Washington Township Warren County Wastewater Management Plan

Amending the Upper Delaware Areawide Water Quality Management Plan

Partial WMP Submitted by the Governing Body of Washington Township on: October 22, 2014
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Approved by the New Jersey Department of Environmental Protection on:

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NOTE: THIS WMP IS A PARTIAL WMP ADDRESSING PUBLIC SEWER AREAS ONLY

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I. Introduction

The purpose of this document is to provide a portion of what will eventually serve as a comprehensive Wastewater Management Plan (WMP) for the Township of Washington. The partial WMP is being submitted to the New Jersey Department of Environmental Protection (Department) for approval so that it may be incorporated into the Upper Delaware Water Quality Management Plan via the plan amendment procedure at N.J.A.C. 7:l5-3.

It is noted that P.L. 2011, Chapter 203, as amended and modified by P.L. 2013 Chapter 188 (the WQMP Chapter Laws) authorized wastewater planning agencies to submit to the Department for acceptance and adoption in a sequential or other manner, portions of a WMP, in addition to those portions that provide for the designation of sewer service area, pursuant to the requirements of the WQM Planning Rules at N.J.A.C. 7:15. Generally, the only other substantive exceptions provided by the WQMP Chapter Laws pertaining to the contents and requirements for a WMP submission and adoption is that areas can be included within a sewer service area despite the fact that existing treatment plants do not have the assured capacity to treat wastewater from those areas without having to undertake infrastructure improvements or permit modifications. It is further noted that this partial WMP only addresses the delineation of pubic sewer service areas and the environmental constraints and build out associated with those areas.

This partial WMP does not include the following:

- portions of the Township which are served by septic systems;
- build out and nitrate dilution analyses for septic system areas;
- future water demand and capacity analysis;
- measures to address TMDLs
- incorporation of the required local ordinances;
- discussion of environmental and other land features; and
- Maps 1,5A, 5B and 6.

It is anticipated that portions of the WMP not provided herein will be prepared and submitted to the Department in a timely manner.

Alternative Assignment of Wastewater Management Planning Responsibility

The Water Quality Management Planning rules (N.J.A.C. 7:15) intended for the County Board of Chosen Freeholders to assume wastewater management planning responsibility. However, Warren County has declined the wastewater management planning responsibility conferred upon it under N.J.A.C. 7:15-5.4. Notification of the County's decision was provided in a letter dated June 30, 2008 from the County Planning Director to the Department of Environmental Protection. Alternative assignment of wastewater management planning responsibility is permitted under N.J.A.C. 7:15-5.13(b). Pursuant to this provision Washington Township was granted and has accepted wastewater management planning responsibility.

Status of Previous Approved Local and Regional WMPs Affected by the WMP

This WMP supersedes all or part of any previously approved WMPs or FWSA Mapping prepared by municipalities or wastewater authorities for the jurisdictional area covered by this WMP.

Overview of Municipality

Washington Township comprises approximately 11,548 acres and lies totally within the Highlands Region. Approximately 31% of the Township lies within the Highlands Preservation Area and 69% within the Highlands Planning Area. The Township surrounds the Borough of Washington and is traversed by two (2) major roadways, NJ Route 57 running east-west and NJ Route 31 running north-south.

Current Wastewater Services and Wastewater Responsibilities

Washington Township is served by two (2) major public community wastewater systems - the Borough of Washington Sewage Treatment Plant (STP) and the Pequest River Municipal Utility Authority Oxford STP. The Washington Borough STP, located in the Borough of Washington, serves a portion of Washington Borough and also serves several parcels in the Township along the common boundary with the Borough and the Warren Hills Regional High School. The Oxford STP services portions of Mansfield, Oxford and White and Washington Townships. The portion within Washington Township served by the Oxford STP consists of an existing residential development along Mine Hill Road. Both the Washington Borough and Oxford STPs have capacity to accept additional flows.

The Township also has a privately owned sewage disposal plant which serves the Hawk Pointe development along the east side of Route 31 south of Washington Borough. Hawk Pointe is a golf course community which includes a golf course, residential and commercial development.

There are no combined sewers within the municipality.

Current Water Services and Water Supply Responsibilities

The public community water system provider in Washington Township is the New Jersey American Water Company – Washington System. The system provides water to residents in both Washington Township and Washington Borough. The system is supplied by three (3) wells – the Vannatta Street well located in Washington Borough and the Dale Avenue and Changewater Road wells located in the Township. Information obtained from the NJDEP Division of Water Supply and Geoscience indicates that, as of February 20, 2014, there is surplus allocation and sufficient pumping and treatment capacity.

Major Environmental, Regional and Local Considerations to Wastewater Services

Wastewater management planning is part of the continuing planning process required by the New Jersey Water Quality Planning Act (N.J.S.A. 58:11A-1 et seq.) and Section 208 of the federal Clean Water Act. The intent of the continuing planning process is to align federal, state, regional and local land use planning to ensure that these land use plans do not conflict with each other.

The provision of environmental infrastructure, in particular centralized sewer service, has a profound influence on development patterns and intensity. The wastewater management planning process is intended to assign an appropriate wastewater management treatment alternative to geographic areas based on environmental sensitivity and other land use planning objectives such as regional center-based development or farmland preservation. The extension of public sewers into areas designated for protection by federal, state, regional or local land use plans would be inconsistent with those protection objectives.

The adopted Water Quality Management Planning Rules (N.J.A.C. 7:15) generally exclude the extension of sewer service into large contiguous areas, defined as 25 acres or more, of wetlands, category one water buffers, Natural Heritage Priority Sites and/or endangered and threatened species habitat. The extension of sewer service into these areas would encourage their development and thus

conflict with the Department of Environmental Protection's statutory mandate to protect these resources.

It should be noted that under limited circumstances environmentally sensitive areas that meet the 25 acre threshold may be included in the sewer service area, as deemed appropriate, for projects having already received certain local and State approvals, to relate sewer service areas to recognizable geographic features, or to accomplish center based development as proposed by the local land use planning authority and approved by the Department of Environmental Protection through the plan endorsement process.

Additional regional and local land use planning objectives used in delineating appropriate areas for public sewer service are discussed in the Highlands section of this WMP.

Future Wastewater Services and Responsibilities

Based on the environmental, regional and local land use planning objectives discussed above, Maps 2 and 3 identify areas presently served by public sewers and the appropriate areas to be served by public sewers in the future, respectively. These maps also identify sites that are served by an on-site treatment works that are regulated under a New Jersey Pollutant Discharge Elimination System permit. Each sewer service area is keyed to a specific sewage treatment plant which is the facility authorized under this plan to accept and treat wastewater from that sewer service area. Each sewage treatment plant identified in this plan has an accompanying facility table that provides information concerning that facility's owner, operator, permitted flow, existing flow, remaining permitted flow, and projected build-out flow summarized by municipality.

Summary of Significant Actions

Service Area Changes – all NJPDES permitted facilities and their existing service areas have been indicated on Maps 2 and 3. At this time, there are no plans to expand those areas within the Township presently served by the Washington Borough and Oxford STPs. However, the existing sewer service area for the Hawk Pointe STP has been expanded to include approximately seventy (70) additional lots totaling approximately 230 acres.

Abandonment of Wastewater Treatment Facilities – the following currently permitted NJPDES wastewater treatment facilities will be abandoned in the future:

- Ocino Restaurant (NJPDES - NJG0169790)
- Burger King Restaurant (NJPDES – NJG0141593)
- Country Charm Trailer Park (NJPDES – NJG0171697)

Wastewater formerly treated by those facilities will be conveyed to the Hawk Pointe STP for treatment.

II. Existing Infrastructure and Demographic Information

This section addresses wastewater treatment facilities utilized by development within the municipality, whether the treatment works itself is located within or outside of the municipality.

Areas Served by Wastewater Facilities

Map 2 shows the areas actively served by existing wastewater facilities, and the tables in Section VII provide detailed information on each of those facilities. "Actively served" means that the collection lines exist and that the property is either connected or has all regulatory approvals necessary to be connected.

Public Wastewater Treatment Works

Table 1 lists the major domestic wastewater treatment facilities and the municipality or municipalities they serve. The wastewater service areas and their associated treatment works are also depicted on Maps 2 and 3.

Table 1. Wastewater Districts, Franchise Areas and Municipalities Served

Wastewater Utility	Municipalities Served
Washington Borough STP	Washington Borough, Washington Township
Oxford STP	Washington Township, Oxford Township, Mansfield Township, White Township
Hawk Pointe STP	Washington Township

Major Transmission Piping and Pumping Stations

Map 2 shows the major interceptors, trunk lines and pumping stations within the various sewer service areas for public wastewater treatment facilities. Washington Township has one (1) pumping station located along Mine Hill Road to convey sewage to the Oxford STP.

On-site, Non-industrial Wastewater Facilities

These facilities typically provide non-industrial wastewater treatment for apartment complexes, commercial properties and businesses where regional sewerage is not available. Existing on-site, non-industrial treatment facilities within Washington Township that discharge treated domestic wastewater to surface water or that discharge more than 2,000 gallons per day of treated domestic wastewater to ground water that are regulated under a NJPDES permit are as follows:

- Route 31 Steakhouse & Ale (NJPDES – NJG0170101)
- Oakwood Lanes (NJPDES – NJG0169587)
- Leo's Pizza & Italian Restaurant (NJPDES – NJG0170305)
- Brass Castle Elementary School (NJPDES – NJG0105571)
- Tractor Supply 390 Route 57 (NJPDES – NJG0065196)
- Warren County Technical School (NJPDES – NJ0020711)
- Ocino Restaurant (NJPDES – NJG0169790)
- Burger King Restaurant (NJPDES – NJG0141593)

- Country Charm Trailer Park (NJPDES – NJG0171697)
- Washington Township Shopping Center (NJPDES – NJ0059897)
- Wayfarer Restaurant (NJPDES – NJG0155667)
- Roaring Rock Restaurant (NJPDES – NJG0166782)

Industrial Treatment Works for Process Wastes and Sanitary Sewage

There are no industrial land uses in the Township that have independent wastewater treatment facilities that treat and discharge manufacturing process waste and/or sanitary sewage to surface water or more than 2,000 gallons per day to ground water

Areas for Septic Systems and Other Small Treatment Works Not Discharging to Surface Waters

Remaining areas of the municipality, not otherwise identified on Map2 as existing service areas for treatment facilities requiring a NJPDES permit, are included within a general wastewater management area for Septic Systems with Planning Flows of less than 2,000 gallons per day.

III. Delineation of Sewer Service Areas and Planning Integration

The WQMP rules at NJAC 7:15-5.22 require coordination with and solicitation of comments or consent from certain agencies, entities and plans, and consistency with other plans. This section addresses those requirements. This section provides the method used to delineate future sewer service areas based on the mapping of significant environmentally sensitive areas, consistency with other regional plans and reflecting municipal planning objectives.

Environmentally Sensitive Areas

Under the Water Quality Management Planning Rules, large contiguous environmentally sensitive areas, generally defined as 25 acres or greater in size should be excluded from sewer service areas except under certain circumstances such as providing service to development that has already secured prior approvals or center based development approved by the Department of Environmental Protection through the Plan Endorsement process.

The environmentally sensitive area overlay is established by merging the GIS layers for wetlands, Category One riparian zones, Natural Heritage Priority Sites, and Threatened and Endangered Species habitats having rank 3, 4, or 5 into a single composite GIS coverage. Areas identified as urban lands in the Land Use coverage are then removed and any composite areas less than 25 acres in size are then deleted from the coverage. The resulting coverage is used to eliminate land from sewer service area except where sewer service already exists, or otherwise permitted through the WQMP rule. The GIS coverage for environmentally sensitive areas was provided to the Township by the NJDEP Office of Water Resources Coordination.

It is noted for public information purposes that the excluded areas, as well as other areas, may also be protected through other NJDEP regulatory programs such as the Flood Hazard Area Control Act and Freshwater Wetlands Act rules, and may be protected by municipal ordinances as well.

Sewer Service Areas in Environmentally Sensitive Areas

Washington Township is proposing no sewer service area within the environmentally sensitive areas.

Exceptions to the Use of Geographic or Political Boundaries

There are several exceptions to the requirement that sewer service areas be located along readily identifiable geographic or political boundaries. Two exceptions occur in the Highlands Preservation area, where, generally, sewer service area can only extend to development that predated the Highlands Act or development that is exempt or received a Highlands Preservation Area approval with waiver. In these cases, sewer service area was limited to the pre-existing or exempt structures having existing sewer service. The other exceptions occur where environmentally sensitive areas overlap with proposed sewer service areas. In these cases, the environmentally sensitive areas were removed from sewer service area except for areas already having sewer service. Otherwise, the sewer service area has been established to run along the limit of the environmentally sensitive area.

Highlands Water Protection and Planning Act

The Highlands Act prohibits sewer service area extensions in the Preservation Area with exceptions only for previously approved projects or for protection of public health and safety. The NJDEP enforces compliance with the Highlands Act through regulations at NJAC 7:38. This WMP proposes no service area extensions within the Preservation Area.

The Highlands Regional Master Plan (RMP) has established Land Use Capability Zones which establish the extent to which environmental resources need to be protected. Sewer extensions within the Conservation and Protection Zones within the Highlands Planning Area are restricted or prohibited. These restrictions within the Planning Area are applicable to municipalities that choose to conform with the RMP within the Planning Area. Washington Township has chosen to not conform with the Highlands RMP within the Planning Area so there are no Highlands restrictions for delineation of sewer service areas within the Highlands Planning Area.

Coordination with the NJ Highlands Council

Compliance with the Highlands RMP and the Highland Water Protection and Planning Act Rules at N.J.A.C. 7:38 is required for lands within the Preservation Area. The Township has petitioned and been approved by the Highlands Council for conformance within the Preservation Area.

With regard to the Planning Area the Township in 2011 submitted a petition to the Highlands Council to conform in the Preservation Area and Planning Area. Based upon a mutual agreement between NJDEP and the Highlands Council, the Highlands Council was made responsible for the preparation of WMP's for municipalities which conform within the Planning Area. As a result the Highlands Council prepared a WMP for Washington Township which was submitted in 2012 for review by the Division of Coastal and Land Use Planning. In October of 2013 Washington Township withdrew its petition for conformance within the Planning Area and assumed responsibility for the preparation of the WMP. Review and approval of this WMP is currently under the authority of the NJDEP Office of Water resources Coordination with referral to the Highlands Council for comments.

Prior to the Township's withdrawal from the Planning Area the Highlands Council had under consideration three (3) Highlands Centers within the Planning Area of Washington. Studies were in progress regarding the feasibility of such designations, including availability of wastewater treatment capacity and water availability. The future status of these areas as Highlands Centers is not clear at this time, however one of these areas – the Washington-South Highlands Center located along Route 31 south of Washington Borough and extending to Anderson Asbury Road – has been included in the future sewer service area of this WMP.

Coordination with Municipalities, Sewer Authorities and Water Utilities

Table 2 lists the municipalities, wastewater and water utilities that have been consulted during the preparation of the WMP. The following entities were either consulted or pertinent information related to their facilities was reviewed.

Table 2. Municipalities, Sewer Authorities & Water Utilities

Municipality	Wastewater Utilities	Water Supply Utilities
Washington Borough	Washington Borough STP	New Jersey American Water Company
	Pequest River Municipal Utility Authority – Oxford STP	

Proposed Wastewater Service Areas

Map 3 shows all proposed future sewer service areas for the WMP area. There is one (1) expanded sewer service area proposed in this WMP. The WMP proposes to expand the sewer service area of the Hawk Pointe STP by approximately 230 acres to facilitate future residential and commercial development along Route 31 from just south of the Washington Borough boundary to Anderson Asbury

Road. This corridor is currently zoned office/commercial and is approximately one (1) mile in length and is characterized by developed or partially developed lands and parcels potentially suited to infill development that would take advantage of the retail zoning of the highway area. Additionally, the Hawk Pointe community to the east of the highway plus underutilized and/or brownfield parcels just south of the Lincoln Avenue and Route 31 intersection are included.

Required 300 foot riparian buffers have been applied to the Category 1 waterways and removed, as appropriate, from proposed sewer service areas on the mapping. Lesser width buffers have not been graphically removed from the sewer service area but are not proposed for sewer service. Jurisdictional determinations by the Department will be utilized to determine the extent of the sewer service area on individual lots.

All existing, new, or expanded industrial pretreatment facilities requiring Significant Indirect User (SUI) permits and/or Treatment Works Approvals, and which are located within the specified sewer service area, are deemed to be consistent with the local WQMP.

This WMP, and its associated mapping, does not cover areas outside those designated as sewer service area, as an analysis of zoning build out and nitrate dilution is not included in this plan.

IV. Future Wastewater Demand

This section describes the build-out methodology used to project future wastewater treatment demand for future sewer service areas within the WMP. Build-out for those areas outside designated sewer service area is not included in this WMP.

Build-out within the public sewer service areas has been calculated based upon the Township's Zoning Ordinance as applied to the developable area within the sewer service area after removing those areas where development is not expected to occur - small irregular polygons, open space, wetlands, steep slopes, riparian zones. The number of residential units and non-residential floor area were then multiplied by the wastewater planning flow estimates in N.J.A.C. 7:14A. The results of the analysis are found in the facility tables.

Conformance and Nonconformance with Zoning and Prior Land Use Approvals

The WMP build-out conforms with current zoning and prior land use approvals as of the date of submission to the Department of Environmental Protection.

Municipal Zoning

Table 3. Summary of Zoning Districts

Zone Name	Zone Description	Permitted Development Density
MR	Mountain Residential	0.2 units/acre
VR	Valley Residential	0.25 units/acre
R-40	Single Family Residential	1 units/acre
R-20	Single Family Residential	2.1 units/acre
R-10	Single Family Residential	4.3 units/acre
HC	Highway Commercial	25% FAR
GC	General Commercial	30% FAR
OR	Office Research	25% FAR
PVD	Planned Village District	10% Building Coverage
ED	Educational Use District	30%
PI	Planned Industrial	30%

Calculating Future Wastewater Needs and Capacity

Using the information provided above regarding existing public wastewater facilities, sewer service area delineation, environmentally sensitive areas, and municipal zoning to project build-out, an analysis of wastewater demand was performed to determine whether existing infrastructure capacity or zoning is the constraining factor. This analysis was performed only for those areas to be served by public sewers. Where zoning is more restrictive than wastewater and does not conflict with the environmentally sensitive areas, no further action is needed. Where the demand projections exceed available wastewater treatment capacity the need for expansion will be so noted. In the case of

wastewater facilities expansion of facility will be triggered when actual flows reach 80% of the capacity of the facility.

Municipal Demand Projections in Non-urban Municipalities

In non-urban municipalities it is anticipated that development of vacant land will be the predominant factor in determining future wastewater treatment needs. Further, because external market and economic forces, such as interest rates, are a dominant factor in determining the rate of construction, this analysis assesses the ability to provide wastewater treatment while protecting surface and ground water quality for the entire projected build-out allowable by zoning. There are two separate methods employed for calculating future wastewater generation at build-out depending on the wastewater service area designation.

Future Wastewater from Non-Urban Municipalities' Sewer Service Areas

In designated sewer service areas the following features have been removed prior to the application of zoning to the undeveloped land area because they are unlikely to generate wastewater in the future - wetlands, riparian zones, permanently preserved farmland, permanently preserved open space, and cemeteries. The existing zoning is then applied to the remaining developable land area within the sewer service area(s) to project a build-out condition for use in estimating the future wastewater management needs of each sewer service area. The build-out data is then converted to a projected future wastewater flow by applying the planning flow criteria from N.J.A.C. 7:14A based on the type of development projected. See build-out spreadsheets in the appendix.

Septic System Development within the Sewer Service Areas

Individual subsurface sewage disposal systems (ISSDS) for individual residences can only be constructed in depicted sewer service areas if legally enforceable guarantees are provided, before such construction, that use of such systems will be discontinued when the depicted sewer service becomes available. This applies to ISSDS that require certification from the Department under the Realty Improvement Sewerage and Facilities Act (N.J.S.A. 58:11-23) or individual Treatment Works Approval or New Jersey Pollutant Discharge Elimination System Permits (under N.J.A.C. 7:14A). It also applies to ISSDS which require only local approvals. Compliance with the connection requirement must be demonstrated through adoption of a municipal or sewerage authority ordinance which requires abandonment of the septic and connection to the sewer system once it becomes available.

Future Wastewater Outside of Sewer Service Areas

This WMP does not include sewage flows from outside those areas designated as sewer service area.

V. Analysis of Capacity to Meet Future Wastewater Needs

The next step in the wastewater management planning process is to assess whether there is sufficient wastewater treatment capacity to meet the needs of the municipality based on the projections described above. For sewer service areas this requires the aggregation of municipal wastewater projections by sewage treatment plant and a comparison of the projected future demand to the existing permitted capacity of the sewage treatment plant. Where a sewage treatment plant does not have sufficient remaining capacity to meet the future wastewater needs of the service area the need for expansion will be so noted. Expansion of facility will be triggered when actual flows reach 80% of the capacity of the facility.

This WMP does not address the adequacy of wastewater generation and wastewater treatment outside those areas designated as sewer service area.

Table 4 provides a breakdown of future wastewater demands in publicly sewered areas by service area and by general development category, based on the development projections provided above. The final column determines whether facility capacity is or is not adequate for the projected flows. Where capacities are inadequate, the issue is addressed in later sections.

Table 4. Future Wastewater Planning Flows By Facility

Domestic Wastewater Treatment Facility	Facility Permitted Flow (MGD)	Existing Flows (MGD)	Projected Residential Dwelling Units	Projected Residential Flow (MGD)	Projected Industrial Units (sq. ft.)	Projected Industrial Flow (MGD)	Projected Commercial Units (sq. ft.)	Projected Commercial Flow (MGD)	Total Future Planning Flows (MGD)	Excess (or Deficit) Facility Capacity (MGD)
Washington Borough STP	1.5	0.662		0.201		0.047		0.088	0.998	0.502
Oxford STP	0.5	0.285		0.167		0.027		0.021	0.500	0
Hawk Pointe STP	0.082	0.035	170	0.038			1,346,000	0.137	0.210	(0.119)

Adequacy of Sewage Treatment Plant Capacity

The facility tables in Section VII provide detailed information on the planning flows for each new and expanded treatment facility. The following facilities will require new or expanded capacity:

Table 5. New and Expanded Treatment Facilities

Facility	Domestic or Industrial	DGW/ DSW	Existing Permitted Flow (MGD)	Future Flow Projection (MGD)
Hawk Pointe STP	Domestic	DGW	0.082	0.210

Analysis and Selection of Treatment Alternatives

The existing Hawk Point STP provides four (4) stage biological treatment consisting of anoxic mixing, aerobic mixing, secondary aerobic mixing and membrane filtration and then ultraviolet light disinfection prior to disposal. Disposal is via infiltration ponds. In addition the system provides for reclaimed water for beneficial use (RWBR) with a portion of the effluent being pumped to storage ponds for watering the golf course. It is anticipated that a duplicate treatment train would be provided to increase the capacity of the Hawk Pointe STP.

Antidegradation Analysis for New and Expanded Domestic Treatment Works

This WMP does not include an antidegradation analysis. Antidegradation measures will be addressed in the course of NJDEP permitting for the expansion of the Hawk Pointe STP.

Relationship to Water Quality Classification

New and expanded discharges will not be permitted in FW1 surface waters or Class I-A ground waters. New and expanded discharges that would degrade current water quality will not be permitted in FW2-Category 1 surface waters or Highlands Preservation Area ground and surface waters. New and expanded discharges to FW2-Category 2 surface waters and Class II-A ground waters may be permitted subject to an analysis of their potential to degrade water quality, the justification for doing so, opportunities for avoiding such degradation, and an overriding requirement that any degradation may not be allowed to violate or increase the violation of standards.

Additional requirements for new or expanded treatment works or increased pollutant loads will be applied through the NJDEP regulatory permit process, including but not limited to compliance with antidegradation requirements of the Surface Water Quality Standards, NJAC 7:9B, and the Ground Water Quality Standards, NJAC 7:9C. Most stringent of these are the nondegradation requirements. Nondegradation water areas shall be maintained in their natural state (set aside for posterity) and are subject to restrictions including, but not limited to, the following: 1) DEP will not approve any pollutant discharges to an FW1 stream, with the exception of upgrades to or continued operation of existing facilities serving existing development. 2) DEP will not approve any pollutant discharge to ground water nor approve any human activity which results in a degradation of natural quality except for the upgrade or continued operation of existing facilities serving existing development. For additional information please see the Surface Water Quality Standards at N.J.A.C. 7:9B, and/or the Ground Water Quality Standards at N.J.A.C. 7:9C. Nondegradation requirements also apply in most situations for waters of the Highlands Preservation Area.

There are no non-degradation areas within the area of the proposed Hawk Pointe STP expansion.

Adequacy of dilution to meet future non-sewer service area demand

This WMP does not include area outside those areas designated as sewer service area. Therefore, adequacy of nitrate dilution capacity in septic areas has not been assessed.

Compliance with Environmental Protection Standards

The WMP must ensure that proposed sewer service areas are in the proper location and will minimize or eliminate primary and secondary environmental impacts. The identification of appropriate sewer service area begins with the analysis of environmentally sensitive areas, discussed above, and incorporates the build-out analyses. The result is a determination of what areas are both zoned for and appropriate for community sewer service, and which areas are not appropriate for sewers due to zoning, environmentally sensitive areas, or both. This WMP meets these standards for future sewer service areas

It is noted that there are other environmental considerations in waste water planning, including pollutant loadings, water supply and other factors. In some cases (e.g., riparian zones and steep slopes) the WQMP rules require that municipal ordinances ensure protection of these areas regardless of their wastewater service area. Further, the WQMP rules establish that avoidable development within these areas is inconsistent with the Statewide Water Quality management plans and the Department cannot issue any permits or approvals for development of these areas. As previously mentioned, this WMP does not incorporate the required municipal ordinances nor does it contain an analysis of future water demand and capacity.

TMDLs and Watershed Restoration/Regional Stormwater Management Plans

Based upon an NJDEP report entitled "2012 Integrated Water Quality Monitoring and Assessment Report", Total Maximum Daily Loads (TMDL's) have been established for Fecal Coliform in the following six (6) HUC 14's within Washington Township as of 2006:

Fecal Coliform TMDL's

- HUC – 02040105140020 Pohatcong Creek (Brass Castle Ck. To Rt. 31)
- HUC – 02040105140030 Pohatcong Creek (Edison Road to Brass Castle Cr.)
- HUC – 02040105160020 Musconetcong River (Changewater to Hances Bk.)
- HUC – 02040105160030 Musconetcong River (Rt. 31 to Changewater)
- HUC – 02040105160040 Musconetcong River (75° 00' to Rt. 31)
- HUC - 02040105090050 Furnace Brook

In addition a TMDL has been established for Escherichia Coli in the following HUC 14 within Washington Township as of 2008:

Escherichia Coli TMDL

- HUC – 02040105140010 Pohatcong Creek (Above Rt. 31)

Suspected sources of Fecal and Escherichia coliform are from older septic systems, manure application in agricultural areas and wildlife feces. This WMP does not include measures for reductions in these contaminants.

VII. Wastewater Facility Tables

The wastewater facility tables for all sanitary and/or process wastewater discharges to surface water facilities and those sanitary and/or process wastewater discharge to groundwater facilities discharging greater than 2,000 gallons per day (i.e., requiring NJPDES permits) are included in this section. Both the Oxford and Washington Borough STPs serve multiple municipalities, while the Hawk Pointe STP serves one municipality, a portion of Washington Township.

Table 6. Washington Borough Facility Table

1. Existing or proposed facility:	Washington Borough STP	
2. New Jersey Pollutant Discharge Elimination System Permit Number:	NJ0021113	
3. Discharge to ground water (DGW) or surface water (DSW):	DSW	
4. Receiving water or aquifer:	Pohatcong Creek	
5. Classification of receiving water or aquifer:	FW2-TM(C2)	
6. Owner of facility:	Borough of Washington	
7. Operator of facility:	Veolia Water	
8. Co-Permittee of facility *(where applicable)*:		
9. Location of facility:	Washington Borough	
a. Municipality & County	Washington Borough, Warren County	
b. Street address	313 W. Washington Avenue	
c. Block(s) and Lot(s)		
10. Location of discharge (i.e. degrees, minutes, seconds):	a. Longitude 75° 00' 07" b. Latitude 40° 45' 0.5"	
11. Present permitted flow or permit condition (DSW) or daily maximum (DGW):	**1.500** MGD	
*12. Summary of population served/to be served (including major seasonal fluctuations if applicable):	Current Population	Build-out Population
Municipality: Washington Borough	6926	7909
Municipality: Washington Twp.	267	282
Total		
*13. Summary of wastewater flow received as a 30-day average flow for DSW:	Year 2013 Flow (MGD)	Build-out Flow (MGD)
Residential flow	0.474	0.675
Commercial flow	0.042	0.130
Industrial flow	0.059	0.106
Infiltration/Inflow	0.087	0.087
Facility Total	**0.662**	**0.998**

*Infiltration/Inflow (I/I): Existing I/I should be identified. However, additional future I/I may not be projected. (The NJPDES Treatment Works Approval regulations make numerical allowances for I/I.) The existing I/I can be carried-over and accounted for in the total future wastewater flow.

Note: The breakdown of existing residential, commercial, and industrial flows in 2013 has been assumed to be proportional to their estimates in the June 2009 Washington Borough WMP prepared by Suburban Engineers based upon total plant flows being reduced from 0.760 MGD in 2008 to 0.662 MGD in 2013. **Table 7. Oxford Facility Table**

1. Existing or proposed facility:	WC(PR)MUA - Oxford STP

2. New Jersey Pollutant Discharge Elimination System Permit Number:	NJ0035483	
3. Discharge to ground water (DGW) or surface water (DSW):	DSW	
4. Receiving water or aquifer:	Pequest River	
5. Classification of receiving water or aquifer:	FW2-TM(C1)	
6. Owner of facility:	Pequest River Municipal Utilities Authority	
7. Operator of facility:	WC(PR)MUA	
8. Co-Permittee of facility *(where applicable)*:		
9. Location of facility:		
a. Municipality & County	Oxford Township, Warren County	
b. Street address	148 Pequest Road	
c. Block(s) and Lot(s)	B33 Lots 23.01 & 27.09	
10. Location of discharge (i.e. degrees, minutes, seconds):	a. Longitude W74º 58' 30" b. Latitude N40º 49' 30"	
11. Present permitted flow or permit condition (DSW) or daily maximum (DGW):	**0.500** MGD	
12. Summary of population served/to be served (including major seasonal fluctuations if applicable):	Current Population	Build-out Population
Municipality: Oxford	1,030	3,084
Municipality: White	0	0
Municipality: Mansfield	476	476
Municipality: Washington	867	867
Total	**2,373**	**4,427**
13. Summary of wastewater flow received as a 30-day average flow for DSW (includes all municipalities)	Year 2013 Flow (MGD)	Build-out Flow (MGD)
Residential flow	0.178	0.397
Commercial flow	0.009	0.030
Industrial flow	0.046	0.073
Infiltration/Inflow	0.052	
Facility Total	**0.285**	**0.500**

*Infiltration/Inflow (I/I): Existing I/I should be identified. However, additional future I/I may not be projected. (The NJPDES Treatment Works Approval regulations make numerical allowances for I/I.) The existing I/I can be carried-over and accounted for in the total future wastewater flow.

Table 8. Hawk Pointe Facility Table

1. Existing or proposed facility:	Hawk Pointe STP
2. New Jersey Pollutant Discharge Elimination System Permit Number:	NJ0136335
3. Discharge to ground water (DGW) or surface water (DSW):	DGW

4. Receiving water or aquifer:		
5. Classification of receiving water or aquifer:		
6. Owner of facility:	New Jersey American Water Company	
7. Operator of facility:	New Jersey American Water Company	
8. Co-Permittee of facility *(where applicable)*:		
9. Location of facility:		
a. Municipality & County	Washington Township, Warren County	
b. Street address		
c. Block(s) and Lot(s)		
10. Location of discharge (i.e. degrees, minutes, seconds):	a. Longitude 74.9608113° W b. Latitude 40.7344157° N	
11. Present permitted flow or permit condition (DSW) or daily maximum (DGW):	**0.082** MGD	
*12. Summary of population served/to be served (including major seasonal fluctuations if applicable):	Current Population	Build-out Population
Total		
*13. Summary of wastewater flow received/to be received as a 30-day average flow for DSW or a daily maximum flow for DGW:	Year 2013 Flow (MGD)	Build-out Flow (MGD)
Residential flow	0.023	0.061
Commercial flow	0.012	0.149
Industrial flow	0	0
Infiltration/Inflow		
Facility Total	**0.035**	**0.210**

*Infiltration/Inflow (I/I): Existing I/I should be identified. However, additional future I/I may not be projected. (The NJPDES Treatment Works Approval regulations make numerical allowances for I/I.) The existing I/I can be carried-over and accounted for in the total future wastewater flow.

Table 9. NJPDES Permitted Facilities in or Serving Washington Township

NJPDES Permit #	PI #	Facility Name	Discharge Category Code	Street Address	Post Office	ZIP	Discharge Location Longitude	Discharge Location Latitude
NJ0021113	47066	Washington Borough WWTP	A	313 W Washington Ave	Washington Twp	07882	074.9928427°	40.7536356°
NJ0035483	47060	Oxford Area WTF	A	148 Pequest Rd	Oxford	07863	074.9838712°	40.8215926°
NJ0020711	47061	Warren Co Technical School	A	Rte 57 E	Washington Twp	07882	075.022888°	40.741274°
NJ0065196	46148	390 RT 57	GW	Rte 57	Washington Twp	07882	075.0050352°	40.7525480°
NJ0059897	46533	Washington Twp Shopping Center	GW	Rte 31 & Asbury Anderson Rd	Washington Twp	07882	074.9737803°	40.7201001°
NJ0136336	52623	Hawk Pointe Golf Community	GW	105 E Asbury Anderson Rd	Washington Twp	07882	074.9608113°	40.7344157°
NJG0170101	425190	31 Steakhouse & Ale	T1	268 Rte 31 North	Washington Twp	07882	074.976497°	40.776642°
NJG0105571	47567	Brass Castle Elementary School	T1	16 Castle St	Washington Twp	07882	075.0061321°	40.7586728°
NJG0141593	162446	Burger King Restaurant	T1	Rte 31 South	Washington Twp	07882	074.9771675°	40.7392189°
NJG0171697	450525	Country Charm Trailer Park	T1	429 Rte 31 South	Washington Twp	07882	074.9729304°	40.7264391°
NJG0170305	450523	Leos Pizza & Italian Restaurant	T1	230 Rte 31 North	Washington Twp	07882	074.9729300°	40.7268388°
NJG0169587	441405	Oakwood Lanes/ Sports Scene	T1	234 Rte 31 North	Washington Twp	07882	074.9785852°	40.7723588°
NJG0169790	450518	Ocino Restaurant	T1	289 Rte 31 South	Washington Twp	07882	074.9779108°	40.7412196°
NJG0166782	294689	Roaring Rock Restaurant	T1	388 Jonestown Rd	Washington Twp	07863	075.017266°	40.778522°
NJG0155667	196809	Wayfarer Restaurant	T1	464 Rte 31	Washington Twp	07882	074.9699363°	40.7203931°

APPENDIX

BLOCK	LOT	ACRES	HUC14	MUNICIPAL ZONE	MUNI DU/ACRE	MUNI FAR	RESID UNITS		NONRES-SQFT		WW-RESIDENTIAL-GPD	WW - NON RESIDENTIAL-GPD	WATER DEMAND-GPD
64	1	0.27665118	02040105160030	HC	0	0.25	1				300		395
64	2	0.98353914	02040105160030	HC	0	0.25			2,500	Dairy Queen		250	313
64	3	0.63853874	02040105160030	HC	0	0.25			6,500	Auto Repair Shop		650	813
64	3.01	0.43536032	02040105160030	HC	0	0.25			3,000	Mamo Subs		300	375
64	4	2.06861077	02040105160030	HC	0	0.25			21,000	100% davelopable		2,100	2,625
64	5	0.84926333	02040105160030	HC	0	0.25			9,000	100% davelopable		900	1,125
64	6	0.70102218	02040105160030	HC	0	0.25			7,000	Taylor Rental		700	875
64	7	0.98346826	02040105160030	HC	0	0.25			4,500	Auto body		450	563
64	8	1.24697293	02040105160030	HC	0	0.25			4,000	Animal Hospital		400	500
64	9	3.60327223	02040105160030	HC	0	0.25			20,000	Little Bear Learning & retail		2,000	2,500
64	10	1.33076289	02040105160030	HC	0	0.25			9,500	Graphic Design		950	1,188
64	11	0.71645617	02040105160030	HC	0	0.25			6,000	Existing building (office/retail)		600	750
64	12	0.47918959	02040105160030	HC	0	0.25	1				300		395
64	12.01	0.5367683	02040105160030	HC	0	0.25			2,000	Norton Oil		200	250
64	13	2.72814386	02040105160030	HC	0	0.25			3,600	75 seat - Ocino Restaurant		2,625	3,281
64	14	1.89906793	02040105160030	HC	0	0.25			13,500	Dollar General		1,350	1,688
64	15	3.12326624	02040105160030	HC	0	0.25			4,000	70 seat - Burger King		1,050	1,313
64	16	1.72646713	02040105160030	HC	0	0.25			17,000	St. Lukas		1,700	2,125
64	16.01	1.55142203	02040105160030	HC	0	0.25			2,500	Hess Gas Station		250	313
65	1	9.999934616	02040105160030	VR	0.25	0	111	HP Townhouses			24,975		23,310
65	2.01	2.50651192	02040105160030	VR	0.25	0	1				300		395
65	3.03	4.01666171	02040105160030	PVD	6	0.22		Combined with B65, L1			0		0
65	8	22.73890616	02040105160030	OR	0	0.25			250,000	100% davelopable		25,000	31,250
65	8.02	7.79825609	02040105160030	HC	0	0.25				Combined with B65, L8.03		0	0
65	8.03	3.04258961	02040105160030	OR	0	0.25			18,500	Rossi Chev		1,850	2,313
65	9	0.8963853	02040105160030	VR	0.25	0		Combined with B65, L1			0		0
65	11	0.95750189	02040105160030	VR	0.25	0		Combined with B65, L1			0		0
65	12	0.88701169	02040105160030	VR	0.25	0		Combined with B65, L1			0		0
65	13	0.91888454	02040105160030	VR	0.25	0		Combined with B65, L1			0		0
65	14	1.08728456	02040105160030	VR	0.25	0		Combined with B65, L1			0		0
65	15	1.18195642	02040105160030	VR	0.25	0		Combined with B65, L1			0		0
65	16	1.5479927	02040105160030	VR	0.25	0		Combined with B65, L1			0		0
65	17	0.70478103	02040105160030	VR	0.25	0		Combined with B65, L1			0		0
66	11	2.44992571	02040105160030	VR	0.25	0	1				300		395
66	12	0.87181792	02040105160030	VR	0.25	0	1				300		395
66	13	1.01751407	02040105160030	VR	0.25	0	1				300		395
66	14	0.52948435	02040105160030	VR	0.25	0	1				300		395
66	16	1.19803546	02040105160030	VR	0.25	0	1				300		395
66	20.01	4.62542018	02040105160030	HC	0	0.25			19,000	Smith Motors		1,900	2,375
66	20.02	6.18	02040105160030	HC	0	0.25				Self Storage Units - 2 employees		50	63
66	20.03	16.00801489	02040105160030	HC	0	0.25			105,000	50% davelopable		10,500	13,125
66	20.05	3.00	02040105160030	HC	0	0.25			5,000	D Donuts		500	625
66	20.07	16.81086424	02040105160030	HC	0	0.25			4,000	Skyline Trailers		400	500
66	20.08	1.97672098	02040105160030	VR	0.25	0	1				300		395
66	20.09	1.98990818	02040105160030	VR	0.25	0	1				300		395
66	20.10	1.93404318	02040105160030	VR	0.25	0	1				300		395
66	20.11	6.03783482	02040105160030	HC	0	0.25				Combined with B 66, L20.01		0	0
66	20.12	3.57	02040105160030	HC	0	0.25			39,000	100% davelopable		3,900	4,875
71	5.01	1.8269947	02040105160030	VR	0.25	0	1				300		395
71	5.02	1.8913461	02040105160030	VR	0.25	0	1				300		395
71	5.03	2.17704125	02040105160030	HC	0	0.25	1				300		395
76	1	2.69415688	02040105160030	HC	0	0.25			8,000	Lawn Mower Sales		800	1,000
76	1.01	2.8	02040105160030	HC	0	0.25			30,000	100% davelopable		3,000	3,750
76	1.02	13.15091221	SPLIT_PARCEL	HC	0	0.25			142,000	100% davelopable		14,200	17,750
76	1.03	8.42811361	02040105160030	HC	0	0.25			91,000	100% davelopable		9,100	11,375
76	2	1.12155478	02040105160040	HC	0	0.25	8	Country Ch Trailer Pk			2,400		3,160
76	3	1.36059385	02040105160040	HC	0	0.25			6,500	Ernie & Doms Restaurant		650	813
76	4	22.60754059	02040105160040	HC	0	0.25			245,000	100% davelopable		24,500	30,625
77	1	0.29332448	02040105160030	HC	0	0.25			3,000	100 davelopable		300	375
78	1	8.20206041	SPLIT_PARCEL	OR	0	0.25			89,000	100 davelopable		8,900	11,125
78	3.01	2.47038925	02040105160040	OR	0	0.25			26,000	100% davelopable		2,600	3,250
78	7	0.19034381	02040105160030	VR	0.25	0	1				300		395
78	8	0.38199942	SPLIT_PARCEL	VR	0.25	0	1				300		395

BUILD-OUT

FUTURE SEWER SERVICE AREA - HAWK POINT

BLOCK	LOT	ACRES	HUC14	MUNICIPAL ZONE	MUNI DU/ACRE	MUNI FAR	RESID UNITS		NONRES-SQFT		WW-RESIDENTIAL-GPD	WW - NON RESIDENTIAL-GPD	WATER DEMAND-GPD
78	9	1.14253874	SPLIT_PARCEL	VR	0.25	0			4,000	Unity Bank		400	500
78	9.01	0.37490499	02040105160040	HC	0	0.25			1,500	Gas Station		150	188
78	10	0.70808349	02040105160040	VR	0.25	0	1				300		395
78	10.01	4.41462337	SPLIT_PARCEL	VR	0.25	0	1				300		395
78	10.02	0.16424279	02040105160030	VR	0.25	0	1				300		395
78	11	0.27032381	02040105160040	HC	0	0.25			2,800	Elec. Contractor		280	350
78	12	0.23130682	02040105160040	HC	0	0.25			1,800	Enterprise		180	225
78	13	0.31230583	SPLIT_PARCEL	VR	0.25	0	1				300		395
78	14	0.55945828	02040105160040	HC	0	0.25			7,000	Existing building (vacant)		700	875
TOTALS		230.1360554					139		1,233,700		33,375	126,335	192,280
Water demand			NJAC 5:23-5.2 residential										
			NJAC 7:10-12.6(b)2 non-residentia										
Sewage generation			NJAC 7:14A-23.3										

BUILD-OUT
FUTURE SEWER SERVICE AREA - HAWK POINT

BLOCK	LOT	ACRES	HUC14	MUNICIPAL ZONE	MUN DU/ACRE	MUN FAR	RESD UNITS	NONRES-SQFT	WW-RESIDENTIAL-GPD	WW-NONRESIDENTIAL-GPD	WATER DEMAND-GPD
28	3.01	4.88098499	02040105140020	R4	1.09	0	1 Oxford STP	0 Oxford STP	300		395
46	13	9.99772985	02040105140020	GC	0	0.3	0 Wash Boro STP	73678 Wash Boro STP		7,368	8,960
65	2	248.0119083	02040105160030	PVD	6	0.22	17 Hawk Pt. STP	42236 Hawk Pt. STP	3,825	4,224	8,850
65	4	8.39003036	02040105160030	PVD	6	0.22	4 Hawk Pt. STP	11514 Hawk Pt. STP	900	1,151	2,279
65.01	1	13.4785185	02040105160030	PVD Non R	0	0.22	0 Hawk Pt. STP	59086 Hawk Pt. STP		5,909	7,386
65.02	1	2.48861176	02040105160030	PVD Res	6	0	10 Hawk Pt. STP	0 Hawk Pt. STP	2,250		2,300
HAWK POINT TOTALS							31	112836	6975	11,284	20,635

Water demand NJAC 5:21-5.2 residential
NJAC 7:10-12.6(b)2 non-residential

Sewage generation NJAC 7:14A-23.3

BUILD-OUT
INFILL WITHIN EXISTING SERVICE AREAS