

Record of Decision

**Wastewater Disposal Options Including a Proposed Ocean Outfall for the City of Rehoboth Beach
Wastewater Treatment Facility**

Environmental Impact Statement



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Table of Contents

Record of Decision

- A. Background
- B. The Environmental Impact Statement
 - B.1 Introduction to the EIS
 - B.2 Alternatives Considered
 - B.3 Alternatives Considered But Not Evaluated Further
 - B.4 Environmental Consequences of the Alternatives
- C. Choice of Alternatives
 - C.1 Selected Alternative
 - C.2 Identification of the Department's Preferable Alternative
- D. Additional Information
 - D.1 Consultation and Coordination
 - D.2 Summary of Comments Received on the Final EIS
- E. Mitigation and Monitoring
 - E.1 Land Use
 - E.2 Air and Water Quality
 - E.3 Essential Fish Habitat
 - E.4 Protected Species
 - E.5 Cultural and Historic Resources
 - E.6 Adoption of All Practical Means to Minimize Environmental Harm
 - E.7 Permitting
- F. Decision

Appendices

- A. All Comments Received on the Final EIS
- B. Responses to Substantive Comments on the Final EIS
- C. Documentation of Conformance with Environmental Review Procedures for the Water Pollution Control Revolving Fund

RECORD OF DECISION

Wastewater Disposal Options Including a Proposed Ocean Outfall for the City of Rehoboth Beach Wastewater Treatment Facility

NOTE: All citations in the Record of Decision refer to Chapter 12_References of the Final EIS.

A. Background

The Delaware Department of Natural Resources and Environmental Control (DNREC) has prepared this Record of Decision (ROD) for the *Wastewater Disposal Options Including a Proposed Ocean Outfall for the City of Rehoboth Beach Wastewater Treatment Facility's Final Environmental Impact Statement (FEIS)*. The Final EIS was prepared by the City of Rehoboth Beach and its consultants and accepted by DNREC. This ROD includes a summary of the Final EIS, the public involvement in the decision-making process, a synopsis of alternatives considered, a summary of the key environmental issues evaluated, a statement of the decision made (selection of an alternative), and the basis for the decision.

The City of Rehoboth Beach Wastewater Treatment Plant (RBWWTP) receives wastewater from the City and surrounding areas of Henlopen Acres and Dewey Beach and discharges the treated effluent to the Lewes-Rehoboth Canal which flows into the Rehoboth Bay. The original RBWWTP was completed in 1987 and was designed to provide a secondary level of treatment, equating to a minimum reduction of 85% of influent concentrations of biological oxygen demand (BOD) and total suspended solids (TSS) (USEPA 2010). Nutrient removal was not a requirement of the discharge permit when the plant was completed.

In 1993, DNREC issued a consent order to implement Biological Nutrient Removal (BNR) at the RBWWTP. This was driven by and consistent with the "Comprehensive Conservation and Management Plan (CCMP) for Delaware's Inland Bays." This plan established goals for nutrient reductions throughout the Inland Bays Watershed. A final cap on nutrients was established based on the 1989 baseline load. The final cap was established as a 30% reduction in nitrogen and a 70% reduction in phosphorus to be monitored on a rolling annual average. Interim goals of a 15% and 30% reduction in nitrogen and phosphorus discharge, respectively, were also established.

In 1994, an automated Dissolved Oxygen (DO) control system consisting of DO probes, blower controls, and a programmable logic controller was installed in order to achieve simultaneous nitrification/denitrification in the existing oxidation ditches. The 1997 project added a chemical phosphorus removal system and replaced the Ultraviolet (UV) disinfection system that was not reliable with a chlorination/dechlorination system. Minor upgrades were also implemented at the plant in 2002 to improve grit removal.

Purpose and Need for the Proposed Action

Section 303(d) of the Federal Clean Water Act requires states to identify water bodies that do not meet water quality standards and to impose a Total Maximum Daily Load (TMDL) on both the point and non-point sources that discharge to the water bodies that do not meet the water quality standards for its intended use (USEPA 2002). Water quality monitoring performed by the federal

government, the State of Delaware, citizen monitoring groups, and various university and private researchers have shown that the Inland Bays (Rehoboth Bay, Indian River Bay, and Little Assawoman Bay) are highly enriched with nitrogen and phosphorus (DNREC 1998). High levels of nutrients lead to eutrophication or the excess growth of algae which is severely detrimental to water quality. The mats of algae that form deplete the dissolved oxygen as they decay and reduce the water clarity that native animals and plants need to survive. Additionally, algae blooms can hinder human navigation, cause noxious odors, and otherwise affect the aesthetics of the water. Thus, in 1996, Rehoboth Bay was listed as “water quality limited” by DNREC which required the development of a TMDL.

The TMDL was issued in December 1998 and required that, “all point source discharges which are currently discharging into the Indian River, Indian River Bay, and Rehoboth Bay and their tributaries shall be eliminated systematically.” Thus, the City of Rehoboth Beach had to find an alternate method to discharge its treated wastewater effluent.

In December 2002, the terms of the consent order, which addressed the TMDL, were finalized between the City of Rehoboth Beach and DNREC, and a revised discharge permit for the RBWWTP was issued in August of 2005. As stated in the plant’s discharge permit, the consent order establishes a firm date of December 31, 2014 for the discharge to be eliminated and the new discharge method to be fully operational. To meet the consent order and revised discharge permit, the need for an alternative method of discharge at the RBWWTP was identified.

B. The Environmental Impact Statement

B.1 Introduction to the EIS

The City of Rehoboth Beach has applied for funding for the proposed action under the Water Pollution Control Revolving Fund (WPCRF) under the guidance of the Environmental Protection Agency's (EPA) Clean Water State Revolving Fund (CWSRF). The Environmental Impact Statement (EIS) was prepared for the proposed project to comply with the Environmental Review Procedures of the Delaware WPCRF. The goal is to determine if the City's proposed alternative can be supported by the regulatory agencies and the public, and, if found to be environmentally sound, to obtain a Record of Decision (ROD) in support of the ocean outfall alternative. The environmental review process is a State, not a Federal Action. Per EPA regulations, the process is to be "NEPA-like," meaning that the process is consistent with the Federal National Environmental Policy Act (NEPA) and 40 CFR Part 6. The ROD is a procedural action under Delaware Code Title 29 § 8003 Powers, duties and functions of the Secretary.

Specifically, Title 29§ 8003 Section (12) (c) (4-6) states:

- 4. Procedures for completing an environmental review of projects pursuant to paragraph (12) d. of this section;*
- 5. Conditions for financial assistance; and*
- 6. Other relevant criteria, standards or procedures.*

Standards and procedures specified under this paragraph shall provide for a final approval by the Water Infrastructure Advisory Council of any loan from the Delaware Water Pollution Control Revolving Fund and the "project priority" list.

The Secretary shall conduct an environmental review of projects otherwise qualifying under this subsection which shall be sufficiently consistent with the provisions for environmental review established under 40 CFR, Part 6, and the Secretary's environmental review standards and procedures established in Title 7.

DNREC has consulted with the EPA Region 3 NEPA Coordinator during the environmental review process to ensure consistency with NEPA guidance and to ensure maximum public participation.

On August 8, 2010, DNREC issued a Notice of Intent to prepare an EIS and conduct public scoping for the proposed ocean outfall project. A Public Notice of the Notice of Intent and Public Scoping Meeting were advertised in the Delaware State News and Wilmington News Journal on August 8 and 11, 2010; Cape Gazette on August 10 and 13, 2010; and DNREC Public Notices and Statewide Calendar starting on August 8, 2010.

On August 11, 2010, a project overview was sent to affected Federal, State, and local agencies, and other interested parties, asking for comment on the scope. Comments were accepted from

agency reviewers and the public until September 22, 2010.

A public scoping meeting was held on September 21, 2010 at the Rehoboth Beach Convention Center to independently evaluate the scope and contents of the EIS prior to its approval.

DNREC provided the approved Scope Document to City of Rehoboth Beach on November 24, 2010. This document identified alternatives that need to be adequately addressed in the EIS. Also, the Scope Document provided the format and required elements of the EIS.

The City of Rehoboth Beach requested approval to hire Stearns and Wheler / GHD to prepare the draft EIS on September 9, 2010. The City submitted a statement of qualifications for the firm. Based upon the applicable and extensive background and experience of GHD, especially in ocean modeling, the request was approved by DNREC on November 29, 2010.

The draft EIS was received by DNREC on December 15, 2011. After DNREC staff review, it was made available to reviewing agencies and the public on March 7, 2012. A legal notice was published by the City in the Wilmington News Journal, Cape Gazette and Delaware State News on March 7, 2012 and March 11, 2012. A legal notice was published on the DNREC website as well on March 7, 2012. The draft EIS was available for review on the City of Rehoboth Beach and DNREC websites and at the Rehoboth Beach Public Library until the end of the public comment period. In an effort to maximize public input, the comment period was open for 60 days. This is an additional 15 days longer than the federal NEPA requirement of 45 days.

A public hearing was held by the City of Rehoboth Beach on April 10, 2012. The hearing was publicly noticed at the same time the draft EIS was made available. This was the opportunity for all interested parties and the public to question or challenge the report. An independent hearing officer, Tim Bureau, was hired by the City to conduct the hearing. Mr. Bureau was approved by DNREC based on his experience and recommendations from DNREC staff who had used Mr. Bureau as an independent hearing officer to conduct public hearings. The public hearing was conducted in compliance with Title 29, Chapter 80 of the Delaware Code, and it was transcribed by a professional court reporter. At the public hearing, the hearing officer entered 38 exhibits into the record. The City of Rehoboth Beach engineering consultant made a presentation on the draft EIS and DNREC staff made a presentation on the Clean Water State Revolving Fund EIS process. Individuals requesting to speak were given ample time to make statements. Six individuals spoke.

The public comment period remained open until May 10, 2012. Comments were received by DNREC via e-mail, fax, and letter. The comments were given exhibit numbers, sent to the hearing officer, and entered into the record. Comments were received from state and federal agencies, stakeholders, and the public. The transcript of the public hearing, the 46 public comments, two legal notices, the sign-in sheet, and an e-mail message confirming electronic receipt were all entered into the record for a total of 89 exhibits.

The hearing officer prepared a report based on the transcript of the public hearing and the exhibits. The report prescribed what responses were required of the City. It was delivered to the City and DNREC in June 2012. The City's engineering consultant, GHD, began to prepare the responses. DNREC advised the consultant to respond to all comments on the draft EIS.

A copy of the final EIS was submitted to DNREC in August of 2012 for feedback on the responses to the comments on the draft EIS. The Department found that the EIS did not adequately address the issue of constructed wetlands. Constructed wetlands were brought up in numerous comments both at the public hearing and in written comments. Also, the Department conducted an internal study on the use of constructed wetlands as an alternative disposal method for the Rehoboth Beach WWTP. That study resulted in a white paper that has been included in the agency comments on the Final EIS.

The final EIS was revised and resubmitted to DNREC in December 2012. The City responded to all comments from reviewing agencies, interested parties, and the public, and addressed them in the final EIS. A Notice of Availability of the Final EIS was published on January 27, 2013. The final EIS was subjected to a 30-day comment period. Comments on the final EIS were received until February 26, 2013.

B.2 Alternatives Considered

Alternative 1: No Action: Treated effluent continues to be discharged into Rehoboth Bay.

Alternative 3: Land Application: Treated effluent is sprayed on agricultural land to irrigate crops and provide nutrients as necessary for crop uptake. The effluent, with nutrients not taken up by the crops, percolates through the soil to the groundwater. Several variations of this alternative were evaluated including:

Alternative 3A: Treated effluent from Rehoboth Beach is sent to a new facility built for the sole use of the RBWWTP.

Alternative 3B: The RBWWTP is shut down and all raw wastewater is sent to the Wolfe Neck Regional Wastewater Facility (WNRWF) with excess flow treated at the Inland Bays Regional Wastewater Facility (IBRWF).

Alternative 3C: The RBWWTP is shut down and all raw wastewater is sent to the WNRWF with excess flow treated by a Private Wastewater Provider (PWWP).

Alternative 3D: The RBWWTP remains in service and treated effluent is sent to the WNRWF for disposal via spray irrigation, with excess flow sent to the IBRWF for disposal via spray irrigation.

Alternative 3E: The RBWWTP remains in service and treated effluent is sent to the WNRWF for disposal via spray irrigation, with excess flow sent to a PWWP.

Alternative 6: Ocean Outfall: Treated effluent is discharged through an outfall and diffuser into the ocean at a depth and distance from the shore that allows for adequate mixing with seawater such that all water quality criteria and public health standards are achieved.

B.3 Alternatives Considered But Not Evaluated Further

Alternative 2: Nutrient trading: Per the consent order finalized in December 2002, this option would only be available if other options were technically or economically unfeasible.

Alternative 4: Rapid Infiltration Beds: Treated effluent is flooded onto sand beds allowing the wastewater to percolate down into the groundwater. The basins are typically flooded and then allowed to dry and rest for a period of time. A minimal amount of additional treatment is achieved by soils and soil microbes, but the treatment level is much less than provided by spray irrigation.

Alternative 5: Ground Water Injection: Treated effluent is injected into the groundwater. Two variations of this alternative were evaluated including:

Alternative 5A: Treated effluent is injected into a shallow well in an area where the groundwater is not potable due to its salt content or other contamination.

Alternative 5B: Treated effluent is injected through a deep well into an aquifer that is confined below the drinking water aquifers.

B.4 Environmental Consequences of the Alternatives

Under the no action alternative, treated effluent continues to be discharged into the Lewes-Rehoboth Canal via the current outfall. This is not a feasible option since it would violate the 1998 Nitrogen and Phosphorus Total Maximum Daily Load (TMDL) requiring the elimination of all point source discharges into the Inland Bays, which includes Rehoboth Bay, and the 2002 consent order which requires the elimination of the RBWWTP outfall. The environmental impacts of this alternative were investigated in detail to provide a point of comparison to the ocean outfall alternative.

Under the land application alternative, treated effluent is pumped from RBWWTP to a spray irrigation facility to be land-applied. None of the five land application alternatives originally considered was determined to be feasible, since insufficient land was determined to be available and cooperation with Sussex County is no longer expected to occur. In order to provide a point of comparison to the ocean outfall alternative, the environmental impacts of a dedicated land application facility were investigated in detail, as this is the option that would potentially have the greatest impact on the environment.

Under the ocean outfall alternative, treated effluent is pumped from RBWWTP to an ocean outfall located more than one mile off of the coast in the Atlantic Ocean. Two potential locations were considered for the ocean outfall, both extending out from the beach access parking lot located at the intersection of Henlopen Avenue and Duneway in Rehoboth Beach. Only one of the two proposed outfalls will be constructed.

Air Quality/Odor

Short-term and temporary impacts to air quality/odor are expected for the land application and ocean outfall alternatives due to construction vehicles and equipment.

Long-term and chronic impacts to air quality and odor are expected for the no action alternative due to algae produced by eutrophication.

Soils/Groundwater

Minor short-term impacts to soil are expected for the land application and ocean outfall alternatives due to disturbance from construction.

Potential long-term chronic impacts to soils and groundwater may result from the land application alternative, due possible contamination by pathogenic microorganisms, nutrients, and other contaminants. Delaware regulations require that both soil and groundwater influenced by land application effluent be tested regularly (DNREC 1999).

Surface Water Quality/Quantity

Minor short-term impacts to surface water quality are expected for the land application and ocean outfall alternatives due to increased erosion and sedimentation during construction. Silt fencing and other erosion control methods would effectively mitigate this impact. For the ocean outfall alternative, trenching in the ocean will agitate the ocean floor, which may temporarily increase turbidity and release biological and chemical substances that have settled into the sediment. Sediment data indicates that impacts from turbidity should be localized and minimal. The potential for the release of drilling fluid into the ocean when utilizing directional drilling during a “frac-out” will be minimized by carefully monitoring of the drilling fluid pressure during drilling.

Floodplains

Minor short-term impacts to floodplains are expected for the land application and ocean outfall alternatives due to disturbance from construction. No long-term impacts are expected from any alternative.

Prime Agricultural Land

Potential short-term impacts to prime agricultural land may result from the land application alternative due to disturbance for construction of the force main. The force main will follow existing roadways and construction will not have a significant impact on nearby farmland. Land application of treated wastewater would limit the types of crops that could be grown; crops that would go to market for direct human consumption (e.g., sweet corn, lima beans, etc.) could not be grown.

No alternative will encourage any growth or development that could infringe upon agricultural land since no alternative will increase the treatment capacity of the RBWWTP.

Cumulative Effects to the Physical Environment

The current impaired environmental condition of Rehoboth Bay is directly due to the cumulative impacts of nutrients discharged from the RBWWTP and nonpoint sources within the watershed. The City of Lewes is also a minor contributor to the nutrient load. Nonpoint source discharges from agricultural operations are the leading source of nutrients (Martin, et al. 1996); however, point source discharges have almost immediate impacts on water quality, especially during the warmer months. Continuing to discharge into the Bay will likewise continue to contribute to the poor water quality. The land application alternative is not expected to contribute to any

cumulative effect on the physical environment. Adequate land is not available for just the construction of a land application facility for Rehoboth Beach, so it is extremely unlikely that additional land application facilities for other treatment plants would be built in the area. Additionally, the buffer zones required around land application facilities minimizes the cumulative effect of multiple facilities.

No ocean outfalls currently exist off of the coast of Rehoboth Beach and there are no known plans to construct additional outfalls. The South Coastal WWTP ocean outfall, located off of the coast of the Town of South Bethany, is the closest existing outfall to the proposed RBWWTP outfall. The two outfalls would be approximately 13 miles (21 km) apart. Due to the distance between outfalls and the rapid dilution of treated effluent within the ocean, the RBWWTP ocean outfall is not expected to contribute to any cumulative impacts.

Affected Environment and Environmental Consequences (Biological Environment)

Terrestrial Biota and Habitats

Potential short-term impacts to terrestrial biota and habitats may result from the land application alternative. The proposed alignment crosses over creeks associated with rare, threatened and endangered species that could be indirectly impacted from sediment. Stringent erosion and sediment controls would be required to minimize impacts. Several species of nesting migratory birds may be using areas along the force main alignment as a nesting ground. If a visual survey confirms a substantial number of nests, construction should be restricted to between August 1 and April 15, or deterrents such as mesh netting should be used (Stetzar 2011). Potential short-term impacts to terrestrial biota and habitats may also occur with the ocean outfall alternative. Impacts to the lower and upper beach areas, dunes, the intertidal zone, and their associated terrestrial species are not anticipated since the pipeline will be directional drilled in those areas and construction of the force main from RBWWTP to the ocean outfall will have minimal environmental impact because the alignment will follow existing utilities and roadways.

Potential long-term impacts to terrestrial biota and habitats may result from land application since a portion of the proposed land application site is mapped as a Key Wildlife Habitat by the Delaware Wildlife Action Plan, indicating that it is an area of the state where conservation efforts should be focused (Allen, Barkus and Bennett 2006). However, this designation is not regulatory, and impact to species from treated effluent is not expected.

Wetlands Biota/Habitat

Potentially significant impacts to wetland biota/habitats may exist for the land application alternative if constructed at the proposed location; freshwater forested/shrub wetlands and freshwater emergent wetlands are located there.

No long-term impacts to wetlands biota/habitat are expected from any alternative.

Aquatic Biota/Habitat

Benthic Biota

Minor short-term impacts to benthic biota are expected for the ocean outfall alternative in the vicinity of the outfall diffuser or the trenched portion of the outfall pipe due to dredging and backfill operations during installation. Benthic communities in the disturbed area are initially decimated but resettling and recolonization occur rapidly. Benthic biota sampling could be done before and after construction to determine what effect, if any, construction had on the benthic community.

Minor long-term impacts to benthic biota may result from the ocean outfall alternative in the vicinity of the ocean outfall. Previous studies have shown that the community composition in the near-field area showed the greatest discharge-related effects, but biota diversity remained high, and the area was not characterized by a degraded community (Diener, et al. 1995).

Phytoplankton

Minor short-term impacts to phytoplankton may occur from the ocean outfall alternative. Construction of the trenched portion of the outfall pipe will increase local turbidity, which could impact the ability of phytoplankton to receive sunlight for photosynthesis. The potential mortality of phytoplankton caused by construction activity would not be as great as the natural mortality rates under normal circumstances (Louis Berger Group, Inc. 1999).

Major long-term impacts to phytoplankton in Rehoboth Bay would result from the no action alternative. Nutrient overenrichment within the Bay would continue to cause phytoplankton blooms, including blooms of potentially toxic algal species, which are damaging to the local ecosystem and of possible human health consequences.

Submerged Aquatic Vegetation (SAV)

Short-term impacts to submerged aquatic vegetation (SAV) are not expected for any alternative.

Major long-term impacts to SAV in Rehoboth Bay would result from the no action alternative. The excessive growth of phytoplankton and seaweed resulting from eutrophication block sunlight from reaching SAV on the Bay bottom. DNREC and the nonprofit Center for the Inland Bays have been engaged in the restoration of eelgrass for more than a decade.

Fish

Minor short-term impacts to fish may occur from the ocean outfall alternative. Dredging within the ocean could cause physical injury to fish either directly by physical contact or indirectly by disrupting the food resources. Significant impacts to Essential Fish Habitats (EFHs) are not expected as all of the fish species associated with the area of concern are highly mobile and migratory, and all EFHs near the project extend far beyond the area. Construction activity will, at most, only disturb a small fraction of the total EFH area.

Long-term impacts to fish are not expected to occur from the ocean outfall alternative. All of the fish species associated with the area of concern are highly mobile and migratory, and all EFHs near the project extend far beyond the area. Any contaminant potentially present in the effluent would be rapidly diluted to below minimum water quality criteria or to non-detectable levels.

Marine Mammals

Minor short-term impacts to marine mammals may occur from the ocean outfall alternative. Construction during winter months will minimize impact to bottlenose dolphins. No construction will occur on the dunes or beach, so impacts to seals from construction equipment is not expected. Equipment for construction should be selected to minimize sound intensity and duration to prevent affecting the acoustic ability or injuring the hearing organs of marine mammals (Stetzar 2011).

Long-term impacts to mammals are not expected to occur from the ocean outfall alternative. All of the fish species associated with the area of concern are highly mobile and migratory, and the range of all mammals near the project extend far beyond the area. Any contaminant potentially present in the effluent would be rapidly diluted to below minimum water quality criteria or to non-detectable levels. Bioaccumulation of contaminants from RBWWTP effluent within marine mammals is not expected to occur.

Endangered Species

Sea Turtles

Minor short-term impacts to sea turtles may occur from the ocean outfall alternative from the use of dredging equipment for construction of the outfall. Use of clamshell or cutter suction dredger equipment and construction during winter months would minimize impact to sea turtles.

Long-term impacts to sea turtles are not expected to occur from the ocean outfall alternative. The sea turtles associated with the area of concern are mobile and migratory and thus exposure to any contaminant is expected to be transient and minimal. Any contaminant potentially present in the effluent would be rapidly diluted to below minimum water quality criteria or to non-detectable levels.

Cumulative Effects to the Biological Environment

The current impaired environmental condition of Rehoboth Bay is directly due to the cumulative impact of nutrients discharged from point and nonpoint sources of nutrients within the Watershed. RBWWTP effluent, a point source, currently discharges into the Bay and contributes to the poor water quality; however, non-point discharges from agricultural operations are the leading source of nutrients (Martin, et al. 1996). Continuing to discharge into the Bay will likewise continue to contribute to poor water quality.

The land application alternative is not expected to contribute to any cumulative effect on the physical environment. Adequate land is not available even for just the construction of a land application facility for Rehoboth Beach, so it is extremely unlikely that additional land application facilities for other treatment plants would be built in the area. Additionally, the buffer zones required around land application facilities minimizes the cumulative effect of multiple facilities.

No ocean outfalls currently exist off of the coast of Rehoboth Beach, and there are no known plans to construct additional outfalls. The South Coastal WWTP ocean outfall, located off of the coast of the Town of South Bethany, is the closest existing outfall to the proposed RBWWTP outfall. The 2 outfalls would be approximately 13 miles (21 km) apart. Due to the distance between

outfalls and the rapid dilution of treated effluent within the ocean, the RBWWTP ocean outfall is not expected to contribute to any cumulative impacts in the area.

Affected Environment and Environmental Consequences (Human Environment)

Growth and Development

Minor impacts to growth and development may result from construction of the land application and ocean outfall alternatives. No alternative will encourage any growth or development since no alternative will increase the treatment capacity of the RBWWTP.

Environmental Justice

There is no area with a concentration of low income households that would be disproportionately impacted by any alternative. Therefore, any adverse impact would not be borne predominately by a minority population and/or a low-income population. There is no adverse environmental impact anticipated as a result of the proposed action, construction of an ocean outfall and its supporting facilities. Adverse impacts to terrestrial, wetlands, aquatic, or endangered species are expected to be minimal for the proposed project. Because there would be no adverse environmental impacts, an environmental justice analysis is not required.

Community Facilities

During construction of either the land application or ocean outfall alternative, minor impacts to community facilities may occur due to traffic control along the proposed force main routes. However, this impact will be minor and will be managed to minimize impacts.

None of the effluent disposal alternatives will have any long-term impacts on community facilities. Although wastewater treatment is a public utility, all impacts will be downstream of RBWWTP; therefore, public utility service will not be impacted.

Economics

Minor short-term economic impacts may result from construction of the land application and ocean outfall alternatives. The adverse effects of construction on local businesses can be mitigated by constructing appropriate pedestrian and traffic controls and rerouting traffic to minimize temporary reduction in access. The local economy relies heavily on tourism during the summer months, and thus construction should be limited to the winter months to avoid impacts to retail sales.

Long-term economic impacts may result from all considered alternatives. The no action alternative would allow the water quality in Rehoboth Bay to continue to diminish which could potentially reduce tourism to the area, which is a major component of the local economy. The land set aside for the land application site for that alternative will be prohibited from being used for growing crops and raising livestock for direct human consumption (DNREC 1999). Since the land required is only a small fraction of the available farmland, the impact to the agricultural industry will be minimal. Negative public perception of the ocean outfall alternative could potentially reduce tourism to the area, and thus have a negative effect on the local economy. However, there was no

noticeable difference in tourism to nearby beaches before and after construction of the South Coastal WWTP ocean outfall off of the Town of nearby South Bethany, Delaware.

Project Financing

The typical current annual user charge was calculated to be \$326 for a residential customer within the City of Rehoboth Beach limits (Stearns & Wheler 2009). According to DNREC guidelines, the maximum “reasonable” user charge is 1.5% of the median household income, which equates to \$989 for the City of Rehoboth Beach (Stearns & Wheler 2009).

Estimated Annual User Charges (Stearns & Wheler 2009)

Alternative	Description	Estimated Annual User Rate
1	No Action	\$326
3	Land Application	n/a
3A	Dedicated Spray Irrigation Facility	See note 1
3B	Raw Wastewater To WNRWF with Excess Flow Treated at the IBRWF	\$1,160
3C	Raw Wastewater To WNRWF with Excess Flow Treated by a PWWP	\$1,430
3D	Treated Effluent to WNRWF with Excess Flow Sent to the IBRWF	\$1,014
3E	Treated Effluent to WNRWD with Excess Flow Sent to a PWWP	1,420
6	Ocean Outfall	\$635

Note 1: Because of unknowns associated with acquisition of land and construction of a spray irrigation facility, the annual user charges for this option were not calculated.

Public Health

Construction of the land application and ocean outfall alternatives would have negligible effects on public health that is inherent to all construction activity.

Long-term public health impacts may result from all considered alternatives. The no action alternative would contribute to algae blooms in Rehoboth Bay, which can produce toxins harmful to humans. Under the land application alternative, contamination of groundwater with nitrate, pathogenic organisms, or metals is not expected, since concentrations in the effluent are below the applicable standards/limits for human health. Public exposure to aerosols containing pathogenic organisms or other contaminants would be limited since public access to the application site would be restricted. Under the ocean outfall alternative, public exposure to contaminants in the effluent is not expected since concentrations within the effluent will be reduced to contaminant standards/limits within the zone of initial dilution.

Noise

Minor short-term noise impacts may result from construction of the land application and ocean outfall alternatives.

Minor long-term noise impacts may result from operation of the land application facility.

Historic/Archeologic

Historic/Archeologic effects may result from construction of the land application and ocean outfall alternatives. Construction of the force main for either alternative in the vicinity of a historical site will require mitigation techniques, including, but not necessarily limited to, utilizing directional drilling methods. Impact to submerged cultural resources may also occur for the ocean outfall alternative. A magnetometer and side-scan sonar survey was performed by Tidewater Atlantic in the vicinity of the potential ocean outfall from July 11 to July 15, 2011. This report is included in Appendix O of the final EIS. One target area with potentially significant cultural resources was identified near the end of the southern outfall. This anomaly would require additional underwater survey to conclude that it is historically significant. No significant anomalies were associated with the northern alignment and outfall. It is concluded that the northern outfall would have the least impact to cultural resources.

No long-term historic/archeologic effects are expected from any alternative.

Aesthetics and Recreation

Minor short-term impacts to the public's recreational usage of nearby beaches may result from construction of the land application and ocean outfall alternatives. The staging area of the directional drilled portion of the ocean outfall alternative is located in a parking lot used by beach goers and would have to be closed during construction. Beach tourism varies by season and is minimal during the winter months. If construction is performed during this time of the year, there would be very little impact to users of the beach.

Long-term aesthetic or recreational impacts may result from all of the considered alternatives. Under the no action alternative, Rehoboth Bay will continue to be impaired for some recreational activities due to algae blooms and other effects of overenrichment that would continue to diminish the aesthetic appeal of the Bay. The facility required for the land application alternative would be highly visible to nearby neighbors but will be located over five miles inland from the ocean, and it is not expected to detract from the current aesthetics of the area. The land will be restricted for use as a land application facility which will prevent any further development that could potentially diminish the aesthetic appeal of the area. Shellfishing (e.g., commercial mechanical clam harvesting) in the direct vicinity of the ocean outfall will be prohibited as a precaution, but this would be within a small area located more than a mile offshore. Further, a harvestable shellfish resource is not known to exist in the area proposed for the diffuser.

C. Choice of Alternatives

C.1 Selected Alternative

No Action Alternative

Due to the 2002 consent order, the No Action alternative is not feasible and would likely result in legal action taken by DNREC against the City.

Spray Irrigation Land Application Alternative

As a general matter, the Department of Natural Resources and Environmental Control’s (DNREC) preferred method of wastewater effluent disposal is land application. For this reason, DNREC required the City of Rehoboth Beach to evaluate wastewater disposal via land application as an alternative when evaluating the different wastewater disposal options in the Environmental Impact Statement (EIS) for the Wastewater Disposal Options for the City of Rehoboth Beach Wastewater Treatment Facility. The following table from the EIS summarizes the advantages and disadvantages of wastewater disposal via land application:

Land Applications Advantages and Disadvantages from EIS Table 3-16

Alternative	Advantages	Disadvantages
3. Land Application	Well established and accepted practice in Delaware Recharges groundwater Preserves agricultural use of land	Lack of available land High cost of property Significant effluent wastewater storage volume required Use of existing WNRWF spray irrigation facilities would require coordination with Sussex County including capital improvements to County WWTPs Potential to continue discharge of nitrogen into Inland Bay via groundwater City essentially operating two treatment facilities
<p>Conclusion: Land not available. Alternative possible only if cooperation with County at significantly higher cost. City and County rejected regional solution.</p>		

Extensive effort was made by the City to find available land for a dedicated wastewater spray irrigation facility. The following is taken from Section 3.1.3.3.1 of the EIS and demonstrates the effort made by the City of Rehoboth Beach to pursue the land application alternative.

“An extensive land search utilized the services of a professional realtor over a period of several years but was not successful in identifying even a single landowner willing to sell their property to the City for the purpose of spraying treated effluent. Letters were sent to all the property owners within a reasonable distance of the RBWWTP (approximately 15 miles) soliciting interest. This effort was followed up by an expanded search with phone contact and an additional letter. The search was then again expanded to include lands that are preserved for agricultural use by the Delaware Agricultural Lands Preservation Act. The Agricultural Lands Preservation Foundation was established by the State of Delaware to create incentives to agricultural land owners to

preserve their land for farming and not sell to developers. ¹The law does not allow the application of treated effluent on lands preserved by the Agricultural Land Preservation Act, but the last several years there have been initiatives in the legislature to remove these restrictions. The owners of three (3) different groups of properties protected by the Agricultural Land Preservation Act were contacted, but none expressed an interest in allowing spray irrigation. At one point during the land search, a good faith effort was made by the City to purchase a tract of land. The tract of land would have been too small to meet the needs of a spray irrigation facility, but the objective was to initiate a program of land acquisition with the hope that others would be willing to sell after the initial purchase was made. However, the purchase offer was declined, and no further acquisition could be identified. A search for leasable land was also conducted and was also not successful.”

¹Note: In August 2004, the 142nd Delaware General Assembly amended the Act to allow the spray irrigation of treated wastewater to agricultural lands preserved under the Act.

In addition to pursuing land for its own wastewater spray site, the City also approached Sussex County and private wastewater utilities in an effort to explore disposal of wastewater via land application using nearby treatment plants. In total, five different land application options were evaluated in Rehoboth Beach’s Environmental Impact Statement (EIS) for the Ocean Outfall project. The estimated costs for these projects are detailed in EIS tables 3-4 through 3-8 and 3-14. A summary of the findings is presented in the table below. Also included is the cost to the end user which can be found in EIS table 3-18:

Alternative	No.	Description	Total Cost to RB (Year 2009 Dollars)	Estimated Annual User Charge
No Action	1	No Action (Current User Rate)	n/a	\$ 326
Land Application	3A	RBWWTP Spray Irrigation System	\$ 69,000,000	Determined Unfeasible
	3B	Raw Wastewater to WNRWF, Excess Flow to IBRWF	\$ 68,250,000	\$ 1,160
	3C	Raw Wastewater to WNRWF, Excess Flow to PWWP	\$ 49,600,000	\$ 1,430
	3D	Treated Effluent to WNRWF, Excess Flow to IBRWF	\$ 54,200,000	\$ 1,010
	3E	Treated Effluent to WNRWF, Excess Flow to PWWP	\$ 36,900,000	\$ 1,420
Ocean Outfall	6	Dedicated City Outfall	\$ 22,900,000	\$ 635

List of Acronyms; see EIS Figure 3-2 for facility locations:

RBWWTP	Rehoboth Beach Wastewater Treatment Plant
WNRWF	Wolfe Neck Regional Wastewater Facility
IBRWF	Inland Bays Regional Wastewater Facility
PWWP	Private Wastewater Provider

Constructed Wetland (Land Alternative)

The EIS did not originally investigate constructed wetlands as an alternate disposal method. But due to comments on the draft EIS during the review process, the EIS was updated to evaluate Constructed Wetlands. The City updated the land application section of the alternatives analysis to explore Constructed Wetlands. Also, DNREC's Division of Water undertook a technical review of the feasibility of Constructed Wetlands for the City of Rehoboth Beach.

Constructed Wetlands have been used in the U.S. as an alternative to complex mechanical WWTFs designed to provide tertiary treatment for nutrient removal. Natural wetlands are typically prohibited from being used for wastewater treatment because they are considered "waters of the United States" and subject to protection under the Clean Water Act. Constructed Wetlands are typically used to polish primary treated wastewater or lagoon-treated wastewater. Constructed Wetlands are not commonly used to further reduce nitrogen and phosphorus concentrations from mechanical WWTFs that already provide tertiary treatment for nutrient removal like the Rehoboth Beach WWTF.

There are numerous agricultural sites within 5 to 7 miles of the Rehoboth Beach WWTF that could be investigated as potential sites for a Constructed Wetlands system. It must be noted, however, that following nutrient polishing from a Constructed Wetland, the polished effluent will still need to be disposed of. Either a new NPDES discharge point to the Rehoboth Bay would have to be permitted, or a land-based disposal system, employing either spray irrigation or Rapid Infiltration Basins (RIBs), or a combination of both, would have to be developed to dispose of the effluent. A RIB system would require an additional 50 to 150 acres, provided a suitable site can be identified; and over 300 acres would be required to spray irrigate the effluent from a Constructed Wetland with a design flow of 3.5 MGD. The 1998 Nitrogen and Phosphorus Total Maximum Daily Load (TMDL) prohibits new point source discharges to Rehoboth Bay, Indian River, and Indian River Bay. Therefore, the TMDL would need to be amended to allow a new discharge.

Based on the already high levels of nutrient removal achieved by the Rehoboth Beach WWTF, concerns that additional nutrient removal using a Constructed Wetland would not occur, and the need for an alternative disposal option such as a new NPDES permit or land based disposal system, DNREC staff do not believe that a Constructed Wetlands system can consistently meet water quality standards for Delaware's Inland Bays. Consequently, DNREC does not recommend this option for the City of Rehoboth Beach.

Ocean Outfall Alternative

As a result of the land application study, Rehoboth Beach decided to pursue the Ocean Outfall project. DNREC concludes that this decision was made for several reasons: 1) an ocean outfall will allow the City to comply with the terms of the 2002 consent order between the City and DNREC which requires the elimination of RBWWTP's point source discharge. As noted in EIS Section 3.1.3.2, "Higher levels of treatment can mitigate the impacts of nutrients [from spray irrigation] on surface water but would not completely eliminate the nutrients. Therefore, under a strict interpretation of the terms of the TMDL, the use of spray irrigation in the watershed would not be permissible." 2) The Ocean Outfall alternative is the most economically viable alternative. That is, the end user cost is much more affordable than the other alternatives; see the table above. The most economical land application disposal option investigated would result in an estimated

annual user charge of \$1,010 per user. When comparing this number to the average annual rate for Sussex County, as found in Table A-22 of the Delaware Statewide Assessment of Wastewater Utilities 2011 – 2016, it is almost double the average user fee. 3) The City will have lower operation, maintenance, and replacement costs with an ocean outfall. Implementing wastewater disposal through land application would involve City staff or paid contractors to ensure the many working parts—pumps, irrigation equipment, nozzles, flow meters, etc.—are maintained and replaced as they wear out.

Selected Alternative

After a thorough review of the potential environmental consequences of all alternatives evaluated in the Final EIS, and consultations with and input from other Federal, State, and local agencies, organizations, and individuals, **Alternative 6 - Ocean Outfall** - has been selected as the alternative for disposal of the RBWWTP effluent based upon the following:

The ocean outfall alternative is the most technically feasible, cost-effective and environmentally responsible alternative for the City of Rehoboth Beach. The ocean outfall is the only alternative that ensures that 100% of the nutrients from the RBWWTP effluent will be eliminated from the Inland Bays Watershed. Therefore, this is the only alternative that will allow the City to fully comply with the TMDL and its most recent NPDES discharge permit.

Land application is not a feasible alternative because the required land was not available, and working with Sussex County on a spray irrigation option was determined not to be feasible. This included an alternative whereby the RBWWTP effluent would be spray irrigated at Wolfe Neck, two parcels of nearby State-owned land would be added to the Wolfe Neck complement, and displaced Sussex County wastewater would be pumped to the County's Inland Bays Regional Wastewater Facility. This alternative is also significantly more costly than the ocean outfall alternative and would result in a significant loss of future capacity at the Inland Bays facility.

During the public participation process, proposals were received for land based application by private wastewater providers. These proposals were interim in nature and did not identify land that would be secured for wastewater disposal over the 20-year financing period. Hence, these proposals were not considered viable. Also, the proposals did not offer ratepayers assurances that user fees will not significantly escalate during the contract period.

Finally, land based application will result in nitrogen and phosphorus generated by sewer users in coastal communities being exported to a watershed which has a TMDL for nitrogen and phosphorus. Even if spray irrigation is utilized as the disposal method, it is estimated that approximately 2,430 pounds of nitrogen will further contaminate groundwaters already high in nitrogen. Groundwater is a significant source of freshwater to the Inland Bays and their tributaries.

Computer modeling demonstrates that treated effluent discharged via the proposed ocean outfall will meet all water quality standards within immediate proximity of the diffuser. Even in a highly improbable worst case scenario where the RBWWTP catastrophically fails, the diluted wastewater would still meet water quality standards. During Hurricane Sandy in November 2012, the RBWWTP did not violate any of the conditions of its permit or have any sewer overflows. Also, the treatment plant is scheduled to undergo a rehabilitation and enhancement

project that will further improve the reliability of the plant. As part of this upgrade, backup power generation will be installed.

The outfall is the most favorable alternative on a long-term present worth basis. After the initial 20 years of operation, the City would have paid off the debt and would only have operation and maintenance costs remaining in the ensuing years. The land application alternatives would require the City to make payments to the County or to a private utility (or both) in perpetuity. The ocean outfall will enable the City to maintain control of its user rates now and into the future by owning and operating its wastewater infrastructure.

Based on the information above and the immediate positive environmental impact to the Inland Bays Watershed via the elimination of the City of Rehoboth Beach's discharge to the Lewes-Rehoboth Canal, Alternative 6 - Ocean Outfall - is the selected alternative.

C.2 Identification of the Department's Preferred Alternative

As stated earlier, land application is the Department's preferred alternative for disposal of treated wastewater; consequently, it could be assumed that land application would be the selected alternative. However, as stated above, securing contiguous, dedicated land for spray irrigation in reasonable proximity to the RBWTTP is not feasible. The distance required to find suitable land would be cost-prohibitive and unreasonable to require. Proposals submitted by private wastewater service providers received in response to a Request for Proposals by the City were unresponsive. Also, the proposals received during the public comment period on the draft EIS appeared to be hastily prepared and did not provide for a 20-year solution.

However, Alternative 3D: "*The RBWWTP remains in service and treated effluent is sent to the WNRWF for disposal via spray irrigation, with excess flow sent to the IBRWF for disposal via spray irrigation*" is a feasible solution for the City albeit more costly. It also requires the City to partner with the County through a cost-sharing model and use leased lands for disposal. This alternative is not without environmental consequences, as 2,430 pounds of nitrogen annually will continue to be discharged to the Inland Bays via groundwater. Hence, the Department's preferred alternative is not the selected alternative.

D. Additional Information

D.1 Consultation and Coordination

While preparing the Final EIS, DNREC strived to accomplish as many environmental review requirements as practicable to assist in the decision-making process. Consultations pursuant to the Coastal Zone Management Act, Endangered Species Act, and the National Historic Preservation Act were all accomplished concurrently while the City of Rehoboth Beach and its consultants prepared the EIS. Documentation of such consultations is included in the Final EIS. Any correspondence or consultation information on the Final EIS is included in the appendices of this Record of Decision.

D.2 Summary of Comments Received on the Final EIS

After the EIS was finalized and made publically available, several additional comments were received. Although not required to respond to comments on the Final EIS, DNREC reviewed all the comments received and to the extent the agency or individual raised a substantive new issue, the Department provided a response as part of this ROD. The additional comments are in Appendix A – All Comments Received on the Final EIS. Responses to specific comment letters can be found in Appendix B - Responses to Substantive Comments on the Final EIS.

STATE AGENCIES:

DNREC received six internal departmental comments on the Final EIS. From the Division of Water, the Ground Water Discharges Section provided an internal white paper on constructed wetlands. The Division of Waste and Hazardous Substances and the Division of Parks and Recreation provided measures to limit the environmental impacts of construction. A “No Comment” response was received from the Division of Water’s Water Supply Section.

Comments from the DNREC Division of Parks and Recreation reiterated that a review was performed during November 2011 under the provisions of Section 106 of the National Historic Preservation Act (amended 1966) and in coordination with the Delaware State Historic Preservation Office. It was concluded that the ocean outfall project is an undertaking for Section 106 review that has the potential to affect historic properties in limited areas of force main construction on land and offshore.

DNREC also received a “No Comment” response from the Delaware State Housing Authority.

FEDERAL AGENCIES:

DNREC received two comments from Federal Agencies: the Environmental Protection Agency (EPA) and the National Marine Fisheries Service (NMFS), an agency within the National Oceanic and Atmospheric Administration (NOAA).

The EPA appreciated that all public and agency comments were taken into consideration and responded to in the FEIS and thanked the Department for coordinating with EPA during the project modeling and monitoring, as well as throughout the State EIS process.

The NMFS commented on the following areas: Fishery Habitat and Resources; Potential Impacts; Essential Fish Habitat; and the Endangered Species Act. Their comments also included numerous recommendations on mitigating the impacts and required coordination with their office. The recommendations from the NFMS letter are included below in Section E. Mitigation and Monitoring. The NMFS thanked the Department for the opportunity to comment on the EIS and looks forward to continued coordination with the Department as the proposed ocean outfall project moves forward.

GENERAL PUBLIC

DNREC received comments on the Final EIS via letter or e-mail from six individuals. One individual, Mr. Gregg Rosner, submitted six documents, some duplicates. Two of the documents were letters to Secretary O'Mara and Attorney General Biden. These letters challenged the legality of permitting the ocean outfall. As stated in the beginning of the ROD, this is a procedural action of the Water Pollution Control Revolving Fund, not a permit or regulatory action. The required permits for the proposed project are listed in Section E.7 of the Final EIS. Mr. Rosner also believed that his comment (Exhibit 63-Q from the hearing officer's report) on the Draft EIS was not sufficiently responded to. The comment was not responded to because the independent hearing officer considered the issue sufficiently addressed in the draft EIS; consequently no revision was made.

The other five comments from the general public opposed the project but raised no substantive issues that were not addressed in the EIS.

STAKEHOLDER ORGANIZATIONS

DNREC received comment letters from the following organizations:

1. Delaware Chapter of the Sierra Club – The Sierra Club did not outright oppose the proposed project, but they had issues with some of the studies used in the Final EIS. The letter suggests that the EIS be revised and more ocean data collected.
2. Marine Education, Research & Rehabilitation Institute, Inc. (MERR) – MERR opposes the proposed project and suggests that constructed wetlands be the preferred alternative.
3. Marine Mammal Stranding Center (MMSC) – The MMSC expressed concerns about the effects of the outfall on toothed whales and dolphins, baleen whales, seals, and turtles.
4. Delaware Riverkeeper Network – The Delaware Riverkeeper Network expressed concerns regarding endangered species, in particular the Atlantic Sturgeon.
5. Clean Ocean Action – Clean Ocean Action opposes the project and advocates for land application as the preferred alternative.
6. Surfrider Foundation – Delaware Chapter – The Delaware Chapter of the Surfrider Foundation opposes the project and advocates for land application as the preferred alternative.

The Department also received 109 petition e-mails from members of MERR opposing the proposed outfall. The National Surfrider Foundation members submitted 914 web-generated letters opposing the proposed project as well. The ROD responds to substantive issues in the letters sent from the Executive Director of MERR and the Secretary of the Surfrider Foundation – Delaware Chapter.

As stated earlier, responses to specific comment letters can be found in Appendix B - Responses to

Substantive Comments on the Final EIS. The comments from the stakeholder organizations are similar in nature will be addressed collectively.

E. Mitigation and Monitoring

Any mitigative measures or required monitoring will be included in the loan closing documents. Mitigative measures included in the body of the Final EIS but not mentioned in the ROD must be adhered to as well.

E.1 Land Use

DNREC Parks and Recreation – Construction Site

There are specific conditions that must be met regarding the use of two park sites within the path of the force main that may affect permitting and construction project circumstances. Two sites – Grove Park and Deauville Beach – are permanently protected under Section 6(f) of the federal Land & Water Conservation Fund Act (LWCF). As stated in the EIS, both sites will be locations where direct bore pipes will be permanently located underground.

While this action does not affect the 6(f) protection status, any above ground disturbance - most likely Deauville Beach – must be restored, to no less than the pre-existing condition, to ensure the continuation of public outdoor recreational use at those sites. Furthermore, the LWCF Program requires that non-recreation activities - direct bore operation, for example - that exceed 6 months in duration are not considered temporary and are problematic.

The City must advise the Division of Parks and Recreation as to the expected construction start and end timeframes for the project.

E.2 Air and Water Quality

DNREC – Division of Waste and Hazardous Substances (WHS)

Site Investigation and Restoration Section (SIRS) and Tank Management Section (TMS)

SIRS Comments

Regulations/Code Requirements

DNREC's Site Investigation and Restoration Section (SIRS) reviewed the proposed project. There are no SIRS sites or salvage yards found within a ½-mile radius of the proposed project. However, if it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C. Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.

Suggestions

- SIRS strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (**including a title search to identify environmental covenants**) in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). While this is not a requirement under HSCA, it is

good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.

- Additional remediation may be required if the project property or site is re-zoned by the county or state.
- Should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRS should also be contacted as soon as possible at 302-395-2600 for further instructions.

TMS Comments

Regulations/Code Requirements

- If there is a release of a Regulated Substance within the limits of the City of Rehoboth Beach, one must comply with 7 Del.C. Chapter 60, 7 Del.C., Chapter 74 and DE Admin. Code 1351, State of Delaware *Regulations Governing Underground Storage Tank Systems* (the UST Regulations).
- Per the **UST Regulations: Part E, § 1. Reporting Requirements:**
 - “Any indication of a Release of a Regulated Substance that is discovered by any Person, including but not limited to environmental consultants, contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within 24 hours to: The Department’s 24-hour Release Hot Line by calling 800-662-8802; and the DNREC Tank Management Section by calling 302-395-2500.”

Suggestions:

- Should the municipality anticipate being more restrictive than Delaware’s Regulations Governing Underground Storage Tank Systems or Delaware’s Regulations Governing Aboveground Storage Tanks, please be aware that the municipality shall be responsible for enforcing the more restrictive rules.
- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.
- If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS.

E.3 Essential Fish Habitat

NMFS – Essential Fish Habitat –

The following recommendations from the NMFS will be followed:

1. In order to minimize impacts to benthic habitats, locate discharge points in coastal waters well away from shellfish beds, coral reefs, and other similar fragile and productive habitats.

E.6 Adoption of All Practical Means to Minimize Environmental Harm

All practical measures to mitigate environmental harm have been adopted for the selected option - Ocean Outfall. As discussed in the Final EIS, constructing the ocean outfall exclusively during the winter months would present the least environmental impact. Coordination with all relevant Department regulators during the design and construction phases of the project is mandatory.

E.7 Permitting

No construction may begin until all necessary permits have been obtained. These permit programs each have their specific requirements for public participation. The goal is to optimize the public hearing process by consolidating the hearings where feasible. This is a list of the known permits for the selected alternative - Ocean Outfall:

1. U.S. Army Corps of Engineers Individual Permit – USACOE
2. Coastal Zone Federal Consistency Certification – Delaware Coastal Programs
3. Wetlands and Subaqueous Lands Permit – Division of Water
4. NPDES permit – Division of Water
5. Wastewater Facilities Construction Permit – Division of Water
6. Coastal Construction Permit – Division of Watershed Stewardship
7. Erosion and Sediment Control Plan – Sussex Conservation District

Note: Each of the permits may also be issued with conditions to minimize environmental impacts.

F. Decision

Although the Department generally prefers the disposal of treated wastewater effluent to be through land application rather than to surface waters, the EIS has identified numerous environmental, economic and practical impediments to implementation of such an alternative. The cost of land, lack of available land in reasonable proximity to the City of Rehoboth Beach, coordination with Sussex County and additional costs have been identified. In addition, land application within the Inland Bays watershed would result in continued, albeit reduced, nitrogen and phosphorous loads to the Bays and its tributaries whereas an ocean outfall will completely eliminate those loads to the Bays from the RBWWTP.

Public comment in the Record raised concerns about the potential impacts to ocean water quality from an ocean outfall. While an assessment of those potential impacts in the EIS reveals that the RBWWTP would meet water quality standards for an ocean outfall under even catastrophic conditions, there are other potential impacts on recreational ocean water quality that, along with the temporary impacts of construction of the outfall, should be considered.

Therefore, as a condition of this Record of Decision, the City will conduct a stormwater evaluation

2. In order to minimize scour and resuspension of sediments, reduce potentially high velocities by diffusing effluent to acceptable velocities.
3. Outfall design should be developed with input from appropriate Federal and State resource agencies.

The following recommendations from the NMFS will be not be a requirement of the ROD but may be required as result of the permitting processes:

4. The applicant should determine benthic productivity by sampling prior to any construction activity related to installation of new or modified facilities.
5. Mitigation for the degradation or loss of habitat from placement and operation of the outfall structure and pipeline should be required.
6. Benthic biota sampling should be an integral component of a comprehensive environmental/ecological monitoring program; the study program should consist of before (baseline) and following construction investigations so as to determine what effect, if any, construction had on the benthic community.

E.4 Protected Species

NMFS – Endangered Species Act

Since the proposed action will be subject to an US Army Corps of Engineers (USACOE) permit, the following recommendation from the NMFS will be followed:

Any discretionary federal action, such as the approval or funding of a project by a Federal agency, that may affect listed species, must undergo consultation pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended. If the proposed project has the potential to affect listed species and it is being approved, permitted, or funded by a Federal agency, the lead Federal agency, or their designated non-Federal representative, is responsible for determining whether the proposed action is likely to affect these species. The Federal agency would submit their determination along with justification for their determination and a request for concurrence to the attention of the Section 7 Coordinator, NMFS Northeast Regional Office, Protected Resources Division, 55 Great Republic Drive, Gloucester, MA 01930. After reviewing this information, NMFS would then be able to conduct a consultation under Section 7 of the ESA.

E.5 Cultural and Historic Resources

Phase I archaeological testing is required to assess the presence of intact landscapes that may contain historic or prehistoric site locations along the banks of the canal and at Deauville Beach. The phase I survey would also include background research on the existing site information with a primary emphasis on the development and construction of the Lewes and Rehoboth Canal as it affected the headlands and marshes in Rehoboth.

Section 106 coordination is to be conducted through Cherie Clark, Cultural and Recreational Services, Division of Parks and Recreation.

evaluation of its catchment areas and collection system that are associated with the existing five (5) outfalls which discharge directly to the Atlantic Ocean. The City will submit a planning-level report to the Department which identifies nonpoint sources of stormwater effluent and options for controlling those sources in order to minimize potential impacts to swimmers, surfers, and other water users within the nearshore area. The report shall include cost effective alternatives for improving stormwater quality, reducing stormwater volume within the collection system, and an evaluation of disposal options, including possible reorientation, reconfiguration, extension, or other upgrades to the outfalls. The stormwater evaluation shall include Engineers Estimates of Probable Construction Costs of the various approaches for improving stormwater quality, reducing quantity, and improving disposal methods. The report shall be completed and provided to DNREC by January 1, 2016.

The factors and considerations identified in the Final EIS warrant approval of Alternative 6, Ocean Outfall, as described and analyzed in the Final EIS for the wastewater disposal method for the City of Rehoboth Beach and in this Record of Decision. All practical means to avoid and minimize environmental harm from implementation of the selected alternative have been incorporated, as described in the final EIS and this Record of Decision. This Record of Decision is not the final agency action for those elements of the decision that require the issuance of permits or funding approvals.

Final agency action to implement this decision will occur when a financing agreement incorporating these terms is completed and all required permits are issued to the City of Rehoboth Beach.

1/5/15

Date



David S. Small
Secretary
Department of Natural Resources and
Environmental Control