jessica Noble  
 Secretary

  
 \_\_\_\_\_  
 Laura E. Matos  
 Chair



# ***RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION***

**NO. PC4-23- 07**

**TITLE:** Authorizing the Executive Director to Execute the First Amendment to the March 4, 1998 Memorandum of Agreement Between the Pinelands Commission and Atlantic County Regarding Development on the Western Lakeshore of Lake Lenape Park

**Commissioner Irick moves and Commissioner Lohbauer  
seconds the motion that:**

**WHEREAS**, the New Jersey Pinelands Commission (hereinafter “Commission”) and the County of Atlantic (the “County” or “Atlantic County”)(both of which are collectively referred to herein as the “Parties”) entered into a Memorandum of Agreement (“MOA”), dated March 4, 1998 (the “1998 MOA”), which facilitated review of projects undertaken by the County in the “Atlantic County Park at Lake Lenape” (“Lake Lenape Park”) located in Hamilton Township; and

**WHEREAS**, Lake Lenape Park consists of approximately 1,898 acres, which includes an approximately 330-acre water body known as Lake Lenape; and

**WHEREAS**, among other things, the 1998 MOA authorized Atlantic County to construct a 40 foot by 20 foot partially submerged concrete boat ramp and a 120 foot L-shaped floating dock proximate to the boathouse building in accordance with the plans entitled “Western Lake Shore Development Area – Lake Lenape,” prepared by Chris R. Rehmann, P.E., L.S., dated July 29, 1991 and revised October 10, 1997; and

**WHEREAS**, certain development authorized by the 1998 MOA was not fully consistent with the Pinelands Comprehensive Management Plan (the “CMP”) and, as a result, the March 1998 MOA was necessary to authorize a deviation from the following CMP standards: 1) N.J.A.C. 7:50-5.23(b)12, prohibiting the development of centralized wastewater treatment and collection facilities in a Forest Area absent an identified public health problem; and 2) N.J.A.C. 7:50-6.14, prohibiting development within 300 feet of a wetland unless it is demonstrated that such development will not result in a significant adverse impact on the wetlands; and

**WHEREAS**, in order to provide an equivalent level of protection of the resources of the Pinelands as would have been provided through strict application of the Pinelands CMP as required by N.J.A.C. 7:50-4.52(c)2, Atlantic County deed restricted approximately 1,822 acres of Lake Lenape Park as permanently preserved in its natural state; and

**WHEREAS**, by letter dated July 10, 2019, Atlantic County Administrator Gerald DelRosso asked for a meeting with the Commission’s Executive Director to explore amending the March 1998 MOA to permit reconfiguration of the docks within Lake Lenape; and

**WHEREAS**, amendment of the 1998 MOA is required because the Declaration of Restrictive Covenants signed by the County Administrator on May 29, 1998, and subsequently filed with the County Clerk, specifically referenced the 1998 MOA and, thus, had the unintended consequence of prescribing the precise location, size and configuration of the docks on Lake Lenape; and

**WHEREAS**, since 1998, public safety concerns have arisen between trucks backing onto the boat ramp adjacent to the L-shaped docks and other users of Lake Lenape; and

**WHEREAS**, after consultation with the Commission’s CMP Policy and Implementation Committee between August 2019 and November 2022, the First Amendment to the 1998 MOA was drafted; and

**WHEREAS**, in order to provide flexibility in the placement of the docks in the vicinity of the boathouse on the Western Lakeshore of Lake Lenape, the First Amendment to the 1998 MOA eliminates the reference in Paragraph II.C.2(h) of the 1998 MOA to the “120 feet L-shaped dock varying in width from six (6) feet to eight (8) feet adjacent to the first aid/restroom/boathouse building” and instead creates a 300’ x 200’ (1.39 acre) rectangular area within which docks of various sizes and configurations may be constructed, as depicted on the plan entitled “Floating Dock General Location Area, Lake Lenape Park,” prepared by Thomas A. Prendergast, PLS, County Surveyor, Atlantic County, Division of Engineering, last revised December 13, 2022; and

**WHEREAS**, to offset the loss of this 1.39 acre deed restricted portion of Lake Lenape, the First Amendment eliminates the authorization in the 1998 MOA to construct a dock at the group camping area elsewhere in Lake Lenape Park and requires the County to deed restrict a 300’ x 200’ rectangular section of Lake Lenape proximate thereto, as depicted on the plan entitled “Area of Deed Restriction” prepared by Thomas A. Prendergast, PLS, County Surveyor, Atlantic County, Division of Engineering, last revised December 13, 2022; and

**WHEREAS**, a public hearing to receive testimony on the proposed First Amendment to the 1998 MOA was duly advertised, noticed, and remotely held on January 4, 2023 at 9:30 a.m. with live broadcast on the Pinelands Commission’s public YouTube channel and opportunity for the public to call-in during the live broadcast; and

**WHEREAS**, the Executive Director has submitted a report to the Commission recommending issuance of an order to execute the First Amendment to the 1998 MOA; and

**WHEREAS**, the Commission’s CMP Policy and Implementation Committee has reviewed the Executive Director’s report and has recommended that the Commission enter into the First Amendment to the 1998 MOA; and

**WHEREAS**, the Pinelands Commission has duly considered all public testimony submitted to the Commission concerning the First Amendment to the 1998 MOA and has reviewed the Executive Director’s report; and

**WHEREAS**, the Pinelands Commission finds that the offsetting measures proposed by Atlantic County will provide an equivalent level of protection for the resources of the Pinelands as would be provided through strict application of the CMP; and

**WHEREAS**, the Commission, further finds that the First Amendment to the 1998 MOA, attached hereto, satisfies the standards of N.J.A.C. 7:50-4.52(c), which authorizes the Commission to enter into such agreements; and

**WHEREAS**, the Commission accepts the recommendation of the Executive Director; and

**WHEREAS**, pursuant to N.J.S.A. 13:18A-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 the Governor shall approve same, in which case the action shall become effective upon such approval.

**NOW, THEREFORE BE IT RESOLVED** that the Commission agrees to enter into the First Amendment to the 1998 MOA between the Commission and Atlantic County regarding Development on the Western Lakeshore of Lake Lenape Park, attached hereto.

**BE IT FURTHER RESOLVED** that the Commission authorizes the Executive Director to execute the First Amendment to the 1998 MOA between the Commission and Atlantic County.

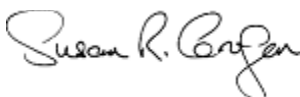
**Record of Commission Votes**

	AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*
Asselta	X				Lettman			X		Pikolycky	X			
Avery	X				Lloyd	X				Wallner			X	
Christy	X				Lohbauer	X				Matos	X			
Holroyd	X				Mauriello	X								
Irick	X				Meade	X								

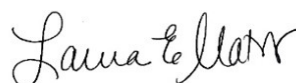
\*A = Abstained / R = Recused

Adopted at a meeting of the Pinelands Commission

Date: February 10, 2023



Susan R. Grogan  
Executive Director



Laura E. Matos  
Chair



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

LAURA E. MATOS  
 Chair  
 SUSAN R. GROGAN  
 Acting Executive Director

January 18, 2023

**REPORT ON A PROPOSED FIRST AMENDMENT TO THE MARCH 4, 1998  
 MEMORANDUM OF AGREEMENT BETWEEN ATLANTIC COUNTY AND THE  
 NEW JERSEY PINELANDS COMMISSION REGARDING DEVELOPMENT PROJECTS  
 IN THE ATLANTIC COUNTY PARK AT LAKE LENAPE**

**FINDINGS OF FACT**

Atlantic County has requested an amendment of the March 4, 1998 Memorandum of Agreement (the 1998 MOA”) between it and the Pinelands Commission (the “Commission”) that authorized the development of certain projects along the Western Lakeshore of Lake Lenape Park in Hamilton Township. The Proposed Amendment would eliminate the provision authorizing construction of a 120-foot L-shaped dock in varying widths from six to eight feet adjacent to the existing boat ramp and proximate to the first aid/restroom/boathouse (the “boathouse”) building. Instead, the Proposed Amendment would authorize the County to install floating docks within a 300’ x 200’ rectangular area (1.39 acres) adjacent and parallel to the boathouse.

**I. Background and Purpose of the 1998 MOA**

Lake Lenape Park is owned by Atlantic County and located in Hamilton Township. It consists of approximately 1,898 acres, including an approximately 330-acre water body known as Lake Lenape. It is located within the Pinelands Area and in a designated Forest Area.

In 1998, Atlantic County was seeking to construct the following on the Park’s western lakeshore: 1) wastewater treatment and facilities, 2) a water main, 3) a boat house, 4) boat ramps, 5) a playground, 6) restroom and shower facilities, 7) cabins, 8) camp sites, 9) docks, 10) access roads and 11) other related improvements. The proposed development was not fully consistent with the Forest Area (N.J.A.C. 7:50-5.23) and the wetland buffers (N.J.A.C. 7:50-6.14) standards of the Pinelands Comprehensive Management Plan (the “CMP”).

The CMP authorizes the Commission to enter into an intergovernmental MOA to permit development that is not fully consistent with its standards, provided such MOA includes measures that afford, at a minimum, an equivalent level of protection for the resources of the Pinelands as would be provided through strict application of the Plan’s standards (N.J.A.C. 7:50-4.52). In March 1998, the Commission and Atlantic County executed a MOA authorizing the above delineated development at Lake Lenape. In order to provide the required offset, Atlantic County deed restricted approximately 1,822 acres of Lake Lenape Park as permanently preserved in its natural state. The County also filed a deed notice restricting the use of the existing sanitary sewer line to the proposed interpretive center, boathouse building and the restroom and shower facilities for the six cabins and eleven campsites.



The Deed of Restrictive Covenants (DCR) filed by the County in May 1998 referenced and incorporated the terms of the MOA. An unintended consequence of this incorporation was the inclusion within the DCR of the specific dimensional requirements for the docks to be constructed proximate to the Boathouse. (See Paragraph C.2(h) of the 1998 MOA). As a result, the DCR limited the County's ability to relocate the docks or change the configuration without an amendment to the MOA authorizing same.

The County subsequently implemented several of the improvements authorized by the March 1998 MOA in the Western Lakeshore Area of Lake Lenape Park, including construction of a 40 foot by 20 foot partially submerged concrete boat ramp and a 120 foot L-shaped floating dock proximate to the Boathouse in accordance with the plans entitled "Western Lake Shore Development Area –Lake Lenape," prepared by Chris R. Rehmann, P.E., L.S., dated July 29, 1991 and revised October 10, 1997.

## **II. Safety Concerns Regarding the Existing Dock Configuration**

By letter dated July 10, 2019, the Atlantic County Administrator requested a meeting with the Pinelands Commission staff to discuss amending the 1998 MOA to address reconfiguration of the docks proximate to the Boathouse at Lake Lenape. The County proposed removing the existing L-shaped dock adjacent to the boat ramp and replacing it with two new floating docks, a 50-foot long by 6-foot wide dock adjacent to the existing boat ramp and a 140-foot long by 13-foot wide dock, independent of and down shore from the boat ramp.

As expressed in its August 23, 2019 presentation to the Commission's CMP Policy and Implementation Committee and, again, in its testimony during the public hearing on the proposed MOA Amendment, there are significant safety concerns associated with the existing configuration of the L-shaped dock adjacent to the boat ramp. Currently, the Boathouse and dock area at Lake Lenape is utilized by thousands of visitors. The current configuration serves as a funnel for access to the lake by various user groups.

The 1998 MOA did not anticipate the conflicts brought about by having vehicles backing trailers down the boat ramp next to the dock being used by kayakers and other small boats, motorboats, swimmers, fisherman, student sculler, etc. It did not anticipate students who scull on the lake being in the path of trucks backing up to use the boat ramp. It also did not anticipate the difficulty of maneuvering large sculls around the L-shaped dock.

These issues, as well as the increased use of the docks since 1998 and the age and condition of the existing docks, prompted the County to approach the Commission with a proposal to amend the 1998 MOA.

## **III. Proposed Offset Replacement**

Initially, the County proposed replacing the existing L-shaped docks with two floating docks; a dock approximately 50 ft long adjacent to the existing boathouse and a second dock 140 ft long x 13 ft wide located at the far side of the Boathouse. These floating docks would not be permanent structures; they have no pilings and are not anchored to the lake bottom. Rather, the docks are kept in place with concrete weights. Following the discussion with Committee members at the August 23, 2019 CMP Policy & Implementation Committee, it was determined that a better approach would be to establish a 300 ft x 200 ft (1.39 acres) area within which the County would have the ability to place docks in whatever configuration would meet its needs.

In order to provide the necessary offset for the amendment, the County offered to deed restrict a comparable area (300 ft x 200 ft, 1.39 acres) located to the north of the camping area on the western lakeshore of Lake Lenape. This area had previously been approved for construction of a dock. The County considered this to be an appropriate offset given the proposed area had not yet been developed and was of a more pristine character than the area around the Boathouse.

#### **IV. Findings**

The County's testimony as discussed above supports the finding that the existing dock configuration required by the terms of the 1998 MOA is resulting in safety conflicts between the various users of the Boathouse area and Lake Lenape. These safety concerns need to be addressed.

Moreover, as evidenced by the County's testimony, developing an amendment to the 1998 MOA that once again restricts the County to the development of docks with specific dimensions and locations does not provide the County with the necessary flexibility to address changes in circumstances that arise over time. Providing the County with a 300 ft x 200 ft area adjacent to the Boathouse for installation of docks of various sizes and configurations will allow the County to address any safety concerns that may arise in the future.

Additional findings are included in the "whereas" paragraphs of the proposed MOA amendment and are incorporated herein by reference.

#### **V. Basis for the First Amendment to the March 4, 1998 MOA**

In order for the Commission to enter into a MOA with a governmental entity that permits development that may not be fully consistent with the land use and development standards (N.J.A.C. 7:50-5 and 6) of the Pinelands CMP, the governmental entity must demonstrate and the Commission must find that variations from the Plan are accompanied by measures that will, at a minimum, afford an equivalent level of protection for the resources of the Pinelands than would be provided through strict application of the CMP. N.J.A.C 7:50-4.52(c)2. As discussed above, the County has proposed to replace the 300 ft x 200 ft (1.39 acre) area proximate to the Boathouse with another area of the same shape and size on Lake Lenape and deed restrict this area against future development.

The 1998 MOA authorized the development of 76 acres of Lake Lenape Park and required that the remaining approximately 1,822 acres of the park be deed restricted against development. Through the MOA, the County was authorized to undertake various development projects including the development of the L-shaped dock proximate to the Boathouse and a similar L-shaped dock in the area it is now offering to deed restrict. The proposed MOA Amendment does not increase size of the area permitted for development in the park. Rather, the new area to be deed restricted is the same size as the area proximate to the Boathouse but is in its natural state. The County is also relinquishing its existing authorization to construct a dock in this area. As a result, the County has proposed an equivalent level of protection for the resources of the Pinelands as was provided previously under the 1998 MOA and as would be provided through strict application of the relevant standards of the Pinelands CMP.

## **VI. PUBLIC HEARING**

Pursuant to N.J.A.C. 7:50-4.52(c)3, a public hearing to receive testimony concerning the proposed First Amendment to the March 4, 1998 MOA was duly advertised and noticed. The hearing was conducted by Acting Executive Director Susan R. Grogan and held virtually, via ZOOM on January 4, 2023 at 9:30 a.m. Two individuals attended the hearing.

At the outset of the public hearing, Acting Executive Director Grogan provided a summary of the terms of the MOA amendment being requested and the replacement offset proposed by the County. Ms. Grogan noted that written comment concerning the proposed amendment would be accepted by mail, fax or email until 5:00 p.m. on January 9, 2023.

Ms. Grogan advised the public that following the hearing, staff would prepare a report and recommendation concerning the MOA amendment for the Commission's review. This report would provide a summary of any testimony provided at the hearing and any written comments received before the record closed on January 9, 2023. Ms. Grogan further advised that the Commission's CMP Policy & Implementation Committee would discuss the proposed MOA Amendment and the staff's recommendation at its January 27, 2023 meeting, with consideration by the full Commission likely to occur on February 10, 2023.

The following testimony was received at the hearing:

Anthony Pagano, Assistant County Counsel, appeared on behalf of Atlantic County. Mr. Pagano testified that he had worked on the original 1998 MOA and circumstances had changed since that document was executed. He indicated that in 1998, the user conflicts that had been encountered over the recent years and the safety concerns attributable to such conflicts had not been anticipated. He testified that the boat ramp area is used by various user groups including fishermen, people wanting to recreate and jump into the lake and trucks backing boat trailers onto the boat ramp. He noted that the current dock configuration is a fixed structure located right up against the boat ramp. He stated that there have been problems with students who scull on the lake being in the path of trucks backing onto the boat ramp and that these user groups needed to be separated. He also noted that using a floating dock system will provide the County with needed flexibility as opposed to a permanent structure and will allow the County to move other users away from trucks backing onto the boat ramp. He said that this is an important safety issue to the County. As to the area being offered as an offset, he advised that the area had not been developed and is of a more pristine character than the area around the Boathouse. Given this, the County feels it is more appropriate to deed restrict this area and preserve it in its natural state, in exchange for the flexibility to address the County's needs for the area by the Boathouse where activity is occurring.

Eric Husta, Director, Atlantic County Parks, also appeared on behalf of Atlantic County. Mr. Husta said that he was there predominantly to answer any questions that the Acting Executive Director may have. He indicated that he echoed Mr. Pagano's testimony. He said that the increased usage of the park had caused the County to look at the dock area and its current configuration. He advised that given the existing L-shaped dock structure is aging out and needs repair or replacement, the County felt that now was the time to discuss its safety concerns with the Commission.

There being no further testimony, the hearing concluded at approximately 9:40 a.m.

No written comments were received regarding the proposed MOA Amendment.

## **VII. CONCLUSION AND RECOMMENDATION**

The proposed amendment to the March 4, 1998 MOA between the Commission and Atlantic County will create a 300 ft x 200 ft rectangular area proximate to the existing Boathouse, within which the County will be permitted to install docks in whatever configuration it deems necessary to permit the park's visitors to use and enjoy the lake safely.

As discussed above, the County has proposed to deed restrict an area of the same size and shape of the lake in the vicinity of the existing camping area on the western lakeshore. In addition, the County is relinquishing the authorizations granted by the 1998 MOA to construct a L-shaped dock in this area. Unlike the area proximate to the Boathouse, the new offset area to be deed restricted remains undeveloped.

Moreover, development of the new docks within the 300 ft x 200 ft area proximate to the Boathouse will not require construction of permanent structures, pilings or anchors to the lake bottom. Rather, these docks will be secured using concrete weights.

Considering the above, the proposed MOA Amendment is accompanied by measures that, at a minimum, afford an equivalent level of protection of the resources of the Pinelands as required by N.J.A.C. 7:50-4.52(c)2. The Acting Executive Director therefore recommends that the Commission enter into the First Amendment to the March 4, 1998 Memorandum of Agreement with Atlantic County regarding development projects in the Atlantic County Park at Lake Lenape.



# ***RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION***

**NO. PC4-23- 08**

**TITLE:** To Authorize the Executive Director to Propose Substantial Changes Upon Adoption to the Proposed Amendments to the Comprehensive Management Plan Related to Water Management in Accordance with the Administrative Procedure Act

**Commissioner Pikolycky moves and Commissioner Holroyd seconds the motion that:**

**WHEREAS**, on July 8, 2022, the Pinelands Commission adopted Resolution PC4-22-25, authorizing the proposal of Comprehensive Management Plan amendments that provide clearer, quantifiable standards for assessing the ecological impacts of nonagricultural diversions from the Kirkwood-Cohansey aquifer, introduce new, quantifiable standards to protect the available water supply in the watershed in which a diversion will be located, expand the scope of wells that will be subject to the new standards, limit new or increased diversions from the Kirkwood-Cohansey to appropriate Pinelands management areas and clarify and expand water conservation requirements; and

**WHEREAS**, the proposed amendments were thereafter submitted to the Office of Administrative Law and published in the New Jersey Register on September 6, 2022; and

**WHEREAS**, public comments on the proposed amendments were accepted at public hearings held on October 12, 2022 and November 2, 2022 and in writing through November 5, 2022; and

**WHEREAS**, the Commission received both oral and written public comments on the proposed amendments; and

**WHEREAS**, after review of the public comments, the Executive Director identified the need for revisions to the proposed amendments, largely to recognize the nonconsumptive use of water by the resource extraction industry in the Pinelands Area; and

**WHEREAS**, the Executive Director therefore drafted proposed substantial and non-substantial changes to the proposed Comprehensive Management Plan amendments and discussed them with the Commission's CMP Policy and Implementation Committee on November 30, 2022; and

**WHEREAS**, the proposed substantial and non-substantial changes to the Comprehensive Management Plan amendments have been reviewed by the Pinelands Commission; and

**WHEREAS**, the Pinelands Commission wishes to formally consider the Notice of Proposed Substantial Changes Upon Adoption to the Proposed Amendments to the Comprehensive Management Plan set forth in the attachment hereto, dated January 4, 2023; and

**WHEREAS**, the Administrative Procedure Act of 1968, as amended, and the Office of Administrative Law implementing regulations set forth a detailed procedure governing proposed rulemaking; and

**WHEREAS**, the Pinelands Commission also wishes to obtain the comments of the public, governmental agencies and the Pinelands Municipal Council on the Notice of Proposed Substantial Changes Upon Adoption, in accordance with the Pinelands Protection Act and Subchapter 7 of the Comprehensive Management Plan; and

**WHEREAS**, pursuant to N.J.S.A. 13:18A-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 the Governor shall approve same, in which case the action shall become effective upon such approval.

**NOW, THEREFORE, BE IT RESOLVED** that:

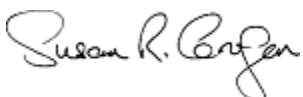
1. The Commission hereby authorizes the Executive Director to submit the Notice of Proposed Substantial Changes Upon Adoption to Proposed Amendments to the Comprehensive Management Plan, attached hereto and dated January 4, 2023, and the required supporting documentation to the Office of Administrative Law for publication in the New Jersey Register;
2. The Executive Director shall transmit the Notice of Proposed Substantial Changes Upon Adoption to all Pinelands municipalities and counties and the Pinelands Municipal Council for review;
3. The public comment period on the Notice of Substantial Changes Upon Adoption shall extend 60 days from the date of publication of the proposal in the *New Jersey Register* and the Acting Executive Director shall affix the date of a public hearing to receive comments on the proposal; and
4. Subsequent to the comment period, the Executive Director shall expeditiously prepare proposed final amendments, with any pertinent changes to these amendments, for review by the Commission's CMP Policy and Implementation Committee, and shall submit same to the Commission for final action.

**Record of Commission Votes**

	AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*
Asselta	X				Lettman			X		Pikolycky	X			
Avery	X				Lloyd	X				Wallner			X	
Christy	X				Lohbauer	X				Matos	X			
Holroyd	X				Mauriello	X								
Irick	X				Meade	X								

\*A = Abstained / R = Recused

Adopted at a meeting of the Pinelands Commission

Date: February 10, 2023



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 Susan R. Grogan  
 Executive Director




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 Laura E. Matos  
 Chair

**ENVIRONMENTAL PROTECTION**

**PINELANDS COMMISSION**

**Pinelands Comprehensive Management Plan**

**Fees; Definitions; Development Review (new); Water Quality**

**Proposed Substantial Changes: N.J.A.C. 7:50-2.11, 7:50-4.2 (new), and 6.86(d)iii**

**Proposed Non-substantial Changes: N.J.A.C. 7:50-2.11, 7:50-6.86(b), (d), (d)2i, (d)2ii,  
and(d)6**

**Notice of Proposed Substantial Changes Upon Adoption to Proposed Amendments**

Proposed: September 5, 2022 at 53 NJR 9(1)

Authorized By: New Jersey Pinelands Commission, Susan R. Grogan, Acting Executive  
Director.

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

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

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

Wednesday, May 3, 2023 at 9:30 A.M.

Richard J. Sullivan Center

15C Springfield Road

New Lisbon, New Jersey

Submit written comments by regular mail, facsimile, or email by June 2, 2023, to:

Susan R. Grogan, P.P., AICP

Acting Executive Director

Pinelands Commission

PO Box 359

New Lisbon, NJ 08064

Facsimile: (609) 894-7330

Email: [planning@pinelands.nj.gov](mailto:planning@pinelands.nj.gov) or through the New Jersey Pinelands

Commission's website at <http://nj.gov/pinelands/home/contact/planning.shtml>.

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

**Take notice** that the New Jersey Pinelands Commission proposed amendments to the Pinelands Comprehensive Management Plan at N.J.A.C. 7:50-1.6, 2.11, and 6.86 on September 5, 2022 at 53 NJR 9(1) to strengthen protections to the Kirkwood-Cohansey aquifer and the ecology of the Pinelands Area. Public hearings were held on October 12 and November 2, 2022 and the public comment period closed on November 5, 2022. This notice of proposed substantial changes is published pursuant to N.J.S.A. 52:14B-4.10.

The Commission is proposing three substantial changes to the amendments in response to comments received. During the public comment period on the original notice of proposal, the Commission received comments expressing concern regarding the impact of the proposed amendments on the resource extraction industry in the Pinelands Area. Resource extraction in the Pinelands Area involves mining sand and gravel, typically by mechanical or hydraulic dredging, a process that uses water directly from water bodies created by excavations below the water table of the Kirkwood-Cohansey Aquifer.



The Commission is also proposing non-substantial changes to the amendments in response to public comments and one very minor agency-initiated change. These changes clarify language in the proposed amendments and correct a citation.

The following individuals and organizations submitted comments that gave rise to the substantial and non-substantial changes being proposed in this notice. The Commission has also responded to comments received from those same individuals, but which did not result in revisions to the original proposal. The Commission will respond to the remaining comments received, as well as any new comments, when it files a notice of adoption. The numbers in parentheses after each comment summarized below correspond to the following list of commenters.

1. William Layton, Executive Director (written comment) and Kyle England, CLB Partners (public hearing), NJ Concrete & Aggregate Association
2. Ryan Benson, Esq., (public hearing), Kevin Coakley, Esq. (written comment), and Brian Blum, CPG, LSRP (written comment), Clayton Companies
3. Robert S. Baranowski, Jr., Esq. (public hearing and written comment), Whibco, Inc.
4. Joseph Gallagher, Township Administrator, Winslow Township
5. Jeffrey L. Hoffman, State Geologist, New Jersey Department of Environmental Protection, Division of Water Supply and Geoscience
6. Robert Kecskes (public hearing and written comment)

### **Summary of comments**

#### Resource extraction (N.J.A.C. 7:50-2.11; 4.2(b)6xi ((new)); 6.86(d)2iii)

1. COMMENT: Resource extraction operations use mechanical and hydraulic dredging that typically involves “nonconsumptive” water use. The water is returned to the source

with little or no change in the quality or quantity of water. The rule would impose a disproportionate regulatory burden on such nonconsumptive diversions and would not accomplish the purpose of protecting the aquifer. The proposed amendments are punitive of nonconsumptive uses as they do not account for aquifer replenishment in a closed-loop use. (1, 2, 3)

2. COMMENT: The proposed regulations will hurt the mining industry. Additional constraints on mining in the Preservation Area District, Forest Area, and Special Agricultural Production Area will hasten the demise of the industry. (1, 2, 3)

3. COMMENT: The proposed rule will force resource extraction operations to reduce production of mined sand, gravel, and crushed stone, resulting in a shortage of the products, which will threaten vital transportation projects and negatively impact the construction industry. The Commission should identify and protect these resources to ensure an uninterrupted, economical supply. The proposed rule is contrary to the federal ROCKS act (part of the Infrastructure and Jobs Act of 2021), designed to keep aggregate building materials sustainable. The general mid-Atlantic region is dependent on these already scarce materials used for construction of buildings and roads. (1, 2, 3)

4. COMMENT: The proposed rules will result in a shortage of sand, gravel, and crushed stone, which could result in the doubling of price for those materials. (2)

RESPONSE: The Commission thanks the resource extraction industry for its comments and explanations regarding the specific nonconsumptive uses of water for hydraulic dredging operations. Given that there are over 70 existing resource extraction operations in the Pinelands Area, approximately half of which are located in the Preservation Area District and Forest Area where the proposed rule would prohibit new diversions of 50,000 gallons of water per day or

more from the Kirkwood-Cohansey aquifer, the industry has raised valid concerns about the impact of the proposed rule.

In order to avoid unintended negative impacts on the resource extraction industry, the Commission is proposing a new provision at N.J.A.C. 7:50-6.86(d)2iii, which states that the standards at N.J.A.C. 7:50-6.86(d)3 through 9 will not apply to proposed diversions for resource extraction operations that constitute a nonconsumptive use, provided that the water returned to the source is not discharged to a stream or waterbody or otherwise results in offsite flow, and the diversion and return are located on the same parcel. A definition of “nonconsumptive use” is being added at N.J.A.C. 7:50-6.86-2.11 to mean the use of water diverted from surface or ground waters in such a manner that at least 90 percent of the diverted water is returned to the source surface or ground water at or near the point from which it was taken. This new definition focuses on water quantity and does not explicitly reference water quality, because all development in the Pinelands Area, including diversions from the Kirkwood-Cohansey aquifer, are required to meet the existing water quality standards of the Comprehensive Management Plan.

A resource extraction operation located in the Pinelands Area will continue to be required to apply to the Commission for any new or increased diversion. If the applicant for such a diversion can demonstrate as part of the application process that the proposed diversion meets the definition of nonconsumptive use at N.J.A.C. 7:50-2.11 and the conditions in new N.J.A.C. 7:50-6.86(d)2iii (described in the paragraph above), the water management standards at N.J.A.C. 7:50-6.86(d)3-9 will not apply, even if the proposed diversion involves the withdrawal of 50,000 gallons of water per day or more from the Kirkwood-Cohansey aquifer. To clarify the application process, the Commission is also proposing a new provision at its application requirement section, N.J.A.C. 7:50-4.2(b)6xi, to specify the information a resource extraction

operation must provide to the Commission. This application would most likely be submitted as part of an application for renewal of a resource extraction permit or as a separate application for development that would necessitate a modification of a New Jersey Department of Environmental Protection (DEP) Water Allocation Permit. The new provision requires submission of a hydrogeologic report that identifies the volume of the diversion, the volume of water to be returned to the source, a description of the route of return to the source, the methodology used to quantify the volume of water returned to the source and a description of any other existing or proposed water diversions or discharges on or from the parcel. A “parcel” will be considered as all tax lots that are a part of a resource extraction operation for which a municipal approval has been reviewed by the Commission, determined to be consistent with all CMP standards and allowed to take effect pursuant to N.J.A.C. 7:50-4.37 and 4.40. The report shall also include a map that depicts the location of the diversion, the location of the return to source, the location of all existing or proposed resource extraction operations and the location of all wetlands on or within 300 feet of the parcel on which the diversion is proposed.

5. COMMENT: Holders of current water allocation permits issued by the New Jersey Department of Environmental Protection (DEP) should be “grandfathered” under the proposed amendments. The proposed rules will prohibit new diversions or increases in diversions even though a resource extraction operation may have had a DEP-issued water allocation permit for many years. (1,2)

RESPONSE: There is no need for a grandfathering provision because under the proposed amendments, a holder of a current water allocation permit is not required to apply to the Commission for an existing diversion. The holder is required to complete an application only for a new diversion or an increase in allocation from either a single existing diversion source or from

combined existing and new diversion sources in the same HUC-11 watershed in the Kirkwood-Cohansey aquifer, that results in a total diversion of 50,000 gallons of water per day or more.

6. COMMENT: Disparate treatment of different Pinelands Management Areas is arbitrary and nothing in the Pinelands studies supports a prohibition on diversions in the Forest Area and Preservation Area District. Most mines are located in the Forest Area or Preservation Area District; therefore, the proposed standard at N.J.A.C. 7:50-6.86(d)3 is a problem. (2, 3)

RESPONSE: The Commission disagrees, as the Pinelands Protection Act, N.J.S.A. 13:8A, authorizes greater protections for the Forest Area and Preservation Area District based on the ecology of these management areas. The Commission recognizes, however, that certain nonconsumptive uses of water can be consistent with those necessary protections and, as discussed above, is proposing revisions to recognize that such uses can maintain the ecological values of these most ecologically valuable management areas.

7. COMMENT: The proposed amendments rely upon flawed studies that model "excessive" drawdown of up to 30% of streamflow, 6 inches of water table lowering, or pumping at 30% of groundwater recharge. (2)

RESPONSE: The Commission disagrees that the model is flawed. The studies provide insight into the level of impact that can occur before those impacts have significant adverse impacts on the Pinelands ecology.

8. COMMENT: The Pinelands Commission does not have the regulatory authority to require or issue permits or regulate water use. The New Jersey Department of Environmental Protection has exclusive authority to regulate water diversions and evaluate alternative source requirements where critical water areas are established. The Pinelands Protection Act does not

authorize the Pinelands Commission to help implement the Water Supply Management Act. (2, 3)

RESPONSE: The Commission respectfully disagrees with these statements. The Pinelands Protection Act, N.J.S.A. 13:8A, directs the Commission to regulate development and establish standards to allow development without a significant adverse impact to the resources of the Pinelands Area. The Act specifically authorizes the Commission to regulate land and water management. N.J.S.A. 13:18A-8d. This statutory authority to regulate water management is independent of the DEP's authority under the Water Supply Management Act. The Commission also notes that it does not issue permits; rather, it evaluates development applications and municipal approvals to ensure compliance with the standards established in the Comprehensive Management Plan, adopted to implement the Pinelands Protection Act.

9. COMMENT: The proposed rule is duplicative of DEP rules. (3)

RESPONSE: The Commission respectfully disagrees, as it is not issuing water allocation permits. The proposed rule establishes standards and criteria for diversions in the Pinelands Area, some of which are more stringent than those administered by the DEP. The Commission's evaluation of a diversion application does rely upon a modeling process similar to the DEP's in an effort to avoid the need for duplicative modeling by applicants in those situations where there is regulatory overlap.

10. COMMENT: One of the commenters noted that its resource extraction site is bisected by watershed management area boundaries and by the nature of the extraction operation, it cannot avoid interbasin transfers. (3)

RESPONSE: If a resource extraction company can demonstrate that its operation constitutes a nonconsumptive use of water, then by definition, there will be no interbasin transfer

of water. Nonconsumptive use is being defined to mean that at least 90 percent of the diverted water is returned to the source surface or ground water at or near the point from which it was taken. No interbasin transfer of water will occur if 90 percent of the diverted water is returned in this manner.

11. COMMENT: The Pinelands Protection Act already prohibits export of water greater than 10 miles so there is no need for interbasin transfer prohibition. (2)

RESPONSE: The Commission disagrees. The prohibition against interbasin transfer of water is not necessarily the same as the prohibition in the Pinelands Protection Act against exporting water greater than ten miles (N.J.S.A. 58:1A-7.1) as there could be instances where an interbasin transfer of water occurs within a ten-mile area. In addition, the proposed amendments merely strengthen the existing restriction against interbasin transfer at N.J.A.C. 7:50-6.86(a) and clarify that restriction by defining the basins.

12. COMMENT: Along with recognizing mining as a nonconsumptive use, the definition of “divert” or “diversion” should be modified to exclude “mining of sand or similar materials, as long as the mining is conducted by mechanical or hydraulic dredging” and state that such mining shall not be considered development. (3)

RESPONSE: The Commission believes that its proposed changes, described in the response to comments 1 through 4, above, sufficiently address the resource extraction industry’s concerns regarding compliance with the proposed new water management standards when an operation involves nonconsumptive use of water. In addition, the suggested revision would conflict with the definition of “divert” and “diversion” in the DEP’s water supply allocation rules at N.J.A.C. 7:19-1.3.

13. COMMENT: The definition of “allocation” at 7:50-6.86(b), and the standards at proposed (d)3 through (d)9, should also exclude the taking or discharge of water for mining of sand or other earthen materials, even if permitted pursuant to a Water Allocation Permit, Water Use Registration, Number, NPDES or NJPDES permit, as long as such mining is conducted by mechanical or hydraulic dredging. (3)

RESPONSE: The Commission believes that its proposed changes, described in the response to comments 1 through 4, above, sufficiently address the resource extraction industry’s concerns regarding compliance with the proposed new water management standards when an operation involves nonconsumptive use of water.

14. COMMENT: The Commission’s current 100,000 gallon per day threshold pumping volume at which a diversion would need to meet the existing standards at N.J.A.C. 7:50-6.86 adequately prevents excessive or nonessential diversions from the Kirkwood-Cohansey aquifer and does not need to be modified. (3)

RESPONSE: The Commission respectfully disagrees. The twelve studies on the impacts of diversions on the Kirkwood-Cohansey aquifer, described in the original rule proposal at 53 NJR 9(1) and at <https://www.nj.gov/pinelands/science/complete/kc/>, revealed a need to update the Comprehensive Management Plan to better protect the aquifer.

15. COMMENT: The Commission should identify and protect sand, gravel, and crushed stone resources to ensure an uninterrupted, economical supply. (1)

RESPONSE: The Commission does not have the statutory authority to directly protect sand, gravel and crushed stone resources, but the proposed revisions, described above, recognize the industry’s nonconsumptive use of water and should help to ensure the continued production and supply of the resources.



Stream low flow margin (N.J.A.C. 7:50-2.11)

16. COMMENT: The definition of “stream low flow margin” should be the same as the one in the New Jersey Statewide Water Supply Plan. (5)

RESPONSE: The Commission is proposing to change the definition of stream low flow margin at N.J.A.C. 7:50-2.11 to make it consistent with the New Jersey Statewide Water Supply Plan. Specifically, the definition will clarify “September Median Flow” to mean a stream’s normal dry-season flow and will replace the term and definition of “statistical flow” with “drought flow.”

Interbasin transfer (N.J.A.C. 7:50-6.86(b))

17. COMMENT: There are unavoidable interbasin transfers because some diversions that are located near the border of the Atlantic and Delaware River Basins are pulling water from both basins. This is difficult for municipalities whose land areas straddle both basins and can be problematic for municipalities that currently depend on interbasin transfer for a potable water source and wastewater treatment. Winslow Township purchases 1.5 MGD from New Jersey American Water that is sourced from the Delaware River Basin and is mostly transferred to the Atlantic Basin. (4)

RESPONSE: The Commission thanks the commenter for raising this concern. The Commission is aware that for Winslow Township and other municipalities, water procurement involves the transfer of water between the Atlantic and Delaware River Basins and that these transfers are from diversions located outside the Pinelands Area. Therefore, the Commission is proposing to amend N.J.A.C. 7:50-6.86(b) to clarify that the prohibition against interbasin transfers applies only to transfers of water from sources within the Pinelands Area. It should be noted that water sourced from outside the Pinelands Area that is distributed to development

within the Pinelands Area through a public or community water system will not result in an interbasin transfer, as the water will be conveyed back out of the Pinelands Area through the public sanitary sewer system or completely consumed.

Water management standards/ 50,000 gpd threshold (N.J.A.C. 7:50-6.86(d))

18. COMMENT: The proposed rule does not clearly state that any proposed increase in diversion over 50,000 gpd triggers review. (4)

RESPONSE: In its initial proposal, the Commission expanded the scope of wells that will be subject to the water management standards by lowering the water volume threshold from 100,000 gallons of water or more per day to 50,000 gallons of water or more a day. The proposed amendments at N.J.A.C. 7:50-6.86(d) specify that the 50,000 gallon per day threshold includes all an applicant's existing diversions in the same HUC-11 watershed, in addition to the new or increased diversion. In response to the commenter's request for greater clarification, however, the Commission is proposing to add the word "and new" to N.J.A.C. 7:50-6.86(d) so that it reads "A new diversion or an increase in allocation from either a single existing diversion source or from combined existing and new diversion sources in the same HUC-11 watershed and in the Kirkwood-Cohansey aquifer, that results in a total diversion of 50,000 gallons of water per day or more (hereafter referred to as "proposed diversion") shall meet the criteria and standards set forth at (d)3 through 9 below." Examples and additional explanations of how this threshold will be calculated and applied can be found in the initial notice of proposal at 53 NJR 9(1).

Water management standards (N.J.A.C. 7:50-6.86(d)2i)

19. COMMENT: The citation at N.J.A.C. 7:50-6.86(d)2i is incorrect. N.J.A.C. 7:9-9 was repealed and replaced with N.J.A.C. 7:9D-3. (5)

RESPONSE: The Commission has corrected the citation in this notice.

Adverse Regional Impact (N.J.A.C. 7:50-6.86(d)6)

20. COMMENT: It is unclear which datasets in the Water Supply Plan the Commission will rely upon to determine whether a proposed diversion exceeds 20 percent of the stream low flow margin. It is unclear if the proposed rule is referring to allocations or peak reported use, which are estimated differently in the Water Supply Plan. Additionally, the information referred to is in Appendix A of the Water Supply Plan, which is not the referenced document. The correct reference is <https://www.state.nj.us/dep/watersupply/pdf/wsp-appendix-a.pdf>. (6)

RESPONSE: The Commission has revised proposed N.J.A.C. 7:50-6.86(d)6 to make the language consistent with the New Jersey Statewide Water Supply Plan and to specify that applicants should use Appendix A of that Plan. The revisions also include correcting the link to Appendix A, and specifying the exact datasets/tables applicants should use in Appendix A.

**Summary of Agency-Initiated Changes**

The Commission is clarifying N.J.A.C. 7:50-6.86(d)2ii by adding the word “proposed” before “diversion.”

**Effect of Proposed Changes on Impact Statements Included in Original Proposal**

None of these changes affect the Social, Agriculture Industry or Racial and Ethnic Community Criminal Justice and Public Safety Impacts, the Federal Standards Statement, or the Housing Affordability and Smart Growth Development Impact Analyses as published in the original proposal. The following is a discussion on how the revisions change the Economic, Environmental, and Jobs Impact, as well as the Regulatory Flexibility Analysis.

## Economic Impact

When the Commission initially proposed the amendments, it was not aware of the potential impacts on the resource extraction industry in the Pinelands Area or the construction industry in general. If the proposal remained unchanged, there would be a negative economic impact on both of those industries -- but with the proposed changes, it is anticipated that these impacts will be avoided.

There will, however, continue to be some costs for a resource extraction operation proposing a new or expanded diversion from the Kirkwood-Cohansey aquifer that meets the volume threshold specified at N.J.A.C. 7:50-6.86(d). Under the revisions, an operation will still have to apply for a diversion, but it will not have to conduct the hydrogeologic modeling required at N.J.A.C. 7:50-6.86(d) if it can demonstrate that the diversion constitutes a nonconsumptive use, the water returned to the source is not discharged to a stream or waterbody or otherwise results in offsite flow, and the diversion and return are located on the same parcel that is the subject of the application to the Commission. To demonstrate that the application meets these three standards, a resource extraction operation will have to provide a hydrogeologic report that identifies the volume of the diversion, the volume of water to be returned to the source, a description of the route of return to the source, the methodology used to quantify the volume of water returned to the source and a description of any other existing or proposed water diversions or discharges on or from the parcel. The report shall also include a map that depicts the location of the diversion, the location of the return to source, the location of all existing or proposed resource extraction operations and the location of all wetlands on or within 300 feet of the parcel on which the diversion is proposed.

Although there could be engineering and other professional costs associated with the preparation of the application and hydrogeologic report, the DEP requires similar information from a resource extraction operation that is applying for a modification to a water allocation permit (WAP). Thus, if the operation is simultaneously applying for a WAP modification, there should not be any significant additional costs associated with the application to the Commission.

Ultimately, the revisions will result in greater economic protection to the resource extraction industry and the associated construction industries.

### Environmental Impact

The revisions should not have a negative impact on the environment. The revisions are being proposed to recognize that the nonconsumptive use of water by a resource extraction operation need not be subject to the new Kirkwood-Cohansey water management standards provided the specified conditions are met to ensure the protection of the aquifer and ecology. Specifically, a resource extraction operation will have to demonstrate that it meets the new definition of nonconsumptive use, that the water returned to the source is not discharged to a stream or waterbody or otherwise results in offsite flow, and that the diversion and return are located on the same parcel. All other CMP environmental standards will continue to apply to such proposed diversions, including those related to water quality.

### Jobs Impact

The Commission does not anticipate that the revisions will have any significant impact on job creation and retention in New Jersey. Engineering and other professional work will be needed for the hydrogeologic report required at new N.J.A.C. 7:50-4.2(b)6xi, but the requirements for the report align closely with those currently imposed by the DEP on the resource extraction industry. Under the proposed amendments, however, the report requirements

will apply to a slightly larger group of proposed diversions in the Pinelands Area (those that will pump 50,000 gallons per day or more from the Kirkwood-Cohansey aquifer).

### Regulatory Flexibility Analysis

The revisions do not alter the Commission's initial evaluation of whether the proposed amendments will impose any reporting, recordkeeping, and other compliance requirements on small businesses pursuant to the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq. As discussed above, resource extraction operations that are deemed small businesses may incur costs from hiring professional consultants, such as engineers, when proposing new or increased diversions in the Kirkwood-Cohansey reservoir.

The Commission has balanced the costs imposed by the proposed revisions on small resource extraction businesses against the environmental benefits to be achieved by ensuring that a diversion for resource extraction purposes should not have to comply with the proposed water management standards and determined that it would be inappropriate to exempt small businesses from these new application requirements.

**Full text** of the proposed changes to the proposed amendments follows (additions to proposal indicated in italicized boldface ***thus***; deletions from proposal indicated in italicized cursive brackets [*thus*]):

## SUBCHAPTER 1. GENERAL PROVISIONS

### 7:50-1.6 Fees

- (a) (No change from proposal.)
- (b) (No change.)

(c) (No change from proposal.)

(d)-(l) (No change.)

## SUBCHAPTER 2. INTERPRETATIONS AND DEFINITIONS

### 7:50-2.11 Definitions

When used in this Plan, the following terms shall have the meanings ascribed to them.

...

**“Divert” or “Diversion” means the taking of water from a river, stream, lake, pond, aquifer, well, other underground source, or other waterbody, whether or not the water is returned thereto, consumed, made to flow into another stream or basin, or discharged elsewhere.**

...

*“Nonconsumptive use” means the use of water diverted from surface or ground waters in such a manner that at least 90 percent of the diverted water is returned to the source surface or ground water at or near the point from which it was taken.*

...

**“Stream low flow margin” means the difference between a stream’s *normal dry-season flow (September Median Flow) and drought flow* [its statistical flow, which is the seven-day flow average in the 10-year period for the stream] (7Q10) as reported in the New Jersey Statewide Water Supply Plan, New Jersey Department of Environmental Protection, 2017, New Jersey Water Supply Plan 2017-2022: 484p, <http://www.nj.gov/dep/watersupply/wsp.html>, as amended and supplemented.**

...

**"Well" means a hole or excavation deeper than it is wide, that is drilled, bored, core driven, jetted, dug, or otherwise constructed for the purpose of the removal of, investigation of, or exploration for water.**

...

**"Zone of influence" means the area of ground water that experiences an impact attributable to a pumping well.**

...

#### SUBCHAPTER 4. DEVELOPMENT REVIEW

7:50-4.2 Pre-application conference; application requirements

(a) (No change).

(b) Application requirements

1.-5. (No change).

6. Application for resource extraction: Unless the submission requirements are modified or waived pursuant to (b)3 above, an application filed pursuant to N.J.A.C. 7:50-4.13 or 4.33 for resource extraction shall include at least the following information:

i.-x. (No change).

*xi. If the application includes a proposed diversion from the Kirkwood-Cohansey aquifer, a hydrogeologic report that identifies the volume of the diversion, the volume of water to be returned to the source, a description of the route of return to the source, the methodology used to quantify the volume of water returned to the source and a description of any other existing or proposed water diversions or discharges on or from the parcel. The report shall also include a map that depicts the location of the diversion, the location of the return to*



*source, the location of all existing or proposed resource extraction operations and the location of all wetlands on or within 300 feet of the parcel on which the diversion is proposed.*

## SUBCHAPTER 6. MANAGEMENT PROGRAMS AND MINIMUM STANDARDS

7:50-6.86 Water management

[(a) Interbasin transfer of water between watersheds in the Pinelands should be avoided to the Maximum extent practical. In areas served by central sewers, water-saving devices such as water saving toilets, showers and sink faucets shall be installed in all new development.]

[(b)] **(a)** Water shall not be exported from the Pinelands except as otherwise provided [in] **at** N.J.S.A. 58:1A-7.1.

[(c) All wells and all increases in diversion from existing wells which require water allocation permits from the New Jersey Department of Environmental Protection shall be designed and located so as to minimize impacts on wetlands and surface waters. Hydrologic analyses shall be conducted in accordance with the New Jersey Department of Environmental Protection Guidelines for Water Allocation Permits, with an Appendix on Aquifer-Test Analysis Procedures, New Jersey Geological Survey Report GSR 29, 1992, incorporated herein by reference, as contained in pages 53 through 91 of the Technical Manual for Water Supply Element, Bureau of Water Allocation, Water Allocation Permits dated May 19, 1993, as amended.

(d) All applications for the development of water supply wells or the expansion of existing water distribution systems shall address measures in place or to be taken to increase water conservation in all areas to be served by the proposed well or system. This shall include efforts

by water purveyors and local governments to reduce water demands by users and to reduce losses in the supply and distribution system.

(e) Except for agricultural uses, all new potable and non-potable water supply diversions of more than 100,000 gallons per day that utilize the Kirkwood-Cohansey aquifer as a source of water supply and new increases in existing potable and non-potable water supply diversions of over 100,000 gallons per day that utilize the Kirkwood-Cohansey aquifer may be permitted only if it is demonstrated that:

1. No viable alternative water supply sources are available; or
2. The proposed use of the Kirkwood-Cohansey aquifer will not result in any

adverse ecological impact on the Pinelands Area.]

**(b) A diversion that involves the interbasin transfer of water *from sources within [in] the Pinelands Area between the Atlantic Basin and the Delaware Basin, as defined at (b)1 and 2 below, or outside of either basin, shall be prohibited.***

**1.-2.** (No change from proposal.)

(c) (No change from proposal.)

**(d) A new diversion or an increase in allocation from either a single existing diversion source or from combined existing *and new* diversion sources in the same HUC-11 watershed and in the Kirkwood-Cohansey aquifer, that results in a total diversion of 50,000 gallons of water per day or more (hereafter referred to as “proposed diversion”) shall meet the criteria and standards set forth at (d)3 through 9 below. “Allocation” shall mean a diversion permitted pursuant to a Water Allocation Permit or Water Use Registration Number issued by the New Jersey Department of Environmental Protection pursuant to N.J.A.C. 7:19.**

1. (No change from proposal.)
2. The standards set forth at (d)3 through 9 below shall not apply to:
  - i. A new well that is to replace an existing well, provided the existing well is sealed in accordance with N.J.A.C. 7:9-9D-3 and the new replacement well will:
    - (1)-(3) (No change from proposal.)
    - (4) Be located within 100 feet of, and in the same HUC-11 watershed as, the existing well; [or]
  - ii. Any *proposed* diversion that is exclusively for agricultural or horticultural use; or [.]
  - iii. Any *proposed diversion for a resource extraction operation that constitutes a nonconsumptive use, provided the water returned to the source is not discharged to a stream or waterbody or otherwise results in offsite flow, and the diversion and return are located on the same parcel.*
- 3.-5. (No change from proposal.)
6. A proposed diversion shall be deemed to have an adverse regional impact if it, combined with all *current depletive-consumptive net use* [existing permitted allocations] in the same HUC-11 watershed, exceeds 20 percent of the stream low flow margin for the year of peak use. *For this analysis, applicants shall use Appendix A of* [established in] **the New Jersey Statewide Water Supply Plan at <https://www.state.nj.us/dep/watersupply/pdf/wsp-appendix-a.pdf>** [<https://www.nj.gov/dep/watersupply/pdf/wsp.pdf>] *as amended and supplemented, and refer to* [for] **the HUC-11 watershed where the proposed diversion will be located** (hereafter referred to as “the affected HUC-11 watershed”). *Applicants shall use the tables in Appendix A entitled “Summary of HUC11 area, Low Flow Margin and*

*Remaining Water” and specifically, the values for the HUC-11 Low Flow Margin in the column labeled LFM(mgd) and the values for current depletive-consumptive net use in the column labeled “Current Net Dep-Con (mgd)”.*

**i.-iii.** (No change from proposal.)

**7.-9.** (No change from proposal.)

**From:** William Layton <[bill@clbnj.com](mailto:bill@clbnj.com)>  
**Sent:** Friday, November 4, 2022 5:32 PM  
**To:** Comments, PC [PINELANDS] <[comments@pinelands.nj.gov](mailto:comments@pinelands.nj.gov)>  
**Subject:** Public Comment Submissions

Below is the result of your feedback form. It was submitted by  
William Layton ([bill@clbnj.com](mailto:bill@clbnj.com)) on Friday, November 4, 2022 at 17:32:30

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email: [bill@clbnj.com](mailto:bill@clbnj.com)

subject: Public Comment Submissions

Name: William Layton

Affiliation: New Jersey Concrete and Aggregate Association

Mailing Address: 130 West State Street Trenton, NJ 08608

Comment Topic: selected=

Message: On behalf of the NJ Concrete & Aggregate Association, we have provided some points below expressing our concerns in response to Water Diversion Regulations proposed by the New Jersey Pinelands Commission, as they pertain to crucial material mining operations as well as projects constructed by the Department of Transportation.

- We have a concern about the regulations - as they would pertain to mining operations - being based on "diversion" or "withdrawal", which in the case of mining operations does not take into account replenishment via "closed loop" type water management systems at mining sites (where groundwater is inadvertently penetrated due to excavation, used for material processing, then returned almost undiminished back to the immediate excavated area (not a distance away, or to a wetland or stream in nearly all cases) where groundwater replenishment can occur. The industry has come to an agreement with the NJDEP (informally) that allows the use of a 10% total loss due to evaporation, possible thermal loss, and incorporation into material (much/most of which would drain back into the excavation anyway). This figure, the 10% of the total diversion, is what is reported to NJDEP as "water use", a far more meaningful number in the case of mining operations, rather than total diversion (which is the basis for NJDEP Water Allocation Permitting applicability, but not for diversion reporting, which the NJDEP considers more critical). This should be taken into account in these proposed regulations.
- Mining operations are primarily located in the more sensitive areas of the Pinelands, those where future proposed restrictions would essentially prohibit new or increased diversions. Water diversions in the Pinelands Area need both Pinelands Commission approval (as a Certificate or Filing or "COF") for the diversion, followed thereafter by a Water Allocation Permit ("WAP") issued by the NJDEP. While this has been a requirement, in practice this has not happened consistently in the past, resulting in a number of mining operations that may lack that "initial" COF for a water diversion from years ago, when the WAP was initially issued by NJDEP (and copied to the Pinelands Commission). As a result, there are a number of mining operations (exact number unknown) that lack that initial COF, but have had WAP from the NJDEP for years. It is the request of NJCAA and the mining industry that these currently permitted (WAP)

mining operations, regardless of which management area they may be located in, be "grandfathered" to the existing limits of their current, approved WAP permits issued by NJDEP. We recognize that any increases or new diversions would require an initial COF for water diversion from the Pinelands Commission followed by NJDEP WAP approval, in accordance with any regulations currently proposed which may ultimately be enacted as law. The timing of this issue is critical as if the Commission does not grandfather these facilities - and they are required at this time to retroactively seek a COF for diversions permitted by NJDEP years ago - applications for these diversions would be made almost immediately by any mining facility lacking that initial COF prior to the enactment of these newly proposed regulations, which might otherwise prohibit the issuance of said COF (even retroactively) due to their locations in the more sensitive areas of the Pinelands.

- To ensure a continuing, uninterrupted and economical supply of sand, gravel and crushed stone, it is necessary to identify and protect existing aggregate resources in the state. This is of vital importance, not only in areas where supplies may be limited, but also in high-demand areas where sources are abundant. New Jersey already faces a shortage in cement, stone, asphalt and ready-mix concrete products.
- Mining operations are already severely constrained as to future growth in those areas in which diversions would be prohibited (e.g., Preservation, Forest, Special Agricultural), which is where most mining operations are located. Additional diversion, without impact, would not further the growth of these industries, and in fact would likely serve to hasten their demise in those areas by allowing for faster material withdrawal and resource exhaustion.
- Like many others, this proposed regulation will continue to serve to hurt the aggregates industry, which the Pinelands Area, southern NJ, the entirety of NJ, and the general mid-Atlantic region is dependent upon for the material to make the concrete, asphalt and other building materials that our homes, roads, schools, hospitals, and more are constructed of.

It is our feeling, if adopted as currently written without clarification, the industry will have to cut production by 50%. This will lead to a huge shortage, only exacerbating the current shortage and will threaten the contractors in our state's ability to complete vital DOT projects such as bridges, highways and local roads. In addition to a lack of materials, the shortage from these regulations could mean a doubling in material price. Given the current inflationary environment we live in today, these regulations, as currently written, will threaten the New Jersey Department of Transportation's Capital Program.



Connell Foley LLP  
 56 Livingston Avenue  
 Roseland, NJ 07068  
 P 973.535.0500 F 973.535.9217

**Kevin J. Coakley**  
 Partner  
 KCoakley@connellfoley.com

November 3, 2022

**VIA EMAIL AND FEDEX OVERNIGHT**

Susan R. Grogan, P.P., AICP  
 Acting Executive Director  
 Pinelands Commission  
 P.O. Box 359  
 New Lisbon, New Jersey 08064  
[planning@pinelands.nj.gov](mailto:planning@pinelands.nj.gov)

**Re: Written Comments of Clayton Companies on  
 Pinelands Rule Proposal Set Forth at 54 N.J.R. 1668(a)**

Dear Ms. Grogan:

This firm represents Clayton Companies (“Clayton”), which mines sand in the Pinelands Region. We write to comment on the Pinelands Commission’s proposed rule concerning diversions of water in the Pinelands, *i.e.*, 54 N.J.R. 1668(a) (the “Proposed Rule” or the “Rule Proposal”). These written comments supplement the oral remarks made by this firm at the public hearing on October 12, 2022.

Clayton submits that the Proposed Rule is *ultra vires* and unlawful on multiple grounds:

First, the Legislature did not empower the Pinelands Commission to regulate water supply, particularly diversions and water allocations.

Second, the Pinelands Commission is preempted from regulating water supply. The Legislature granted that power to the New Jersey Department of Environmental Protection (“NJDEP,” “DEP,” or the “Department”) in the Water Supply Management Act, N.J.S.A. 58:1A-1 *et seq.* (the “WSM Act”), and NJDEP promulgated comprehensive regulations in that domain.

Third, the Rule Proposal is contradicted not only by NJDEP’s regulations, but also by higher legal authorities, *i.e.*, statutes and perhaps even the U.S. Constitution. The Proposed Rule sets a different gallon per day threshold than does the WSM Act, ignores statutory procedures for limiting or reducing diversion amounts and requiring use of alternative water sources, and potentially results in an unconstitutional taking of rights to expand mining operations without just compensation.

Finally, the Rule Proposal is overbroad, arbitrary, and unreasonable inasmuch as it has no rational nexus to the problems it purports to solve. It fails to distinguish between consumptive

and nonconsumptive diversions, imposes heavier restrictions on certain Pinelands Management Areas and uses without any justification, provides no evidence that aquifer levels will actually decrease to the levels it modeled in its studies, and fails to meaningfully consider economic impacts.

The Rule Proposal is therefore *ultra vires* and *void ab initio* and should be withdrawn.

#### **I. THE RULE PROPOSAL IS *ULTRA VIRES* BECAUSE THE LEGISLATURE DID NOT EMPOWER THE PINELANDS COMMISSION TO REGULATE WATER SUPPLY.**

The Rule Proposal seems to invoke P.L. 2001, c. 165 as its authority for the Rule Proposal. See 54 N.J.R. at 1668. However, that statute only authorizes the Pinelands Commission to prepare a report. It states:

The Pinelands Commission shall . . . assess and prepare a report on the key hydrologic and ecological information necessary to determine how the current and future water supply needs within the pinelands area may be met while protecting the Kirkwood-Cohansey aquifer system and while avoiding any adverse ecological impact on the pinelands area.

[P.L. 2001, c. 165.]

This language clearly does not authorize the Commission to promulgate regulations relating to water or anything else. Nor does the remainder of the statute.

The Pinelands Protection Act, N.J.S.A. 13:18A-1 *et seq.*, does not support the Rule Proposal either. The Act does not grant the Pinelands Commission any power to regulate diversions or allocations of water:

- The section of the Pinelands Protection Act enumerating the powers of the Pinelands Commission does not list any power to regulate water. N.J.S.A. 13:18A-6. The only mention of water in that section states that the Commission has the power merely to “prepare and transmit to the Commissioner of Environmental Protection such ***recommendations*** for water quality standards for surface and ground waters in the pinelands area, or in tributaries and watersheds thereof, as the commission deems appropriate.” N.J.S.A. 13:18A-6i (emphasis added).
- The section of the Pinelands Protection Act granting the power to prepare the Pinelands Comprehensive Management Plan is also unresponsive. See N.J.S.A. 13:18A-8. Although it mentions water, it does not bestow any power to regulate diversions and allocations of water. It is primarily focused on regulation of land, which of course indirectly impacts water. See, e.g., N.J.S.A. 13:18A-8d (authorizing the Pinelands Commission to prepare a “***land use*** capability map and a statement of policies for planning and managing the development and use ***of land*** in the pinelands area”) (emphasis added). With regard to water, it only authorizes the Pinelands Commission to: (1) prepare a “resource assessment” that “[d]etermines the amount and type of human development and activity which the ecosystem of the pinelands area can sustain . . . , with special reference to ground



and surface water supply and quality,” among other things, N.J.S.A. 13:18A-8a; and (2) to include in its “**land use** capability map and comprehensive statement of policies for planning and managing the development and **use of land**” certain “policies” for protection of land and water, N.J.S.A. 13:18A-8d.

- While the Pinelands Protection Act expressly authorizes the Pinelands Commission to help prepare a “plan to implement the provisions of the [Clean Water Act] and the [Safe Drinking Water Act],” it includes no such authorization for the Pinelands Commission to help implement the WSM Act, the statute that governs diversions and allocations of water. See N.J.S.A. 13:18A-8j. That is because the Legislature made NJDEP solely responsible for regulating diversions and allocations of water, as is explained below.

## **II. THE RULE PROPOSAL IS ULTRA VIRES BECAUSE THE PINELANDS COMMISSION IS PREEMPTED FROM REGULATING WATER SUPPLY.**

Comparison of the Pinelands Commission’s powers with NJDEP’s powers shows that all authority to regulate diversions and water allocations lies with NJDEP and not the Commission:

The Appellate Division of the New Jersey Superior Court stated as follows about NJDEP’s power to regulate in this domain:

Under the [WSM Act], the **NJDEP** has the **exclusive** authority to “control, conserve, and manage the **water supply** of the State **and the diversions** of that water supply.”

[United Water New Jersey, Inc. v. Boro. of Hillsdale, 438 N.J. Super. 309, 319 (App. Div. 2014) (citing N.J.S.A. 58:1A-5) (emphasis added).]

Even a cursory review of the WSM Act illuminates why the Appellate Division reached that conclusion.

### **NJDEP POWERS**

The legislative findings and declarations section of the WSM Act makes clear that water supply should be regulated by an entity with Statewide purview, not a regional body such as the Pinelands Commission. It asserts that the “water resources **of the State** are public assets **of the State** held in trust for its citizens and are essential to the health, safety, economic welfare, recreational and aesthetic enjoyment, and general welfare, **of the people of New Jersey**.” N.J.S.A. 58:1A-2 (emphasis added). The “ownership of these assets is **in the State** as trustee **of the people**.” Ibid. (emphasis added). “[B]ecause some areas within the State do not have enough water to meet their current needs and provide an adequate margin of safety, the water resources of the State . . . must be planned for and managed **as a common resource** from which

the requirements of the several regions and localities in the State shall be met.” Ibid. (emphasis added).

The WSM Act is unequivocal as to what entity with Statewide purview is charged with regulating the State’s water supply:

[T]o ensure an adequate supply and quality of water for citizens of the State . . . and to protect the natural environment of the waterways of the State, it is necessary that the State, through its Department of Environmental Protection, have the power to manage the water supply by adopting a uniform water diversion permit system and fee schedule, a monitoring, inspection and enforcement program, a program to study and manage the State’s water sources and plan for emergencies and future water needs, and regulations to manage the waters of the State during water supply and water quality emergencies.

[N.J.S.A. 58:1A-2 (emphasis added).]

The WSM Act thus provides:

The commissioner [of NJDEP] shall have the power to adopt, enforce, amend or repeal . . . rules and regulations to control, conserve, and manage the water supply of the State and the diversions of that water supply to assure the citizens of the State an adequate supply of water under a variety of conditions and to carry out the intent of this act. These rules and regulations may apply throughout the State or in any region thereof and shall provide for the allocation or the reallocation of the waters of the State . . . .

[N.J.S.A. 58:1A-5.]

Moreover:

- The “department [of Environmental Protection<sup>2</sup>],” not the Pinelands Commission, is empowered by the WSM Act to “[e]valuate and determine the adequacy of ground and surface water supplies and develop methods to protect aquifer recharge areas.” N.J.S.A. 58:1A-15m (emphasis added).
- The “commissioner” of NJDEP, not the Pinelands Commission, is empowered to set “[s]tandards and procedures to be followed to maintain the minimum water levels and flow necessary to provide adequate water quality and quantity.” N.J.S.A. 58:1A-5e.

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<sup>1</sup> See N.J.S.A. 58:1A-3 (defining “commissioner” as the “Commissioner of the Department of Environmental Protection”).

<sup>2</sup> See N.J.S.A. 58:1A-3 (defining “department” as the “Department of Environmental Protection”).

- The “commissioner” of NJDEP, not the Pinelands Commission, is empowered to institute a “permit system to allocate or reallocate any or all of the waters of the State, which system shall provide for the issuance of permits to diverters of more than 100,000 gallons per day<sup>3</sup> of the waters of the State.” N.J.S.A. 58:1A-5a; see also N.J.S.A. 58:1A-6a(3) (“The **department [of Environmental Protection]** in developing the permit system . . . shall . . . [r]equire any person diverting more than 100,000 gallons per day of any waters of the State . . . to obtain a diversion permit.”) (emphasis added);
- NJDEP (through its permits), not the Pinelands Commission, shall “[f]ix[] the maximum allowable diversion” and “[i]dentify[] and limit[] the use or uses to which the water may be put”). N.J.S.A. 58:1A-8b & -8c.
- The “commissioner” of NJDEP, not the Pinelands Commission, is empowered promulgate “[s]tandards and procedures to be followed by diverters to ensure that . . . [NJDEP] is provided with adequate and accurate reports regarding the diversion and use of water.” N.J.S.A. 58:1A-5b(4); see also N.J.S.A. 58:1A-5c (stating the “commissioner” of NJDEP rules may also set “monitoring” and “reporting procedures”).
- The “commissioner” of NJDEP, not the Pinelands Commission, is empowered to set “[s]tandards and procedures to be followed to determine the location, extent and quality of the water resources of the State **and plan for their future use** to meet the needs of the citizens of the State.” N.J.S.A. 58:1A-5d (emphasis added). Similarly, the “department” of Environmental Protection, not Pinelands, is tasked with preparing, adopting, and maintaining the New Jersey Statewide Water Supply Plan. N.J.S.A. 58:1A-13a. That Plan “shall” touch on “**maintenance and protection of watershed areas**” and “[r]ecommendations for administrative actions to ensure the **protection of ground and surface water quality and water supply sources**.” N.J.S.A. 58:1A-13b(5) and -13b(7) (emphasis added). Notably, the Legislature required NJDEP to “consult with the Highlands Water Protection and Planning Council” before the “adoption of any revision to the New Jersey Statewide Water Supply Plan” concerning possible effects on the Highlands region. N.J.S.A. 58:1A-13d. By contrast, the Legislature did not include any such provision requiring consultation with the Pinelands Commission for revisions impacting the Pinelands Region. See *ibid.*
- The “commissioner” of NJDEP, not the Pinelands Commission, is empowered to “[p]erform any and all acts and issue such orders as are necessary to carry out the purposes and requirements of [the WSM Act],” N.J.S.A. 58:1A-15a, and to “[a]dminister and enforce the provisions of [the WSM Act] and rules, regulations and orders adopted, issued or effective thereunder,” N.J.S.A. 58:1A-15b.

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<sup>3</sup> This figure, which clashes with the threshold set by the Proposed Rule, is discussed further below.

Even a crisis of the type proclaimed by the Rule Proposal does not detract from NJDEP's sole power in this domain. The WSM Act states:

In exercising the water supply management and planning functions . . . , particularly in a region of the State where excessive water usage or diversion present undue stress, or wherein conditions pose a significant threat to long-term integrity of a water supply source, including a diminution of surface water supply due to excess groundwater diversion, the ***commissioner [of NJDEP]*** shall . . . designate that region as an area of critical water supply concern.

[N.J.S.A. 58:1A-6b (emphasis added).]

After such a designation, NJDEP “***in consultation with . . . local governing bodies*** . . . shall,” among other things, “select and adopt appropriate water supply alternatives.” N.J.S.A. 58:1A-6c(4) (emphasis added). Clearly, this language puts NJDEP in the primary position of power and limits local governing bodies such as the Pinelands Commission to merely being consulted. Only NJDEP can “revise the designation and impose further restrictions” if it determines “that the alternatives selected are not effective.” N.J.S.A. 58:1A-6d.

#### NJDEP REGULATIONS

Not only is NJDEP authorized to regulate these matters, but it has actually promulgated relevant regulations at N.J.A.C. 7:19-1.1 *et seq.* Those regulations describe themselves as “***governing the establishment of privileges to divert water, the management of water quantity and quality***, the issuance of permits, and the handling of drought warnings, water emergencies and water quality emergencies.” N.J.A.C. 7:19-1.1a (emphasis added). The NJDEP regulations thus “prescribe[] the application, review, notification and hearing procedures for establishing those [diversion] privileges,” N.J.A.C. 7:19-1.1(a), and “establish[] the procedures for . . . areas of critical water supply concern . . . and water emergency allocation,” N.J.A.C. 7:19-1.1(b).

Consistent with the WSM Act, the NJDEP regulations set the de fault threshold for regulated diversions at 100,000 gallons per day. See N.J.A.C. 7:19-1.10 (“No person shall divert water either from a single diversion source or from combined diversion sources at a rate in excess of 100,000 gallons of water per day without obtaining a Water Supply Allocation Permit or a Temporary Dewatering Permit, a Water Use Registration, or complying with the requirements for a Short Term Water Use Permit-by-Rule or Dewatering Permit-by-Rule in accordance with this chapter or a water usage certification in accordance with N.J.A.C. 7:20A.”); N.J.A.C. 7:19-1.7(a) (“Any person presently diverting or claiming the right to divert more than 100,000 gallons of water per day and who does not hold a valid permit is subject to penalties provided for under N.J.A.C. 7:19-1.8 and shall apply for a permit immediately.”).

The NJDEP regulations also “prescribe[] the procedures which shall be followed by applicants when applying for . . . water supply allocation permits . . . .” N.J.A.C. 7:19-2.1 & -2.2; see also United Water N.J. Inc., supra, 438 N.J. Super. at 320 (stating NJDEP “has adopted comprehensive regulations governing the water supply, which include a detailed application process for water supply allocation or diversion in the public interest,” and citing N.J.A.C. 7:19-

2.2 as an example). These procedures include requirements for specific reports that must be provided. See, e.g., N.J.A.C. 7:19-2.2(d) (“The applicant for the diversion of surface water shall provide information on the watershed, including . . . [among other things] [a] comprehensive hydrological evaluation of the proposed diversion . . .”).

Moreover, the NJDEP regulations set standards for who may obtain a permit to divert. See, e.g., N.J.A.C. 7:19-2.2(f) & (g). These standards require the applicant to demonstrate, among other things, “[t]hat the diversion shall not exceed the natural replenishment or safe yield of the water resources or threat to exhaust such waters,” and “[t]hat the plans for the proposed diversion are just and equitable to the other water users affected thereby, and that the withdrawal does not adversely affect other existing withdrawals, either ground or surface.” N.J.A.C. 7:19-2.2(f). The applicant must also “substantiate[] the need for the proposed allocation and support[] the designated choice of water resource for the allocation.” N.J.A.C. 7:19-2.2(g). The application will be denied if the applicant fails to establish any of the various items at N.J.A.C. 7:19-2.2(f) & (g), or if NJDEP “determines that a more viable alternative source of water is available, or if the proposed diversion is not in accordance with the New Jersey Statewide Water Supply Plan.” N.J.A.C. 7:19-2.2(h). These regulations apply to increased diversions as well as new diversions. N.J.A.C. 7:19-2.2(c) (“An applicant whose application includes a new well, an increase in diversion capacity, and/or an increase in monthly or yearly allocation shall conduct a hydrogeologic test . . .”).

Similarly, those who already have a permit must continually meet certain standards and requirements. See, e.g., N.J.A.C. 7:19-2.14. These include, among other things, a maximum allowable diversion and a requirement that the “permittee is responsible for mitigating adverse impacts on ground or surface waters or the users thereof caused as a direct result of their diversion.” See, e.g., N.J.A.C. 7:19-2.14(a)2 & 11. It also includes reporting requirements. See, e.g., N.J.A.C. 7:19-2.14(a)3 (requiring “[t]hat the monthly diversion amount be reported on a quarterly basis on forms provided by the Department”) & -2.14(a)7 (requiring “[t]hat the static water levels for ground water sources be determined and reported on the quarterly diversion”). The NJDEP regulations additionally address fee calculations for water allocation permits. See N.J.A.C. 7:19-3.1.

Perhaps most importantly, the NJDEP regulations institute a system, and criteria, for identifying and protecting aquifers that have reached dangerously low water levels. For example:

The Commissioner [of NJDEP] shall, after notice and public hearing, designate as areas of critical water supply concern those areas in which the Department determines that adverse conditions exist, related to the ground or surface water, such that special measures are required to ensure the integrity and viability of the water supply source and to protect the public health, safety or welfare. The Department shall demonstrate that the designation is warranted through the use of a water supply availability study.

[N.J.A.C. 7:19-8.2(a).]

In such areas of critical water supply concern, N.J.A.C. 7:19-8.3(a) indicates that NJDEP shall:

1. Study water supply availability;
2. Estimate future water supply needs;
3. Identify appropriate and reasonable alternative water supply management strategies, including, but not limited to:
  - i. Water conservation;
  - ii. Substitution of alternative water sources;
  - iii. Participation in a Department approved regional water supply project;
  - iv. Transfer of diversion rights;
  - v. Artificial recharge of diversion sources; and
  - vi. Substitution of water supply from a noncritical aquifer; and
4. Select and adopt water supply alternatives after notice and public hearing.

NJDEP “will not issue new or increased diversions from affected aquifers within an area of critical water supply concern,” with limited exceptions. N.J.A.C. 7:19-8.3(i). In such areas, NJDEP can also “[modify the conditions of an existing water supply allocation permit or water usage certification in order to limit or reduce the quantity of water which may be diverted” and “[r]equire the permittee to use alternate sources of water.” N.J.A.C. 7:19-8.3(c). NJDEP apparently considers the following to be “additional controls and requirements” for use in areas of critical water supply concern in certain, but not all, circumstances: “metering, additional reporting requirements, restrictions of inter-basin diversions of water for water supply or wastewater discharge, restriction of consumptive uses and water quality testing of wells.” See N.J.A.C. 7:19-8.2(d). And the “Commissioner [of NJDEP] . . . may impose such additional restrictions and requirements during a water emergency [as] he deems necessary to alleviate the water emergency.” N.J.A.C. 7:19-10.1.

Simply put, there is no need for the Proposed Rule given NJDEP’s comprehensive regulatory scheme. The Proposed Rule actually interferes with and unnecessarily complicates NJDEP’s regulation of water allocations and diversions. For example, whereas NJDEP has an elaborate process for restricting diversions in areas it designates as being of critical water supply concern, the Proposed Rule simply ignores that procedure, confounding the whole system. (See more on this topic below.)

Accordingly, the Pinelands Commission is preempted from regulating diversions and water allocations. As the Appellate Division explained:

The NJDEP has adopted **comprehensive** regulations governing the water supply, which include a detailed application for water supply allocation **or diversion** in the public interest. See, e.g., N.J.A.C. 7:19-2.2(a) to (f). Decisions as to the allocation **and diversion of water** . . . are conferred upon the **NJDEP** by the [WSM Act], and the NJDEP's **pervasive** authority in this area **precludes** local regulation . . . ."

[United Water N.J., Inc., *supra*, 438 N.J. Super. at 320 (emphasis added).]

See also *Op. of Montville v. Lotta Lettuce J.T.S. Farms LLC*, Docket No. A-6036-10T3, 2013 N.J. Super. Unpub. LEXIS 1424 (App. Div. 2013) ("Statewide legislation and DEP implementing regulations regarding water supply . . . , well construction . . . , and agricultural activities and water usage . . . together evince a clear intention to preempt local legislation . . . ."). The "confluence of the State's stewardship of the water supply, comprehensive oversight of well construction, and protection of farming activities demonstrably bespeak the need for a **one-voice** approach." *Id.* at 24. The one voice is NJDEP's voice, and there is no room for the Pineland's Commission's Rule Proposal.

### **III. THE RULE PROPOSAL IS ULTRA VIRES BECAUSE IT IS CONTRADICTED BY HIGHER LEGAL AUTHORITY.**

Even if the Pinelands Commission had authority to regulate here (and it does not), its Proposed Rule actually clashes with the requirements of the Legislature. It might also be unconstitutional.

#### **THE GALLONS PER DAY THRESHOLD**

As is mentioned above, the WSM Act calls for the commissioner of NJDEP to institute a "permit system to allocate or reallocation any or all of the waters of the State,"

which system shall provide for the issuance of permits to diverters of **more than 100,000 gallons per day** of the waters of the State.

[N.J.S.A. 58:1A-5a (emphasis added).]

That **100,000 GPD** threshold is repeated multiple times in the WSM Act. For instance:

- "The department [of Environmental Protection] in developing the permit system . . . shall . . . [r]equire any person diverting more than **100,000 gallons per day** of any waters of the State . . . to obtain a diversion permit." N.J.S.A. 58:1A-6a(3) (emphasis added).
- "A person shall not divert more than **100,000 gallons per day** of any waters of the State . . . unless the person obtains a diversion permit or water usage certification, as appropriate, pursuant to [N.J.S.A. 58:1A-6]." N.J.S.A. 58:1A-7a (emphasis added).

This statutory authority directly contradicts the Proposed Rule. The Proposed Rule purports, without authority, to regulate diversions of half that 100,000 GPD figure (*i.e.*, 50,000

GPD), not to mention that it adds new diversion restrictions not contemplated by the statute or by NJDEP. See Rule Proposal at proposed N.J.A.C. 7:50-6.86(d).

The Legislature could have set a 50,000 GPD threshold for the Pinelands, but it chose not to do so. In fact, the Legislature did set a 50,000 GPD threshold for the Highlands Region, but did not do so for the Pinelands, stating in the WSM Act that NJDEP:

shall establish a permit system to provide for review of allocation or reallocations, for other than agricultural or horticultural purposes, **of waters of the Highlands** . . . to provide for the issuance of permits for diversions either individually or cumulatively of more than **50,000 gallons per day** of waters **of the Highlands in the Highlands preservation area**.

[N.J.S.A. 58:1A-5.1 (emphasis added).]

#### PROCEDURE FOR LIMITING OR REDUCING DIVERSION AMOUNTS AND REQUIRING USE OF ALTERNATIVE SOURCES OF WATER

The Proposed Rule also contradicts the section of the WSM Act that states diversion permits “shall” include a provision:

[p]ermitting the department [of Environmental Protection] to modify the conditions of a diversion permit issued . . . **in a designated area of critical water supply concern** in order to (1) limit or reduce the quantity of water which lawfully may be diverted to the safe or dependable yield of the resource; (2) transfer the point of diversion; or (3) require a permittee to utilize alternate sources of water, upon a determination that the existing diversion or continued use of the same source in excess of the safe or dependable yield, as the case may be, adversely impacts or threatens to adversely impact the water resources of the State.

[N.J.S.A. 58:1A-8j.]

There is a process for designating a region as an “area of critical water supply concern”; such a designation cannot simply be declared. See N.J.S.A. 58:1A-6b; see also N.J.A.C. 7:19-8. Even in a designated area of critical water supply concern, such requirements for reduction and use of alternative sources are limited by N.J.S.A. 58:1A-7.3.

Despite the above, the Proposed Rule purports to limit or reduce the quantity of water that may be diverted and to require a permittee to utilize alternate sources of water without requiring that the area in question be a designated area of critical water supply concern. For example, proposed N.J.A.C. 7:50-6.86(d)3 limits diversions to specific areas without the need for prior designation of those areas as areas of critical water supply concern. Yet there is no statutory support for imposing restrictions in some areas and not others absent an NJDEP designation of an area as a critical water supply concern, defined in the NJDEP regulations as a “region of the State where excessive water usage or diversion presents undue stress, or wherein conditions pose a significant threat to the long-term integrity of a water supply source, including a diminution



of surface water due to excess groundwater diversion.” N.J.A.C. 7:19-1.3.<sup>4</sup> Similarly, without any limitation to designated areas of critical water supply concern, proposed N.J.A.C. 7:50-6.86(d)<sup>4</sup> prohibits a proposed diversion unless the “applicant demonstrates that no alternative water supply source is available or viable.”<sup>5</sup>

### INTERBASIN TRANSFERS

And whereas the Proposed Rule tries to regulate “interbasin” transfers of water, see proposed N.J.A.C. 7:50-6.86(b), the Legislature has already accounted for the transfer of Pinelands water:

“The provisions of any law, rule or regulation to the contrary notwithstanding, no person shall transport, or cause to be transported, more than 10 miles outside the boundary of the Pinelands National reserve, any ground or surface water therefrom . . . .”

[N.J.S.A. 58:1A-7.1.]

The most the Pinelands Protection Act has to say on the matter is that “[n]othing in this act shall be construed to authorize or permit the exportation of any ground or surface waters from the pinelands area.” N.J.S.A. 13:18A-25a. In short, the Rule Proposal’s prohibition on water transfers goes far beyond the regulation contemplated by the Legislature.

### UNCONSTITUTIONAL TAKING WITHOUT JUST COMPENSATION

Finally, the Proposed Rule is tantamount to a taking of sand mines’ property rights without just compensation in violation of the 5<sup>th</sup> Amendment to the United States Constitution. Mining

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<sup>4</sup> N.J.A.C. 7:19-1.3 also defines “water supply critical aquifer” as an “aquifer within an area of critical water supply concern where there may be either insufficient water supply, shortage of ground water by overdraft, threat of salt water intrusion or contamination, or where other circumstances exist requiring the Department to impose special water supply management provisions by rule under N.J.A.C. 7:19-8.”

<sup>5</sup> The Proposed Rule also contradicts the section of the WSM Act that states: “Every diversion permit issued . . . shall be renewed by [NJDEP] upon the expiration thereof, with any conditions deemed appropriate by [NJDEP], except that the [NJDEP] may, **after notice and public hearing**, limit the quantity to the amount currently diverted, subject to contract, or reasonably required for a demonstrated future need.” N.J.S.A. 58:1A-7b (emphasis added); see also N.J.A.C. 7:19-2.5(d) (“The Department will issue a permit renewal, with any conditions deemed appropriate by the Department, for the same allocation, except that the Department may, after notice and public hearing, if requested by the applicant, pursuant to N.J.A.C. 7:19-2.7 through 2.11, reduce the allocation to that quantity currently diverted, subject to contract, or reasonably required for a demonstrated future need.”). Ignoring this statutory provision, the Proposed Rule purports to prohibit increases in diversion volume in certain regions of the Pinelands, as is mentioned above, without prior notice and public hearing. See Proposed Rule at proposed N.J.A.C. 7:50-6.86(d)3; see also 54 N.J.R. at 1670 (“[T]he Commission is proposing to limit new **or increased** diversions from the Kirkwood-Cohansey aquifer to the following Pinelands Management Areas . . . .”) and at 1674 (“[T]he Commission is proposing to limit new **or increased** diversions from the Kirkwood-Cohansey aquifer to the Agricultural Production Area and the following growth-oriented Pinelands Management Areas . . . .”) (emphasis added).

permits include certain rights to continued expansion of mining operations. If increased diversions are prohibited by the Proposed Rule, the Pinelands Commission will be negating those rights.

For all of these reasons, the Rule Proposal is contradicted by higher law and cannot stand.

#### **IV. THE RULE PROPOSAL IS *ULTRA VIRES* BECAUSE IT IS OVERBROAD, ARBITRARY, AND UNREASONABLE**

The Proposed Rule is also *ultra vires* because it is overbroad, arbitrary, and unreasonable inasmuch as its requirements have no rational nexus to the problems they purport to solve. This problem is discussed at length in the attached expert report prepared by Brian Blum, CPG, LSRP of Langan and dated November 2, 2022 (the “Expert Report”).

#### **LACK OF DISTINCTION BETWEEN CONSUMPTIVE AND NONCONSUMPTIVE DIVERSIONS**

The Proposed Rule’s most glaring flaw is its failure to distinguish between “consumptive” diversions and “nonconsumptive” diversions, as is explained in the Expert Report. In the WSM Act, the Legislature explained this distinction by defining “nonconsumptive use” as:

The use of water diverted from surface or ground waters in such a manner that it returned to the surface or ground water at or near the point from which it was taken without substantial diminution in quantity or substantial impairment of quality.

[N.J.S.A. 58:1A-3e.]

By contrast, “consumptive use” is defined as “any use of water diverted from surface or ground waters other than a nonconsumptive use.” N.J.S.A. 58:1A-3e.

Even though the professed, overarching purpose of the Proposed Rule is “to better protect the aquifer,” 54 N.J.R. at 1668, “there is no distinction or recognition in the New Rule between the diversion of water that is consumed or depleted versus water that is returned in an un-depleted manner.” Expert Report at 2. As a result, sand mining operations (recognized by NJDEP as returning 95 percent or more of their diversions back to the water source, see Expert Report at 2, and not addressed at all in the Kirkwood-Cohansey Project studies)<sup>6</sup> are regulated as much as uses that return 0 percent of their diversions back to the water source. Imposing such a disproportionate regulatory burden on nonconsumptive diversions does not accomplish the purpose of protecting the aquifer, and none of the studies in the Kirkwood-Cohansey Project

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<sup>6</sup> “There are no documented ecological impacts associated with water diversions for hydraulic dredging from manmade ponds as the water is returned to the water table in an undiminished manner. Therefore, mining operations do not affect water levels, stream flow, or the ecological environment.” Expert Report at 3-4. See also N.J.A.C. 7:19-2.2(i). That section explicitly exempts “[s]and and gravel mining,” along with other diversions of “[w]ater which is returned to its source without a substantial diminution in quantity,” from the requirement that water allocation permit applicants submit to NJDEP a Water Conservation and Drought Management Plan. Ibid. N.J.A.C. 7:19-2.2(i) is thus another acknowledgement from NJDEP that sand mining is nonconsumptive and does not impair aquifer water levels.

provide any evidence to the contrary. See Expert Report at 1, 3. That imposition thus is overbroad, arbitrary, unreasonable, and *ultra vires*.

#### DISPARATE TREATMENT OF DIFFERENT PINELANDS MANAGEMENT AREAS AND USES WITHOUT JUSTIFICATION

The Proposed Rule is also overbroad, arbitrary, and unreasonable because it prohibits new and increased diversions in some Pinelands Management Areas and not others without any regard to relative impact on the aquifer. “Nothing in the Pinelands Studies supports the absolute prohibition of new or increased diversions in the Forest and Preservation Areas while imposing no such prohibition in other areas.” Expert Report at 3. This apparent oversight leads to the incongruous result that new or increased sand mine diversions are absolutely prohibited in the Preservation Area (where virtually no development is allowed anyway, and only limited diversions are occurring) even if completely nonconsumptive, while agricultural diversions, which tend to be highly consumptive, are encouraged in the Agricultural Production Areas. See Expert Report at 3. In other words, without any supporting evidence, the Proposed Rules actually results, in some cases, in consumptive uses being regulated less than nonconsumptive uses simply because of geography.<sup>7</sup> Such a result does not further the professed regulatory goal of protecting the aquifer and is thus overbroad, arbitrary, unreasonable and *ultra vires*.

#### LACK OF EVIDENCE THAT AQUIFER LEVELS WILL DECREASE TO THE MODELED LEVELS

Even the premise on which the Proposed Rule is based is hollow. To demonstrate the need for additional protection of the aquifer, the Pinelands Commission relied on studies (the Kirkwood-Cohansey Project) that “simulated or modeled reductions in stream flow of up to 30 percent, lowering of groundwater levels by up to 6-inches (15 cm), or pumping withdrawal rates at upwards of 30 percent of the ground water recharge.” Expert Report at 3. However:

***These studies present no evidence that existing groundwater levels in the Pinelands will be reduced to the extent simulated by models.***

The Kirkwood-Cohansey Project studies have not established a nexus to actual hydrological impacts from the presumed diversions.

[Expert Report at 3 (emphasis added).]

In other words, the basis for increased regulation is speculative, and certainly does not justify the dramatic regulatory steps that the Pinelands Commission is proposing. Nothing could be more arbitrary and unreasonable.

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<sup>7</sup> This possibility is not hypothetical. Clayton actually has nonconsumptive sand mine operations in the Preservation Area that the Proposed Rule, as currently drafted, would prohibit from implementing new or increased diversions. Expert Report at 3, Figure 1. Meanwhile, highly consumptive agricultural uses are able to continue obtaining and increasing diversions in the Agricultural Production Areas, which depletes the aquifer.

### LACK OF ECONOMIC CONSIDERATIONS

Similarly, the Proposed Rule is based entirely on studies of ecological impacts without any consideration of economic impacts. The statute that the Pinelands Commission invokes as its authority for the Proposed Rule (which, as is explained above, authorizes only studies, not regulation) directs the Pinelands Commission to:

assess and prepare a report on the key hydrologic and ecological information necessary to determine ***how the current and future water supply needs within the pinelands area may be met*** while protecting the Kirkwood-Cohansey aquifer system and while avoiding any adverse ecological impact on the pinelands area.

[P.L. 2001, c. 165 § 1 (emphasis added).

This accounting for “water supply needs” is consistent with the Pinelands Protection Act itself, which requires the Pinelands’ Commission’s Comprehensive Management Plan to “[r]ecognize existing economic activities within the area and provide for the protection and enhancement of . . . ***those indigenous industries and commercial and residential developments which are consistent with such purposes and provisions.***” N.J.S.A. 13:18A-8(d)(3) (emphasis added); see also N.J.S.A. 13:18A-56 (expressing concern about the “Pinelands comprehensive management plan and its accompanying land use regulations plac[ing] a number of restrictions on opportunities for economic development”); N.J.S.A. 13:18A-5b (“The membership of the entire commission shall include residents of the pinelands area who represent ***economic activities***, such as agriculture, in the area . . .”) (emphasis added). It is also consistent with the WSM Act, which declares that the “water resources of the State are . . . essential to the . . . ***economic welfare*** . . . of the people of New Jersey,” among other things. N.J.S.A. 58:1A-2 (emphasis added). Nevertheless, the Commission chose to focus on the ecological aspect of its directives and completely ignored “water supply needs” and economic concerns.

The Rule Proposal itself (in its “Summary” section) describes the “series of studies that resulted from this law” accordingly: “The [Kirkwood-Cohansey] Project addressed two major questions: (1) hydrologic effects of groundwater diversions from the Kirkwood-Cohansey aquifer on stream flows and wetland water levels; and (2) the ecological effects of stream flow and groundwater-level changes on aquatic and wetland communities.” 54 N.J.R. at 1668. Notably absent from those two major questions is the question of “how the current and future water supply needs within the pinelands area may be met.” See *ibid.* Even the “Economic Impact” section of the Rule Proposal fails to address how the “water supply needs within the pinelands area” can/will be met. See *id.* at 1673

Apparently cognizant of the above shortcoming, the Pinelands Commission tries to make up for it in way that is not meaningful. It claims in the Rule Proposal that the Proposed Rule “ensur[es] a sufficient water supply for development in the more growth-oriented areas of the Pinelands Area.” 54 N.J.R. at 1668. Specifically, while new and increased diversions are prohibited in certain Pinelands Management Areas, new and increased diversions are still permissible in other Pinelands Management Areas, subject to the Proposed Rule’s new restrictions on diversions. See proposed N.J.A.C. 7:50-6.86(d)3.

However, the Rule Proposal does not mention any study supporting its conclusory statement that it has ensured a sufficient water supply for development in the more growth-oriented areas of the Pinelands Area. And it simply ignores whether there is a sufficient water supply for uses in the non-growth-oriented areas of the Pinelands. Further, the Proposed Rule totally ignores the economic impact from the loss of sand resources necessary for public and private construction projects which will occur if future sand mining is prohibited.

The Rule Proposal also fails to appreciate the distinction between securing water supply and meeting water supply needs. For purposes of “water supply needs,” it does not matter if high water levels are maintained in the aquifer if no one can use the water—whether because of increased regulatory costs or outright prohibition. Unsurprisingly, the Pinelands Commission’s failure to study how water supply needs could be met resulted in water supply needs being omitted from the Rule Proposal.

In short, the Proposed Rule is overbroad, arbitrary, and unreasonable.

### **CONCLUSION**

For the reasons listed above, the Proposed Rule is *ultra vires* and should be withdrawn.

Respectfully submitted,

*/s/Kevin J. Coakley*

Kevin J. Coakley

Enclosure

cc: William Layton  
Robert Baranowski, Esq.  
William Clayton  
Gordon Milnes, P.E.  
Brian Blum, C.P.G., LSRP  
William J. Castner, Esq.  
Ryan A. Benson, Esq.

2 November 2022

Via email: [planning@pinelands.nj.gov](mailto:planning@pinelands.nj.gov)

Susan R. Grogan, P.P., AICP  
Acting Executive Director  
Pinelands Commission  
P.O. Box 359  
New Lisbon, New Jersey 08064

**Re: Pinelands Comprehensive Management Plan  
Proposed Amendments – N.J.A.C. 7:50-1-6, 2.11, and 6.86  
Langan Project No. 101022401**

Dear Ms. Grogan:

I am employed by Langan Engineering and Environmental Services, Inc. On behalf of the Clayton Companies of Wall Township, New Jersey ("Clayton"), I have reviewed the above-referenced Proposed Amendments (referred to herein as the "New Rule") and have provided these comments challenging the propriety of the same. A copy of my C.V. is attached. As set forth therein, I have extensive experience with water diversion permits in New Jersey. In preparation for this assignment I visited the Clayton mine known as the Woodmansie mine in Woodland Township on October 10, 2022. I was able to freely and fully inspect mine operations.

Clayton mines sand from the Kirkwood-Cohansey Formation ("Kirkwood-Cohansey") at four (4) locations in the following Townships within the Pinelands Area: Woodland, Jackson, and Lacey. While my observations herein apply to the Clayton mines, they also likely apply to all sand mines that utilize hydraulic dredging to mine sand.

The New Rule is inappropriately punitive with respect to diversions of groundwater that are associated with non-consumptive uses that are common to mines. The New Rule will severely impact Clayton's mining operations that rely on the diversion of water from the Kirkwood-Cohansey aquifer utilizing mechanical/hydraulic dredging procedures. Based on my review of the New Rule and the series of studies performed by the Pinelands Commission and known as the so-called "Kirkwood-Cohansey Project", I believe there is no demonstrated nexus between Clayton's diversion of water and the stream, wetlands, or ecological health of the Pinelands. The Proposed Amendments are broad and sweeping and will place an unsupported burden on Clayton's future operations without any empirical evidence to suggest that their permitted undiminished diversion and use of water will have a direct or material impact on the Pinelands environment. We recommend that the proposed New Rule be withdrawn or at minimum, that Clayton's mining operations be exempt from the New Rule or "grandfathered" so that future mining operations are not in any way affected by the New Rule or limited when water allocation permit renewals or permit modifications are put forth by Clayton in the future. In short, the New Rule is simply not justified as related to mine operations such as those operated by Clayton.

## Background

Clayton has been mining sand from the Pinelands since the 1990s. Clayton's mining operations rely upon mechanical sand excavation to the water table to create a manmade pond and then utilizes the more energy efficient process of mechanical/hydraulic dredging. The dredge operation consists of mechanically cutting sand at the base of the manmade pond while simultaneously pumping (i.e., hydraulic or suction dredging) water with entrained sand through an approximate 18-inch diameter plastic pipe to a processing plant. At the processing plant, the sand is screened and sorted while the water diverted from the pond to extract the sand is returned to the pond in an undiminished or non-altered manner via pipes and overland flow. The water diverted from the pond acts only to entrain and transport the sand that is pumped during the dredging process. Water diverted from the pond, pursuant to existing permits from the NJDEP's Bureau of Water Allocation and Well Permitting, is not consumed with the exception of the potential for minimal evaporative losses.

Currently the NJDEP considers consumptive water use for sand mining as having an "undiminished return" of less than 10 percent consumptive, and "The New Jersey Water Supply Plan 2017-2022" (NJDEP, 2017) ("Water Supply Plan") is based on a 5% consumptive use rate for mining activities. In other words, the State Water Supply Plan assumes that 95% of water "diverted" for mining operations is returned to the water table in the same quantity and quality it was when diverted. Neither the New Rule nor any Pinelands' study supportive of the New Rule makes any mention of the findings of the Water Supply Plan. This assigned rate of 5% for mining is broad and not specific to Clayton's hydraulic dredging operation.

We understand the New Rule is focused on water withdrawals or "diversions" from the Kirkwood-Cohansey because of the potential to impact the character of the Pinelands environment. However, the New Rule fails to distinguish between the effects of "diversion" versus "consumptive use" of groundwater. The Water Supply Plan 2017-2022 (NJDEP 2017) establishes that "total withdrawal and total use can be somewhat misleading when it comes to hydrologic impacts, because not all water use results in a consumptive or depletive loss to the basin". The New Rule fails to recognize this distinction.

## Additional Comments to the Proposed New Rule

The following additional comments are related to specific aspects of the New Rule for your consideration:

- (i) Consumptive Versus Non-Consumptive Use – the New Rule cites the multiple studies of the Kirkwood-Cohansey Project that were undertaken to document the potential for environmental/ecological impacts based on modelling scenarios that incorporate diversions of groundwater that might result in a direct imbalance to the water/hydrologic budget. Yet there is no distinction or recognition in the New Rule between the diversion of water that is consumed or depleted versus water that is returned in an un-depleted manner. Clayton's diversion of water has little, if any, impact of the water budget because the water is returned in an un-diminished manner.

The threats to ecological sustainability as presented in the Kirkwood-Cohansey Project studies relied on by the Pinelands Commission are based upon modelled scenarios of increased groundwater withdrawals that result in depletion of water and the associated lowering of water levels that result in stream flow reduction. While theoretical consumptive demand increases may result in lowering water levels, non-consumptive uses (undiminished return) will have little bearing on water levels and therefore will not result in a threat to ecological sustainability. Because Clayton's mining operations results in an undiminished use of groundwater, its operations have little threat to the overall ecological health of the Pinelands and the New Rule should not apply to them. Nothing in the Pinelands' studies supports the proposed New Rule as applied to mines.

- (ii) The Proposed Rule is Arbitrary With Respect to its Disparate Treatment of Different Pinelands Management Areas and Different Types of Uses – Whereas the New Rule prohibits new or increased diversions in the Preservation Area and certain other areas (see proposed N.J.A.C. 7:50-6.86(d)3), it aims only to regulate (but not prohibit) new or increased diversions from the Kirkwood-Cohansey to Agricultural Production Areas and the more growth-oriented Pinelands Management Areas (e.g., Regional Growth Area, Pinelands Towns, Rural Development Area, Military and Federal Installation Area, and the 24 Pinelands Villages). Agricultural water uses are mostly consumptive and will have associated hydrological impacts to the watershed. By contrast, Clayton, whose water diversion is associated with little, if any, consumptive use, operates at Pinelands locations (see Figure 1) within the already heavily restricted Preservation Area (at two locations) and therefore their business stands to be directly impacted despite the fact that its diversion of water will not result in an associated hydrological or ecological impact. Nothing in the Pinelands Studies supports the absolute prohibition of new or increased diversions in the Forest and Preservation Areas while imposing no such prohibition in other areas.

(iii) The Simulated Studies Are Flawed - The studies performed in connection with the Kirkwood-Cohansey Project simulated or modeled reductions in stream flow of up to 30 percent, lowering of groundwater levels by up to 6-inches (15 cm), or pumping withdrawal rates at upwards of 30 percent of the groundwater recharge. These studies using excessive hypothetical conditions create a flawed scenario of hydrological impacts. These studies present no evidence that existing groundwater levels in the Pinelands will be reduced to the extent simulated by models. The Kirkwood-Cohansey Project studies have not established a nexus to actual hydrological impacts from the presumed diversions. Therefore, while Clayton's operations don't come close to approaching the excessive hypothetical simulations of the Kirkwood-Cohansey Project's studies, the New Rule will prohibit diversions in the Preservation and Forest Areas and while only regulating diversions elsewhere

(iv) Sand Mines Do Not Require Wells - The New Rule specifically addresses wells that are more often associated with a consumptive use such as farming or residential real estate. Clayton does not operate wells for the purpose of mining. Its diversions are for hydraulic dredging. The only well(s) at its sites are for domestic/sanitary purposes (e.g., for bathrooms) which use a de minimis quantity of water, as there are typically less than ten full-time employees per day associated with the mining operations.



## Conclusion

Clayton has been operating mines in the Pinelands for decades, each diverting water under NJDEP Water Allocation Permits. There are no documented ecological impacts associated with water diversions for hydraulic dredging from manmade ponds as the water is returned to the water table in an undiminished manner. Therefore, mining operations do not affect water levels, stream flow, or the ecological environment. However, the broad application of the New Rule, based on unrealistic and unsupported simulated groundwater water level drops and stream flow reductions, stand to directly impact Clayton's business despite there being no nexus between their mining operations and the ecological health of the Pinelands. Therefore, the New Rule should be withdrawn because it is not related to empirical data supportive of the rule.

Sincerely,

**Langan Engineering and Environmental Services, Inc.**



Brian A. Blum, CPG, LSRP  
Associate Principal

BAB:mf

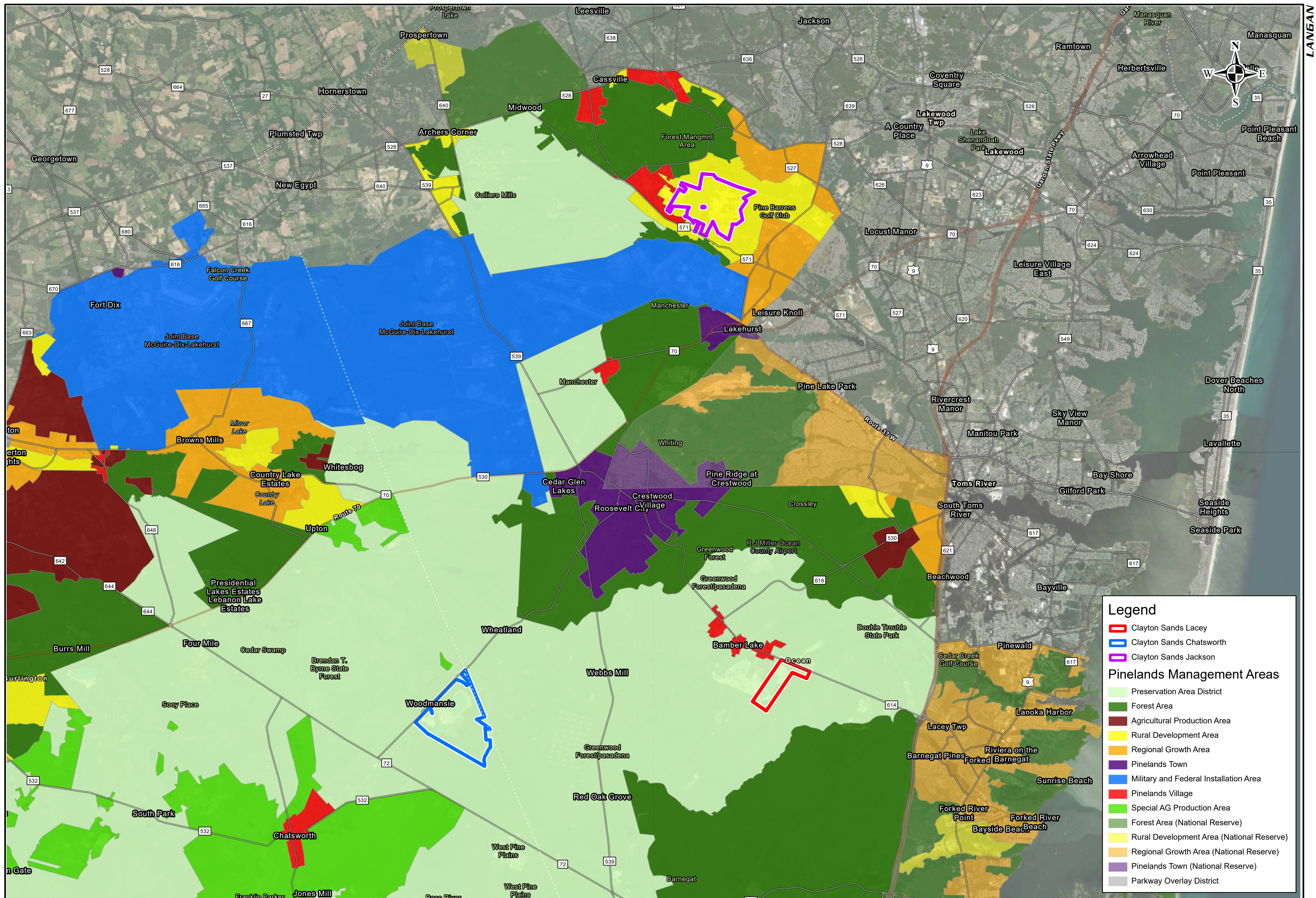
Attachments:

Figure 1 – Pinelands Management Areas  
C.V. for Brian Blum

cc: Kevin J. Coakley, Esq.  
William J. Castner, Esq.

NJ Certificate of Authorization No. 24GA27996400

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**Legend**

- ▭ Clayton Sands Lacey
- ▭ Clayton Sands Chatsworth
- ▭ Clayton Sands Jackson

**Pinelands Management Areas**

- ▭ Preservation Area District
- ▭ Forest Area
- ▭ Agricultural Production Area
- ▭ Rural Development Area
- ▭ Regional Growth Area
- ▭ Pinelands Town
- ▭ Military and Federal Installation Area
- ▭ Pinelands Village
- ▭ Special AG Production Area
- ▭ Forest Area (National Reserve)
- ▭ Rural Development Area (National Reserve)
- ▭ Regional Growth Area (National Reserve)
- ▭ Pinelands Town (National Reserve)
- ▭ Parkway Overlay District



NAME \_\_\_\_\_ DATE \_\_\_\_\_

PROFESSIONAL XXXXXXXXXX  
STATE LIC. No. XXXXXX

**LANGAN**

300 Kimball Drive, Parsippany, NJ 07054  
T: 973.560.4900 F: 973.560.4901 www.langan.com

NEW JERSEY NEW YORK VIRGINIA CALIFORNIA  
PENNSYLVANIA CONNECTICUT FLORIDA

ABU DHABI ATHENS DOHA  
DUBAI ISTANBUL

Langan Engineering & Environmental Services, Inc.  
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.  
Langan International LLC  
Collectively known as Langan

Project  
**PINELANDS PROPOSED  
RULE AMENDMENT**

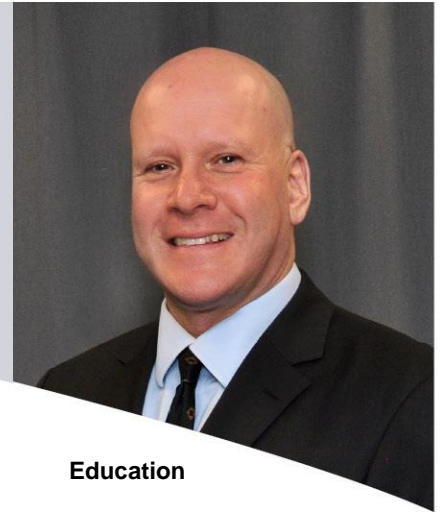
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Drawing Title  
**PINELANDS  
MANAGEMENT AREAS**

Project No. 101022401	Figure 1
Date 10/27/2022	
Scale 1" = 2 Miles	
Drawn By ATR	

## Brian Blum, CPG, LSRP

Associate Principal/Vice President  
Hydrogeology, Geology, Geothermal Systems



### 37 years in the industry ~ 21 years with Langan

Mr. Blum is a hydrogeologist certified by the American Institute of Professional Geologists (AIPG-Certified Professional Geologist), a New York State licensed Professional Geologist, and a New Jersey-Licensed Site Remediation Professional (LSRP). He has over 37 years of experience in environmental contamination investigation and remediation mostly relating to groundwater impacts, water resource permitting and development for irrigation and water supply systems, and geothermal ground-coupling in support of constructing indoor heating and cooling systems.

Mr. Blum has managed a multitude of investigation and remediation projects ranging in size and scope from relatively small assessments to multi-million dollar, multi-discipline investigations that involved coordination and management of efforts in geology, hydrogeology, geochemistry, geophysics, groundwater modeling, air quality modeling, health risk assessment, baseline ecological evaluation, remedial engineering, site/civil engineering, and geotechnical engineering. Mr. Blum has managed some of the largest Industrial Site Recovery Act (ISRA)-related remedial investigations in New Jersey. As a result, he is extremely familiar with the environmental regulatory and site closure processes. Mr. Blum has developed expertise in delineating TCE sources and contaminant migration within fractured rock and has worked with the NJDEP in assessing impacts to water supplies and indoor areas via vapor intrusion. He has managed a unique, full-scale, remediation project integrating the construction of blast fracture trenches in a crystalline bedrock unit to enhance chemical oxidant (permanganates) delivery to the subsurface to mitigate the source of a trichloroethene (TCE) plume.

Mr. Blum has authored several published proceedings and presented at technical conferences mostly relating to innovative delineation and remediation of TCE in fractured media. He was also a participant on the DEP/Stakeholder Committee that drafted NJDEP's Vapor Intrusion Guidance Document. Was also He has given numerous American Institute of Architects (AIA) and American Council of Engineering Companies of New York accredited presentations on the "Fundamentals of Geothermal Ground Couples" to architectural and MEP engineering firms throughout the northeast U.S.

### RELEVANT EXPERIENCE – Water Supply / Environmental / Geothermal Systems

#### WATER SUPPLY

**Bluewater Industrial Partners, Montgomery, New York** – An Aquifer Testing Plan and Engineer's Report for a New Water Supply System were developed in support of a potable water supply system for a new warehouse designed for e-commerce. The warehouse employs a total of over 1,000 workers (all shifts) and has a water supply capacity of 20,000

#### Education

M.S., Geology (Hydrogeology)  
University of Massachusetts at Amherst

B.S., Geology  
State University of New York at  
Binghamton

#### Professional Registration

Certified Professional Geologist (CPG)

Licensed Geologist in State of NY

Licensed Site Remediation Professional  
(LSRP) in NJ

#### Affiliations

American Institute of Professional  
Geologists

National Ground Water Association

Licensed Site Remediation  
Professional Association

## Brian Blum, CPG, LSRP

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gallons per day (gpd) for average demands and 60,000 gpd for peak demands. Mr. Blum managed aquifer testing to establish viable safe yield and water quality from on-site supply wells.

**F&S Produce Co., Inc., Rosenhayn, New Jersey** - A Water Allocation Test Plan, Hydrogeologic Report, and Water Allocation Permit were prepared on behalf of the F&S Produce Company. The New Jersey DEP approved the Permit to divert groundwater rates of 350-gallons per minute (gpm), 7.75 million gallons per month, and 93 million gallons per year. The application to divert groundwater was also submitted to the Delaware River Basin Commission for review and approval. The water diversion is critical to food processing and cleaning operations. Water supply development included installing monitoring wells and conducted required aquifer pumping tests of existing production wells.

**Village Grande at Bear Creek, West Windsor, New Jersey** – An irrigation pilot study was undertaken to evaluate hydrological impacts associated with irrigation of turf and landscape areas. The pilot study consisted of monitoring groundwater diversion for irrigation vs. aquifer water-levels, surface water levels, and precipitation. The pilot study was implemented in order to settle a dispute between Village Grande Homeowner's Association, the developer of the property, and NJDEP regarding Water Allocation Permit limits and conditions.

**Test Drilling and Aquifer Testing Program, American Cyanamid, West Windsor, NJ** - A Water Allocation Test Plan, Hydrogeologic Report, and Water Allocation Permit were prepared on behalf of the American Cyanamid Company. The New Jersey DEP approved the Permit for a 600- gpm diversion of groundwater and surface water for a Non-Community, Non-Transient Public Supply. Water supply development included installing new supply wells and conducted required aquifer pumping and water quality tests.

**Town of Harrison and Mobil Oil Company, Harrison, NY** – Managed a hydrogeological investigation that supported a legal settlement in which a 500-gpm capacity well was refurbished for the municipality and an air stripping system (packed aeration tower) capable of treating volatile organic compounds was constructed.

**Hydrogeologic Investigation, Hop Brook Drainage Basin, Town of Amherst, Amherst, Massachusetts** - This study was used as a groundwater management plan that helped Amherst obtain funds from the Commonwealth of Massachusetts as part of their Aquifer Land Acquisition program. Drilling and aquifer testing activities lead to the design and development of a 1.5 million-gallon per day (mgd) municipal supply well.

**Croton-On-The-Hudson, Westchester County, New York** – A comprehensive aquifer drilling, exploration, and testing program was conducted for the town of Croton-On-The-Hudson. The results of the comprehensive program supported the design and development of an additional 2-mgd community water supply.

**Aquifer Exploration and Testing, Southington, Connecticut** - An aquifer exploration and testing program was conducted to prepare a water balance and calculate safe yields to develop a 2-mgd supply well for the town of Southington. The information obtained was used to design and construct a community potable supply well.

## Brian Blum, CPG, LSRP

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**Industrial Supply Well Development, Carmel, New York** - Conducted well drilling and aquifer testing for the development of industrial supply wells. The obtained water supply information was used as a management tool by IBM to determine the potential location of a new facility.

**Sun Oil Company Facility, Yabucoa, Puerto Rico** - Mr. Blum evaluated well efficiencies and safe yields of a well field. The study was used to determine which supply wells warranted redevelopment and whether additional wells were needed to meet facility demands.

**General Electric, Vega Alta, Puerto Rico** - Managed a large-scale RI/FS in Vega Alta, Puerto Rico. The project scope included an extensive field investigation precipitated by the contamination of a municipal wellfield. Well installation, groundwater sampling, water-level measurements, aquifer pumping tests, soil-gas surveys, geophysical surveys, soil borings, and trenching were conducted. Data collected were utilized in a groundwater flow model used to negotiate with the USEPA to modify a Record of Decision (ROD) calling for a costly pump-and-treat remedy of groundwater to a more pragmatic pump-and-treat remedy at half the original estimated cost. Technical and administrative tasks included cost tracking and scheduling; coordinating a team of 50 professionals in a multitude of disciplines; preparing monthly progress reports, technical reports and presentations; and participating in negotiations.

**Town of Islip, Hauppauge, New York** - Managed a multi-million dollar RI/FS at an active municipal landfill on Long Island, New York. A complex environmental investigation and conceptual remedial design was developed to cleanup groundwater within the "Sole Source Aquifer" of Suffolk County, New York.

**Golf Club Water Supply** – Conducted water supply-related permitting and/or irrigation-related feasibility studies and water supply development for the following golf clubs:

- Ardsley Country Club – Ardsley-on-Hudson, New York
- Beacon Hill Country Club – Atlantic Highlands, New Jersey
- Cobbs Creek Golf Club – Philadelphia, Pennsylvania
- Colonia Country Club – Woodbridge, New Jersey
- Hackensack Golf Club – Oradell, New Jersey
- Huntsville Golf Club – Shaverton, Pennsylvania
- Maidstone Club – East Hampton, New York
- Montclair Golf Club – West Orange, New Jersey
- Navesink Country Club – Middletown, New Jersey
- Plainfield Country Club – Edison, New Jersey
- Rumson Country Club – Rumson, New Jersey
- Saucon Valley Country Club – Bethlehem, Pennsylvania
- Shark River Golf Course – Neptune City, New Jersey
- Spring Brook Country Club – Morristown, New Jersey
- Spring Lake Golf Club – Spring Lake, New Jersey
- TPC Jasna Polana – Princeton, New Jersey
- White Beeches Country Club – Haworth, New Jersey

**ENVIRONMENTAL**

**NJDEP LSRP**

Mr. Blum is the LSRP for over 45 sites and has issued about 30 Response Action Outcomes (RAOs) since the inception of the LSRP program. Mr. Blum also performs routine remedial action permit compliance monitoring and maintenance for a portfolio of New Jersey industrial properties. Highlighted below are selected projects in which an RAO has been issued where Mr. Blum was the LSRP of record.

**PSE&G Former Front Street Gas Works, Newark, N.J.** – Mr. Blum is the LSRP for the former Front Street MGP site, located along the west bank of the Passaic River. The site consists of two separate parcels that are separated by New Jersey Route 21 (McCarter Highway). Parcel 1 of the Site is located immediately adjacent to and west of the Passaic River and east of McCarter Highway, and Parcel 2 is located west of McCarter Highway. An RAO was issued in connection with both parcels. Parcel 1 remediation was completed along the Passaic riverbank within a 500 foot long, 15 foot wide cofferdam constructed to remove MGP impacted soils. The remedial activities consisted of the removal of approximately 29,500 tons of MGP-impacted, non-hazardous soil for off-site thermal desorption and disposal as well as excavation of 1,000 tons of lead hazardous soil for disposal.

**Morgan Village Junior High School, Camden, New Jersey**

Mr. Blum was retained as the LSRP by the New Jersey Schools Development Authority to evaluate environmental conditions and issue a Response Action Outcome (RAO) in connection with a portion of an Area of Concern that was incorporated into a new school built directly adjacent to an older school where environmental impacts to soil were documented. The scope of work included conducting a supplemental site investigation to delineate polynuclear aromatic hydrocarbons in soil above the Soil Remediation Standards and working with NJDEP to develop a creative RAO that allowed the SDA to obtain a temporary certificate of occupancy. Once the entire school site was fully constructed an unconditional Site RAO was issued by Mr. Blum.

**New York Jets Training Center, Florham Park, NJ**

Mr. Blum was retained as the LSRP for a relatively recent and minor petroleum spill that occurred at this sports facility. Langan has filed a spill report with the NJDEP and we have conducted post remediation monitoring and sampling in accordance with the Administrative Requirements for the Remediation of Contaminated Sites (ARRCS) regulations. Upon completion of post remediation sampling, Mr. Blum issued a RAO for the spill and related Area of Concern.

**Federal Realty Investment Trust – Blue Star Shopping Center, Watchung, New Jersey**

Mr. Blum served as the LSRP for a tetrachloroethene (PCE) release associated with historical dry cleaning operations at a tenant space in a commercial strip mall. An unrestricted use RAO was issued after the PCE impacts were delineated and mitigated. As part of the cleanup effort, a site-specific Impact to Groundwater Soil Cleanup Standard was established. The remediation effort included the removal and off-site disposal of 250 tons of hazardous soil. The soil remediation effort incorporated geotechnical elements because the building foundation needed to be secured while the PCE impacted soils were being excavated.

**Scannell Properties # 139, LLC – Fed Ex Ground Parking Area, Woodbridge, New Jersey**

Mr. Blum was retained as the LSRP for Site-wide soil areas of concern (for a total of 59 AOCs) related to former chemical manufacturing operations that triggered remediation pursuant to the Industrial Site Recovery Act. Scannell Properties, # 139, LLC, in connection with their purchase of a property in Woodbridge, assumed responsibility for environmental remediation associated with Sherwin Williams and PMC Specialties past industrial processes. Upon completion of site development that capped the Site, Mr. Blum filed a Deed Notice, applied for and obtained a Remedial Action Permit for soils and issued an RAO to Scannell.

**Cranbury Brick Yard, LLC, Former Munitions Manufacturing Facility, Cranbury, New Jersey**

Mr. Blum was retained as the LSRP for a total of 26 AOCs related to former munitions manufacturing operations that triggered remediation pursuant to terms of an Administrative Consent Order. Cranbury Brickyard, LLC, in connection with their purchase of the property, assumed responsibility for environmental remediation associated with the former manufacturing operations that ceased in the early 1950s. Upon completion of the RI, Mr. Blum has issued an unconditional RAO for 20 AOCs. Six AOCs have or are undergoing remediation. Once the site development is completed the remaining six AOCs will be issued a conditional RAO.

**NYSDEC**

**Orange & Rockland Utilities, Inc., Middletown, New York** – Developed and implemented a Supplemental Remedial Investigation (SRI) Work Plan aimed toward fulfilling delineation requirements in connection with a former manufactured gas plant (MGP) site. The work included a soil-gas survey, soil borings, monitoring well installation and associated sampling. The SRI work incorporated an evaluation of potential vapor intrusion into buildings in the immediate vicinity of MGP impacts to the environment. An RI report was submitted to NYSDEC in January 2004.

**Orange & Rockland Utilities, Inc., Port Jervis, New York** – Developed and implemented a Supplemental Remedial Investigation (SRI) Work Plan aimed toward fulfilling delineation requirements in connection with a former manufactured gas plant (MGP) site. The SRI work consisted of a soil-gas survey, indoor air sampling, soil borings, monitoring well installation, and a fish and wildlife assessment.

**Cornell University, Lansing, New York** - Managed an investigation and an interim remedial measures project to prevent migration of contaminants (mostly 1,4-dioxane in groundwater) from both a former radiation disposal site and a former chemical disposal site in Lansing, New York.

**General Electric, Hudson Falls and Ft. Edward, New York** - Carried out field investigations, supervised test drilling, mapped groundwater quality patterns, and evaluated a remedial extraction system at industrial sites, contaminated with polychlorinated biphenyls (PCBs) and other organic compounds.

**110 Sand and Gravel, Melville, New York** - Supervised the installation of monitoring wells, conducted six aquifer pumping tests, and conducted geophysical logging and groundwater sampling as part of a work plan designed for a New York State Department of Environmental Conservation Part NYCRR 360 Application for solid waste disposal.

### **NJDEP ISRA**

Mr. Blum is the project manager for numerous ISRA-related remedial investigations / remedial actions. Several on-going projects are at various stages of the ISRA process ranging from the preliminary assessment phase to final closure. Several closures have required the filing of a Deed Notice for impacted soils or notification of a Classification Exception Area for groundwater as part of the site remedy. Several of the projects summarized below involved and evaluation of vapor intrusion in residential settings, requiring community interaction.

**Nokia (formerly Alcatel-Lucent Inc.), Murray Hill, New Jersey** - Project Manager for an ISRA-related groundwater remediation project with a TCE plume in fractured rock. Remediation activities focused on delineating a TCE source in fractured basalt by employing creative site area mapping to expedite characterization. Geologic mapping and borehole televising were employed to delineate faults that have a major control on contaminant migration. An off-site soil-gas survey and associated indoor air monitoring was conducted to evaluate and remediate vapor intrusion to mostly residential buildings. Indoor air remediation of a residential building was performed by installing a sub-slab ventilation system. Groundwater-related remedial efforts have consisted of source removal, and in-situ chemical oxidation with both sodium and potassium permanganate. In-situ chemical oxidation was conducted in connection with the construction of blast fracture trenches in the bedrock to enhance oxidant delivery and contact with the TCE in bedrock. Remediation efforts eliminated TCE in groundwater by approximately 95% and NJDEP approved a Technical Impracticability (TI) waiver for the remaining groundwater plume and impacts to a surface water body.

**Nokia formerly (Alcatel-Lucent Inc.), Chester, New Jersey** - Project Manager for two neighboring ISRA-related groundwater remedial efforts involving mostly TCE groundwater plumes in fractured rock. An off-site vapor intrusion evaluation consisting of soil-gas and indoor air monitoring program was undertaken to evaluate potential vapor intrusion to residential and commercial buildings). Remediation consisted in in-situ chemical oxidation with sodium permanganate and deployment of "permanganate candles" in wells constructed within bedrock.

**Novartis Pharmaceuticals Corporation, Summit, New Jersey** – Project Manager for a Preliminary Site Assessment, Site Investigation and Remedial Investigation at a 65-year old facility with over 60 Areas of Concern (AOCs). The work included negotiations with NJDEP regarding AOC closure and investigative scope. Off-site sampling activities included sediment and surface water sampling of the Passaic River in support of an Ecological Exposure Assessment.

**Exxon, USA, Linden, New Jersey** - Managed a multi-million dollar Remedial Investigation of a 1,300-acre refinery / petroleum facility in Linden, New Jersey. Project scope included a multi-phased field investigation consisting of soil borings and drivepoint sampling, groundwater monitoring well installation and sampling, borehole geophysics, a ground penetrating radar study, surface-water sediment sampling, a tidal study, aquifer testing, and non-aqueous phase liquid (NAPL) delineation. The RI was considered by the New Jersey Department of Environmental Protection as one of the largest (in terms of scope and budget) environmental studies conducted in New Jersey, under state oversight. The RI was one of the first implemented under New Jersey's



## Brian Blum, CPG, LSRP

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*Technical Requirements for Site Remediation.* All RI work was coordinated with interim remedial measures (IRMs) designed to mitigate environmental releases deemed an immediate threat.

**Exxon, USA, Bayonne, New Jersey** - Managed a multi-million dollar RI/IRM study at a 115-year old petroleum products blending and storage facility in Bayonne, New Jersey. An RI work plan, calling for an extensive field program to determine the nature and extent of contamination for remedial decision making, was developed. Fieldwork included borings and temporary well points for NAPL determination and delineation, and groundwater monitoring well installation and sampling. Activities were coordinated in connection with IRMs focused on containment and removal of hydrocarbon product from the subsurface.

### **Litigation Support**

**Confidential Client, West Caldwell, New Jersey** – A large New Jersey Utility Company and a developer were represented in support of litigation involving the deposition of materials containing polycyclic aromatic hydrocarbons (PAHs) at a residential property in Essex County, New Jersey. Managed a soils investigation and provided deposition testimony substantiating a position to leave materials with PAH concentrations in place due to no demonstrated threat to human health or the environment.

**Town of Harrison, Harrison, New York** - Managed a groundwater resource investigation for a municipality in Westchester County, New York. Findings supported a legal settlement in which the municipality obtained a 500 gallons per minute (gpm) refurbished well with an air stripping system (packed aeration tower) capable of treating volatile organic compounds (VOCs).

**Confidential Client, Tenafly, New Jersey** - Provided technical support for allocation and arbitration of cleanup costs for a site in Tenafly, New Jersey. Mr. Blum represented the interests of a former owner of a chemical manufacturing facility that released chlorinated aliphatic hydrocarbons that impacted soils, groundwater, and surface water. Responsibilities included development and review of settlement terms, file review, and support for the interrogatories and deposition process.

**Confidential Client, Trenton, New Jersey** - Managed an underground storage tank (UST) site characterization and closure at property in Trenton, New Jersey. Site work was conducted in connection with litigation activities. The project involved representing a property owner who purchased a site that contained four USTs containing hazardous substances. Remediation costs were estimated to serve as the basis for settlement negotiations.

### **GEOHERMAL SYSTEMS**

**Private Residence at 655 Park Avenue, New York, New York** - Managed the permitting, design, and construction administration of a standing column well (SCW) required for a 12-ton residential cooling system. Permits and/or approvals were obtained from NYSDEC-Division of Mineral Resources, USEPA, NYCDOT, NYCDEP, MTA-NYC Transit, and the NYC Department of Parks and Recreation. A 1,500-foot deep SCW was installed in the sidewalk. Aquifer and water quality testing were conducted to evaluate the SCW's ability to yield sufficient water and to determine what effects the water quality would have on the well components and related pump and flow regulator appurtenances.

**Columbia University Knox Hall, New York, New York** - Managed the permitting and part-time construction administration associated with a four SCW system for heating and cooling of Knox Hall. Wells were installed to a total depth of 1,800 ft below grade. Aquifer testing and water quality testing revealed that the wells were not capable of yielding significant quantities of water and therefore could only be relied upon for minimum groundwater exchange. The water quality results were used to identify piping, pumps, and related flow appurtenances that were compatible with poor quality water. The work was conducted with close interaction between the owner, building architect, MEP engineer, general contractor, and drilling contractor who installed the four SCWs.

**Brooklyn Botanic Gardens Visitor's Center** – Managed the design of a 28 well, 400-foot deep vertical closed-loop geothermal cooling system. The design warranted detailed coordination with the owner, building architect, other design engineers, and the landscape architect to assure that the piping associated with the geothermal well system would not interfere with other components of the Visitor's Center design.

**Visiting Nurse Association of Northern New Jersey, Morristown, New Jersey** - Managed a hydrogeologic and environmental due diligence effort in support of installing a vertical closed-loop geothermal well field. Based on the favorable findings of the due diligence effort, a 400-foot deep test loop was installed and a 48-hour thermal conductivity test was conducted in support of the full-scale closed-loop well field design.

#### **PROFESSIONAL ASSOCIATIONS**

Licensed Site Remediation Professional Association  
American Institute of Professional Geologists  
National Ground Water Association

#### **PUBLICATIONS**

Blum, B.A. et al. 2008, "In Situ Oxidation of TCE Using Permanganate via Blast Fracture Trenches in the Preakness Basalt". Proceedings from the Battelle Environmental Conference entitled – "Remediation of Chlorinated and Recalcitrant Compounds".

Blum, B.A., et al. 2004, "In-Situ TCE Oxidation Using Potassium Permanganate in the Columnar-Jointed Preakness Basalt of New Jersey". Proceeding from the 2004 USEPA/NGWA Fractured Rock Conference: State of the Science and Measuring Success in Remediation.

Blum, B.A., and G.M. Fisher, 2000, "Trichloroethene Plume Source Area Delineation in the Preakness Basalt", Treating Dense Nonaqueous Phase Liquids (DNAPLs): Remediation of Chlorinated and Recalcitrant Compounds. Battelle Press, Columbus, Ohio, p. 25.

#### **PRESENTATIONS (Past 10 Years)**

Annual Environmental Workshop - developed an "in-house" Langan training workshop entitled "Vapor Intrusion". This workshop is given in October (beginning in 2007) and provides training to engineers and environmental scientists.

"Fundamentals of Geothermal Ground Couplings" – numerous American Institute of Architects (AIA) presentations have been and will continue to be

## Brian Blum, CPG, LSRP

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given to firms or AIA chapters in the northeast U.S. These presentations are registered with AIA for continual professional education. The presentations, often given with an MEP engineer teaming partner, serve as a primer for architects interested in learning about the installation of geothermal heating and cooling systems.

“Vapor Intrusion in New Jersey” – organized and participated as an instructor associated with vapor-intrusion related continued and professional education seminars at Rutgers and Montclair State Universities. These programs have been in place for six years.

October 6, 2021, LSRPA Course on “Successful Remediation – Pitfalls to Avoid, and Remediation In Bedrock”. Presentation on “Bedrock Remediation in New Jersey and Technical Impracticability Waiver”

October 10, 2017, LSRPA and NJSWEP Annual Golf Network Event. “Getting Golf Greens Greener in the Garden State”

April 12, 2017, RTM Conference - Sustainable Property and Asset-Based Transactions: Closing Deals and Capturing Market Opportunities. “Vapor Intrusion – What’s New and Hot Topics”, Philadelphia, PA.

September 30, 2016, Langan Remediation Summit, Hamburg, NJ - “Vapor Intrusion – What’s New”.

October 15, 2014, Langan Remediation Summit, Hamburg, NJ - “Vapor Intrusion - Regulatory Framework and Mitigation”.

June 5, 2014, New Life for Closed Gas Stations Conference, Orlando, FL. - “Digging Deeper on Design – Vapor Intrusion Risks & Solutions”.

April 15, 2013, and April 10, 2014, Rutgers University Training Program, New Brunswick - “Vapor Intrusion in New Jersey”.

June 5, 2012, Langan Engineering and Environmental Services Program on Integrating Site Remediation and Sustainable Redevelopment in Woodbridge, NJ – “Vapor Intrusion and Sustainable Redevelopment”.

May 3, 2012, RTM Conference of Sustainable Property Transactions in Cambridge, Massachusetts – “Vapor Intrusion: Assessment and Remediation”.

February 13 and 27, 2012, NJDEP Vapor Intrusion Technical (VIT) Guidance Training at NJDEP headquarters in Trenton, New Jersey. A technical presentation focused on reviewing pertinent aspects of the NJDEP’s January 2012 VIT Guidance document.

**Robert S. Baranowski, Jr.**  
Direct 856.355.2955  
baranowski@hylandlevin.com

November 4, 2022

*Via E-Mail (planning@pinelands.nj.gov)*

Susan R. Grogan, P.P., AICP  
Acting Executive Director  
Pinelands Commission  
P.O. Box 359  
New Lisbon, NJ 08064

Re: Comments on Pinelands Comprehensive Management Plan  
Proposed Amendments: N.J.A.C. 7:50-1.6, 2.11,  
and 6.86, 54 N.J.R. 1668(a)

Dear Ms. Grogan:

This firm represents Whibco of New Jersey, Inc. (“Whibco”). On behalf of Whibco, please accept the following comments on the proposed amendments to the Comprehensive Management Plan (“Rule Proposal”) noted above, in addition to the comments provided verbally during the hearing on the Rule Proposal that was conducted virtually on October 12, 2022.

Whibco conducts permitted resource extraction activities on multiple sites throughout Cumberland County, including areas within the Pinelands. In connection with such activities involving the processing of sand or other earthen materials that are conducted by mechanical or hydraulic dredging, Whibco obtains water allocation permits from the State of New Jersey, Department of Environmental Protection (“NJDEP”). Such use is generally considered “nonconsumptive” under the Water Supply Management Act, meaning the water is “diverted from surface or ground waters in such a manner that it is returned to the surface or ground water at or near the point from which it was taken without substantial diminution in quantity or substantial impairment of quality.” See N.J.S.A. 58:1A-3. Based on the above, Whibco offers the following comments on the Rule Proposal:

1. The Rule Proposal exceeds the Commission’s regulatory authority. Under the Water Supply Management Act, only NJDEP is granted the power “to adopt, enforce, amend or repeal rules to control, conserve, and manage the water supply of the State and the diversions of that water supply. . . .” N.J.S.A. 58:1A-5. Under the Pinelands Protection Act, the Commission is given the authority only to make recommendations for water

quality standards for surface and ground waters in the Pinelands area, N.J.S.A. 13:18A-6(i), not develop its own procedures for allocations. NJDEP has the exclusive authority to implement such controls and requirements, including “metering, additional reporting requirements, restriction of inter-basin diversions of water for water supply or wastewater discharge, restriction of consumptive use and water quality testing of wells” in “areas of critical water supply concern.” See N.J.A.C. 7:19-8.2. The proposed rule modifications attempt to establish new criteria for withdrawals, lowers the threshold pumping volumes from 100,000 gpd to 50,000 gpd that trigger applicability of new proposed standards, prohibits interbasin transfers, and proposes the use of the USGS MODFLOW model to calculate the zone of influence, which is not used by NJDEP. As such, the Rule Proposal would create a duplicative and inconsistent permitting system that conflicts with existing regulation of water allocation and diversion by the NJDEP.

2. The prohibition on interbasin transfers as set forth in the Rule Proposal disregards the location of existing and active mining sites that may be located in areas where WMA boundaries cross and divide existing operations, which would inhibit future permitting applications for new or increased allocation as needed to operate and expand to supply mining products as needed for construction and infrastructure improvements. All such existing sites should be acknowledged and accounted for in the Rule Proposal to allow for full utilization of the resources of these sites consistent with existing mining permits.
3. The Rule Proposal does not account for resource extraction as a non-consumptive use. Whibco’s operations under its water allocation permits return over 90% of the water being pumped back into the aquifer. NJDEP rules recognize non-consumptive use as “the use of water diverted from surface or ground waters in such a manner that it is returned to the surface or ground water at or near the point from which it was taken without substantial diminution in quantity or substantial impairment of quality.” N.J.S.A. 58:1A-3. The proposed rule should properly account for a non-consumptive use such as resource extraction that returns 90% of the water pumped back to the aquifer. This can be accomplished by adding a definition for “nonconsumptive use” to the CMP at N.J.A.C. 7:50-2.11, consistent with the definition at N.J.S.A. 58:1A-3 as set forth above, with mining to be further noted as an example of a nonconsumptive use: “Nonconsumptive use” means the use of water diverted from surface or ground waters in such a manner that it is returned to the surface or ground water at or near the point from which it was taken without substantial diminution in quantity or substantial impairment of quality; for purpose of this definition, mining or processing of sand or other earthen materials, as long as such mining is conducted by mechanical or hydraulic dredging, shall be considered a nonconsumptive use.”
4. Nonconsumptive uses such as mining should be exempt from the Rule Proposal, and the CMP at N.J.A.C. 7:50-6.83 should be modified as follows: “(a) All development permitted under this Plan, or under a certified county or municipal master plan or land

use ordinance, shall be designed and carried out so that the quality of surface and ground water will be protected and maintained. For the purpose of this Part, agricultural use and nonconsumptive uses such as mining or processing of sand or other earthen materials, as long as such mining is conducted by mechanical or hydraulic dredging, shall not be considered development.”

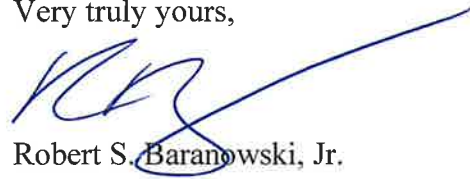
5. Along with recognizing mining as a nonconsumptive use, the definition of “Divert” or “Diversion” at N.J.A.C. 7:50-2.11 should be modified to exclude “mining of sand or similar materials, as long as the mining is conducted by mechanical or hydraulic dredging, shall not be considered development.”
6. The definition of “Allocation” at proposed N.J.A.C. 7:50-6.86(d), and the standards set forth at proposed (d)(3) through (d)(9), should also exclude the “taking or discharge of water for mining of sand or other earthen materials, even if permitted pursuant to a Water Allocation Permit, Water Use Registration Number, NPDES or NJPDES permit, as long as such mining is conducted by mechanical or hydraulic dredging operations.”
7. Unless mining is exempted as a nonconsumptive use, the standard of no drawdown within Forest Area as set forth in the Rule Proposal is problematic as active mine sites exist within these areas, and prohibition on new or increased diversion would inhibit utilization of existing permitted mining reserves and improperly restrict access to those resources. The Rule Proposal should expressly recognize and permit the continuation of existing mining sites including all reserve areas, and the non-consumptive nature of mining activities.
8. The Rule Proposal also needs to be reconciled with the Federal ROCKS Act, which was part of the Infrastructure and Jobs Act of 2021. The Federal ROCKS Act encourages the preservation of access to and reduction of costs for resources needed for infrastructure projects, such as stone, sand and gravel. Unless the Rule Proposal is revised consistent with the comments set forth herein, or withdrawn, the Rule Proposal would have the contrary effect of restricting access to resources needed for infrastructure projects and would increase the costs of these resources, contrary to the Federal ROCKS Act.
9. In response to comments received in connection with rule amendments promulgated in 1994, the Commission previously indicated that: “The proposed standards for water supply diversion in N.J.A.C. 7:50-6.86(e) prohibit diversions or increases in diversions of over 100,000 gallons per day that utilize the Kirkwood-Cohansey aquifer unless it is demonstrated that no alternative water sources are available and that no adverse ecological impact on the Pinelands Area will result. The Commission believes that these two standards will prevent excessive or nonessential diversions from the Kirkwood-Cohansey aquifer and that additional requirements, such as the purchase of Pinelands Development Credits, are unnecessary.” See 26 N.J.R. 4803 (December 5,

Susan R. Grogan, P.P., AICP  
Acting Executive Director, Pinelands Commission  
November 4, 2022  
Page 4

1994). The Commission's reasoning as set forth above remains applicable and no modification of these standards is warranted.

Whibco reserves the right to submit additional or supplemental comments as may be warranted upon the publication of any amended or revised Rule Proposal concerning the subject matter set forth herein, and Whibco further reserves the right to seek judicial review of any final, adopted rule addressing the above issues.

Very truly yours,

A handwritten signature in blue ink, appearing to read 'R. Baranowski, Jr.', with a long horizontal flourish extending to the right.

Robert S. Baranowski, Jr.

RSB/amb

cc: Whibco of New Jersey, Inc.



JOSEPH GALLAGHER Jr., MPA  
TOWNSHIP ADMINISTRATOR

November 2, 2022

[planning@pinelands.nj.gov](mailto:planning@pinelands.nj.gov)  
Pinelands Commission Office  
P.O. Box 359  
New Lisbon, NJ 08064

Re: Written Formal Comments – Township of Winslow  
Proposed Amendments to the Pinelands Comprehensive Management Plan

Dear Ms. Grogan:

In response to the public hearing held October 12, 2022 regarding the proposed amendments to the Pinelands Comprehensive Management Plan, the Township of Winslow provides the following comments.

- 1) Winslow Township seeks clarification as to the applicability of these regulations to existing wells and existing water allocation permit limits. The proposed regulations read as they apply to:

*A new diversion or increase in allocation from either a single existing source or from combined existing diversion sources in the same HUC-11 watershed and in the Kirkwood-Cohansey aquifer, that results in a total diversion of 50,000 gallons of water per day or more (hereafter referred to as “proposed diversion”) shall meet the criteria and standards set forth at (d)3 through 9 below. “Allocation” shall mean a diversion permitted pursuant to a Water Allocation Permit or Water Use Registration Number issued by the New Jersey Department of Environmental Protection pursuant to N.J.A.C. 7:19. **Proposed 7:50-6.86(d), New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1676)***

Therefore, it is understood that the existing Winslow Township wells, as they are currently



operating, do not need to meet the criteria and standards set forth at Proposed 7:50-6.86 (d)3 through 9 in the proposed regulations even though, they currently pump more than 50,000 gallons of water per day. In addition, it is understood that increased withdrawals from the Kirkwood-Cohansey aquifer are not subjected to the criteria and standards set forth at Proposed 7:50-6.86 (d)3 through 9 in the proposed regulations if the increased withdrawals are from existing wells and do not exceed existing water allocation limits specified in the Township's water allocation permit since this would not be a "new diversion" or "increase in allocation".

- 2) The Township seeks clarification for the threshold pumping volume at which a proposed diversion or increase in water allocation will be subjected to the new standards. The proposed rule indicates that a proposed diversion or requested increase in allocation must be at least 50,000 gallons per day to trigger the application of the criteria and standards set forth in the proposed regulations.

*A new diversion or increase in allocation from either a single existing source or from combined existing diversion sources in the same HUC-11 watershed and in the Kirkwood-Cohansey aquifer, that results in a total diversion of 50,000 gallons of water per day or more (hereafter referred to as "proposed diversion") shall meet the criteria and standards set forth at (d)3 through 9 below. "Allocation" shall mean a diversion permitted pursuant to a Water Allocation Permit or Water Use Registration Number issued by the New Jersey Department of Environmental Protection pursuant to N.J.A.C. 7:19. **Proposed 7:50-6.86(d), New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1676)***

While it appears as though a new diversion or new increase in allocation of 50,000 gallons per day or more is the threshold pumping volume that would require the detailed criteria and standards put forth in **Proposed 7:50-6.86(d)3 through 9 ("proposed standards")**, various examples and explanations throughout the document indicate that if combined new and existing diversions exceed the 50,000 gallons per day threshold, this would trigger compliance with the new proposed standards. These examples are confusing and contradict the proposed regulatory language.

***Example 1:** The proposed amendments also specify that the 50,000 gallon per day threshold includes all of an applicant's existing diversions in the same HUC-11 watershed, in addition to the new or increased diversion. For example, if an applicant currently diverts 40,000 gallons of water a day and is proposing to divert an additional 20,000 gallons of water a day through a new well or from one of the applicant's existing wells in the same HUC-11 watershed, the new diversion will be subject to the new standards even though it is less than 50,000 gallons of water per day, as the total diversion would be 60,000 gallons of water a day. **New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1670)***

***Example 2:** For example, if an applicant already has a DEP water allocation permit for 100,000 gallons a day and has applied to the Commission for a new well that will withdraw an additional*

20,000 gallons a day under the same permit, the Commission will evaluate the ecological impacts from the total withdrawal of 120,000 gallons per day. The new standards and review process set forth in these amendments will apply. **New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1671)**

Example 3: Of the 30 applications for new or increased diversions received by the Commission since 2017, it is estimated that only eight would have incurred these additional costs, either because of the new 50,000 gallons per day threshold or because the proposed rule clarifies that wells owned in common will be grouped for purposes of determining whether the 50,000 gallons per day threshold is exceeded. **New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1673)**

Example 4: The proposed amendments expand the scope of diversions that will be subject to the stricter standards and criteria. The CMP's water management provisions currently apply only to total diversions of 100,000 gallons or more per day. The Commission is proposing to lower this threshold to total diversions of 50,000 gallons or more per day from the Kirkwood-Cohansey aquifer in the same HUC-11 watershed. The volume determination is based on all of an applicant's allocations under a water allocation permit, water use registration issued by the DEP, which will ensure that more wells will be subject to the proposed new standards and further protect the Pinelands ecology and water supply. **New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1673)**

The proposed codified regulatory language in **Proposed 7:50-6.86(d), New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1676)** does not make any mention of the volume determination being based on all of an applicant's allocations under a water allocation permit and/or water use registration issued by the DEP. There is also no mention of combining existing and proposed volumes to determine if the 50,000 gallons a day threshold is exceeded and if the new diversion is now subjected to the proposed standards. This explanation is confusing and contradicts the proposed regulatory language.

3) Winslow Township disagrees with the prohibition of interbasin transfer.

*A diversion that involves the interbasin transfer of water in the Pinelands Area between the Atlantic Basin and the Delaware Basin, as defined at (b)1 and 2 below, or outside of either basin, shall be prohibited.* **Proposed 7:50-6.86(b), New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1676)**

The language in the current regulations "should be avoided to the maximum extent practical" is better suited to allow for unavoidable interbasin transfers. Basin boundaries don't translate directly to the aquifer and some diversions that are located near the border between the Atlantic and Delaware Basins are pulling water from both basins. This also makes things difficult for Townships that straddle both the Delaware and Atlantic Basins and can be problematic for municipalities that currently depend on interbasin transfer for a potable water source and wastewater treatment. Winslow Township currently purchases 1.5 MGD from New Jersey

American Water (NJAW) which is sourced from the Delaware Basin and is transferred mostly to the Atlantic Basin.

- 4) Winslow Township recommends the allowance of historical aquifer pump test data to determine if a proposed diversion will be deemed to have an adverse local impact in the Pinelands Area (**Proposed 7:50-6.86(d)7, New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1676)**). A request for a pump test waiver is currently accepted (as written in the regulations N.J.A.C. 7:19-2.2(c)) by the NJDEP Division of Water Supply and Geoscience for hydrogeological reports in certain instances where recent and applicable pump test data can be used to evaluate the hydrogeological impacts on the aquifer and watershed.
- 5) Winslow Township does not agree with the addition of the **Proposed 7:50-6.86(d), New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1676)**. We believe it to be redundant with the current NJDEP water allocation permitting requirements, specifically for applicants that request a major modification to their water allocation permit. The language in the document states that the Commission wants to promote consistency with NJDEP review procedures:

*The decision to consider all of an applicant's diversions in the same HUC-11 watershed requires the DEP to consider all diversions covered under one DEP Water Allocation Permit when evaluating new water allocation permit applications. Structuring the Commission's evaluation of water diversion impacts to groups of wells and diversions proposed or operated by the same applicant or owner mirrors the DEP requirement and should promote consistency between the two agency's review procedures. **New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1670)***

The NJDEP already requires applicants to prepare an extensive and technical pump test work plan and hydrogeological report that fully encompasses evaluations of regional and local ecological impacts. Consistency between two agency's review procedures is essential yet can be very difficult when dealing with two different sets of regulations trying to enforce the same thing. The Commission's proposed regulations already differ from the NJDEP's with the requirements for local ecological impacts (**Proposed 7:50-6.86(d)7, New Jersey Register, Tuesday, September 6, 2022 (CITE 54 N.J.R. 1676)**) that includes specific requirements for aquifer pump testing.

## Summary

Overall, Winslow Township objects to the proposed regulations because they are superfluous and ask for the same requirements from an applicant as it would be for a Major Modification to a Water Allocation Permit. The NJDEP regulations for water allocation permits at N.J.A.C 7:19 are much more comprehensive and are sufficient to evaluate adverse ecological impacts in the Pinelands Area. The NJDEP regulations also include tasks such as compiling a well inventory list within a 1-mile radius, a contaminated sites search, and significant mapping requirements.

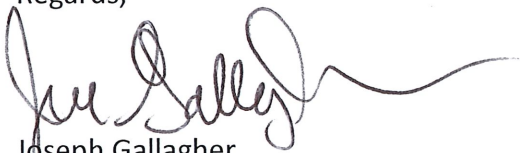
The addition of a second set of redundant regulations will be confusing for the applicant and difficult to enforce with another similar set of regulations. Applicants can potentially spend a lot of time and money on aquifer pump tests only to lead to an approval from the NJDEP but a denial from the Pinelands Commission or vice versa.

As it stands now, the Commission must provide an approval letter for water allocation permits and major modification requests in the Pinelands Area, therefore, the Commission currently has a say in the allowance of Kirkwood-Cohansey withdrawals in the Pinelands Area. With the Commission establishing their own independent review of Kirkwood-Cohansey withdrawals, this could lead to interagency conflicts between the NJDEP and the Pinelands Commission.

As mentioned during the hearing, Winslow Township objects to the proposed amendments based on the Pinelands Authority to determine water allocation. This authority was specifically given to the NJDEP and should remain with them to prevent conflicting regulations.

The Township appreciates the opportunity to provide comment regarding these proposed changes and looks forward to a response.

Regards,

A handwritten signature in black ink, appearing to read "Joe Gallagher", with a long, sweeping horizontal line extending to the right.

Joseph Gallagher  
Township Administrator

JG/mb

cc: Mayor and Township Committee (via email)  
Stuart Platt, Township Solicitor, The Platt Law Group (via email)  
Louis Bowman, Superintendent of Municipal Utilities, Township of Winslow (via email)  
Monica Bell, Project Manager, Remington and Vernick Engineers (via email)  
Steven Donohue, Utilities Engineer, Remington and Vernick Engineers (via email)  
Dennis Yoder, Director of Engineering, Remington and Vernick Engineers (via email)



State of New Jersey

PHILIP D. MURPHY  
GOVERNOR

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SHAWN M. LATOURETTE  
COMMISSIONER

SHEILA Y. OLIVER  
LT. GOVERNOR

Mail Code 401-04Q  
Division of Water Supply & Geoscience  
New Jersey Geological and Water Survey Element  
401 E. State Street - P.O. Box 420  
Trenton, New Jersey 08625-0420  
Tel #: (609) 984-6831 - Fax #: (609) 633-1231  
<https://www.nj.gov/dep/watersupply/>

November 4, 2022

Susan R. Grogan, P.P., A.I.C.P.  
Acting Executive Director  
Pinelands Commission  
P.O. Box 389  
New Lisbon, NJ 08064

Re: Proposed Amendments to the Pinelands Comprehensive Management Plan  
Proposal Number: PRN 2022-110

Dear Ms. Grogan:

The Division of Water Supply and Geoscience (DWSG) has reviewed the Pinelands Commission’s (Commission) proposed amendments to the Pinelands Comprehensive Management Plan as published in the September 6, 2022, New Jersey Register (54 N.J.R. 1668(a)). DWSG provides these comments for your consideration. For organizational purposes, the comments are broken down into following categories: “Technical Manual 12-2,” “Low Flow Margin,” “Programmatic,” and “General.”

Technical Manual 12-2

1. Proposed N.J.A.C. 7:50-6.86(d)7 references DWSG’s Technical Manual 12-2, “Hydrogeologic Testing and Reporting Procedures in Support of New Jersey Water Allocation Permit Applications” (TM 12-2). The purpose of TM 12-2 is to provide guidance on conducting aquifer tests and submitting hydrogeological reports in support of requests for new and revised water allocation permits under the Water Allocation Permits rules at N.J.A.C. 7:19. TM 12-2 was developed in consideration of the withdrawal limits under N.J.A.C. 7:19 (100,000 gallons per day or greater) and DWSG’s standard evaluation criteria for impact analysis (one (1) foot of drawdown). The recommendations for number and location of observation wells, and pumping volume and duration, are based on the need to generate and observe sufficient groundwater drawdowns that can be analyzed for aquifer properties and then used to predict a one-foot drawdown zone of influence. Aquifer tests conducted using the document’s guidance but with lower withdrawal rates may not produce data that can be accurately analyzed for aquifer parameters that in turn can be used to reliably predict a four-inch drawdown zone of influence. This may be especially true for the prolific Kirkland-Cohansey aquifer, where significant withdrawals are required to see measurable

drawdowns. DWSG recommends that the Commission consider a “Pinelands-specific” guidance based on TM12-2 so that aquifer tests are to more likely produce appropriate results that can provide insight to groundwater impacts at the proposed lower withdrawal rates and smaller allowed impacts.

2. DWSG notes that under the proposal, the potential impact of a new or increased diversion may be evaluated without consideration of all other existing diversions and the potential four-inch drawdown impact on wetlands and surface water bodies. Existing ground water conditions reflect current diversions and the need to base evaluations without considering all pre-existing diversions is not consistent with DWSG’s evaluation methodology, including using the model impacts based upon one foot of drawdown.

### Low Flow Margin

3. Proposed N.J.A.C. 7:50-6.86(d) references Hydrologic Unit Code 11 (HUC-11) watersheds. HUC-11s are no longer supported by the U.S. Geological Survey’s and the Department’s Watershed mapping groups. HUC-11s do ‘neatly aggregate up’ into larger HUCs (with smaller HUC numbers). DWSG will continue with HUC-11s for the Low Flow Margin (LFM) 2023 New Jersey Statewide Water Supply Plan (WSP) update, but then will most likely switch to HUC-12s for future analyses. DWSG recommends that the Commission shift to HUC-12s for consistency with its analyses.
4. DWSG’s LFM results for some HUC-11s include diversions from unconfined aquifers that are not the Kirkland-Cohansey aquifer. Some of these same HUC-11s may also be only partially inside the Pinelands Area (Pinelands). The Commission’s proposal does not address how to handle HUC-11s that are both in- and outside of the Pinelands, and which might include both the Kirkland-Cohansey aquifer as well as other aquifers.
5. DWSG’s LFM results also include agricultural, horticultural and aquacultural water use and allocations. The proposed rule refers to these results, but the Department is unaware of the authority to regulate water withdrawals regulated pursuant to N.J.A.C. 7:20A under the proposed rule.
6. The Commission proposes at N.J.A.C. 7:50-2.11 to define “stream low flow margin” as “the difference between a stream’s September median flow and its statistical flow, which is the seven-day flow average in the 10-year period for the stream (7Q10) as reported in the New Jersey Statewide Water Supply Plan, New Jersey Department of Environmental Protection, 2017, New Jersey Water Supply Plan 2017-2022: 484p, <http://www.nj.gov/dep/watersupply/wsp.html>, as amended and supplemented”. DWSG notes that the WSP on page 19 defines “low flow margin” as “...the difference between the median September flow and the 7Q10 flow at the lowest elevation of each Hydrologic Unit Code (HUC) 11.” The WSP defines September median and 7Q10 in its glossary. DWSG recommends that the Commission modify the proposed definition of “stream low flow margin” to reference the definition in the WSP.
7. Proposed N.J.A.C. 7:50-6.86(d)6 states “[a] proposed diversion shall be deemed to have an adverse regional impact if it, combined with all existing permitted allocations in the same HUC-11 watershed, exceeds 20 percent of the stream low flow margin for the year of peak use established in the New Jersey Statewide Water Supply Plan at

[https://www.nj.gov/dep/water\\_supply/pdf/wsp.pdf](https://www.nj.gov/dep/water_supply/pdf/wsp.pdf) for the HUC-11 watershed where the proposed diversion will be located (hereafter referred to as ‘the affected HUC-11 watershed’).” DWSG recommends that the Commission clarify this language as it is unclear if the proposed rule is referring to allocations or peak reported use. The WSP considers allocations and peak water use, based on reported actual water use, which are two different factors and the WSP estimates them differently. Additionally, the information referred to is in Appendix A of the WSP, which is not the referenced document. The correct reference is <https://www.state.nj.us/dep/watersupply/pdf/wsp-appendix-a.pdf>.

8. The LFM method is designed to evaluate the net loss of water to a HUC-11 and as such considers consumptive and non-consumptive water uses plus imports and exports (e.g. 90% of a golf course irrigation is assumed to be consumptive and 10% is assumed to return to the local aquifer). The proposed rules do not appear to make this distinction. The proposal seems to refer to the diversion and assume that all of it is lost, which is incorrect. The proposed rule should be clarified so that the LFM refers to the net loss of the diversion to the HUC-11.

#### Programmatic

9. The proposal limits new or increased diversions from the Kirkwood-Cohansey aquifer in specific areas of the Pinelands including but not limited to Pinelands towns, villages, and rural development areas. Proposed new or increased diversions are not permitted in preservation, forest, or special agricultural areas. Under the proposal, there may be specific existing diversions in these restricted areas that could be impacted by this restriction. Notably, this would seem to impact diversions from sand quarries where water is returned to the source, minimally impacting the aquifer. Modifications are necessary for those facilities as they often relocate sources due to the nature of mining as well as changing of pumps and associated capacities, which often require modification of the permit. DWSG recommends that the Commission create exceptions to the proposed limitations.
10. Proposed N.J.A.C. 7:50-6.86(d)6 allows for the offset of potential impacts with alternatives which include the recharge of treated wastewater and, stormwater recharge. The offset of potential impacts also includes reduction of infiltration/inflow and water leak audits, which DWSG supports. DWSG encourages the Commission to provide a list of acceptable alternatives.
11. The proposal refers to agricultural activities which include some of the activities regulated by the Department in accordance with N.J.A.C. 7:20A but does not include reference to aquaculture which is clearly defined as agriculture in N.J.A.C. 7:20A. The Department has received multiple inquiries regarding proposed aquaculture facilities proposed in southern New Jersey, including in the Pinelands Area. Aquaculture should be included in this section and continue to be exempt from the proposed rule.
12. DWSG notes that, under the Commission’s proposal, an existing diversion that exceeds 100,000 gallons per day and is permitted in accordance with N.J.A.C. 7:19 (and methodologies in TM 12-2) will be subject to the Commission’s review and may not meet the new proposed standards proposed by the Pinelands.

## General

13. The proposal summary and proposed N.J.A.C. 7:50-6.86(d)2i refer to N.J.A.C. 7:9-9. N.J.A.C. 7:9-9 was repealed and replaced by N.J.A.C. 7:9D-3 in 2001 (see 32 N.J.R. 2832(a), 33 N.J.R. 3194(a)). The Commission's proposal should be updated accordingly.
14. The Commission proposes to define at N.J.A.C. 7:50-2.11 the terms "divert" or "diversion," "well", and "zone of influence," which are also defined at N.J.A.C. 7:19-1.3. DWSG anticipates amending its definition of "well" to have "...the same meaning as the term defined at N.J.A.C. 7:9D." For consistency, DWSG recommends that the Commission follow the same approach for its proposed definitions.
15. The proposed reference to replacement wells at N.J.A.C. 7:50-6.86(d)2i is current with respect to DWSG's current policy for replacement wells and N.J.A.C. 7:19-1.5(b)3. This existing policy is more restrictive than what is being planned to be proposed in future rulemaking. DWSG suggests that the Commission amend the proposed rule language to state that a replacement well is any well considered a replacement well under N.J.A.C. 7:19.
16. Several references to N.J.A.C. 7:9D are inconsistent with those rules, including the requirement to decommission wells that are replaced. The Commission's proposal is more in line with how replacement wells are modified under the water allocation rules at N.J.A.C. 7:19-1.5. DWSG recommends that the Commission clarify its proposed requirements and their impacts on individual domestic wells, and the proposed requirements for Allocation Permit or Registration wells. Typically, replacement wells are needed on an emergency basis. See N.J.A.C. 7:19-1.4(a)4 for the Department's applicability provisions regarding emergency diversions from wells.
17. At proposed N.J.A.C. 7:50-6.86(b), the Commission states, "[a] diversion that involves the interbasin transfer of water in the Pinelands Area between the Atlantic Basin and the Delaware Basin, as defined at (b)1 and 2 below, or outside of either basin, shall be prohibited." DWSG interprets this as meaning that if there is an existing diversion that meets this criterion, it would now be prohibited. DWSG recommends that the Commission clarify this provision, including any process that would be followed if an applicable facility is identified.
18. Any references to the Department of Environmental Protection's (Department) Bureau of Water Allocation & Well Permitting should be updated as needed.
19. In the Department's anticipated proposal amending N.J.A.C. 7:19, a link between volumes of water (e.g., 100,000 gallons per day) and pumping rates (e.g., 70 gallons per minute) will be addressed. We would recommend the Commission include a similar link to identify new wells more readily being installed by their pump capacity and relationship to the volumetric regulatory thresholds.



DWSG appreciates the opportunity to submit these written comments in response to the proposal at 54 N.J.R. 1668 for the written record.

Respectfully submitted,



Jeffrey L. Hoffman, State Geologist  
New Jersey Geological and Water Survey  
Division of Water Supply & Geoscience

C: Trish Ingelido, Director, Division of Water Supply and Geoscience  
Terry Pilawski, Chief, Bureau of Water Allocation and Well Permitting

**MEMORANDUM**

From: Robert Kecskes  
To: Susan R. Grogan, Acting Executive Director, NJ Pinelands Commission  
Re: Proposed Amendments to the Pinelands Comprehensive Management Plan  
Date: November 4, 2022

Dear Ms. Grogan,

I congratulate the New Jersey Pinelands Commission (Commission) for its effort to protect the natural resources of the Pinelands region. The introduction of an approach to protect the region's natural resources from excessive withdrawals from the Kirkwood-Cohansey (Cohansey) aquifer is long overdue. I make the following comments on the proposed revisions to the Pinelands Comprehensive Management Plan:

LOW FLOW MARGIN METHOD

The use of the New Jersey Department of Environmental Protection (NJDEP) Low Flow Margin (LFM) method will be valuable in assessing new withdrawals from the Cohansey Aquifer. However, caution is needed due to its scale and the manner in which the LFM threshold results are understood and employed.

As you know, the LFM is defined as the difference between the median September flow and the 7Q10 flow at the lowest elevation of each HUC-11 watershed. The NJDEP uses 25% of the LFM as a statewide planning threshold of excessive depletive and consumptive water loss from unconfined aquifer wells and surface water intakes. It has determined that this percentage can be removed from a HUC-11 watershed without causing adverse ecological impacts. If there is more water loss by current depletive and/or consumptive water withdrawals than this threshold, a HUC-11 is considered to be stressed. If there will be more water loss by current depletive and/or consumptive water allocations than this threshold, a HUC-11 is considered to be stressed at full allocation. The LFM method is not meant to replace more rigorous groundwater or surface water modeling or other detailed hydrogeologic-hydrologic assessment methods. Instead, it provides an estimate of water availability. It serves as a screening tool that can identify watersheds with potential water availability shortages that may require more detailed evaluations. The HUC-11s in New Jersey range in size from 3 to 349 square miles, and average about 60 square miles. HUC-11s are aggregated together to form 20 Watershed Management Areas

The threshold is set at the very bottom of the HUC watershed, where all the water from throughout the watershed is discharged. The threshold essentially represents the entire cumulative amount of water that can be depletively or consumptively withdrawn from the watershed in question. The NJDEP arrived at the 25% of the LFM limit by testing it in various watersheds and concluding that withdrawals in excess of the limit contributed to aquatic resource impairment. In consideration of the exceptional resources of the Pinelands region, the Commission is now proposing that 20% of the LFM threshold serve as the water availability limit for the HUC-11 watersheds in the Pinelands region.

It goes to say that if one assumes that the LFM threshold is protective of a HUC 11 watershed, one should also believe that the threshold is protective of a HUC 14 watershed. I believe that most water professional would concur with this assertion. Allow me to give a very simplified example of why I am emphasizing this notion.

Let us say that Pinelands Commission staff are evaluating a new request for a 0.2 million gallon per day (mgd) water allocation (0.1 mgd to be used upon approval) to serve a growth area in a hypothetical 100-square mile HUC-11 watershed that is comprised of ten 10 square-mile HUC- 14s. The NJDEP estimates that this HUC-11 watershed's September flow is 20 mgd and the 7Q10 is 10 mgd, for a LFM of 10 mgd, which translates to a 2.5 mgd NJDEP LFM threshold and a 2.0 mgd Pinelands LFM threshold. Now, let's say that there is already 0.5 mgd of existing streamflow loss in this HUC-11 and a potential full allocation loss of 1 mgd from these existing users. However, since the new withdrawal would use 0.1 mgd upon approval and 0.2 mgd at full allocation, there would be at total loss of 0.6 mgd in this HUC-11 upon approval of the growth area's request and 1.2 mgd at full allocation, well below the NJDEP 2.5 mgd and Pinelands 2.0 mgd LFM thresholds. Planning approvals would likely thus be granted. Of course, the planning approval would not supersede the more rigid adverse local impact analysis on wetlands that the applicant would be required of the Commission.

Let us now say that the existing withdrawals and the newly proposed withdrawal were all in the same HUC-14 watershed. If each of the ten 10 square-mile HUC-14 watersheds were extrapolated to have a Pinelands LFM threshold that is one-tenth of the HUC-11 watershed, each would have a Pinelands LFM threshold of 0.2 mgd. This would result in a 300% exceedance of the HUC-14 watershed with the combined new and current withdrawals, and a 600% exceedance at full allocation. Consequently, the evaluation of the proposal at the HUC-11 watershed level would have resulted in a potential approval that would have critically impacted a part of the watershed that seemed reasonable when assessing it on such a large scale. Utilization of the larger HUC-11s for water availability analysis is essentially "diluting" the negative effects in the HUC-14 watersheds.

It is realized that there are issues with the "transfer" of streamflow statistical information from a large HUC-11 watershed down to a smaller HUC-14 watershed. However, it is quite likely that the transfer would yield reasonable results. Furthermore, it should not be forgotten that most of the streamflow statistics to estimate September and 7Q10 flows were transferred from stream gages that are not located in the actual HUC-11s that were evaluated, that a good deal of "averaging" occurred due to the variation in watershed characteristics, and that recent streamflow patterns are evolving due to climate change, etc. In other words, the LFM threshold is not as precise as we would like it to be.

Based on the potential to approve water withdrawal projects that can severely impact local resources without realizing it, consequently, it is recommended that the Pinelands Commission revise its proposed amendment so as to review proposed withdrawals from the Cohansey Aquifer at the HUC-14 watershed level with streamflow statistical data extrapolated from the HUC-11 data. I am also making the same recommendation to the NJDEP in its development of the recently initiated NJ Statewide Water Supply

Plan. As you probably know, the Highlands Council has employed the HUC-14 watersheds for its water availability analysis. For the Pinelands, this can be implemented in three different ways.

First, the United States Geological Survey (USGS) can develop the water availability assessment for the HUC-14 that a proposed Cohansey Aquifer well would be located in. The additional fee should not be excessive since much of the current and full allocation water withdrawal and wastewater discharge information has already been collected and located. It would be a matter of extrapolating and transferring this information from the HUC-11 watershed to the HUC-14 watershed, correlating stream gage and partial record station data, and evaluating local topography and watershed characteristics to re-estimate stream low flows.

Second, the Pinelands Commission and the NJDEP can coordinate with the USGS to develop water availability estimates for HUC-14 watersheds. If this approach was acceptable, I would approximate that the results could be available in about two years.

Third, the Pinelands Commission itself can develop these estimates by transferring the existing HUC-11 watershed LFM estimates down to the HUC-14 level, and assuming that LFM threshold for the larger watershed can be prorated to area occupied by the HUC-14 watershed. In the example above, the 100 square mile HUC-11 watershed generated a 20% of the LFM availability of 0.02 mgd per square mile. If a HUC-14 watershed in that HUC-11 watershed was 15 square miles, water availability for that HUC-14 watershed would be estimated at 0.3 mgd.

Whichever approach was used, it would be significantly more protective of the ecological resources of the Pinelands region. It would also provide a much improved “road map” for the Commission and applicants to employ to identify where and how much water is available and where potential offsets should be implemented.

I should also note that the NJDEP is considering making modifications to the LFM method that appear to make more water available to the HUC-11s as part of the next NJ State Water Supply Plan (2020 – 2050). I make this comment since the Commission is considering adopting the current LFM statistics. Among the changes are reducing the baseflow effects caused by withdrawals from unconfined aquifers; the current LFM method assumes that baseflow is reduced by 90% of the withdrawal. Using rolling averages of demand, rather than one peak year, is also being contemplated. In addition, agricultural withdrawal demand is likely to be reduced to reflect a recent pilot project. On the other hand, including the effects of upstream HUC-11 withdrawals on downstream HUC-11s is a much more realistic approach. Nonetheless, the number of HUC-11 watersheds with surplus water availability would somewhat increase in New Jersey. And none of these changes would resolve the potential impairment of HUC-14 watersheds from being over-utilized. I am in the process of request that the next NJ State Water supply Plan perform its water availability assessment at the HUC-14 levels, and that the streamflows and peak water demands that are used in the analysis consider the effects of climate change.

### SURFACE WATER WITHDRAWALS

The proposed amendment does not appear to address potential impacts that would be associated with public surface water withdrawals. It would seem possible that a growth area near a large stream or river might choose that source over an aquifer. An intake on a large stream or river, even if it was within the LFM threshold, could theoretically reduce surface water flow levels that could trigger accelerated groundwater discharge to the waterway, and thus potentially affect important wetlands.

### OUT-OF-BASIN TRANSFERS

Several HUC-11 watersheds in the Pinelands region are affected by confined aquifer pumpage along the New Jersey shore. Leakage in the Pinelands HUC-11 recharge area induced by these confined aquifer withdrawals are reducing water availability in these recharge areas. In fact, confined aquifer pumpage is the primary cause of the current LFM threshold exceedance in two Pinelands HUC-11s and a major contributor to exceedance to the LFM threshold in several other HUC-11s. One can expect these exceedances to increase as demand in the New Jersey shore communities grow. The Commission should call this to the attention of the NJDEP so that it can be raised as an issue in the next NJ State Water Supply Plan.

Related to the above is the Commission's policy to steer withdrawals from within the Pinelands region toward confined aquifers rather than the Cohansey Aquifer. As suggested above, withdrawals from confined aquifers can reduce groundwater levels in their recharge areas. If the Commission steers too many entities in the Pinelands region to confined aquifers that have their recharge areas also in the region, it appears possible that excessive surface and ground water declines can result. This might be especially true as many shore towns are also using the same confined aquifers. Consideration should be given on whether impact analysis should be conducted in such cases.

### OFFSETS

In the event that a proposed diversion cannot meet the LFM threshold, the amendments allow applicants to offset the diversion on a gallon-for-gallon basis, so that the proposed diversion, combined with all other allocations in the watershed, no longer exceeds LFM threshold. It is suggested that the amendments consider requiring the offsets to be guided toward the portion of the watershed most impacted (i.e., near where the wetlands are most severely reduced or where major streamflow depletion might be occurring).

### LAND SUBSIDENCE/SEA LEVEL RISE

A recent investigation conducted by Rutgers University concluded that groundwater pumpage in coastal New Jersey partially contributed to land subsidence that in turn increased the perils of sea level rise. It is hoped that the Commission would request more in-depth analysis of this phenomenon since subsidence and sea level rise will have such a large impact on the water resources of the Pinelands. See link below: [https://njclimateresourcecenter.rutgers.edu/climate\\_change\\_101/sea-level-rise-in-new-jersey-projections-and-impacts/](https://njclimateresourcecenter.rutgers.edu/climate_change_101/sea-level-rise-in-new-jersey-projections-and-impacts/)

### IRRIGATION SOIL MOISTURE SYSTEMS

The proposed amendment will be requiring mandatory soil moisture/rain sensors for all landscape irrigation systems. While rain sensors are certainly in order, the Commission should give some thought about requiring soil moisture sensors. As inferred, sensors trigger irrigation as drier conditions prevail. As the Pinelands region evolves into future drought conditions, these irrigation systems will be activated more frequently. If the customers using these systems are served by a purveyor that uses the Cohansey Aquifer, ground water levels will decline at a faster rate and spread further. Drought warnings are typically of little help. Some of the highest demand periods occur during drought warnings, primarily as a result of irrigation. It is recommended that the Commission reconsider this recommendation. Rather, using native vegetation for landscaping would be more prudent.

Before I end, I would like to provide you with some of my background. I have been involved in water issues for nearly 50 years including being involved in the development of the last three State Water Supply Plans. I have served as the Chief of the Water Supply Planning Section for 25 years, and I am now working as a part-time freelance environmental consultant.

Some of the above topics I described are rather complex. Please let me know if you have any questions.

Thank you and good luck with your proposed plan amendment!

Robert Kecskes  
354 Pennington-Rocky Hill Road  
Pennington, NJ 08534  
Pennington, NJ 08534  
609 915-0037  
1roke@msn.com

1. Group R-1: Single or multiple station smoke alarms shall be installed and maintained as required by Section [907.2.10.1] **907.2.11.1** of the building subcode.

2. Groups R-2, R-3, R-4, R-5, and I-1: Smoke alarms shall be installed and maintained as required by Section [907.2.10.2] **907.2.11.2** of the building subcode or Section R314 of the one- and two-family dwelling subcode, as applicable.

3. (No change.)

(j)-(l) (No change.)

(m) Electrical Requirements: The following electrical requirements shall apply in changes of use:

1. When the character of the use of a building or portion thereof is changed to one of the following special occupancies as described [in] at Chapter 5 of the electrical subcode, the electrical wiring and equipment of the building or portion thereof that contains the proposed use shall comply with all applicable requirements of the electrical subcode regardless of whether a change of group is involved:

i.-iii. (No change.)

[iv. Gasoline Dispensing and Service Stations;]

**iv. Motor Fuel Dispensing Facilities;**

v. (No change.)

vi. Spray Application, Dipping, [and] Coating, **and Printing Processes;**

vii. (No change.)

viii. [Places of] Assembly **Occupancies;**

ix. Theaters, [Audience Areas of] Motion Picture and Television Studios, and Similar Locations;

x.-xi. (No change.)

2. (No change.)

(n)-(q) (No change.)

5:23-6.32 Additions

(a)-(f) (No change.)

(g) All additions shall comply with the requirements [of] at Chapter 11 of the building subcode for accessibility, where applicable.

1. The addition shall include accessible entrance(s) unless the requirement that [50] **60** percent of the building entrances be accessible has been met in the existing building. (For purposes of calculating the number of accessible entrances required, all entrances in the existing building and planned for the addition shall be included.)

i. (No change.)

2. (No change.)

(h)-(i) (No change.)

Susan R. Grogan, P.P., AICP

Acting Executive Director

Pinelands Commission

PO Box 359

New Lisbon, NJ 08064

Facsimile: (609) 894-7330

Email: [planning@pinelands.nj.gov](mailto:planning@pinelands.nj.gov) or through the New Jersey Pinelands Commission's website at <http://nj.gov/pinelands/home/contact/planning.shtml>.

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

The agency proposal follows:

**Summary**

The New Jersey Pinelands Commission (Commission) proposes to amend Subchapter 1, General Provisions; Subchapter 2, Interpretations and Definitions; and Subchapter 6, Management Programs and Minimum Standards of the Pinelands Comprehensive Management Plan (CMP). The CMP has been guiding land use and development activities in the Pinelands since it took effect on January 14, 1981. The CMP has been amended many times, most recently in January 2022 through a set of amendments related to stormwater management (see 54 N.J.R. 138(b)).

The Kirkwood-Cohansey aquifer is a fresh-water reservoir underlying the New Jersey Pinelands and containing an estimated 17 trillion gallons of water. It is a source of potable and non-potable water to hundreds of thousands of people in South Jersey and sustains the ecology of the Pinelands by supporting wetlands and unique Pinelands vegetation and animal communities. As a result, withdrawals from the aquifer can impact the essential character of the Pinelands environment if they cause changes to habitats, reduce the quantity of water in the Preservation Area, or encourage inappropriate patterns of development. Water withdrawals are also referred to as diversions or wells throughout this rulemaking.

The current standards in the CMP that govern water withdrawals in the Pinelands Area were last amended in 1994. As explained in greater detail below, a series of studies on the impacts of diversions on the Kirkwood-Cohansey aquifer illuminated the need to update the CMP to better protect the aquifer. The proposed amendments strengthen protections to the Kirkwood-Cohansey aquifer and the Pinelands ecology while ensuring a sufficient water supply for development in the more growth-oriented areas of the Pinelands Area.

The New Jersey Legislature enacted a law in 2001 calling for a study of the ecological impacts of human activities, such as diversions, on the ecology of the Pinelands Area. The law directed the Commission, in cooperation with the Department of Environmental Protection, Rutgers University, the United States Fish and Wildlife Service, and the United States Geological Survey, to "assess and prepare a report on the key hydrologic and ecological information necessary to determine how the current and future water supply needs within the pinelands area may be met while protecting the Kirkwood-Cohansey aquifer system." (P.L. 2001, c. 165).

The series of studies that resulted from this law became collectively known as the Kirkwood-Cohansey Project (Project). The Project addressed two major questions: (1) the hydrologic effects of groundwater diversions from the Kirkwood-Cohansey aquifer on stream flows and wetland water levels; and (2) the ecological effects of streamflow and groundwater-level changes on aquatic and wetland communities.

Twelve separate studies were completed as part of the Kirkwood-Cohansey Project, which are described at <https://www.nj.gov/pinelands/science/complete/kc/>. They showed a direct correlation between simulated groundwater withdrawals and/or simulated streamflow reductions on the distribution and composition of wetland-forest communities, individual wetland species, and wetland-indicator groups. The studies assessed impacts from diversions on nine frog species, the Federally endangered wetlands plant swamp pink, fish and invertebrate assemblages, and vegetation types. Taken together, the studies predicted reductions in the plants and animals that are characteristic of undisturbed Pinelands ecosystems caused by groundwater withdrawals. In particular,

**ENVIRONMENTAL PROTECTION**

**(a)**

**PINELANDS COMMISSION**

**Pinelands Comprehensive Management Plan Fees; Definitions; and Water Quality**

**Proposed Amendments: N.J.A.C. 7:50-1.6, 2.11, and 6.86**

Authorized By: New Jersey Pinelands Commission, Susan R. Grogan, Acting Executive Director.

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

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

Proposal Number: PRN 2022-110.

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

October 12, 2022, at 9:30 A.M.

Richard J. Sullivan Center

15C Springfield Road

New Lisbon, New Jersey

Submit written comments by regular mail, facsimile, or email by November 5, 2022, to:

the studies showed that a decline of the water table by more than four inches in wetlands caused a sharp decline in wetlands vegetation and reduced the survival rates of three species of frogs found in the Pinelands, including the spring peeper, the southern leopard frog, and the State-threatened Pine Barrens tree frog.

Multiple studies in the Project assessed impacts related to water supply in terms of the water budget. These studies compared water inputs through rainfall and infiltration versus water losses through transpiration and pumping. A hydrologic framework study characterized the hydrogeology of the aquifer. A hydrologic assessment of three watersheds modeled changes to the water budget and created water table maps. An evapotranspiration study evaluated impacts to the water budget due to loss of water evaporated from surfaces or transpired by vegetation. Finally, a hydrologic modeling study was built on the other water budget studies by measuring groundwater and stream flow responses to groundwater withdrawal scenarios. Models were developed to estimate withdrawal impacts. The findings of the Kirkwood-Cohansey Project form the basis for most of the proposed amendments, which significantly strengthen the ecological protections of the Kirkwood-Cohansey aquifer. The Commission is proposing clearer, quantifiable standards for assessing the ecological impacts of non-agricultural diversions from the Kirkwood-Cohansey aquifer (hereinafter referred to as “adverse local impact”) and introducing new, quantifiable standards to protect the available water supply in the watershed in which a diversion will be located (referred to in the rule as “adverse regional impact”).

The protections to the Kirkwood-Cohansey aquifer will also be strengthened by expanding the scope of wells that will be subject to the proposed standards. The threshold pumping volume at which a well will need to meet the standards at N.J.A.C. 7:50-6.86 is being reduced from 100,000 gallons per day to 50,000 gallons per day.

The proposed amendments require applicants for diversions in the Kirkwood-Cohansey aquifer to conduct specific tests, analyses, and modelling to demonstrate whether the proposed diversion will have an adverse regional or local impact.

To protect the more ecologically sensitive areas of the Pinelands Area, the Commission is proposing to limit new or increased diversions from the Kirkwood-Cohansey aquifer to the Agricultural Production Area and the more growth-oriented Pinelands Management Areas. In addition, a diversion will only be permitted if an applicant can demonstrate that no alternative water supply source is available or viable.

The amendments clarify the current water conservation requirements and impose notice requirements on well applicants in the Kirkwood-Cohansey aquifer to better address issues associated with potential limits on water available for future growth and water demand.

The only two amendments that do not apply solely to the Kirkwood-Cohansey aquifer are those related to inter- and intra-basin transfers of water. The Commission is proposing to strengthen and clarify provisions related to such transfers.

New definitions are being proposed at N.J.A.C. 7:50-2.11 for terms that are used in the proposed amendments at N.J.A.C. 7:50-6.86. The Commission is also proposing to amend its fee schedule at N.J.A.C. 7:50-1.6 to specifically address applications for wells, in addition to making minor, non-substantive changes to the existing fee rules.

The current water management rule is broader, in that it addresses diversions from all aquifers in the Pinelands Area, except for one provision that applies only to diversions in the Kirkwood-Cohansey aquifer. As explained in greater detail below, the Commission is proposing to eliminate the standards for diversions in the other aquifers and adopt standards that will apply only to diversions in the Kirkwood-Cohansey aquifer that are above the pumping threshold of 50,000 gallons per day or more. All other wells, however, will be considered development pursuant to N.J.A.C. 7:50-2.11 and subject to all other applicable provisions of the CMP. These include geothermal wells, wells not in the Kirkwood-Cohansey aquifer, and wells that are below the threshold pumping volume in the proposed new standards.

It is also important to note that the proposed new water management standards do not replace any development standards in the CMP. Well applicants must continue to comply with all other applicable standards in the CMP, including those related to the protection of threatened and

endangered species at N.J.A.C. 7:50-6.27 and 6.33 and wetlands and wetlands transition areas at N.J.A.C. 7:50-6, Part 1.

Given the technical nature of the proposed standards and analysis, the United States Geological Survey (USGS) will be assisting the Commission in its review of diversion applications. To offset the costs of the USGS’s review, the Commission intends to require escrow payments from diversion applicants pursuant to N.J.A.C. 7:50-1.7.

The proposed amendments were discussed and reviewed during various focus group and stakeholder meetings from 2015 to 2022 hosted by the Commission, through presentations at the New Jersey Water Supply Advisory Council, and during multiple public meetings of the full Commission and the CMP Policy and Implementation Committee. If requested, Commission staff will also provide a presentation on the proposed amendments at a public meeting of the Pinelands Municipal Council (“PMC” or “Council”). The PMC, created by the Pinelands Protection Act (N.J.S.A. 13:18A-1 et seq.), is made up of the mayors of the 53 municipalities in the Pinelands Area, or their designees. The Council is empowered to review and comment upon changes to the CMP proposed by the Commission and advises the Commission on matters of interest regarding the Pinelands.

A more detailed description of the proposed amendments follows.

### Subchapter 1

The Commission is proposing to amend its existing fee schedule to include a specific fee for certain well applications at N.J.A.C. 7:50-1.6. The current fee rule does not distinguish wells from other types of non-residential development and does not adequately represent the projected costs for reviewing well applications pursuant to the proposed new standards. The Commission is proposing an application fee of \$6,000 for any well in the Kirkwood-Cohansey aquifer that is required to meet the criteria and standards at proposed N.J.A.C. 7:50-6.86(d). For all other wells, including geothermal wells and those that are not subject to the standards at proposed N.J.A.C. 7:50-6.86(d), the application fee will continue to be calculated based on construction costs as set forth at N.J.A.C. 7:50-1.6(c). The difference in the two fees reflects the more extensive review process that is concurrently being proposed at N.J.A.C. 7:50-6.86 for wells of a certain size in the Kirkwood-Cohansey aquifer.

Additional amendments to the existing fee schedule are proposed to correct a cross-reference at N.J.A.C. 7:50-1.6(c), relocate the existing text at N.J.A.C. 7:50-1.6(c) describing typical construction costs, so that it more logically follows the table provided in the subsection, and clarify, at N.J.A.C. 7:50-1.6(a), that development application fees, once submitted to the Commission, are not transferable to subsequent applicants.

### Subchapter 2

New definitions are being added at N.J.A.C. 7:50-2.11 for terms in the proposed amendments at N.J.A.C. 7:50-6.86: “divert” or “diversion,” “stream low flow margin,” “well,” and “zone of influence.” The definitions of “divert” or “diversion” and “well” refer to withdrawals of water and are identical to those used by the New Jersey Department of Environmental Protection (hereafter referred to as “DEP”) in its water supply allocation permits rules at N.J.A.C. 7:19-1.3. “Stream low flow margin” and “zone of influence” are hydrogeologic terms used to measure the impacts of a diversion on the available water supply and the hydrogeology surrounding the diversion, respectively.

### Subchapter 6

The Commission is proposing amendments to the water management rule, at N.J.A.C. 7:50-6.86, which governs the transfer, exportation, and withdrawal of water in and from the Pinelands Area.

#### Export of Water Outside the Pinelands Area (recodified N.J.A.C. 7:50-6.86(a))

The Commission is proposing to recodify N.J.A.C. 7:50-6.86(b), which prohibits the export of water outside the Pinelands Area, except as provided for at N.J.S.A. 58:1A-7.1, as N.J.A.C. 7:50-6.86(a).

#### Interbasin Transfer of Water (recodified N.J.A.C. 7:50-6.86(b))

The proposed amendments clarify and strengthen the current restriction on transferring water between different basins in the Pinelands Area (interbasin transfer) by explicitly prohibiting such transfers and



identifying and defining two basins in the Pinelands Area at recodified N.J.A.C. 7:50-6.86(b).

The current rule, at existing N.J.A.C. 7:50-6.86(a), merely requires that interbasin transfers be avoided to the “maximum extent practical.” The Commission is proposing to prohibit such transfers, to better align with the intent of the statute and reflect past policy, and to limit adverse impacts to the Pinelands environment related to the reduction in stream base flows that can result from interbasin transfers.

The current rule does not define the term “basin,” which can describe many different drainage areas or watersheds. Using watershed management areas designated by the DEP, the Commission has clarified what the term “basin” means by delineating two basins in the proposed amendments: the Atlantic and Delaware basins. As used in this provision, the Atlantic Basin includes those portions of watershed management areas within the Pinelands Area that drain to the Atlantic Ocean, including the Barnegat Bay Watershed (WMA 13), the Mullica Watershed (WMA 14), the Great Egg Harbor Watershed (WMA 15), and the Cape May Watershed (WMA 16). The Delaware River Basin includes those portions of watershed management areas that drain to the Delaware River or the Delaware Bay, including the Rancocas Watershed (WMA 19) and the Maurice, Salem, and Cohansey Watershed (WMA 17). Delineating specific basins in this way reduces ambiguity in the existing rule.

#### **Intrabasin Transfer of Water (new N.J.A.C. 7:50-6.86(c))**

The Commission is proposing to add a provision to explicitly allow the transfer of water between HUC-11 watersheds within either the Atlantic or Delaware basins at proposed N.J.A.C. 7:50-6.86(c). HUC-11 watersheds are geographic areas delineated by the United States Geological Survey and are defined in the CMP at N.J.A.C. 7:50-2.11.

This provision is intended to add clarity and flexibility to the water management standards, as the current rule is unclear as to whether such transfers are permissible. The specific allowance of intrabasin transfers is designed to provide an opportunity to address the needs of future permitted growth in the Pinelands Area. If the intrabasin transfer involves water sourced from the Kirkwood-Cohansey aquifer, it must meet the criteria and standards set forth at proposed N.J.A.C. 7:50-6.86(d).

#### **Diversions from the Kirkwood-Cohansey Aquifer (recodified N.J.A.C. 7:50-6.86(d))**

The current standard in the CMP for non-agricultural diversions from the Kirkwood-Cohansey aquifer requires only that the diversion “not result in any adverse ecological impact on the Pinelands Area.” Existing N.J.A.C. 7:50-6.86(e). The Commission is proposing to recodify this provision at N.J.A.C. 7:50-6.86(d) and strengthen it by: (1) defining “ecological impact” with specific, measurable standards; (2) requiring well applicants to conduct tests, analyses, and modelling to evaluate ecological impacts; and (3) expanding the scope of wells that will be subject to the new standards and requirements. Proposed N.J.A.C. 7:50-6.86(d).

#### Scope of proposed rule

The current water management standards for withdrawals from the Kirkwood-Cohansey aquifer apply only to diversions over 100,000 gallons of water per day. Existing N.J.A.C. 7:50-6.86(e). The Commission is proposing, at recodified N.J.A.C. 7:50-6.86(d), to expand the scope of wells that will be subject to the proposed new requirements by lowering that threshold to 50,000 gallons of water or more a day.

The proposed amendments also specify that the 50,000 gallon per day threshold includes all of an applicant’s existing diversions in the same HUC-11 watershed, in addition to the new or increased diversion. For example, if an applicant currently diverts 40,000 gallons of water a day and is proposing to divert an additional 20,000 gallons of water a day through a new well or from one of the applicant’s existing wells in the same HUC-11 watershed, the new diversion will be subject to the new standards even though it is less than 50,000 gallons per day, as the total diversion would be 60,000 gallons of water a day. The decision to consider all of an applicant’s diversions in the same HUC-11 watershed is based upon DEP’s Technical Memorandum 12-2 (TM 12-2), which requires the DEP to consider all diversions covered under one DEP Water Allocation Permit when evaluating new water allocation permit applications. Structuring the Commission’s evaluation of water diversion

impacts to groups of wells and diversions proposed or operated by the same applicant or owner mirrors the DEP requirement and should promote consistency between the two agency’s review procedures.

There are two categories of wells in the Kirkwood-Cohansey aquifer that will not be subject to the new standards: (1) diversions to be used exclusively for agricultural or horticultural use; and (2) the replacement of an existing well with a diversion rate of 50,000 gallons of water per day or more, provided the existing well is sealed in accordance with N.J.A.C. 7:9-9 and the replacement well is approximately the same depth as the existing well, diverts from the same aquifer, has the same or lesser pump capacity, is within 100 feet of the existing well, and is in the same HUC-11 watershed as the existing well. N.J.A.C. 7:50-6.86(d)2.

The new standards proposed at N.J.A.C. 7:50-6.86(d) will apply only to diversions from the Kirkwood-Cohansey aquifer. All other wells will continue to be considered development pursuant to N.J.A.C. 7:50-2.11 and subject to all other applicable provisions of the CMP. These include geothermal wells, wells not in the Kirkwood-Cohansey aquifer, and wells that pump less than 50,000 gallons per day.

It should be noted that the DEP requires water allocation permits for diversions greater than 100,000 gallons per day. There could be instances under the Commission’s proposed amendments where an applicant in the Pinelands Area is required to meet the CMP standards for a new or increased diversion but is not required to apply for a water allocation permit from the DEP for the same diversion because it is less than 100,000 gallons per day.

#### Permissible Areas

To protect the more ecologically sensitive portions of the Pinelands Area, the Commission is proposing to limit new or increased diversions from the Kirkwood-Cohansey aquifer to the following Pinelands Management Areas: Regional Growth Area, Pinelands Towns, Rural Development Area, Military and Federal Installation Area, and the 24 Pinelands Villages that are not located in the Pinelands Preservation Area. Not only is most existing development in the Pinelands Area located in these management areas, but the CMP also directs and encourages new development here as well. Requiring new and increased diversions to be located in the same management areas as the existing and new development to be served is fully in keeping with long-standing CMP requirements for other types of infrastructure. New and increased diversions from the Kirkwood-Cohansey aquifer will also continue to be permitted in the Agricultural Production Area, where the Commission is charged with maintaining agriculture as an essential element of the Pinelands region. Such diversions will not be permitted in the Preservation Area District, Forest Area, or Special Agricultural Production Area, which comprise the most ecologically sensitive portions of the Pinelands Area. Proposed N.J.A.C. 7:50-6.86(d)3.

#### Alternative Sources

Diversions from the Kirkwood-Cohansey aquifer are currently permitted only if there are no “viable alternative water supply sources” available. Existing N.J.A.C. 7:50-6.86(e)1. The Commission proposes to clarify this standard at N.J.A.C. 7:50-6.86(d)4 by permitting diversions only if an applicant demonstrates that no alternative water supply source is available or viable. The proposed amendment provides examples of alternative sources, which include non-Kirkwood-Cohansey aquifer sources and public water purveyors and suppliers. The Commission will maintain a list of alternative water supply sources, referenced in the proposed rule, which can be found on the Commission’s website. If there is an alternative water supply source on the Commission’s list that an applicant does not believe is viable, the applicant will have to demonstrate to the Commission the reason why the source is not viable. Reasons for lack of viability could include prohibitive cost, limits on available technology, and significant timing issues.

#### Adverse Ecological Impact

Existing N.J.A.C. 7:50-6.86(c) requires all wells to be “designed and located so as to minimize impacts on wetlands and surface waters” but provide no quantifiable measures to ensure the well meets that standard. Existing N.J.A.C. 7:50-6.86(e)2 is similarly vague as it requires well applicants in the Kirkwood-Cohansey aquifer to demonstrate that the diversion “will not result in any adverse ecological impact on the

Pinelands Area,” without defining adverse ecological impact or providing any criteria for measuring the ecological impacts.

The amendments reframe the existing standards, adding clarity and measurable criteria. Proposed N.J.A.C. 7:50-6.86(d)5 defines “adverse ecological impact” as an adverse regional impact and/or adverse local impact, which are each explained in detail at N.J.A.C. 7:50-6.86(d)6 and 7. Quantifiable standards are being proposed at N.J.A.C. 7:50-6.86(d)6 and 7 to help determine whether a proposed withdrawal from the Kirkwood-Cohansey aquifer will have a regional or adverse local impact.

When determining impacts to the Kirkwood-Cohansey aquifer, the Commission will consider all of the applicant’s allocations under one water allocation permit or water use registration issued by the DEP in the same HUC-11 watershed. Although the existing rule at N.J.A.C. 7:50-6.86(c) was always intended to require consideration of all allocations under one permit, the language was not clear and caused confusion. Proposed N.J.A.C. 7:50-6.86(d)1 clarifies that all allocations, in addition to the proposed diversion, will be included in the evaluation if they are under one DEP water allocation permit or water use registration. For example, if an applicant already has a DEP water allocation permit for 100,000 gallons a day and has applied to the Commission for a new well that will withdraw an additional 20,000 gallons a day under the same permit, the Commission will evaluate the ecological impacts from the total withdrawal of 120,000 gallons per day. The new standards and review process set forth in these amendments will apply.

Although the existing rule at N.J.A.C. 7:50-6.86(c) requires that all wells be designed to minimize impacts on wetlands and surface waters, the proposed amendments remove that requirement for wells outside the Kirkwood-Cohansey aquifer. The decision to eliminate the requirement is based on the fact that the Kirkwood Cohansey aquifer is the primary source of water supporting the Pinelands Area and Pinelands ecosystems. Drawdowns from other aquifers do not have the same impact on water availability and ecosystems in the Pinelands as do those from the Kirkwood-Cohansey aquifer. Wells proposed outside the Kirkwood-Cohansey aquifer will remain subject to the wetlands protection standards of the CMP, which apply to all development in the Pinelands Area. At the same time, wells in other aquifers will be required to meet other development standards in the CMP, including those at Subchapter 6 that prohibit certain impacts to wetlands (N.J.A.C. 7:50-6), vegetation (N.J.A.C. 7:50-6.23 through 6.27), and to fish and wildlife (N.J.A.C. 7:50-6.33 and 6.34).

#### Adverse Regional Impact

One of the major goals of the proposed rulemaking is to protect against decreases in regional water availability due to new or increased water diversions. A proposed diversion will be deemed to have an adverse regional impact if it, combined with all existing permitted allocations in the same HUC-11 watershed, exceeds a specific threshold at which water availability in that watershed will be deemed to be adversely impacted. Proposed N.J.A.C. 7:50-6.28(d)6. When determining whether a diversion meets this criteria, all allocations permitted and registered by the DEP in that HUC-11 watershed will be considered, not just the applicant’s permitted allocations.

The water availability threshold proposed by the Commission is based on the stream low flow margin, which is defined in the proposed amendments at N.J.A.C. 7:50-2.11, and used by the DEP to estimate water availability throughout the State of New Jersey. Computations of the stream low flow margin are published in the New Jersey Statewide Water Supply Plan (Water Supply Plan) for each HUC-11 in the State. They are an estimate of the amount of water that would remain in a stream system during a specified drought period. The Water Supply Plan includes calculations for the volume of water that can be removed from an HUC-11 watershed without impacting the stream low flow margin and stressing the watershed based on all known allocations.

The Commission is proposing to restrict the amount of water that can be diverted from an HUC-11 watershed to 20 percent of the stream low flow margin. In the event a proposed diversion cannot meet this threshold, the amendments allow applicants to offset the diversion on a gallon-for-gallon basis, so that the proposed diversion, combined with all other allocations in the watershed, no longer exceeds 20 percent of the stream low flow margin. Proposed N.J.A.C. 7:50-6.86(d)6i. Examples of offset

measures include: the recharge of previously non-infiltrated stormwater runoff in the Pinelands Area; the recharge of treated wastewater that is currently discharged through a regional sewage treatment plant that discharges treated wastewater into the Delaware River or Atlantic Ocean; development of a desalinization facility; and sewerage system inflow and infiltration abatement and/or water distribution infrastructure leak auditing and correction.

This same flexibility is being offered to an applicant who proposes a diversion in an HUC-11 watershed that is already constrained by withdrawals exceeding 20 percent of the stream low flow margin -- before the proposed diversion is even factored in. In those situations, the diversion will be allowed if the applicant can permanently offset the new diversion in the same manner as described at N.J.A.C. 7:50-6.86(d)5i. N.J.A.C. 7:50-6.86(d)6ii.

An applicant will be required to identify all offset measures and provide the Commission a detailed description of the measures, including the volume of water that will be offset, timeframes for implementing the offsets, a description of the entity that will be implementing the offset measures, and an explanation of the entity’s authority to implement the measures. N.J.A.C. 7:50-6.86(d)6iii(2).

It should be noted that the Commission is proposing a more stringent standard for maintaining water availability than that advised by the DEP in the Water Supply Plan. As a tool for regional protection of the water table aquifer contributing to stream flows, the Water Supply Plan recommends limiting aquifer withdrawals to no more than 25 percent of the stream low flow margin. The Commission is proposing a lower threshold of total withdrawals from an HUC-11 watershed to better protect water supply in the Kirkwood-Cohansey aquifer. The more restrictive 20 percent of the stream low flow margin volume is intended to recognize climate change effects on aquifer recharge due to greater extremes in drought and rainfall patterns.

In addition, the five percent difference between the Commission’s proposal and the DEP’s threshold also accounts for water diverted for agricultural and horticultural purposes, which the Commission does not have the authority to review or limit. The lower stream low flow margin threshold being proposed by the Commission assures that the additional five percent of the stream low flow margin allowed by the DEP could be dedicated to agricultural and horticultural purposes.

The proposed amendments at N.J.A.C. 7:50-6.86(d)6 require an applicant to calculate the sum of the proposed diversion and all existing permitted allocations in the affected HUC-11 watershed. Using data from the Water Supply Plan, the applicant is required to show whether that sum exceeds 20 percent of the stream low flow margin for the year of peak use established in the New Jersey Statewide Water Supply Plan. Lastly, the applicant is required to submit a report to the Commission detailing the calculations and the impact of the proposed diversion on the available portion of the 20 percent stream low flow margin in the affected HUC-11.

#### Adverse Local Impact

Proposed N.J.A.C. 7:50-6.86(d)7 prohibits a proposed diversion from having an adverse impact on wetlands and the most ecologically sensitive areas in the Pinelands Area, also referred to as an “adverse local impact.” The Commission is proposing specific, quantifiable standards to determine whether a well will have an adverse local impact. The standards are based on the studies of the Kirkwood-Cohansey Project, which revealed the adverse effects of aquifer withdrawals on the distribution of wetlands and wetland habitats necessary for the survival of threatened and endangered plant and animal species. The proposed amendments also update the methodologies at existing N.J.A.C. 7:50-6.86(c) for measuring the impact of a diversion on wetlands and surface water.

A diversion will be deemed to have an adverse local impact if it results in any drawdown of the water table in the most ecologically sensitive areas of the Pinelands, which include any portion of the Preservation Area District, a Forest Area, or a Special Agricultural Production Area in the affected HUC-11 watershed. A diversion will also be deemed to have an adverse local impact if it results in a drawdown of the water table by more than four inches of the wetland nearest to the “zone of influence,” defined at N.J.A.C. 7:50-2.11 as the area of ground water in the affected HUC-11 watershed that experiences an impact attributable to the pumping well. N.J.A.C. 7:50-6.28(d)7.

The applicant is required to conduct tests and run models to establish whether the diversion will have an adverse local impact. N.J.A.C. 7:50-6.28(d)7i. The proposed application requirements clarify, strengthen, and update the testing methodologies at existing N.J.A.C. 7:50-6.86(c), which requires only that "hydrologic analyses" be conducted in accordance with DEP guidelines from a technical manual that has since been replaced with a newer manual with a different title. (Technical Memorandum 12-2, Hydrogeologic Testing and Reporting Procedures in Support of New Jersey Water Allocation Permit in effect at the time of application ("TM 12-2"). N.J.A.C. 7:50-6.28(d)7i(1)).

The applicant will first be required to submit an analysis of potential drawdown impacts using the Thiem analysis. After completing the Thiem analysis, the applicant is required to submit to the Commission a proposed hydrogeologic test (also known as a pump test) developed in accordance with TM 12-2. N.J.A.C. 7:50-6.28(d)7i(2). This design phase gives applicants the opportunity to demonstrate to the Commission how the pump test will provide accurate results.

The pump test design can be flexible, but the proposed rule lists the minimum required design elements, which include installation of a single pumping well, observation wells to monitor water levels and collect time-drawdown data, and at least one piezometer to measure surface water and water table decline at the wetlands nearest to the proposed well. Other locations to be monitored are the nearest boundaries of a Forest Area or a Special Agricultural Production Area, or the Preservation Area District in the same HUC-11 watershed. Where one of the designated boundaries is located further from, but in the same direction as, another management area boundary to be monitored (nested), the more distant boundary would not be required to have a piezometer. Where different management area boundaries are located in different directions from the proposed diversion (not nested, but adjacent), a piezometer would be required at each management area boundary. N.J.A.C. 7:50-6.28(d)7i(2)(A), (B), (C), and (D). The applicant may include additional observation wells or piezometers at additional locations in the design of the pump test. As pump test design is also required by the DEP, it is expected that applicants will also be conferring with the DEP Bureau of Water Allocation during pump test design to assure that the design meets requirements of that agency.

If an applicant is unable to gain access to properties where piezometers are required, the applicant may propose to install them at comparable locations if the alternate placement will adequately measure surface water and water table decline at the locations specified at N.J.A.C. 7:50-6.28(d)7i(2). In such circumstances, the applicant would be required to provide information to the Commission to show how the alternate locations will provide measurements of surface water and water table decline that are comparable to the measurements that would be taken at the preferred locations. Factors that would go into a determination of whether the alternate locations could produce comparable measurements include comparable distance from the preferred location, no known differences in other withdrawals between the preferred and alternate locations, and no known naturally occurring differences in hydrologic or hydrogeologic characteristics. An example of an alternate location that would not be approved is one where there is a 100,000 gallon per day well that is pumping between the proposed new well and the alternate location, but not between the proposed new well and the preferred location. Another example of an unacceptable alternate location is where the preferred location is a wetlands that is fed by groundwater, but the alternate location is known to be perched and fed only by infiltration (rain).

After completing the pump test, the applicant is required to submit to the Commission a hydrogeologic report prepared in accordance with TM12-2 that includes the testing procedures, data collected and analyzed, and evaluation of the effect of the proposed diversion on the Kirkwood-Cohansey aquifer. N.J.A.C. 7:50-6.28(d)7i(3). The Commission will notify the applicant regarding whether the pump test design, test, and report have been completed appropriately in a consecutively executed application process. Applicants will be encouraged to concurrently consult with the DEP, as a pump test is also required by that agency.

Using the results of the hydrogeologic test, the applicant is next required to calculate an estimated zone of influence created by the proposed diversion and submit a groundwater flow model using the

modular hydrologic model of the United States Geological Survey, MODFLOW. The MODFLOW model will enable the applicant to calculate the zone of influence of the water table at the nearest boundaries of the Preservation Area District, Forest Area, and Special Agricultural Production Area in the affected HUC-11 watershed as well as the boundary of the wetland nearest to the proposed diversion in the same HUC-11 watershed. N.J.A.C. 7:50-6.28(d)7i(4).

#### Water Conservation

The current water management rule at existing N.J.A.C. 7:50-6.86(d) requires all well applicants to "address measures in place or to be taken to increase water conservation in all areas to be served by the proposed well or system." The Commission is proposing to reword this requirement and add clarity by defining water conservation measures as "measurable efforts by public and private water system operators and local agencies to reduce water demand by users and reduce losses in the water distribution system." N.J.A.C. 7:50-6.86(d)8. Examples of water conservation measures include implementation of the WaterSense water conservation program of the United States Environmental Protection Agency, or of the LEEDs building standards of the United States Green Building Council, implementation of a peak demand fee structure, or requiring mandatory soil moisture/rain sensors for all landscape irrigation systems.

The Commission will no longer require water saving devices to be installed in all new development in areas served by central sewers, as is currently required at N.J.A.C. 7:50-6.86(a). Instead, it is proposing at N.J.A.C. 7:50-6.86(d)8 to broaden the water conservation measures that will be deemed acceptable as part of a well application. The current water conservation requirement is limited to areas served by sewers and was meant to be an indirect conservation measure to limit the amount of water exported from the Pinelands Area by sewer pipes, by also targeting those areas likely to be served by public community water systems. The Commission is replacing this requirement with broader and more flexible conservation requirements that do not preclude the implementation of conservation measures in sewer service areas, but add options for conservation other than the difficult to enforce requirement to install water saving devices. At the same time, the proposed rule recognizes that there are some areas that may be served by public community water systems but are not connected to public sewers. While those areas may be considered to recharge any water used that is discharged to individual subsurface disposal systems, those areas may also be using large volumes of water for lawn irrigation or other consumptive uses.

#### Notice Requirements

Recognizing that a diversion in one municipality may affect the availability of water in another municipality, the Commission is proposing, at N.J.A.C. 7:50-6.86(d)9, to require that well applicants are required to notify the municipality and county in which the proposed diversion will be located, as well as all other municipalities and counties in the affected HUC-11 watershed of the proposed diversion. This requirement will apply to private well applicants, as well as public well applicants.

Notice for private and public well applicants is to include: a detailed description of the proposed diversion, including the source, location, quantity, and/or allocation of water to be diverted; and the potential impact of the proposed diversion on the volume of water in the affected HUC-11 watershed that will be available for future diversions. Private well applicants will also have to include in their notice: a statement advising that written comments on the application may be submitted to the Pinelands Commission; a statement advising that the application is available for inspection at the office of the Pinelands Commission; and the address and phone number of the Pinelands Commission. Public well applicants are also required to comply with the existing notice provisions at N.J.A.C. 7:50-4.53(e), which apply to all major public development.

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

#### **Social Impact**

The Kirkwood-Cohansey aquifer is a vital resource that sustains the Pinelands ecosystem and provides potable and non-potable water to hundreds of thousands of people, businesses, and farms in southern New

Jersey. The proposed amendments establish stricter standards for withdrawals from the aquifer, which will result in stronger protections to the ecosystem and greater protections to the supply of water for agricultural operations in the Pinelands Agricultural Production Area and permitted development in the more growth-oriented areas of the Pinelands Area. These enhanced protections to the Pinelands ecology and regional water supply are expected to have a positive social impact in the Pinelands Area, as protection of resources in the Pinelands benefits society within the Pinelands and in the surrounding areas. These stronger protections will ensure that existing users will be able to continue to rely on the Kirkwood-Cohansey aquifer for community water supplies, private home wells, and industrial and agricultural uses in southern New Jersey.

#### **Economic Impact**

The proposed amendments will have a positive economic impact on the growth-oriented areas of the Pinelands, as they limit new diversions from the Kirkwood-Cohansey aquifer to the Regional Growth Area, Pinelands Towns, Rural Development Area, Agricultural Production Area, Military and Federal Installation Area, and 24 specific Pinelands Villages. Wells that support new or existing development in these areas will be permissible if they meet the new proposed standards and criteria. For the existing residential and non-residential uses and agricultural operations that currently withdraw water from the Kirkwood-Cohansey aquifer, the rules are designed to ensure continued reliance on the aquifer. This translates into an economic benefit for those water users, as accessing new water sources, such as wells, distribution lines, or utility fees, could be very costly.

There will be added costs for applicants proposing new or expanded non-agricultural diversions of at least 50,000 gallons per day from the Kirkwood-Cohansey aquifer. An application fee of \$6,000 has been established for all such proposed projects, and an escrow payment will be required to fund the USGS's review of the testing, modelling, and analysis required by the proposed amendments. Since 2017, the Commission has received 30 applications for new or increased diversions, most of which proposed withdrawals from the Kirkwood-Cohansey. Of those applications, only 13 would have been subject to the application fee and escrow requirements proposed in this rulemaking.

There will be additional costs associated with new non-agricultural withdrawals of between 50,000 to 100,000 gallons per day from the aquifer, as the proposed amendments require testing, modeling, and analyses to assess the ecological impact of the proposed withdrawal. The DEP already requires similar analyses and modeling for diversions of 100,000 gallons per day or more. By lowering the threshold to 50,000 gallons per day, the proposed amendments will result in smaller wells in the Pinelands Area incurring costs for testing, modeling, and analyses that are not currently required by the DEP rules. Of the 30 applications for new or increased diversions received by the Commission since 2017, it is estimated that only eight would have incurred these additional costs, either because of the new 50,000 gallons per day threshold or because the proposed rule clarifies that wells owned in common will be grouped for purposes of determining whether the 50,000 gallons per day threshold is exceeded. Based on its past application activity, and the limitations imposed in the proposed amendments, the Commission anticipates that the total number of applications for new and increased divisions in the Kirkwood-Cohansey aquifer will continue to be low, with a small percentage subject to the additional costs associated with the proposed amendments.

Additional costs may also be incurred to meet the proposed water conservation and offset requirements, which will vary depending on the type of measures that are implemented. For individual users served by the water system, however, conservation measures may reduce costs based on lower water usage. For the system owner, development costs could potentially be reduced through the Pinelands Infrastructure Trust, which provides low-cost loans and grants to municipalities developing infrastructure to support growth in Pinelands Regional Growth Areas.

In some instances, the proposed amendments will require that new development rely on water outside the Kirkwood-Cohansey aquifer—from alternative water sources in deeper aquifers or from water purveyors or public community system interconnections. The initial costs associated with deeper wells or creating more extensive water supply distribution

systems and interconnections may initially be greater than the costs of a new well in the Kirkwood-Cohansey aquifer.

#### **Environmental Impact**

The Kirkwood-Cohansey aquifer contains at least 17 trillion gallons of fresh water that lies beneath a 3,000 square mile area of the Pinelands Area. It sustains a vast ecosystem by supplying water to almost all the wetlands, streams, and rivers in the Pinelands, as well as being the primary water source for people, business, and farms in and immediately around the Pinelands Area. The proposed amendments prohibit diversions that will adversely impact the Pinelands ecology and the local water supply based on clear, measurable standards. These enhanced protections are anticipated to have a positive environmental impact.

Through legislation enacted in 2001, the New Jersey Legislature directed the Pinelands Commission to study how future water supply needs can be met from the Kirkwood-Cohansey aquifer without adversely impacting the ecosystem. P.L. 2001, c. 165. The studies, conducted jointly by the Commission and other government and educational entities and known collectively as the Kirkwood-Cohansey Project, established a clear link between the aquifer and the ecosystem. Simulated groundwater withdrawals and streamflow reductions reduced the distribution and composition of wetland-forest communities, individual wetland species, and wetland-indicator groups. In turn, there was a reduction in the survival rate of certain animal and plant species, including the State-threatened Pine Barrens tree frog and Federally endangered wetland plant, swamp pink, when the water table in the wetlands declined. The study of frogs, in particular, demonstrated a sharp decline in populations when the water table was lowered by four inches. Taken together, the studies predicted that groundwater withdrawals will reduce the populations of plants and animals that are characteristic of undisturbed Pinelands ecosystems.

Based on these studies, the Commission is proposing to strengthen protections for wetlands, and the animal and plant species that rely on wetlands habitats for survival, by requiring an assessment of the ecological impact of a proposed diversion. The amendments will prohibit diversions that would result in the drawdown of the water table of any portion of the most ecologically sensitive Pinelands management areas: the Preservation Area District, Forest Area, and Special Agricultural Production Area. In less restrictive management areas, the amendments will prohibit diversions that result in the drawdown of the water table by more than four inches in wetlands nearest to the zone of influence (the area of ground water that experiences an impact attributable to a pumping well).

The proposed amendments expand the scope of diversions that will be subject to the stricter standards and criteria. The CMP's water management provisions currently apply only to total diversions of 100,000 gallons or more per day. The Commission is proposing to lower this threshold to total diversions of 50,000 gallons or more per day from the Kirkwood-Cohansey aquifer in the same HUC-11 watershed. The volume determination is based on all of an applicant's allocations under a water allocation permit, water use registration issued by the DEP, which will ensure that more wells will be subject to the proposed new standards and further protect the Pinelands ecology and water supply.

The proposed amendments also limit the adverse effects of withdrawals on the sustainability of the water supply in HUC-11 watersheds in the Kirkwood-Cohansey aquifer. Excessive withdrawals can diminish available water supply for existing uses such as community water systems, private home wells, businesses, agriculture, and ecosystems. The Commission is proposing a specific, measurable standard to assess and limit the impact of a proposed diversion on water availability in a particular watershed. The standard is based on the stream low flow margin, a tool formulated by the DEP for regional protection of the water table aquifer. The New Jersey Statewide Water Supply Plan (Water Supply Plan) includes estimates of this stream low flow margin for each HUC-11 watershed in the State. Withdrawals in any HUC-11 watershed that exceed a specific portion of that low flow margin are expected to reduce stream flows such that a stream may dry up during annual low flow periods or droughts, thus impacting wetlands habitats and species, existing human uses, and stressing the watershed. These calculations are based on all known allocations approved and registered by the DEP.

The Commission's rulemaking to limit aquifer withdrawals to no more than 20 percent of the stream low flow margin for each HUC-11 watershed will strengthen the protections of the water supply in the Pinelands Area, as the CMP does not currently impose specific limits on withdrawals. This threshold limit of 20 percent is also stricter than that recommended by the Water Supply Plan, which says that up to 25 percent of the stream low flow margin could be diverted without causing streams to dry up during annual low flow periods or droughts. The lower threshold will protect Pinelands plants, animals, and habitats, as well as existing withdrawals for public water supplies, agriculture, and other businesses. The Commission also chose a lower threshold in recognition that climate change may result in longer or more frequent drought periods.

When evaluating whether a proposed diversion meets this stream low flow margin threshold, the proposed amendments require the Commission to consider all the existing permitted allocations in the same HUC-11 watershed, not just the proposed diversion. This consideration mirrors the methodology by which the low flow margin is estimated in the Water Supply Plan and will ensure a more complete and accurate evaluation of how stressed the watershed will be from the proposed new diversion in light of all existing allocations.

Other provisions in the proposed amendments also serve to protect the environment, including the explicit prohibition on the interbasin transfers of water. Prohibiting such transfers is a key tool in limiting adverse environmental impacts related to the reduction in stream base flows that can result from the transfers. The restriction against interbasin transfers is also strengthened by defining the two basins between which water cannot be transferred.

To better protect the most ecologically sensitive areas of the Pinelands, the Commission is proposing to limit new or increased diversions from the Kirkwood-Cohansey aquifer to the Agricultural Production Area and the following growth-oriented Pinelands Management Areas: Regional Growth Area, Pinelands Towns, Rural Development Area, Military and Federal Installation Area, and 24 specific Pinelands Villages. This is expected to minimize future impacts to groundwater quantities in the Preservation Area District, the Special Agricultural Production Area, and the Forest Area.

The Commission is proposing to strengthen and clarify the water conservation requirement currently in the CMP by requiring documentation of measures that have been implemented or that are planned for implementation and requiring that the conservation efforts be measurable. The amendments also broaden the water conservation requirements of the current rule by requiring conservation to occur not just in areas served by centralized sanitary sewer systems, but throughout all areas to be served by the proposed diversion.

#### **Federal Standards Statement**

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

The Federal Pinelands legislation sets forth rigorous goals that the plan must meet, including the protection, preservation, and enhancement of the land and water resources of the Pinelands. The proposed amendments are designed to meet those goals by imposing stringent requirements and restrictions on groundwater withdrawals from the Kirkwood-Cohansey aquifer, which, in turn, will protect wetlands habitats and plants and animals that are characteristic of undisturbed Pinelands ecosystems, including at least one wetlands plant that is on the Federal endangered species list.

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

#### **Jobs Impact**

The Commission anticipates that this rulemaking will not have any significant impact on job creation and retention in New Jersey. Engineering and other professional work will be needed to comply with the testing and modeling requirements in the proposed amendments. These requirements align closely with those currently imposed by the DEP, but under the proposed amendments, they will apply to a slightly larger group of wells (those that will pump 50,000 gallons per day or

more). Overall, the Pinelands Commission does not believe that the rulemaking will result in a significant impact on jobs.

#### **Agriculture Industry Impact**

The rulemaking will have no direct impact on the agriculture industry, as exclusively agricultural uses are not deemed development under the CMP and do not require application to the Commission. The proposed amendments permit new and expanded diversions in the Pinelands Agricultural Production Area and explicitly exempt diversions exclusively for agricultural or horticultural use from complying with the new standards. It is anticipated that the amendments will indirectly benefit farm operations that rely upon the Kirkwood-Cohansey aquifer for water by protecting regional water supply.

The Kirkwood-Cohansey aquifer provides water for upland agriculture and for the cranberry bogs and blueberry farms throughout the Pinelands Area. Farmers depend on water from the aquifer for irrigation and cranberry growers use large amounts of water from the aquifer to maintain their bogs. The amendments strengthen the protections to the Kirkwood-Cohansey aquifer water supply, which, in turn, will benefit the agriculture industry in the Pinelands Area and surrounding areas.

The proposed standard for maintaining water availability could benefit the agricultural industry. The Commission is proposing to limit withdrawals from the Kirkwood-Cohansey aquifer to no more than 20 percent of the stream low flow margin for the HUC-11 watershed in which a proposed diversion is located. This represents a five percent difference between the Commission's rulemaking and the DEP's recommended threshold, which is 25 percent of the stream low flow margin. The difference in the threshold suggests that an additional five percent of the stream low flow margin might be allowed by the DEP for agricultural and horticultural purposes that the Commission does not regulate.

#### **Regulatory Flexibility Analysis**

In accordance with the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Commission has evaluated whether the proposed amendments will impose any reporting, recordkeeping, and other compliance requirements on small businesses. Most businesses in the Pinelands Area may be characterized as small in size and employment compared to the rest of New Jersey. However, the proposed amendments do not differentiate by size of business and thus will impact all businesses equally in terms of absolute costs.

Small businesses proposing new or increased diversions in the Kirkwood-Cohansey reservoir may incur costs from hiring professional consultants, such as engineers. Although under the current rules small businesses incur similar costs, the proposed rules require additional analyses and modeling, which could increase the costs. Also, where new or increased diversions require offsets on a gallon-per-gallon basis for withdrawals beyond 20 percent of the stream low flow margin, small businesses may incur costs associated with those offsets depending on the method of implementing the offsets. Similarly, businesses served by a water supply system that is the subject of an application for a new or increased withdrawal from the Kirkwood-Cohansey aquifer may also be required to institute water conservation measures and may, therefore, incur a cost depending on the method of implementing conservation.

The Commission has balanced the costs imposed on small businesses by the proposed amendments against the environmental benefits to be achieved by the amended well requirements and determined that it would be inappropriate to exempt small businesses from these requirements. As noted above in the Environmental Impact statement, the amendments impose stricter requirements on water withdrawals from the Kirkwood-Cohansey aquifer, which will result in healthier ecosystems and less threats to the plants and animals that thrive in those undisturbed ecosystems.

#### **Housing Affordability Impact Analysis**

The Commission does not anticipate this rulemaking will have a significant impact on the affordability of housing. Costs may be incurred by developers, municipalities, or utilities related to implementing conservation measures or offsets, where required. Those upfront costs may result in a minor incremental increase in housing costs where a community water supply is served by a new or increased diversion from the Kirkwood-Cohansey aquifer. Additional impacts to housing

affordability are expected to be minimal, as DEP already imposes similar requirements for well modeling and testing. There may be situations, however, where the regional impact to the aquifer cannot be offset and a housing project may be required to seek an alternative water supply source. The additional costs for extending the infrastructure would likely be passed along in housing prices.

**Smart Growth Development Impact Analysis**

N.J.S.A. 52:14B-4 requires that proposed amendments be evaluated to determine their impacts, if any, on housing production in Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan (State Plan). Planning Areas 1 and 2 do not exist in the Pinelands Area. Likewise, the State Plan does not designate centers within the Pinelands Area. Instead, N.J.S.A. 52:18A-206.a provides that the State Plan shall rely on the Pinelands CMP for land use planning in the Pinelands. The Commission has evaluated the impact of the proposed amendments on Pinelands management areas designated by the CMP that are equivalent to Planning Areas 1 and 2 and designated centers, namely, the Regional Growth Areas, Pinelands Villages, and Pinelands Towns.

These three management areas are designated for development by the CMP and are equivalent to designated centers under the State Plan. The rulemaking will not increase the amount of permitted residential development in these management areas and is not expected to result in any changes in housing density within designated centers or in any other portions of the Pinelands Area.

There will be no effect on new construction in Planning Areas 1 and 2, as designated by the State Development and Redevelopment Plan, as these State Planning Areas do not exist in the Pinelands Area.

**Racial and Ethnic Community Criminal Justice and Public Safety Impact**

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

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

SUBCHAPTER 1. GENERAL PROVISIONS

7:50-1.6 Fees

(a) Except as provided [in] at (a)1 and 2 below, all applications required or permitted by any provision of this Plan shall be accompanied by a nonrefundable, **nontransferable**, application fee of \$250.00 or a fee calculated according to the fee schedule set forth [in] at (b) through (l) below, whichever is greater. No application filed pursuant to this Plan shall be reviewed or considered complete, unless all fees required by this Part have been paid and any escrow required pursuant to N.J.A.C. 7:50-1.7 has been submitted.

1.-2. (No change.)

(b) (No change.)

(c) The application fee for a commercial, institutional, industrial, or other non-residential development application submitted pursuant to N.J.A.C. 7:50-4.14, 4.33, 4.52, or 4.66 shall be calculated in accordance with the following, based on typical construction costs, except as provided [in] at (c)1 through [9] **10** below: [Typical construction costs shall include all costs associated with the development for which the application is being submitted, including, but not limited to, site improvement and building improvement costs, but shall not include interior furnishings, atypical features, decorative materials or other similar features.]

Construction Cost	Required Application Fee
\$0 - \$500,000	1.25 percent of construction costs
\$500,001- \$1,000,000	\$6,250 + one percent of construction costs above \$500,000
Greater than \$1,000,000	\$11,250 + 0.75 percent of construction costs above \$1,000,000

**Typical construction costs shall include all costs associated with the development for which the application is being submitted, including, but not limited to, site improvement and building improvement costs,**

**but shall not include interior furnishings, atypical features, decorative materials or other similar features.** Supporting documentation of the expected construction costs shall be submitted as part of the application for development, unless the maximum fee pursuant to [(e)4] **(e)3** below is required, in which case no such documentation shall be necessary.

1.-7. (No change.)

8. For the demolition of a structure 50 years or older, the fee shall be \$250.00; [and]

9. For the development of a solar energy facility, the fee shall be \$1,500 plus \$500.00 per acre of land to be developed, or portion thereof, including any off-site development[.]; **and**

**10. For a well, the application fee shall be:**

**i. \$6,000 for any well in the Kirkwood-Cohansey aquifer that is required to meet the criteria and standards at N.J.A.C. 7:50-6.86(d); or**

**ii. Calculated based upon construction costs as set forth in this subsection for wells that are not subject to the criteria and standards at N.J.A.C. 7:50-6.86(d).**

(d)-(l) (No change.)

SUBCHAPTER 2. INTERPRETATIONS AND DEFINITIONS

7:50-2.11 Definitions

When used in this Plan, the following terms shall have the meanings ascribed to them.

...

**“Divert” or “Diversion” means the taking of water from a river, stream, lake, pond, aquifer, well, other underground source, or other waterbody, whether or not the water is returned thereto, consumed, made to flow into another stream or basin, or discharged elsewhere.**

...

**“Stream low flow margin” means the difference between a stream’s September median flow and its statistical flow, which is the seven-day flow average in the 10-year period for the stream (7Q10) as reported in the New Jersey Statewide Water Supply Plan, New Jersey Department of Environmental Protection, 2017, New Jersey Water Supply Plan 2017-2022: 484p, [http://www.nj.gov/dep/water\\_supply/wsp.html](http://www.nj.gov/dep/water_supply/wsp.html), as amended and supplemented.**

...

**“Well” means a hole or excavation deeper than it is wide, that is drilled, bored, core driven, jetted, dug, or otherwise constructed for the purpose of the removal of, investigation of, or exploration for water.**

...

**“Zone of influence” means the area of ground water that experiences an impact attributable to a pumping well.**

...

SUBCHAPTER 6. MANAGEMENT PROGRAMS AND MINIMUM STANDARDS

7:50-6.86 Water management

[(a) Interbasin transfer of water between watersheds in the Pinelands should be avoided to the maximum extent practical. In areas served by central sewers, water-saving devices such as water saving toilets, showers and sink faucets shall be installed in all new development.]

[(b)] **(a)** Water shall not be exported from the Pinelands except as otherwise provided [in] at N.J.S.A. 58:1A-7.1.

[(c) All wells and all increases in diversion from existing wells which require water allocation permits from the New Jersey Department of Environmental Protection shall be designed and located so as to minimize impacts on wetlands and surface waters. Hydrologic analyses shall be conducted in accordance with the New Jersey Department of Environmental Protection Guidelines for Water Allocation Permits, with an Appendix on Aquifer-Test Analysis Procedures, New Jersey Geological Survey Report GSR 29, 1992, incorporated herein by reference, as contained in pages 53 through 91 of the Technical Manual for Water Supply Element, Bureau of Water Allocation, Water Allocation Permits dated May 19, 1993, as amended.

(d) All applications for the development of water supply wells or the expansion of existing water distribution systems shall address measures in place or to be taken to increase water conservation in all areas to be served by the proposed well or system. This shall include efforts by water purveyors and local governments to reduce water demands by users and to reduce losses in the supply and distribution system.

(e) Except for agricultural uses, all new potable and non-potable water supply diversions of more than 100,000 gallons per day that utilize the Kirkwood-Cohansey aquifer as a source of water supply and new increases in existing potable and non-potable water supply diversions of over 100,000 gallons per day that utilize the Kirkwood-Cohansey aquifer may be permitted only if it is demonstrated that:

1. No viable alternative water supply sources are available; or
2. The proposed use of the Kirkwood-Cohansey aquifer will not result in any adverse ecological impact on the Pinelands Area.]

(b) A diversion that involves the interbasin transfer of water in the Pinelands Area between the Atlantic Basin and the Delaware Basin, as defined at (b)1 and 2 below, or outside of either basin, shall be prohibited.

1. The Atlantic Basin is comprised of Watershed Management Areas 13, 14, 15, and 16, as identified by the New Jersey Department of Environmental Protection at <https://www.state.nj.us/dep/seeds/docs/watersheds.pdf>.

2. The Delaware Basin is comprised of Watershed Management Areas 17, 18, 19, and 20 as identified by the New Jersey Department of Environmental Protection at <https://www.state.nj.us/dep/seeds/docs/watersheds.pdf>.

(c) A diversion involving the intrabasin transfer of water between HUC-11 watersheds in the same basin, Atlantic Basin or Delaware Basin as defined at (b) above, shall be permitted. If such an intrabasin transfer involves water sourced from the Kirkwood-Cohansey aquifer, the diversion shall meet the criteria and standards set forth at (d) below.

(d) A new diversion or an increase in allocation from either a single existing diversion source or from combined existing diversion sources in the same HUC-11 watershed and in the Kirkwood-Cohansey aquifer, that results in a total diversion of 50,000 gallons of water per day or more (hereafter referred to as "proposed diversion") shall meet the criteria and standards set forth at (d)3 through 9 below. "Allocation" shall mean a diversion permitted pursuant to a Water Allocation Permit or Water Use Registration Number issued by the New Jersey Department of Environmental Protection pursuant to N.J.A.C. 7:19.

1. When evaluating whether the proposed diversion meets the criteria set forth at (d)3 through 9 below, all of the applicant's allocations in an HUC-11 watershed, in addition to the proposed diversion, shall be included in the evaluation.

2. The standards set forth at (d)3 through 9 below shall not apply to:

i. A new well that is to replace an existing well, provided the existing well is sealed in accordance with N.J.A.C. 7:9-9 and the new replacement well will:

- (1) Be approximately the same depth as the existing well;
- (2) Divert from the same aquifer as the existing well;
- (3) Have the same or lesser pump capacity as the existing well; and
- (4) Be located within 100 feet of, and in the same HUC-11 watershed as, the existing well; or

ii. Any diversion that is exclusively for agricultural or horticultural use.

3. A proposed diversion shall be permitted only in the following Pinelands Management Areas:

- i. Regional Growth Area;
- ii. Pinelands Towns;
- iii. Rural Development Area;
- iv. Agricultural Production Area;
- v. Military and Federal Installation Area; and
- vi. The following Pinelands Villages: Milmay; Newtonville; Richland; Folsom; Cologne-Germania; Pomona; Mizpah; Nesco-Westcoatville; Port Republic; New Gretna; New Lisbon; Indian Mills; Tabernacle; Blue Anchor; Elm; Tansboro; Waterford Works;

Winslow; Dennisville; Petersburg; Tuckahoe; Delmont; Dorchester; and Port Elizabeth-Bricksboro.

4. A proposed diversion shall only be permitted if the applicant demonstrates that no alternative water supply source is available or viable. Alternative water supply sources include, but are not limited to, groundwater and surface water sources that are not part of the Kirkwood-Cohansey aquifer, and public water purveyors and suppliers, as defined at N.J.A.C. 7:19-1.3. A list of alternative water supply sources is available at the offices of the Pinelands Commission and at <https://www.nj.gov/pinelands/>.

5. A proposed diversion shall not have an adverse ecological impact on the Kirkwood-Cohansey aquifer. Adverse ecological impact means an adverse regional impact and/or an adverse local impact, as described at (d)6 and 7 below.

6. A proposed diversion shall be deemed to have an adverse regional impact if it, combined with all existing permitted allocations in the same HUC-11 watershed, exceeds 20 percent of the stream low flow margin for the year of peak use established in the New Jersey Statewide Water Supply Plan at <https://www.nj.gov/dep/water/supply/pdf/wsp.pdf> for the HUC-11 watershed where the proposed diversion will be located (hereafter referred to as "the affected HUC-11 watershed").

i. If a proposed diversion is deemed to have an adverse regional impact, it shall be permitted only if an applicant permanently offsets the diversion on a gallon-for-gallon basis in accordance with the following:

(1) Offsets shall be implemented in the affected HUC-11 watershed and include, but are not limited to:

(A) The recharge of previously non-infiltrated stormwater runoff in the Pinelands Area;

(B) The recharge of treated wastewater that is currently discharged by a regional sewage treatment plant that discharges treated wastewater into the Delaware River or Atlantic Ocean;

(C) Development of a desalinization facility; and

(D) Sewerage system inflow and infiltration abatement and/or water distribution infrastructure leak auditing and correction.

ii. A proposed diversion in an HUC-11 watershed where water withdrawals already exceed 20 percent of the stream low flow margin established in the New Jersey Statewide Water Supply Plan shall be deemed to have an adverse regional impact unless an applicant can permanently offset the entire diversion in accordance with (d)6(i) above.

iii. Unless the submission requirements are modified or waived pursuant to N.J.A.C. 7:50-4.2(b)3, all applications shall include the information required at N.J.A.C. 7:50-4.2(b)4 or 5, as well as the following:

(1) Using data on low flow margins in the New Jersey Statewide Water Supply Plan in effect at the time of application, the applicant shall calculate the sum of the proposed diversion and all existing permitted allocations in the affected HUC-11 watershed, and show whether that sum exceeds 20 percent of the stream low flow margin for the year of peak use established in the New Jersey Statewide Water Supply Plan. The applicant shall submit a report that includes all required calculations and a summary of the impact of the proposed diversion on the available portion of the 20 percent stream low flow margin in the affected HUC-11.

(2) The applicant shall identify all offset measures and provide to the Commission a detailed description of the measures, including the volume of water that will be offset, timeframes for implementing the offsets, a description of the entity that will be implementing the offset measures, and an explanation of the entity's authority to implement the measures.

7. A proposed diversion shall be deemed to have an adverse local impact in the Pinelands Area if it results in the drawdown of the water table as defined at N.J.A.C. 7:19-6.2 of any portion of the Preservation Area District, Forest Area, or Special Agricultural Production Area in the affected HUC-11 watershed, or of more than four inches of the wetlands nearest to the estimated zone of influence in the affected HUC-11 watershed.

i. Application requirements:

(1) The applicant shall submit an analysis of potential drawdown impacts using the Thiem method in accordance with the New Jersey Geological & Water Survey Technical Memorandum 12-2, Hydrogeologic Testing and Reporting Procedures in Support of New Jersey Water Allocation Permit in effect at the time of application (hereafter referred to as “TM 12-2”).

(2) Upon completion of the Thiem analysis, the applicant shall submit a proposed hydrogeologic test procedure, developed in accordance with TM 12-2, which shall include, at a minimum, the installation of:

- (A) A single pumping well;
- (B) Observation wells to sufficiently monitor water levels while the test well is pumped at a constant rate;
- (C) Observation wells to collect time-drawdown data for aquifer characterization; and
- (D) At least one piezometer to measure surface water and water table decline at: the nearest boundaries of the Preservation Area District, Forest Area, or Special Agricultural Production Area in the affected HUC-11 watershed found in any direction from the proposed well location; and the wetlands nearest to the estimated zone of influence in the affected HUC-11 watershed.

I. If the applicant cannot gain access to the parcels at the locations listed at (d)7i(2)(D) above for placement of piezometer(s), the applicant may propose to install piezometers at comparable locations if the alternate placement will adequately measure surface water and water table decline at the locations listed at (d)7i(2)(D) above.

II. Piezometers shall be tested to ensure hydraulic responsiveness and the results of such testing shall be included in the report submitted pursuant to (d)7i(3) below;

(3) Following the Commission’s review of the hydrogeologic test procedure, the applicant shall complete the test and submit a final hydrogeologic report prepared in accordance with the “Hydrogeological Report” section of TM 12-2, which shall describe the field procedures used, all data gathered, analysis of the data, and evaluation of the effect of the proposed diversion on the Kirkwood-Cohansey aquifer.

(4) Using the results of the hydrogeologic testing performed in accordance with (d)7i(3) above, the applicant shall calculate an estimated zone of influence created by the proposed diversion and submit a groundwater flow model using the modular hydrologic model of the United States Geological Survey, (MODFLOW) in use at the time of the application. The MODFLOW model shall calculate the zone of influence of the water table at: the nearest boundaries of the Preservation Area District, Forest Area, or Special Agricultural Production Area in the affected HUC-11 watershed; and the boundary of the wetland nearest to the proposed diversion in the same HUC-11 watershed.

8. An applicant for a proposed diversion shall provide written documentation of water conservation measures that have been implemented, or that are planned for implementation, for all areas to be served by the proposed diversion. Water conservation measures are measurable efforts by public and private water system operators and local agencies to reduce water demand by users and reduce losses in the water distribution system.

9. The following notice requirements shall apply to the proposed diversions:

i. For applications submitted pursuant to N.J.A.C. 7:50-4.31 through 4.50, the applicant shall provide notice of the application to the municipality and county in which the proposed diversion will be located, as well as all other municipalities and counties in the affected HUC-11 watershed. The notice shall state:

- (1) The nature of the application submitted to the Pinelands Commission and a detailed description of the proposed diversion, including the source, location, quantity, and/or allocation of water to be diverted;
- (2) The potential impact of the proposed diversion on the volume of water in the affected HUC-11 watershed that will be available for future diversions;
- (3) That written comments on the application may be submitted to the Pinelands Commission;

(4) That the application is available for inspection at the office of the Pinelands Commission; and

(5) The address and phone number of the Pinelands Commission.  
 ii. For applications submitted pursuant to N.J.A.C. 7:50-4.51 through 4.60, the applicant shall provide notice of the application for public development pursuant to N.J.A.C. 7:50-4.53. In addition, the applicant shall provide notice of the application to all municipalities and counties in the affected HUC-11 watershed. The notice shall include the information required at N.J.A.C. 7:50-4.53(e), as well as the following:

- (1) A detailed description of the proposed diversion, including the source, location, quantity and/or allocation of water to be diverted; and
- (2) A statement of the potential impact of the proposed diversion on the volume of water in the affected HUC-11 watershed that will be available for future diversions.

iii. No application for which notice pursuant to (d)9i or ii above is required shall be deemed complete until proof that the requisite notice that has been given is received.

**HIGHER EDUCATION**

**(a)**

**HIGHER EDUCATION STUDENT ASSISTANCE AUTHORITY**

**Primary Care Practitioner Loan Redemption Program**

**Proposed Readoption with Amendments: N.J.A.C. 9A:16**

Authorized By: Higher Education Student Assistance Authority, Christy Van Horn, Chairperson.

Authority: N.J.S.A. 18A:71C-32 et seq.

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

Proposal Number: PRN 2022-109.

Submit written comments by November 5, 2022, to:

Marnie B. Grodman, Esquire  
 Administrative Practice Officer  
 Higher Education Student Assistance Authority  
 PO Box 545  
 Trenton, NJ 08625-0545  
 Email: [Regulations@hesaa.org](mailto:Regulations@hesaa.org)

The agency proposal follows:

**Summary**

The Higher Education Student Assistance Authority (Authority) proposes to readopt N.J.A.C. 9A:16 governing the Primary Care Practitioner Loan Redemption Program (“PCPLRP” or “Program”). Pursuant to N.J.S.A. 52:14B-5.1, this chapter was scheduled to expire on August 4, 2022. In accordance with N.J.S.A. 52:14B-5.1.c(2), the filing of this notice of proposal with the Office of Administrative Law prior to August 4, 2022, extended that date 180 days to January 31, 2023.

The Authority has reviewed the rules and determined that they continue to be necessary, reasonable, and proper for the purpose for which they were originally promulgated. The rules proposed for readoption with amendments will continue to provide the Authority with the ability to administer the Primary Care Practitioner Loan Redemption Program in an efficient and economic matter. Pursuant to N.J.S.A. 18A:71C-48, the Authority is statutorily responsible for the administration of the PCPLRP and for the promulgation of all rules to that effect. To ensure the continued efficient administration and operation of this program, the Authority is proposing the readoption of this chapter with amendments, all of which are summarized below.

Subchapter 1 sets forth the general provisions of the Program, explaining that the Program provides for the redemption of eligible



Hello, I am Heidi Yeh, policy director for the Pinelands Preservation Alliance. My colleagues, Carleton Montgomery and Jaclyn Rhoads, send their greetings, as both happened to be away on vacations today and regret they could not be here to express their support for the Commission's decision to promote Susan Grogan to Executive Director. They have worked with Susan for a collective 45 years now and have great respect for her intelligence, her diligence, her unequaled knowledge of the Pinelands' planning and land use regime, and her decision to dedicate her career to the Pinelands. Throughout the life of the Commission, the talents and commitments of the Executive Director have shaped the Commission's course, for good or ill. We look forward to working with Susan and the entire team here to carry on this unique conservation mission.

We have been following the ongoing negotiations with the developer DR Horton in Egg Harbor Township over a disputed requirement for PDC's to be redeemed for a proposed housing development. Lawyers for the developer rely on a dubious string of permit extension acts, for which their argument for eligibility breaks down in 2019. In the 16 years between 2007 when the plan was originally approved, and the present moment in 2023 when they claim their permit extensions should still be in effect, our understanding of the environment, and the ways in which we regulate development that impacts it, has changed substantially—so firstly, it is ridiculous that a proposal be allowed to exist unchanged for this long. At issue in this particular case, the applicant is arguing that an ordinance change that changed the PDC requirements during this 16 year period of extensions should not apply to them. The PDC requirement was levied as part of a fair share housing settlement, and now is ironically being shirked by a development that will have NO affordable housing units. We haven't been able to see the January 3 and 9<sup>th</sup> letters mentioned in the most recent monthly management report, but it seems that the commission is making concessions that are completely unwarranted. The PDC's at issue are connected to fair share housing, which makes this a diversity, equity, and inclusion problem. Regardless of whether their permit extensions are valid to avoid a PDC obligation, should the developer also be exempted from the statewide requirement to make a portion of their units available to low- and moderate-income families? We are seeing a widespread trend of developers ignoring this law, and municipalities just let them. The commission is holding leverage in this PDC dispute that should not be given away or compromised on.

We were disappointed to learn that Winslow Township Ordinance O-2022-032 was approved by Commission staff. Although the ordinance purports to change zoning that affects large swaths of the town, it is effectively spot-zoning that was meant to target a single property. Residents brought their concerns to us about a Wawa that had been proposed to be built in the midst of their Rural Development Area where residents are fully reliant on well-water. This Wawa proposal was blocked by the NJ supreme court in early 2022, so when the developer couldn't get their way, they crafted this ordinance with the town to reverse each of the restrictions that had previously stood in their way. This ordinance eliminates the previous restriction on how closely gas stations could be constructed to each other—surely there was a good reason why this restriction was created in the first place, but it is now being arbitrarily tossed aside under pressure from a developer. The intersection in question already has a gas station, and this ordinance paves the way for another gas station to be built right across the street from it that the locals do not want. We understand that the commission tries to allow towns as much leeway as possible to make decisions on zoning, but in this moment when the state is trying to encourage the transition to clean energy and electric vehicles, a proliferation of gas stations is not the kind of investment that we should be encouraging in the Pinelands. This is why we really need the commission looking at ways in which it can mitigate climate change by preventing the expansion of projects that further entrench fossil fuels in vulnerable Pinelands communities.



# ***RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION***

**NO. PC4-23-\_\_\_\_\_**

**TITLE:** **Approving** With Conditions Applications for **Public Development** (Application Numbers 1985-0204.010, 1989-0349.023 & 2022-0135.001)

**Commissioner \_\_\_\_\_ moves and Commissioner \_\_\_\_\_**  
**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:

**1985-0204.010**

**Applicant:** **Greater Egg Harbor Regional High School District**  
**Municipality:** Hamilton Township  
**Management Area:** Pinelands Regional Growth Area  
**Date of Report:** February 16, 2023  
**Proposed Development:** Installation of an artificial turf field at Oakcrest High School;

**1989-0349.023**

**Applicant:** **Burlington County**  
**Municipality:** Pemberton Township  
**Management Area:** Pinelands Agricultural Production Area  
Pinelands Regional Growth Area  
**Date of Report:** February 16, 2023  
**Proposed Development:** Demolition of a juvenile detention building, 50 years old or older;  
and

**2022-0135.001**

**Applicant:** **Monroe Township**  
**Municipality:** Monroe Township  
**Management Area:** Pinelands Regional Growth Area  
**Date of Report:** February 17, 2023  
**Proposed Development:** Two lot subdivision and no further development.

**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 1985-0204.010, 1989-0349.023 & 2022-0135.001 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*
Asselta					Lettman					Pikolycky				
Avery					Lloyd					Wallner				
Christy					Lohbauer					Matos				
Holroyd					Mauriello									
Irick					Meade									

\*A = Abstained / R = Recused

Adopted at a meeting of the Pinelands Commission

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

---

Susan R. Grogan  
Executive Director

---

Laura E. Matos  
Chair



# State of New Jersey

THE PINELANDS COMMISSION

PO Box 359

NEW LISBON, NJ 08064

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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)

LAURA E. MATOS  
Chair  
SUSAN R. GROGAN  
Acting Executive Director

February 16, 2023

Thomas P. Grossi, School Business Administrator (via email)  
Greater Egg Harbor Regional High School District  
1824 Dr. Dennis Forman Drive  
Mays Landing NJ 08330

Re: Application # 1985-0204.010  
Block 1027, Lot 1.01  
Hamilton Township

Dear Mr. Grossi:

The Commission staff has completed its review of this application for installation of an artificial turf field at Oakcrest High School. 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 March 10, 2023 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, Hamilton Township Planning Board (via email)  
Hamilton Township Construction Code Official (via email)  
Atlantic County Department of Regional Planning and Development (via email)  
Bahram Farzaneh (via email)  
Mark Shenoda, PE (via email)



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LAURA E. MATOS  
 Chair  
 SUSAN R. GROGAN  
 Acting Executive Director

**PUBLIC DEVELOPMENT APPLICATION REPORT**

February 16, 2023

Thomas P. Grossi, School Business Administrator (via email)  
 Greater Egg Harbor Regional High School District  
 1824 Dr. Dennis Forman Drive  
 Mays Landing NJ 08330

Application No.: 1985-0204.010  
 Block 1027, Lot 1.01  
 Hamilton Township

This application proposes installation of an artificial turf field at Oakcrest High School located on the above referenced 78.84 acre parcel in Hamilton Township.

The application proposes to replace an existing grassed athletic field with an artificial turf athletic field. The replacement athletic field will be in the same location as the existing athletic field.

**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(a))**

The proposed development is located in a Pinelands Regional Growth Area. Institutional uses, including schools and accessory athletic fields to a school, 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 proposed development will be located within the limits of the existing grassed athletic field. 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. To stabilize the disturbed areas beyond the limits of the proposed artificial turf athletic field, the application 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 proposed development is consistent with the stormwater management standards contained in the CMP. To meet the stormwater management standards, the application proposes to construct a subsurface stormwater infiltration system beneath grassed areas adjacent to the proposed artificial turf athletic field.

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

The Commission staff reviewed available information to determine whether any significant cultural resources exist on the parcel. Based upon the lack of potential for significant cultural resources, 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 November 29, 2022. Newspaper public notice was completed on January 6, 2023. The application was designated as complete on the Commission's website on January 4, 2023. The Commission's public comment period closed on February 10, 2023. 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 French & Parrello Associates, all sheets dated February 11, 2022 and last revised November 14, 2022.
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.



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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)

LAURA E. MATOS  
Chair  
SUSAN R. GROGAN  
Acting 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 the by 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 March 6, 2023 and include the following formation:

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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LAURA E. MATOS  
Chair  
SUSAN R. GROGAN  
Acting Executive Director

February 16, 2023

Steven Stypinski (via email)  
Burlington County  
1900 Briggs Road  
Mount Laurel NJ 08054

Re: Application # 1989-0349.023  
Block 812, Lot 9.01  
Pemberton Township

Dear Mr. Stypinski:

The Commission staff has completed its review of this application for demolition of a juvenile detention building, 50 years old or older. 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 March 10, 2023 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)





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

LAURA E. MATOS  
 Chair  
 SUSAN R. GROGAN  
 Acting Executive Director

**PUBLIC DEVELOPMENT APPLICATION REPORT**

February 16, 2023

Steven Stypinski (via email)  
 Burlington County  
 1900 Briggs Road  
 Mount Laurel NJ 08054

Application No.: 1989-0349.023  
 Block 812, Lot 9.01  
 Pemberton Township

This application proposes demolition of a vacant 13,000 square foot juvenile detention building, 50 years old or older, located on the above referenced 335 acre parcel in Pemberton Township.

**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. 7:50-5.24 & 5.28)

The parcel is located in a Pinelands Agricultural Production Area and Pinelands Regional Growth Area. 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 Commission staff reviewed available information to determine whether any significant cultural resources exist on the parcel. Based upon the lack of potential for significant cultural resources, 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 December 28, 2022. Newspaper public notice was completed on December 29, 2022. The application was designated as complete on the Commission’s website on January 12, 2023. The Commission’s public comment period closed on February 10, 2023. 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. 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.

**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.



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LAURA E. MATOS  
Chair  
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Acting 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 by the Commission's office no later than 5:00 PM on February March 6, 2023 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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Application Specific Information: [AppInfo@pinelands.nj.gov](mailto:AppInfo@pinelands.nj.gov)

LAURA E. MATOS  
Chair

SUSAN R. GROGAN  
Executive Director

February 17, 2023

Jill McCrea, Monroe Township Administrator  
Monroe Township (via email)  
125 Virginia Ave.  
Williamstown NJ 08094

Re: Application # 2022-0135.001  
Block 3205, Lot 3  
Monroe Township

Dear Ms. McCrea:

The Commission staff has completed its review of this application for a two lot subdivision and no further development. 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 March 10, 2023 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, Monroe Township Planning Board (via email)  
Monroe Township Construction Code Official (via email)  
Monroe Township Environmental Commission (via email)  
Secretary, Gloucester County Planning Board (via email)  
Joseph Raday, PE (via email)



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General Information: Info@pinelands.nj.gov  
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LAURA E. MATOS  
 Chair  
 SUSAN R. GROGAN  
 Executive Director

**PUBLIC DEVELOPMENT APPLICATION REPORT**

February 17, 2023

Jill McCrea, Monroe Township Administrator  
 Monroe Township (via email)  
 125 Virginia Ave.  
 Williamstown NJ 08094

Application No.: 2022-0135.001  
 Block 3205, Lot 3  
 Monroe Township

This application proposes a two lot subdivision and no further development of the above referenced 1.24 acre (54,014 square feet) parcel in Monroe Township. There is an existing privately owned commercial bank serviced by public sanitary sewer located on the parcel.

The proposed subdivision will create a 0.73 acre (31,799 s.f.) lot and a 0.51 acre lot (22,215 s.f.) lot. The 0.73 acre lot will contain the existing bank and a portion of the bank's existing parking area. The proposed 0.51 acre lot will contain the remaining portion of the bank's existing parking area. The Township intends to acquire the 0.51 acre lot to provide for additional public parking for access to businesses in the area.

**STANDARDS**

The Commission staff has reviewed the proposed subdivision 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 two lot subdivision is permitted in a Pinelands Regional Growth Area.

The proposed 0.73 acre lot is located within the Township's RG-TC and RG-40 zoning districts. The existing bank building is located in the RG-TC portion of the lot where it is a permitted use based on the Commission certified Monroe Township land use ordinance.

The proposed 0.51 acre lot, which will contain a portion of the bank's existing parking area, is located entirely within the Township's RG-40 zoning district. The Township's RG-40 zoning district permits both commercial and residential uses.

### **PUBLIC COMMENT**

Subdivision is included in the CMP definition of development. The CMP defines the proposed subdivision 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 January 27, 2023. The Commission’s public comment period closed on February 10, 2023. No public comment was submitted to the Commission regarding this application.

### **CONDITIONS**

1. The proposed subdivision shall adhere to the plan, prepared by Pennoni Associates, Inc., dated May 4, 2022 and last revised February 15, 2023.
2. The applicant shall obtain any other necessary permits and approvals for the subdivision.

### **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 subdivision subject to the above conditions.



## State of New Jersey

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LAURA E. MATOS  
Chair

SUSAN R. GROGAN  
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 by the Commission's office no later than 5:00 PM on March 7, 2023 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.



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

LAURA E. MATOS  
Chair  
SUSAN R. GROGAN  
Executive Director

## MEMORANDUM

To: Members of the Pinelands Commission

From: Katie Elliott *KE*  
Planning Specialist

Date: February 28, 2023

Subject: No Substantial Issue Findings

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During the past month, the Planning Office reviewed eight ordinance amendments and one master plan that were found to raise no substantial issues with respect to the standards of the Pinelands Comprehensive Management Plan (CMP). It included the following:

**Buena Vista Township 2022 Master Plan Reexamination Report** – reviews the problems and objectives identified in the Township’s previous master plan reexaminations (1997, 2006, and 2017), discusses the extent to which they have been addressed or remain valid, and identifies changes in conditions, policies, and objectives at the local, county, and state level relevant to the Township. The report recommends conditionally permitting cannabis Classes 1 through 5 in various zones within the Township, adopting electric vehicle supply/service equipment (EVSE) and make-ready parking provisions, increasing lot coverage requirements in various zoning districts, as well as making minor corrections/clarifications to the Township’s land development regulations.

**Buena Vista Township Ordinance 123-2022** – amends Chapter 115, Development Regulations, of the Code of Buena Vista Township. The ordinance establishes provisions regulating cannabis-related businesses within the Township. Within the Pinelands Area, the ordinance conditionally permits cannabis Classes 1-4 (cultivation, manufacture, wholesale, and distribution) in the Pinelands Town-Commerce (PT), Pinelands Village Exclusive Industry (PVI), Rural Development Exclusive Industry (RDI), Rural Development Residence/Commercial (RDR1C), and Rural Development Residence/Industry (RDR1I) districts. The ordinance also conditionally permits cannabis Classes 1 and 2 in the Agricultural Production (AP) and Agriculture Commerce (APC) districts as well as cannabis Class 5 (retail) in the PT and Pinelands Village Residence/Commerce (PVRC) districts. The ordinance includes conditional use standards related to siting requirements, building design, security, odor and parking. Conditional use standards are also included to limit the intensity of cannabis Classes 1 and 2 in the AP and APC districts.



**Buena Vista Township Ordinance 124-2022** – amends Chapter 115, Development Regulations, of the Code of Buena Vista Township by establishing provisions promoting and encouraging the installation of EVSE and Make-Ready parking spaces.

**Corbin City Ordinance 13-2022** – amends Chapter 102, Zoning, Subdivision, and Site Plan Review, of the Code of Corbin City by establishing provisions authorizing and encouraging the installation of EVSE and Make-Ready parking spaces.

**Hamilton Township Ordinances 1963-2021, 1989-2022, and 2023-2022** – amend the existing Redevelopment Plan for the Entirety of the Township of Hamilton to establish regulations for cannabis-related businesses. The Townshipwide Redevelopment Plan was previously adopted by Ordinance 1897-2019 and found to raise no substantial issues with respect to the CMP.

- **Ordinance 1963-2021** conditionally permits cannabis Classes 1-4 (cultivation, manufacture, wholesale, and distribution) in the Agricultural (AG), Forest Area-10 (FA-10), Forest Area-25 (FA-25), Forest Area-70 (FA-70), and Industrial Business Park (IBP) districts. The ordinance also conditionally permits cannabis Classes 5 and 6 (retail and delivery services) in the Design Commercial (DC), Highway Commercial (HC), and IBP districts. The ordinance includes conditional use standards related to siting requirements, building design, security, odor and parking.
- **Ordinance 1989-2022** conditionally permits cannabis Classes 1 and 2 (cultivation and manufacture) in the DC and HC districts. The ordinance repeals cannabis Classes 3 and 4 (wholesale and distribution) as conditionally permitted uses in the AG District and repeals cannabis Classes 2, 3, and 4 (manufacture, wholesale, and distribution) as conditionally permitted uses in the FA-10, FA-25, and FA-70 districts. Conditional use standards are also amended to limit the intensity of those cannabis-related Classes that remain conditionally permitted in the AG, FA-10, FA-25, and FA-70 districts.
- **Ordinance 2023-2022** repeals cannabis Class 2 (manufacture) as a conditional use in the Pinelands Forest Area portions of the HC District. Conditional use standards are also amended to limit the intensity of Class 1 (cultivation) facilities within the Forest Area portions of the HC District.

**Maurice River Township Ordinance 718** – amends the Code of Maurice River Township by establishing provisions promoting and encouraging the installation of EVSE and Make-Ready parking spaces.

**Maurice River Township Ordinance 720** – amends Chapter 35, Land Development Regulations, of the Code of Maurice River Township. The ordinance establishes standards for home professional offices and shipping containers/trailers used for storage, and permits them both as accessory uses in the following Pinelands Area zoning districts: Pinelands Business (PB), Pinelands Conservation (PC), Pinelands Mobile Home (PMH), Pinelands Residential (PR), Pinelands Rural Development Area Conservation (PRDA-C), Pinelands Rural Development Area Residential (PRDA-R), Pinelands Village Business (PVB), Pinelands Village Center-3 and -5 (PVC-3 and PVC-5), and Pinelands Village Highway Business (PVHB). The ordinance also establishes performance standards for non-residential uses related to glare, heat, air emissions, noise emissions, and storage and waste disposal, and amends townshipwide standards regulating fences and the keeping of animals.



**RESOLUTION OF THE NEW JERSEY PINELANDS COMMISSION**

**NO. PC4-23-**\_\_\_\_\_

**TITLE:** To approve the Pinelands Commission’s 2022 Annual Report

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

**WHEREAS,** in September 2006, then Governor Corzine issued Executive Order #37; and

**WHEREAS,** Executive Order #37 called for the preparation and approval of a comprehensive report concerning the operations of each State authority; and

**WHEREAS,** the report shall set forth the significant actions of the Commission; and

**WHEREAS,** since the report is to be done on an annual basis and it includes much of the same information as the Commission's Annual Report, which is required by the Pinelands Protection Act, the two reports have been combined every year since 2007 as a cost savings measure to eliminate waste and promote efficiency as called for in Executive Order #37; and

**WHEREAS,** pursuant to N.J.S.A. 13:18A-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 the Governor shall approve same, in which case the action shall become effective upon such approval.

**NOW, THEREFORE BE IT RESOLVED** that the attached 2022 Annual Report be approved, submitted to the Governor's Authorities Unit and posted on the Commission's website.

**Record of Commission Votes**

	AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*		AYE	NAY	NP	A/R*
Asselta					Lettman					Pikolycky				
Avery					Lloyd					Wallner				
Christy					Lohbauer					Matos				
Holroyd					Mauriello									
Irick					Meade									

\*A = Abstained / R = Recused

Adopted at a meeting of the Pinelands Commission

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

\_\_\_\_\_  
Susan R. Grogan  
Executive Director

\_\_\_\_\_  
Laura E. Matos  
Chair



# 2022 Annual Report

New Jersey Pinelands Commission



# Protecting the New Jersey Pinelands

The New Jersey Pinelands Commission is an independent state agency whose mission is to preserve, protect, and enhance the natural and cultural resources of the Pinelands National Reserve, and to encourage compatible economic and other human activities consistent with that purpose.

The Commission was created by the passage of the Pinelands Protection Act in 1979.

To accomplish its mission, the Commission implements a comprehensive plan that guides land use, development and natural resource protection programs in the 938,000-acre Pinelands Area of southern New Jersey. The Commission's 15-member board consists of state, county and federal appointees who volunteer their time and expertise. The panel meets monthly and receives guidance from its Executive Director and staff.



**Above:** The Pinelands is home to vast forests, farms and towns that cover portions of seven counties in southern New Jersey. This photo was taken in Belleplain State Forest in 2022.

Photo/Paul Leakan

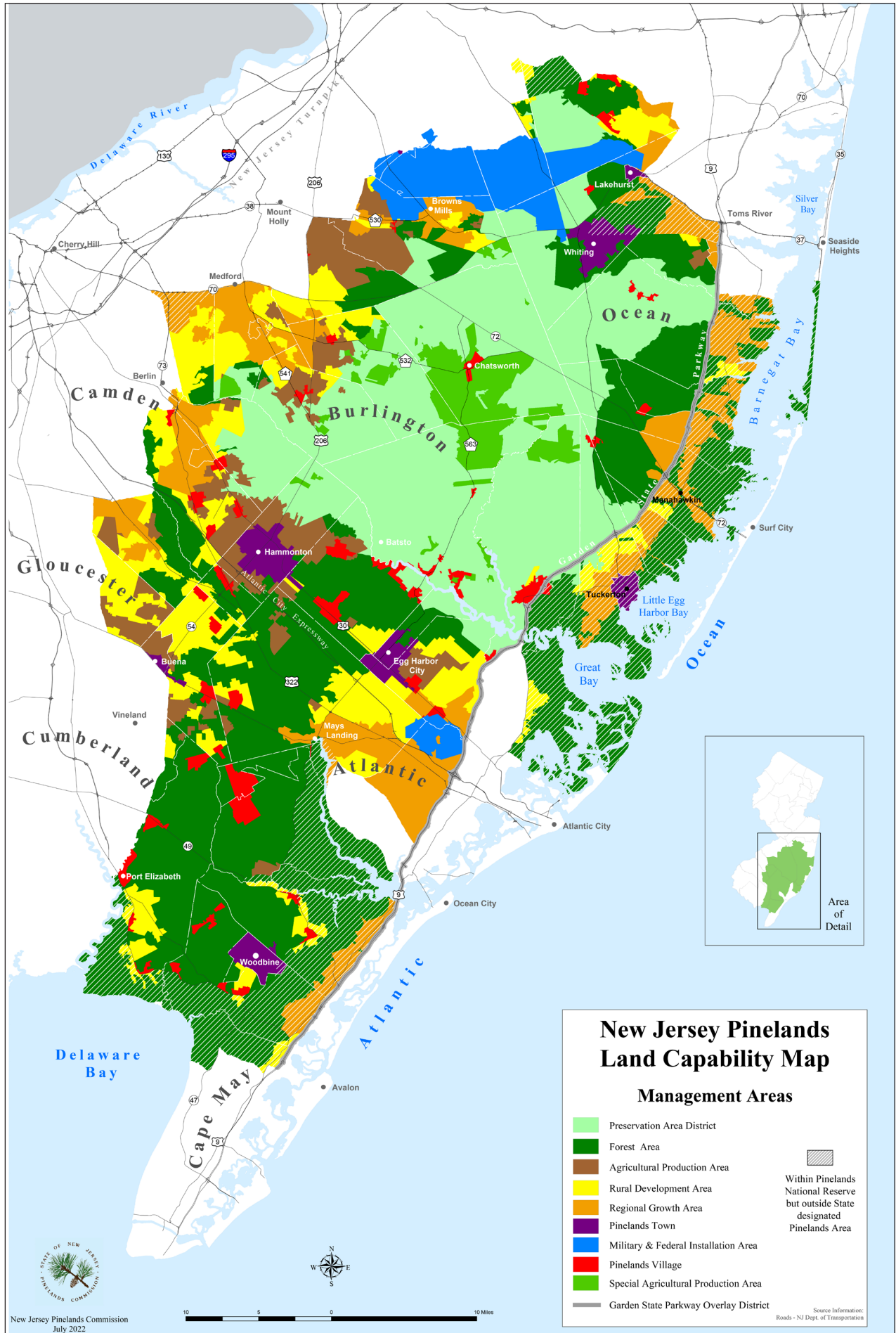
## Commissioners:

Laura E. Matos, Chair  
Alan W. Avery, Jr., Vice Chairman  
Daniel Christy  
Shannon Higginbotham (January - April 2022)  
John Holroyd, Jr. (February - Current)  
Jerome H. Irick  
Jane Jannarone (January - December 1, 2022)  
Theresa Lettman  
Edward Lloyd  
Mark S. Lohbauer  
Mark Mauriello (November - Current)  
Davon McCurry  
Jonathan Meade  
William Pikolycky  
Gary Quinn (January - November 2022)  
Doug Wallner (August - Current)

Susan R. Grogan, Executive Director

Pinelands Commission  
P.O. Box 359  
New Lisbon, NJ 08064  
Phone: (609) 894-7300  
Fax: (609) 894-7330  
Website: [www.nj.gov/pinelands](http://www.nj.gov/pinelands)





# Executive Director's Message

**Editor's Note:** Susan R. Grogan was appointed as the Pinelands Commission's Executive Director on February 10, 2023.

New Jerseyans are proud of the Pinelands, and for good reason. The Pinelands Commission has an extraordinary responsibility to safeguard this million-acre treasure for current and future generations.

In 2022, the Commission took great strides in advancing its mission to protect the region's resources and plan for the challenges posed by a changing climate, thanks to the work of our partners, our staff and our board, which gained six new members.

The Commission began implementing new rules that better protect Pinelands resources by requiring the use of green infrastructure and other more stringent standards to manage stormwater. It also proposed new rules to strengthen the protection of the Kirkwood-Cohansey aquifer, which contains an estimated 17 trillion gallons of water in the Pinelands. The Commission also focused on climate change and resilience, launching a new Climate Change webpage and setting a course for future rule amendments pertaining to climate change. The agency also undertook several projects aimed at reducing the agency's carbon footprint, including the installation of a rain garden at its headquarters and the completion of an energy audit of its four facilities. Meanwhile, the Commission launched a new permanent land protection database that is available to the public, and it continued to administer the Pinelands Development Credit Program, through which 365 acres of land were permanently preserved in 2022. Staff also conducted an archaeological excavation at the former Brotherton Indian Reservation in Shamong. The Commission's regulatory staff worked diligently to review and ensure compliance with Pinelands regulations in 2022, while seeing increased application activity related to cannabis cultivation, solar energy facilities, landfill closure and the development of warehouses. Commission scientists conducted numerous research projects, including studies of snake fungal disease, rare snakes, endocrine disruption, microorganisms, box turtles, and the use of environmental DNA to detect reptiles. Last but not least, the Commission educated thousands of people about the Pinelands through special events, webinars, in-class education presentations, videos and hundreds of social media posts.

The public can be heartened by the Commission's accomplishments in 2022 and rest assured that we will continue our efforts to preserve, protect and enhance the Pinelands in the years ahead.



**Above:** More than 51% (or 481,000 acres) of the Pinelands has been permanently preserved, including this 1,128-acre cranberry farm that was preserved through the severance of 32.25 Pinelands Development Credits in December 2021. Photo/Paul Leakan

Susan R. Grogan  
Executive Director

# Commission Gains Six New Members in 2022

The Pinelands Commission gained six new members on its 15-member board in 2022, including a new Chair.

Theresa Lettman, Laura E. Matos, and Davon McCurry were sworn in as new gubernatorial appointees on January 14, 2022, and Douglas Wallner took the oath of office as Burlington County's new representative on September 9, 2022. Meanwhile, Jonathan D. Meade, who was appointed as the U.S. Secretary of the Interior's representative on the Commission in December 2021, attended his first meeting in January 2022. John Holroyd, Jr. was sworn in as Camden County's representative on the Commission on February 11, 2022.

New Jersey Governor Phil Murphy nominated Lettman, Matos and McCurry to serve as Commissioners, and their appointments were approved by New Jersey State Senate in early January 2022. Governor Murphy also designed Ms. Matos as the Commission's new Chair.

Ms. Matos replaced a seat on the Commission that was held by Richard Prickett, who joined the Commission in January 2012 and had served as the board's Chairman since May 2019.

Ms. Matos is a native of the Pinelands, having grown up in Medford Lakes, and is a seasoned professional with an extensive career in government, public affairs, and strategic communications. Ms. Matos is a Partner at MAD Global Strategy Group, a national public affairs consulting firm. She maintains an in-depth understanding of government processes and their intersections with the private sector, along with the importance of public education and advocacy efforts in affecting policy change. For a decade before joining MAD, Ms. Matos was New Jersey General Manager and Managing Director of a national public affairs firm. She worked in the New Jersey Governor's Office for eight years for Governors McGreevey, Codey, and Corzine, working in Operations, Legislative Affairs, Cabinet Affairs and as an Assistant Chief of Staff. In these roles, she oversaw a vast array of public policy issues across all areas of the Executive Branch. Ms. Matos also served as director of business development and communications at a top New Jersey law firm. She has also served on numerous boards for Governor Phil Murphy, including the 2017 Transportation and Infrastructure Transition Advisory Committee, the Governor's Restart and Recovery Advisory Council and the New Jersey Complete Count Commission. Ms. Matos serves on the Board of Latina Civic Action and as President of the Board of Latina Civic PAC and previously served on the board of PlanSmartNJ. She attended Rutgers University and lives in Belmar, NJ.

Ms. Lettman fills a seat on the Commission that has been vacant since the passing of Candace McKee Ashmun on May 22, 2020. Ms. Ashmun had served on the Commission from its inception in 1979. Ms. Lettman has been a resident of Ocean County for 52 years and currently lives in Manchester Township. She monitored activities in the New Jersey Pinelands while working for the Pinelands Preservation Alliance (PPA), a non-profit organization, for 26 years. She retired from PPA in 2016. Ms. Lettman has been a Board Member and Secretary



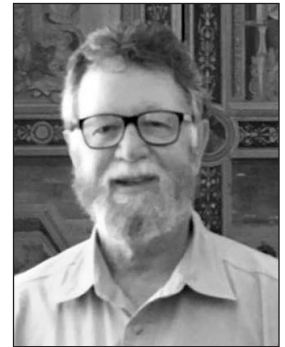
**Matos**



**Lettman**



**McCurry**



**Wallner**



**Holroyd Jr.**

for the New Jersey Natural Lands Trust since 1995. She has been a member of the Ocean County Solid Waste Advisory Council since 1990. Ms. Lettman is a former member of the Manchester Township Council and the Ocean County Natural Lands Trust Advisory Committee.

Mr. McCurry was appointed to a seat on the Commission that was previously held by D’Arcy Rohan Green, who joined the Commission in July 2011. In his role at Ørsted, Mr. McCurry helps to develop and implement strategies to ensure the successful advancement of Ørsted’s existing New Jersey offshore wind projects and shape Ørsted’s position and standing in the state. Additionally, he is specifically responsible for the company’s stakeholder relationships in Atlantic City. He previously served as Director of Legislative Affairs at the New Jersey Department of Environmental Protection. As Director, Mr. McCurry served on the Commissioner’s senior leadership team, managing the Department’s intergovernmental relations with the state Legislature and New Jersey’s congressional delegation. Mr. McCurry is a graduate of Rutgers University–New Brunswick. As a resident of Willingboro, he serves as a member of the Willingboro Zoning Board and the Willingboro Environmental Commission. He previously served as a member of the Burlington Township Planning Board. In 2014, Mr. McCurry was one of the recipients of the Burlington County Times’ 40 under 40 award.

Mr. Wallner filled a seat that became vacant when Shannon Higginbotham resigned on April 9, 2022. He has lived in Evesham Township within the Pinelands National Reserve since 1990. Mr. Wallner studied Biology with an Ecological Emphasis at the University of California at Berkeley with graduate studies in Environmental Biology at California State University, East Bay. He retired from the National Park Service in 2012, having served for 34 years in a variety of natural resource and fire management positions. He worked in both small and large parks before ending his career in the Philadelphia regional office as the Regional Fire Management Officer. As such, he provided leadership for agency fire programs in the 13 northeastern states. He worked closely with state fire programs and departments of environmental protection, including the New Jersey State Fire Warden and others. Since retiring, Mr. Wallner has been active in the NestWatch Program since its inception in 2015 at the Black Run Preserve and currently serves as its Co-Chair. He has served as a Trustee for the Friends of the Black Run Preserve. He has been an active member of the Evesham Township Environmental Commission since 2018.

U.S. Secretary of the Interior Deb Haaland designated Mr. Meade as the Commission’s federal representative in early December 2021. Mr. Meade has served as the Associate Regional Director for Resource Stewardship and Science for the National Park Service’s (NPS) Northeast Region in Philadelphia since January 2018. Prior to his current post, he had served as the Deputy Regional Director for the NPS Northeast Regional Office since 2014. In his current role, he leads NPS’ efforts to manage natural and cultural resources and oversee planning and compliance activities across a 13-state region. Prior to his current work at the National Park Service, Mr. Meade served as the Director of Watershed Programs for the Pennsylvania Environmental Council, and as the Executive Director of the Pennsylvania Organization for Watersheds and Rivers, as well as the Executive Director of the four-state Highlands Coalition and the Vice President of Planning for the Heritage Conservancy. He also worked in the National Park Service’s Washington, D.C. headquarters, leading their business management group. Mr. Meade holds a bachelor’s degree in ecology from the University of Richmond and a master’s degree from Yale University’s School of Forestry and Environmental Studies. He was a Fulbright Scholar at the University of Alberta.

Mr. Holroyd was appointed to serve as Camden County’s representative on the Commission in January 2022. He has lived in Winslow Township since 1985. Mr. Holroyd was an electrician for 17 years, and he attended classes at Atlantic, Camden and Gloucester County Colleges. He has been a licensed inspector for electric, fire, plumbing, buildings, and multi-family dwellings, and a construction official in several New Jersey municipalities for more than 20 years. He is a member of Winslow Township’s Planning Board, Environmental Commission and Green Team. He also serves as Winslow’s representative on the Pinelands Municipal Council and is a member of Berlin Township’s Planning Board. Mr. Holroyd filled a seat on the Pinelands Commission that



became open after Jordan P. Howell resigned on August 13, 2021. Mr. Howell had served as Camden County's representative on the Commission since January 18, 2018.

The Commission adopted separate resolutions thanking Mr. Prickett, Ms. Rohan Green and Ms. Higginbotham for their service.

The Commission's 15-member board consists of seven members who are appointed by the New Jersey Governor, one member appointed by each of the seven Pinelands counties, and one member appointed by the U.S. Secretary of the Interior. The gubernatorial appointees are subject to the review and consent of the New Jersey Senate.

## Honoring the Late Governor James J. Florio

The Commission named its library in honor of the late Governor James J. Florio in 2022, while recognizing his vital efforts to protect the region.

During its meeting on October 14, 2022, the Commission adopted a resolution officially designating the James J. Florio Pinelands Library at its headquarters on Springfield Road in Pemberton Township. The library is adjacent to interactive, educational exhibits in the agency's Richard J. Sullivan Center for Environmental Policy, and it is filled with Pinelands-related books, Pinelands-themed artwork, and professional, framed photos that showcase the beauty of the Pinelands. The library also serves as an important meeting space for Commission staff and the public.

Governor Florio passed away on September 25, 2022, and the Commission's resolution details his life of public service and his extraordinary vision, wisdom and determination to protect the environment, especially the Pinelands in southern New Jersey. Governor Florio served in the U.S. Navy, as a State Assemblyman from 1969 to 1974, as a member of the U.S. Congress from 1975 to 1990, as the Governor of the State of New Jersey from 1990 to 1994, and as the Chairman of New Jersey Pinelands Commission



**Above:** A photo of the late Governor James J. Florio was projected on a television during the dedication of the library that is located in the Commission's headquarters and now bears his name. Photo/Paul Leakan

from November 8, 2002 to June 28, 2005. He was a strong proponent of Pinelands protection, helping to craft and steer passage of the National Parks and Recreation Act of 1978, which established the 1.1-million-acre Pinelands National Reserve. The federal act created a planning process to preserve the resources in the Pinelands and set the stage for the adoption of the New Jersey Pinelands Protection Act.

During his tenure as Chairman of the Pinelands Commission, the Commission launched a \$5.5 million study of the Kirkwood-Cohansey aquifer

system, amended the Pinelands Comprehensive Management Plan to expand the list of protected plant species, successfully halted the construction of a proposed waste-transfer station in the Pinelands, launched an in-depth review of forestry policies in the Pinelands, created a task force to assess housing opportunities in Regional Growth Areas, completed smart growth planning projects in several Pinelands municipalities, instituted innovative conservation measures that protected thousands of acres in the Toms River, Oyster Creek and Waretown Creek watersheds, and established the Pinelands Conservation Fund, which has since helped to fund numerous scientific studies, planning initiatives, the construction of the Candace



**Above:** The Commission adopted a resolution designating the James J. Florio Pinelands Library on October 14, 2022. The resolution also highlights Governor Florio's contributions to the Pinelands protection effort, including his service as the agency's Chairman.

Photo/Paul Leakan

McKee Ashmun Pinelands Education Exhibit, and the permanent preservation of nearly 9,000 acres of land in the state Pinelands Area.

## Planning Activities

### Amendments to the Pinelands Comprehensive Management Plan

In 2022, new rules took effect that will better protect Pinelands resources by requiring the use of green infrastructure and other more stringent standards to manage stormwater.

The Commission voted to adopt the new rules via amendments to the Pinelands Comprehensive Management Plan (CMP), the rules that govern land-use, development and resource protection in the state Pinelands Area, in December 2021.

The rules integrate the stormwater management standards previously adopted by the New Jersey Department of Environmental Protection (NJDEP) and incorporate additional standards in order to provide enhanced protection to the Pinelands environment. For the first time, the Commission's rules will require stormwater management for all residential development, including projects involving only one new housing unit. The new rules also include stricter standards for nitrogen removal that will apply to larger projects in the Pinelands Area. The new rules are intended to reduce the volume of stormwater runoff, lower the potential for localized flooding and help to maintain water levels in the Kirkwood-Cohansey aquifer, which underlies the Pinelands, provides fresh drinking water and supports the region's special ecosystem. Much of 2022 was spent preparing for implementation of the new rules by drafting model ordinances for the 53 Pinelands municipalities and

advising applicants to prepare for the date on which the new rules will be applied (January 18, 2023) to all public and private development applications.

Meanwhile, after decades of intensive study, the Commission proposed rules in 2022 to strengthen protections to the Kirkwood-Cohansey aquifer and the Pinelands ecology as a whole, while ensuring sufficient water supply for authorized development in the growth-oriented portions of the Pinelands Area.

The Kirkwood-Cohansey is a freshwater reservoir underlying the Pinelands and containing an estimated 17 trillion gallons of water. Withdrawals from the aquifer can negatively impact the essential character of the Pinelands environment; therefore, the Commission proposed clear, quantifiable standards to address potential adverse local and regional impacts. Comments received during the public comment period resulted in the need to revise the proposed rules to recognize the nonconsumptive use of water by the resource extraction industry in the Pinelands Area. A Notice of Substantial Change Upon Adoption will be published in April 2023.

## Climate resilience

The Commission continued to focus on climate change and resilience, while taking direct steps to reduce the agency’s environmental impacts.

In February 2022, the Commission launched a new Climate Change webpage that charts the work of the Commission’s Climate Committee and contains information about other climate resiliency initiatives. The Climate Committee met five times in 2022, and staff and Committee members discussed a series of potential CMP amendments pertaining to climate change. Going forward, the Committee plans to review changes to Pinelands regulations for solar energy facilities, including agrivoltaics and other siting opportunities. The Committee will also begin a comprehensive review of Pinelands management area boundaries designated for growth and development by the Pinelands CMP that are vulnerable to climate change.

The Commission also participated in the Interagency Council on Climate Resilience in 2022. Formed in 2019 via Governor Murphy’s Executive Order 89, the Council is charged with developing the state’s Climate Change Resilience Strategy, which was released in late 2021, and coordinating state agency implementation of the priorities and recommendations in that plan.

Meanwhile, the Commission undertook several projects aimed at reducing the agency’s carbon footprint.

In June 2022, the Commission installed a 340-square foot rain garden at its headquarters in Pemberton Township. Designed in coordination with the Rutgers Cooperative Extension Water Resources Program, the garden captures and filters stormwater generated by our main office building while providing habitat for wildlife and helping to mitigate climate change impacts such as flooding. The garden is designed to collect, treat and infiltrate an estimated 53,287 gallons of



**Above Top:** Contractors installed bioretention soil at the site of the Commission’s rain garden.

**Above Bottom:** The rain garden features native Pinelands plants that bloom for months.

Photos/Paul Leakan

stormwater onsite each year. It features 100% native Pinelands plants and a new interpretive sign that includes a list of the plant species used. Following completion of the rain garden, the Commission launched a new web page containing its final engineering, design and planting plan as well as links to assist others interested in purchasing native plants and installing their own rain gardens. The project was funded by the Kathleen M. Lynch-Van de Sande Fund for the Reforestation of the New Jersey Pinelands. The fund was established in memory of Ms. Lynch-van de Sande, a Pinelands Commission Environmental Specialist who died in a car accident in June 1989.

In 2022, the Commission applied and was granted approval for an energy audit of the four facilities that house the Commission's staff. The audit was conducted through the Local Government Energy Audit (LGEA) Program, an energy efficiency program sponsored by New Jersey's Clean Energy Program (NJCEP). The reports are available on the Commission's website (<https://www.nj.gov/pinelands/about/business/#7>). In 2023, the Commission will pursue the installation of an electric vehicle charging station, purchase of electric vehicles, and retention of a solar energy facility consultant to evaluate the potential for renewable energy facilities at its offices.

## Excavation at the former Brotherton Reservation

In 2022, the Commission completed a significant project funded by its annual grant from the National Park Service: excavation of the former Brotherton Indian Reservation (1758-1802) which once encompassed portions of present-day Indian Mills, Shamong Township. A ground penetrating radar survey conducted in 2018 suggested that subsurface features potentially associated with Reservation residents might be present within the eastern portion of an approximately 27-acre agricultural field. Archaeological trenching was conducted in April 2022 to identify possible archaeological signatures of the former Brotherton Indian Reservation. This involved use of a backhoe by a local farmer, shallow excavations, shovel scraping of trench floors and mapping, photographing and recording the GPS locations of all identified features. On the local level, documentation of the structures and any associated deposits has the potential to provide valuable information on the settlement and domestic consumption patterns of Brotherton's original inhabitants. On a broader scale, work at this site can shed new light on the tragic exodus of the Lenape from their ancestral lands in the aftermath of both the French and Indian and Revolutionary Wars. Public education efforts included a visit by approximately twenty students from



**Above:** Tony McNichol, a Cultural Resource Planner with the Commission at the time of the project, explained the excavation to students at the Indian Mills Middle School. Photo/Paul Leakan

the nearby Indian Mills Middle School during the excavation. The students met with the Commission's archaeologist, who provided them with a historical background for the Brotherton Reservation, gave an overview of archaeological methods and discussed how archaeology is used to help us recreate the past. Excavations and activities at the site were also photo-documented by Commission staff, and a reporter came to the site to do a story on the excavations. The story aired on a major regional media outlet multiple times the week of the dig. Additional video footage was obtained through the use of the Commission's new drone.

## Pinelands Development Credit Program

The Pinelands Development Credit Program is a regional transfer of development rights program that preserves important agricultural and ecological land. Pinelands Development Credits (PDCs) are allocated by the Commission to landowners in the Preservation, Agricultural Production and Special Agricultural Production Areas, which are the sending areas. PDCs can be purchased by property owners and developers who are interested in developing land in Regional Growth Areas, which serve as the receiving areas.

Once PDCs are “severed” from a sending area property, the property is permanently protected by a conservation or agricultural deed restriction and the PDCs allocated to that property can be sold on the private market.

During 2022, 15.19 PDCs were allocated by the Commission to 14 sending area properties. A total of 16.25 PDCs were severed, protecting 365.39 acres of land in the Agricultural Production Area in Franklin, Hamilton, Monroe, Mullica and Shamong townships.

Since 1982, 57,512.48 acres in the Pinelands Area have been permanently preserved through the PDC



**Above:** This 67.95-acre property in Franklin Township, Gloucester County, was permanently preserved through the severance of 3.25 Pinelands Development Credits in August 2021. Photo/Paul Leakan

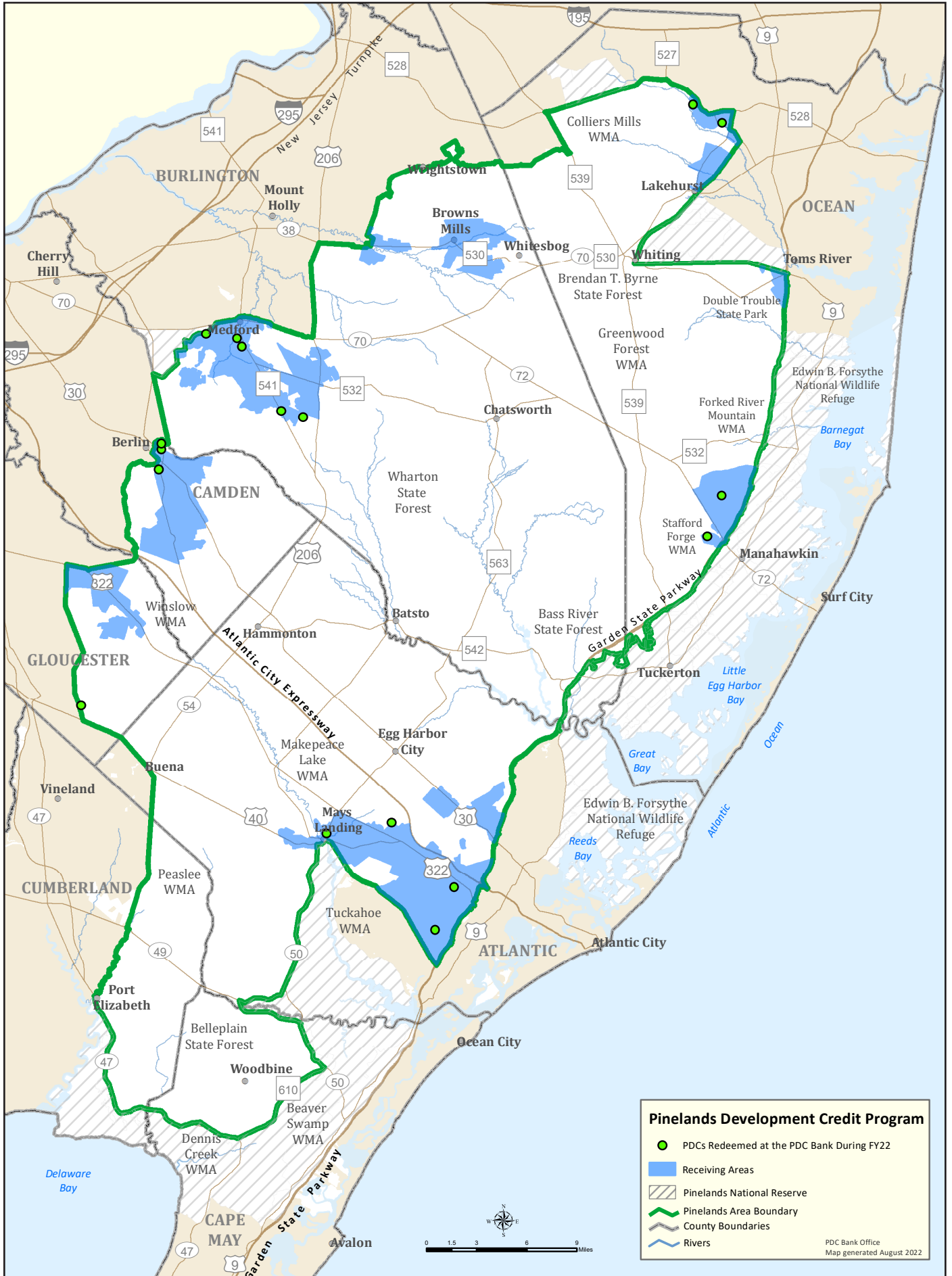
Program. In 2022, a total of 44.50 PDCs were sold, with an average sales price of \$75,371 per PDC.

A total of 9.25 PDCs were redeemed for 14 residential projects and three non-residential projects in Barnegat, Berlin, Egg Harbor, Galloway, Hamilton, Lacey, Medford, Monroe, Shamong, Stafford, Weymouth and Winslow townships in 2022.

Please see page 11 for a map that illustrates all PDC redemptions that occurred during Fiscal Year 2022.



**Above:** This 94-unit, single-family housing development in Winslow Township, Camden County, was built with the use of 6 Pinelands Development Credits (PDCs), including 3.25 PDCs that were redeemed in February 2022. Photo/Paul Leakan



## Reviewing Municipal Ordinances

The master plans and land use ordinances of all Pinelands municipalities and counties must be consistent with the Pinelands CMP. Consistency is ensured through the conformance process, by which municipalities and counties submit their master plans, ordinances and amendments to the Commission for review and certification.

The Commission received and reviewed 137 municipal master plan and ordinance amendments in 2022. The Commission approved significant master plan and zoning updates from Evesham Township, Winslow Township and Woodbine

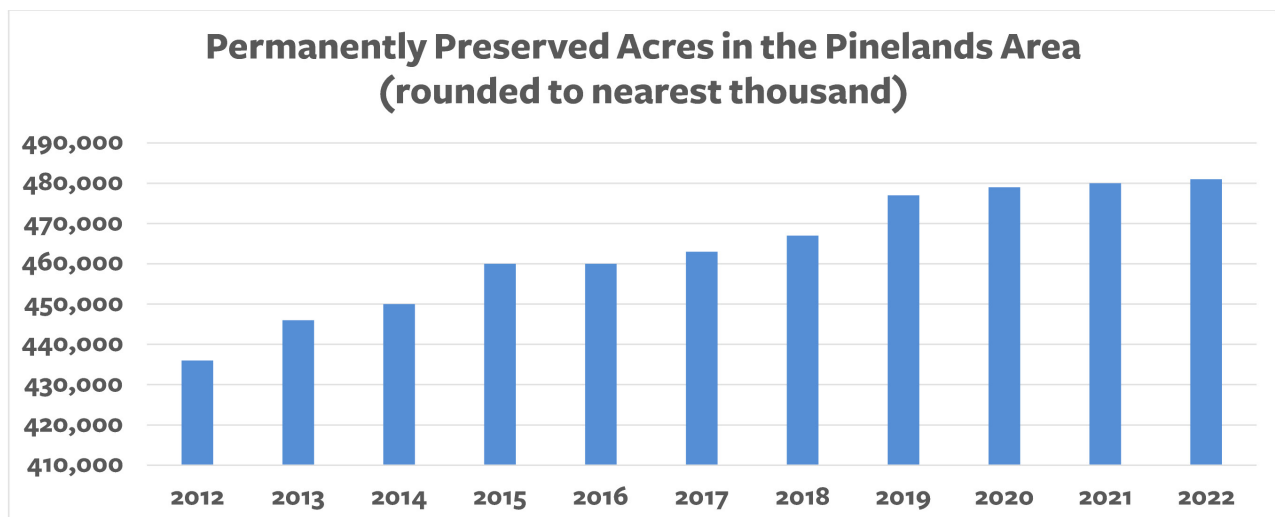
Borough. The Commission continued to see a trend of municipalities adopting redevelopment plans regulating land uses in areas designated in need of redevelopment. In 2022, the Commission received 27 ordinances either adopting or amending redevelopment plans. These redevelopment plans sought to advance a variety of local planning objectives, including the development of solar energy facilities on closed landfills and resource extraction sites, affordable housing and senior housing, warehouses, cannabis-related land uses and the redevelopment of aging shopping centers.

## Annual Permanent Land Protection Update

The Pinelands Commission’s staff delivered its annual update on permanent land protection in the Pinelands on October 14, 2022.

A total of 2,007 acres of land were preserved in the Pinelands Area from June 2021 to June 2022. Of that total, 282 acres were preserved through Pinelands programs, along with 1,317 acres through the Pinelands Development Credit Program.

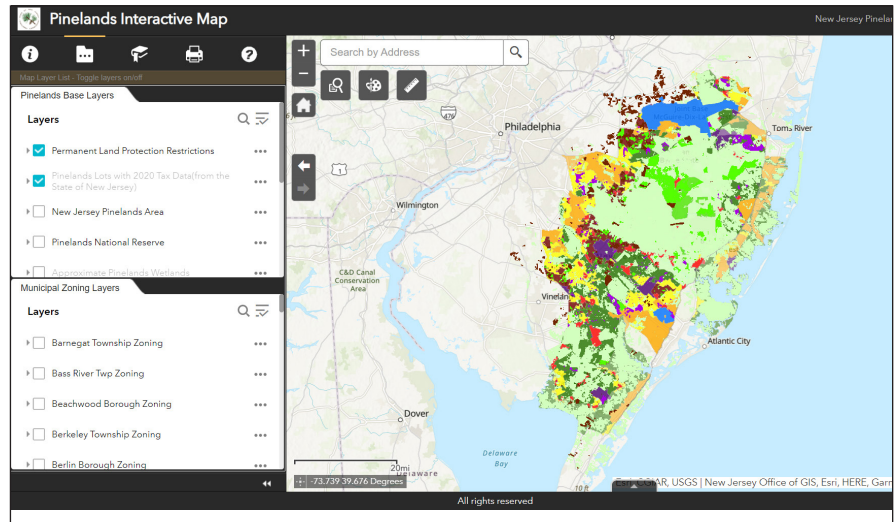
As of June 2022, 51% (481,000 acres) of the state Pinelands Area has been permanently preserved through a variety of programs. Of that total, 94% of the land is located in Pinelands Management Areas that are designated for conservation, including the Preservation Area District, the Forest Area, the Special Agricultural Production Area, and the Agricultural Production Area. The Commission anticipates launching another round of land acquisition funding through the Pinelands Conservation Fund in 2023.



## Commission Completes a New Permanent Land Protection Database

In 2022, the Commission completed a multi-year project aimed at integrating data on permanently preserved land in the Pinelands Area from disparate sources and developing a user interface of the data and the mapping for Pinelands staff.

After intensive efforts by the development team to bring in old and new data, run quality control procedures, create reports, create the geodatabase/mapping interface, and test all facets of the system, a new interface was launched to staff in June 2022. It allows staff to search for preserved lands based on municipal block and lot numbers, date of preservation, Pinelands application number and other attributes. In addition, staff may also use Geographic Information System (GIS) mapping to visualize permanent land preservation data, review a limited set of attributes and access copies of recorded deeds. The new system greatly simplifies accessibility to the information, clarifies the



reasons for the preservation, collects historical land preservation records in one location, and simplifies reporting on the status of land preservation in the Pinelands Area. Shortly after making the system available to staff, the Commission launched a new layer to the interactive map available on our website to make certain features of the permanent land protection database available to the public. The interactive mapping is expected to assist realtors, assessors and land preservation partners in identifying preserved lands and targeting lands for future acquisition and preservation.

## Commission Wins Second Place in State Mapping Contest

The Pinelands Commission's Pine Barrens Byway StoryMap won second place in a statewide mapping contest held by the NJDEP on April 7, 2022.

The StoryMap features a fully searchable, interactive map of the entire 130-mile Byway route, along with miniature maps, detailed descriptions, links, and 36 photos of nine featured destinations on the Byway. The StoryMap can be accessed via the Pine Barrens Byway section of the Commission's website (<https://www.nj.gov/pinelands/landuse/current/byway/>).

Commission staff members created the StoryMap to enable the public to better plan their trips on the Byway. The Commission also included a QR code link to the StoryMap in the official brochure for the Byway. The brochures are available at various Byway locations.



**Above:** The mapping award included certificates for the three Commission staff members who worked on the Byway StoryMap and a mapping journal.

Photo/Paul Leakan



# Regulatory Activities

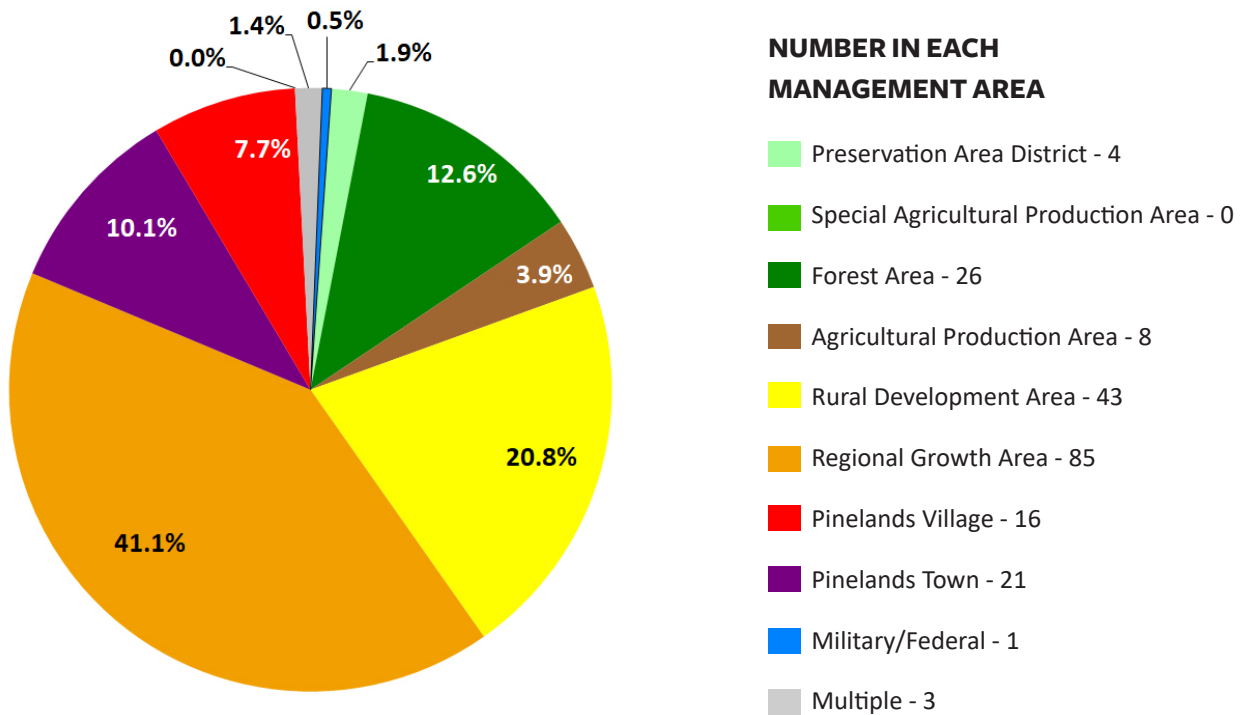
## Applications

The Pinelands Commission reviews applications for development by evaluating proposals to ensure that they meet the regulations contained in the Pinelands Comprehensive Management Plan. Development proposals must meet a series of environmental standards, including those that protect water quality, wetlands and threatened and endangered species.

The Commission's development approval process varies, depending on whether the application is submitted by a public agency or a private landowner. The Commission's staff reviews private development proposals, such as single-family dwellings, subdivisions and commercial projects. After applicants provide all of the necessary information, the Commission issues a Certificate of Filing (or CF), signifying completion of an application and allowing an applicant to seek all municipal and county approvals for the proposed development. Other completeness documents include Preliminary Zoning Permits (PZPs) and Notices of Filing, which are issued under alternative permitting programs in accordance with the CMP (N.J.A.C. 7:50-3.81). These documents certify completeness of development applications and are equivalent to CFs. A total of 207 Completeness Documents were issued in 2022, including CFs, PZPs and Notices of Filing.

Most Completeness Documents (85) were for proposed development in Regional Growth Areas (as shown in the chart below). There are 24 municipalities with Regional Growth Areas, or RGAs, in the 938,000-acre state Pinelands Area. RGAs make up 8% of the land in the Pinelands Area and are generally located on the fringes of the Pinelands boundary. The RGAs include areas of existing development and adjacent lands that have the infrastructure such as sewers, roads and other utilities needed to accommodate new development while protecting the essential character and environment of the Pinelands. The Pinelands CMP encourages future growth in the RGAs as a way to prevent scattered and piecemeal development in other more sensitive portions

**Completeness Documents Issued in 2022 by Management Area**



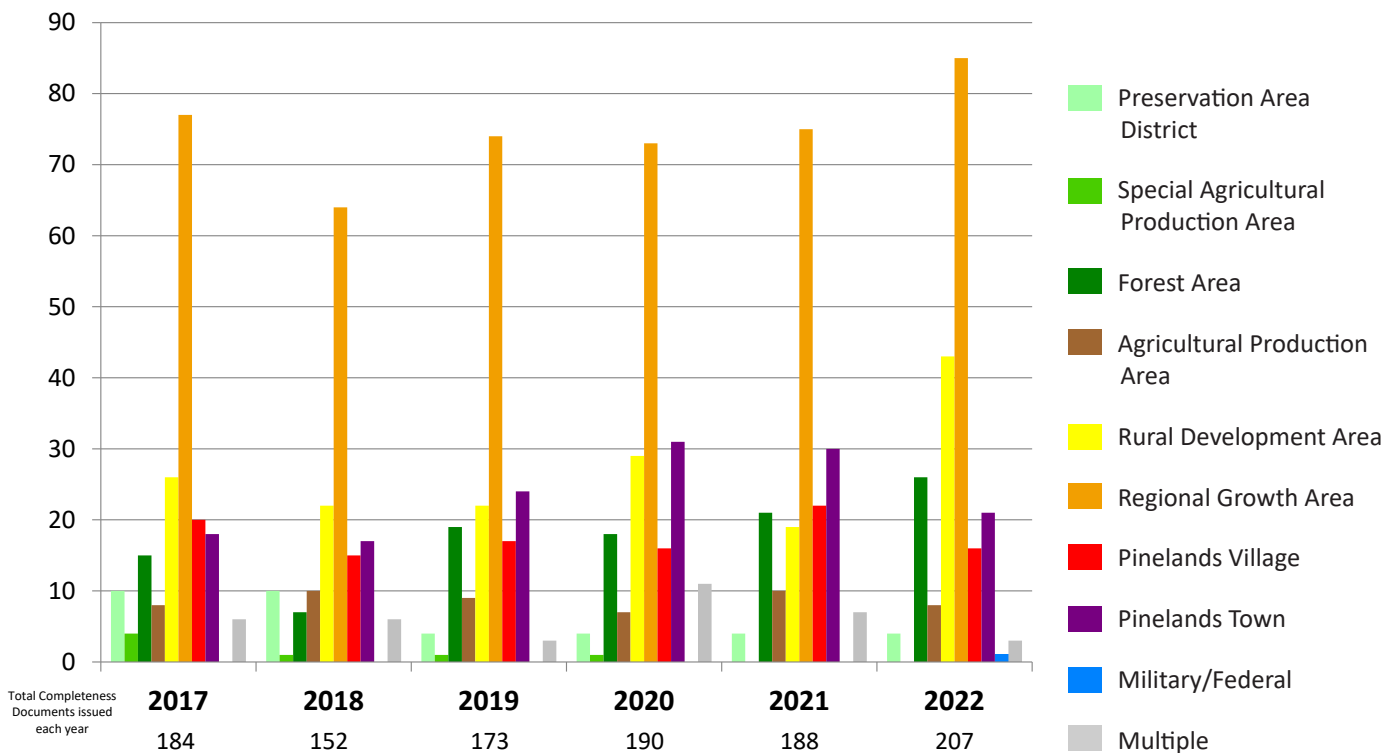
## Completeness Documents Issued in 2022 by Management Area and Type of Development

<b>Management Areas</b>	Commercial	Infrastructure	Institutional	Recreation	Residential	Resource Extraction	<b>Total</b>
Preservation Area District	1	1			1	1	4
Special Agricultural Production Area							0
Forest Area	3	2			15	6	26
Agricultural Production Area	2				6		8
Rural Development Area	11	2			29	1	43
Regional Growth Area	22	2	2		59		85
Pinelands Village	4				12		16
Pinelands Town	9				12		21
Military/Federal	1						1
Multiple	2	1					3
<b>Totals</b>	<b>55</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>134</b>	<b>8</b>	<b>207</b>

of the Pinelands Area.

Of the 207 Completeness Documents that were issued in 2022, most involved proposals for residential development, followed by commercial development (as shown in the table above). The Commission issued similar numbers of Completeness Documents from 2017 to 2022, with the majority of the proposals for development located in RGAs (as shown on the bar graph below).

## Completeness Documents by Management Area (2017-2022)



The Pinelands Commission is also responsible for reviewing and approving development applications that are submitted by public entities, such as a municipality, county or a State agency. The full, 15-member Commission votes on whether to approve these applications during its monthly meetings. The Commission approved a total of 32 applications for public development in 2022, including improvements to the Lake Lenape Dam in Hamilton Township, installation of a 4,372-square-foot geothermal well field for the heating and cooling of the Batsto Mansion in Washington Township, construction of a 17,811-square-foot fire station in Monroe Township, installation of 2,200 linear feet of water main Manchester Township, construction of a 4,000-square-foot emergency services building and associated site improvements in Stafford Township, installation of a public sanitary sewer main within the White Horse Pike and Mannheim Avenue rights-of-way in Galloway Township, establishment of a 102.6-acre grassland conservation and management area at the Atlantic City International Airport in Hamilton Township, three school projects in Buena Vista Township, and forestry activities at Bass River State Forest in Little Egg Harbor Township.



**Above:** The Pinelands Commission approved 32 applications for public development in 2022, including the installation of a geothermal well field for the heating and cooling of the historic Batsto Mansion.

Photo/Paul Leakan

Some applications may not meet all of the Commission’s land use or environmental standards. In these instances, applicants may elect to apply for a “Waiver of Strict Compliance.” The Commission acted on four waivers in 2022, each of which allowed for the development of one single-family home.

## Recreation Permits

In 2022, the Commission issued nine Recreation Permits for organized, off-road vehicle events in the Pinelands Area. In order to receive a Recreation Permit, groups must submit a completed “Off-Road Vehicle Event Application” for each proposed event. In addition to the application form, the group must submit the course route in electronic format, an application review fee, proof of insurance, property owner permission and proof that the township and New Jersey State Police have been notified. Commission staff reviews the course route to determine if there are any issues with wetlands, threatened and endangered species, deed-restricted land and private and public ownership. Any portions of the route that have potential issues are inspected by a member of the Commission’s staff. If any route changes are necessary, a revised route is required and must again be submitted for review.

## Development Application Trends in 2022

The Commission’s Regulatory Programs staff reviews a wide variety of development applications ranging from single-family dwellings and small-scale commercial site improvements (e.g. minor parking lot improvements) to large residential subdivisions, forestry operations and large-scale commercial development (e.g. shopping centers

and entertainment complexes).

In the 2021 Annual Report, the Commission reported an increased interest and activity in development inquiries and applications for cannabis-related facilities, community solar facilities on existing landfills and large warehouses. That trend continued into 2022.

In 2022, Commission staff continued to receive inquiries and development applications regarding cannabis-related cultivation, processing/manufacturing, sale and distribution for both recreational and medical cannabis uses. This activity was in response to the 2021 the New Jersey Cannabis Regulatory, Enforcement Assistance, and Marketplace Modernization Act (P.L. 2021, c. 16). Based on the Commission's rules, the growing of cannabis is permitted throughout the Pinelands Area, except in the Preservation Area District or a Special Agricultural Production Area where agricultural uses are limited to berry agriculture and native Pinelands horticulture. The submission of an application to the Commission for a cultivation facility is not required. However, the establishment of a facility to process, sell or distribute cannabis does require application to the Commission.

The Commission also saw continued interest in proposed solar energy facilities in 2022. These inquiries and application submissions included applications for floating solar energy facilities accessory to resource extraction operations and additional joint proposals from municipalities and solar energy providers to formally close existing landfills and install solar energy facilities on the closed landfills.

Additionally, of note in 2022, the Commission received inquiries and applications proposing the development of large warehouses and large residential subdivisions (100-600 units) in the Regional Growth Area (RGA). Both types of development proposals were primarily located in the RGA. As indicated above, the Pinelands CMP encourages future growth in the RGAs as a way to prevent scattered and piecemeal development in other more sensitive portions of the Pinelands Area. Municipalities have the ability to determine the types of nonresidential uses permitted within the RGA. All development within the RGA must still meet all CMP environmental standards.

## Science & Research Activities

### Long-term Environmental Monitoring Program

**Snake Fungal Disease:** In 2018, Commission scientists began collaborating with Dr. Joanna Burger and her colleagues at Rutgers University, Robert Zappalorti of Herpetological Associates, and Dr. Jeffrey Lorch of the United States Geological Survey (USGS) to conduct research on snake fungal disease in the Pinelands. Snake fungal disease is an emerging disease found in populations of captive and wild snakes and has been found to infect snakes in North America, parts of Europe, and Australia. Laboratory analyses have demonstrated that the fungus *Ophidiomyces ophiodiicola* is consistently associated with snake fungal disease, but often additional fungi are also found. Although snakes can show signs of fungal disease just after spring emergence from hibernation, it was previously unknown if *O. ophiodiicola* was present inside the hibernacula.



**Above:** The soft and crusty brown blotches on this northern pine snake indicate potential snake fungal disease infection.

Photo/John Bunnell

Dr. Burger and Mr. Zappalorti have been excavating a group of northern pine snake hibernacula, or winter dens, annually for the past 36 years. Their long-term study

provides a unique opportunity to sample inside snake dens to determine if the fungus is present in the soil or on the hibernating snakes. Excavating the dens during hibernation also allows the sampling of a number of individual snakes from a population at one time. A passive integrated transponder (PIT) tag is inserted into each new snake found during the excavations. A PIT tag is a tiny, glass-coated microchip commonly used in wildlife research that allows for the permanent identification of an animal through the use of a special scanner that reads the unique tag number.

To determine if *O. ophiodiicola* was present in the dens or on hibernating snakes, initial sampling was completed in 2018 during den excavations at three locations. Because the initial sampling indicated that *O. ophiodiicola* was present on snakes and in the soil inside the dens, in 2019 – 2021, all hibernating snakes were swabbed to document changes in fungal infection for individual snakes over time and investigate changes in snake fungal disease among dens. Results assessing the presence of *O. ophiodiicola* in dens versus adjacent soils and examining factors associated with the growth of the fungus were recently published in the Journal of Fungi (Campbell, L.J.; Burger, J.; Zappalorti, R.T.; Bunnell, J.F.; Winzeler, M.E.; Taylor, D.R.; Lorch, J.M. Soil reservoir dynamics of *Ophidiomyces ophiodiicola*, the causative agent of snake fungal disease. Journal of Fungi 2021, 7, 461). In 2022, hibernating snakes were sampled again for fungal infections. A manuscript that describes fungal prevalence among individual snakes and the soils in contact with them during hibernation was submitted for publication in a scientific journal.

**Rare Snake Monitoring:** Aside from the long-term artificial den excavations mentioned in the Snake Fungal Disease Monitoring component, no long-term data exist to assess rare snake population trends in the Pinelands. Therefore, the Commission is establishing a network of natural snake dens, shed areas, and nest sites to monitor long-term changes in several species of rare snakes. As part of ongoing snake studies that were initiated in late 2016, numerous winter dens have been identified for corn snakes and pine snakes. The Commission is attempting to identify more natural pine snake dens and natural dens for other rare snake species. From 2018 - 2021, corrals were built around most dens to capture snakes as they enter hibernation in the fall and emerge from hibernation in the spring. The den corrals offer an effective, non-invasive method to census snakes each fall and spring without physically disturbing dens or hibernating snakes.

From 2016 to 2022, 1826 new snakes representing 13 species were found. These include 990 corn snakes, 441 pine snakes, 187 kingsnakes, 109 black racers, 55 hognose snakes and 44 snakes of several other species. All snakes were weighed, measured, and PIT tagged. A total of 293 of these processed snakes were recaptured at least once during this time period.

Other 2022 environmental monitoring activities included surveying calling frogs and toads at a group of ponds that are surveyed annually, measuring bimonthly water quality at 47 stream sites, recording monthly water levels at 35 forest plots and 30 ponds, and maintaining continuous water-level recorders installed in seven other ponds and in a shallow observation well installed within a pine lowland forest.

Long-term environmental monitoring research is being funded by the National Park Service.

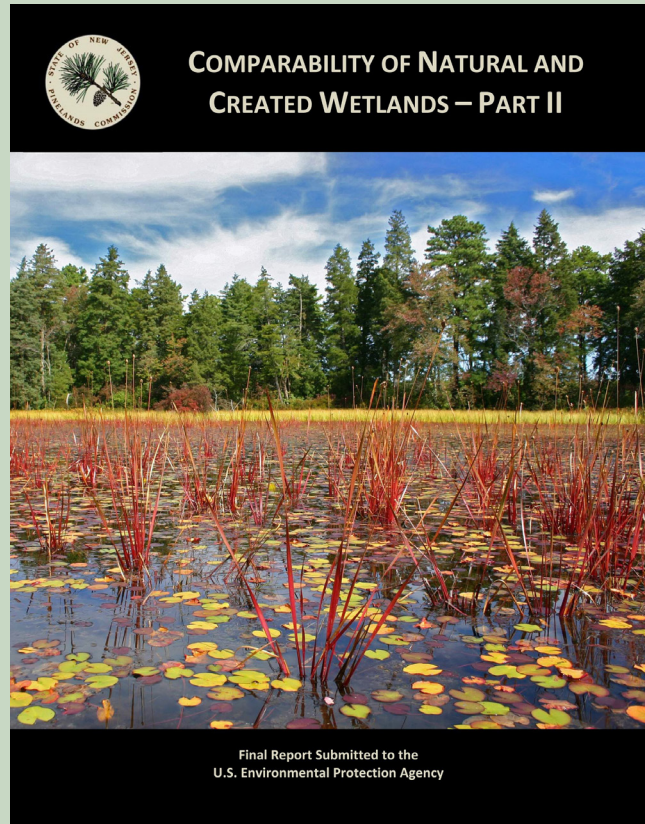


**Above:** Located in Brendan T. Byrne State Forest, Burnt Pond has a continuous water level recorder installed to automatically collect water-level data. Photo/John Bunnell

## Microorganism Study

In 2017, the Commission was awarded funding to study the effects of land use on water quality and microorganisms in 60 natural ponds, excavated ponds, and stormwater basin study sites. The goals of the Microorganism Study are to assess the relationship between surrounding land use and various water-quality and biological attributes and to compare the plants and animals from these natural and created wetlands. Over a three-year period, from 2018 to 2020, field work was conducted at the 60 wetlands. Commission scientists and collaborators with the N.J. Department of Environmental Protection (NJDEP) and U.S. Geological Survey (USGS) sampled surface water for nutrients, metals, pesticides, and chlorophyll-a (an indirect measure of algal plant growth) and collected samples of diatoms (single-celled algae), phytoplankton (free-floating algae in the water), zooplankton (tiny animals that swim or drift in the water), and benthic macroinvertebrates (primarily aquatic larval insects). In 2021, taxonomic consultants completed the identification of zooplankton, algae, diatoms, and macroinvertebrates that were collected from the study sites.

In 2022, project scientists completed data analysis and prepared the final report. Differences in the various water-quality and aquatic assemblage attributes were most pronounced between stormwater basins and natural and excavated ponds. This finding was similar to results from the Commission's previous study, which compared water quality and vegetation, fish, and frog and toad assemblages among the three wetland types. Both



studies indicated that the natural and excavated ponds generally exhibited characteristic Pinelands water quality and similar aquatic assemblages. The stormwater basins that were sampled displayed more degraded water quality conditions, supported different aquatic plant and animal assemblages, and contained more nonnative and invasive species.

This research was funded by a grant from the U.S. EPA and a match by the Commission through the Pinelands Conservation Fund.

## Endocrine Disruption Study

The endocrine system is a collection of tissues in animals that produce hormones to regulate essential life processes, such as metabolism, tissue function, reproduction, and development. A large group of natural and synthetic chemicals are known to disrupt endocrine function. Examples include plant hormones, plastic components, flame retardants, surfactants, fragrances, pesticides, etc. Endocrine disrupting chemicals, or EDCs, are a global environmental problem and have been linked to reproductive and developmental abnormalities in a variety of animal species, especially fish and amphibians.

Commission and U.S. Geological Survey scientists initiated a study to sample water chemistry and fish above and below two municipal wastewater treatment plants, which represent direct point sources of EDCs, and water

chemistry and frogs at ponds and stormwater basins, which may receive indirect non-point sources of EDCs from runoff and the Kirkwood-Cohansey aquifer. Results from these sites will be compared to those from appropriate, minimally impacted reference sites.

In 2017, 2018, and 2019, green frogs were collected from ponds and stormwater basins for histological analysis and water chemistry was sampled at the sites on multiple occasions. In 2019 and 2020, fish were collected from stream sites above and below sewage treatment plants for histological analysis by USGS scientists. Although field work for the project was completed in 2020, factors related to the pandemic caused significant delays in laboratory processing. In 2021, data collected in the study were published by the USGS (Breitmeyer, S.E., Walsh, H.L., Smalling, K.L., Blazer, V.S., Boetsma, A.C., Carper, L.G., Cohl, J.A., Dietze, J.E., Iwanowicz, L.R., Lane, R.F., Raines, C.D., Schreiner, M.L., Tush, D.L., Wilson, M.C., Sperry, A.J., Bunnell, J.F., Burritt, P.M., and Dragon, J., 2021, Organic and inorganic constituents in surface water and native and non-native fish and frog health data collected from streams, impoundments and wetlands in the New Jersey Pinelands, 2017-2020: U.S. Geological Survey data release, <https://doi.org/10.5066/P93VW8GX>).



**Above:** Non-native black crappie was one of the fish species sampled for evidence of endocrine disrupting chemicals at lakes upstream and downstream of a sewage treatment plant.

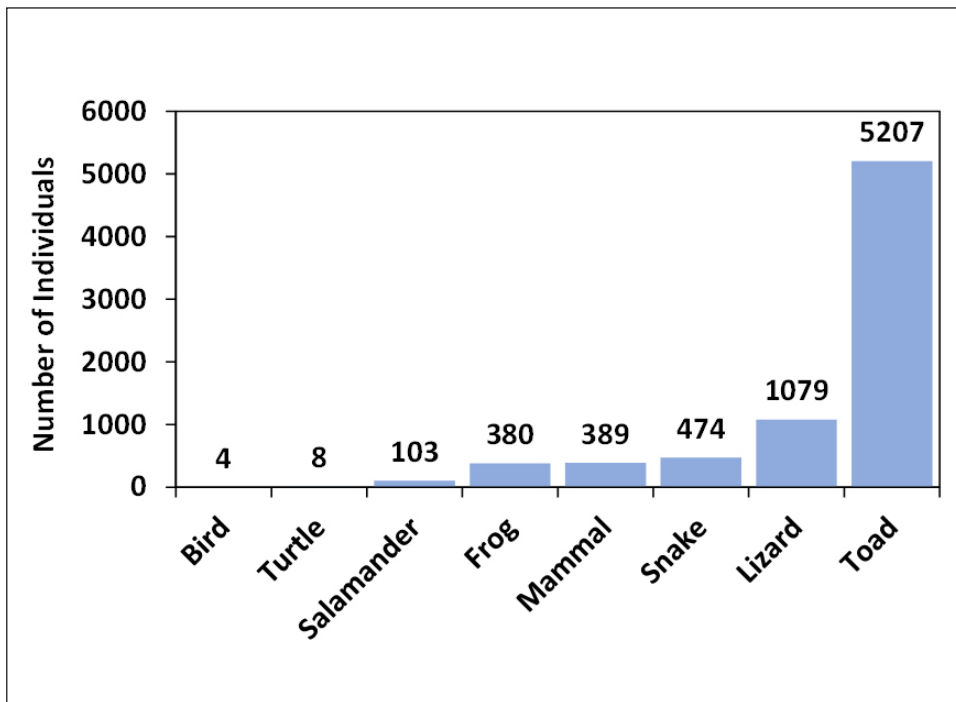
Photo/John Bunnell

In 2022, USGS and Commission researchers published the research in a scientific journal: Breitmeyer, S. E., H. L. Walsh, V. S. Blazer, J. F. Bunnell, P. M. Burritt, J. Dragon, M. L. Hladik, P. M. Bradley, K. M. Romanok, and K. L. Smalling. 2022. Potential health effects of contaminant mixtures from point and nonpoint sources on fish and frogs in the New Jersey Pinelands. *Science of the Total Environment* 851 (2022) 158205. <https://doi.org/10.1016/j.scitotenv.2022.158205>. The results of the study showed that upland agriculture and developed land were the primary drivers of contaminant concentrations rather than municipal wastewater. Municipal wastewater mostly contributed personal care products. Intersex, or the presence of egg cells in males, varied by fish species and was extremely low in frogs. The prevalence of parasites in animals was site and species dependent.

The study was funded by a grant from the William Penn Foundation through the Delaware Watershed Research Fund administered by the Academy of Natural Sciences of Drexel University, a match by the Pinelands Commission, and a match by the USGS.

## **Joint Corn Snake Radio Tracking and Drift Fence Study**

In 2016, Commission scientists began to collaborate with Dr. Howard Reinert of The College of New Jersey, Mr. Robert Zappalorti of Herpetological Associates, and the NJDEP Endangered and Nongame Species Program staff to conduct an intensive research project on the corn snake in the Pinelands. The corn snake is a colorful, secretive species of rat snake that reaches the northern limit of its range in the New Jersey Pine Barrens. Also called the red rat snake, the corn snake is listed as an endangered species by the NJDEP. The goals of the corn snake research are to better understand the habitat requirements and life history of this



**Above:** The number of individuals from various animal groups captured from 2016-2019 during the drift fence study.

secretive serpent to develop meaningful conservation management programs for the species and ensure its continued survival in the Pinelands.

The research includes two components: radio-telemetry and headstarting, which is a conservation technique where vulnerable young animals are raised in captivity until they attain a larger size and then released into the wild. For the telemetry aspect, researchers surgically implant small radio-transmitters in adult corn snakes and locate the snakes on a regular basis to collect data on their activity

range; types of habitats used; and the locations for nesting, shedding, and hibernation. In 2019, scientists completed radio tracking of 29 corn snakes, which concluded the telemetry component of the study. Corn snake telemetry data will be analyzed by research collaborators at The College of New Jersey.

For the headstarting component of the study, researchers collect corn snake eggs from nest areas and transport them to a laboratory for incubation and hatching. All of the hatchlings are microchipped and one-half of them are released back to the primary nest area as cold-released snakes. The other group of hatchlings are kept in the laboratory over the winter and released the following spring as headstarted snakes. The goal is to recapture as many of these snakes as possible to assess growth and survivorship of the cold-released and headstarted hatchlings over time.

From 2016 – 2019, a total of 182 corn snake hatchlings were PIT tagged and released. The 182 hatchlings included 96 cold-released and 86 headstarted hatchlings. In 2019, a drift fence array was established at the primary nest area to help recapture corn snake hatchlings to assess the survival of headstarted and cold-released hatchlings and to compare the effectiveness of using a drift fence outfitted with box traps and artificial wood and metal cover to detect corn snakes and other species of snakes. From 2019 - 2022, the drift fence and artificial cover placed at this study area and other study areas resulted in the capture of 7 (7%) cold-released and 15 (22%) headstarted hatchlings, for a total of 22 (12%) hatchlings recaptured. During this same period, a total of 7,644 animals were found along the drift fence, under the artificial cover associated with the fence, or in the box traps. These 7,644 animals included 15 species of snakes and 22 species of toads, frogs, salamanders, lizards, turtles, mammals, and birds. The drift fence was removed from the area at the end of 2022. Scientists will continue to monitor corrals and strategically placed cover in this study area and other nearby areas for new and previously pit tagged snakes.

This Joint Corn Snake Study is being funded by the Pinelands Commission and the NJDEP.



## Eastern Kingsnake Study

In 2019, the Commission was awarded funding for a grant proposal, titled “Activity range, habitat use, shedding, denning, and nesting of the wetland-dependent eastern kingsnake.” The eastern kingsnake is listed as a species of special concern in New Jersey because it is vulnerable to multiple threats, is potentially declining, and its distribution and population status are not known. Although kingsnakes are a wetland-dependent species that use wetlands for overwintering, the specific wetland habitat types needed for hibernation and the amount and type of associated upland habitats used for foraging, shedding, and nesting have not been documented.

Commission scientists are collaborating with Mr. Robert Zappalorti of Herpetological Associates and Dr. Howard Reinert of The College of New Jersey on this four-year study. Scientists are using radio telemetry to determine the activity range; upland and wetland habitat use; and timing of shedding, denning, and nesting of the eastern king snake.

From 2019 – 2022, scientists radio-tracked 47 kingsnakes, including 23 females and 24 males. Of the 47 kingsnakes, 22 snakes are hibernating, 20 are dead, 4 have been released, and 1 is missing. Radio-tracking was completed in 2022. The study snakes will be collected after they emerge from dens, transmitters will be removed, and the snakes will be released.

This research is being funded by a grant from the U.S. EPA and a match by the Commission through the Pinelands Conservation Fund.

## Ground Skink eDNA Study

In 2020, the Commission began to collaborate with Dr. Julie Lockwood and Kathleen Kyle of Rutgers University. Dr. Lockwood and Ms. Kyle were interested in sampling the wood and metal cover placed along the drift fence array (see Drift Fence Study above) to determine whether they could detect environmental DNA of a small common lizard called the ground skink. Environmental DNA (eDNA) is nuclear or mitochondrial deoxyribonucleic acid (DNA) shed by organisms into their surroundings as they move, grow, breed, and decompose. Compared to terrestrial habitats, the use of eDNA is more advanced in aquatic habitats because of the ease of drawing water from the habitat through a filter and analyzing the filter for eDNA. Detection of eDNA from dry surfaces and soil is a new field of research. The use of eDNA has the potential to revolutionize traditional survey and monitoring programs that rely on visual detection by an observer, especially for secretive or rare species, such as many species of reptiles.

In late-2020 and early 2021, Ms. Kyle sampled the underside of the wood and metal cover the Commission placed along the drift fence array and the soil beneath the artificial cover and analyzed the samples for ground



**Above:** Field work was completed on a four-year study of the wetland-dependent eastern kingsnake.

Photo/John Bunnell

skink eDNA. The results indicated that detection probabilities were 4 – 16 times greater than visual detection. Ground skink eDNA was detected under cover objects up to two weeks after the last visual detection and at some cover objects where skinks had not been visually observed in prior months. These results suggest that combining eDNA with traditional cover object surveys can greatly increase the power of detecting reptiles during surveys.

In 2022, the study was completed and published in a scientific journal: Kyle, K. E., M. C. Allen, J. Dragon, J. F. Bunnell, H. K. Reinert, R. Zappalorti, B. D. Jaffe, J. C. Angle, and J. L. Lockwood. 2022. Combining surface and soil environmental DNA with artificial cover objects to improve terrestrial reptile survey detection. *Conservation Biology* 36 e13939. <https://doi.org/10.1111/cobi.13939>.

The ground skink research was funded by Rutgers University and the Commission through the Pinelands Conservation Fund.

## Eastern Box Turtle Study

In 2021, the Commission began to radio-track eastern box turtles. This species is listed by the NJDEP as a species of special concern because it is vulnerable to multiple threats, its distribution and population status in the state are not well understood, and it is potentially declining throughout its range. One goal of this research on box turtles is to gather data on turtle behavior, habitat use, movement, and use of nest sites and hibernacula in the Pinelands. Another goal is to monitor turtles in burned and unburned areas to better understand the relationship between turtles and prescribed fire. In 2021, a total of 20 box turtles were captured and outfitted with external transmitters and radio-tracked about once each week. The turtles were tracked to their winter hibernation areas.



**Above:** A female box turtle currently being radio-tracked as part of the study.  
Photo/John Bunnell

In 2022, staff frequently checked the box turtles in spring to detect when they emerged from hibernation burrows. The timing of emergence is important information for assessing the potential impact of conducting prescribed fires in the vicinity of box turtles that are on the ground surface. Science staff captured, processed, and began tracking additional turtles. Currently, 36 box turtles are being radio-tracked as part of the study. In November, the turtles were tracked to hibernation burrows and geographic coordinates were collected at these locations.

Science staff also assisted turtle researchers from the MidAtlantic Center for Herpetology and Conservation to conduct box turtle surveys in the Pinelands. Genetic samples were collected from four box turtles and shipped out for analysis as part of a larger box turtle study being conducted across the geographic range for this species. Commission staff are working with NJDEP staff to obtain funding for future box turtle research.

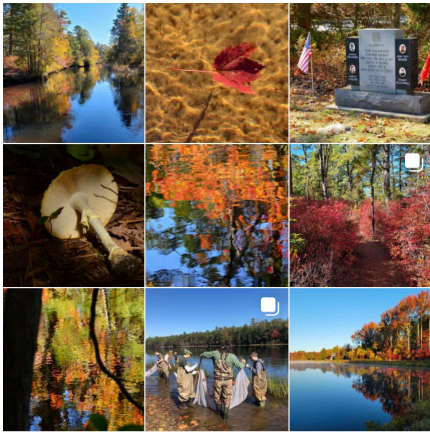
# Public Information, Education & Outreach

## Raising Awareness, Fostering Stewardship

The Commission continued to raise awareness and appreciation of the Pinelands in 2022, educating thousands about the region's resources.

The Commission cosponsored and carried out the 33rd annual Pinelands Short Course at Stockton University's main campus in Galloway Township on March 12, 2022. More than 400 people attended the event, which featured 31 educational presentations, including 15 new programs. Three Commission staff members delivered presentations, and the event also included four field trips and three live musical performances.

Commission staff educated 100 students about water quality and the importance of protecting the Pinelands at Batsto Lake on June 2, 2022. Students slipped on waders and used



nets to catch fish, while learning about the native and non-native species that can be found in Batsto Lake.

Approximately 75 people attended the 6th annual Pinelands Summer Short Course on July 21, 2022. The daylong, educational event was held at Stockton University's Kramer Hall in downtown

Hammonton. The event featured five classroom programs and four field trips. Event and course evaluations were overwhelmingly positive for both Short Course events.

Staff members delivered three presentations during the annual Pinelands Orientation for Newly Elected Officials on July 26, 2022. The event was held at the Commission's headquarters and was livestreamed and archived on YouTube.

The Commission also organized and hosted 10 educational presentations that were livestreamed and are available on the Commission's YouTube Channel. The presentations covered winter breeding in birds of prey, the Commission's new

## By the Numbers:

In 2022, the Commission's staff:

- Responded to more than 600 public inquiries about recreation, general information about the Pinelands and the Commission, and other non-development application questions;
- Organized and carried out the 33rd annual Pinelands Short Course, the 6th Pinelands Summer Short Course, a spring and fall edition of the annual, Pinelands-themed World Water Monitoring Challenge events, and the annual Pinelands Orientation for Newly Elected Officials. The events educated a total of more than 750 people;
- Organized, hosted, promoted and recorded 10 educational presentations that were livestreamed and archived on YouTube. The presentations have been viewed more than 1,500 times;
- Took and shared 928 photos on the agency's Instagram site and shared 375 Tweets on Twitter;
- Created and shared 16 videos that raise awareness of the Pinelands on the Commission's YouTube Channel;
- Organized and carried out the second Archaeology and Anthropology Symposium at the Commission's headquarters. The event attracted more than 60 people; and
- Maintained, updated and enhanced the Pinelands Commission's website, including the creation of two new webpages (the Climate Change webpage and Rain Garden webpage).

stormwater rules, the spongy moth caterpillar, communication among amphibians, insects and mammals, a live musical performance by local musician Pat Seiler, communication among plants and birds, fungal biodiversity in the Pinelands, and invasive species threats, identification and control.

Staff educated more than 130 students about the Pinelands during the fall version of the World Water Monitoring Challenge at Batsto Lake on October 21, 2022. The event is co-organized and staffed by the Commission, NJDEP, New Jersey Division of Parks & Forestry, the Jacques Cousteau National Estuarine Research Reserve, and Americorps Ambassadors.

The Commission also held its first-ever Moth Night on October 6, 2022. The evening began with an indoor presentation that focused on the attributes and beneficial features of moths. Following the presentation, more than 20 attendees went outside to identify and photograph moths at two stations with screens and powerful lighting.

Commission staff also organized and hosted the second Archaeology and Anthropology Symposium at



**Above:** More than 400 people attended the 33rd annual Pinelands Short Course, which included a presentation with live snakes. The presentation was delivered by Commission Research Scientist Jeff Dragon. Photo/Paul Leakan

the agency's headquarters on November 18, 2022. The symposium was held in honor of renowned Pinelands archaeologist Budd Wilson, and it included seven presentations on a wide variety of topics related to Pinelands archaeology and history. (Please see a photo from the event on page 26.)

Last but not least, the Commission shared hundreds of posts, dozens of videos, nearly 1,000 photographs, and numerous polls and Pinelands-themed trivia contests on its social media sites (Instagram, Twitter and YouTube).



**Above:** About 20 members of the public ventured outside to search for moths during the Commission's first-ever Moth Night on October 6, 2022. Photo/Paul Leakan

## Pinelands National Reserve Calendar

The Pinelands Commission issued its seventh edition of the Pinelands National Reserve wall calendar in early December 2022.

The calendar features a theme of State Parks and Forests and includes 38 stunning photos that were captured at Bass River State Forest, Batsto Village, Belleplain State Forest, Brendan T. Byrne State Forest, Double Trouble State Park, Whitesbog Village and Wharton State Forest.

The Commission worked with Rowan College at Burlington County to design and print the calendar.

All of the photos were taken by members of the Commission's staff.

Aside from the photos of the region's resources, the calendar includes State holidays, dates of Pinelands Commission meetings and important dates in Pinelands history.

A total of 800 copies of the calendar were printed and distributed free of charge at the Bass River



**Above:** The front cover of the 2023 Pinelands National Reserve wall calendar features a photo of fall foliage flanking a hiking trail at Double Trouble State Park.

State Forest, Batsto Visitor Center, Belleplain State Forest, Brendan T. Byrne State Forest, the General Store at historic Whitesbog Village, and at the Pinelands Commission's headquarters.

The project was funded through the Education and Outreach component of the Commission's Pinelands Conservation Fund.



**Above:** More than 60 people attended the Commission's second Archaeology and Anthropology Symposium on November 18, 2022. The event was held in the Richard J. Sullivan Center for Environmental Policy & Education. Photo/Paul Leakan

# Finances

## Fiscal & Budget

The Commission's Operating Budget for Fiscal Year 2022 totaled \$5,966,202. Of this, \$4,932,889, or 82.68% percent, was budgeted for personnel expenses.

Budgeted revenue sources included \$618,000 in federal grants, a \$3,249,000 State appropriation, \$688,000 in State grants and other State funding, \$500,000 in application fees and \$911,202 from the Commission's fund balance and reserves.

The budget for the Pinelands Conservation Fund was \$1,043,632. The Kathleen M. Lynch-van de Sande ("Katie") Fund for the Reforestation of the New Jersey Pinelands had a budget for \$20,000, which funded the installation of a rain garden at the Commission's headquarters in June 2022.

The Commission's Audit Report for Fiscal Year 2021, which ended June 30, 2021, will be completed later this year. The Fiscal Year 2020 Audit Report is available at <https://pub.njleg.state.nj.us/publications/auditor/2021/03002221.pdf>.

## Pinelands Application Fees

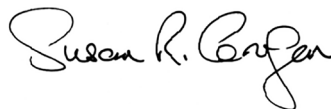
Since April 2004, the Pinelands Commission has received application fees to partially underwrite the direct costs associated with reviewing development applications in the Pinelands Area. During Fiscal Year 2022, unaudited application fee revenues actually collected totaled \$1,113,432.35 (\$470,003.39 more than Fiscal Year 2021).

## Refurbishing Fenwick Manor

In 2022, the Commission applied for and received an historic site management grant from the New Jersey Historic Trust. The grant will allow the Commission to complete a Preservation Plan for its historic office building, known as Fenwick Manor. The structure was built in the early 1820s and is listed on the State and National Registers of Historic Places. Elizabeth C. White helped to cultivate the highbush blueberry while living in Fenwick Manor. The Commission signed a contract with its selected consultant in late November 2022, and the preparation of the plan is underway. The Commission also received a special \$500,000 state appropriation specifically for stabilization, improvement and long-term maintenance of the building.

## Certification

As required by State Executive Order #37, all State authorities are required to certify that during the preceding year the authority has, to the best of its knowledge, followed all of the authority's standards, procedures, and internal controls. I hereby certify to the best of my knowledge that, during the 2022 calendar year, all of the Commission's standards, procedures, and internal controls were followed.



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Susan R. Grogan  
Executive Director

# Scenes around the Pinelands in 2022



**Above:** New Jersey is among the top growers of blueberries in the U.S., with most of the production occurring in the Pinelands. The NJ Division of Travel & Tourism featured this photo on Instagram.



**Above:** Native pink lady's slipper orchids can be seen blooming in the Pinelands from early to mid-May. They are among approximately 27 wild orchid species in the Pinelands.



**Above:** Hikers can see brilliant fall foliage in Double Trouble State Park in the Pinelands. Located in Ocean County, the park is over 8,000 acres and offers more than eight miles of official, blazed trails.



**Above:** Great blue herons are a common but beautiful sight along Wildlife Drive at the Edwin B. Forsythe National Wildlife Refuge in the Pinelands National Reserve.

**Photos by Paul Leakan  
NJ Pinelands Commission**



**Cover image:** Layers of fall foliage in Wharton State Forest in the New Jersey Pinelands.

Photo/John Bunnell