November 12, 2020

Assistant Commissioner Vincent Mazzei
Watershed and Land Use Management
New Jersey Department of Environmental Protection
401 East State Street
Trenton, NJ 08608

RE: NJPACT – Coastal Zone Management Rules (N.J.A.C. 7:7)

Dear Assistant Commissioner Mazzei,

As the New Jersey Department of Environmental Protection works to update the state's Coastal Zone Management Rules and related regulations (N.J.A.C. 7:7) to take climate change into account under the NJPACT Initiative, we commend your focus on improving regulations related to the protection, management and restoration of our critical coastal habitats and offer the following comments and recommendations for your consideration.

Partners across New Jersey have long recognized the value of our salt marshes and other coastal habitats, working to conserve, restore and protect habitats through on-the-ground conservation projects, improvement of state regulations to limit development and disturbance, and support for numerous public and private programs that improve habitat quality. Our goal is to ensure that our coastal habitats persist in the face of climate change and provide ecosystem service benefits to our coastal communities. Ensuring healthy, resilient coastal habitats will help to ensure a resilient New Jersey. While NJDEP and partners are working towards this goal, further regulatory improvements are needed to facilitate the restoration and protection of estuarine habitats. We, therefore, recommend:

- changes to the permitting of marsh restoration and living shorelines projects to clarify and ease project implementation,
- the updating of dredging regulations to better reflect NJDEP's stated priority to retain sediment in the system as a resource for the estuarine system, and
- strengthening of buffer provisions to better protect key habitats.

Permitting & Implementation of Marsh Restoration and Living Shoreline Projects

Clarification of terminology describing living shorelines and coastal habitat restoration projects

"Living shorelines" as a general term has taken hold with practitioners and other stakeholders in New Jersey in order to describe a broad range of project types. It would be beneficial to refine the definition to reflect specific types of projects and group projects into one of two categories:

1) those intended as an alternative to a bulkhead or otherwise serve as a means of erosion control to protect built infrastructure, or
2) those that protect and restore the edge of marshes or other intertidal habitats, whether as a stand-alone project or as part of a larger marsh restoration or enhancement project that helps habitats persist in the face of sea level rise.

Recognizing this distinction will encourage nature-based shoreline restoration efforts that are driven by project design and success criteria, as well as provide a more appropriate lens through which permitting officials view an application. Clarifying terminology could include updating the definition of living shorelines to establish subcategories that clearly delineate between project type based on goal.

The terminology and permitting of living shoreline projects could be clarified through the creation of a tiered permitting structure that differentiates between project goal, location and size. One approach would:

1. Create a new general permit-by-certification (GPBC) solely for nature-based living shorelines in low energy environments that maximize ecological uplift through the use of coir logs, vegetation, shell bags and other softer, natural materials. This approach would be more streamlined, making permitting as easy as it is for a bulkhead, providing an incentive for private landowners to consider living shorelines. The new GPBC could be based off the standards outlined in the *current* GP 17, with additional provisions that would define "low energy" areas with minimal wave energy, boat wakes, and fetch and the development of clear installation requirements or guidelines. Identifying "low energy areas" could be accomplished through either a mapping exercise (e.g., provide map of coastal streams or other areas with low enough wave energy) or providing threshold criteria for a homeowner or contractor to assess. Two potential references include NJDEP's *Guidance for Appropriate Shoreline Protection and/or Storm Damage Reduction Measures for a Site*[1] and the *Living Shorelines Engineering Guidelines*[2] developed by the Stevens Institute of Technology.

2. Update the current GP 17 (stabilization of eroding shorelines) to focus on shoreline stabilization projects that are intended to protect built infrastructure and would likely need a more hybrid approach. These would be projects that tend to be smaller, be better alternatives to a bulkhead, and have the primary goal of reducing erosion with relatively minimal additive ecological benefit. To help differentiate between these projects and a habitat restoration project under GP24, we recommend:
    a. maximum size criteria that limits the project to one acre and the inclusion of the '77 Tidelands line to limit the relative width of the project,
    b. criteria for proximity to built infrastructure, and
    c. utilization of NJDEP's *Guidance for Appropriate Shoreline Protection and/or Storm Damage Reduction Measures for a Site* and the *Living Shorelines Engineering Guidelines* developed by the Stevens Institute of Technology to identify appropriate engineering parameters. These documents could serve as a resource for establishing standards for identifying which living shoreline technique would be most appropriate for a location. It should be noted that these guidelines, which are on the conservative side could lead to 'over-engineering' of projects. While that helps to minimize the inadvertent failure of an installed living shoreline project, this can negate the spirit of living shorelines. Therefore, provisions should be included in an updated GP17 to limit the amount of rock and other hard structures to qualify for such a permit. Further, these guidance documents should be updated regularly in ensure the most up-to-date science and provide relevant maintenance measures to ensure sound performance.

[1] https://www.nj.gov/dep/landuse/download/lur_031.pdf

[2] https://www.state.nj.us/dep/cmp/docs/living-shorelines-engineering-guidelines-final.pdf

3. Update the current GP 24 to focus on projects intended to promote innovative habitat restoration and enhancement projects. The current provisions for a general permit allows for the restoration or enhancement of coastal wetlands, with relatively broad provisions. However, as the State of New Jersey continues to address the impacts of accelerating sea level rise, a key strategy is to ensure the long-term viability of our coastal habitats. To achieve that, we will need to continue to develop innovative techniques for retaining sediment in the estuaries for the restoration and enhancement of salt marshes, bay beaches and dunes. With this in mind, we recommend the following:
    - Replace the requirement in GP 24 for a federal or state project sponsor with an optional recommendation that a federal, state or non-profit sponsor will facilitate implementation;
    - Update the reference to the 1977/78 Tidelands map for projects that require fill in order to allow for the re-creation a more functional shoreline that is most appropriate for that site. While the 1977/78 Tidelands line provides a good frame of reference, there should be the ability to go beyond that line if that is what the site needs in order to persist longer in the face of increased rates of sea level rise and coastal erosion. With the wide availability of historic aerials, past shoreline extent and rates of erosion would be able to inform a reasonable project footprint based on the habitat and geophysical needs of site; and
    - Remove the one-acre-or-less project limitation of General Permit 24 and replace it with a requirement that the scope of the project should not exceed 5 acres. This increase in project size would allow for more innovation in project design.

In addition, the Coastal Zone Management Rules should be updated to better allow for innovative habitat restoration or enhancement projects where the current health of the habitat in question may not yet be obviously "degraded" but is at high-risk to sea level rise or coastal erosion. In order to maximize the persistence of key habitats in decades to come, we will need to help habitats recover and "get ahead of the curve" when it comes to impacts of climate change. This may require near-term habitat trade-offs for the longer-term persistence of the entire estuarine ecosystem. Rules should be updated, using sea level rise projections included in the *2020 New Jersey Scientific Report on Climate Change*[3], to allow for restoration activities where there is a demonstrable threat to the habitat and resources due to climate change, at either the project or the landscape level which may or may not reflect current metrics used to evaluate the need for restoration or enhancement activities. Additionally, appropriate, flexible guidelines for innovative techniques like mud-motoring or island re-creation should be included in the new rules.

Specialized general permit for multiple projects

We strongly support the development of a specialized permit for the installation of living shoreline and coastal restoration and enhancement projects that would authorize multiple projects within a specific geographic area over a longer timeframe than current permits allow. Rather than piecemeal restoration that current permits encourage, this proposed approach would help to incentivize wholistic habitat restoration and climate resilience plans. Coastal habitats and watersheds are dynamic, interconnected systems; therefore, ensuring the resilience of those habitats should take a more regional approach to better ensure success and cumulative benefits. In addition, should restoration activities be dependent on the beneficial use of dredged material, a regional approach

[3] https://www.nj.gov/dep/climatechange/docs/nj-scientific-report-2020.pdf

could help to reduce the costs of design, mobilization and construction, as well as support the development of a regular dredging/marsh nourishment cycle.

Monitoring of living shoreline and coastal restoration projects
Nature-based solutions, like smaller, community-based living shorelines, marsh edge stabilization, elevation enhancement, hydrological restoration and habitat re-creation projects, all provide learning opportunities for practitioners and resource managers. However, the additional cost, time and effort devoted to monitoring requirements can also be a deterrent to project implementation. As such, monitoring requirements should be carefully considered. Monitoring of restoration projects should be encouraged through partnerships and other incentives but *should not* be required in order to be granted a permit under the Coastal Zone Management Rules, other than those requirements already in place for wetland mitigation projects.

In the near-term, larger restoration or enhancement projects, which are the types of projects that would benefit the most from monitoring efforts, are more likely to be funded by public funding sources. These funding sources typically require monitoring plans, which also allow for a flexible approach to monitoring based on project goals. NJDEP should utilize its Long-Term Wetland Monitoring Network and Riparian Reference Wetland Database to collect and centralize monitoring data, highlight key lessons learned and share those lessons with practitioners across the state; though the existence of the databases themselves should not be used to require that practitioners collect data of metrics not closely tied to the goals of their projects. These are all activities that do not require changes to the Coastal Zone Management Rules.

Update of Coastal Engineering Rule to clarify use of non-structural measures
Significant progress has been made in the Coastal Zone Management Rules to promote non-structural measures like living shorelines and habitat restoration. The Coastal Engineering Rule (N.J.A.C. 7-7-15.11) stated previously that non-structural shore protection and storm damage measures were only "*preferred*" over structural measures. The current Rule creates a definite hierarchy of shore protection measures that *requires* the use of non-structural measures unless a demonstration is made that such measures are not feasible.[4] If such a demonstration is made, then a hybrid approach is required unless this approach is not feasible. Only then can purely structural measures be considered under the current rules.

However, it is unclear how a demonstration that non-structural or hybrid shore protection measures that are not feasible can be made so under the Coastal Engineering Rule. NJDEP should consider amending the rules to clearly articulate the factors that will inform the feasibility determination in the Coastal Engineering Rule. Requiring the utilization of non-structural and hybrid structural solutions in the environments identified in NJDEP's *Guidance for Appropriate Shoreline Protection and/or Storm Damage Reduction Measures for a Site* would implement the Engineering Rule in the hierarchy laid out in the rule. The Rule should provide criteria to allow for consistent decisions and require consideration of long-term and off-site consequences of the decision to ensure non-structural measures are given full, fair and accurate consideration. Structural shore protection measures in low energy environments should be required to demonstrate that they are the only viable options through appropriate engineering and design analysis.

[4] Comparing former N.J.A.C. 7:7E-7.11 to current 7:7-15.11

Update Dredging regulations to prioritize aquatic beneficial use of dredged material
The NJDEP has previously stated that it views dredged material as a resource and that it should be beneficially used whenever possible. We strongly support this policy as a key means for helping to promote the persistence of our coastal wetlands and other aquatic habitats. While the current regulations refer to a long-standing policy to treat dredged material as a resource and to beneficially use it in appropriate applications, the Coastal Zone Management Rules should be updated to directly, and more clearly, support NJDEP's desire to retain sediment in the system for the benefit of estuarine habitats.

To achieve this, we recommend amending the dredging provisions to establish a hierarchy that mirrors the hierarchy related to non-structural measures established in the Coastal Engineering rules (N.J.A.C 7:7-15.11). This tiered approach would require that sediment in "inland waters" (i.e., not ocean) must be beneficially used within the aquatic environment of the estuary in which the dredging project occurs, unless determined to be infeasible. If it is determined to be infeasible, and a potential future use is identified, it could be "staged" in a nearby confined disposal facility for future aquatic beneficial use. In addition, NJDEP should promote the emptying of current CDFs for the restoration of estuarine habitats.

Protection of wetland buffers and coastal inundation zones
The importance of protecting wetland areas is already outlined in the Coastal Zone Management Rules; however, there are opportunities to strengthen these protections against continuously rising seas as well as traditional impacts like development. Recommendations for your consideration include:

Require the maximum wetland buffer width in areas that will be affected by sea level rise.
Current rules (Wetlands Buffer Rule, N.J.A.C. 7:7-9.28) allows NJDEP to require buffers "up to" 300 feet. The Rule gives no guidance on when to apply the maximum, other than to state "wider buffers than those noted may be required to establish conformance with this chapter, including but not limited to when the [endangered and threatened species habitat rule and critical habitat rules] apply." NJDEP should update the rationale for this Rule to include the importance of wetlands to community resilience, i.e., the role that wetlands play in sea level rise and storm-surge scenarios, the need for marsh migration zones, and other circumstances under which the maximum 300' buffer should be required. In addition, NJDEP should identify other Coastal Rules where these principals should be applied (e.g., Buffers and Compatibility of Uses Rule, N.J.A.C. 7:7-16.11) and updated accordingly.

Creation of Sea Level Rise Buffer Zones
As part of the NJPACT Initiative, NJDEP is expected to release Sea Level Rise Guidance (SLRG) in order to "provide designers, builders and regulators science-based standard for building and design through 2050, facilitating consistent review of permits and approvals."[5] We strongly support the issuance of such a guidance. This guidance should also serve to inform the creation of sea level rise buffer zones that would then inform where development and redevelopment occurs, *as well as* where conservation efforts (e.g., open space protection, habitat restoration) should be prioritized. We expect that the SLRG will have some risk assessment incorporated into its recommendations and standards. The maximum regulatory protection applied to tidal wetlands and their appurtenant buffer zones would be most appropriate in high-risk areas in order to leverage their risk reduction values in the protection of adjacent communities, as well as areas of significant conservation value to allow for

[5] https://www.nj.gov/dep/njpact/docs/njpact-regulation-chart.pdf

the migration and persistence of the tidal marsh. Specific attention should be paid to re-establishing the maximum buffer between wetlands and redeveloping properties to restore and reestablish previously altered, filled or built-over wetland areas and their buffers.

Thank you again for the opportunity to comment on the pending revisions to the Coastal Zone Management Rules. We look forward to our continued conversations as NJDEP works to implement the NJPACT Initiative. Given the tremendous impact this rulemaking can have in improving the resilience of New Jersey's coastal communities and habitats, we strongly encourage NJDEP to schedule additional stakeholder meetings over the next months to further discuss these very important topics.

Sincerely,

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