

Section 9

Environmental Assessment

9.1 Introduction

Prior to the Wastewater Facilities Plan being granted final approval, the Connecticut Department of Environmental Protection (CTDEP) must prepare either a *Finding of No Significant Impact* or an *Environmental Impact Evaluation* for the review and approval by the Connecticut Office of Policy and Management. The CTDEP utilizes the *Environmental Impact Evaluation* checklist to evaluate whether sufficient information has been provided in the Wastewater Facilities Plan to prepare either of the documents previously mentioned. This section addresses the required evaluation criteria for the recommended collection system improvements and the recommended treatment plant alternative as summarized in Section 8, to assist the CTDEP in preparing the necessary documentation.

9.2 Existing Conditions and Environmental Impacts

The recommended treatment plant alternative includes upgrading and expanding each of the three existing WPCFs at the Mystic, Borough and Pawcatuck sites. The construction work will occur on the existing WPCF properties and will require new or expanded concrete treatment tankage. The expanded plants will treat the wastewater to a higher level of quality than the existing plants. Though the upgrades are planned to meet the projected flows from each service area, the discharge rates from each facility will not exceed the current NPDES permit requirements.

The recommendations also include extensions of the existing wastewater collection systems to the “critical” and “high” priority sewer needs areas identified in this report. The environmental impacts of these recommendations are discussed in the following sections.

9.2.1 Soils

There are four major soils associations that have been identified in Stonington: Woodbridge-Paxton-Montauk; Charlton-Canton-Hollis; Haven-Hinckley; and Westbrook-Pawcatuck (*Soil Survey of New London County, Connecticut, United States Department of Agriculture, Soil Conservation Service, 1983*). These soil types range from well and excessively-drained to poorly-drained. For the purposes of wastewater disposal, it should be noted that well-drained soils might still contain restrictive layers to downward movement of water in the soil profile.

Soil conditions for the sewer needs areas were evaluated for on-site disposal feasibility and are discussed in Section 2.4. Since the collection system would extend to the “critical” and “high” priority sewer needs areas, and on-site disposal would no longer be a concern, soil conditions in these areas would not have an impact. Soil conditions may have an impact on the construction of sewers to these areas.

9.2.2 Geology and Topography

According to the *Soil Survey of New London County, Connecticut*, the topography in Stonington varies from nearly level to steep. Areas with Woodbridge-Paxton-Montauk soils typically exhibit drumloidal upland landforms with stone and boulders commonly found on the surface. This is the predominant type of formation and is found in the central and northern portions of Stonington. Charlton-Canton-Hollis soils formations are typically upland glacial till hills, ridges, and plains. Stone and boulders are common on the surface and many areas have bedrock outcrops. This formation is typically located along the coastal areas of Stonington. Outwash plains, stream terraces, and eskers in valleys are typically found where Haven-Hinckley soil formations are present. There are two areas in Stonington where this topography is found including along Whitford Brook and Anguilla Brook. Finally, tidal flats are typically made up of Westbrook-Pawcatuck soils, and are usually inundated with saltwater two times daily. There is a small area near the Barn Island Wildlife Management Area in Pawcatuck that is comprised of these soils.

The existing sites for all three existing WPCFs are cleared with fairly level terrain. The geology and topography of each site would not have an impact on the construction activities at the existing WPCF sites.

Construction of sewers to the sewer needs areas may be impacted by the geology and topography of each area. The presence of bedrock, stone, or boulders has an impact on the cost of constructing the sewers, while the topography may dictate which type of sewer would be preferred (e.g., gravity, pressure, etc.).

9.2.3 Hydrology

Stonington is located on Fisher's Island Sound and has two harbors, Mystic Harbor and Stonington Harbor. The shoreline is jagged, with several peninsulas and coves. The Town is also bounded by the Mystic River to the west and the Pawcatuck River to the east. Several major brooks also flow through the Town: the Pequotsepos Brook, Cops Brook, Stony Brook and Anguilla Brook.

The Aquarion Water Company of Connecticut's Mystic Reservoir is located on Cops Brook; Silvias Pond is located on Stony Brook; and Wequetequock Pond is located on Anguilla Brook.

Groundwater depth is shallow along Stonington's shoreline. In some areas, ledge and low-permeability soils cause groundwater to perch near the ground surface.

Construction work at the three existing WPCFs would not have an impact on the local hydrology. Surface water bodies would be protected during construction by utilizing soil erosion control measures.

The construction of new sewers in the sewer needs areas could positively impact the quality of groundwater in those areas, since it would replace existing, problematic septic systems. Four of the 18 sewer needs areas, including three of the nine areas

identified as “critical” or “high” priority, are all or partially located within a CTDEP Level A/B Aquifer Protection Area. In fact, the Marjorie Street area is located adjacent to an Aquarion Water Company well site. Similarly, five of the 18 sewer needs areas, including three of the nine areas identified as “critical” or “high” priority, are located within the Town’s Aquifer Protection Zone. Resolving wastewater disposal problems in these areas would improve groundwater quality. Some excavations would likely need to be dewatered during construction, but this would only have a short-term affect on the local groundwater or surface water bodies. Utilizing soil erosion control measures can protect surface water bodies or wetlands near the construction areas. A brief description of the hydrology for each sewer needs area is mentioned in Section 2.4.

9.2.4 Wetlands

Construction activity at the Mystic, Borough and Pawcatuck WPCFs could have a temporary impact on nearby coastal wetlands. Expansion at the treatment plant sites will not occur directly in existing wetlands, although some of the work may be in close proximity. Proper soil erosion control measures (i.e., hay bales, silt fences, etc.) would be required to mitigate impacts.

New sewer construction for the proposed sewer needs areas involves construction in close proximity to wetlands. However, since most of the proposed sewers would be constructed in existing roads and right-of-ways, no construction is anticipated to occur directly in the wetlands. Soil erosion control measures would be required in areas where construction activity could impact nearby wetlands.

9.2.5 Floodplains

Available Geographical Information System (GIS) floodplain information was collected and reviewed. Federal Emergency Management Agency (FEMA) flood maps were also reviewed. FEMA mapping indicates that the shoreline area below elevation 10 to 11 – as high as elevation 16 in some areas with wave action – is within the 100-year floodplain. Under this condition, the Mystic River, Pawcatuck River, Pequotsepos Brook, Cops Brook, Stony Brook and Anguilla Brook also become flooded several feet above their normal stage. Therefore, many areas in the Town of Stonington located near the coast and along rivers and streams are prone to flooding. Both the Mystic and Borough WPCFs are located within the 100-year floodplain. The Pawcatuck WPCF is located just outside of the 500-year floodplain.

Although the Mystic and Borough WPCFs are located within the 100-year floodplain, the affect of the floodplain on the recommended alternative of upgrading the existing WPCFs is not a concern. Any new tankage or facilities, like the existing facilities, would be constructed either above the 100-year flood stage or would be otherwise protected from the 100-year flood.. The Pawcatuck WPCF is not located within the 100-year floodplain.

The existing plant sites are not within the floodways of any rivers or streams, and construction at these sites will not impact the flood elevations.

The proposed expansion of the collection system to six of the sewer needs areas would require some construction within the 100-year floodplain. However, the construction and operation of the sewers would not be affected by flooding, nor would it impact the frequency or severity of flooding in any areas.

9.2.6 Vegetation and Wildlife

There are federal and state agencies that require certain forms to be filed prior to construction projects to ensure that certain species of plants and animals are not negatively affected by construction activity. These agencies include the U.S. Fish and Wildlife Service, CTDEP, etc.

Construction at the Mystic WPCF is not expected to affect any threatened or protected vegetation or wildlife, because the existing site vegetation is comprised of plants that typically inhabit previously disturbed areas. Likewise, construction at the Borough WPCF also is not expected to have an impact on threatened or protected vegetation and wildlife, since site work would disturb only the existing site.

The Pawcatuck WPCF is not located on any major waterway, but the property is large enough to accommodate different wildlife species. The existing site is comprised of plants that typically inhabit disturbed areas. There are no known threatened or endangered vegetation or wildlife species at this site. Construction at this site should not directly impact the existing vegetation and wildlife species.

The recommended sewer construction would mostly be located in existing roadways and should not directly impact any flora or fauna located near the work sites. However, it is important that this issue be addressed with the appropriate agencies prior to any of the proposed sewer installations.

9.2.7 Air Quality

Concerns about potential odors from the three WPCFs are a priority to WPCA, and the planned upgrades to the three existing plants include, at a minimum, maintenance of the same level of odor control provided in the 2003 odor control project. During construction, there would be emissions from vehicles and other construction equipment, and dust from construction activities within the sites. Construction equipment and vehicles would likely cause a temporary increase in localized hydrocarbon and carbon monoxide levels, but not to an extent that would cause adverse impacts to air quality. The use of equipment mufflers and typical dust control measures (i.e., water sprinkling, calcium chloride, etc.) can minimize any impacts to air quality.

No new odor control facilities are proposed for Pumping Station No. 3, which currently transfers Pawcatuck system flow to the Pawcatuck WPCF for treatment and would transfer Pawcatuck system flow to the new plant in the future. Review of the pumping station indicates that some operational changes could be made to minimize odors at this facility. Should odors become problematic in the future, a small carbon canister-type system could be installed for odor control.

The installation of sewers would have the same impacts to air quality as the construction activities mentioned above, however, they would likely be on a much smaller scale. The sewer construction process moves quickly, and should not be located within one area for a long period of time. The use of equipment mufflers and typical dust control measures can minimize any impacts to air quality.

9.2.8 Noise

Construction activity and large equipment traffic would be noticeable to nearby neighborhoods and businesses during construction activities at the existing WPCFs. Noise levels in the immediate areas inclusive of each treatment facility would be elevated at times during demolition and construction. The noise created during demolition and construction would be temporary in nature and would be restricted to normal working hours. Once operational, noise levels are not expected to be any different from current levels, and would be minimized by placement of equipment in sealed areas, and/or specifying silencers or mufflers on large equipment.

The sewer construction process moves quickly, and activity is usually not within one area for long periods of time. Construction equipment can be equipped with silencers or mufflers to minimize noise during construction. Therefore, there should not be any significant impact from noise associated with installing sewers to the sewer needs areas.

9.2.9 Traffic

Construction at the existing WPCFs would require the use of heavy equipment including excavators, cranes, rams, and dump trucks. The removal of excavated materials from each site, and the delivery of construction materials and new equipment would involve a steady stream of vehicle traffic entering and exiting the site. Access to the Borough WPCF is especially difficult for heavy equipment and tractor trailers because the streets are extremely narrow. Unfortunately, truck traffic through residential neighborhoods cannot be avoided for work at any of the three WPCFs. Traffic during the construction work may require that traffic patterns be temporarily modified to accommodate these activities. Traffic control plans would need to be prepared prior to construction to address these issues so that traffic impacts are avoided or minimized.

Installation of sewers in the sewer needs areas would be mostly located within existing roads and right-of-ways, and would likely impact traffic patterns. Therefore, traffic patterns would be temporarily modified to accommodate these construction activities. Traffic control plans would need to be prepared prior to construction to address these issues so that traffic impacts are minimized.

9.2.10 Visual Impacts / Aesthetics

The aesthetics of the Mystic, Borough and Pawcatuck WPCFs would not significantly change after the upgrades to the three existing WPCFs. The Mystic WPCF and the

Pawcatuck WPCF are visually isolated from neighbors, and the recommended upgrades will have negligible impacts at those sides.

Construction at the Borough WPCF has the potential to have a more significant aesthetic impact, depending on the final treatment process selected. The process planned in this facilities plan will require a small increase in treatment tankage, requiring an expansion of the existing process footprint. Alternative technologies, requiring less extensive heavy construction, would minimize any aesthetic impact.

Installing sewers may impact the aesthetic quality of certain neighborhoods temporarily during construction.

9.2.11 Cultural/Recreational/Historical/Archeological Resources

The recommended construction work at the existing WPCFs would not have an impact on any cultural or historical resources. The Borough WPCF site is within an area of historical significance. All necessary state and federal regulations should be followed in advance of the construction activities to address this issue.

The proposed installation of sewers would mostly take place in existing roadways, which have been previously disturbed. Therefore, it is unlikely that any cultural or archeological resources would be revealed during construction. However, all applicable federal and state regulations dealing with this issue must be addressed prior to construction.

9.2.12 Land Use

All three WPCF sites are presently used for wastewater treatment. It is proposed these facilities remain in service. The upgrades planned do not require expansion of land area beyond the existing site boundaries.

The land uses surrounding the Mystic WPCF site include a residential neighborhood, a Bed and Breakfast (B&B), and a small marina. The construction at the existing site could temporarily impact the B&B, but it is unlikely to impact the marina. Once the construction is completed, the upgraded plant impact will be equal to the existing site.

The Borough WPCF is located near a residential neighborhood and a large fishing pier. Construction at the site would not have an effect on the use of the fishing pier, but construction activity would likely temporarily impact the surrounding neighborhood. Once the construction is completed, the upgraded plants impact will be very similar to the existing site, though an increase in tankage would extend partially into the existing dog-walk area.

The Pawcatuck WPCF is located near a residential neighborhood. Construction activity during construction would temporarily impact the surrounding neighborhood. The land use impacts at project completion would be minimal.

9.2.13 Zoning

Town-wide zoning and land use information were obtained from the Town's zoning bylaws and from available GIS mapping. The Mystic WPCF is zoned as Residential Coastal, the Borough WPCF is zoned Reserved Land (i.e., land owned by public and semi-public agencies for public purposes), and the Pawcatuck WPCF is zoned for Residential Single Family. The zoning for the sewer needs areas is predominately residential, with some areas zoned for commercial and manufacturing. Zoning would not have an impact on construction activities at the three existing WPCF sites, or within the sewer needs areas.

9.3 Growth Issues

9.3.1 Population Projections

Population projections are discussed in Section 3.3. The Wastewater Facilities Plan recommendations are made in consideration of projected population growth.

9.3.2 Secondary Growth Impacts

Secondary Growth Impacts are impacts that occur as an indirect result of new infrastructure development (e.g., increasing the rate of conversion of undeveloped land to residential land following installation of sewers).

Construction of the recommended upgrades to the existing WPCFs is not expected to create any major secondary growth impacts.

Construction of sewers to the sewer needs areas would have secondary growth impacts to these areas. It is likely that development of vacant lots in these areas would accelerate once sewers are installed, particularly where a lot cannot be developed without the use of innovative or alternative disposal technologies because of poor soils or high groundwater.

9.3.3 Existing Zoning

In general, zoning by-laws have changed over the years with the intent of increasing minimum lot sizes. Zoning for the sewer needs areas is predominantly residential, with some areas zoned for commercial and manufacturing. Town-wide zoning and land use information for Stonington is discussed further in Section 2.3.3.

9.4 Conservation and Development Plans

9.4.1 Stonington Plan of Conservation and Development

The Town of Stonington recently adopted its *2004 Plan of Conservation and Development* (Stonington Plan). The Stonington Plan is "intended to provide a framework for consistent decision-making by Town boards, commissions and residents with regard to conservation and development activities." The plan summarizes existing conservation and development trends, identifies community issues and recommends an approach to future conservation and development.

Key issues addressed include:

- Preserving important resources (e.g., open space, natural resources, coastal resources, historic resources and scenic resources)
- Protecting and enhancing the three village areas (i.e., Mystic, Borough and Pawcatuck)
- Encouraging appropriate development (e.g., residential and business development patterns, changing housing needs, institutional needs, etc.)
- Addressing community needs (e.g., community facilities, transportation, etc.)

The Stonington Plan strikes a balance between development and open space preservation through zoning, acquisition and resource protection.

Open Space Planning

Stonington's open space plan includes maintaining a portion of new developments as open space, enhancing existing open space through acquisition or conservation easements, and creating "greenways" by connecting open space. Stonington's planned open space is shown on **Figure 9-1**. This Wastewater Facilities Plan includes no provision for collection system expansion for future development.

Conservation of Coastal Resources

Enhanced treatment at the existing WPCFs reduce the discharge of nitrogen and other pollutants to the Pawcatuck and Mystic Rivers and to Stonington Harbor.

Protection of Important Natural Resources

The Stonington Plan includes suggested policies to strengthen wetland and wildlife protection policies, as follows:

- This Wastewater Facilities Plan does not propose work resulting in wetland impacts. Sewer extensions into sewer needs areas would largely be constructed in Town streets and should not impact adjacent wetlands.

Water Quality Protection

As noted in Section 9.2.3, five of the 18 identified sewer needs areas are located within CTDEP Level A and/or B Aquifer Protection Areas and/or the Town's Aquifer Protection Zone. Four of these areas have been identified as "critical" or "high" priority areas and have been included in the recommended plan (see Section 8). The Marjorie Street area – the most critical area – is located adjacent to an Aquarion Water Company well site. The "critical" Elm Ridge Road area is within the aquifer area for wells owned and operated by the Town of Westerly, Rhode Island – Pawcatuck's water supplier. Resolving wastewater disposal problems in these areas would improve groundwater quality.

See Figure 9-1

Enhancing the Village Areas

The proposed improvements contained in this Wastewater Facilities Plan would have a negligible impact, neither positive nor negative, on Stonington's plans to enhance the three village areas.

Encouraging Appropriate Development

The proposed Wastewater Facilities Plan complies with the Stonington Plan. The upgraded WPCFs have been sized to accommodate future flows and loads within the existing collection systems and from the sewer needs areas. No additional expansion of the collection system is proposed by the WPCA. The existing Mystic and Pawcatuck collection systems would support controlled development within the existing collection system service area, including desired development along Interstate 95 and planned redevelopment projects.

Addressing Community Needs

The proposed facilities have no impact on the community planning included in the Stonington Plan.

9.4.2 State Conservation and Development Policies Plan

The Connecticut Department of Environmental Protection (CTDEP) requires that any facility planning conform to the Office of Policy and Management's *Conservation and Development Policies Plan* (OPM Plan). The OPM Plan is a statewide plan, developed to guide planning processes in a manner that best suits the future human, environmental, and economic needs of the State of Connecticut. An important concept of the OPM Plan is that areas of environmental concern (existing preserved open space, preservation areas, conservation areas, Level A/B Aquifer Protection Areas and historic areas) not be included in the Wastewater Facilities Plan as proposed future sewer service areas unless there is an existing pollution problem in those areas. The OPM Plan includes a Location Guide Map, which is a geographical representation of the categories, including the "Areas of Critical Environmental Concern."

Figure 9-2 shows the "Areas of Critical Environmental Concern" information provided on the OPM Plan's Location Guide Map and areas within the Town that are projected for possible development within the planning period. According to the OPM Plan:

- "Existing Preserved Open Spaces represent areas in the state with the highest priority for conservation and permanent use as open space." These areas include parks, trails and greenways, preserves, and Class I water utility-owned lands.
- "Preservation Areas are lands that do not reflect the level of permanence of Existing Preserved Open Space but which nevertheless represent significant resources that should be effectively managed in order to preserve the state's unique

See Figure 9-2

heritage.” These areas include water supply watersheds, flood zones, inland wetlands, protected species/habitats, and water bodies.

- “Conservation Areas represent a significant portion of the state and a myriad of land resources.” These areas include Class II public water supply watershed lands, Level A and B Aquifer Protection Areas (not otherwise classified), scenic areas, agricultural land, historic areas, recreational areas, and conservation easements.

Existing Preserved Open Space has the highest conservation priority; followed by Preservation Areas and Conservation Areas. The OPM Plan includes guidelines for protection of these areas, which become more stringent/limiting as the conservation priority increases. The Location Guide Map (see Figure 9-2) identifies approximately half of the Town as an Area of Critical Environmental Concern. The OPM Plan also identifies areas in Mystic and Pawcatuck, along Interstate 95 and U.S. Route 1, as growth areas.

The sewer needs areas were identified as those areas with an existing pollution problem, and therefore, are consistent with the OPM Plan.

Proposed residential developments shown north of Interstate 95 (I-95) are not projected to be sewered by the WPCA, and thus, are not included in this Wastewater Facilities Plan. All projected residential areas shown south of I-95 are not located entirely within Areas of Critical Environmental Concern. However, where these areas of environmental concern overlap onto a proposed residential area, development may be limited based on the OPM Plan classification and respective guidelines.

Two areas projected for future commercial development/redevelopment are already developed and have existing sewers. These areas are not located within an Area of Critical Environmental Concern, and therefore, comply with the OPM Plan.

Four projected manufacturing/industrial areas identified by the Town are also shown on Figure 9-2 as either being totally or partially within the Areas of Critical Environmental Concern. Where these areas of environmental concern overlap onto a proposed manufacturing/industrial area, development may be limited based on the OPM Plan classification and respective guidelines.

9.4.3 Comparison of the Stonington and State Plans

This Wastewater Facilities Plan complies with the Stonington Plan and with the OPM Plan. According to the Stonington Plan, inconsistencies between these plans include:

- *“differences in definitions of desirable uses or development densities,*
- *local (as opposed to State or regional) desires about how Stonington should grow and change in the coming years, or*
- *the fact that the State [OPM] Plan and the Regional [Conservation and Development Policy Guide for Southeastern Connecticut] Plan make policy recommendations for relative*

intensity and environmental sensitivity while this [Stonington] Plan suggests specific land use types."

As a result, the Town and OPM approaches to conservation and development do not fully agree. The philosophical differences in the two plans can be seen by comparison of Figures 9-1 and 9-2. These differences are predominantly related to the OPM definition of Areas of Critical Environmental Concern, and do not have a significant impact on the Wastewater Facilities Plan.

9.5 Permitting Analysis

Environmental permits and approvals are required whenever proposed work may affect certain environmentally sensitive resources including waterways, wetland resource areas, habitats of rare or endangered species, and historic and archeological sites. Others, such as building permits and planning and zoning approvals are required for proposed work that involves construction activities. The necessary permits required for the recommended alternative including expansion of the treatment facilities at the Mystic, Borough, and Pawcatuck WPCFs, construction of a new WPCF, and extensions of the collection systems to the sewer needs areas are discussed below.

9.5.1 Federal Permits

Permit under Section 404 of the Clean Water Act

The U.S. Army Corps of Engineers (ACOE) regulates the placement of dredged or fill material in waters of the United States, which includes wetlands, pursuant to 33 CFR Parts 320-330.

National Pollutant Discharge Elimination System Permits

The Clean Water Act requires wastewater dischargers to have a permit establishing pollution limits, and specifying monitoring and reporting requirements. The three wastewater treatment facilities in Stonington have individual *Municipal National Pollutant Discharge Elimination System (NPDES) Permits* for discharging treated effluent. The recommended alternative proposes upgrades and expansions to the existing WPCFs. Therefore, the existing NPDES permits would likely need to be updated to include new monitoring, reporting, and discharge limit requirements.

A NPDES *Stormwater Discharge General Permit* is required for the construction activities planned at each site. A *Notice of Intent (NOI) for the General Permit* must be submitted to the Federal Clearinghouse in Virginia and the U.S. Environmental Protection Agency (Region 1) two days before the initiation of construction. In addition, a stormwater pollution prevention plan must be prepared describing the sedimentation and erosion control measures that would be implemented as part of the project. The plan does not need to be reviewed by EPA, but must be kept on file in case EPA requests a copy. Upon construction completion, a Notice of Termination must be submitted to terminate the temporary discharge permit. The General Permit also covers dewatering (of uncontaminated groundwater) during construction.

9.5.2 State Permits / Approvals

Section 401 Water Quality Certification

Under Section 401 of the Clean Water Act, federal permits for projects in wetlands or waterways must be certified by the state to ensure that state water quality standards are met. The Bureau of Water Management's Inland Water Resources Division and the Office of Long Island Sound Programs administer the program. This certificate is required for activities that may discharge dredged and fill material and storm water during construction.

Air Emissions

A CTDEP *Air Emissions Permit* may be required to construct and/or operate a new or existing emergency generator. The general permit pertains to "a stationary reciprocating or turbine engine providing mechanical or electrical power only during periods of routine testing and scheduled maintenance, or during an emergency." This permit may be required for any generators proposed as part of this Wastewater Facilities Plan. Since this plan does not recommend a specific generator, this issue should be addressed during the design phase of the approved alternative.

Connecticut Department of Transportation

The installation of sewers within state highways would require prior approval by the Connecticut Department of Transportation (ConnDOT). Also, any traffic control plans that may impact state highways may require prior ConnDOT approval.

9.5.3 Local Permits / Approvals

The following Town departments must be contacted prior to construction activities for the recommended WPCF improvements and extension of sewers to the sewer needs areas for permits / approvals. They include:

- Building Department
 - Building Permits, Demolition Permits, Electrical Permits
- Planning and Zoning Commission
 - Connecticut Coastal Management Act
 - 8-24 Review
 - Site Plans
 - Inlands, Wetlands and Watercourse
- Stonington Highway Department

9.6 Summary

This environmental assessment of the proposed construction activities at each WPCF, in addition to installing new sewers to the sewer needs areas, addresses the environmental concerns associated with these activities.

The new construction and operations the Mystic, Borough and Pawcatuck WPCFs would likely have minimal impact to most environmental concerns. Improved receiving water quality at all three discharge locations will be a positive impact. Possible impacts that may have temporary negative affects during construction activities include impacts to air quality from emissions and dust, water quality due to erosion, noise levels, traffic patterns, and surrounding land uses. Various mitigation measures utilized during construction can dramatically reduce and possibly eliminate negative impacts to these areas of concern. Mitigation measures for each of these impacts have been discussed.

Installation of new sewers to the sewer needs areas would mostly take place within existing roadways. There would be wetland, air quality, noise, traffic, and visual/aesthetic impacts during construction. However, most of these impacts would be temporary and can be either minimized or eliminated through proper mitigation measures.

Under the OPM Plan, future development should not take place within Areas of Critical Environmental Concern unless there is an existing pollution problem. The sewer needs areas are consistent with the policies of the OPM Plan since all of the areas have potential or existing pollution problems related to onsite septic systems. It was noted that there are philosophical differences in development policy between the OPM Plan and the Stonington Plan, though these differences have no impact on the Wastewater Facilities Plan.