

**DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF WATER RESOURCES MANAGEMENT COORDINATION**

**PROPOSED AMENDMENT TO THE OCEAN COUNTY WATER  
QUALITY MANAGEMENT PLAN**

**Public Notice**

**Take notice** that the New Jersey Department of Environmental Protection (Department) is seeking public comment on a proposed Wastewater Management Plan (WMP) for Ocean County. This amendment, proposing a new areawide WMP for Ocean County, was submitted by the Ocean County Board of Chosen Freeholders as the designated planning agency and developed by the Ocean County Planning Department, as the designated WMP agency for Ocean County, in accordance with the WQMP Rules, N.J.A.C.7:15, and P.L. 2011, c. 203, as amended by P.L. 2013, c. 188. This proposed WMP will amend the Ocean County Water Quality Management (WQM) Plan upon adoption by the Department. The WMP sets out countywide wastewater treatment and conveyance capabilities with respect to municipal master plans and projected development based on existing municipal zoning and projected population growth. This WMP will replace all previously adopted municipal and county utility authority WMP's in Ocean County.

The Ocean County WQMP is divided into three planning areas; Northern, Central, and Southern, each of which is served by a centralized wastewater treatment facility. All three facilities are owned and operated by the Ocean County Utilities Authority (OCUA), which is the designated management agency for wastewater treatment under the WQMP. Within the Northern planning area of the Ocean County WQMP, there are portions of Monmouth County,

specifically areas of Freehold Township, Freehold Borough, Millstone Township, Howell Township, Farmingdale Borough and Wall Township that are primarily located in the Toms River and Metedeconk River drainage areas. However, Monmouth County has WMP responsibility in the portions of the Northern planning area of the Ocean County WQMP that extend into Monmouth County and as a result, these municipalities will be addressed in Monmouth County's Wastewater Management Plan.

The proposed amendment includes a planned 0.6 Million Gallons per Day (MGD) treatment plant for the New Egypt Town Center in Plumsted Township. It is proposed to be located in the vicinity of Route 537 and New Egypt-Allentown Road on Block 40, Lot 4 and discharge to the adjacent Crosswicks Creek. Plumsted Township's redevelopment plan calls for the creation of a new public sewer system which would serve the New Egypt Town Center area of Plumsted Township. The purpose of this system would be to support center-based development to reverse the economic decline of the downtown area, as well as to address ongoing public health and welfare issues. The sewer service area for the new treatment plant would remain consistent with the Future Wastewater Service Area (FWSA) map for Ocean County which was adopted by the Department on February, 7, 2013 and with this proposed WMP.

The proposed amendment anticipates extending sanitary sewer infrastructure to existing buildings at Island Beach State Park in Berkeley Township. Island Beach State Park is an approximately ten mile area of natural beaches and coastal dunes located at the southernmost end of the Barnegat Peninsula in Berkeley Township. The Department is planning to extend sanitary sewer from existing infrastructure just outside of the park to certain existing structures inside the park. The extension of sanitary sewer lines into the park will create new wastewater flow to

the Ocean County Utility Authority and will eliminate the need for the exclusive use of the various on-site treatment systems in the park. The areas of these select structures in the park have been added to the County's proposed sewer service area as part of this WMP proposal. Additional flow from the park to the OCUA's Central Water Pollution Control Facility is projected to be 0.024 MGD, less than the permitted 0.049 MGD approved under the park's New Jersey Pollutant Discharge Elimination System (NJPDES)-Discharge to Groundwater Permit. Once sewer connections have been constructed, the existing NJPDES permitted onsite treatment plant will continue to operate on a more limited basis.

Amendments to the Water Quality Management Planning (WQMP) Rules in 2008 necessitated changes to previously adopted sewer service areas based on environmental sensitivity and local planning objectives as described in this document. In accordance with these regulatory requirements, 37,061 acres were removed from the previously adopted sewer service area. Also, 11,371 acres that were not part of the previously approved sewer service area had been added based on local planning objectives, NJ Pinelands Commission requirements and an assessment of environmentally sensitive areas. These changes resulted in a net removal of 25,690 acres from the sewer service area

The proposed amendment identifies areas to be served by sewage treatment facilities/sewer systems and areas served by individual subsurface sewage disposal systems (ISSDS) with wastewater planning flows of 2,000 gallons per day (gpd) or less (septic systems). The WMP also evaluates future wastewater treatment needs, water supply demands and nonpoint sources of pollution. All appropriate WMP requirements for compliance with N.J.A.C 7:15 and P.L. 2011, c. 203, as amended by P.L. 2013, c. 188 are outlined in the following paragraphs.

In accordance with N.J.A.C. 7:15-5.24, environmentally sensitive areas (ESA) have been assessed to determine what areas must be excluded from SSA as adopted herein. Pursuant to N.J.A.C. 7:15-5.24, ESAs are defined as contiguous areas of 25 acres or larger consisting of habitat for threatened and endangered wildlife species as identified on the Landscape Project Maps of Habitat for Endangered, Threatened or Other Priority Specific, Natural Heritage Priority Sites, Category One special water resource protection areas, and wetland, alone or in combination.

In accordance with N.J.A.C. 7:15-5.24(b)1, to determine areas designated as threatened or endangered wildlife species habitat, an analysis was performed utilizing the Department's Division of Fish and Wildlife, Endangered and Non-Game Species Program "Landscape Project" maps of habitat for Endangered, Threatened, or Other Priority Species, version 3.1. The Landscape Project identifies areas of critical habitat that support or potentially support Federal or State endangered or threatened species, and other species of concern. Endangered and Threatened Species habitats reviewed under this analysis are Rank 5 (Federal endangered and/or threatened species), Rank 4 (State endangered species), and Rank 3 (State threatened species). This analysis determined that portions of the WMP planning area contained areas that serve as habitat for threatened and endangered species. After extensive coordination and consultations between the Department, Ocean County, municipalities, and municipal utility authorities, many of these environmentally sensitive areas have been removed from the WMP sewer service area. Areas identified by the Landscape Project as being suitable habitat for threatened and endangered species are not included in the proposed sewer service areas except as provided under N.J.A.C. 7:15-5.24(e) – (h), or unless a site has undergone a site specific Habitat Suitability Determination prepared in accordance with N.J.A.C. 7:15-5.26 that found the site to be not

suitable habitat, or pursuant with N.J.A.C. 7:15-5.24(g)2, the Department determined the environmentally sensitive area are not critical to a population of endangered or threatened species the loss of which would decrease the likelihood of the survival or recovery of the identified species. Additionally, pursuant to N.J.A.C. 7:15-8.1(b)2, projects that have received both local approvals and Department wastewater approvals have not been removed from the future sewer service area.

In accordance with N.J.A.C. 7:15-5.24(b)2, areas mapped as Natural Heritage Priority Sites are not included in the adopted SSA of this notice, except as provided under N.J.A.C. 7:15-5.24(e) - (h).

In accordance with N.J.A.C. 7:15-5.24(b)3, areas identified as special water resource protection areas along Category One waters and their tributaries are not included in the proposed sewer service areas, except as provided under N.J.A.C. 7:15-5.24(e) – (h). The required buffer width is applied to both sides of a stream measured from the top of bank of an intermittent or perennial stream, or centerline if the bank is not defined, and from the defined edge of a lake, pond or reservoir at bank full flow or level. Category One waters and their tributaries are afforded a 300-foot buffer. In addition, as required under N.J.A.C. 7:15-5.20(b)3, the proposed WMP text indicates that development in riparian zones, or designated river areas, may be subject to special regulation under Federal or State statutes or rules. Most development within these riparian zones is limited by these regulatory programs

In accordance with N.J.A.C. 7:15-5.24(b)4, areas mapped as wetlands pursuant to N.J.S.A. 13:9A-1 and 13:9B-25 are not included in the adopted SSA, except as provided under N.J.A.C. 7:15-5.24(e) - (h).

In accordance with N.J.A.C. 7:15-5.25(c), an environmental constraints/build-out (build-out) analysis was conducted to identify existing and future projected flow for all parcels within the sewer service areas. Projected flow was evaluated on undeveloped or under-developed parcels within the existing and future SSA. Projected wastewater flow was calculated in accordance with N.J.A.C. 7:14A-23.3 (sewer service areas) or N.J.A.C. 7:9A (septic areas) based upon the current municipal zoning and included potential development of all remaining non-environmentally constrained parcels of vacant land and any existing parcels currently served by ISSDS that are located within the proposed sewer service area and not currently provided sanitary sewer service. Projected wastewater flow calculations excluded environmentally constrained areas specifically, wetlands, riparian zones, and open space. The build out in septic areas was calculated by applying municipal zoning over all undeveloped land except polygons which were too small to support additional development. The number of residential units and non-residential percent lot coverage area were then multiplied by the wastewater planning flow estimates in either N.J.A.C. 7:14A-23.3 or N.J.A.C. 7:9A, as appropriate.

In accordance with N.J.A.C. 7:15-5.25(d), an analysis was performed to assess the existing and future wastewater needs for each treatment plant. The existing wastewater flow for each wastewater treatment plant was calculated based on the annual average of the monthly metered flow from inland municipalities during the period of January 2010 through December 2010 as reported to the Department in the Discharge Monitoring Reports (DMRs) received from all the wastewater treatment plants in Ocean County. For coastal municipalities, the average summer seasonal peak flow from 2010 was used. Different flow methods were used for inland and coastal municipalities due to the large wastewater flow changes in the

summertime in the coastal municipalities due to tourism. Ocean County used 2010 flow data in their calculations because it was the most representative year of normal conditions available to them before Superstorm Sandy hit and impacted typical wastewater flow volumes due to temporary reduction in population. The existing wastewater flow volumes from each wastewater treatment plant and the future wastewater flow as projected in the build out analysis indicated above were combined to determine the total projected future wastewater flow from each specific wastewater treatment plant's SSA. The results were utilized to assess whether sufficient capacity exists in Ocean County's wastewater treatment plants to accommodate future wastewater treatment needs.

The analyses performed pursuant to N.J.A.C. 7:15-5.25(c) and (d) demonstrate that the potential wastewater generation from each treatment plant's SSA does not exceed the permitted capacity for each treatment facility, except for the Northern Water Pollution Control Facility. Specifically, the build out analysis of each treatment plant's SSA and the existing permitted capacity of those treatment plants identified no need for future expansion of the Central Water Pollution Control Facility or for the Southern Water Pollution Control. However, an expansion of the Northern Water Pollution Control Facility (NWPCF) would be necessary if a full build out were to occur within the SSA based on current zoning. Population and flow projections indicate that by 2035 wastewater influent directed to the NWPCF will reach 93% of its present capacity. The OCUA has been independently monitoring growth and flow numbers, and if an expansion is warranted, it plans to prepare an anti-degradation analysis to address future increased flow; including non-binding estimated water quality based effluent limits. OCUA commenced a planning study for the expansion of the NWPCF's capacity from 32 MGD to 36 MGD, which is nearly complete. OCUA does not anticipate moving forward with the design engineering phase of the expansion

immediately, but will continue to evaluate the incoming flow and begin design when conditions warrant.

In accordance with N.J.A.C. 7:15-5.25(e), the future wastewater treatment needs were evaluated for the development of those areas of Ocean County that are outside of the proposed sewer service area and are to be served by ISSDS's. The nitrate dilution model developed by the Department: *A Recharge-Based HUC 11-Scale Nitrate-Carrying-Capacity Planning Tool for New Jersey, v3.0* (MS Excel Workbook) was applied. This model estimates the minimum lot size necessary to support conformance with the Ground Water Quality Standards (GWQS) rules at N.J.A.C. 7:9C, as well as the Water Quality Management Planning Rules at N.J.A.C. 7:15, in order for areas served by ISSDS's to achieve a planning standard of 2 mg/L nitrate on a hydrologic unit classification (HUC) 11 basis. It is, therefore, necessary to determine how much development relying on ground water disposal of wastewater can be supported on a HUC 11 basis within the planning area while attaining this planning standard, using one of the nitrate dilution models described in the Water Quality Management Planning rule. Achieving the planning standard ensures that existing ground water quality will be maintained on a regional basis, thus ensuring compliance with the antidegradation requirements in the GWQS rules.

The Department has established standards for the maximum allowable units on a HUC 11 basis to ensure that nitrate levels in groundwater do not exceed 2 mg/L. Each HUC 11's septic density value is equivalent to the number of acres needed to accommodate a single ISSDS. To calculate a HUC 11's total capacity for additional nitrate dilution in terms of dwelling units, the total acreage of all vacant land is divided by that HUC 11's septic density. With the Department's concurrence, Ocean County included permanently preserved open space in the



vacant land calculation. This value can then be compared to the total units allowed by current municipal zoning regulations. If the total units allowed by zoning is less than or equal to the maximum allowable units capable of sufficient nitrate dilution, no action is required. If the total units allowed by zoning exceed the maximum allowable units capable of sufficient nitrate dilution, this is an indication that if future build out occurs based on the current zoning, there will be increases in the nitrate levels in the groundwater that exceed the nitrate target.

The results of the nitrate dilution analysis indicate that current municipal zoning is sufficient to regulate future septic developments in 22 of the 25 of Ocean County HUC 11s. The initial results of this nitrate dilution analysis indicate that one HUC (# 02040301110) which covers portions of Barnegat, Lacey, and Ocean Townships, would exceed the 2 mg/L nitrate target if built out under current zoning regulations. The NJDEP model used to produce these results, and all nitrate dilution projections in this WMP, incorporates an Equivalent Dwelling Unit (EDU) formula for all non-residential parcels which, lacking specific development parameters such as type of non-residential development, square footage of floor space, number of floors, etc., may project nitrate discharges from non-residential zones that are greater than those from similar areas of residential zones—especially when applied to exceedingly large tracts of land.

According to the EDU formula, several industrial and commercially zoned parcels in the vicinity of Lacey Township's Oyster Creek Nuclear Generating Station are projected to discharge more than their proportional share of this HUC 11's total assimilative capacity if developed as zoned. At the time of this writing, however, Oyster Creek Nuclear Generating Station is still operational and will start decommissioning in 2019, a process that is expected to take several years. No development is expected to occur in this area until the decommissioning is

complete, and any future development in this area is almost certainly to be either NJPDES permitted or added to the sewer service area through an amendment to the WQMP. Furthermore, the County anticipates that a significant percentage of the remaining area in question will be designated for preservation in the course of decommissioning. The Department has acknowledged that the ultimate nitrate discharges from the Oyster Creek area will most likely be less than what is currently projected and has, therefore, determined that as long as this HUC 11 is identified as “of Special Concern” in the WMP, meaning, that all proposed projects or activities will now be considered on a case-by-case and cumulative basis moving forward, and those that are proposed to be served by ISSDS’s must still meet the septic density criteria established by one of the Department’s approved nitrate dilution/carrying capacity models, that the WMP may be approved with that acknowledgement.

According to the nitrate dilution analysis, portions of Lakewood Township in HUC 11 (# 02040301020) are zoned for a greater density of septic development than can be accommodated to remain within the 2 mg/L nitrate target. The portion of the HUC that is within Jackson Township is zoned at a density that meets the nitrate target. Although 72.26% of this HUC 11 is outside the political boundaries of Ocean County, and municipal zoning and or restricted land in these remaining areas could offset the land deficiency on the Ocean County side, local zoning in several parts of Monmouth County also exceed their proportional shares of the assimilative capacity. It is reasonable to assume that both of these localized zoning imbalances in Monmouth County and Lakewood Township contribute to this HUC 11 exceeding its cumulative nitrate target.

In HUC 11 (# 02040301030), the nitrate dilution model has shown that current zoning regulations in Jackson Township exceed the cumulative capacity for septic

development by more than ten percent. As previously mentioned, this may be, in part, due to the projection of greater amounts of septic discharges from large tracts of commercially zoned areas.

At the present time, Ocean County, Monmouth County, and the Department are engaged in discussions regarding HUC 11 (# 02040301020 and # 02040301030), to propose appropriate remedial actions for specific locations in these HUC 11s which are projected to discharge in excess of the assimilative capacity. While this process continues, the Department has advised Ocean County to not include nitrate dilution projections for those municipalities which are situated in HUC 11s initially projected to exceed their cumulative nitrate targets. This applies to Jackson Township and Lakewood Township. The nitrate dilution analysis for these two municipalities will be submitted separately in the future and according to those mechanisms the County may choose to incorporate.

In accordance with N.J.A.C 7:15-5.25(f), the water supply needs associated with the environmental build out performed at N.J.A.C. 7:15-5.25(c) were evaluated to determine whether the water supply needs can be met with existing, new or expanded water supplies that do not conflict with the current NJ State Water Supply Plan, last adopted in August 1996. To satisfy the water supply analysis, Ocean County used data provided by the Department's Division of Water Supply and Geoscience to document current monthly supplies of potable water by public water utilities and projected water demand at buildout by public water utilities and private wells located outside of water purveyor areas.

Current water allocation and demand were derived from NJDEP Public Water System Deficit/Surplus database <http://www.nj.gov/dep/watersupply/pws.html>. Future water demand was calculated by applying the Daily Residential Water

Demand for a 3-bedroom house (Residential Site Improvement Standards (RSIS) at N.J.A.C. 5:21-5.2, Table 5.1 “Water Demand/Generation by Type/ Size of Housing”) and Daily Non-Residential Water Demand for the applicable use (Safe Drinking Water Act rules, N.J.A.C. 7:10-12.6(b)2, (Table 1) to the buildout results. The results were then converted to millions of gallons per month (MGM). To determine if a purveyor will have a deficit in future water supply, Current Water Allocation was subtracted from the sum of Current Water Demand and Future Water Demand.

For developable land outside of purveyor areas, a comparison was made between Available Water and Future Water Demand by Regional Water Resources Planning Areas (RWRPA). A number of resources were needed to complete this comparison. The 1996 NJ Statewide Water Supply Plan was used to find water availability by RWRPA. Water Demand Average 2005-2009 was derived from a report created by the NJDEP entitled “NJGWS DGS13-1 Computer Workbook Summarizing New Jersey Withdrawals and Discharges on a HUC 11 Basis”, December 2014. Finally, Future Water Demand was calculated, by HUC 11 watershed, using the results of the buildout analysis and the same calculations that were used in purveyor areas, were used in this case as well. In order to make the comparison between water availability and future water demand, HUC 11 watersheds were grouped into Regional Water Resources Planning Areas. To determine if a purveyor will have a deficit in future water supply, Water Available was subtracted from the sum on Water Demand Average 2005-2009 and Future Water Demand.

The results of the water supply demand calculations indicate that 46 out of the 50 purveyors that service the non-urban towns in Ocean County, will have excess capacity at buildout. Three purveyors, Lacey Township MUA, Manchester

Township Water Utility and New Jersey American Water Company – New Egypt, project a deficit in future water supply and Jensen’s Deep Run Adult Village is currently in a water supply deficit. In addition private well areas in Metedeconk, Toms River, and Atlantic Coastal water resources planning areas are in deficit at buildout.

While the affected towns will not be required to rezone, specific projects in these areas will be addressed on an individual basis when a permit is requested from the NJDEP. Other strategies for addressing deficit areas are listed in NJAC 7:15-5.25(f)2, and include: obtaining additional water supply through reuse, obtaining water from a source with available capacity, adopting water conservation ordinances to reduce demand to match available supply or reducing the amount of water demand by reducing the amount or altering the type of planned future development.

In accordance with N.J.A.C. 7:15-5.25(g)1, an assessment of nonpoint source pollution impacts with respect to stormwater was evaluated. To comply with this requirement, Ocean County municipalities adopted stormwater management ordinances. These ordinances specify that the stormwater performance requirements of the Stormwater Management rules, N.J.A.C 7:8 must be met through the use of non-structural measures, where possible. If non-structural measures alone are insufficient to meet the rule requirements, then the proposed project must be supplemented with structural best management practices (BMPs) as necessary.

In accordance with N.J.A.C. 7:15-5.25(g)2, an assessment of nonpoint source pollution impacts with respect to riparian corridors was evaluated. Three Ocean County municipalities, Barnegat Township, Brick Township and Stafford

Township, adopted riparian zone ordinances that are in compliance with N.J.A.C. 7:15 to ensure the protection of the riparian corridors along all perennial and intermittent streams. As required, the adopted ordinances establish and protect riparian buffer conservation zones (“stream corridor buffer”). The stream corridor buffers vary in width depending upon the water body’s classification in the Surface Water Quality Standards at N.J.A.C. 7:9B-1.15, the minimum width being 50 feet of undisturbed vegetation on both sides of the stream, under the following regulations: the Flood Hazard Area Control Act Rules, the Stormwater Management rules, and the Water Quality Management Planning rules. The Department will continue to work with Ocean County to ensure that the remaining municipalities proceed to implement protections to riparian corridors from the effects of nonpoint source pollution.

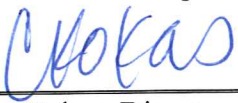
This proposed amendment represents only one part of the permit process and other issues may need to be addressed prior to final issuance of all appropriate permits. Additional issues which may need to be addressed may include, but are not limited to, the following: compliance with stormwater regulations; antidegradation; effluent limitations; water quality analysis; exact locations and designs of future treatment works (pump stations, interceptors, sewers, outfalls, wastewater treatment plants); and development in wetlands, flood prone areas, designated Wild and Scenic River areas, or other environmentally sensitive areas which are subject to regulation under Federal or State statutes or rules.


Approval of this amendment does not eliminate the need for any permits, approvals or certifications required by any Federal, State, County or municipal review agency with jurisdiction over this project/activity.

**This notice** is being given to inform the public that a plan amendment has been proposed for the Ocean County WQM Plan. All information related to the WQM Plan, and the proposed amendment is located at the Department, Office of Water Resources Management Coordination, 401 East State Street, P.O. Box 420, Mail Code 401-02A, Trenton, New Jersey 08625. The Department's file is available for inspection between 8:30 a.m. and 4:00 p.m., Monday through Friday. An appointment to inspect the documents may be arranged by calling the Office of Water Resources Management at (609) 777-4349.

**A public hearing** on the proposed amendment will be held on November 16, 2015 from 6:00pm to 8:00pm at Mancini Hall in the Ocean County Library Toms River Branch, 101 Washington Street, Toms River Township, N.J. or close of testimony, whichever comes first.

**Interested persons** may submit written comments on the amendment to WQM Program Docket, Office of Water Resources Management Coordination, at the Department address cited above, with a copy sent to Mr. David McKeon, Ocean County Department of Planning, P.O. Box 2191, Toms River, NJ 08754-2191. All comments should reference Program Interest No. 435448, Activity No WMP150001 and must be submitted within 15 days following the public hearing. All comments submitted prior to the close of the comment period shall be considered by the Department in reviewing the amendment request.

  
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Collen Kokas, Director  
Office of WRM Coordination  
Department of Environmental Protection

  
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Date

