



Delaware
Ornithological
Society

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July 9, 2019

Submitted Electronically

Lisa Vest
Hearing Officer
Delaware Department of Natural Resources & Environmental Control
89 Kings Highway
Dover, DE 19901

Coastal Zone Industrial Control Board
89 Kings Highway
Dover, DE 19901

**Re: Comments on the Proposed Changes to 7 Del. Admin. C. § 101 –
Regulations Governing Delaware’s Coastal Zone (Register Notice SAN #2017-
17/Docket #2019-R-CZ-0013)**

Dear Hearing Officer Vest and Members of the Coastal Zone Industrial Control Board,

The Delaware Ornithological Society (DOS) welcomes the opportunity to comment on the proposed revisions to 7 Del. Admin. C. §101, the Regulations Governing Delaware’s Coastal Zone (hereafter “the Proposed Regulations”). Please see our comments below.

The Delaware Ornithological Society is an all-volunteer, 501(c)3 nonprofit representing more than 500 members in Delaware and adjacent areas. Our mission is the promotion of the study of birds, the advancement and diffusion of ornithological knowledge, and the conservation of birds and their environment.

Environmental Impacts and Environmental Impact Statements

DOS Conservation Chair Matthew Sarver, the primary author of this comment letter, served on the Environmental Impacts Working Group of the CZCPA RAC on behalf of DOS and at the request of DNREC. Mr. Sarver, a Certified Senior Ecologist by the Ecological Society of America, made a number of comments and suggestions during the meetings of the Environmental Impacts Working Group with regard to environmental impacts and environmental impact statements (EIS). Those comments form the basis for our requested changes to the Proposed Regulations, as outlined below.

The April 2019 recommendations of the CZCPA RAC to DNREC stated that “For CZCPA purposes, environmental impacts should be characterized in the same manner used to characterize environmental impacts under the current CZA permit program, consistent with the existing CZA statutory definition of “environmental impact (Section 7004(b)(1))” (CZCPA RAC Final Report, p.22).

The language of the above referenced section of the Code is as follows (emphasis added):

(b) In passing on permit requests, the Secretary of the Department of Natural Resources and Environmental Control and the State Coastal Zone Industrial Control Board shall consider the following factors:

(1) Environmental impact, *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. 1953, §7004)

Critical to this definition is the phrase “but not limited to” that occurs in two places, making it clear that the specific examples given are not the only impacts to be taken into consideration by the Secretary, and giving DNREC broad statutory authority to require analysis of a wide range of potential impacts in an EIS.

Further, and more explicitly, the original definition of “Environmental impact statement” in the preceding 7 Del. C. 1953, § 7002 specifies that:

(c) "Environmental impact statement" means a detailed description as prescribed by the Department of Natural Resources and Environmental Control of the effect of the proposed use on the immediate and surrounding environment and natural resources such as water quality, fisheries, wildlife and the aesthetics of the region.

Note that, again, in this definition, the environmental impacts required to be described are broadly defined to include “effect...on the immediate and surrounding environment and natural resources” with specific and explicit reference to “water quality”, “fisheries”, “wildlife” and “aesthetics”. In light of the statutory language and the risk that industrial redevelopment in the Coastal Zone poses for a wide range of receptors, we request that several critical changes to the Proposed Regulations be made with regard to the specifics of the Applicant’s EIS submission.

Impacts on Wildlife and Fisheries

In the Proposed Regulations subject to this comment, there are only two specific elements that an Applicant is required to provide in an EIS with regard to impacts upon wildlife and fisheries. Specifically, the Applicant is required to analyze:

8.2.3 Destruction of wetlands and flora and fauna and their habitat that would result from project site construction and ongoing activity.

and

8.2.8 The effect of the proposed project on threatened and on endangered species as defined by the regulations promulgated by the State or pursuant to the Federal Endangered Species Act.

Clearly, the legislative intent of the Coastal Zone Act is that the Secretary consider all potential impacts to flora and fauna *sensu lato*, not only impacts on those individual species listed at the state or federal levels. It seems that DNREC agrees with this interpretation as the definition of “Environmental Damage” in the Proposed Regulations is “harm to human health and the environment, including wildlife and wildlife habitat” (Section 3.0).

From a practical standpoint, this is of critical importance. For example, numerous bird species of conservation concern could be adversely impacted by a project as a result of construction, normal operation, and/or malfunction or accidental pollutant release. An EIS that provided only the information strictly required in the Proposed Regulations would not require the applicant to disclose or address such impacts, unless they resulted in either (a.) the “destruction” of flora and fauna or (b.) an effect on a listed species. Put simply, substantial sublethal or indirectly lethal effects to non-listed species are not required to be analyzed under either the current or proposed regulatory guidelines for a Coastal Zone permit EIS. This is unacceptable given the significant risk to natural resources presented by redevelopment of industrial operations in the Coastal Zone.

We request that subsection 8.2.8 of the Proposed Regulations be amended to read “The direct, indirect, and cumulative effect of the proposed project on flora and fauna, including effects on threatened and on endangered species as defined by the regulations promulgated by the State or pursuant to the Federal Endangered Species Act;”

Further, no specific requirement occurs in the Proposed Regulations for estimating the potential direct and indirect impact to flora and fauna of accidental release or malfunction during operation of a proposed use. This information should be critical to an application for a Conversion Permit, and we request that such an analysis be explicitly included in the form of a specific line item in subsection 8.2.

Light Impacts

While “habitat disturbance from light” is listed under the definition of “Environmental Damage” in Section 3.0 of the Proposed Regulations, light is missing from the list of emission analyses required to be included in Applicant’s EIS that includes “glare, heat, noise, vibration, radiation,” etc., in subsection 8.2.7 of the Proposed Regulations. This presents a major problem, as light pollution at night is widely recognized as one of the most significant impacts to a wide range of species (Rich and Longcore 2013), and is particularly problematic for migrating birds (McLaren et al. 2018), for which Delaware is a major stopover (Buler and Dawson 2014). Light output from a proposed project should be analyzed with respect to potential site-specific and cumulative impacts. We request that the term “nocturnal light pollution” be added to the lists of potential pollutants in section 3.0 under the definitions of “Potential to Pollute” and “Pollutants” and to the list of media in subsection 8.2.7.

Cumulative Impacts

Section 8.5.2 of the Proposed Regulations (8.3.2 of the Current Regulations) wisely directs the Secretary to “consider the proposed project’s direct and *cumulative* environmental impacts” (emphasis added). In a complex and highly connected estuarine system like the Delaware Bay, cumulative impacts occurring throughout the Coastal Zone should be central to the Secretary’s decision on a Conversion Permit.

Cumulative Impacts Analysis is routinely conducted for federal projects under the National Environmental Policy Act (NEPA) and a large body of guiding literature is available for analyzing such impacts. The Council on Environmental Quality (CEQ) defined Cumulative Impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” (40 CFR § 1508.7).

The language of Section 8.5.2 of the Proposed Regulations notwithstanding, no requirement occurs in the Current or Proposed Regulations for the Applicant to include a Cumulative Impacts Analysis in an EIS. Therefore, it is unlikely that the Secretary will have sufficient information upon which to base a consideration of cumulative impacts.

Mr. Sarver brought up the issue of Cumulative Impacts Analysis during the Environmental Impacts Working Group meetings, including citing best practices for analysis from the scientific literature, but unfortunately further discussion of this topic was not pursued in that context, and a Cumulative Impacts Analysis requirement was not included in the Proposed Regulations. We request that a requirement be added to Section 8 that Cumulative Impacts Analysis be conducted for each impact medium in the EIS. Examples of media for which such an analysis would be particularly important to bird conservation include such impacts as water usage and light pollution.

EIS Preparer Qualifications

While it is commendable that the Proposed Regulations require that an EIS be certified by a Delaware Registered Professional Geologist or Professional Engineer, neither of these disciplines represents the full range of knowledge and experience necessary to prepare an EIS for such important uses in Delaware’s Coastal Zone. Due to the potential for proposed projects to involve significant impacts to wildlife, wetlands, and estuarine resources, we request that language be added to the Regulations requiring that the EIS be contributed to and reviewed by professionally certified or otherwise highly qualified experts from all appropriate key disciplines. Suggested key disciplines and certifications are given in the following table, though this list is by no means exhaustive.

Table 1. Suggested Qualifications for EIS Certifiers / Preparers

KEY DISCIPLINE	CERTIFICATION	CERTIFYING ORGANIZATION
Ecology	Certified Ecologist	Ecological Society of America
Wildlife Biology	Certified Wildlife Biologist	The Wildlife Society
Wetland Science	Professional Wetland Scientist	The Society of Wetland Scientists
Ecotoxicology and Environmental Science	Board Certified Environmental Scientist	American Academy of Excellence in Environmental Engineering and Science
Geology	DE Professional Geologist	Delaware Board of Geologists
Engineering	DE Professional Engineer	Delaware Association of Professional Engineers

Offsets

Sections 9.2.7 and 9.2.8 of the Proposed Regulations lay out a requirements for a monitoring plan and schedule for verification of the outcomes of Offset projects. However, Section 12 of the Proposed Regulations does not reference any annual or periodic reporting requirement on offset monitoring. We request that language be added to Section 12 requiring annual reporting of Offset project implementation, monitoring, and success, to include quantifiable metrics.

Sea Level Rise Plan

Subsection 8.4.2.2 of the Proposed Regulations states that the Sea Level Rise and Coastal Storm Plan “Use the anticipated useful life of the facility, which shall be 30 years unless the Secretary finds that the applicant’s plans for the project site justify the use of a different time period”.

Heavy industry redevelopment in the Coastal Zone should anticipate long-term effects of Applicants’ actions beyond the useful facility life because some changes made to these sites may continue to affect Sea Level Rise processes far beyond that time frame. For instance, any additional hardening of shoreline or loss of open space on the coastline may continue to cause SLR-related issues well into the future, for example by preventing inland migration of coastal wetlands. The default definition of 30 years is inadequate for full consideration of Sea Level Rise impacts, especially due to uncertainty about future rates of relative Sea Level Rise. We request that the time frame for Sea Level Rise and Coastal Storm planning be extended to a minimum of 50 years.

We ask that DNREC also include a requirement in Subsection 8.4.2 of the Proposed Regulations that the Applicant's Sea Level Rise and Coastal Storm Plan "identify existing or proposed facilities or infrastructure that have the potential to impede inland migration of existing tidal marsh and existing or proposed facilities that have the potential to impede the conversion of existing upland to tidal marsh under the High SLR scenario."

Cumulative Impacts and Sea Level Rise Plans

Just one example of many important reasons for the need to evaluate Cumulative Impacts of industrial redevelopment of Delaware's Coastal Zone is that the Sea Level Rise and Coastal Storm Plan required by the Proposed Regulations considers only topographic inundation models of SLR and flooding. However, recent research has shown that such inundation models alone do not fully account for appropriate projection of design heights for coastal protection. For example, Arns et al. (2017) found that:

As sea-level increases, the depth-limitation of waves relaxes, resulting in waves with larger periods, greater amplitudes, and higher run-up; moreover, depth and frictional changes affect tide, surge, and wave characteristics, altering the relative importance of other risk factors. Consequently, sea-level driven changes in wave characteristics, and to a lesser extent, tides, amplify the resulting design heights by an average of 48–56%, relative to design changes caused by SLR alone. Since many of the world's most vulnerable coastlines are impacted by depth-limited waves, our results suggest that the overall influence of SLR may be greatly underestimated in many regions.

Since the Delaware Bay coastlines converge in the upper reaches of the estuary, tidal range is amplified as one travels north along the coast, with tidal range increasing from 1.2 m at the mouth to 2.2 m at the head of the Bay (Lee et al. 2017). Models developed by Lee et al. (2017) found that given the extensive low-lying land bordering Delaware Bay, future tidal range "decreases with respect to the present tides if low-lying land is allowed to be inundated, but increases if seawalls or levies are constructed at the present coastline to prevent inundation. These different tidal responses are explained in terms of the tidal energy dissipation and tidal energy flux. When low-lying land is allowed to flood, increased dissipation in shallow water and newly inundated areas offsets reduced dissipation in deep water to cause an overall reduction in the tidal range."

Thus, appropriate design heights for Coastal Zone industrial infrastructure are by definition tied to future changes in coastal barriers to SLR and marsh migration throughout the Bayshore and cannot be confidently projected on the basis of topographic inundation maps at a single site in isolation.

Since the potential environmental consequences of storm damage and flooding at a heavy industry site may be catastrophic for the Estuary, a cumulative impacts analysis as it relates to SLR and design elevations of any infrastructure should be very carefully considered by the Secretary, based upon submissions by the Applicant that incorporate the latest available science with respect to both SLR and meteorological projections as well as baywide non-linear feedbacks.

Port of Wilmington Exemption

We object to the addition in section 5.1.10 of the phrase “or its successors”, in both instances in which it is inserted. GulfTainer, a private United Arab Emirates Corporation, recently entered into a 50-year operating agreement for the Port of Wilmington through its US subsidiary. Questions of ownership of environmental incidents and accidents should be known by the Delaware taxpayer. Extending the existing exemption for the Diamond State Port Corp. to “its successors” may inappropriately transfer privileges that were originally granted by the legislature to a public entity to a private company. We request that the two occurrences of the phrase “or its successors” be stricken from subsection 5.1.10 of the Proposed Regulations.

Permitting Timeframe

While we recognize that a 90-day decision window for the Secretary’s response to a Conversion Permit Application was required by statute in the CZCPA, we would be remiss in not stating for the record our objection to said timeframe as wholly inadequate to allow for critical evaluation of a complex submission, and especially inadequate to allow for meaningful public comment on the Permit Application.

Elimination of Environmental Goals and Indicators

Section 8.3.3 of the Current Regulations requires the Secretary, during the CZA permit application review process, to “consider any impacts the proposed activity may have on the Department’s environmental goals for the Coastal Zone and the environmental indicators used to assess long-term environmental quality within the zone.” The promise that DNREC would create environmental goals and indicators was an essential premise upon which the current Regulations were agreed to during the 1999 Regulatory Advisory Committee process. However, the Environmental Indicators were never fully developed by the Agency. The Proposed Regulations state:

In 1999 the Department and its advisors intended to use environmental indicators, yet to be developed, to guide the identification and evaluation of environmental offsets. However, after the Environmental Indicator Technical Advisory Committee deliberated, the members concluded that the resources needed to launch and operate an indicators program would exceed those available to the Department. The General Assembly was silent on the issue of indicators in the CZCPA. The majority of references to indicators have therefore been removed from this guidance, although some provisions remain in the regulations and this guidance in case the resources become available and the Secretary chooses to resume developing the program in the future. (Proposed Regulations Section 3.4)

The assertion in the Proposed Regulations that “the [EITAC] members concluded that the resources needed to launch and operate and indicators program would exceed those available to the Department” is incorrect and we request that it be stricken from the Proposed Regulations. The EITAC’s Final Report in 1999 concluded, in part, that:

3. DNREC should begin immediate development and implementation of an Environmental Indicator monitoring program, while recognizing that the initial set of Coastal Zone Environmental Indicators still requires refinements. DNREC should use a phased approach to the initial implementation of Environmental Indicators, focusing on those thirteen (13) parameters that have data available during year I. DNREC should address those eighteen (18) additional parameters with some data available by year II, and the remaining seventeen (17) parameters that require significant work and resources by year III. DNREC should also issue an annual progress report on the Environmental Indicators program.

4. The refinement of the Environmental Indicators should be accomplished using highly structured focus groups of scientific and technical experts and should include the continuation of direct stakeholder and public input. A new committee, "EITAC II", should be established with a modified membership from the original EITAC to provide oversight for the focus groups. The new committee will need a considerably higher percentage of scientifically and technically trained members than the original EITAC.

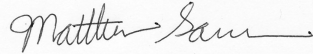
5. The partially implemented state of the current Environmental Indicators program is of limited value in carrying out the purposes outlined in the 1999 Regulations Governing Delaware's Coastal Zone. Adequate funding and support from State Government is critical for further development. Therefore, the EITAC recommends that work for phase II be fully funded and supported by DNREC, other State agencies, and the State Legislature.

The formalization, in the Proposed Regulations, of DNREC's renegment on establishing Coastal Zone Environmental Indicators is wholly unacceptable and such action is outside of the regulatory scope granted to the Agency under the CZCPA.

The birds and other wildlife of Delaware's Coastal Zone deserve our best efforts at protection, so that they may be enjoyed by future generations of Delawareans. The long-distance migrant champion shorebirds and the beautiful warblers, thrushes and other songbirds who visit our shores annually deserve more than a flawed and perfunctory regulatory exercise to assure their protection. Delaware's high regional responsibility for declining tidal marsh breeding species, including Clapper Rail, Saltmarsh and Seaside Sparrows, Willet, and others, means that meaningful efforts to identify, quantify, and mitigate the impacts of any industrial redevelopment on our Coastal Zone must be made in the context of the Coastal Zone Act and Coastal Zone Conversion Permit Act. To do otherwise mars the legacy of Delaware Bay conservation that our predecessors worked so hard to protect.

As one of DNREC's conservation partners, we have been disappointed in the process undertaken by the Agency to promulgate regulations under the CZCPA and the Agency's superficial efforts to engage environmental stakeholders and the public in this process. We hope that by making the requested changes to the Proposed Regulations, and by immediately moving forward with the development of the Environmental Indicators begun two decades ago, DNREC will fully embrace its mission of ensuring "the wise management, conservation, and enhancement of the State's natural resources, [and] protect[ing] public health and the environment."

Respectfully,

A handwritten signature in cursive script that reads "Matthew Sarver". The signature is written in black ink on a light-colored background.

Matthew Sarver, DOS Conservation Chair

Literature Cited

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