

DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
OFFICE OF LAND AND WATER PLANNING

AMENDMENT TO THE NORTHEAST WATER QUALITY MANAGEMENT PLAN

Public Notice

Take notice that on August 27, 1993, 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 Northeast Water Quality Management Plan was adopted by the Department of Environmental Protection and Energy (DEPE) subject to a number of conditions outlined below. This amendment adopts a Wastewater Management Plan (WMP) for Chatham Township. The WMP proposes the expansion of the Chatham Township Water Pollution Control Plant #1 (Chatham STP) from a design capacity of 0.75 million gallons per day (mgd) to 1.0 mgd, and delineates the expanded sewer service area for the Chatham STP. The WMP also delineates an expanded sewer service area for the Chatham Glen Sewage Treatment Plant (Chatham Glen STP) and specifies expansion of the Chatham Glen STP to 0.155 mgd. In addition, the Plan delineates an expanded sewer service area for the Madison-Chatham Joint Meeting STP located in Chatham Borough.

Notice of a public hearing on the amendment was published in the New Jersey Register on June 15, 1992. A public hearing on the amendment was held on July 23, 1992. In order to provide additional opportunity for public comment, notice of a second public hearing was published in the New Jersey Register on October 5, 1992. The second public hearing on the amendment was held on November 12, 1992. The public comment period on the amendment closed on November 27, 1992.

The DEPE received written comments from approximately 1,100 persons and 84 persons presented comments at the two public hearings. Approximately 45 persons fully supported the Plan, the other persons completely opposed the Plan or objected to one or more of its provisions. The Plan was endorsed, however, by the Mayor and Township Committee of Chatham Township. A summary of the comments received on the Plan and the DEPE's responses to these comments is included below.

In accordance with N.J.A.C. 7:15-5.18(a), the DEPE has determined that the proposed expansion of the Chatham Township STP from 750,000 gallons/day to 1.0 million

gallons/day reasonably represents the projected 20-year need of the sewer service area served by the Chatham Township STP. To effectively control potential secondary impacts of development made possible by the plant expansion on the Great Swamp National Wildlife Refuge (GSNWR), however, the DEPE hereby phases and conditions its approval of this expansion, as follows:

1. The DEPE hereby grants final water quality management planning approval for the first phase of the expansion of the Chatham Township plant to a capacity of up to 900,000 gallons/day, contingent upon capacity assurance by Chatham Township, and subject to the following conditions:

a. Priority in allocating this first phase of an additional 150,000 gallons/day is to be given to (1) serving affordable housing under the terms of the Scarce Resource Order issued by the Hon. Stephen Skillman, J.S.C., on August 20, 1990, (2) remediating existing water quality problems, particularly in the Green Village section of Chatham Township, and (3) serving other immediately pending development. In the event that the August 20, 1990 Scarce Resource Order is modified or repealed, or the scale of the development covered by the Scarce Resource Order is reduced, the balance of the capacity covered by the Scarce Resource Order shall be held in reserve pending completion and DEPE approval of the additional planning steps outlined in Paragraphs 2(a) through (d), below. In addition, any capacity allocated for remediating water quality problems in Green Village shall be held in reserve pending completion and DEPE approval of the septic management plan required by Paragraph 2(b) below;

b. Consistent with the recommendations of the Great Swamp Advisory Committee Final Report regarding the evaluation of secondary impacts of development in the Great Swamp watershed and the establishment of a water quality management planning goal of "no net increase" with respect to both stormwater quantity and pollutant loadings affecting the Great Swamp watershed in general and the GSNWR in particular, Chatham Township shall take all steps necessary to require applicants for site plan and subdivision approval for disturbances of 5,000 square feet or more that qualify as "projects" under N.J.S.A. 4:24-39 et seq. to submit for DEPE approval a plan for achieving, to the extent practicable, a goal of "no net increase in storm water runoff or pollutants." At a minimum, such a plan shall evaluate: (1) the applicability of the DEPE's current Best Management Practices for nonpoint source control, (2) on-site and off-site opportunities for nonpoint source control, and (3) the economic cost and environmental

effectiveness of these practices. The DEPE also strongly encourages Chatham Township to impose this requirement on those projects which have already received preliminary site plan or subdivision approval for disturbances of 5,000 square feet or more but which have not commenced construction as of the date of this wastewater management plan approval.

2. The DEPE hereby grants water quality management planning approval for the second phase of the expansion of the Chatham Township plant, to a capacity of up to a total of 1.0 million gallons/day, contingent upon capacity assurance by Chatham Township, and contingent upon the DEPE's written certification of the completion and compliance with the following conditions by the Township:

a. The development and implementation of a Township stormwater management plan approved by the DEPE. At minimum, the Township stormwater management plan must identify existing land uses and applicable land use regulations, must inventory, describe and quantify point and nonpoint sources of pollution and their relationship to existing land uses and land use regulations, and must identify and implement remedial measures to be implemented by the Township to address those sources of pollution;

b. The development and implementation of a Township septic system management plan approved by the DEPE. At minimum, the septic system management plan must identify septic system problems within the Township, including the Green Village area of the Township, identify remedial measures (including, but not limited to, regular septic maintenance) to address septic system problems, and contain a schedule for implementing regular septic system maintenance and other remedial measures;

c. The development and implementation of a Township water conservation plan approved by the DEPE. At a minimum, the water conservation plan will identify problems related to water loss and waste in the Township and identify and implement remedial measures to address those problems; and

d. The establishment, maintenance and operation of two monitoring stations on the Black Brook in accordance with a work plan to be approved by the DEPE. These stations should be strategically located, one upstream and one downstream of the Chatham Township Wastewater Treatment Plant, to enable the DEPE, the Township and the general public to effectively assess the impact of the effluent discharge of that Plant on the Black Brook and GSNWR. These stations must be equipped to monitor,

at a minimum, for the following parameters: flow, nitrogen, and phosphorus. The data collected will be reported on a quarterly basis to the DEPE.

In addition, it appears based on the description of the number of units, persons per unit, and gpd per person to be served by the Chatham Glen STP that the present population for this STP specified in Table 2 of the Plan is incorrect. This figure should be revised to 1268 persons, and the projected population figure should be revised accordingly. As part of the approval of this Plan the population figures for the Chatham Glen STP must be corrected. However, this does not affect the total flow specified in the Plan for the Chatham Glen STP.

Comments Regarding Great Swamp Ecology

COMMENTS: Numerous commenters objected to the Chatham Township WMP because of potential adverse impacts on the GSNWR and the watershed from the proposed increase in discharge from the Chatham Township STP and the increased development within the sewer service area (especially the Prudential Insurance Company's proposed Giralda Farms development). These potential adverse impacts include: (1) destruction of the ecological balance of the swamp and loss of existing wildlife habitat including endangered and threatened species habitat; (2) increased non-point source pollution loads adding pollution to the swamp and increasing flooding in and adjacent to the Refuge; (3) loss of vegetative cover from proposed development; (4) degradation of water quality within the swamp; (5) increased traffic due to further development within the watershed; (6) decreased ability of the Great Swamp to filter water supplies; (7) secondary impacts from proposed development on Green Acres parklands; and, (8) land use sprawl.

RESPONSE: The DEPE has approved the Chatham Township WMP in two phases, consisting of an initial phase of an increase in the permitted flow of the Chatham Township STP by 150,000 gallons per day (gpd) with a second phase of an additional 100,000 gpd only after the Township meets certain conditions. The purpose of the phasing and these conditions is to protect the GSNWR, acknowledging its sensitivity to both point and nonpoint sources of pollution.

In addition, over the past three years the Great Swamp Watershed Advisory Committee (GSWAC) has been meeting to develop recommendations for the protection of the GSNWR as well as surrounding lands within the watershed. The Final Report of the GSWAC was presented to the DEPE on April 29, 1993. As indicated in the Office of Land and Water Planning's (OLWP) response to the GSWAC Report, released August 26, 1993, the DEPE intends to propose amendments to the Northeast WQMP to advance regional planning, improve the

permitting process and acknowledge the importance and sensitivity of the Great Swamp. The amendments would acknowledge the GSNWR as an environmentally sensitive resource with specified goals within the Northeast WQMP. In addition, the OLWP has accepted the no net increase recommendation of the GSWAC. A combination of Best Management Practices and/or offsite mitigation designated to minimize impacts of pollutant loadings and stormwater runoff from development in the Great Swamp watershed may be accepted as evidence of meeting the goal of no net increase until such time as the concept is refined to include more precise performance measures.

Legal Comments

COMMENTS: Officials of Chatham Township persist in misrepresenting to the public Prudential's assumption that their Mt. Laurel obligation is conditional upon Prudential receiving a major share of the Townships increased sewage plant capacity. A contractual agreement between a developer and a municipality which provides the sale of a limited and scarce public resource as a condition of site plan approval is contrary to law and adverse to public welfare. The controlling Land Use Ordinance of Chatham Township, Ordinance 2-79 Amended does not contain the required regulations to authorize the Township to demand or receive contributions in any form from a developer for off tract sewage treatment approval.

RESPONSE: At this time, the sewer capacity of Chatham Township is subject to a Scarce Resource Order issued on August 20, 1990 by the Hon. Stephen Skillman, J.S.C. as part of the Township's Mt. Laurel proceedings. Under this Order, Chatham Township is obligated to grant priority to Prudential for all sewer capacity coming into existence now or in the future for the build-out of the Prudential project. This Order is binding on Chatham Township until and unless modified by the Appellate Division.

COMMENTS: The law which established the DEPE (N.J.S.A. 13:1D-9) requires that the Department: "prepare, administer and supervise statewide, regional and local programs of conservation and environmental protection, giving due regard for the ecology of the varied areas of the state and relationship to the environment". This will not be the case if this amendment is approved.

RESPONSE: Contrary to the commenter's assertions, the DEPE believes that the phased approach and planning conditions outlined in this approval have been imposed on Chatham Township out of "due regard" for the ecology of the Great Swamp and its relationship to the environment.

Comments Relating to the State Development and Redevelopment Plan (SDRP)

COMMENTS: The WMP does not comply with the goals and policies of the SDRP which places high priority on protecting the state's natural resources and controlling urban sprawl by redirecting it to areas with already developed infrastructure (sewers, roads, etc.).

RESPONSE: Unless the policies of the SDRP become incorporated into the zoning ordinance of the Township, the DEPE can not require that the WMP be consistent with the SDRP. However, it is the DEPE's intention to cooperate with the Office of State Planning in an effort to foster consistency among municipal and county plans and regulations, areawide WQMPs, and the SDRP. This issue is also discussed in the OLWP's response to the GSWAC report dated August 26, 1993.

Comments on Regional Planning

COMMENTS: Currently there is no independent mechanism, such as the Hackensack Meadowlands Development Commission, with strict standards and a clear mandate, to protect the Great Swamp and other natural resources of this area such as the Buried Valley aquifer from which the Boroughs of Chatham and Madison draw their water. Such mechanism would be charged with the review of development applications in the region and with the enforcement of mitigation measures.

The proposed amendment must be analyzed in tandem with the STP being expanded on Loantaka Brook in Morris Township and proposed for construction on Primrose Brook in Harding Township. Both brooks flow into the Great Swamp. The public health problems and environmental hazards to the Great Swamp are not confined solely to those residents of Green Village in Chatham Township. It also extends to homes in neighboring Harding and Long Hill Townships.

Without a watershed master plan, fragmented permit decisions will continue to add to cumulative environmental degradation of the Great Swamp and its feeder streams. An integrated regional plan for water management, greenways, recreation, environmental protection, and conservation of public trust lands should be initiated. This regional planning would place development in areas where infrastructure is already in place rather than adding new stress to the fragile suburban environment.

A Regional Environmental Planning Board composed of representatives of all political and geographical units making up the Great Swamp watershed should be created.

RESPONSE: It is the DEPE's intent to support the establishment of a new advisory body to replace the GSWAC. The purpose of the advisory body will be to make recommendations to the U.S. Fish and Wildlife Service, the DEPE, counties and municipalities, the soil conservation districts and area residents and businesses with respect to planning, monitoring, modeling and permitting activities affecting the Great Swamp watershed in general and the GSNWR in particular. The advisory body will also assist in the development and implementation of environmental education and pollution programming.

In addition, the DEPE intends to authorize and partially fund a Regional Stormwater Study of the Great Swamp Watershed. The study will build upon previous and continuing work in the watershed and will include the identification of outfalls, monitoring, and modeling.

It is also the DEPE's intent to establish and maintain an internal permit review process for the Great Swamp watershed to ensure the assessment of aggregate impacts of both General and Individual Permits.

These issues are all discussed in further detail in the OLWP's response to the GSWAC report dated August 26, 1993.

Comments Relating to the United States Fish and Wildlife Service

COMMENTS: Before the Department of the Interior took over the management of the Great Swamp, it functioned well and the water table level in Green Village and surrounding areas was lower. The United States Fish and Wildlife Service (USFWS) created detention ponds to attract migratory birds. The USFWS should be required to clean out the debris in the ditches that built up due to the dikes they built, or the dikes should be removed. Property owners of Chatham Township who paid for a sewer line but cannot connect to it, the senior citizens who are looking forward to affordable housing, and the residents of Green Village have more right to sewers than migratory birds have to a man-made lake in the swamp. Also, the USFWS tree removal policy contributes to the loss of all other environmental benefits trees naturally provide.

RESPONSE: The DEPE does not have jurisdiction over management of the GSNWR. However, it is the DEPE's understanding that the USFWS is limited in what they are able to do in regard to management within the GSNWR because part of the GSNWR is a designated federal Wilderness Area. A section of the GSWAC's Report contains recommendations for the USFWS including the review of the Station Management Plan. The regulated activities of the GSNWR are contained

in the Station Management Plan. The USFWS participated on the GSWAC and agreed with the overall policy and goals.

COMMENTS: The USFWS indicates that "development in the Great Swamp watershed has diminished water level manipulation as a wetland habitat management tool causing uncontrollable fluctuations in rates of surface water runoff, and deposition of silt into refuge wetlands...severity of non-point and point source contaminant discharges is increasing and further degrading Refuge water quality." USFWS has limited authority to control the development outside the Refuge but, must appeal to State, county, and local governments to assume a "shared responsibility" in regulating further watershed development, particularly in wetlands and other environmentally important areas.

RESPONSE: In consideration of the secondary impacts on the GSNWR associated with expansion of the Chatham Township STP, the DEPE has approved the Chatham Township WMP in two phases with conditions as described above. The purpose of the phasing and conditions is to evaluate the secondary impacts of the WMP and further the goal of no net increase with respect to both water quantity and pollutant loadings affecting the Great Swamp watershed in general and the GSNWR in particular. In addition, the DEPE is researching the creation of a regional entity working with the USFWS, National Park Service, State, county and municipal managers and the public to ensure that all management plans work together to achieve the public interest objectives of the Great Swamp basin.

Comments on the Wastewater Management Plan

COMMENTS: If the WMP is adopted, this municipality's zoning decisions shall govern the water quality management planning process for the region. The DEPE, however, has the legal authority to compel Chatham Township to conduct analysis of "critical economic, social, environmental or institutional factors" as part of an examination of specific wastewater management alternatives before making its determination (N.J.A.C. 7:15-5.18(a)2).

RESPONSE: The Statewide Water Quality Management Planning (SWQMP) rules, N.J.A.C. 7:15, specify that to the maximum extent practicable wastewater service areas shall be identified in a manner as to provide adequate wastewater service for land uses allowed in zoning ordinances or future land uses shown in municipal or county master plans. The Chatham WMP complies with this by using zoning as a basis for wastewater service areas.

Although a specific study of critical economic, social, environmental or institutional factors of wastewater management alternatives was not required as part of this

WMP, as a result of the DEPE's disapproval of the previous Chatham Township WMP the Township was required to reanalyze the proposed wastewater service areas in regard to potential failure of individual subsurface sewage disposal systems in the Township, particularly in the Green Village area. As a result of this analysis, the Township submitted a WMP which more appropriately addressed these needs.

In addition and as described above, additional studies will be required in both phases of the Chatham Township STP expansion. For the expansion up to 900,000 gpd, Chatham Township will institute a process under which certain applicants for site plan or subdivision approval will be required to submit a plan for DEPE approval for achieving a goal of no net increase in stormwater runoff or pollutants. As part of this plan, an evaluation of the economic cost and environmental effectiveness of the practices used to achieve this goal will be required. For the expansion up to 1.0 mgd, additional studies and plans must be prepared to address certain environmental and social factors related to stormwater management, septic management and water conservation.

COMMENTS: Fred and Walker Kirby own property in Chatham Township, 78 acres on Shunpike Road, Lots 20 and 21, Block 144 which they request be included in the designated sewer service area to the Chatham Township STP as delineated in the WMP. In a 1989 suit against the Township, the Kirbys objected that they were not included in the WMP for sewerage. This litigation was dismissed due to disapproval of the WMP. Plaintiffs contend that the failure to have included their property as part of the Plan is part of an overall scheme to insure that plaintiff's property will never be developed for any purpose, even under existing zoning.

RESPONSE: Based on the zoning for the area described above, R-1A, Residence District (one family - 100,000 sq.ft., cluster option), which does not authorize development of a density that requires sewers under all circumstances, the DEPE does not require that this area be included in the future sewer service area of the Chatham Township STP.

COMMENTS: The Environmental Impact Statement (EIS) on the Upper Passaic River Basin 201 Facilities Plan released by the US Environmental Protection Agency in Sept. 1991 recommends that the discharge rate of the Chatham Township STP not be increased beyond current levels. The proposed Chatham Township Wastewater Management Plan is inconsistent with the findings of this Federal EIS.

RESPONSE: The EIS specified above, does recommend 0.75 mgd as the flow rate for the Chatham STP. However, it also recommends that certain issues should be considered in

permitting a flow above 0.75 mgd (NJPDES permit parameters, hydraulic loading to the Great Swamp, increased non-point source pollution). These are some of the issues which were considered in the DEPE's decision on the WMP and which will be considered in the DEPE's review of the Discharge Allocation Certificate for this STP. Therefore, this approval is not inconsistent with the findings of the EIS.

COMMENT: The proposed expansion will increase sewage capacity regulated by NJPDES permits in Chatham Township to 1,154,600 gpd. How is this consistent with the Northeast Plan that set 1 million gpd as the limit for the Township with the caution that figure was arrived at without excluding environmentally sensitive areas from sewer service?

RESPONSE: The Northeast WQMP does not assign a wastewater flow limit of 1.0 mgd to the entire Township; the 1.0 mgd limitation applies specifically to wastewater flows discharged from the Chatham Township STP. The projected wastewater flows of 0.132 mgd to the Chatham Glen STP and 0.024 mgd to the Park Central STP are in addition to the flow from the Chatham Township STP. With approval of the WMP, the flows previously specified for the Chatham Township STP in the Northeast WQMP are now superseded to allow an additional 150,000 gpd above the current permitted flow of 750,000 gpd plus 100,000 gpd more only after the Township meets certain conditions, for a total of 1.0 mgd from the Chatham Township STP. The projected wastewater flow to the Chatham Township STP was figured based on exclusion of environmentally constrained areas from the service area.

COMMENTS: Flows of water entering the Refuge are in part a function of total flows from all STPs in the watershed. Going beyond imposing a cap on flows from each STP, the State could develop a cap for all STP's with a schedule to reduce that cap until total STP flows reach 1986 conditions. This arrangement would then authorize flow trading. Chatham STP could increase flows above 750,000 gpd only if it purchased allowable flow credits from another STP, the flows of which were measurably below the permitted level.

RESPONSE: Based on the technical information available at present, the DEPE is not prepared to require a cap on flows in the watershed based on 1986 conditions. Instead, the approved WMP allows for an immediate increase in flow from the Chatham Township STP up to 0.9 mgd, with an additional increase of 0.1 mgd (to a total of 1.0 mgd) based on specific conditions. In the future, the DEPE may establish a regional pollution credit bank to trade pollution credits or some other appropriate regional entity to implement point source and nonpoint source pollution prevention measures in the Great Swamp watershed based on meaningful performance

standards. This issue is discussed in further detail in the OLWP's response to the GSWAC report dated August 26, 1993.

COMMENT: The proposed new sewage capacity is already totally allocated and is based on estimates of current population that are not at all certain. These allocations do not allow for any cushion for failing septic systems. We are giving half of the increased capacity to Prudential. What is going to happen if these projections are low? Will the future residents of our Township be told that they're going to be getting capacity and find that the capacity is not there?

RESPONSE: The population projections in the WMP are based on 3 persons per single family household and 2 persons per apartment, which is within a range that is acceptable to the DEPE based on the Statewide Water Quality Management Program Plan. In addition, the WMP addresses all of the existing single family units currently served by individual subsurface sewage disposal systems (ISSDS). Only 36 of the 247 existing single family units within the existing or proposed sewer service area of the Chatham Township STP are proposed to remain on ISSDS. In addition, Chatham Township has indicated on an informal basis that flow from Prudential's project will be less than anticipated. In that case, the additional flow would be available for Chatham Township to allocate as needed.

COMMENTS: Key data used for projections in the WMP include average residential occupancy of 3 individuals, condominium occupancy of 2 individuals, average individual water usage of 65 g/d for individual residency persons and 60 g/d for condominium residents. It seems that actual data are essential to verify the accuracy of the projections. There are some figures that allow some comparisons. Population currently served by STP #2 is 70 gpd v. 60 gpd used in the projections. Comparable figures for the Park Central plant result in an average daily usage of 64 gpd. The figures from the report which verify the data used for projections indicate that the projections are low when compared with actual current experience. In addition, the WMP specifies an annual average flow figure. However, the current permit for the Chatham Township STP specifies a monthly average flow which yields a more realistic result.

RESPONSE: The population per unit and gpd per person used as a basis for projected wastewater flows in the Chatham Township WMP are within a range that is acceptable to the DEPE based on N.J.A.C. 7:15, the Statewide Water Quality Management Program Plan, and the Northeast WQMP. However, it appears based on the description of the Chatham Glen STP that in regard to number of units, persons per unit and gpd per person, that the present population for this STP as specified in Table 2 is incorrect and should be revised to 1268 persons. It appears that a change in the projected

population is also required. A revision to the WMP in regard to these population figures is required as part of the adoption of this plan. Slight differences in flow calculations for the Park Central STP are due to rounding. In regard to the WMP specifying annual average flows, the DEPE requests this for the planning flow since a component for future infiltration and inflow (I/I) is not included in the total flow calculations (in accordance with the SWQMP rules). The New Jersey Pollutant Discharge Elimination System (NJPDES) permit could be issued, however, at a higher monthly flow which includes a component for future I/I.

COMMENTS: Instead of pumping the discharge into the Great Swamp, wastewater from the Chatham Township STP should be pumped over the hill directly into the Passaic River.

RESPONSE: If the Township finds that it cannot increase the permitted flow of the Chatham Township STP due to NJPDES permitting requirements or other reasons, the Township may petition the DEPE for an amendment to discharge directly to the Passaic River. The DEPE has no indication at this time, however, that this proposal would provide a viable option without creating additional problems. Approval of this WMP allows the Township to proceed with applying for a NJPDES permit for increased flow, with certain conditions attached to the additional flow.

COMMENTS: Dividing population served, according to the Chatham Township WMP, 7100 - by gallons of sewage actually treated, less commercial usage of 28,000 gallons - the produced per capita per day figure of 101 gpd, not the 65 gpd cited by the Township is more believable. A figure of 101 gpd is more consistent with the Northeast WQMP which projected per capita usage of 100 gpd. Multiplying 101 gallons per capita daily by population projection of 8700 produces consumption within 20 years of 878,000 gallons, not 781,000. Add commercial projections of 188,000 gpd and the total is 1,066,000 gallons daily. It becomes absolutely impossible for the Township to provide for both Prudential and the Township's existing requirements without exceeding the sewage plant's rate of capacity by 66,000 gpd. The Township's omission of a hundred affordable housing units mandated by the Court Order compounds the problem. They will require an additional 30,000 gpd. Thus, under this WMP, we have a shortfall ranging from 33,000 gallons to 100,000 gallons daily.

RESPONSE: The use of 65 gpd per person as the basis for residential wastewater flow to the Chatham Township STP is consistent with both the SWQMP rules (which specify 65 gpd per person for domestic flow from new residences, exclusive of other flow such as industrial flow, commercial flow, and I/I), and the Northeast WQMP (the estimate of 100 gpd per person includes 60 - 80 gpd from residential sources and 20

- 40 gpd from I/I) and is subject to capacity assurance. The 65 gpd specified in the WMP represents wastewater flow, I/I is identified separately. As discussed in the WMP, the 100 units of affordable housing will be transferred to other municipalities pursuant to Regional Contribution Agreements. Therefore, this flow has not been included in the flow to the Chatham Township STP. In addition, Chatham Township has indicated on an informal basis that the flow from the Prudential project will be less than anticipated.

Comments on Water Quality and Quantity

COMMENTS: A hydrology study conducted in 1984-85 with the Morris County Soil Conservation District and the U.S. Soil Conservation Service indicated that increasing impervious cover in the watershed due to urbanization is sending increasing amounts of stormwater runoff into the refuge. The Environmental Commission has passed a resolution expressing serious concerns about the effects of storm water runoff on the swamp. It does not make sense for Chatham Township to add 250,000 gpd to the flooding problem until their present problem is under control.

RESPONSE: Although the addition of 250,000 gpd in a point source discharge does not equate to 250,000 gpd in flooding, the Township and DEPE plan to address the concerns regarding additional water from both point and nonpoint sources in a number of ways. The Township currently has an adopted Stormwater Management Plan and Ordinance. Additional capacity to the Chatham Township STP will be qualified by phasing with 150,000 gpd initially and an additional 100,000 gpd after certain conditions are met. One condition includes the development and implementation of an updated Township stormwater management plan which will at a minimum identify existing land uses, land use regulations, point and nonpoint sources of pollution, their relationship to existing land uses and land use regulations, and measures to address those sources of pollution. In addition, the DEPE intends to authorize and partially fund a Regional Study of the Great Swamp Watershed which will contribute to a Great Swamp Regional Stormwater Management Plan. This Plan will identify existing land uses, land use regulations, and their relationship to water quality and quantity, point sources and nonpoint sources of pollution, and remedial measures including stream corridor protection and best management practices techniques throughout the watershed. This issue is discussed in further detail in the DEPE's response to the GSWAC report dated August 26, 1993.

COMMENTS: All of the waters of the Great Swamp watershed must be classified as Category 1. The waters entering and within the Wildlife Refuge are classified as Category 1 waters defined in N.J.A.C. 7:9-4.4 and are designated for protection from measurable change because of their

exceptional attributes. Category 1 waters may include, but are not limited to: "1) waters originating wholly within Federal,...parks, forests, fish and wildlife lands...5) other waters and their tributaries that flow through, or border Federal, State, ... parks, forests, fish and wildlife lands, and other special holdings." These provisions clearly require DEPE to designate all of the waters of the Great Swamp watershed as Category 1 waters.

RESPONSE: At this time, the DEPE does not intend to designate the waters of the GSNWR as Category 1 because it has accepted the no net increase recommendation of the GSWAC as a goal for development in the Great Swamp watershed and is planning to entertain the designation of the waters in the GSNWR as Outstanding National Resource Waters. The Outstanding National Resource Waters as designated in N.J.A.C. 7:9-4.15(i) currently include Fresh Water 1 waters and Pinelands waters. The Great Swamp waters would be added to this category. The DEPE believes that these measures will provide more protection than Category 1 standards.

COMMENTS: There are measures which will help reduce the effect of the increased volume of stormwater triggered by the expansion of the Chatham STP. These techniques should be required for any development in the watershed requiring major subdivision or site plan approval. They should be part of Chatham's Wastewater Management Plan and ordinance structure:

a) all roof drains shall drain to dry wells for ground water recharge with at least 250 cu.ft. of storage volume for each 1000 sq.ft. of roofed area.

b) All detention facilities shall be designed for all storms up to and including a 100 year 24 hour duration storm. Detention facilities shall be constructed to store the entire runoff volume from all impervious surfaces not discharging to drywells and for the incremental increase in runoff volume from pervious surfaces for a period of not less than 24 hours following the cessation of runoff from the design storm. After the 24 hour storage period, the stored runoff shall be released at a rate not to exceed 0.1 cu.ft. per acre of drainage area.

RESPONSE: The Chatham Township Stormwater Management Ordinance currently specifies that rooftop storage, tanks, infiltration pits, dry well, or gravel layers underneath paving may be used for the purposes of meeting the basic requirements of the ordinance. For flood and erosion control the ordinance currently requires that any proposed detention facility must accommodate site runoff generated from 2-year, 10-year, and 100-year 24-hour storms considered individually. Detention must be provided such that after development, neither the peak rate of flow from the site, nor the total flow during the hour of maximum releases will

exceed the corresponding flows which would have been created by similar storms prior to development.

Chatham Township will be required to update its Stormwater Management Plan as a condition of approval of the WMP. This updated plan will be required to include best management practices for water quantity control for stormwater runoff from any proposed development requiring major site plan or subdivision review. The two suggested techniques for controlling additional volume of stormwater runoff will be thoroughly explored. In addition, starting with the first phase of the expansion of the Chatham STP, Chatham Township must require applicants for site plan or subdivision approvals for sites of 5,000 square feet or more to submit for DEPE approval a plan for achieving a goal of no net increase in stormwater runoff or pollutants. Such a plan would incorporate at a minimum (1) appropriate current DEPE Best Management Practices for nonpoint source control, (2) either or both on-site and off-site opportunities for such controls, and (3) initial estimates of and then followed by an evaluation of the economic cost and environmental effectiveness of those practices.

COMMENTS: The Chatham Stormwater Management Ordinance does not address the increased volume of stormwater that will result from the Giralda Farms development and from area roads and bridges widened as a result of increased traffic.

RESPONSE: The Chatham Township Stormwater Management Ordinance does apply to the Giralda Farms development, however, it does not address the additional quantity of stormwater runoff from the widening of area roads and bridges as a result of increased traffic. In addition, the Giralda Farms development is addressing quantity of stormwater runoff in the following ways as quoted from the Supplemental Statement of The Prudential Insurance Company of America RE: Department of Environmental Protection and Energy Public Hearing on the Chatham Township Wastewater Management Plan, November 25, 1992:

"The stormwater controls at Giralda Farms have resulted in a substantial decrease in the rate of stormwater runoff when compared to pre-development levels. At full build-out of the Madison and Chatham portions of Giralda Farms, the peak rate of runoff will be approximately 25% below pre-development levels. Maintaining these levels of flow is accomplished through the on-site detention system at Giralda Farms.

The 25% reduction in peak rate actually lowers water surface levels in the Loantaka Brook which is downstream of Giralda Farms. The lower water surface elevation in the brook reduces the contact area of water and unprotected bank

areas, thereby reducing erosion and conveyance of water-borne siltation into the Great Swamp.

The quantity of stormwater leaving Giralda Farms will increase over pre-development conditions by approximately seven (7) percent for the 100 year design storm. Because of the stormwater detention system at Giralda Farms, the runoff will not adversely affect the water-carrying capacity of downstream piping, streams and other stormwater conveyances."

COMMENTS: Fundamental to DEPE's efforts at regional water quality planning is the fact that all water quality management plans must be consistent with all other applicable rules and regulations and the most important of these are the State's surface water quality standards and antidegradation policies. The WMP for Chatham Township cannot possibly be in accordance with the following antidegradation policies (N.J.A.C. 7:9-4.5(d)):

a) existing uses shall be maintained and protected. ie: the GSNWR must be protected and maintained. These existing uses of the GSNWR are being impinged upon now. They are being adversely affected by point and nonpoint source pollution from land development activities taking place outside of the GS Refuge

b) the designated uses shall be maintained or as soon as technically or economically feasible, attained

c) no irreversible changes are permitted to occur to the existing water quality that would impare or preclude attainment of the designated uses.

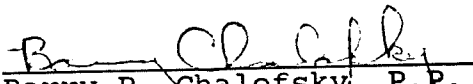
RESPONSE: Although enforcement of antidegradation policies and surface water quality standards is not imposed through the WQMP amendment process, the proposed changes to the Chatham Township STP discharge are subject to compliance with the antidegradation policies identified in N.J.A.C. 7:9-4.5(d) and an antidegradation analysis must be prepared as part of the NJPDES permit process if Chatham Township proposes to increase the loading of pollutants. In addition, nonpoint source discharges are not exempt from complying with antidegradation requirements. Historically, however, the DEPE has not enforced compliance for nonpoint source discharges with antidegradation requirements as no procedures were in place for implementation. Currently, the DEPE is developing antidegradation implementation procedures for both point and nonpoint source discharges. The DEPE anticipates proposing the implementation procedures in late 1994.

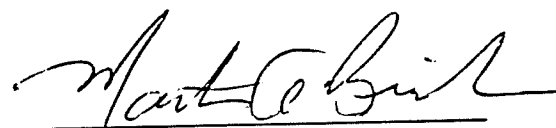
In addition, the DEPE intends to propose an amendment to the Northeast WQMP in part to establish as an explicitly stated goal, compliance with the State's antidegradation regulations with respect to surface waters within and affecting the waters of the GSNWR.

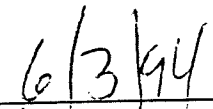
Comments Regarding the Council on Affordable Housing

COMMENTS: The DEPE should petition the governor to examine a way to reconcile the seemingly conflicting directives of DEPE and the Council on Affordable Housing. Certainly conflicting governmental directives and objectives make this situation very difficult.

RESPONSE: Each state entity, including the DEPE and the Council on Affordable Housing is required to follow its own legislative mandate, therefore, many times conflicts do arise. At this time, however, the DEPE does not believe that the intervention of the Governor is necessary to resolve such disputes, and will continue to solve these problems on a case-by-case basis.


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