



STATE OF DELAWARE
**DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL**

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DOVER, DELAWARE 19901
Secretary's Order No. 2010-CZ-0022

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Office of the
Secretary

Re: Application of Tidewater Environmental Services, Inc. for a Coastal Zone Act Permit for Wandendale Regional Wastewater Treatment and Disposal Facility near Lewes, Sussex County. CZA Project No. 386P

Date of Issuance: **July 23, 2010**

Effective Date: **July 23, 2010**

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control (Department) by *29 Del. C. §§8001 et seq.*, *7 Del. C. Chapter 60* and the Coastal Zone Act, *7 Del. C. Chapter 70 (CZA)*, the following findings, reasons and conclusions are entered as an Order of the Secretary:

Procedural History and Factual Background

This Order considers the CZA permit application submitted by Tidewater Environmental Services, Inc. (Applicant) to use land in the Coastal Zone to build and operate a 3 million gallon per day (gpd) wastewater treatment and disposal plant to be known as the 'Wandendale Regional Wastewater Treatment and Disposal Facility' (Facility). The application was reviewed in the Secretary's Assessment Report, as published April 24, 2010 and which formally commenced the Department's CZA review process. The Department held a public hearing on May 19, 2010 before presiding hearing officer, Robert P. Haynes, who prepared a Hearing Officer's Report (Report), dated July 22, 2010, recommending issuance of a CZA permit. He relied on a

recommended record and the Department's experts who contributed technical advice in a Technical Response Memorandum and prepared a draft permit. I adopt the Report to the extent it is consistent with this Order.

Discussion and Reasons

The Applicant is the first to seek a CZA permit for a privately owned sewage treatment plant. The Facility's location in the Coastal Zone and its purpose to serve up to 10,000 residential customers, most of which would reside outside the Coastal Zone, was the subject of numerous comments in opposition. The public comments cited the Department's comments submitted to Sussex County, which opposed the conditional land use application. The Department acknowledges that it, along with other State agencies, once opposed the Facility as it was under review by Sussex County. Despite objections by the State and public, Sussex County approved a conditional use for the Facility. Similarly, Sussex County has authorized residential development to occur, and the residential development will require some form of wastewater treatment and disposal system. The Facility is proposed to meet the residential sewer utility requirements of the anticipated 8,400 new residential unit and 1,600 existing residential units within the Applicant's Public Service Commission approved and regulated utility service territory. The Facility proposes to utilize a combination of spray irrigation and rapid infiltration basin technology for treatment and disposal of the wastewater.

The Report discusses the difference between the local land use regulation by Sussex County and the Department's regulation under the CZA. The Department continues to be frustrated by local land use decisions that allow development in more rural, Level 4 areas despite significant environmental impacts, such as degradation of air

and water quality, loss of habitat and additional demands for infrastructure such as roads and schools and public services such as police and fire protection and specialized transit. However, the Department's duty is to review the proposed Facility solely under the CZA, and I find that the record, on balance, does not provide sufficient support to prevent issuance of a permit under the CZA, but such a permit will include special permit conditions that will protect the Coastal Zone's environment for recreation and tourism uses.

The most significant issue raised by the public comments was whether the Facility's wastewater treatment and discharge would cause a negative impact to the Coastal Zone's environment. I have thought long about this issue and believe that the decision by Sussex County to approve residential development in this area, despite the opposition by multiple State agencies, makes development in this area inevitable. It is this decision by Sussex County to allow development in a Level 4 area and not the Facility itself that will impact the rate of growth. If development is going to occur, the strong preference of the Department is to ensure that enhanced treatment services are provided through a central wastewater system, rather than allowing greater discharge of pollutants from on-site septic systems or other legally available options in amounts that will far exceed the discharge levels from the proposed Facility. Further, the proposed Facility presents an opportunity to eliminate septic systems used by 1,600 existing homes through the connection to the proposed wastewater system.

The Applicant has also articulated that the Facility will provide an opportunity to protect open space and keep local agricultural lands in operation through the provision of spray irrigation on demand. Spray irrigation will remove additional nutrients from

entering the Inland Bays, even beyond the proposed tertiary treatment levels, and should be pursued to the greatest extent practicable.

The Department continues to have concerns about the appropriateness of rapid infiltration basins in Sussex County and the long-term consequences on water quality should such a system fail. As a result, the Department will require high performance standards, sound geologic science, and a rigorous technical review as part of the wastewater construction permit process. Members of the public and the Department have also expressed concerns about the proposed location of the RIB near Love Creek in a wellhead protection area. In its preliminary review of the project through the State's PLUS process, the Department stated that "the Rapid Infiltration Basin (RIB) proposed on the northern portion on the combined parcel area should not be sited adjacent to the headwater tributary connected to Love Creek, nor should forest cover be removed to accommodate it. Doing so will increase the volume of water discharged to the creek while potentially decreasing water quality. DNREC strongly recommends that the RIB system be relocated to a more suitable location and the forest cover retained." In response to these concerns, the Applicant will be required to relocate the RIB to a more appropriate location.

Following a thorough review, a CZA permit should be issued with conditions because it will prevent the installation of thousands of septic systems and allow possible connections to an enhanced treatment system, which is consistent with the Department's commitment to improving water quality and the Inland Bays Pollution Control Strategy. The only way the water quality in the Inland Bays will be improved is to reduce the amount of pollutants discharged into the watershed. The Facility will provide one way to

achieve the pollutant discharge reduction goals from development and improve the Inland Bays' water quality to help meet federal and state standards.

The Department's experts in the Coastal Zone Program and the Division of Water Resources recommend special conditions to protect the environment and Coastal Zone, and the Report recommends adoption of these conditions. I agree and find that they are necessary to strike the correct balance between allowing some new manufacturing use within the Coastal Zone while safeguarding the Coastal Zone for primarily recreation and tourism uses. The Department will require six conditions as part of the CZA permit:

1. Reduce the design capacity from 3 million gpd to 1.45 million gpd, which is a condition that is consistent with the Department's groundwater impact assessment of the project.
2. Submit to the Department as part of its construction permit a plan to minimize the facility's environmental footprint and submit a plan for reforestation equal to 130% of the estimated loss of mature forests.
3. Fulfill the recommendations of the Department's Natural Heritage report on the Facility to protect the wildlife and natural resources from harm from the Facility construction and operation.
4. Submit an operating plan as part of the construction permit application that uses spray irrigation as the preferred discharge method to the greatest extent practicable, particularly during the early phases of the project to maximize the environmental and agricultural benefit and a preferred use of spray irrigation of agricultural areas over use of wooded areas.

5. Relocate the rapid infiltration basin on the northern portion of the combined parcel area to a more appropriate location in consultation with the Department.
6. Submit as part of the construction permit application a surface water assessment report to ensure that the Facility will comply with the Total Maximum Daily Loads for the surrounding watersheds.

Conclusions

Accordingly, I direct that the permit be issued to the Applicant, and enter the following findings and conclusions:

1. The Department has jurisdiction to issue a CZA Permit to the Applicant subject to reasonable permit conditions deemed appropriate and consistent with the CZA's purposes;
2. The Department provided adequate public notice of the proceeding and the public hearing in a manner required by the law and its regulations;
3. The Department held a public hearing in a manner required by the law and its regulations;
4. The Department considered all timely and relevant public comments in making its determination;
5. The Department shall issue a permit to the Applicant and the permit shall include conditions requiring that the Applicant: 1) submit to the Department as part of its construction permit a plan to minimize the facility's environmental footprint and submit a plan for reforestation equal to 130% of the estimated loss of mature forests; 2) submit a construction permit application based upon a design limit of 1.45 million gpd, which is a

reduction supported by the Department's groundwater impact assessment; 3) submit as part of its construction permit a plan to comply with the recommendations within the Natural Heritage Program's report; 4) include an operating plan as part of the construction permit application that uses spray irrigation as the preferred discharge method to the greatest extent practicable, particularly during the early phases of the project to maximize the environmental and agricultural benefit and a preferred use of spray irrigation of agricultural areas over use of wooded areas; (5) relocate the proposed rapid infiltration basin to a more appropriate location and submit such a plan through the construction permit process, and; (6) submit as part of the construction permit application a surface water assessment report to ensure that the Facility will comply with the Total Maximum Daily Loads for the surrounding watersheds.

6. The Department carefully has considered all the statutory factors to be considered in making a decision on a CZA permit application under the CZA and its regulations; and

7. The Department shall publish legal notice this Order and otherwise provide notice as to all affected persons in a manner consistent with the public notice required by the law and the Department regulations, and shall post on the Department's web site.



Collin P. O'Mara
Secretary

HEARING OFFICER'S REPORT

TO: The Honorable Collin P. O'Mara
Secretary, Department of Natural Resources and Environmental Control

FROM: Robert P. Haynes, Esquire
Senior Hearing Officer, Office of the Secretary
Department of Natural Resources and Environmental Control

RE: Application of Tidewater Environmental Services, Inc. for a Coastal Zone Act Permit for the Proposed Wandendale Regional Wastewater Treatment and Disposal Facility near Lewes, Sussex County. CZA Project No. 386P

DATE: July 23, 2010

I. BACKGROUND AND PROCEDURAL HISTORY

This report reviews for the Secretary of Department of Natural Resources and Environmental Control (Department) Tidewater Environmental Service Inc.'s (Applicant or TESI) application for a Coastal Zone Act ¹ (CZA) permit. The permit would be to use undeveloped land owned by Wandendale Farms, Inc, which Applicant has leased. The land is in an unincorporated area of Sussex County, south and west of Lewes along John J. Williams Highway (Route 24), Camp Arrowhead Road, and Love Creek. Three of the parcels are within the Coastal Zone.² The proposed use would be for the 'Wandendale Regional Wastewater and Disposal Facility' (Facility), which would be a 3 million gallon per day (gpd) capacity sewage treatment plant employing spray irrigation areas and rapid infiltration basins (RIBs) for groundwater discharge of the treated effluent.

In December 2008, Sussex County approved the Facility as a conditional use pursuant to the Sussex County land use ordinances. On September 25, 2009, Applicant submitted a CZA permit application to the Department. DNREC Ex.1. On October 2, 2009, the Department

¹ 7 Del. C. Chap. 70.

² The CZ is defined by the CZA and the proposed Facility would use four parcels, and the three parcels east of Route 24 are within the defined CZ. The total area in the CZ is 296.55 acres as Tax Parcel 2-34-11.00-48.00 should not be subject to any CZA jurisdiction.

published legal notice of the CZA application. DNREC Ex 2. On December 3, 2009, the Department's CZA Policy Director, Philip Cherry, wrote to the Applicant requesting additional information required by the Department to determine if the application was administratively complete. DNREC Ex. 3. On January 5, 2010, the Applicant wrote in response to the Department's December 3, 2009 letter. DNREC Ex. 4. On March 10, 2010, the Groundwater Discharge Section of the Department's Division of Water Resources (DWR) wrote to Applicant indicating approval of a phased approach to the Facility, which was based upon Applicant's March 3, 2010 letter. DNREC Ex. 5. Applicant's phased approach seeks an initial construction permit³ to build the Facility to treat up to 1.45 million gpd, and an operating permit of 725,000 gpd. DNREC Ex. 6. The Department's DWR's Watershed Assessment Section also indicated in an email that the Facility would meet the effluent treatment standards imposed by the Department's Inland Bays Pollution Control Strategy⁴ (PCS) because it would treat wastewater to the PCS' Standard Nitrogen Level 1 and provide suitable vegetative buffers along the waterways. DNREC Ex. 7. On March 19, 2010, Applicant submitted a revised application. DNREC Ex. 8.

On April 23, 2010, Secretary O'Mara signed the Secretary's Assessment Report, which signifies under the *Regulations Governing Delaware Coastal Zone* (Regulations) that the Secretary has determined that a CZA permit application is complete. DNREC Ex. 9. On April 23, 2010, the Department published notice of a public hearing, which was held May 19, 2010 at the Lewes Fire Company Station No. 3 at 21914 John J. Williams Highway, Lewes. DNREC Ex. 10.

³ This is a separate permit process that requires construction and operating permits for any wastewater treatment and disposal facility. These permits are issued by the Division of Water Resources (DWR) under the Department's authority to regulate water resources from pollution. *7 Del. Chap. 60.*

⁴ *7 DE Admin. Code Regulation 7403.*

Secretary's Assessment Report (SAR), issued by public notice on April 24, 2010, reviewed Applicant's proposed offset and determined that the application was administratively complete for purposes of commencing the formal CZA review and holding a public hearing. The SAR accepted the Applicant's position that the Facility would provide better wastewater treatment than otherwise would be possible from individual or smaller community on-site wastewater treatment and disposal systems (OWTDS). The offset was based upon the Facility providing an alternative to serve the 1,600 existing septic systems identified within the Facility's proposed wastewater utility service area. The Applicant also indicated that the Facility would serve new houses and thereby avoid the construction of 8,400 new septic systems, which also would allow much higher levels of pollutants to be discharged into the groundwater than would be discharged by the Facility.

The SAR noted that the Facility would treat to standards that would satisfy the Inland Bays PCS standards of 5 milligram per liter (mg/l) total Nitrogen and 0.5 mg/l of total phosphorus (TP). In contrast, an existing OWTDS for a single family residence typically allows groundwater discharges of approximately 50 mg/l TN and 15.7 mg/l TP. The Department's experience also has found that many older systems may be failing and causing even more pollution than a new OWTDS that would meet the Inland Bays PCS. Thus, the SAR noted that the Facility would result in a 10x improvement of the treatment for TN and a 32.4x improvement for TP over a typical residential OWTDS that would meet the Inland Bays PCS standards. DNREC Ex. 11. The Applicant's offset also noted that the Facility would reduce the agricultural application of fertilizer that otherwise could be applied to the land area to be used.

In a May 6, 2010 letter, the Applicant submitted some revisions to the application, including a change to the groundwater discharge site to allow increased spray irrigation.

On May 18, 2010, the Department received a written comment from Richard Anthony on behalf of the Plan Delaware.⁵ DNREC Ex. 12.

At the public hearing, I granted a request to hold the public comment period open for an additional week, or until June 1, 2010. Several public comments were received during this extended public comment period. In a June 24, 2010, memorandum, I requested that the Coastal Zone Act Program provide a Technical Response Memorandum (TRM), including its recommendations and a draft permit if such action is recommended. On July 23, 2010, the CZA Program provided its TRM and a draft permit, which recommends that a permit be issued subject to several special conditions.

II. SUMMARY OF THE RECOMMENDED RECORD

The recommended record consists of: 1) the documents in the public hearing record including received during the extended time period for written public comments, 2) the 130 page verbatim transcript, and 3) the documents identified by the CZA Program in response to my request for a TRM, and 4) this Report and the final order and any permit.

At the public hearing, the Department's person primarily responsible for reviewing the CZA application, Kevin Coyle, principal planner and administrator of the Department's CZA Program, introduced into the public hearing record certain relevant documents from the Department's files.⁶ Other Department representatives in attendance included Phillip Cherry, Policy Director, Office of the Secretary (OTS), Lee Ann Walling, Chief of Planning, OTS, John Schneider, Administrator of Watershed Assessment Section in the DWR's, and Dave Schepens,

⁵ The comments described Plan Delaware as 'an independent nongovernmental nonpartisan organization to identify, assess and report potential impacts upon the citizens of Delaware generated by legislation, regulatory action, and public or private sector policy, agendas and trends, to promote public involvement and serve as an independent voice to address government action/activities.'

⁶ These documents were described in the prior section. The Department's exhibits presented at the public hearing are for the benefit of the public, as the Department does not have a burden of proof to develop a record during the public hearing. The Department does develop an administrative record to support its final decision, and this Report makes a recommendation to the Secretary on a record.

Program Manager in the DWR's Groundwater Discharge Section. In addition, the Applicant made a presentation by Bruce Patrick, Applicant's Vice-president of engineering, and Lee Beetschen, President of CABA Associates, a civil engineering firm.⁷ Applicant also was represented by its counsel, Jeremy Homer, Esquire of the law firm of Parkowski, Guerke and Swayze.

Mr. Patrick's presentation provided an overview of the Application, which he stated was to obtain a CZA permit for the Facility as an allowed use within the CZ. He stated that the Facility would eliminate the need for septic systems to serve communities and individual lots, and provide a much better environmental treatment and disposal option for the estimated existing 1,600 septic systems within the Applicant's proposed service area. The Facility would use a membrane bioreactor treatment process, which he stated would produce a clear, odorless effluent that would be 8 times better than required by the phosphorus standards the Department has required for the Inland Bays. He stated that the treatment includes ultraviolet disinfection, which results in the treated effluent meeting drinking water standards prior to any groundwater discharge. He explained that the groundwater discharge would use spray irrigation and RIBs methods. The spray irrigation would use 150 acres that would be planted with crops, and other spray irrigation sites would be in wooded area using staked sprayers. He explained that the RIB method would have 6 areas using 15.4 acres. The RIBs would be 18 to 24 inches deep and each basin would be used to receive a discharge on one day and then again be used after a five day recovery period. The RIBs would be located in areas where the groundwater depth is 19 to 22 feet, which he stated was far in excess of the depth that the Department regulations require. He

⁷ Chapter 60 appears to allow an Applicant a right to make a presentation at a public hearing, subject to reasonable restriction so as to allow adequate time to hear from the public on a pending application, which is the purpose of the public hearing.

indicated that two lined treated effluent storage ponds would be used to use if the two disposal systems were not available to handle the treated wastewater.

Mr. Patrick stated that the Facility's 3 million gpd capacity would be built in several phases. The initial construction permit would seek approval for a 1.45 million gpd capacity system. The construction would occur in incremental phases of 150,000 gpd of capacity, which would use parallel units that would allow for redundancy to back up a unit that may not operate when the second unit is installed. The separate units also allow the biosolids to be hauled to a disposal site outside of the CZ more efficiently than if a single unit was operating.

Mr. Lee Beetschen made a presentation on the offset proposal in which he described the Facility as having a positive impact on the environment because of the ability to treat wastewater to higher standards than possible through septic systems that otherwise would be used. He mentioned the Department's regulation that established the Inland Bays' Total Maximum Daily Loads (TMDLs) as imposing strict water quality limits to meet in order to protect the Inland Bays from water pollution.

The first speaker from the public was Bill Moyer, who retired from the Department, where he worked for 30 years and his last position was manager of DWR's Wetlands and Subaqueous Lands Section. He noted that he is a member of the Scientific and Technical Advisory Committee of the Center for the Inland Bays and a certified environmental professional. He inquired about the clearing of 10 acres of forest area for the RIBs. Mr. Patrick indicated that initially only 1 to 3 acres would be cleared, and the 10 acres would be cleared in phases as the Facility was built to its 3 million gpd final capacity. Mr. Patrick also noted that the Applicant's plan included planting at least 10 acres of trees and screening along the buffer areas which would more than offset any harm from the removal of existing trees. Mr. Moyer introduced a paper by Scott Andres, which describes research done on RIBs in Delaware. Mr.

Moyer recommended that the Department require an independent study be done, at Applicant's expense, on the proposed impact on the Facility's RIBs. Mr. Moyer also recommended that the wooded area to be cleared be studied by the Department using the habitat evaluation procedure developed by the United States Fish and Wildlife Service. Mr. Moyer introduced his notes and the study as Moyer Ex. 1.

John Austin spoke on behalf of the Southern Chapter of the Sierra Club in opposition to the Facility and provided 4 documents introduced as Austin Exs. 1-4. He questioned whether any of the proposed RIBs would be located in wetlands, which he noted would be contrary to the Applicant's representation in part 6.27 of the CZA permit application. He also cited the City of Rehoboth's engineers who rejected the use of RIBs because it would result in a discharge of nutrients into the Inland Bays, which he claimed would violate the Inland Bays TMDLs in that it would be a prohibited discharge of nutrients into the Inland Bays. Mr. Austin questioned the offset calculation and noted that the Facility would add 41,545 pounds per year of nitrogen and 3,413 pounds of phosphorous to the CZ. Consequently, Mr. Austin indicated that the offset should be to remove 130 percent of these amounts from the environment. He requested that the application be rejected as it failed to clearly and demonstrably more than offset the pollution to be added by the Facility and that the RIBs would violate the federal regulations and the Department's TMDLs regulation.

Mable Granke spoke in opposition to the Facility as a blatant misuse of the land because the land is located in the state policy level 4 area, which she claimed is supposed to reserved for low density development and not the proposed development of the 10,000 housing units that the Facility anticipates serving at final design capacity. She indicated that the service area would have more population than many of the current coastal communities of Rehoboth Beach, Lewes, and Dewey Beach. She expressed concern about the roads that would be used by the 10,000

customers and the other infrastructure problems that such growth would impose on the area. She commented on the lack of any authority to require existing septic system owners to connect to the central sewer system that would send wastewater to the Facility. She mentioned the need to protect the sensitive Inland Bays area, which the State has recognized as needing more protection. Finally, she questioned what would happen to the wastewater treatment sludge.

Steve Callanen spoke on behalf of the Southern Delaware Group of the Sierra Club in opposition to the Project based upon its water pollution potential and legal precedent. His opposition was to the use of RIBs and he submitted a 1996 US Geological Survey to support his opposition, which he indicated should cause the Department to also study the environmental impacts of groundwater discharges from RIBs more before approving the Facility. Callanen Ex. 1. He expressed concern for the introduction of currently unregulated low-level trace substances in wastewater from medical substances such as pills and other forms of drugs.

Mrs. Callanen also presented comments as a representative of Save Our Coastal Communities and she provided a June 13, 2008 letter sent by various state agencies to Dennis Schrader in opposition to the Facility before it was considered by Sussex County for zoning approval. She expressed concern with the harm from flooding and releasing wastewater into Love Creek. She requested that the tree clearing not be done during April 1 to July 31 to protect wildlife during breeding seasons. She also raised a question about the replacement of existing septic systems and indicated that the Applicant had no history of participating in a septic system replacement program. She repeated the concern raised by the Office of State Planning Coordination in 2008 with RIBs located near the headwaters of Love Creek. The comments also referenced the Rehoboth Beach study and a potential for water mounding and increased nitrates in the groundwater.

Brenna Goggin spoke in opposition in her capacity as environmental advocate for the Delaware Nature Society. She also provided her comments in writing. Her comment questioned the use of RIBs because they could harm the groundwater including the Columbia aquifer that is a main source of water in Sussex County. She opposed the location of the Facility in a level 4 area, which she stated is an area identified as to be protected and preserved from infrastructure development. She indicated her belief that the Facility will promote sprawl, traffic, air pollution and other environmental impacts inappropriate for a level 4 area. She commented that studies show that diversity of bird species decline on regularly irrigated sites and that spray irrigation in forest areas also harm amphibian reproduction. She commented on the offsets as the elimination of 1,600 existing septic systems and avoiding the installation of 8,400 new septic systems does not provide the needed offset under the CZA regulations because these connections to the Facility are not mandatory. Hence, the offset claimed is hypothetical in her opinion.

Bill Zak provided comments that opposed the Facility based upon the RIBs and the operation of a wastewater treatment plant by a for-profit business.

Chris Bason, science and technical coordinator for the Center for the Inland Bay, spoke in opposition to the Facility. He mentioned the 1995 Inland Bays Comprehensive Conservation and Management Plan (CCMP), which supports replacing septic systems with sewer service by an enhanced wastewater treatment system such as the Facility. He, however, expressed concern with the use of RIBs based upon the potential failure of RIBS to work properly, which could cause groundwater contamination. He also commented that the proposed site in Area B may be unsuitable for RIBs based upon 2010 Delaware Geological Survey and high wet weather water tables. He added that Delaware has had RIBs fail at the Bethany Bay development near Bethany Beach, Sussex County. He questioned the use of any RIBs near Love Creek, which he noted is Department designated waters of Exceptional Recreational Ecological and Significance (ERES).

He indicated that spray irrigation was his preferred method of disposal for treated wastewater. He also wondered why the Department had not considered water table rising in connection with climate change and sea level rising. He expressed a concern that the Department not approve any RIB use until the Department has issued regulations that provide more environmental protection, such as provided by Maryland. He also raised an issue with air quality based upon studies on higher levels of polybrominated diphenyl ethers or PBDEs found when spray irrigation is used. He indicated that the treatment process may remove this pollutant but at this time he did not know. He also raised a concern with habitat protection and cited the possible hydrologic loading that may result from the rapid infiltration of up to 2 million gallons per day of treated wastewater. The possible impact he stated was to cause the stream channel to disconnect from its streamside wetlands, and increase the export of sediments from erosion. He indicated that the Wolfe Neck spray irrigation facility had such an adverse impact from RIBs. He also raised questions about the environmental impact of a hydrologic failure and the presence of drugs in the treated wastewater. Finally, given the concerns he raised he disputed that the application was administratively complete at this time.

John Sykes spoke in opposition to the Facility as a representative of the League of Women Voters and also as a nearby resident. He expressed concern with the Facility's proximity to waterways and the potential to flood, particularly of the spray irrigation storage pond to be located approximately 1,000 feet from Love Creek. He also repeated the concern that the destruction of mature forest and a replacement with new trees would not provide the same degree of nutrient uptake as does the current mature forest. He raised an issue with power outages and emergency procedures if no power and whether the generator would work.

Mr. Glowiak spoke in opposition as a representative of the Citizens Coalition. He indicated that state policy was to move any wastewater disposal away from the Inland Bays,

while the Facility would have a new one built close to the Inland Bays. He expressed concern that the Facility would fuel development because it would need customers to be profitable and was proposed to serve 10,000 customers. Thus, he was concerned that it would accelerate sprawl and environmental degradation in an already stressed environment.

Ms. Spence spoke and indicated she attended the Sussex County meeting that approved the zoning use for the Project, but she only heard proposed spray irrigation and did not hear anything about RIBs. She also questioned whether the Applicant as a private business could be trusted based upon the problems with British Petroleum in the Gulf and that she had a septic system and lived nearby, but would not connect to the Facility because it would be too expensive. She also noted that Love Creek has become a breeding area for colonies of Great Blue Herons.

Jason Kennedy spoke in opposition based upon his concern with the water tables and the ease by which contaminants may travel to other properties. He cited his water problems from contamination by a local gas station as an example.

Ted Farragut spoke in opposition based upon the impact to the low density area from the development that the Facility would serve. He commented that this Facility was the first to test the CZA's protection of the CZ for recreational use. He opposed the Facility because it would increase the area population with the 10,000 to 15,000 people that would use the Facility.

John Walsh spoke in opposition based upon the Facility's potential harm to the area from the development it would enable, but he also recognized that the growth had been authorized by the Sussex County government.

Ms. Johnson spoke in opposition based upon the heavy industrial use of the area that the Facility would represent.

Ms. Keller spoke in opposition and commented on the possible unintended consequences of approving the Facility and changing the nature of the area. She also raised a question about the harm to the aquifer and how it could impact a wide area given the porous nature of the aquifers with sand walls separating them. Finally, she questioned whether any existing septic systems would connect to the Facility given the cost associated with such a connection.

Ms Hemmerich spoke in opposition to the Facility based upon the cost of the sewer service. She is a Tidewater Utilities water customer and she worried that she would have to pay for the Facility.

Ms Carmine spoke as the adjacent landowner to the Facility and indicated that the Facility would serve the growing population that has come to the area and will continue to come to the area because of its beauty.

The Applicant submitted post-hearing comments that addressed the public comments in detail. TESI Ex. 1A. The comments first addressed the Delaware Geological Survey (DGS) Phase 1 study that was cited by several of the public comments. The Applicant noted that it was not site specific to the Facility. RIBs, the Applicant's comment noted, are a proven wastewater disposal technology. Moreover, the comments noted that the Facility's high level of treatment means that the treated effluent does not require any more treatment in a land application, which is consistent with the DGS study. The Applicant's comment disputed that the Facility would be an inappropriate land use based upon Sussex County's 2008 conditional use approval, which expressly recognized the RIBs as part of the proposed land use. The cover letter from counsel also disputed whether a CZA permit was required as the Facility would not be manufacturing any new product within the intent of the CZA to regulate industrial development in the CZ.

Alan Muller of the Green Delaware organization submitted comments dated May 19, 2010 (Green Delaware Ex. 1A) and June 1, 2010 (Green Delaware Ex. 2A). The first comment

provided an overview of the CZA, and indicates that the Facility should not be approved based upon the offset claimed because it was based upon new 8,400 connections for new homes that have yet to be built and would add pollution to the CZ. The second comment cited the Office of State Planning Coordination's June 13, 2008 letter to Sussex County in opposition to the then pending zoning approval. The comments included comments from the Department questioning the location of the RIBs near the headwaters of Love Creek and the potential to pollute the surface waters and the proposed destruction of forest areas. The Department's comment also questioned the possible impact to a public water supply well owned by Tidewater Utilities. His comments also were critical of the Department's regulations on locating RIBs, but stressed the need to protect Love Creek as a waterway of Exceptional Recreational and Ecological Significance (ERES), as determined by the Department. He contended in the comments that the Department's preliminary determination of completeness should be reversed as erroneous and the issues raised by the public comments addressed. In the alternative, he recommended denial of the application. Finally, he criticized the Department's hearing process and the post-hearing development of the record without any public participation.

John M. Thaeber, Senior Vice President of Artesian Water Company submitted comments on behalf of Artesian that listed concerns that should be addressed in any permit decision. Artesian Water Company Ex. 1A. The list included the location of the Facility in the CZ and within the environmentally sensitive Inland Bays watershed area. The comments noted that 90% of the Applicant's service area was outside of the CZ and that the Facility would result in pollutants being transported into the CZ to be discharged near Love Creek. This discharge, he claimed, would accelerate the pollutants reaching the waters than if on-site treatment and disposal outside of the CZ would occur. He noted that the Facility would be located within an existing Sussex County sewer district. The comments noted no guarantee that any offsets would

reduce pollutants in the CZ. The proposed offset from not using fertilizer on the crop land to be used for spray irrigation is not supported by any documentation by the farmers and the lease is silent on such a term. Finally, the comments noted that the CZA Regulations on proposed offsets require them to be “well-defined and contain measurable goals which can be audited by the Department” and occur simultaneously with the implementation of the activity needing an offset” and that no agreed upon offset schedule was submitted.

Steve Callanen submitted a comment that included A. Scott Andres’ paper on the problems with RIBs in Delaware and its conclusion that 80 to 95% of Delaware’s land area would be excluded from RIB use under the Department’s current regulations.

Robert Maegerle submitted comment and indicated he was a professional engineer licensed in Delaware. Maegerle Ex. 1A. His comment expressed support for replacing the use of septic systems with central sewer system with improved treatment processes, but he opposed the Facility based upon being too close to the Inland Bays and that it will increase the Inland Bays’ pollution. The Facility, in his view, is intended to serve new communities not in the CZ and transporting the developments’ wastewater closer to the Inland Bays for disposal.

William Payne wrote to support the Facility to provide sewer service to the high growth area along both sides of Route 77 as approved by Sussex County. Payne Ex. 1A. He considered the Facility would provide a much better treatment method and would improve water quality in the Inland Bays than if the new development are served by community owned wastewater treatment plants that otherwise would be needed.

Betty Kratt wrote to oppose the Facility’s CZA permit based upon the lack of existing homes that would use it and the new homes would add to the area’s traffic congestion. Kratt Ex 1A. She also questioned the use of RIBs. Paul Kraft of the same address also wrote to express similar concerns. Kratt Ex 2A.

Ron Wuslich wrote to oppose any permit based upon the fact that there is no need for the Facility, which he stated was opposed by Delaware's PLUS⁸ comments and contrary to the CIB's Comprehensive Conservation Management Plan. Wuslich Ex. 1A. Moreover, he indicated that the Facility's impact would increase water pollution of waters already determined to be impaired. He noted that 22,000 lots have approved for construction in the watershed, but have yet to be built.

Steve Callanen submitted comments on behalf of the Sierra Club's Southern Delaware Group that raised the issue of whether the Department's TMDLs for the Inland Bays and the prohibition against any surface water discharge from a wastewater treatment plant prohibited the proposed discharge from the Facility.

John Austin submitted comments that followed up on his comments at the hearing but also asked why the Department's comments submitted as part of the PLUS review were not reflected in the CZA application review process. Austin Ex 1A.

Finally, a petition in opposition was submitted by residents who are members of the Love Creek Woods Homeowners Association.

The Department's experts in DWR and the CZA Program provided me with their technical advice and recommendations in a TRM, which is attached hereto as Appendix A. The TRM includes a draft permit should the Secretary decide to issue a CZA permit. The TRM addresses the issues raised by the public comments, including: 1) the time schedule for the construction permit; 2) the reduced capacity of the Facility based upon groundwater analysis and the associated reduced customer base for the Facility's capacity to serve 4,833 customers rather than the proposed 10,000; 3) the concern with the excessive reliance of using the RIBS as the primary disposal method; 4) the concern with the secondary impacts from the Facility promoting

⁸ Plan Land Use Service (PLUS) was established to provide state assistance and advice for local land use planners such as Sussex County.

residential sprawl and development as part of a central sewer service that allows higher density development of a Level 4 area; 5) the revision to replace RIB in Area “B” with a spray irrigation provides protection of a public water supply well located downgradient from Area “B;” and 6) the importation of pollutants from sources outside of the CZ into the CZ for disposal. The recommendations are to issue a CZA permit because its wastewater treatment will provide vastly superior treatment service for existing and new homes that otherwise would discharge much higher levels of pollutants into the Inland Bays’ watershed. The CZA Program recommends a permit be issued based on a draft permit it prepared, which contains special conditions to ensure that the Facility will protect the CZ from undue pollution.

III. DISCUSSION AND REASONS

A. Statutory Purposes of the CZA

The CZA’s statutory purposes may be summarized as delegating to the Department control over industrial development within the CZ to safeguard the CZ’s use primarily for recreation and tourism.⁹ Under the CZA, the Department is to undertake “careful planning” in determining the “correct balance” between safeguarding the CZ primarily for tourism and recreational uses on one side and permitting “new industry” in the CZ on the other side.¹⁰ The Department should apply this statutory intent when administering its duties under the CZA,

⁹ It is hereby determined that the coastal areas of Delaware are the most critical areas for the future of the State in terms of the quality of life in the State. **It is, therefore, the declared policy of the State to control the location, extent and type of industrial development in Delaware’s coastal areas.** In so doing, the State can better protect the natural environment of its bay and coastal areas and **safeguard their use primarily for recreation and tourism....7 Del C. §7001 (emphasis supplied).**

¹⁰ While it is the declared public policy of the State to **encourage the introduction of new industry into Delaware,** the protection of the environment, natural beauty and recreation potential of the State is also of great concern. **In order to strike the correct balance between these 2 policies, careful planning based upon a thorough understanding of Delaware’s potential and her needs is required. Therefore, control of industrial development other than that type of heavy industry in the coastal zone of Delaware through a permit system at the state level is called for.** 7 Del. C. §7001(emphasis supplied).

which relates more to land use planning than the Department's other regulatory areas, but the Department's CZA authority is different from local land use planning.

B. Local Land Use Planning v. CZA Review

The Department's administration of the CZA is a form of land use regulation, but the decision to develop land by subdivision and any other uses other than regulated by the CZA is within the exclusive jurisdiction of local governments such as Sussex County for the land are to be used by the Facility. The CZA prohibits certain new uses in the CZ, and delegates to the Department the determination whether a proposed new use that is regulated by the CZA should be permitted. The Department's CZA jurisdiction is to apply its environmental expertise to correctly balance the CZA's considerations in determining whether to permit new uses in the CZ or the expansion of permitted uses in the CZ. Indeed, the Facility's application highlights the differences because Sussex County approved the Facility as an appropriate land use, despite the Department's environmental objections and yet the Department now considers whether the Facility should be permitted under the CZA. The CZA requires the Department to apply a different set of considerations than applied by Sussex County when it made its conditional use decision on the Facility. The Department's past opposition to the Facility does not require the Department to deny the permit, but the environmental concerns raised by the Department's opposition should be considered as part of its CZA review. The relationship between Sussex County's (or any local zoning authority's) land use determination in the context of a CZA application review is that the Department requires the proposed CZA use be consistent with a local land use decision. *Section 8.1.2 of the Regulations*. The Department, however, does not need to follow the local land use decision to the extent it grants approval of a proposed use. Instead, the Department determines independently whether a proposed use should be permitted based upon considering the CZA's environmental and economic considerations.

C. CZA Legal Analysis Of The Facility's Proposed Use

1. The Facility Will Not Be A Prohibited Use

A CZA analysis first requires a finding of whether a proposed use is a prohibited use. The fact that the Facility is the first privately owned sewage treatment plant to seek a CZA permit means that there is no prior guidance on the proposed use. I recommend a finding that the Facility is not one of the CZA's prohibited new uses, which are a "heavy industry use," a "bulk product transfer facility"¹¹ or a small incinerator.

Only the "heavy industry use" requires further explanation because the Facility's because it will have some physical characteristics of a "heavy industry use," which are: 1) uses "more than 20 acres," 2) uses "smokestacks," "**tanks**," "distillation or reaction columns," "**chemical processing equipment**," "scrubbing towers," "pickling equipment" and "**waste-treatment lagoons**,"¹² and 3) is in an industry that has a "potential to pollute the environment when equipment malfunctions or human error occurs."¹³ I find that the Facility's total proposed land use in the CZ will be approximately 272 acres.¹⁴ The proposed use of most of this land area will be used for spray irrigation (agricultural use will continue) and the RIBs, which resemble small depressions that will hold temporarily shallow treated water when used. Consequently,

¹¹A "bulk transport facility" must be a "port or dock facility" located either on or off-shore and hence the Facility is not.

¹² Waste water treatment lagoons are different from the proposed RIBs, which handle discharge treated effluent whereas the treatment lagoons handle untreated wastewater.

¹³ The CZA provides specific examples of heavy industry uses such as "oil refineries," "basic steel manufacturing plants," "basic cellulosic pulp paper mills," and "chemical plants such as petrochemical complexes," and an "incinerator" larger than 5,000 square feet.

¹⁴ 48.53 acres in parcel 2-34-11.00-48.00 are outside of the CZ

only the Facility's two buildings¹⁵ should be considered as an industrial use of the land under the CZA because the buildings will contain "tanks" and "chemical processing equipment." The buildings small footprint is well below 20 acres. Thus, the Facility's industrial use will not approach the size or have most of the physical characteristics equivalent of a "heavy industry use." The type of "heavy industry use" prohibited by the CZA was the subject of public comments, including comments that described the CZA's purpose and history as to stem the threat of additional oil refineries and other heavy industrial using the entire Delaware coastal area. I agree that oil refineries is exactly the type of heavy industry use that the CZA prohibits. I find no support for any intent to prohibit generically new sewage treatment plants in the CZ. Moreover, I find that the Facility's small treatment building and the fact that it will not use any treatment lagoons as compelling support for a finding that the Facility's proposed use is not a prohibited use under the CZA. Instead, the Facility is like the manufacturing uses that the CZA specifically identifies as allowable.¹⁶

2. On Balance And Subject to Appropriate Permit Conditions, The Facility Will Be An Allowable Manufacturing Use In The CZ

The Department's regulations require that the Facility, as a privately owned sewage treatment plant, must obtain a CZA permit.¹⁷ Indeed, Applicant's application was filed without seeking a status decision, which otherwise is required for any new manufacturing use in the CZ. *See Section 7.4 of Regulations.* Nevertheless, Applicant's comments have questioned whether there is CZA jurisdiction claiming that the Facility would not be "manufacturing of new

¹⁵ 39,015 square foot treatment building and a 3,600 square foot control building will be in the CZ on Tax Parcel 2-34-11.00-50. Sussex County's zoning approval requires these structures to look like agricultural buildings.

¹⁶ The CZA cites uses that could obtain a CZA permit such as "garment factories," "automobile assembly plants," "jewelry and leather goods manufacturing establishments," and "on-shore facilities less than 20 acres in size consisting of warehouses, equipment repair and maintenance structures, open storage areas, office and communication buildings, helipads, parking space and other service and supply structures required for transfer of materials and workers in support of off-shore research, exploration and development operations."

¹⁷ *See Section 6.2*

products.” Again, because this is the first privately owned sewage treatment plant to have sought a CZA permit the issue has not been considered before by the Department.

I reject Applicant’s argument that seeks to challenge the regulation as a collateral challenge to the regulation. The Department is required to follow its own regulations in conducting its CZA review. Nevertheless, I will address the argument that relies on the CZA definition of “manufacturing” as “the mechanical or chemical transformation of organic or inorganic substances into new products.” 7 Del. C. §7002 (d). I find that the Facility will use in its treatment process “power-driven machines and material handling equipment” and that the treatment process will result in the mechanical and chemical transformation of untreated wastewater into treated wastewater. Thus, the proposed use meets some of the CZA definition of manufacturing.

The real issue is whether wastewater treatment is the manufacturing of “new products.” Merriam-Webster defines product as “something produced; *especially* : commodity 1 (2) : something (as a service) that is marketed or sold as a commodity.” Under this common usage treated wastewater would not be considered “new products” because treated wastewater is not something sold as a commodity. Nevertheless, the Department should liberally interpret the CZA to protect the CZ from uses such as wastewater treatment and require wastewater treatment uses to obtain a CZA permit in order to safeguard the CZ for recreation and tourism uses. Clearly a wastewater treatment plant is not a recreation or tourism use, but the Facility may provide wastewater treatment and sewer utility service that could promote recreation and tourism uses. Consequently, on balance, I find that the fact that the Facility’s reliance on “power-driven machines” and “material handling equipment,” albeit small in size, and its use of mechanical and chemical processes tip the balance in favor of CZA regulation over the Facility. The General properly left the determination of the types of uses to be regulated as “manufacturing” to the

Department, and the Facility's proposed use is one of the areas where the Department has determined to regulate. Thus, there is support for requiring the Facility's wastewater treatment use to obtain a CZA permit because "new products" from any such an industrial type manufacturing process should be regulated even if they have no commercial value.

This interpretation of wastewater treatment as manufacturing will not apply to all wastewater treatment systems in the CZ because the Regulations exempt all publicly owned wastewater treatment plants.¹⁸ The Department also does not regulate under the CZA small systems that do not employ such industrial type processes that the Department is regulating for the Facility because these systems are not manufacturing if they use standard on-site wastewater treatment and disposal systems and serve a single lot or even community systems.¹⁹

D. Negative Impacts

The Department under the CZA must determine if the Facility's use will have any negative impacts and the Department's Regulations require that any negative impacts be offset. The Applicant disclosed negative environmental impacts from the clearing of approximately 10 acres of trees, the production of certain solid waste from materials used at the Facility, and the Facility's production of treatment process byproducts in biosolids or sludge. I agree that these are negative impacts that should be considered. The Applicant proposes to remove all solid waste and biosolids from the CZ and I agree this will eliminate any CZ negative impacts. The Applicant proposes landscaping as an offset for the loss of 10 acres of mature trees, but the CZA Program in its TRM considers this offset is not sufficient under the *Regulations* as an offset. Instead, the CZA Program recommends that the Applicant be required as part of its construction

¹⁸ See Section 5.20 for exemption for Public Sewage Treatment Plants subject to regulation by the Federal Water Pollution Control Act, 33 U.S.C. § 1251, et. seq. and/or the Delaware Environmental Protection Act, 7 *Del.C.*, Chapter 60.

¹⁹ It is the enhanced treatment process the Facility will use that subjects the Facility to CZA authority, and the enhanced treatment process is required to meet the Department's stringent discharge limits in the Inland Bays PCS.

permit application a plan that would minimize any tree clearing and restore trees that will more than offset the loss of the environmental protection provided by mature trees. This plan would protect the watershed from nutrients entering it. I agree that requiring an offset more than mere replacement is appropriate and consistent with the long standing CZA Program policy to require an offset at least 130% more than the negative impact. The specifics to the plan to be submitted will be reviewed as part of the construction permit application process and this is to provide the guidance to the Applicant and the Department that this important environment safeguard should be considered, which was supported by several of the public comments. The CZA Program also recommends requiring compliance with the Department's Natural Heritage report and the Applicant has agreed to comply with the Report's recommendation, but this too will be included as a special condition to ensure compliance. Again this was raised by several public comments.

The public comments also wanted the Department to deny any permit or require an offset for the treatment and discharge of pollutants. I recommend that this position be rejected. I do not find that the entire Facility's wastewater treatment process should be considered a negative impact because the entire purpose of the Facility is to treat wastewater using an enhanced treatment process. The enhanced treatment process will remove most of the pollutants (nitrogen and phosphorus) prior to any groundwater discharge and the process will be used by customers who otherwise would use wastewater treatment and discharge methods that would result in much higher levels of pollutants entering the CZ and more importantly the Inland Bays.

I consider the Facility to be a water pollution reduction project that would be used consistent with the Department's goal of improving the Inland Bays' water quality. If all wastewater within the entire Inland Bays watershed was treated to meet the Facility's treatment standards, then the Inland Bays' water quality would improve significantly. Indeed, it is the Department's PCS that requires the Facility to provide such a high level of treatment, which is

why the offset was based upon reduced nitrogen and phosphorus discharges when compared to discharges from individual or small community wastewater treatment systems. The Department Inland Bays PCS Regulations allow these smaller systems to continue to build and operate in the Inland Bays watershed, which means that the only way to reduce pollutants is to build advanced treatment systems like the Facility as a viable wastewater treatment option in the Inland Bays. It is not contradicted that for every customer who connects to the Facility there will be an environmental benefit to the Inland Bays's water quality and the CZ than if the customer installed a new septic system or continued to use an existing septic system. In other words, the Inland Bays' water quality and the CZ will be protected more by customers connecting to the Facility than if they do not.

The public comments in opposition consider that the Facility will promote residential growth and sprawl. First, as noted in the CZA Program's TRM, the promotion of residential growth and sprawl is not within the Department's CZA's jurisdiction to regulate. As noted above, the Department opposed the Facility's local land use approval, but Sussex County's decision is final and binding on the Department. The Department now must protect the environment from the consequences of such residential sprawl and growth and the Facility provide one way to protect the Inland Bays' water quality because the Facility will be built consistent with the standards imposed by the Inland Bays PCS. The CZA Program recommends that the Applicant be required to demonstrate compliance by undertaking a surface water quality assessment as part of its construction permit application. I agree that this is an appropriate and reasonable permit condition to ensure that the Facility will indeed satisfy the Inland Bays PCS and the TMDLs that apply to non-point source discharges such as the Facility's.

The Department's most important special condition as recommended by the CZA Program is the capacity limit of 1.45 million gpd, which is based upon the Department's

groundwater study. While Sussex County may consider it appropriate to allow up to 10,000 sewer connections within the Facility's proposed service area, fortunately environmental science has prevented such explosive growth in an area classified by the State Planning Office as a Level 4 area that should not receive such growth. Thus, the CZA Program's special condition will reduce the customers, or equivalent dwelling units (EDUs),²⁰ can be connect to the Facility to 4,833 EDUs, which will provide environmental protection from residential growth and sprawl and the secondary negative impact of a possible dramatic population increase in a Level 4 area.

There were comments about the Facility's service area²¹ and the transportation of pollutants from outside the Inland Bays watershed and the CZ to the CZ and Inland Bays watershed. I reject this as a negative impact because the overall impact of the Facility will to reduce pollution in the CZ and the Inland Bays. The transportation of pollutants by central sewer mains or other means to the Facility does not constitute a negative impact that should be offset because under the watershed assessment analysis of nitrogen and phosphorus discharges anywhere in the Inland Bay watershed. All such discharges have the potential to be transported into the CZ and the Inland Bays, and the Facility provides one way to reduce the transportation to the Inland Bays. Thus, the mode of transportation into the CZ or the Inland Bays is less critical than the treatment process to be used that removes the pollutant before any discharge.

The CZA Program also has proposed a special condition that would address some concerns with the use of RIBs as a discharge method. The CZA Program recommends that the Facility be operated so that spray irrigation will be the preferred method of disposal over use of the RIBs and that spray irrigation of agricultural area be the preferred area to be used over the

²⁰ EDUs are established by regulation based upon the design demands imposed on the sewer system. A single family residence's EDU is 300 gpd.

²¹ The Applicant is a utility regulated by the Delaware Public Service Commission (PSC), which issued a certificate of public convenience for an authorized service area. Applicant provided support for the utility service by potential customers. The PSC will regulate Applicant's utility service on the quality of service provided, and subject to PSC approved rates and charges.

wooded areas, which was a concern raised in the Delaware Natural Heritage report. The possible adverse environmental consequence from excessive use of RIBs was noted by Ron Graeber in DWR. Indeed, many comments opposed any use of RIBs, but the Department has recognized RIBs as an acceptable disposal method and the CZA permit is not the appropriate permit to get too much into the specifics of the treatment and disposal methods except as necessary under the CZA considerations. The Department's construction permit review will address the science and the appropriateness of RIBs, including the issues raised by public comments that questioned the Facility's compliance with the Inland Bays' TMDLs as a point source discharge into the Inland Bays.

I agree with the CZA Program's recommendation that the offsets should be changed to reduce possible negative impacts from excessive use of RIBs when spray irrigation is possible. The Facility may rely on RIBs and not use spray irrigation because RIBs usage does not require as much pumping as spray irrigation. In addition, spray irrigation requires more land area to be used. I agree that this special condition would protect the CZ from negative impacts from excessive reliance on discharge of treated wastewater into the RIBs. I recommend that a special condition be included in any CZA permit to direct that the construction permit application and the Department's review process should comply with this special condition, subject to subject the Department's reasonable engineering and operational reasons that may require RIBs to be used when appropriate. This special condition it to provide guidance to the Applicant and the Department in reviewing the construction permit application.

The public comments also raised questions on the April 26, 2010 Secretary Assessment Report (SAR), which was criticized for finding the application, including the proposed offset, as complete. The SAR is the starting point for the CZA's formal review process by the Department once it has received all the information from the Applicant that the Department considers

necessary to begin the process and receive public comments on an application. The Applicant revised its application on March 19, 2010, which the Department considered administratively completed based upon the information known at that time and before receiving any public comments. Obviously, the Department is not bound by the SAR when it makes its final decision. Indeed, the purpose of the subsequent review and record development, including by public comments made during the public hearing process, can result in the Department changing its initial determination that an application is administratively complete or that the Applicant's offsets, as reviewed in the SAR, are sufficient under the CZA analysis. The CZA Program recommends that the offsets be increased is one example of the changes that can and should be made in response to the Department's CZA review process after the SAR and the receipt of public comments.

The public comments raised an issue whether the Applicant filed the permit application necessary to receive the offset. As discussed above, the Facility does not need to offset the treatment and discharge process that I recommend finding has no negative impact. Thus, no administratively complete construction permit application is needed to implement an offset for the treatment process. I agree that if the Facility did not provide a better form of treatment than other available treatment alternatives, then the treatment process may require an offset as a negative impact. The Department has not received any construction permit application, but I do not find that an administratively complete construction permit application is necessary for any offset. I find that the Facility will benefit the environment and does not need an offset because Sussex County has allowed (over the Department's opposition) more residential growth in a sensitive area and the Facility will provide the best environmental way to treat the wastewater from this growth. Furthermore, as a practical matter, requiring an application to be submitted prior to the CZA review would result in considerable waste of resources if the CZA permit is not

issued. Finally, as this Report recommends, the CZA review process may require revisions to a construction permit application that could essentially rescind any Department determination of an administratively complete application if issued prior to a final CZA decision. The applications could have been considered together, and the Applicant requested this regulatory treatment. The Department elected to handle the CZA application first and the Department's experts have recommended that changes be required for any construction permit application based upon the CZA review process. Thus, I find no need for an administratively complete construction permit application within the meaning of Section 9.1.6 of the Regulations when the treatment process provides environmental benefits and no negative impacts as it will be to reduce pollution that otherwise would occur.²²

Another issue raised by public comments was the Applicant's revisions in its May 6, 2010 letter. I find that these changes are not of the type to warrant a finding that they substantially revised the application. If that were the case then the Applicant likely would withdraw the revisions, which the Department considers as beneficial. The revision replaces one RIB with spray irrigation and the Applicant made this change that is consistent with what the Department likely would have ordered to be done. This interpretation of a non-substantial change to benefit the environment should be allowed to encourage such changes that are beneficial to the environment, as opposed to penalizing an applicant for such voluntary revisions. I agree that the Department had this information before the public hearing and the information should have been in the record developed at the public hearing, but the revision does not change the type of public notice that the Department issued and did not prevent anyone from having sufficient notice of the public hearing. The failure to introduce this document at the public

²² The Regulation recognize the need to exempt pollution control equipment installed on non-conforming uses from the CZA permit process if installed within an existing footprint and causing in any new negative environmental impacts over existing impacts. *See Section 5.16.* I agree that this theory should apply to all CZA uses that are pollution control equipment.

hearing was an administrative oversight. In addition, the revision is beneficial to the environment and is a change that is consistent with some of the public comments.

Finally, the public comments address the issue of whether the Facility will promote more residential and commercial growth in a level 4 area, which assumes that a wastewater treatment plant is built first and then lots are approved. I disagree with this assumption. Sussex County will have to approve lots, and then if a lot is approved wastewater treatment and disposal service options are required, and the Facility will provide one option that will protect the CZ and the Inland Bays more than other available options. If the Applicant does not think there is a demand for the Facility, then it would not seek to build it because it is in the business of providing sewer utility service. The Department's CZA analysis should not unduly interfere with managerial discretion to operate a new business that otherwise satisfies the CZA considerations. Sussex County has made a decision to allow residential growth in the Facility's service area over the Department's opposition. That local land use decision is not subject to reversal in a CZA permit proceeding. The CZA's purpose is to control industrial growth, and controlling residential and commercial growth is not within its jurisdiction **even if it harms the CZ**. Indeed, residential and commercial growth in the CZ may arguably be considered as consistent with safeguarding the CZ for recreation and tourism uses. The CZA is to control manufacturing uses within the CZ. Consequently, the Facility's proposed provision of sewer utility service to residential and commercial customers on lots approved by Sussex County is not controlling under the CZA's considerations.

The Department is required to evaluate a CZA application based upon weighing the statutorily mandated considerations. The first consideration is environmental impact, which is defined broadly as follows:

including but not limited to, probable air and water pollution likely to be generated by the proposed use under normal operating conditions as well as

during mechanical malfunction and human error; likely destruction of wetlands and flora and fauna; impact of site preparation on drainage of the area in question, especially as it relates to flood control; impact of site preparation and facility operations on land erosion; effect of site preparation and facility operations on the quality and quantity of surface, ground and subsurface water resources, such as the use of water for processing, cooling, effluent removal, and other purposes; in addition, but not limited to, likelihood of generation of glare, heat, noise, vibration, radiation, electromagnetic interference and obnoxious odors.

7 Del C. §7004 (b) (1).

The Applicant has set forth in the Department's CZA application the proposed environmental impacts, which at full build out at a 3 million gpd design capacity would produce 8,000 pounds per day of biosolids and require the clearing of approximately 10 acres of forest. First, the CZA Program recommends a reduction to the authorized size to allow the Facility a design capacity of 1.45 million gpd, which will reduce the customers to be served from 10,000 to 4,833 EDUs. As discussed above, I find that the CZA Program's recommendations for a permit to be issued with special conditions will provide the level of protection of the environment necessary to satisfy the environmental impacts consideration.

CZA's second consideration is the proposed economic effect. The application indicates that approximately 11 employees will work at the Facility, 4 which will be new hires. In addition, an estimated 330 construction jobs will be generated during the 24 month construction period, which will provide an estimated \$117,000 weekly payroll. The total estimated capital cost for the Facility is \$6 million. The Applicant estimates paying taxes of over \$71,300 annually paid to state and local taxing authorities. I find the positive economic benefit consistent with the CZA's purpose to encourage appropriate industrial development in Delaware, particularly where the Applicant will use primarily local residents for its workforce.

The third CZA consideration is the number and type of supporting facilities required and their impacts on all other factors. The Facility will not require supporting structures other than the two buildings, and the Sussex County has already required the building to look like

agricultural structures. The fourth CZA consideration is aesthetic and the application discloses that the Facility's two structures will set well back from the public roads, and should not cause any aesthetic concerns from adjacent users of nearby properties. The fifth consideration is the effects on neighboring land uses, and the Applicant states that there would be no adverse impacts on the closest residential property. The sixth consideration is that Facility will be consistent with county and municipal comprehensive plans, which Applicant satisfied by proof of Sussex County's approval of the Facility as a conditional use.

I find that the Applicant adequately has disclosed the environmental impacts of the Facility, and that the proposed use would cause certain quantified negative environmental impacts, albeit very minor, based upon land clearing that the Department will require to be offset as part of the review of the construction permit. Similarly, the Department will provide guidance on the operation of the Facility to be implemented as part of the construction permit review process. The Applicant proposed an environmental offset that was based upon the nutrient reduction from farming use will reduce 2,700 lbs of nitrogen and 1,000 lbs of phosphorus annually from entering the Inland Bays watershed based upon the historic levels of application for agricultural use. I find that the Facility's offset, as modified by the recommendation of the CZA Program, will satisfy the "more than" requirement in the *Regulations*.

I find the permit application meritorious because it is aligned with the Department's efforts to permit responsible industrial manufacturing uses within the CZ that will provide good local employment opportunities and safeguard the CZ for recreation and tourism uses. Such uses require a wastewater treatment and disposal and the Facility will provide such a service with a high level of treatment, which Applicant claims will result in the treated effluent meeting drinking water standards. The Department does not agree that it would be appropriate to use the treated effluent for drinking water purposes, but agrees that the treatment level will protect the

groundwater and the Inland Bays from pollution far more than other methods of treatment and disposal.

The Applicant does not set forth how the Facility will be operated, and this will be reviewed in the construction permit application. Nevertheless, the CZA permit approval provides considerations to be addressed in the construction permit review, namely, that spray irrigation will be used the maximum extent possible. The Department has employed a similar provision in permit in order to protect the environment when there are two discharge methods possible and where business practices may favor a least cost method that provide less environmental protection than spray irrigation, which requires additional pumping and uses more land than RIBs as a discharge method.

Based upon the entire recommended record, as identified by the CZA Program and reviewed in this Report and its attachment and including the public hearing record, I find that a CZA permit should be issued, such to such reasonable permit conditions to ensure that the permit is consistent with the CZA, the Department's regulations and policies, and the Department's statutory purposes and policies.

IV. RECOMMENDED FINDINGS AND CONCLUSIONS

Based on the record developed, I find and conclude that the record supports approval of the permit amendment. In conclusion, I recommend the Secretary adopt the following findings and conclusions:

1. The Department has jurisdiction to issue a CZA Permit to the Applicant subject to reasonable permit conditions deemed appropriate and consistent with the CZA's purposes;
2. The Department provided adequate public notice of the proceeding and the public hearing in a manner required by the law and its regulations;

3. The Department held a public hearing in a manner required by the law and its regulations;

4. The Department considered all timely and relevant public comments in making its determination;

5. The Department shall issue a permit to the Applicant in the form and manner proposed by the CZA Program in its draft permit;

6. The Department carefully has considered all the statutory factors to be considered in making a decision on a CZA permit application under the CZA and its regulations; and

7. The Department shall publish legal notice this Order and otherwise provide notice as to all affected persons in a manner consistent with the public notice required by the law and the Department regulations, and shall post on the Department's web site.

Robert P. Haynes, Esquire
Senior Hearing Officer