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September 19, 2025

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Attention: DEP Docket No. 05-24-05

Office of Legal Affairs

NJ Department of Environmental Protection

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Dear Mr. Segal,

On behalf of the New Jersey Business & Industry Association, we are submitting these comments on the substantive changes being proposed to the PACT REAL rules. While we appreciate the Department's recognition that the original proposed rules had fundamental flaws and needed revisions, and we are supportive of several of the proposed changes, overall, these proposed substantive amendments fail to address the fundamental flaws in the original proposal. For that reason, and for the reasons set forth below, we request that the Department not adopt these rules either as initially proposed or as amended, and that the Department reengage stakeholders in a meaningful dialogue to address resiliency matters.

Sea Level Rise – The issue of sea level rise projection is perhaps the most consequential change being made in the PACT REAL rules. We appreciate the fact that the Department now recognizes the fact that recent studies and modeling are showing less warming this century than previously thought and that lowered warming will naturally result in lower projections of potential relative sea level rise. While some of these studies may not have been fully accepted by the scientific community at the time of the STAP report, they certainly were very well known and accepted at the time the DEP made the August 5, 2024, proposal. Nevertheless, we appreciate the fact that the Department now recognizes these studies and the lowered modeled projections of warming.

We find it confusing, however, that the Department takes great pains to demonstrate that they are using moderate emission scenarios and making projections that are “likely” (although based on modeling, 75-year out projections, and at a 17% confidence level) but still insist on using “low confidence” projections of rapid ice sheet melting in order to justify an extreme projection of sea level rise.

Contrary to the Department's assertions, we fully understand what “low confidence” means and have read Rutgers Professor Bob Kopp's article on communicating climate change. While low confidence does not mean that something can be ruled out, it certainly does not mean that an event is likely. Just the opposite. There are no scientific studies that the Department can point to show that rapid ice sheet melting is likely. There are none. The assumption in the 2019 STAP report of rapid ice

sheet melting is based on one scientist's expert opinion, but, as the Department must well know by now, the IPCC and mainstream climate science on rapid ice sheet melting do not show this to be likely this century. While the IPCC did not "reject" this assumption, they did not build it into their projections of likely sea level rise scenarios. The Department cannot claim to support likely projections of sea level rise and then sneak in an unlikely, low-confidence assumption.

Without rapid ice sheet assumptions being built into the model projections, the likely sea level rise is 2 feet, not 4 feet. We strongly recommend the rule be proposed for another round of substantial amendments to reflect the current state of scientific knowledge which would reflect a 2-foot sea level rise in New Jersey by the end of the century. We note, even at 2 feet, this is still a speculative assumption as it continues to project out 75 years and at the most stringent end of the likely range. If actual tide measurements or more knowledge is developed, the Department has decades to adjust.

This projection of sea level rise and the commensurate regulatory burdens that come with it (e.g. expansion of flood zones, the creation of the IRZ, 4 feet of high elevation above the base flood elevation) do not take into account resiliency measures that the state could and should implement to protect the coast from inevitable storms and sea level rise. Even if these regulations are adopted, they will only impact those developments that are new or substantially reconstructed, and to which this rule would apply, they do not address the large number of existing developments. This rule is a costly regulatory requirement, being placed on only a relatively small number of properties. It does not address the problem of extreme weather or sea level rise for the vast majority of properties. It is an illusion, and a delusion to think that these rules would solve the problem in any meaningful way. These rules would only serve to impose economic burdens on a minority of property owners, harm the state's economy, and serve as a step toward the Department's ultimate goal – a managed retreat from the Jersey Shore and our river communities.

The Department has recognized that several scientific reports issued subsequent to the STAP report questioned the rapid ice sheet melting scenario. However, for some reason the Department failed to mention the two reports we previously submitted as well as the analysis by Climate Forecast Applications Network (CFAN) that we submitted specifically on this topic. We are enclosing both the original CFAN report and its addendum for your review.

However, it is important to highlight what the state of the science is when it comes to rapid ice sheet melting, especially in the West Antarctic. Below is the opening section in the CFAN addendum report discussing more recent studies:

Summary. During May 2021, two important papers were published in Nature on the contribution of land ice (particularly Antarctica) to global sea level rise, including projections to 2100. The focus of this addendum is to clarify the current state of knowledge on the likely range (17-83%) of projected sea level rise under a moderate emissions scenario (RCP4.5).

The Edwards et al. paper (with 87 coauthors) describes the culmination of a large international effort in the context of CMIP6 for the IPCC AR6. Edwards et al. concluded that the upper bound of the likely range for sea level rise by 2100 for Antarctica is 9 cm, with a total land ice contribution of 28 cm.

The DeConto et al. paper (which includes RE Kopp as a coauthor) revisits the extreme Antarctic scenario of DeConto and Pollard (2016), which provided the basis for Kopp et al. (2017) and the Rutgers Report. The new DeConto et al. paper projects the upper bound of the likely range for RCP4.5 for contributions from Antarctica to be 12 cm.

These values of 9 and 12 cm for the upper bound of the likely range of Antarctic contributions for RCP4.5 are lower than the corresponding upper bound from the IPCC AR5 and SROCC of 15 cm, and very substantially lower than the values used in Kopp et al. (2017) of 22 to 48 cm as the bounds for the likely range.

This Addendum to the CFAN Review provides further evidence that the projections of New Jersey sea level rise provided by the Rutgers Report are an extreme outlier. Kopp et al. (2017) and the Rutgers Report were based on the extreme scenario provided by DeConto and Pollard (2016) that is no longer supported by the original authors, being superseded by the DeConto et al. (2021 paper).

The contribution of Antarctica to future sea level rise is a rapidly advancing scientific field, with inevitable disagreement among scientists. Given that the Rutgers Report was published in November 2019, the issue remains as to why the Report relied on the outdated DeConto and Pollard (2016) scenario. The DeConto et al. paper (coauthored by Kopp) was submitted in December 2018. The IPCC SROCC published revised sea level rise projections in 2019 (which were not referenced in the Rutgers Report). Further, publication of the IPCC AR6 report is expected in July 2021. The state of New Jersey needs updated projections of sea level rise that are consistent with the latest IPCC assessments, and that do not rely on an extreme, outlier scenario that has subsequently been refuted by the original authors as well as, apparently, by RE Kopp.

We are also disappointed that the Department has relevant information in its possession that has, or may have influenced its decisions, but has refused to release it or even acknowledge its existence. This lack of transparency, we believe, is a reason why these rules should not move forward. Specifically, we are referring to the updates to the STAP report. One report, entitled “Comparing the 2019 New Jersey STAP sea level projections, 2021 IPCC sea level projections, and 2022 Interagency sea level scenarios” was issued to the Department on April 13, 2023 but was never mentioned in the initial rule proposal or in this substantive change proposal and its existence has never been acknowledged and its content never released to the public.

In that “rapid update” document the authors state:

Which projections should be used by decision makers depends on the risk tolerance of the projects and guidance in question. While the current trajectory of warming (approximated by the ‘intermediate’ SSP2-4.5 scenarios in Tables 5 and 6) is projected to be lower than in the STAP report’s ‘moderate’ scenario, future emissions may be either lower or higher than currently projected, depending on the future evolution of technology and policy.

Similarly, the question of whether to consider projections incorporating low confidence processes is a question of risk tolerance. (emphasis added)

This information would have been very valuable to the public to have to understand the science, assumptions, and policy choices the Department is making in this proposal. Is the Department now saying that they should use likely emissions scenarios for evaluating temperature change but low confidence assumptions for rapid ice melting? Is the Department now setting a new standard for public policy choices of avoiding any risk? Why is the Department making a risk tolerance decision, which would have dramatic economic consequences, for sea level rise but in every other regulatory program they either avoid redundant conservative assumptions or have a higher risk tolerance knowing that to avoid risk would result in over regulation without benefit?

Similarly, we know that a full update to the 2019 STAP report exists, and that the Department is in possession of it. Why has the STAP update not been made public? How can the public make informed comments on these rules when the Department is deliberately holding back relevant information that assuredly impacted its decision making. Holding back information that informed the Department's decision making is a clear violation of the Administrative Procedure Act.

We also reject the Department's broad statements that state that resiliency measures save money. As an abstract statement, we agree. However, elevating structures above the base flood elevation and considering likely sea level rise is what is required. Those reasonable measures are likely to be protective and save money. Going far beyond what is necessary to be protective does not save money, it wastes it. Overly risk adverse regulations can prevent many people from owning a home, businesses from developing a site, and roads from getting built. There is only so much money and so many resources available. This is not a paper exercise, and it should not be a political or ideological one. The public needs the Department to use the best science, to act on likely harms, and to balance interests. This proposal fails that test.

We also take no comfort in the Department's commitment to review the science every five years and to make adjustments. First, we would think that this does not need to be said, the science should always be reviewed, and adjustments made. This should automatically be done when rules are readopted every seven years, as required by law. We are also not convinced on the Department's intent to make changes because the science is clear right now and yet the Department is insisting on a sea level rise projection that it knows is not likely. If it is not acting now to make changes, what makes anyone think they will change their mind in the future no matter what the science shows?

We also think it is relevant to bring to the Department's attention a new study that is not based on models, assumptions, or expert opinions, but rather based on actual measurement of sea level gauges. That study, "A Global Perspective on Local Sea Level Changes" by Voortman and De Vos (<https://www.mdpi.com/2077-1312/13/9/1641>). That study concludes:

The statistical procedure detects accelerating sea level rise in a few isolated locations. This pattern is inconsistent with sea level acceleration driven by global phenomena. Further investigation of a subset of locations revealed that local phenomena are often a plausible explanation for the locally observed pattern of sea level rise. The majority of the local causes of rapid sea level rise (or drop) appear to be geologic. Tectonic motion explains sudden changes of sea level rise found in a few places. More gradual but rapid rise (or fall) of sea level is mostly caused by glacial isostatic adjustment and in a few isolated cases by an excessive sediment load. In a few cases, water extraction and loading of soft sediments by buildings explain the (changes of) the observed rate of sea level rise.

Given the studies previously cited on rapid ice sheet melting, the Voortman study showing no global acceleration of sea level rise when looking at actual data, the STAP interim report stating that low confidence (rapid ice sheet melting) should only be used for risk adverse public policies, and the failure of the Department to release relevant updates to the STAP report to the public, we respectfully request that the rules should not be adopted.

No Build – We appreciate the Department acknowledging our concerns over the inclusion of the IRZ as a sensitive area and thus subject to 3% impervious cover. This, to our mind, would create no build zones. We support the change that would remove the IRZ from the sensitive area category. Having said that, we continue to have concerns over the removal of CAFRA centers from the barrier islands. Removal of the centers results in the environmentally sensitive designation being applied to the barrier islands, also with a 3% impervious cover standard. This can have a far more significant impact than the IRZ designation. While much of the barrier islands are already developed, much like the IRZs, there are vacant land parcels that will be impacted. We request that the Department not adopt the provisions eliminating the center designations. We can see no benefit, only harm, by doing so.

Stormwater – We continue to object to the provisions of this rule that would treat stormwater removal requirements the same for urban redevelopment as it would for rural, new development. While the intention of the Department is laudable, improving water quality in urban areas, a site-by-site enhanced standard is not the way to improve water quality. This change is far more likely to harm urban redevelopment than it is to improve water quality. Has the Department done any analysis to support its claim of any meaningful enhanced water quality through this change? A regional stormwater approach is much more likely to result in the benefits the Department claims it is seeking rather than a site-by-site regulatory requirement.

Dry access – We appreciate the Department’s recognition that the dry access rule does not currently work and that the problems would be exacerbated by this rule. The flexibility that the Department is proposing is self-contradictory and gives no relief. You cannot claim that dry access is needed for public safety, but then claim that you are giving flexibility only if you can demonstrate public safety will not be jeopardized. We believe the Department needs to take a different approach to dry access.

While the Department rejects shelter in place by moving higher in a building because of the unlikely scenario of a fire occurring, its alternative policy is to send people onto the roads that the Department has stated have been the primary location of flooding deaths. Even if roads in proximity to a development are above the flood elevations, the other roads being traveled may not be. It seems far safer, in most cases, to shelter in place than to tell everyone to hit the roads.

We believe that dry access requirements should be left to local emergency services agencies to decide. They are the best equipped to determine how best to protect citizens given their capacity and knowledge of local conditions.

Low-income housing – The flexibility given to low-income housing is also meaningless. First the Department claims it is unsafe to locate such housing in flood hazard areas and then claims to be providing flexibility if a developer can show that it is safe through a hardship waiver. We have no confidence in the waiver process given how hard it is to obtain one even under the current state of the law. We continue to have concerns that these rules will negatively impact the state’s ability to construct low-income housing.

Barrier island riparian zone – We continue to object to placement of a riparian zone on the bay side of barrier islands. These areas are largely developed, and the imposition of riparian zones will do nothing to protect vegetation but will rather merely be an impediment to homeowners seeking to maintain or improve their lots. This is especially so on bulkheaded lots where the adjacent land areas no longer serve the ecological functions intended for riparian zones. At the least, the riparian zone should not extend to any lot that is already developed.

Substantial improvement – The Department’s claim that the elevation standards will not apply to merely improving a building, such as replacing a roof, ignores the fact that the definition of “substantial improvement” is not the Department of Environmental Protection’s call. It is a standard in the Uniform Construction Code adopted by the Department of Community Affairs and implemented, largely, by local code officials. It is meaningless that roof replacements and similar activities will not be considered to be substantial improvements for the purposes of the Flood Hazard rules if such activities are covered by the UCC. Once the 50% substantial improvement threshold is triggered, a property will have to meet all code requirements, which will include the elevation standards adopted by the DEP in these rules.

Thank you again for the opportunity to comment. Given all the problems with these rules, the lack of credible science to justify its conclusions, and the overall negative impact of these rules in general, we urge the Department not to adopt the rules but to reengage stakeholders and work toward a solution for our resiliency challenges.

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