ORDINANCE NO. 2024-07

AN ORDINANCE AMENDING CHAPTER 335, ZONING AND LAND USE, AND CHAPTER 336, STORMWATER, OF THE CODE OF THE BOROUGH OF BERLIN, COUNTY OF CAMDEN AND STATE OF NEW JERSEY

WHEREAS, the Pinelands Protection Act (N.J.S.A. 13:18A-1) requires that the municipal master plan and local land use ordinances of the Borough of Berlin implement the objectives of the Pinelands Comprehensive Management Plan (N.J.A.C. 7:50) and conform with the minimum standards contained therein; and

WHEREAS, the Pinelands Comprehensive Management Plan incorporates by reference certain stormwater management regulations contained at N.J.A.C. 7:8; and

WHEREAS, the New Jersey Department of Environmental Protection adopted amendments to certain stormwater management regulations contained at N.J.A.C. 7:8, effective July 17, 2023.

WHEREAS, the Pinelands Commission adopted amendments to the Pinelands Comprehensive Management Plan, effective December 4, 2023.

NOW, THEREFORE, BE IT ORDAINED by the Borough Council of the Borough of Berlin, County of Camden and State of New Jersey, as follows:

SECTION 1: Chapter 336, Stormwater Control, Article II, Stormwater Control in Pinelands Area, Section 336-22, Stormwater Management Requirements, is hereby amended by revising subsection D. as follows:

D. Tables 1, 2, and 3 below summarize the ability of stormwater best management practices identified and described in the New Jersey Stormwater BMP Manual to

satisfy the green infrastructure, groundwater recharge, stormwater runoff quality and stormwater runoff quantity standards specified in **§336-22N, O, P, and Q**. When designed in accordance with the most current version of the New Jersey Stormwater BMP Manual and this Section, the stormwater management measures found in **Tables 1, 2, and 3** are presumed to be capable of providing stormwater controls for the design and performance standards as outlined in the tables below. Upon amendments of the New Jersey Stormwater BMP Manual to reflect additions or deletions of BMPs meeting these standards, or changes in the presumed performance of BMPs designed in accordance with the New Jersey Stormwater BMP Manual, the NJDEP shall publish in the New Jersey Registers a notice of administrative change revising the applicable table. The most current version of the BMP Manual can be found on the NJDEP website at: ~~https://njstormwater.org/bmp_manual2.htm~~ https://dep.nj.gov/stormwater/bmp-manual/.

SECTION 2: Chapter 336, Stormwater Control, Article II, Stormwater Control in Pinelands Area, Section 336-22, Stormwater Management Requirements, is hereby amended by revising subsection O. as follows:

O. Groundwater Recharge Standards

(1) (No change.)

(2) For all major development, the total runoff volume generated from the net increase in impervious surfaces by ~~a~~ the current 10-year, 24-hour storm, as defined and determined in **§336-23H**, shall be retained and infiltrated onsite.

(3) For minor development that involves the construction of four or fewer dwelling units, the runoff generated from the total roof area of the dwelling(s) by ~~a~~ the current 10-year, 24-hour storm, as defined and determined in **§336-23H**, shall be retained and infiltrated through installation of one or more green infrastructure stormwater management measures designed in accordance with the New Jersey Stormwater BMP Manual. Appropriate green infrastructure stormwater management measures include, but are not limited to dry wells, pervious pavement systems, and small scale bioretention systems, including rain gardens.

(4) -- **(5)** (No change.)

SECTION 3: Chapter 336, Stormwater Control, Article II, Stormwater Control in Pinelands Area, Section 336-22, Stormwater Management Requirements, is hereby amended by revising subsection Q. as follows:

Q. Stormwater Runoff Quantity Standards

(1) (No change.)

(2) In order to control stormwater runoff quantity impacts, the design engineer shall, using the assumptions and factors for stormwater runoff calculations at **§336-23**, complete one of the following:

(a) Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction runoff hydrographs for the current and projected 2-, 10-, and 100-year storm events, as defined and determined in **§336-23H and I**, do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storm events;

(b) Demonstrate through hydrologic and hydraulic analysis that there is no increase, as compared to the pre-construction condition, in the peak runoff rates of stormwater leaving the site for the current and projected 2-, 10- and 100-year storm events, as defined and determined in **§336-23H and I**, and that the increased volume or change in timing of stormwater runoff will not increase flood damage at or downstream of the site. This analysis shall include the analysis of impacts of existing land uses and projected land uses assuming full development under existing zoning and land use ordinances in the drainage area;

(c) Design stormwater management measures so that the post-construction peak runoff rates for the current and projected 2-, 10- and 100-year storm events, as defined and determined in **§336-23H and I**, are 50, 75 and 80 percent, respectively, of the pre-construction peak runoff rates. The percentages apply only to the post-construction stormwater runoff that is attributable to the portion of the site on which the proposed development or project is to be constructed; or

(d) (No change.)

(3) -- **(5)** (No change.)

SECTION 4: Chapter 336, Stormwater Control, Article II, Stormwater Control in Pinelands Area, Section 336-23, Calculation of Stormwater Runoff and Groundwater Recharge, is hereby amended as follows:

§336-23. Calculation of Stormwater Runoff and Groundwater Recharge

A. Stormwater runoff shall be calculated by the design engineer using the USDA Natural Resources Conservation Service (NRCS) methodology, including the NRCS Runoff Equation and Dimensionless Unit Hydrograph, as described in Chapters 7, 9, 10, 15 and 16 Part 630, Hydrology National Engineering Handbook, incorporated herein by reference as amended and supplemented, except that the Rational Method for peak flow and the Modified Rational Method for hydrograph computations shall not be used. This methodology is additionally described in Technical Release 55 - Urban Hydrology for Small Watersheds (TR-55), dated June 1986, incorporated herein by reference as amended and supplemented. Information regarding the methodology is available from the Natural Resources Conservation Service website at: ~~https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044171.pdf~~ https://directives.sc.egov.usda.gov/viewerFS.aspx?hid=21422 or at United States Department of Agriculture Natural Resources Conservation Service, ~~220 Davison Avenue, Somerset,~~ New Jersey ~~08873~~.

B. (No change.)

C. For the purpose of calculating ~~runoff coefficients~~ curve numbers and groundwater recharge, there is a presumption that the pre-construction condition of a site or portion thereof is a wooded land use with good hydrologic condition. The term "curve number" applies to the NRCS methodology at **A.** above. A ~~runoff coefficient~~ curve number or a groundwater recharge land cover for an existing condition may be used on all or a portion of the site if the design engineer verifies that the hydrologic condition has existed on the site or portion of the site for at least five years without interruption prior to the time of application. If more than one land cover has existed on the site during the five years immediately prior to the time of application, the land cover with the lowest runoff potential shall be used for the computations. In addition, there is the presumption that the site is in good hydrologic condition (if the land use type is pasture, lawn, or park), with good cover (if the land use type is woods), or with good hydrologic condition and conservation treatment (if the land use type is cultivation).

D. -- G. (No change.)

H. The precipitation depths of the current two-, 10-, and 100-year storm events shall be determined by multiplying the values determined in accordance with items **(1)** and **(2)** below:

(1) The applicant shall utilize the National Oceanographic and Atmospheric Administration (NOAA), National Weather Service's Atlas 14 Point Precipitation Frequency Estimates: NJ, in accordance with the location(s) of the drainage area(s) of the site. This data is available at:

https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=nj; and

(2) The applicant shall utilize **Table 5**: Current Precipitation Adjustment Factors below, which sets forth the applicable multiplier for the drainage area(s) of the site, in accordance with the county or counties where the drainage area(s) of the site is located. Where the major development lies in more than one county, the precipitation values shall be adjusted according to the percentage of the drainage area in each county. Alternately, separate rainfall totals can be developed for each county using the values in the table below.

Table 5: Current Precipitation Adjustment Factors

County	Current Precipitation Adjustment Factors		
	2-year Design Storm	10-year Design Storm	100-year Design Storm
Camden	1.03	1.04	1.05

I. **Table 6**: Future Precipitation Change Factors provided below sets forth the change factors to be used in determining the projected two-, 10-, and 100-year storm events for use in this chapter, which are organized alphabetically by county. The precipitation depth of the projected two-, 10-, and 100-year storm events of a site shall be determined by multiplying the precipitation depth of the two-, 10-, and 100-year storm events determined from the National Weather Service's Atlas 14 Point Precipitation Frequency Estimates pursuant to **H.(1)** above, by the change factor in the table below, in accordance with the county or counties where the drainage area(s) of the site is located. Where the major development and/or its drainage area lies in more than one county, the precipitation values shall be adjusted according to the percentage of the drainage area in each county. Alternately, separate rainfall totals can be developed for each county using the values in the table below.

Table 6: Future Precipitation Change Factors

County	Future Precipitation Change Factors		
	2-year Design Storm	10-year Design Storm	100-year Design Storm
Camden	1.18	1.22	1.39

SECTION 5: Chapter 336, Stormwater Control, Article II, Stormwater Control in Pinelands Area, Section 336-24, Sources for Technical Guidance, is hereby amended as follows:

§336-24. Sources for Technical Guidance

A. Technical guidance for stormwater management measures can be found in the documents listed below, which are available to download from the NJDEP's website

at: ~~http://www.nj.gov/dep/stormwater/bmp_manual2.htm~~
https://dep.nj.gov/stormwater/bmp-manual/.

(1) (No change.)

(2) Additional maintenance guidance is available on the NJDEP's website at:
~~https://www.njstormwater.org/maintenance_guidance.htm~~
https://dep.nj.gov/stormwater/maintenance-guidance/.

B.

(1) Submissions required for review by the NJDEP should be mailed to:

The Division of ~~Water Quality~~Watershed Protection and Restoration, New Jersey Department of Environmental Protection, Mail Code ~~401-02B~~501-02A, PO Box 420, Trenton, New Jersey 08625-0420.

(2) (No change.)

SECTION 6: Chapter 335, Zoning and Land Use, Article II, Definitions, Section 335-2, Definitions and word usage, is hereby amended by adding to subsection C. the following definitions:

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.

HYDROLOGIC UNIT CODE-11 or HUC-11 – Means an area within which water drains to a particular receiving surface water body, also known as a subwatershed, which is identified by an 11-digit hydrologic unit boundary designation, delineated within New Jersey by the United States Geological Survey.

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.

SECTION 7: Chapter 335, Zoning and Land Use, Article VI, Zoning Regulations, Section 335-77, General zoning provisions, is hereby amended by repealing and replacing subsection K(8)(d) as follows:

(d) Water Management.

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

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

[a] The Atlantic Basin is comprised of Watershed Management Areas 13, 14, 15, and 16, as identified by the New Jersey Department of Environmental Protection.

[b] The Delaware Basin is comprised of Watershed Management Areas 17, 18, 19, and 20 as identified by the New Jersey Department of Environmental Protection.

[3] A diversion within the Pinelands Area portion of Berlin Borough involving the intrabasin transfer of water between HUC-11 watersheds in the same basin, Atlantic Basin or Delaware Basin as defined at **[2][a]** and **[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 **[4]** below.

[4] Within the Pinelands Area portion of Berlin Borough 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 **[4][c]** through **[f]** below and the water management standards of the Pinelands Comprehensive Management Plan at N.J.A.C. 7:50-6.86(d). "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.

[a] When evaluating whether the proposed diversion meets the criteria set forth at **[4][c]** through **[f]** below, all of the applicant's allocations in an HUC-11 watershed, in addition to the proposed diversion, shall be included in the evaluation.

[b] The standards set forth at **[4][c]** through **[f]** below shall not apply to:

[i] A new well that is to replace an existing well, provided the existing well is decommissioned in accordance with N.J.A.C. 7:9D-3 and the new replacement well will:

[A] Be approximately the same depth as the existing well;
[B] Divert from the same aquifer as the existing well;
[C] Have the same or lesser pump capacity as the existing well; and
[D] Be located within 100 feet of, and in the same HUC-11 watershed as, the existing well;

[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.

[c] A proposed diversion shall be permitted only in the following Pinelands Management Areas: Regional Growth Area; and Rural Development Area.

[d] 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/.

[e] 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 N.J.A.C. 7:50-6.86(d)6 and 7, respectively. A proposed diversion deemed to have an adverse local impact in the Pinelands Area is prohibited. A proposed diversion deemed to have an adverse regional impact shall only be permitted if an applicant permanently offsets the diversion in accordance with N.J.A.C. 7:50-6.86(d)6i.

[f] 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.

Pinelands Water Management and Stormwater Management Model Ordinance Background Information and Guidance

3/28/2024

Amendments to the Pinelands CMP Water Management Regulations

The Pinelands Commission amended the water management regulations contained in the Pinelands Comprehensive Management Plan (CMP), effective December 4, 2023[1]. The 2023 amendments strengthen the protection of the Kirkwood-Cohansey aquifer and the Pinelands ecology while ensuring a sufficient water supply for development in more growth-oriented areas of the Pinelands Area. These regulations govern the transfer, exportation, and withdrawal of water in and from the Pinelands Area.

Pinelands Area municipalities have previously incorporated the CMP's water management standards into their land development regulations. Therefore, these amended water management regulations need to be incorporated as well. In particular, the amendments do the following:

- They clarify and strengthen the current restriction on transferring water between different basins in the Pinelands Area (i.e., interbasin transfer) by explicitly prohibiting such transfers and defining the two basins in the Pinelands Area

- They clarify the regulation of water transfer within a basin in the Pinelands Area (i.e., intrabasin transfer). The amendments explicitly allow the transfer of water between HUC-11 watersheds within either the Atlantic or Delaware basin.

- They clarify and strengthen the current restrictions on diversions from the Kirkwood-Cohansey aquifer, by defining ecological impact with measurable standards, requiring well applicants to conduct tests, analyses, and modelling to evaluate ecological impacts and expanding the scope of wells subject to these regulations.

Importantly, these CMP amendments do not replace or modify the New Jersey Department of Environmental Protection (DEP) water supply allocation permits rules (N.J.A.C. 7:19). The amendments do not provide Pinelands Area municipalities with any additional regulatory authority over the permitting of wells.

These CMP amendments allow an exemption from certain requirements within the water management standards for proposed diversions related to resource extraction operations, provided that the use is non-consumptive. To be eligible for the exemption, the applicant must demonstrate the diversion is non-consumptive by submitting a hydrogeologic report when the diversion is proposed from the Kirkwood-Cohansey aquifer. If your municipality's land development regulations contain application requirements for resource extraction operations, this ordinance will be amended to require the submission of a hydrogeologic report.

[1] Proposal Notice: 54 N.J.R. 1668(a); Adoption Notice: 55 N.J.R. 2407(a)

DEP amendments impacting the Pinelands CMP Stormwater Regulations

The New Jersey Department of Environmental Protection (DEP) amended the stormwater management regulations contained at N.J.A.C. 7:8, effective July 17, 2023[2]. The stormwater management regulations in the Pinelands CMP incorporate various sections of N.J.A.C. 7:8 by cross-reference, including sections that were impacted as part of this amendment. As such, Pinelands municipal stormwater control ordinances must be amended to incorporate these revised standards.

Please note that the amendments provided in this model ordinance only serve to implement the stormwater management amendments that are applicable within the Pinelands Area. Pinelands municipalities are still required to take any necessary actions related to the Flood Hazard Area Control Act regulations that were also amended. Additionally, for those municipalities that are partially within the Pinelands Area, these amendments trigger the need for the municipality to update both their Pinelands and Non-Pinelands stormwater control ordinances. Please refer to DEP guidance with regard to any necessary updates to your municipality's Non-Pinelands stormwater control ordinance and Flood Hazard Protection ordinance.

Municipal Action
Ordinance Adoption Required

The Pinelands Protection Act requires that Pinelands Area municipalities amend their municipal master plans and land development regulations to implement the objectives and minimum environmental standards of the Pinelands CMP. The amendments to the CMP water management regulations and the DEP stormwater regulations prompt the need for Pinelands Area municipalities to amend their land development regulations.

The Pinelands Protection Act requires Pinelands municipalities to act within one year of the effective date of any CMP amendment. Municipalities must update their Pinelands municipal stormwater control ordinance by July 17, 2024. Municipalities must update their Pinelands water management standards by December 4, 2024. However, we strongly encourage Pinelands municipalities to adopt these changes at the same time. Pinelands Area municipalities should review the prepared model ordinance enclosed with their professional staff and plan to adopt these amendments by July 17, 2024.

Please submit your municipality's anticipated schedule for adoption of the attached model ordinance by **April 26, 2024**. The schedule should be submitted via email to: planning@pinelands.nj.gov.

If you have questions regarding this model ordinance, please contact the Commission's Planning Office at the above email address.

[2] Proposal Notice: 54 N.J.R. 2169(a); Adoption Notice: 55 N.J.R. 1385(b)

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
TAHESHA L. WAY
Lt. Governor

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

LAURA E. MATOS
Chair
SUSAN R. GROGAN
Executive Director

March 28, 2024

Rick Miller (via email)
Berlin Borough
59 South White Horse Pike
Berlin, NJ 08009

Dear Mayor Miller,

I am writing to notify you of two separate matters involving the regulations contained in the Pinelands Comprehensive Management Plan (CMP).

First, the Pinelands Commission amended the water management regulations contained in the Pinelands CMP at N.J.A.C. 7:50-6.86 (see 55 N.J.R. 2407(a)). These rules went into effect December 4, 2023.

Second, the New Jersey Department of Environmental Protection (NJDEP) amended the stormwater management regulations contained at N.J.A.C. 7:8 (see 55 N.J.R. 1385(b)). These amendments went into effect July 17, 2023. The stormwater management regulations in the Pinelands CMP incorporate various sections of N.J.A.C. 7:8 by cross-reference, including some that were impacted as part of this amendment.

The Pinelands Protection Act requires that Pinelands Area municipalities amend their municipal master plans and land development regulations to implement the objectives and minimum environmental standards of the Pinelands CMP. As a result of these two rulemakings, Berlin Borough is required to amend its land development regulations to maintain consistency with the Pinelands CMP.

The Pinelands Protection Act requires the Borough to act within one year of the effective date of the CMP amendment. Those amendments pertaining to stormwater management triggered by the NJDEP rulemaking are required to be adopted by July 17, 2024. The amendments related to water management are required to be adopted by December 4, 2024. Please note that starting July 17, 2024, the Pinelands Commission will require all applications for development in the Pinelands Area to meet these revised stormwater standards, regardless of whether the municipality has adopted them into their land development regulations.

In order to assist the Borough in meeting this obligation, enclosed is a model ordinance tailored to Berlin Borough's existing certified land use ordinance(s). It incorporates necessary revisions to address both amendments described above. I encourage the Borough to adopt all of the amendments at the same time.

Please note that while your municipality may have recently adopted the NJDEP's revised 2023 model stormwater control ordinance, it will still need to make corresponding changes to the stormwater management regulations applicable to the Pinelands Area portion of the Borough, which are included in the attached model ordinance.

I ask that you please review the attached materials with your professional staff and plan to adopt these amendments by July 17, 2024.

Please provide us with the municipality's anticipated schedule for adoption of the ordinance by April 26, 2024, via email to: planning@pinelands.nj.gov.

Thank you for your timely consideration of this matter. Should you have any questions or concerns, or believe a meeting would be beneficial, please feel free to contact Mr. Brad Lanute of our staff.

Sincerely,

Susan R. Grogan, P.P., AICP
Executive Director

Rick Miller
Mayor

DBL/CBE
Enclosures

Rachel von der Tann

c: Rachel von der Tann, Municipal Clerk (via email)
Charleen Santora, Administrator (via email)
Howard Long, Municipal Attorney (via email)
Al Hallworth, Zoning Officer (via email)