

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATERSHED MANAGEMENT

ADOPTED AMENDMENT TO THE MERCER COUNTY WATER QUALITY
MANAGEMENT PLAN

Public Notice

Take notice that on **MAR 06 2007**, pursuant to the provisions of the New Jersey Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq., and the Statewide Water Quality Management Planning rules (N.J.A.C. 7:15-3.4), an amendment to the Mercer County Water Quality Management Plan (WQMP) was adopted by the Department of Environmental Protection (Department). This amendment, submitted on behalf of East Windsor Municipal Utility Authority (EWMUA), will adopt an updated Wastewater Management Plan (WMP) for East Windsor Township and allow for the upgrade and expansion of the existing EWMUA Millstone Sewage Treatment Plant (STP) from 3.35 million gallons per day (mgd) to 4.5 mgd. Treated wastewater from the EWMUA Millstone STP is discharged to the Millstone River, a Category 2, (C2), Fresh Water 2 (FW-2) waterway as classified under the Surface Water Quality Standards, N.J.A.C. 7:9B.

This amendment does not include any expansion to the designated sewer service area of the EWMUA. As part of the build-out analysis for the current adopted WMP, 1.15 mgd of future wastewater flow from a portion of the sewer service area was to be conveyed to a proposed EWMUA satellite treatment facility. However, this satellite treatment facility was never constructed. Consequently, this adopted amendment eliminates reference to the previously planned satellite treatment facility and provides that the projected 1.15 mgd that was to be treated at

the satellite treatment facility will be treated at the EWMUA Millstone STP. As a result of this change, the total projected future flow, based on the new environmental constraints/build-out analysis to the EWMUA Millstone STP, is 4.5 mgd. All projected wastewater flow has been calculated in accordance with N.J.A.C. 7:14A-23.3.

As part of this amendment, adjustments to the sewer service area delineation along the border between Hightstown Borough and East Windsor Township were adopted in order to more accurately reflect the boundary line contained in existing tax maps for these municipalities. Furthermore, adjustments have been made to exclude all parklands from being delineated as sewer service area. Through this amendment, the EWMUA will remain as the designated WMP planning agency for all of East Windsor as well as for portions of the existing sewer service area that are within Hightstown Borough and Washington Township.

This amendment has been reviewed in accordance with Executive Order 109(2000) (EO-109) and N.J.A.C. 7:15-5.18. The Township of East Windsor has adopted a Riparian Buffer Conservation Zone Ordinance (No. 2000-11) to ensure the protection of the riparian zone along all perennial and intermittent streams. The Ordinance establishes and protects a conservation buffer zone of 100 feet from the one hundred-year flood line extending outward on both sides of the stream channel. If no one hundred-year flood line is present, the conservation buffer zone is to be 100 feet outward from the top of the bank of the stream. The existing Ordinance was modified to establish a conservation buffer zone of 300 feet for any waterbodies that may be reclassified as Category 1 under the Surface Water

Quality Standards in the future. The modified Ordinance also includes a conservation buffer zone of a minimum of 75 feet for lakes, ponds, or reservoirs.

It was determined by the Department that, in order to meet the Nonpoint Source Pollutant Loading/Hydrmodification Analysis, an ordinance assuring compliance with the performance standards of the Stormwater Management Rules, N.J.A.C. 7:8 must be adopted prior to adoption of the WMP. The performance standards must be met through the use of non-structural measures, where possible. If non-structural measures alone are insufficient to meet the performance standards, then the proposed project must supplement with structural best management practices (BMPs) as necessary. To satisfy this requirement, the Township of East Windsor adopted Ordinance No. 2006-4.

The Endangered or Threatened Species Habitat Analysis was performed utilizing the Department's Division of Fish and Wildlife, Endangered and Non-Game Species Program "Landscape Project". The Landscape Project identifies areas of critical habitat of concern that support or potentially support species that are Rank 5 (Federal endangered and/or threatened species), Rank 4 (State endangered species), or Rank 3 (State threatened species). This analysis determined that no endangered and/or threatened species habitat Ranked 3, 4 or 5 are identified within the WMP area.

The Water Use Analysis indicated that no new or expanded source of potable water, well allocation or water diversion is required as a result of this amendment.

As a result of the transfer of the projected 1.15 mgd flow of wastewater from the service area that had been planned to be served by the satellite facility, this amendment includes an expansion and upgrade of the existing EWMUA Millstone STP to accommodate the increase in wastewater flow. Therefore, an antidegradation analysis for discharge to a C2 waterbody was required.

The EWMUA Millstone facility is currently regulated under a NJPDES discharge to surface water permit #NJ0023787 for a flow value of 3.35 mgd with associated pollutant loadings. This WQMP amendment, in accordance with the New Jersey Surface Water Quality Standards (SWQS) antidegradation regulations for a C2 waterbody at N.J.A.C. 7:9B-1.5, has been evaluated in accordance with the following conditions: that the proposed NJPDES permit for the expanded flow of 4.5 mgd will require that there be no increase in loading to the receiving stream for carbonaceous biochemical oxygen demand (CBOD), Total Suspended Solids (TSS), Phosphorus, Ammonia, Nickel, and Silver. It should be noted that an antidegradation evaluation is to ensure that water quality that is better than standards will not be degraded, unless allowed through a socio-economic justification. The Millstone River is currently impaired with respect to Phosphorus and that a Total Maximum Daily Load (TMDL) is being developed which may require improved Phosphorus treatment at this facility.

For parameters regulated as concentration only: fecal coliform, dissolved oxygen, and pH, the Department will propose to retain existing permit concentration limitations. In addition, the permit action to incorporate this increase in flow into the permit will propose Water Quality Based Effluent Limits (WQBEL) for pollutants in accordance with the NJPDES regulations at N.J.A.C. 7:14A-13.

Based upon an alternatives analysis and the socio-economic justification provided to the Department, an increase is proposed in the mass loading of total dissolved solids (TDS) permitted to be discharged to the receiving stream. However, this proposed increase in the mass loading is contingent upon compliance with the SWQS at N.J.A.C. 7:9B-1.14 for TDS.

In accordance with the SWQS, this increased loading of TDS, along with the appropriate water quality based Whole Effluent Toxicity (WET) limitation, is anticipated to be protective of aquatic biota and other existing or designated uses in the Millstone River.

In an effort to avoid a lowering of water quality, alternatives to the increased TDS loadings were evaluated. The alternative considered was to treat the effluent for the TDS through a membrane filtration reduction process or reverse osmosis (RO). An alternative analysis was conducted for the possible use of the RO process. This analysis was based on a multitude of social and economic factors obtained for East Windsor Township, including the cost of the necessary treatment plant expansion and the total capital cost of the installation and operation of the energy intensive RO wastewater treatment process. The existing user cost for the EWMUA STP is reported to be approximately \$385.00 per household per year. The STP expansion and upgrade would add an additional \$91.00 per household per year, for a total of \$476.00 per household per year. The capital cost for the RO process was estimated to be approximately \$28.0 million dollars per year. When combined with operations and maintenance costs, the cost of utilizing reverse osmosis would be an additional \$1,831.00 per household per year, which, when combined with the \$476.00 per household per year for the expanded plant, results in a total user cost

of \$2,307.00 per household per year. The alternative analysis concluded that the proposed installation and operation of the RO process would cause adverse social and economic impact to the community of East Windsor. In addition, the Department concluded that no harmful effects to aquatic biota in the receiving waterbody is expected from the increase in TDS as a result of an expansion of the STP.

Based on the finding that the increase in TDS from the expanded STP is expected to result in no harmful effects to aquatic biota in the receiving waterbody and that the addition of the RO process would place a significant financial burden on the existing customers of the EWMUA sewer service area, the Department concluded that the increase in TDS has been justified and is acceptable in accordance with N.J.A.C. 7:9B. However, if future evaluations indicate that a more stringent WQBEL is required, the Department will propose such in a future permit action. In addition, Phosphorus treatment can result in increased levels of TDS. In the event that improved levels of Phosphorus treatment are required as result of the TMDL and will increase TDS beyond the currently anticipated levels, the socio-economic justification related to the lowering of water quality with respect to TDS may need to be revisited.

This amendment proposal was noticed in the New Jersey Register on August 7, 2006 at 38 N.J.R. 3187(b). A public hearing on the proposed WQMP amendment, conducted by the Mercer County Planning Board, was held on Thursday, September 14, 2006. The Mercer County Planning Board and the Department received comments during the comment period. The Mercer County Planning Board considered these written comments and on October 11, 2006, in accordance

with the Mercer County WQMP Amendment Procedures, the Mercer County Planning Board formally endorsed the amendment in the form of Resolution No. 2006-01.

The following people submitted written and/or oral comments on this amendment:

Number – Commenter Name, Affiliation

1. Carmela Roberts, P.E., Borough of Hightstown Engineer
2. Christopher H. DeGrezia, Esq., Drinker, Biddle & Reath, LLP
3. Henry L. Kent-Smith, Esq., Saul Ewing, Attorneys at Law, LLP

Summary of Comments and Responses:

The comments submitted and the Department's responses are summarized below. The number(s) in parentheses after each comment identifies the respective commenter(s) listed above.

Comment 1:

The commenter identified typographical errors that incorrectly labeled several parcels within East Windsor currently served by the Borough of Hightstown STP and indicated that the drafted WMP clarify that Block 48, Lots 19, 20, & 22, currently served by the Borough of Hightstown Wastewater Treatment Plant, will be transferred to the EWMUA sewer service area once service becomes available. Additionally, the commenter noted that the drafted WMP text and tables omitted existing residential flow and population from the Presbyterian Homes at Meadows

Lakes. This nursing home facility is located in East Windsor, however sewer service is provided by the Borough of Hightstown STP. Regardless of these needed corrections, the commenter indicated that the Borough of Hightstown intended to consent to the proposed amendment in the form of a resolution. Nonetheless, the commenter stressed that the items noted would require modification prior to adoption of the amendment by the Department and the Mercer County Planning Board. (1)

Response:

The Department confirmed the specific items noted and requested that EWMUA revise the WMP text and related tables in order to correct the errors accordingly. Therefore, the adopted WMP now reflects that Lots 1, 2 & 3 and not Lots 3 & 21 in Block 48 are currently served by the Borough of Hightstown STP. In addition, the population and flow tables within Section Three of the WMP have been corrected to account for all Blocks and Lots currently served by the Borough of Hightstown STP including those associated with the identified Nursing Home. Finally, the adopted WMP now clarifies that Block 48, Lots 19, 20, & 22, currently served by the Borough of Hightstown Wastewater Treatment Plant, will be transferred to the EWMUA sewer service area once service becomes available. These corrections did not affect the outcome for the final Buildout analysis of this amendment. The resolution consenting to the proposed amendment (#200 6-210) was adopted by the Borough of Hightstown Council on September 18, 2006.

Comment 2:

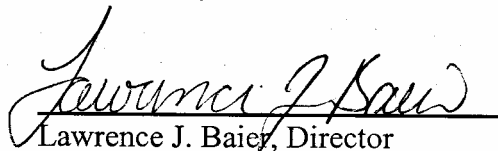
Two related comments were received on behalf of the property owners of parcels Block 13, Lots 1.01 and 1.02. Both commentors requested that these parcels be identified in the updated WMP for future sewer service by the EWMUA through the adopted amendment. The inclusion of these two parcels for future service by the EWMUA would include the future abandonment of an existing on-site wastewater treatment plant serving both parcels. (2) & (3)

Response

The Department determined that the future abandonment of the on-site STP currently serving the Elementis property, Block 13, Lot 1.10 and National Lead property, Block 13, Lot 1.02, and the subsequent inclusion of the two parcels for future sewer service by the EWMUA was a significant action not included in the proposed amendment published for public comment. The proposed inclusion of the two parcels for wastewater allocation based on the current Research Office zoning associated with the total developable acreage of approximately 49.4 acres of the 56.1 total acres was projected to be 43,046 mgd. The Department determined that the abandonment of the permitted STP for the subsequent inclusion of these parcels for future sewer service by the EWMUA would require identifying this significant action in the proposed updated WMP and therefore would necessitate re-noticing of the proposed amendment for public comment. The EWMUA indicated to the Department that they preferred proceeding with the adoption of the amendment for an updated WMP as originally noticed for public comment. Consequently, this proposed significant action for the abandonment of

the permitted STP and the inclusion of the identified parcels will require a separate amendment to the Mercer County WQMP at some future time.

This 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.



Lawrence J. Baier, Director
Division of Watershed Management
Department of Environmental Protection

March 6, 2007
Date