



Comments on The New Jersey Climate Change Resilience Strategy

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The Climate Change Resilience Strategy does an excellent job of articulating the many challenges that New Jersey faces, especially with respect to climate-change- induced flooding. It lays out broad categories and strategies for the State's approach to these challenges through a coordinated, inter-agency effort. Embedded as a chapter within the Strategy is the Coastal Resilience Plan, required by executive order, which outlines specific issues related to the state's 239 municipalities within the coastal zone. Throughout this document, we were happy to see a strong emphasis on climate justice, as well as a recognition of the importance of water infrastructure.

We hope that this exercise was helpful for the State to reaffirm its commitment to making progress on climate change adaptation and to ensure that all state departments see themselves as part of an integrated solution. We also hope that the State will move swiftly from this overarching framework and general policy pronouncements to specific and concrete decision-making steps and actions that will make all New Jerseyans and their property safer and less vulnerable.

Our comments are organized into the following sections:

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1. What New Jersey Future was looking for in the Strategy

New Jersey Future has been advocating for the State's articulation of the following climate change adaptation elements. The Strategy is one of the first opportunities that the State has utilized to publicly announce its intentions regarding adaptation.

- **Measurable targets for adaptation.** Develop and include measurable targets to provide direction and accountability. To strengthen the impact of the State's efforts and drive results, it is critical to have clear climate change adaptation goals and to associate

measurable objectives and targets with each of these goals. Quantifiable objectives and targets will enable focused, coordinated, and efficient action, harnessing the power and synergies of the public and private sectors and ensuring accountability.

The Strategy does not include measurable targets. Action 3.1.3 declares that each state agency will create a resilience action plan with standard goals and metrics. The narrative states, “The Interagency Council will seek to develop standard metrics or goals for use in all agency plans so that agencies can more easily track statewide progress.”

We recommend the addition of a new action to this section that states, “Develop metrics, measurable goals, and specific targets for guiding and measuring the success of adaptation initiatives.” This should serve as one of the Council’s top priorities. Without these measures in place, all the actions are random and can not be evaluated.

- **A statewide sea-level rise standard.** Adopt an official state sea level rise standard to guide all land use planning and investment decisions in tidal areas across state departments.

The strategy does not include a sea level rise standard. Action 6.1.2 says that the State will “provide guidance on use of sea-level rise projections.” Projections are a promising, albeit insufficient, start. The State must establish standards for sea level rise that can be built into laws, regulations, investment criteria, and all manner of land-use decision-making. The standards can recognize differences in the longevity of projects, but should be generally inflexible in order to provide strong guidance to public and private decision-makers.

We recommend the addition of a new action to this section that states, “Develop a set of statewide sea level rise standards to be used for land-use and infrastructure investment decision-making and regulations”.

- **Riverine and design storm guidance.** Revise the official design storm standard to account for increased inland flooding, ensuring appropriate stormwater and floodplain planning and management.

The Strategy does not include guidance for increased storm frequency and intensity. The Strategy does acknowledge that “annual precipitation in New Jersey is expected to increase by 4% to 11% by 2050.” However, this information is not useful to guide planning decisions. It also points out that the results of studies conducted by DEP, DOT, and Rutgers will be coming out this year that “will provide new insight on how shifting rainfall patterns affect flooding”.

We recommend that a new action be added to Strategy 4.3 that says, “Develop and publish specific design storm flood guidance that can be integrated into rules and infrastructure investment criteria”.

- **Environmental justice.** Center the needs, voices, and participation of people of color and people with lower incomes in high-risk areas.

The Strategy effectively elevates climate justice as a concern and focus throughout the document. The Strategy states, “The Interagency Council on Climate Resilience will work with the recently established Interagency Council on Environmental Justice to ensure that the principles of environmental justice identified by impacted communities are incorporated into climate resilience policy development.”

The Strategy does not establish goals or metrics for this work. Rather, it states that “state agencies can create opportunities to evaluate the equity of outcomes for projects and programs that affect or involve underserved populations as they are implemented and afterwards.”

We recommend the addition of a new action to Strategy 3.3 that says, “Establish and track metrics for equity and inclusion of people who are BIPOC and/or low-income.”

- **Flood disclosure and transparency.** Incorporate disclosure into policy and rulemaking. Support and pass a comprehensive flood disclosure law, because homebuyers, renters, and business owners have the right to make smart personal and economic decisions based on the flood risk they face.

The Strategy includes an action that states, “Promote risk disclosure for property owners in current and future hazard areas”. This is an encouraging start, and the narrative provides reasonable guidance for moving forward. However, the action should be more directive and include renters who are highly vulnerable and often left out of disclosure processes.

We recommend that action 1.3.3 be restated to read, “Ensure risk disclosure for property owners and renters in current and future hazard areas.”

- **Vulnerability assessments.** Establish and adopt state-endorsed flood and climate change vulnerability assessment standards that can be applied in all municipalities to provide consistent guidance and a strong foundation for planning.

The Strategy acknowledges the need for local guidance and assistance but stops well short of providing a path forward for developing guidance in a way that is meaningful and useful for local officials and planners. Action 1.1.4 reads, “Provide clear actionable guidance on integrating climate change into local planning.” Most of the discussions pertaining to guidance involve providing data and information for towns to use in their own planning. It is imperative that the State go beyond data sharing to develop a practical, standard vulnerability process that all towns can go through that is based on

planning decisions that a town will need to make. Inundating local officials with information and complex processes will not result in better local plans or outcomes.

We recommend modifying Action 1.1.4 to read, “Provide clear actionable guidance on integrating climate change into the local Municipal Land Use Planning process.” Furthermore, we recommend adding a new action that reads, “Develop a standardized local vulnerability process that is based on a set of planning decisions that towns must make to become more resilient.” Much work has already been done in this area. The State should hire a third party to convene local decision-makers and planners to develop the required assessment process.

- **Local planning.** Develop and adopt a standardized, state-endorsed resilience planning framework to provide consistent local guidance and a structure for making smart land-use and investment decisions.

For the State, establishing a standardized local vulnerability assessment process is the first critical step toward formulating local resilience plans. The second step is to develop a local resilience planning template based on decisions that the town can and will need to make. The State can develop a list of these decision points and utilize it to shape the vulnerability assessment scope and the planning template. This approach ensures an efficient use of time and resources with the greatest likelihood of positive outcomes.

The Strategy appropriately emphasizes the importance of inclusive and transparent planning, and relies on expanded funding and state-provided technical assistance to help. We support the general process and the need for more planning resources, but we recommend that the State revisit its role as a technical assistance provider, especially housing this function within a regulatory agency. We also recommend adding a new action to section 1.1 that states, “Develop a local resilience planning template that integrates with the standard vulnerability assessment.”

- **Combined sewer systems.** Incorporate climate projections (i.e., sea level rise, future precipitation) into Combined Sewer Outfall (CSO) planning and forthcoming permits to prevent sewage from flooding our streets and rivers.

The Strategy does not specifically address combined sewer systems. Long-term control plans that are designed to solve the combined sewer overflow issues in these urban communities are currently being reviewed by DEP. It is critical that these multi-billion dollar plans incorporate climate change considerations that will affect generations to come.

We recommend the addition of a new action to Strategy 6.6 that reads, “Incorporate climate change projections into CSO planning and forthcoming permits.”

- **Transition from high-risk areas.** Develop the planning tools, guidance, and legal framework to allow development, redevelopment, and infrastructure decisions to transition away from high-risk areas and toward safer, more sustainable locations. Enable towns to designate local flood zones to restrict development in high-hazard areas, while reducing barriers to increased density in low-risk areas. These policies must maintain or expand access to affordable housing and prevent the displacement of low-income communities and communities of color.

The Strategy may constitute the first time that the State has acknowledged the fact that some high-risk places will need to transition - resulting in fewer people and properties remaining in harm's way over time. This is a very important step forward, and we are eager to work with the State to develop the legal and regulatory tools to effectuate this transition. The concept and term "bouncing forward" is apt and purposeful. Missing from this discussion in the Strategy, however, are two important elements: 1) making it easier to redevelop areas that are not at risk and 2) incorporating economic analysis and transformation into strategic retreat assessments and planning.

We recommend adding two new actions to Strategy 1.5 that read, "Identify relocation receiving areas and provide redevelopment incentives" and "Fund municipal merger assessments in response to scenarios in which one municipality will be severely impacted by climate change."

We recommend adding a new action to Strategy 1.1 that reads, "Incorporate economic transformation analysis into climate change planning in high-hazard areas."

- **State interagency coordination.** Make the Interagency Council on Climate Resilience permanent. This formalization of the Council should include a commitment to defining its role as a vehicle for 1) ensuring cross-agency implementation, 2) tracking and reporting on progress with measurable goals and targets, 3) regularly soliciting feedback from stakeholders, and 4) updating the plan over time based on the best available scientific evidence.

The Strategy appropriately dedicates a full chapter to coordination.. The interagency Council appears to be the body responsible for coordinating the implementation of the Strategy. However, the Council possesses limited staff, and the departments that make up its membership have little or no capacity to engage in this work. Successful coordination will require additional resources and investment, starting with dedicated staff in each relevant department and an increased role and staffing at the Office of Planning Advocacy, where much of the planning can be coordinated.

We recommend modifying Action 3.1.2 to omit the phrase, "by designating an existing employee." While this may be possible, it should not be the expectation. We recommend adding two additional actions to this section that read, "Increase the capacity of the Office of Planning Advocacy to coordinate planning efforts" and "Develop a list of actions

that the IC will prioritize.” The State Planning Commission and the Office of Planning Advocacy were designed to coordinate planning across the state and across state departments.

2. Additional high-level observations and recommendations

Timeframes and priorities. The Strategy lists a number of key outcomes without providing any timeline for when they should be achieved or how they will be prioritized. Will they be achieved in the next year or the next generation? We recommend identifying top priorities within the Strategy, including when the State anticipates achieving the priority outcomes. This will focus efforts and lead to realistic work plans.

“Will” vs. “should.” Much of the Strategy is written in terms of what the State *will* do. However, there are some sections (most notably the last chapter on the coastal plan) that diverge from this tendency and are written like a consultant’s report advising the State about what it *should* do. We recommend replacing each “should” with “will.”

Continued investment in risky areas. While the Strategy discusses transitioning from risky areas, it simultaneously considers elevations, rebuilding, and renewed investment in these areas. This may constitute a reasonable strategy in high-density, urban areas, but it makes less sense in areas that need to seriously move to a different model. We recommend revisiting the section on elevations, rebuilding, and investment in high-risk areas to ensure that the State is not subsidizing these efforts.

Transparency. The Strategy cites a number of facts about what the State is currently doing and what it is unable to do, but this is the first time many people are learning about these activities. The State must make this information available and accessible in order to inform and include stakeholders throughout these processes. For example, Strategy 1.1 states that “agencies are updating their own state-level plans, where such authority permits, to include climate change.” What agencies do not have this authority (aside from DCA UCC)?

Planning partners. Building partnerships to help deliver planning services will likely prove beneficial, but these partnerships should not be limited to academic institutions, alone. We recommend modifying Action 3.2.4 to read, “Partner with organizations to offer resilience planning and design services, and demonstration projects.”

Mission creep. The Strategy effectively maintains its focus on climate change adaptation strategies. Two notable exceptions, however, are sections 1.5.4 and 1.5.5, which pertain to renewable and clean energy. While these are worthwhile initiatives, their connections to adaptation should be clarified and elaborated or they should be removed. These items should certainly appear in the Energy Master Plan or Global Warming Response Act report.

Next Steps section. We commend the Strategy for its recognition of the need to clearly define the specific next steps that must take place with each action. Nonetheless, we recommend

some indication of timelines and prioritization in this section. This section also indicates that the State will issue its Climate Action Plan by the end of 2021. We recommend describing what this plan will include. The Interagency Council's next steps are reasonable planning steps, but they seem to imply that the Council will not be engaged in any debate or decision-making for the next 6-12 months. We recommend that this section specifically identify two of the Council's next steps as: 1) identify and reconcile inconsistencies between current state department approaches, especially as they are brought to the council from stakeholders, and 2) prioritize and coordinate a single local vulnerability assessment process that can be implemented statewide.

3. Detailed ideas and suggestions by section

The narratives that accompany the specific strategies and action lists are helpful. However, it is often difficult to know when the narrative is addressing a specific action. Below are additional points that we recommend including in the Strategy narratives or that will be helpful moving the Strategy forward..

PRIORITY 1: BUILD RESILIENT AND HEALTHY COMMUNITIES

1.1 Integrate Resilience into Local and Regional Planning

- Towns and counties will need a strategy for measuring economic sustainability as they experience or plan for changing land uses and the economic impacts of climate change. These strategies must also identify new economic opportunities and develop a cost-benefit decision-making framework that considers financial and social factors related to managed retreat.
- The State must set development standards to dictate the kinds of development that can or cannot be permitted in flood-prone areas based on the best available data for projected SLR, storm surge, and riverine flooding. Planning horizons should be long-term (a minimum planning horizon of 100 years, for example). Restrict sewer service areas, septic systems for new development, and redevelopment area designations in existing and projected flood prone areas.
- Update the state plan so that growth areas reflect projected flood risk and SLR projections.
- In addition to detailing the “anticipated impacts of climate change on New Jersey’s most significant natural hazards,” the state Hazard Mitigation Plan can demonstrate a statewide vulnerability assessment by designating flood prone areas statewide to serve as the baseline for municipal vulnerability assessments.
- Provide templates and set minimum standards for local vulnerability assessments and resilience plans. Integration of resilience into local planning is ideal to the extent possible. However, building local resilience capacity requires intentional action and coordination. All municipalities can develop local resilience plans that incorporate integrated planning elements, while identifying and monitoring specific resilience

measures. The “Resilient NJ: Local Planning for Climate Change toolkit” must adhere to a set of resilience best practices and minimum standards in order to allow communities utilizing the toolkit to “meet their obligations under the Municipal Land Use Law requirements, state Hazard Mitigation Plan requirements, and Plan Endorsement requirements.”

- Grant programs must recognize that low capacity characterizes many towns, particularly smaller or low-income communities, and there is disparate capacity across communities. This limits the ability of certain towns to apply for grants, which is often the case for those towns that need resources most.

1.2 Increase Technical Assistance Programs to Address Community Resilience

- Increased focus on the NFIP program is an excellent idea. State and local NFIP compliance, including oversight of local floodplain management, should be a priority. State-level barriers or inconsistencies that do not permit towns to perform their obligatory NFIP program duties or maximize CRS credits should be addressed and removed.
- Resilience training can be included in existing required training for floodplain managers and members of local land use boards and water and wastewater boards. To be an effective resilience measure, oversight of local floodplain management and training programs must do more than meet the minimum requirements of the NFIP or technical and engineering details of mitigation. Rather, oversight and training programs must be centered on the ecosystem function of floodplains.
- It is encouraging that the Interagency Council will continue developing technical assistance programs. There should be a stakeholder process to design assistance programs that have clear parameters for meeting standards of resilience capacity-building that align with statewide measurable targets for adaptation and with specific mechanisms delineated to “focus on leveraging federal and non-governmental partners to support the effort.”

1.3 Modify Regulatory Programs to Address Climate Change Impacts and Encourage Adaptation Over Time

- The Department must be careful about sending mixed messages regarding the speed at which change is needed. Current DEP guidance suggests that new regulations will help applicants receive permits, rather than determining whether permits should be issued.
- Development waivers must be limited and strict in flood-prone areas.
- The State’s construction code can be modified to account for projected climate conditions and permit municipalities to adopt higher regulatory standards consistent with the CRS program, while acknowledging that modifications to construction standards may not be appropriate in areas where development should be restricted based on flood risk. We understand the current limitations on changes to the UCC, but these are surmountable.
- Towns need authority to prevent development in vulnerable areas and withhold investment in public infrastructure to an area after substantial damage to properties in

that area. Additionally, towns require the authority to designate flood risk areas in order to limit or restrict development or impose a fee to support local resilience efforts. They also need the ability to deny or require modifications to development applications or approvals for areas that now fall within a flood risk area, due to updated data or changing conditions, but haven't yet been built.

- Provide resources and guidance for municipalities to track substantial damage and integrate substantial damage planning in the vulnerability assessment required by the Municipal Land Use Law. The State should require that all elevation certificates generated for any purpose be submitted either to the State and/or local authorities. Currently, certificates do not have to be submitted if they are completed for insurance purposes or for any reason other than a development permit.
- Towns must possess the ability to implement CRS actions that exceed NFIP minimum standards. The State can conduct a review of CRS actions that are prohibited or hindered by state policies and regulations and can also identify and incentivize CRS actions that maximally support sustainability and resilience.

1.4 Decrease Vulnerability of Existing Infrastructure and Development

- Resilience of existing infrastructure must include determining which facilities should be abandoned and which facilities should not be expanded. Resources should not be wasted retrofitting properties that should instead be relocated or abandoned.
- More information must be made available regarding how the State will address water infrastructure.
- The strategy of elevating buildings must be revisited with infrastructure and future risk in mind. It should not be assumed that the way in which OEM and DCA are currently approaching this practice is wise or sustainable.
- We recommend that the State revisit its policy approach to insurance. We question the notion that it is "in the state's short-term and long-term interest to maintain high penetration of insurance coverage within hazard areas." Maximizing coverage does not resemble an adequate strategy. Special insurance programs that fund relocation should be considered more seriously, rather than programs that simply give people more money to rebuild, which may result in a huge waste of resources. Consider the surcharge idea on more expensive properties in order to generate relocation funds or subsidize lower income premiums.
- Addressing critical buildings and infrastructure, as well as the retrofitting of existing infrastructure and development, can be based on prioritization of facilities and structures that are not in high-risk areas or affecting climate resilience. An evaluation of the potential for relocation out of high-risk or natural system migration areas should be incorporated in the investment framework.
- Elevating buildings must be treated as an interim solution in high-risk areas. Because it is costly, this response is not an equitable solution. It also fails to account for things like egress during a flood event or the vulnerability of infrastructure and utilities associated with the structure. Public money should not fund elevating or floodproofing private

structures or development without very careful consideration of how these tactics align with strategies to restrict development in risky areas.

1.5 Incentivize Sustainable Growth and Redevelopment that Incorporates Resilience, and Relocation to Safer Places

- The term “complete streets” should be changed to “complete and green streets.”
- Specifically incentivize towns that relocate their growth and redevelopment areas from high-risk areas to low-risk areas. Even more ambitiously, incentivize towns that are entirely high-risk to merge with predominantly low-risk neighbors.
- Identify target investment areas (like opportunity zones, but for migration).
- Integrate housing and economic development within these investment areas.
- With respect to programs that “reward communities and regions that take proactive measures,” an equity component must be incorporated, because low-income communities will not possess the resources and capacity to do as much as other towns, and will subsequently not receive as many rewards.
- Programs should direct development away from risk areas and toward appropriate growth areas.
- While developing affordable housing “in low-risk areas, with standards designed for future conditions, planned connectivity to public transportation networks, and in alignment with the 80x50 Report’s energy efficiency goals” may be effective, such development should parallel a sustainable economic development strategy so that local economies are capable of supporting their communities. In terms of maintaining “affordability within existing housing stock in low-risk areas,” the State should consider state actions that will diversify housing at the local level in all communities. Restricting single-family zoning and promoting “missing middle” housing types, for example, can promote such diversification.
- Sustainable agricultural practices that will enhance resilience by creating healthy soils for enhanced carbon sequestration and protecting water quality include restrictions on synthetic pesticides and fertilizer chemical applications. The Strategy does not mention chemical applications in agriculture or horticulture, but these chemical applications must be addressed in state investments that “minimize future climate resilience needs.”

1.6 Integrate Public Health into Community Resilience Planning and Activities

- It is good that there will be an addendum to the Scientific Report on Climate Change to provide updated research on climate change impacts on public health so that evidence and data can inform policy.
- To foster healthy communities, towns must have the ability to regulate development and activities within their jurisdictions based on an understanding of public health that accounts for air and water quality, flood risk, and any strain on community resilience.

PRIORITY 2: STRENGTHEN THE RESILIENCE OF NEW JERSEY'S ECOSYSTEMS

2.1 Promote Resource Conservation and Natural Lands Management to Strengthen Ecological Resilience

- There must be greater emphasis on the contextualization of floodplains within ecosystems. Although localized natural systems may be smaller-scale, they can act as major determinants of local resilience. Natural systems in urbanized areas must be prioritized so that they can become eligible for state funding to restore natural functions.
- The Green Acres program should consider not only future climatic conditions, but the ability of sites to support green infrastructure, as well.

2.2 Manage Agricultural Lands, Forests, and Other Ecosystems for Climate Impacts and Environmental Stressors

- Healthy soils retain more carbon, and chemical runoff pollutes water. This also applies to HABS. The State should consider what message it wants to send about restrictions on over-the-counter lawn chemicals, as well as incentives for organic and sustainable farming.

2.3 Deploy Natural and Nature-based Solutions for Resilience

- It is encouraging that DOT has Complete and Green Streets guidance, but there must be a path toward implementation. DOT can promote green streets and revise its departmental Complete Streets policy with language from the Complete and Green Streets guidance so that it can lead by example and build its own green streets on state roadways.
- Information regarding the urban forestry initiative requires greater specificity. This may necessitate the formation of an appropriate DEP task force.
- Referencing green infrastructure incorporated into the stormwater rules (green box) is important, but the Strategy only discusses the Phase 1 Stormwater Rule (adopted March 2021). Information should be included about intended changes for Phase 2 rules.
- Prioritizing nature-based solutions is crucial, but we do not agree with the practice of subsidizing homes in flood-prone areas. Resources and efforts should instead be directed toward a program that phases out private ownership in areas of high-flood-risk and marsh migration areas, as well as other areas valued for resilience.
- Prioritizing underserved communities for green infrastructure investment is similarly critical. However, we would like to see details about an investment program in natural infrastructure.

PRIORITY 3: PROMOTE COORDINATED GOVERNANCE

3.1 Ensure Continuing Efforts by the Interagency Council on Climate Resilience to Lead a Coordinated, Whole-of-Government Approach to Resilience

- A list of issues that the council will take on that require coordination is missing (i.e., developing municipal guidance for vulnerability assessments and resilience incorporation)

into local master plans). Consider prescribing a more specific role and tasks for the Office of Climate Action and the Green Economy. The document fails to discuss this matter at length.

- A process and timeline must be established for creating “standard goals and metrics.” The delineation of standard goals and metrics for resilience action plans at state agencies should serve as a short-time priority. This can be added to the list of tasks for the Interagency Council.
- Information sharing is important, but external groups and partners should have opportunities to participate in decision-making regarding goals and approaches.

3.2 Actively Engage Local Governments and Other Partners to Develop Resilience Solutions

- Recommending that local and regional governments designate a resilience champion is appropriate. The State will need to provide guidance to describe the responsibilities and qualifications of that position and institutionalize a support network.
- There are other partners, in addition to academic institutions, that can “offer resilience planning and design services,” as well as “demonstration projects.”
- Describe how the Interagency Council will “engage innovative non-governmental thought leaders.” In order to guarantee accountability and optimize effectiveness, these partners must play a more engaged role that involves developing and implementing resilience strategies, in addition to supporting the Interagency Council.

3.3 Incorporate Equity and Inclusion in Resilience Decision-Making

- It was encouraging to see that an entire section was devoted to this crucial issue.
- We are pleased to learn that the Interagency Council will work internally to “integrate social vulnerability and environmental justice concerns into resilience planning.” Guidance for doing so should also be directed toward municipalities to identify and normalize new local public engagement strategies that are more inclusive than the standard public meeting format.

PRIORITY 4: INVEST IN INFORMATION AND INCREASE PUBLIC UNDERSTANDING

Missing from the list of Key Outcomes is the development of clear goals, metrics, and targets that will help to inform the public and guide decision-making at all levels. Having goals, metrics and targets would provide useful and educational content to increase public understanding. Communication works best when there is an action change required on the part of the information’s recipient.

4.1 Expand Public Communication Efforts on Climate Change and Impacts on New Jersey

- It is important to employ a multi-platform climate change and resilience informational campaign administered by the State. This will help foster a culture shift toward making sustainability and resilience key components of public thinking and government policy.
- The State should collaborate with community organizations to assist local governments to launch local educational and communication campaigns geared toward specific audiences from a diverse array of demographics. These campaigns should include tailored content in languages and media that accommodate a diversity of demographic groups. This means going beyond creating a traditional website and hiring a communications professional to develop material for different audiences.
- The report misuses the statistic from the Eagleton poll regarding 1 in 10 residents frequently receiving information from the state government. It should read, “from local community organizations or the state government.”

4.2 Expand Climate Change Education and Training Opportunities

- Training on climate change and adaptation measures for state and local leaders and staff can be expanded to include best practices training--or potentially certification--for practitioners and community organizations providing resilience assistance or engagement in communities. Training programs must be affordable and accessible.
- It is important to have a workforce development program that encompasses COVID economic recovery, climate change adaptation, and equitable resource distribution to vulnerable populations. It should be coupled with a community-wide vulnerability assessment and identification of relocation areas, where appropriate.

4.3 Develop a State-wide Climate Change Vulnerability Assessment

- This section should be reconsidered. While a statewide vulnerability assessment would be beneficial, it needs to be carefully designed and articulated. The description of what the assessment is, what it will do, and how it will be completed leaves far more questions than answers. This section seems to confuse vulnerability assessments with data collection and general issue identification. Consider changing the term from “vulnerability assessment” to “risk identification.”
- The plan refers to a “full assessment of risk” and internal assessments and understanding of risk. There must be transparency when disclosing the parameters and implications of a statewide full assessment of risk. For example, what decisions will this assessment help the State make? What will be the strategies assigned to different levels or categories of risk? Will places of higher risk receive more resources or less investment, according to the State’s prioritization scheme? These areas should receive less funding from the State, and towns should be able to restrict development and taxpayer resources to those areas. The development of this statement assessment can be a massive undertaking and should seriously be considered before investing resources.
- OEM’s compilation of data on building attributes, which will be included in the risk assessment, provides for a more detailed financial cost-benefit analysis. However, it is

not clear how this information will be used or whether the application of this information will lead to equitable outcomes.

- The State must develop a standardized vulnerability assessment with minimum standards and accompanying guidance. At the local level, it should not be an extension of the HMP process to evaluate risk to critical facilities and a community's ability to recover from a disaster. A climate change vulnerability assessment should entail greater public engagement, include a focus on natural floodplain functions, and be more comprehensive than a HMP risk assessment, which is primarily concerned with protecting critical infrastructure, assessing financial damage to structures, and the ability of a community to recover operational functions as quickly and efficiently as possible after a disaster. These are important emergency management planning elements that should be coordinated with climate change vulnerability assessments. However, assessing local vulnerability is better achieved through a different lens. The plan seems to suggest that the statewide vulnerability assessment should be a compilation of different parts of existing planning elements, as state agencies are "continuously evaluating opportunities to analyze the impacts of climate change, in partnership with each other and external organizations." A statewide vulnerability assessment should be an independent and comprehensive process with an outcome that municipalities can use as a baseline for conducting a local vulnerability assessment. Its purpose should be to provide baseline data for municipalities and direct state investments. Also, it should be updated based on changes that occur through local vulnerability assessments, which will refine the base layer.

4.4 Build a Collaborative Research Agenda to Guide Future Climate Resilience Research

- While the Strategy's discussion of research and science is important, it is not clear if this agenda is being linked to decisions that must be made.
- There is reference to data projects that will identify "priorities to reduce impacts of flooding to infrastructure and buildings in inland flood areas" and to integrate knowledge of future inland flooding and drainage issues into long-range and capital planning. This suggests that the research and data collection will be applied to support greater investment in engineering hard structures for mitigation in those areas identified as having greater flood and water damage risks. This requires clarification in terms of the prioritization scheme and development standards that will be associated with projected flood risk.
- The addendum to the 2020 "NJ Scientific Report on Climate Change" that will include impacts of climate change on public health from extreme weather should include an analysis of how CSOs will affect communities, as well as strategies for long-term adaptation measures.

PRIORITY 5: PROMOTE CLIMATE-INFORMED INVESTMENTS AND INNOVATIVE FINANCING

Missing from the Key Outcomes is the development of alternative local government and local economy models and strategies that towns will need as they transition away from places where the risks are too great to maintain current practices. Also missing is a re-evaluation of existing investment and bond portfolios through a climate change lens. The State should be careful about generating new funds that will be deployed in short-term projects that do not provide long-term benefits.

5.1 Integrate Climate Change into Existing State Investments and Funding Decisions

- It is crucial to “measure” the ecological, social, and economic benefits of state investments, but it will be important to identify goals and metrics. Please let stakeholders know if anyone at the State has started working on the development of such metrics, or if there are specific models from elsewhere that the State is utilizing. The State should be careful when employing cost-benefit analysis approaches. Current practices often give more weight to more expensive real estate and wealthier communities, creating inequitable processes and outcomes (i.e. the current Army Corp approach).
- The Infrastructure Bank can include NJDEP’s sea level rise projections and standards in its funding conditions for new projects.

5.2 Expand the Availability of Financing for Resilience Investments from Public and Private Sources

- There should also be serious consideration and evaluation of innovative programs that will transition flood-prone private properties to public ownership (i.e. life rights, rental agreements until substantial damage, etc.).

5.3 Ensure Equity and Transparency in Resilience Investments

- While these statements are encouraging, they fail to clearly identify next steps.

PRIORITY 6: COASTAL RESILIENCE PLAN

In general, it is encouraging to see that this section contains more concrete goals, but we recommend including the metrics that will be used to measure progress, as well as whether any targets have been selected yet. The Key Outcomes section does not include any measurable outcomes, such as fewer properties damaged or fewer people affected by flooding. The Key Outcome, “Assessment of relocation policy opportunities and obstacles,” is far too conservative an outcome, unless this is intended as a six-month outcome. The outcome must instead entail the identification of high-risk places where transition is the likely long-term solution, as well as the provision of funding and plans to help transitions take place. The Key Outcome, “More private property owners adapting to climate change,” should include the phasing out of private ownership in some areas.

This section has a strong focus on the environmental aspects of a coastal plan, but there is no discussion of economic strategies that will help communities manage risk and transition to new or modified economic development and government revenue raising models.

The first paragraph in “Existential Threat” presents a contradiction. Is the range of SLR by 2100 under a moderate emission scenario 2-5 feet (as stated here) or 3-5 feet (as stated elsewhere)? The last sentence in the same paragraph needs a time frame.

The use of maps and visuals is very effective. We offer two suggestions, however. First, the map on page 78 of “New Jersey’s Coastal Region” would benefit from identifying the names of some of the NJ towns along the coast, either on the map or in a table (which could include all 239 town names). On page 79, the Strategy states, “The same study determined that four of New Jersey’s coastal communities and four cities were among the top 10 nationally of homes built in risky areas.” This sentence should be rephrased to be more clear, and adding the names of the cities would be helpful.

6.1 Incentivize and Support Community Resilience Planning

- It would be helpful to understand what DEP is envisioning for a “Regional Resilience Coordinator.” This was attempted after Sandy and ultimately proved ineffective. The DEP must learn from those lessons and consider more localized coordinators that have achieved success. FEMA has also advocated for the implementation of such local coordinators.
- There must be a specific state program that seeks to increase capacity at the local level. Additionally, “hazards” must be defined in the context presented in 6.1.1.
- Post-disaster plans that are developed pre-disaster for local jurisdictions should be tied to funding and incentive programs so that they become standards, rather than mere “considerations” for localities. These should be treated as opportunities or inflection points to do things differently, which builds on the concept of “bounce forward.”
- Guidance on the use of SLR projections should include development standards that determine what kinds of development can be built in different risk zones or scenarios. It must also be developed for non-coastal areas.
- It is important to include a requirement for nature-based solutions in all coastal resilience planning.
- Center designation should be revised based on resilience goals and flood risk.
- Localities require the development of guidance, a cost-benefit analysis structure, and a Community Benefits Agreement approach in order to start thinking about managed retreat.

6.2 Update Coastal Management Regulations and Policies to Reflect Sea-Level Rise and Other Climate Change Projections

- Towns must be able to regulate development to a higher standard, with only limited cases of relief to those looking to develop. The proposed coastally focused unit of the Department of Law and Public Safety should also be available as a resource to

municipalities as they adopt local regulatory changes to increase resilience and face legal challenges in doing so.

- Identifying sea level rise risk zones and ensuring that development is not inadvertently incentivized in vulnerable areas are important actions
- It is crucial to set a policy for state investments to include natural or nature-based components (or a financial offset, where applicable). Clarification would help convey that nature-based solutions are the required approach, except in cases in which these are not feasible solutions.
- There is a need for more coastal gauges and better data for driving investments.
- It is encouraging that the Strategy emphasizes public access throughout all planning and decision-making processes related to coastal resilience.
- The call-out box on NJ PACT also serves as a positive point.

6.3 Sustain and Strengthen Tidal Marshes to Provide Ecological and Community Resilience

- It is important to identify ways to leverage and expand the Blue Acres program in support of natural lands restoration through buy-outs, and to include marsh migration areas and other areas important for resilience, due to their natural ecosystem functions.

6.4 Manage Shoreline Stabilization with Nature-based Features

- The last sentence requires much more explanation and direction. How will the State “prioritize state investment for new hard stabilization features to projects needed to protect critical infrastructure in major population and economic centers?” This section requires several definitions and detailed decision-making criteria.

6.5 Manage Coastal Beaches and Dunes to Reduce Erosion and Storm Damage

- It is important to continue state investment in dune and beach projects that protect ecosystems and recreation and tourism industries. However, investment should not be prioritized for existing coastal development of private property that does not involve population or economic centers or vulnerable populations.

6.6 Reduce Flood Risk to Existing Buildings and Infrastructure

- This section needs to be strengthened, as it provides very little guidance.
- The inclusion of socially vulnerable populations in this section is misplaced and mischaracterized. It would never be a reason to prioritize protection in the absence of the other two criteria: major population centers and concentrations of critical infrastructure. Socially vulnerable populations must be understood and included in the decision-making process.
- The document’s reference to Hoboken’s Northwest Resiliency Park is effective.

6.7 Make Smarter and More Coordinated Investments in Coastal Resilience

- Action 6.7.1 is strong and appropriate. It would be good to see this action prioritized, as well as some concrete steps for how this will be implemented. To reiterate, it is necessary to move away from expressions of what “should” happen to what “will” happen. What is the mechanism of accountability that will ensure that projects will align

with the State’s resilience strategy and “consider natural features, underserved populations, and equity,” considering that there will be no obligatory process or review mechanism for coordination with the Interagency Council?

- It is crucial to point out that a project-by-project approach is insufficient to address resilience.

6.8 Share Financial Responsibility for Resilience

- Subsidizing private property investments must occur in very unique and unusual circumstances. This practice should be limited, unless it relates to transitioning to public property or supporting a vulnerable population or population center.
- The State can help towns figure out how to deal with the loss of property taxes as development in flood-prone areas becomes restricted. Some towns will not be viable entities if they cannot be sustained without public investment to absorb the risk associated with development of highly flood-prone properties. Alternatives, such as mergers, should be considered.
- The State’s plans to work with insurance and banking sectors are important, albeit lacking in concrete or specific details..
- It is unclear whether NJDEP will ask municipalities to cover O&M costs for coastal flood control projects.

6.9 Support and Incentivize Movement to Safer Areas

- Incentives to develop and redevelop in safer areas are missing. The incentives identified pertain to plans to move to safer areas (6.9.2.) or to relocate (6.9.3), but not the actual redevelopment.
- There needs to be a state-level assessment of the existing built infrastructure in relation to the state economy and climate risk. The DEP must start evaluating where and how to conduct managed retreat without negatively impacting the state economy. Furthermore, it must identify ways to transition to better economic and business strategies that will include improvements for localities over pre-migration trends.
- The actions are all positive, and there needs to be an integrated planning approach so that receiving areas have affordable housing, employment, and transportation options in proximity to each other. Additionally, communities must be designed to be healthy and equitable for all.
- It is important to require local resilience plans to identify potential resilience relocation areas for coastal towns. State guidance on how to consider and evaluate relocation to outside municipalities or municipal mergers is necessary.