



NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION'S

STRATEGIC CLIMATE ACTION PLAN

SEPTEMBER 2023

DRAFT



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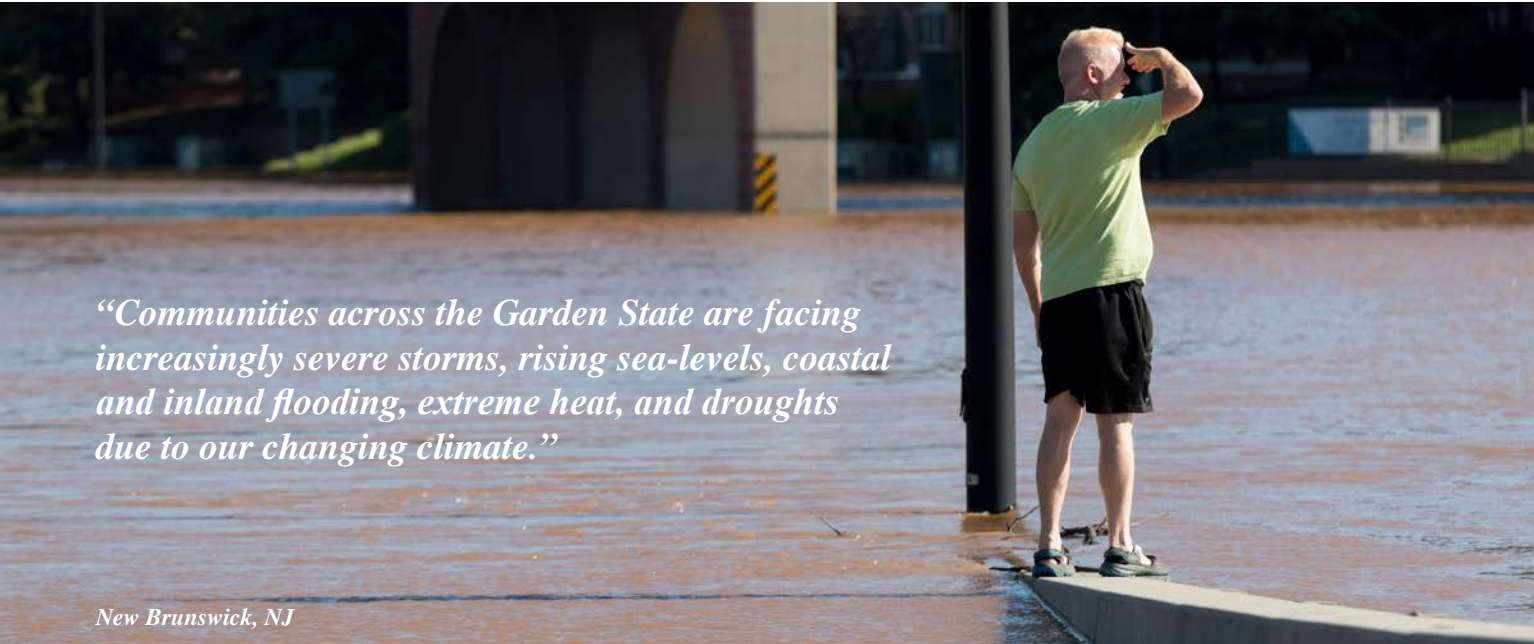
2. EXECUTIVE SUMMARY



Climate change poses the greatest long-term threat to New Jersey’s public health, safety, environment, and economy. Communities across the Garden State are facing increasingly severe storms, rising sea-levels, coastal and inland flooding, extreme heat, and droughts due to our changing climate. Scientists agree that these climate impacts are likely to only continue worsening until drastic reductions in the emissions of climate pollutants are achieved around the globe. As the occurrence of serious climate phenomena has become more routine, the public dialogue about if or when climate change will affect us has given way to deeper consideration about the scale and pace of societal response and our role as individuals, businesses, institutions and governments in meaningful climate action. Against this backdrop, public and private organizations across economic and social sectors have begun to chart their course of climate action.

The Department of Environmental Protection (NJDEP)—the New Jersey state government institution responsible for improving and protecting public health, safety, and the environment—has for years worked to reduce climate hazards and boost preparedness. Spurred to greater action by the Global Warming Response Act of 2007, its 2019 amendments, and later executive orders, the Department launched the New Jersey Protecting Against Climate Threats (NJPACT) initiative in 2020. Through NJPACT, the Department has advanced state-specific climate science to ground planning and policy actions, invested in clean energy and climate resilience solutions, and pursued regulatory reform efforts to modernize dated aspects of environmental governance. While recognizing that no single institution can alone facilitate the structural changes necessary to fully reduce and respond to climate change, the Department has made doing so a principal goal of all Departmental programs and actions.

The Department now offers this NJPACT Strategic Climate Action Plan to set the course for its ongoing and intended future efforts to reduce and respond to climate change. The



“Communities across the Garden State are facing increasingly severe storms, rising sea-levels, coastal and inland flooding, extreme heat, and droughts due to our changing climate.”

New Brunswick, NJ

goal of the NJPACT Strategic Climate Action Plan is to better inform organizations and individuals across sectors as to the Department’s climate action plans, to support their work to advance climate action, and to coordinate collective efforts to reduce the emissions of climate pollutants in the state and build climate resilience for New Jersey families, communities, and businesses.

As it has to date, the Department intends to advance its efforts to reduce and respond to climate change through three important environmental governance vehicles: the production of thought leadership and corollary decision-support tools, the provision of incentivizes for climate action, and the pursuit of supportive regulatory and policy reforms. This Strategic Climate Action Plan is arranged accordingly and identifies specific climate actions, deliverables, and milestones that the Department intends to achieve in the short term (1-2 years), medium term (2-4 years), and long term (4+ years). These include, but are not limited to, actions across each of these thematic areas:

THE ROAD TO 80X50: REDUCING EMISSIONS OF CLIMATE POLLUTANTS

The NJPACT Strategic Climate Action Plan reflects a continuing Departmental commitment to advance an aggressive climate pollutant reduction strategy as New Jersey endeavors to meet the State’s goals of reducing emissions by 50% by 2030 and 80% by 2050, and indicates plans for, among other things:

- Improved climate pollutant emissions monitoring to measure progress towards the 50x30 and 80x50 goals.
- Promoting building electrification through Department-administered State assets while supporting statewide building electrification planning and policy development.
- Advancing transportation decarbonization through zero-emission vehicle standard adoption, infrastructure planning and deployment, and exploring complementary policies to reduce vehicle miles traveled.
- Provide continuing support for a statewide clean energy transition by improving siting guidance for renewables while pursuing regulatory reforms to promote efficiencies at energy generating and other industrial facilities.

BUILDING CLIMATE RESILIENCE

As New Jersey acts urgently to reduce the emissions of climate pollutants, it is critical that communities, businesses, and government institutions take measures to enhance their resilience to the adverse effects of climate change that cannot be avoided. The NJPACT Strategic Climate Action Plan reflects the Department’s continued commitment to building climate resilience across sectors, thereby supporting New Jerseyans in responding to current and future climate threats, such as sea-level rise, extreme weather, and chronic flooding. Ongoing and intended Departmental measures include:

- Enacting a suite of Resilient Environments and Landscapes (REAL) to enable people, communities, and businesses to effectively respond to current and future climate threats, such as sea-level rise, extreme weather, and chronic flooding.
- Identifying and enacting measures for ensuring coastal resilience, including improved beach, bluff, and dune protection critical to shoreline resilience.
- Developing and deploying a statewide extreme heat mitigation initiative.
- Improving stormwater and wastewater infrastructure through investment, permitting, compliance, and the provision of technical assistance.
- Investing in flood and coastal resilience infrastructure projects that address climate change by, among other things, prioritizing construction of flood protection projects that maximize risk reduction and incorporate community co-benefits.
- Ensuring state and local consistency with National Flood Insurance Program criteria while providing municipal climate resilience guidance, planning incentives, and technical support through ResilientNJ and complementary programs.
- Supporting the Interagency Council on Climate Resilience in updating the statewide Climate Change Resilience Strategy and preparation of issue-specific Resilience Action Plans that detail state agencies efforts and intentions and track progress toward resilience goals.

SECURING NATURAL AND WORKING LANDS

Through actions to protect and enhance natural and working lands, including forests, wetlands, developed lands, and agricultural lands, New Jersey can preserve existing carbon sinks and dramatically increase the potential of natural and working lands to store and sequester carbon. These and other Departmental actions to support natural and working lands will bolster climate change mitigation as these lands remove carbon dioxide from the atmosphere through long-term accumulation in vegetation and soils:

- Continual development of the state's Coastal Ecological Restoration and Adaptation Plan (CERAP) to identify and secure areas that are ecologically vulnerable to climate change and in need of restoration or resilience improvements along New Jersey's tidally influenced coast, bays, and rivers.
- Refine and implement the Natural and Working Lands Strategy (NWLS) to provide policy guidance and support for maximizing the carbon sequestration potential of forested, wetland, and agricultural lands.
- Expand forest stewardship and protection through the planning and implementation of science-based management strategies to protect above and below-ground carbon pools, minimize and mitigate the impacts of wildfire, improve ecosystems, and protect soil and water quality.
- Restore, expand, and protect critical wetlands through enhanced monitoring, further enforcement of land resource protection rules and requirements, and investment in blue carbon projects that improve wetland health and sequester carbon.



High Point State Park

ENSURING CLIMATE EQUITY & JUSTICE

Lower wealth communities and communities of color in New Jersey – and across the United States—are burdened with disproportionately high amounts of climate pollution, increased flood risk, more intense heat waves, and other climate change hazards. The NJPACT Strategic Climate Action Plan reflects the Department’s continuing commitment to furthering the promise of environmental justice through actions that advance climate justice, including:

- Identifying and enacting climate pollutant reduction strategies that improve air quality in communities with environmental justice concerns.
- Implementation and enforcement of the Environmental Justice Law and Rules, which include criteria concerning the assessment of certain climate equity and justice factors in the course of applicable permitting matters.
- Development and implementation of uniform and consistent principles to guide Departmental analyses of environmental and climate justice in permitting, compliance, enforcement, and rulemaking processes.
- Design and administration of climate mitigation and resilience funding programs that prioritize the reduction of pollutants in and improve the resilience of communities with environmental justice concerns.
- Development of environmental and climate justice guidance to inform the updated State Plan as well as municipal planning efforts, which may be incorporated into the plan endorsement process before the State Planning Commission.



SUPPORTING AND SHARING CLIMATE SCIENCE & ECONOMICS INFORMATION

The Department will continue to enable the development of the latest and most reliable scientific information on the current and predicted future impacts of climate change on New Jersey’s natural and built environments. This includes identifying and fulfilling additional research needs to provide policymakers and the public with comprehensive and up-to-date information concerning the climate change impacts New Jersey can expect in the near- and long-term. These endeavors include:

- Consistently updating and refining heat, precipitation, flooding, and sea-level rise data and projections while making user-friendly reports, analytic tools, and mapping applications available to the public and regulated communities.
- Characterizing and quantifying climate change risks to ground and surface water supplies through monitoring, modeling, and analyses capable of supporting policy, planning, and investment strategies to preserve and protect state water supplies and ensure their quality.
- Supporting the Offshore Wind (OSW) Research & Monitoring Initiative to continually explore potential environmental, ecological, and socioeconomic impacts of OSW development and operation, and produce scientifically rigorous reports that clearly communicate findings and conclusions.
- Providing support to educators, schools, and communities in the statewide implementation of K-12 climate change educational standards.
- Improving ongoing partnerships and fostering new scientific collaborations to expand and promote New Jersey-specific climate science and information.

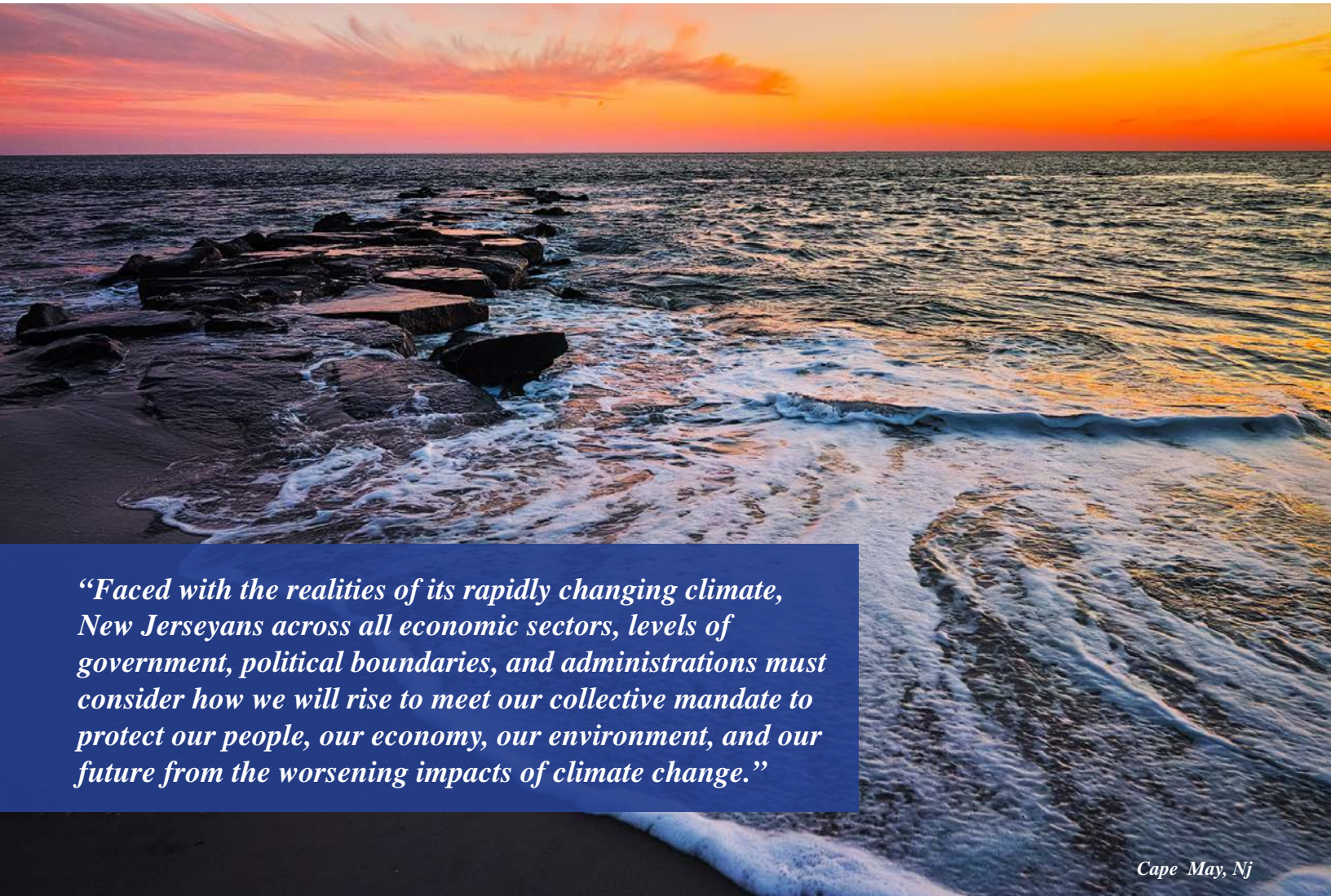
SUSTAINABLY MANAGING WASTE & MATERIALS

Waste and materials management is New Jersey's largest source of climate pollution after consumptive energy uses (i.e., generation, transportation, buildings). To reduce these emissions, it is imperative for the State to reduce waste at its source and amplify the reuse and recycling of materials. Through these and other regulatory and policy actions, New Jersey can reduce waste that typically directed to landfills and incinerators:

- Expand waste reduction programs, including by amplifying the Get Past Plastic single-use plastic reduction and Erase Food Waste campaigns, implementing minimum recycled content standards, developing technical guidance to inform action across sectors on organics, composting, and food waste recycling facility siting, and enacting regulatory reforms that support such initiatives.
- Pilot reductions programs at Department facilities to evaluate and demonstrate innovative solutions and promote adoption.
- Evaluate the vulnerability of landfills to climate risks, including sea-level rise, fluvial flooding, and extreme precipitations, including assessment of potential impacts to surrounding communities, developing technical guidance and regulatory reforms to secure waste management facilities in operating and post-closure conditions.

A CALL TO SUSTAINED ACTION

Faced with the realities of its rapidly changing climate, New Jerseyans across all economic sectors, levels of government, political boundaries, and administrations must consider how we will rise to meet our collective mandate to protect our people, our economy, our environment, and our future from the worsening impacts of climate change. We must commit ourselves to actions and investments that may take time to physically show their benefits. We must have confidence that our successful climate actions will instead be measured by the long-term growth potential and protection we help ensure for the people and communities of New Jersey.



“Faced with the realities of its rapidly changing climate, New Jerseyans across all economic sectors, levels of government, political boundaries, and administrations must consider how we will rise to meet our collective mandate to protect our people, our economy, our environment, and our future from the worsening impacts of climate change.”

The image is a vertical composition. The top portion shows a tennis court with a blue surface and green grass, viewed through a black metal fence. The bottom portion shows a close-up of ocean waves, with a blue wave cresting over a brownish, turbulent sea.

3. INTRODUCTION: AN URGENT CALL TO SUSTAINED CLIMATE ACTION

Climate change poses an existential threat to public health, safety, the environment, and economies all over the world.¹ New Jersey's coastal location, propensity for inland flooding, and high population density only increase its unique climate risk profile. Communities across the State already face rising sea-levels, extreme heat, and increased precipitation, as well as more intense storms and droughts due to climate change.

As noted by the Intergovernmental Panel on Climate Change in their Sixth Assessment report (IPCC Report) and characterized by the United Nations Secretary General's response, this is "a code red for humanity," climate change is happening now, and its effects will only continue to worsen with the passage of time.² The IPCC report echoes many of the findings in the Department's 2020 New Jersey Scientific Report on Climate Change (NJ Climate Science Report). Together, these reports, as well as the ongoing work of reputable scientists, remove any credible doubt that significant and rapid warming of the earth's atmosphere is occurring and that those temperature increases are causing sea-level rise as well as increasing the frequency and intensity of severe weather events. Despite these stark warnings, with rapid, drastic reductions in greenhouse gas emissions, greater impacts of climate change can still be curbed. In fact, humanity is in a powerful position with the ability to affect the long-term trajectory of global warming and our shared future.

Still, in New Jersey, average annual temperatures have already increased by 3.8° F (2.1° C) from 1895-2021,³ which is faster than the Northeast regional average (2.7° F [1.5° C]) (NCEI 2022) and the global average (2° F [1.1° C]) (IPCC AR6 WG1). The Paris Climate Agreement, an international treaty adopted by 196 parties enacted in 2016, set

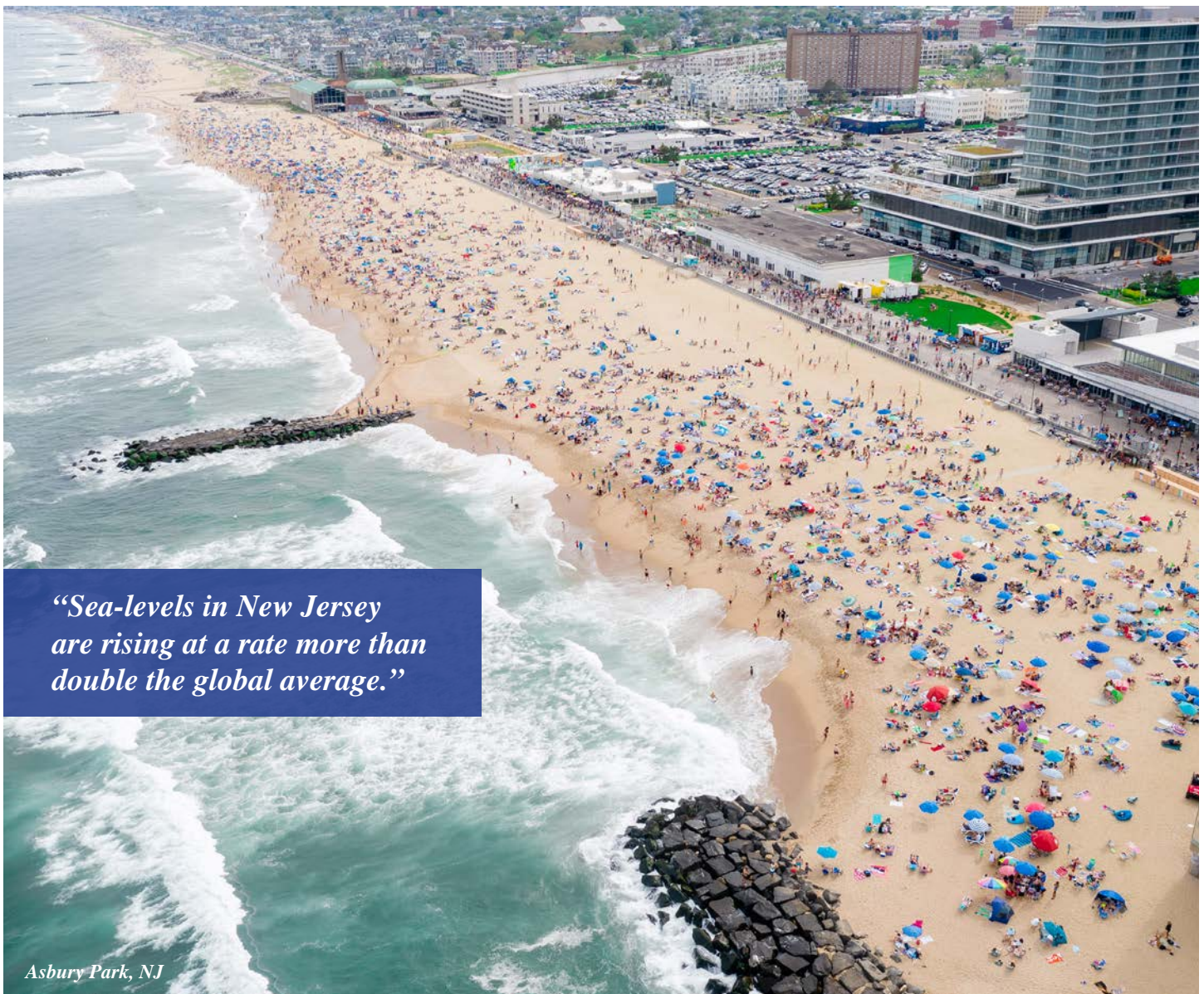
¹ 80x50 Report, October 15, 2020, Executive Summary, p. v, <https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf>.

² Intergovernmental Panel on Climate Change (IPCC), "AR6 Climate Change 2021: The Physical Science Basis, 2021" <https://www.ipcc.ch/report/ar6/wg1/>

³ Office of the New Jersey State Climatologist 2022.

the goal to limit global warming to below 3.6° F (2° C), preferably to 2.7° F (1.5° C), compared to pre-industrial levels. The IPCC's most recent best estimates from both moderate (SSP2-4.5) and high emissions (SSP5-8.5) scenarios suggest we are on target to experience increases of 3.6° F (2° C) or more by mid-century (2041-2060), with the very likely late-century (2081-2100) temperatures ranging from 3.8 to 10.3° F (2.1 to 5.7° C). Given the latest, more ambitious pledges under the 2021 Glasgow Climate Pact from the 26th Conference of Parties (COP26), research has indicated it is possible to keep warming below 3.6° F (2° C) if pledges are implemented fully and on time, including a strong near-term commitment.

November 2021 studies from Northeast Regional Climate Center, commissioned by the State to analyze New Jersey-specific precipitation data, found that annual and short-duration intense precipitation is increasing statewide and will continue to increase through the end of the century.⁴ These studies show that precipitation is already 2.5% to 10% higher than existing standards based on 1999 data. Additionally, moderate emissions scenario projections suggest county-level increases within the likely range of more than 20% from the historical baseline through 2100, with greater increases (as much as 50%) in the northern part of the State. This increase in extreme precipitation has led to repetitive flood events with devastating impacts to life, property, and commerce.



“Sea-levels in New Jersey are rising at a rate more than double the global average.”

Asbury Park, NJ

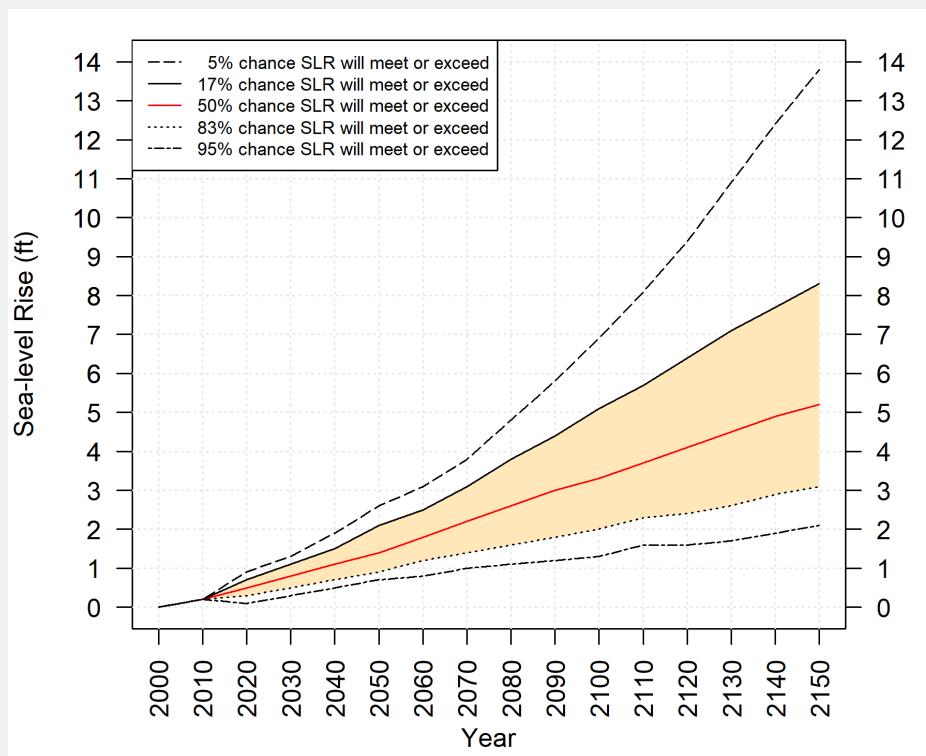
⁴ Northeast Regional Climate Center “Changes in Hourly and Daily Extreme Rainfall Amounts in NJ since the Publication of NOAA Atlas 14 Volume,” November 18, 2021. <https://dep.nj.gov/dsr/#changes-rainfall-nj>

As a coastal state, few climate change impacts present a higher risk to New Jersey’s natural resources, economy, property, and culture than sea-level rise. Sea-levels in New Jersey are rising at a rate more than double the global average. This rapid rise causes increased tidal flooding, even on clear days without precipitation (sunny day flooding), and low-lying coastal areas like Atlantic City are extremely likely to experience at least 95 sunny day flooding events per year. (NJDEP, 2020). As set forth in the definitive, State-specific assessment of sea-level rise conducted by the New Jersey Science and Technical Advisory Panel (STAP), based on a moderate emissions scenario, New Jersey’s sea levels are likely to rise from their 2000 levels by: up to 1.1 feet by 2030, 2.1 feet by 2050, and 5.1 feet by 2100.⁵

Figures 2 and 3 of Sea-Level Rise Projections Curve Under Moderate Emissions Scenario

There is a 50% chance that sea-level rise will exceed the level displayed by the red line, and a 66% chance that sea-level rise levels will be between the solid black line and the dotted black line (i.e., tan area).

Year		2010	2030	2050	2070	2100	2150
Low End	> 95% Chance SLR will meet or exceed		0.3	0.7	1.0	1.3	2.1
Likely Range 66% chance	> 83% Chance SLR will meet or exceed		0.5	0.9	1.4	2.0	3.1
	~ 50% Chance SLR will meet or exceed	0.2 Observed	0.8	1.4	2.2	3.3	5.2
	< 17% Chance SLR will meet or exceed		1.1	2.1	3.1	5.1	8.3
High End	< 5% Chance SLR will meet or exceed		1.3	2.6	3.8	6.9	13.8



⁵Robert E. Kopp and Clinton J. Andrews et al. 2019. “New Jersey’s Rising Seas and Changing Coastal Storms: Report of the 2019 Science and Technical Advisory Panel” (STAP report)., Kopp et al., 2019. <https://doi.org/doi:10.7282/t3-eeqr-mq48>



Example of sunny day flooding in Atlantic City.

Increases in extreme precipitation and rising sea-levels not only elevate the risk of flooding in the State, but also continue to overwhelm inadequate, under designed and poorly maintained stormwater infrastructure, which further exacerbates flooding impacts, including areas lying outside stream corridors or otherwise unaccustomed and unprepared for these impacts. To compound the issue, drought or drought-like conditions, which are expected to increase in frequency, can also increase flooding when the soil is too dry to absorb large amounts of rain in a short period of time.

Addressing these threats is crucial to the continued economic prosperity of the State of New Jersey. Communities that are unable to protect against flooding from increasingly intense storms and sea-level rise can expect to see declining property values and abandoned homes, business closures, a reduced tax base, and less favorable credit terms for financing critical improvement projects. Decline in any of these market elements can snowball across the state, causing economic conditions to worsen until local communities and the State reach a tipping point.⁶ To address this challenge, New Jersey has developed Sea-Level Rise Guidance to help state and local decision makers plan for and adapt to these changing conditions.

Planning in accordance with strong resilience standards will protect and improve local economies, leading to long-term benefits that far outweigh any marginal increased costs of compliance, including: disaster avoidance, business interruption prevention, and stabilized flood insurance costs. This is evidenced by a recent study by researchers from Climate Central, Rutgers University, and Stevens Institute of Technology, showing that approximately 13% (\$8.1 billion) of the \$62.7 billion in losses incurred by New York, New Jersey, and Connecticut following Superstorm Sandy can be attributed to sea-level rise and climate change.⁷ The damages caused by Sandy were not a one-time event. In fact, there is evidence that economic losses from extreme weather is an increasing problem. As NOAA notes, “2021 was another year in a series of years where we had a high frequency, a high cost, and large diversity of extreme events that affect people’s lives and livelihoods – concerning because it hints that the extremely high activity of recent years is becoming the new normal.”⁸ This trend held in New Jersey, which experienced four extreme weather events that caused more than \$1 billion dollars in damages.⁹ No single level of government can address the economic impacts of climate change alone.

Faced with this reality, we must ask ourselves – across all economic sectors, levels of government, political boundaries, and administrations – how we will rise to meet our collective mandate to protect our people, our economy, our environment, and our future from the worsening impacts of climate change.

While it is clear that no state agency or set of regulatory reforms alone can bring about these necessary structural changes, the Department is proud to do its part to support, and as appropriate, help lead the State’s efforts in conjunction with its agency partners – with particular emphasis on climate change impacts as a threat multiplier for those communities that experience environmental injustices - by working to enhance the State’s resilience to those climate effects that cannot be avoided while simultaneously reducing emissions of climate pollutants in order to limit a worsening of adverse climate change impacts.

⁶ See, e.g. Painter, M. (2020). An inconvenient cost: The effects of climate change on municipal bonds. *Journal of Financial Economics*, 135(2), 468-482, Krueger, P., Sautner, Z., & Starks, L. T. (2020). The importance of climate risks for institutional investors. *The Review of Financial Studies*, 33(3), 1067-1111, Shi, L., & Varuzzo, A. M. (2020). Surging seas, rising fiscal stress: Exploring municipal fiscal vulnerability to climate change. *Cities*, 100, 102658, Sinking Tax Base Land & Property at Risk from Rising Seas. (2022, September 8).

⁷ Benjamin H. Strauss, Philip M. Orton et al. 2021. “Economic damages from Hurricane Sandy attributable to sea level rise caused by anthropogenic climate change.” <https://www.nature.com/articles/s41467-021-22838-1>

⁸ Adam B. Smith. 2022. “2021 U.S. billion-dollar weather and climate disasters in historical context.” <https://www.climate.gov/news-features/blogs/beyond-data/2022-us-billion-dollar-weather-and-climate-disasters-historical>

⁹ National Centers for Environmental Information. 2022. “Billion-Dollar Weather and Climate Disasters –Time Series.” <https://www.ncei.noaa.gov/access/billions/time-series>

3.1 SETTING A COURSE FOR CHANGE

In an early acknowledgment of the acute need for State-based climate action, the New Jersey Legislature passed the Global Warming Response Act, N.J.S.A. 26:2C-37 et seq. (GWRA) establishing a Statewide goal for reducing greenhouse gas emissions to 80% below 2006 levels by 2050 (the “80x50” goal).

Recognizing the gravity of climate change and its impacts upon the State, as well as New Jersey’s opportunities to spur innovation and economic growth in response to this challenge, Governor Philip D. Murphy signed the following Executive Orders:

- No. 7 (2018): Mandating that the Department and the New Jersey Board of Public Utilities (BPU) reenter the Regional Greenhouse Gas Initiative;
- No. 8 (2018): Establishing the goal of 3,500 megawatts of offshore wind energy generation by the year 2030;
- No. 23 (2018): Directing the Department to develop guidance for all state departments to incorporate environmental justice considerations into their actions;
- No. 28 (2018): Calling for BPU to update the State’s Energy Master Plan (EMP);
- No. 89 (2019): Establishing Interagency Council on Climate Resilience, which would develop the Statewide Climate Change Resilience Strategy and directed the development of the Climate Science Report;
- No. 92 (2019): Adopting the goal of offshore wind energy generation to 7,500 megawatts by 2035.
- No. 100 (2020): Requiring the Department of Environmental Protection to evaluate the environmental and public health impacts of certain facilities on overburdened communities when reviewing certain permit applications;
- No. 221 (2021): Creating the Office of Climate Action and Green Economy (OCAGE) within the Governor’s Office;
- No. 274 (2021): Establishing an interim benchmark for emissions reductions, declaring it the policy of the State to reduce greenhouse gas emissions to 50% below 2006 levels by the year 2030 (the “50x30” goal);
- No. 307 (2022): Increasing the State’s goal of offshore wind energy generation to 11,000 megawatts by 2040;
- No. 315 (2023): Establishing Goal of 100% electricity sold in State from renewable sources by 2035;
- No. 316 (2023): Establishing building electrification and decarbonization goals; and
- No. 317 (2023): Directing the BPU to engage with stakeholders on the future of State’s natural gas utilities

These Executive Orders clearly establish New Jersey’s policy to take aggressive climate action by reducing the emission of climate pollutants on an economy-wide basis, charting a just and equitable transition away from fossil fuel reliance while building a stronger economy fueled by renewable energy, protecting and promoting the resilience of New Jersey’s communities from the current and anticipated impacts of climate change through planning and regulation, investing in climate solutions that create new economic opportunity and shared prosperity, and furthering the promise of equity and environmental justice for all residents.

3.2 ANSWERING THE CALL

Pursuant to the foregoing directives, the Department continues to take significant steps to support and facilitate the State’s overall climate goals.

As required pursuant to the GWRA and following New Jersey’s 2019 EMP update which set the blueprint for large-scale electrification and 100% clean energy by 2050, on October 15, 2020, the Department delivered to the Legislature [New Jersey’s Global Warming Response Act 80x50 Report](#) (80x50 Report), which builds upon the EMP and communicates the limitations of existing State legislation, policies, and programs in reaching the 80x50 goal by providing detailed recommendations, across eight distinct emissions sectors to assist policymakers in crafting new initiatives to bridge the resulting emissions reductions gap.

One year later in October 2021, under EO 89, the Department issued the State’s first Statewide Climate Change Resilience Strategy (Resilience Strategy) which provides a suite of forward-looking policies to promote long-term climate resilience. As a framework for policy, regulatory, and operational changes, the Resilience Strategy presents actions that the State can take to further climate resilience in our communities, economy, and infrastructure. The Resilience Strategy includes recommended actions across six priority areas: (1) building resilient and healthy communities, (2) strengthening ecosystem resilience, (3) promoting coordinated governance, (4) investing in information and education, (5) ensuring informed investments and innovative financing to leverage resources, and (6) focus on protecting our precious natural and economic coastal resources.

The Resilience Strategy continues the work of EO 89’s Interagency Council on Climate Resilience (Council), comprised of 22 key state agency and departments, as well as the Governor’s Office, and is of critical importance to the State’s resilience efforts to move toward cross-departmental change. The Council is now working to implement the recommendations in the Resilience Strategy, primarily through the development of issue-specific Resilience Action Plans, which will identify actions for each agency to undertake, both in the short and long term, to increase their resilience and that of the State.

With these planning efforts providing a framework for change, as directed by EO 100 and Administrative Order No. 2020-01 (AO 2020-01), the Department continues to press forward with critical regulatory reforms informed by extensive outreach and conversation with its stakeholders known as New Jersey Protecting Against Climate Threats (NJPACT).

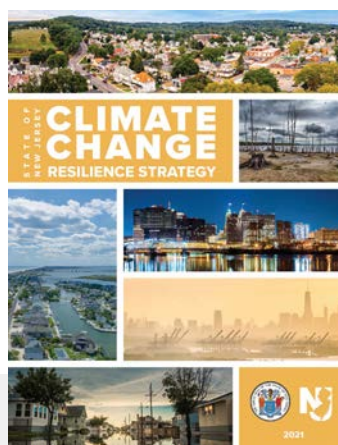
Despite these significant efforts, much work remains to be done.

Accordingly, as required under AO 2020-01, the Department now issues this its NJPACT Strategic Climate Action Plan to guide further reforms and initiatives that promote climate action. This includes looking more broadly across all Department programs and services – their respective policies, procedures, regulations and funding mechanisms – to identify Departmental efforts necessary to meaningfully reduce and respond to the impacts of climate change. These actions are set forth in three different timelines that are reflective of the breadth and scope of the work to be accomplished: (1) short term (1-2 years or as otherwise specified); (2) medium term (2-4 years); and (3) long term (4+ years).

The Department recognizes that it alone cannot affect the structural, economic, and societal changes necessary to reduce the worsening effects of climate change. Rather, meeting the State’s climate goals requires deliberate and coordinated action by all levels of government, economic sectors, communities, and individuals. Therefore, as appropriate, the Department has identified and intends to offer its full support to its key partners in these efforts, providing assistance, guidance, and leadership wherever and in whatever form necessary to ensure the protection of our shared future.



New Jersey's Global Warming Response Act 80x50 Report



Statewide Climate Change Resilience Strategy



New Jersey Protecting Against Climate Threats Regulatory Initiative

4. ROAD TO 80X50



New Jersey must continue to advance an aggressive climate pollutant reduction strategy as it pursues the State's 50x30 and 80x50 climate goals. Such state leadership is especially critical given limitation upon the Federal government's ability to effectively regulate and reduce greenhouse gas emissions in an efficient national manner.

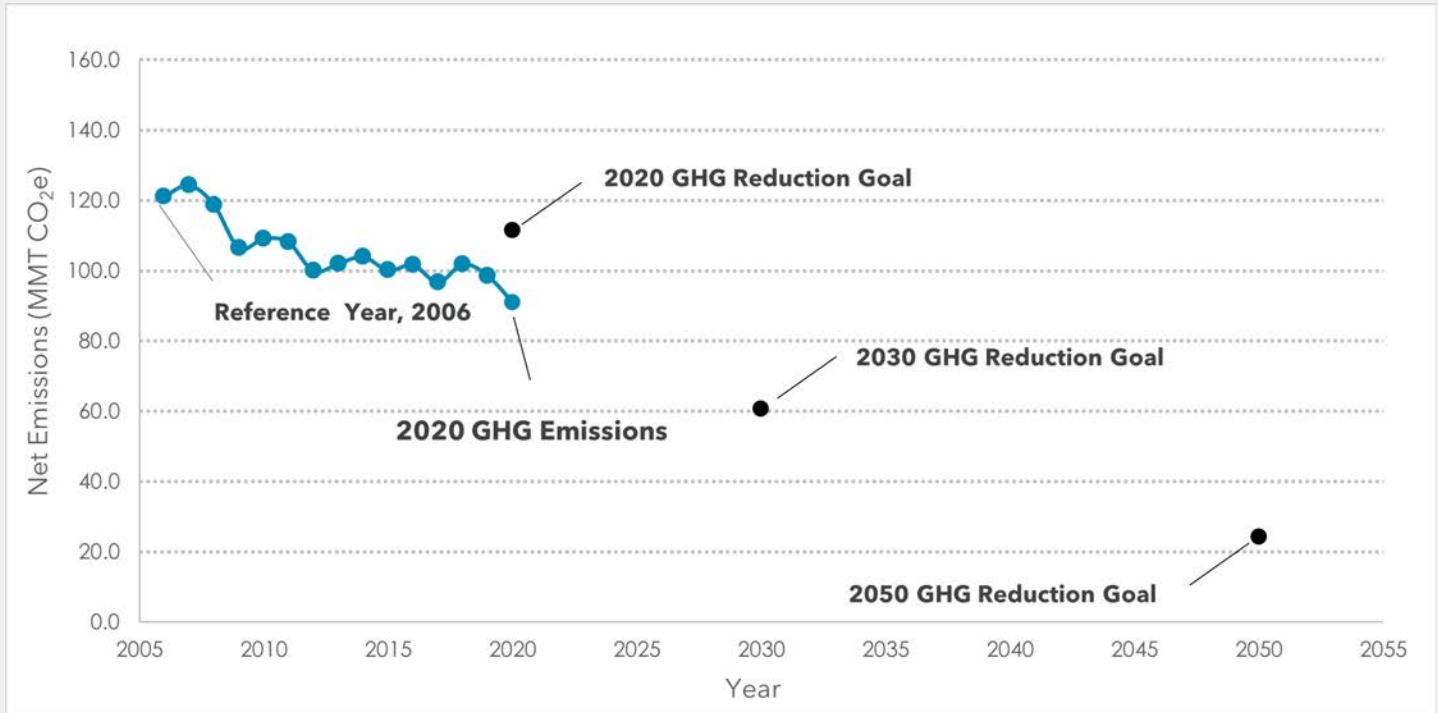
Expressed using the metric of carbon dioxide (CO₂) equivalent (CO₂e), in 2006, New Jersey's net emissions totaled 121.1 million metric tons (MMT) CO₂e, therefore setting the 50x30 goal as 60.6 MMT CO₂e and the 80x50 goal at 24.2 MMT CO₂e.¹⁰

The Department recognizes it cannot meet the State's emission reduction goals through environmental regulation alone. Addressing the State's two primary emissions sectors, transportation and buildings requires broader, coordinated policy and regulatory action across several State agencies, including, among others, the BPU, the Department of Transportation (DOT), the Motor Vehicle Commission (MVC), and the Department of Community Affairs (DCA). For its initial part, however, the Department has pursued aggressive regulatory action through the first phase of its Climate Pollutant Reduction reforms (CPR 1.0), a part of the larger New Jersey Protecting Against Climate Threats (NJPACT) initiative directed by Executive Order 100.

¹⁰ CO₂e is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO₂e signifies the amount of carbon dioxide CO₂ which would have the equivalent global warming impact, based on their relative global warming potential (GWP). See 80x50 Report, at p. 4, <https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf> 2019 Energy Master Plan: Pathway to 2050, at p. 22, https://nj.gov/emp/docs/pdf/2020_NJBPU_EMP.pdf (2019 EMP)

¹¹ NJDEP. 2022 New Jersey Greenhouse Gas Emissions Inventory Report Years 1990-2019. https://dep.nj.gov/wp-content/uploads/ghg/2022-ghg-inventory-report_final-1.pdf

Figure 4: New Jersey Emissions and Greenhouse Gas Reduction Goals¹¹



CPR 1.0 included:

- Incorporation of California’s Advanced Clean Truck rules which set standards for the manufacture of certain zero emission commercial vehicles. **Adopted: 11/01/21.**
- New Greenhouse Gas Reporting Rule to better inventory significant sources of greenhouse gas (GHG) emissions and monitor progress towards the State’s emission reduction goals, including closing reporting gaps on HFCs and natural gas distribution and service lines. **Adopted: 4/22/22.**
- Regulations to set declining CO₂ emissions limits for electric generating units and end the in-State use of certain heavy fuel oils. **Adopted: 12/6/22.**
- Incorporation of California standards to address mobile cargo handling equipment at ports and railyards by requiring diesel mobile cargo handling equipment to apply best available control technology to reduce localized nitrogen oxide (NO_x) and particulate matter (PM) emissions. **Adopted: 12/29/22.**
- Incorporation of California’s NO_x emission standards for medium- and heavy-duty vehicles and inspection requirements for medium-duty vehicles. **Adopted 4/21/23.**

Following the completion of the initial phase of CPR regulatory reforms, and as described further herein, the Department is continuing the evolution of its greenhouse gas reduction efforts through the development of a second phase (CPR 2.0) that will seek to join nationwide efforts to implement regulations to further increase electric vehicle sales, implement appliance and equipment efficiency standards, address climate-influenced degradation of air quality from consumer products, better align policy and permitting decisions with the State’s emission reduction goals, and evaluate additional regulatory proposals related to electrification of large fleets, cargo handling equipment and harbor craft.

Taken together, when CPR is fully implemented, the Department expects avoided CO₂ emissions to be approximately 3 MMT per year with simultaneous reductions of significant co-pollutants such as NO_x and PM_{2.5}.

¹¹ NJDEP. 2022 New Jersey Greenhouse Gas Emissions Inventory Report Years 1990-2019. https://dep.nj.gov/wp-content/uploads/ghg/2022-ghg-inventory-report_final-1.pdf

4.1 THOUGHT LEADERSHIP

As evident from the Energy Master Plan and the 80x50 Report, the State will meet its greenhouse gas emissions reduction goals only if all levels of government, economic sectors, communities, and individuals act together. In the 80x50 Report, the Department outlined various strategies for the executive and legislative branches to implement, given the limitations of existing programs and laws, across eight distinct emissions sectors to assist policymakers in crafting new initiatives to bridge the resulting emissions reductions gap, with specific focus on the three sectors that represent the largest sources of greenhouse gas emissions – electric generation (transition from fossil to renewable fuels, reduction in demand), transportation (large-scale vehicle electrification and vehicle miles traveled (VMT) reduction), and buildings (electrification and transition away from oil, propane, and natural gas for heating and cooling). Reducing greenhouse gas emissions will also have co-benefits of reducing pollutants such as particulate matter and ozone precursors, resulting in improved air quality throughout the State and in overburdened communities.

On January 20, 2023, Governor Murphy announced the commencement of planning for the development of updates to the EMP for release in 2024. This updated EMP will reflect the State’s updated climate goals and the impacts of recent state and federal policies that will help accelerate the state’s transition to a 100% clean energy economy while providing a progress assessment. The 2024 EMP will also identify how federal funding and new federal programs for clean energy and carbon reduction through the federal Infrastructure Investment and Jobs Act (a/k/a Bipartisan Infrastructure Law) and the federal Inflation Reduction Act will support New Jersey’s transition to 100% clean energy by 2050, 50% greenhouse gas emissions reduction by 2030, and 80% greenhouse gas emissions reduction by 2050.

Rather than repeat the recommendations here, the Department outlines specific actions it intends to undertake to further the goals of the 80x50 Report and the interim 50x30 goal.

“As evident from the Energy Master Plan and the 80x50 Report, the State will meet its greenhouse gas emissions reduction goals only if all levels of government, economic sectors, communities, and individuals act together.”

4.2 POLICY DEVELOPMENT & INCENTIVES

4.2.1 SUPPORT COORDINATED GWRA IMPLEMENTATION

Implementation of the economy wide recommendations for achieving the State’s twin goals of 80% reduction of greenhouse gas emissions and 100% clean energy as outlined in the GWRA 80x50 Report and the EMP, respectively, requires coordinated action across government agencies and stakeholders to implement necessary legislative, regulatory and policy initiatives. The Department will continue to dedicate its resources to broadly supporting clean energy and emissions reductions efforts across all levels of government and social and economic sectors.

Lead program: Air, Energy & Materials Sustainability (AEMS)

4.2.2 MONITOR PROGRESS TOWARDS 50X30 AND 80X50 GHG REDUCTION GOALS

We cannot change what we do not measure. Achieving the state’s greenhouse gas reduction goals calls for continual measurement of the State’s greenhouse gas emissions and tracking the efficacy of its implementation endeavors. The Department is tasked with routinely monitoring and keeping all agency efforts on track to achieve the State’s 50x30 and 80x50 GHG reduction goals. Accordingly, the Department is actively developing a series of reports, public information resources and metrics to fully account for state actions and its progress in combating climate change, including fully considering and assessing the impacts and policy considerations of greenhouse gas reduction measurement on a twenty (20) year time horizon.

In addition, OCAGE will direct a collaborative effort led by the Department, to develop guidance for state agencies to incorporate Social Cost of Carbon (SCC) calculations into internal decision-making processes.

Integration of SCC will happen incrementally over five years, beginning with reporting SCC publicly on a limited number of decision-making processes across each agency, and culminating in including SCC as a weighted factor in most major state agency decision-making processes. A collaborative, agency-specific timeline for the integration of SCC will be created as part of the Department’s ongoing technical assistance with agency partners.

Milestones and Targets:

Update the GWRA 80x50 Report to outline progress towards emissions reductions goals.	Short-term
Issue annual Greenhouse Gas (GHG) Inventory Report.	Short-term, ongoing
Release new GHG webpages.	Short-term
Develop a GHG dashboard showing the cumulative expected reductions from the State’s GHG reduction efforts.	Short-term
Develop sector-specific webpages tracking implementation.	Short-term
Develop SCC guidance for State agencies	Short-term
Continue participation in the United States Climate Alliance to stay abreast of state, national, and global policy development.	Ongoing

Lead program: AEMS

4.2.2.1 GHG Inventory and Progress Reports

The greenhouse gas emissions inventory report provides critical data about emissions in New Jersey and determines which sectors are disproportionately contributing to the State’s total emissions. However, emissions numbers are not enough for the State to evaluate its progress. Other key performance indicators (such as registered electric vehicles, number of solar installations and adoption of heat pumps) are necessary to better understand the performance of the State’s greenhouse gas emissions reduction policies. This will be especially important in the interim years when policies and programs are newly adopted and not yet at the scale to register as emission reductions. By evaluating more than just greenhouse gas emissions, policy makers can also consider other metrics to help them make critical adjustments to achieve the State’s strategic goals.

See Department’s most recent GHG Inventory: <https://dep.nj.gov/ghg/nj-ghg-inventory/>.

The Department will:

Develop other key performance indicators to report on progress towards its emissions reduction goals.	Short-term
Continue to release an annual inventory report.	Short-term, ongoing
Explore other communication tools and formats to share up to date information with policy makers, to enable adaptive management of mitigation policy.	Medium-term

The Department also adopted monitoring and reporting rules for certain emissions of methane and halogenated gases, which are short-lived climate pollutants. Short-lived climate pollutants do not remain in the atmosphere as long as other greenhouse gases but are potent climate forcers with global warming potentials tens to thousands of times greater than that of CO2. The Department will evaluate the information collected for potential further action to reduce methane and halogenated gas emissions from reporting sources. The Department will also continue to work with the United States Climate Alliance on actions and studies to address halogenated gas emissions, specifically HFCs, monitor Federal actions to implement the American Innovation and Manufacturing (AIM) Act, and support Federal actions to regulate and phase-out HFCs.

Lead program: AEMS

4.2.2.2 Collaborate to Update RGGI Strategic Funding Plan

New Jersey became a participating state in the Regional Greenhouse Gas Initiative (RGGI) in 2020. RGGI is a multi-state, market-based program that establishes a regional cap on CO2 emissions from fossil fuel-fired power plants. The Department’s CO2 Budget Trading Program rules require fossil fuel-fired power plants with a capacity greater than 25 MW to obtain an allowance for each ton of CO2 emitted annually. Most of these allowances are distributed through quarterly, regional CO2 allowance auctions.

New Jersey has realized over \$410 million dollars in revenue due to its participation. To ensure the efficient investment of these auction proceeds, and in accordance with N.J.A.C. 7:27D, the Department, in partnership with the Economic Development Authority and the Board of Public Utilities (BPU), jointly developed a triennial Strategic Funding Plan. The Strategic Funding Plan guides the agencies’ investments in climate action, clean energy, and equity. It serves as a common climate agenda for the agencies, ensuring that each organization is making investments that will support the State’s broader climate mitigation efforts.

The Department will:

Spearhead the development programs that support initiatives identified in the Regional Greenhouse Gas Initiative (RGGI) Strategic Funding Plan (covering years 2023-2025) in partnership with NJBPPU and NJEDA.	Ongoing
Support transparency in the investment of RGGI funding and track greenhouse gas reductions by regularly updating the RGGI Climate Investments Dashboard .	Ongoing
Provide support to agencies and programs investing RGGI funding, to ensure alignment with the Energy Master Plan and the 80x50 Report.	Ongoing
Support climate resilience by tying in the Department’s Natural and Working Lands Strategy.	Ongoing

Lead program: AEMS

4.2.3 BUILDING DECARBONIZATION

Residential and commercial buildings account for 26% of the State’s greenhouse gas emissions. These emissions are largely due to space and water heating. To achieve the 80x50 goal, the building sector must transition to net-zero emissions, which will require a transition away from heat generated by natural gas use to, for example, modern heat pumps. It is estimated that 80% of the buildings that will be around in 2050 already exist today. By 2050, at least 90% of the residential and commercial sectors must be electrified to meet the State’ clean energy and climate goals.



Launched in October 2022, the statewide Clean Buildings Working Group, led by OCAGE and BPU, will develop a building electrification roadmap including recommendations for policy, legislative, workforce, and funding strategies to, as appropriate, further, through incentivizes or otherwise, increased energy efficiency with its sister agencies BPU and the Department of Community Affairs (DCA), which have primary regulatory authority in this area. The Department will support BPU in implementing Clean Energy Act of 2018 benchmarking requirements, while also working with both sister agencies to evaluate viable technologies that would help decarbonize space and water heating systems.

To model actions that individual institutions can undertake, the Department will initiate a “lead by example” program for its own facilities across the State.

4.2.3.1 Lead by Example: Advancing Clean Energy Through Department Assets

State governments can demonstrate energy and environmental leadership, raise public awareness of the benefits of clean energy technology, and reduce greenhouse gas emissions by implementing lead by example programs. Leading by example involves implementing clean energy policies and programs in buildings, facilities, operations, and fleets under government control and represents a key policy tool for states to both directly reduce emissions and demonstrate proofs of concept for others seeking to achieve clean energy and greenhouse gas reduction goals.

The Department will coordinate with the Department of Treasury and BPU’s Office of State Energy Services to implement a Department-wide initiative that evaluates greenhouse gas emissions and reduction strategies for Department owned/leased buildings and lands. This initiative will inform future regulatory actions in the State and serve as a critical step toward a whole-of-government approach for addressing climate change. Tracking emissions reductions from buildings operated by the State will provide greater familiarity with the most effective tools available on the market as well as any technical and economic limitations that arise in the process of retrofitting buildings with energy conservation and renewable energy measures.

To achieve these goals, the Department will:

Fulfill requirements of the Clean Energy Act of 2018 by benchmarking its facilities for energy and water usage.	Short-term
Develop a greenhouse gas inventory for its facilities.	Short-term
Publish website with success stories and resources.	Short-term
Evaluate Department facilities for building electrification pilot projects.	Short-term
Prioritize its facilities for energy efficiency opportunities.	Medium-term
Work with its facility managers to apply for energy audits and implement energy conservation measures and renewable energy .	Medium-term
Prioritize its facilities for Solar PV and EV charging opportunities.	Medium-term
Evaluate procurement options of renewable energy sourced electricity for its facilities.	Medium-term

Lead program: AEMS

4.2.3.2 Support Building Electrification Roadmap

As set forth in the EMP, the BPU will create a roadmap through 2050 to transition buildings from fossil fuels, an effort which the Department will continue to support. See EMP at 169-170 (Goal 4.2.2). The BPU will establish goals and a timeline in the roadmap to first target new construction and electric resistance, oil or propane-fueled buildings for early decarbonization and consider which building use cases are more appropriate candidates for alternative fuels, rather than electrification.

To support BPU in this effort, the Department will:

Provide technical assistance to support the adoption of net-zero carbon goals for new construction of commercial and residential buildings.	Short-term
Assist in the development of incentive programs to subsidize the cost of decarbonizing existing buildings.	Short-term

Provide technical assistance to develop a New Jersey version of the Clean Energy States Alliance Clean Heat and Cooling Calculator. The calculator estimates the greenhouse gas emission savings and the estimated cost savings of investing in clean heating and cooling technology, reflecting available state-wide incentives.	Short-term
Develop a statewide GIS building decarbonization support tool that shows locations of relevant building data and resources to support the development of targeted policy.	Short-term
Develop a Geothermal Heat Pump Baseline Report to support the adoption of systems across the state.	Short-term
Execute a funding partnership with BPU to engage a research consultant with expertise in Geothermal Heat Pump technology to develop training materials for industry participants, educational curriculum to improve public awareness, and technical understanding to support a GIS-based siting tool to improve understanding of market penetration potential and techno-economic feasibility.	Short-term

Lead program: AEMS

4.2.3.3 Support Expanded Energy Efficiency

Energy efficiency is also critical to solving the climate crisis and achieving the State’s clean energy goals. Energy efficiency improvements are firmly established as among the most cost-effective strategies available for reducing fossil fuel consumption and resulting emissions.

To support the BPU in pursuing aggressive energy efficiency policies, the Department will continue to:

Assist BPU in the implementation of Clean Energy Act of 2018 mandates, including (1) measuring and comparing (“benchmarking”) energy and water usage at commercial properties over 25,000 square feet; and (2) ensuring annual reductions of electricity and natural gas usage by utilities (2.15% for electric utilities and 1.10% for gas utilities).	Short-term
Support BPU and DCA in adopting stringent building and energy codes, including appropriate stretch codes.	Short-term
Develop 1 rules to implement and enforce the recently passed Appliance and Equipment Efficiency Standards Law, P.L. 2021, C. 464 (effective 1/23), which establishes minimum efficiency standards for certain products sold, offered for sale, or leased in the State, or installed for compensation in the State and, by 2025 and in consultation with BPU and DCA, complete a study to evaluate the inclusion of additional products and more stringent standards by January 18, 2025.	Short-term, medium-term
Pursue mandated energy audits and implementation of energy conservation measures in Department-owned and -leased State buildings (also see Lead by Example, 4.2.3.1).	Medium-term
Explore feasibility of incentives or requirements that publicly funded construction meet lowest technically feasible emissions, working towards net zero.	Medium-term

Lead program: AEMS

4.2.4 TRANSPORTATION

At 39% transportation represents the largest source of the State’s total greenhouse gas emissions. Gasoline-powered vehicles, specifically, account for 70% of transportation emissions. To achieve the necessary reductions in this sector, the State must transition from fossil fuel-powered to electric vehicles. At the same time, recognizing that fossil fuel-powered vehicles may remain in the interim, the Department will promote key complementary policies including reducing vehicle miles travelled and single-occupancy vehicle trips by increasing mass transit ridership, incentivizing work-from-home programs and flexible work weeks, and continuing to explore equitable regional partnerships and strategies to reduce emissions.

George Washington Bridge



“At 39%, transportation represents the largest source of the State’s total greenhouse gas emissions.”

4.2.4.1 Inter-Agency Collaboration to Drive Increased Adoption of Electric Vehicles

The State has several transportation electrification goals identified in the 80x50 Report and through a separate Memorandum of Understanding with other signatory states and the District of Columbia. First, the State has a goal of achieving 100% light duty (Class 1 & 2) plug-in electric vehicle (PEV) sales by 2035. This means New Jersey will need an estimated 4.5 million light-duty PEVs on the road in 2035, representing 73% of all registered light duty vehicles. As of December 2022, the number of light-duty EVs registered in New Jersey is 91,515, compared to 64,307 the previous year - a greater than 25% growth rate. EVs were also nearly 8% of new vehicle sales which is an important milestone indicating the beginnings of mass societal adoption of this critical technology. Second, the State also has a medium - and heavy-duty (MHD) goal of 30% electric MHD sales in 2030 and 100% in 2050, which means New Jersey will need 118,000 MHD PEVs on the road in 2035, representing 24% of all registered MHD vehicles.

To meet these goals and transition the transportation sector, the State must continue to develop sufficient EV charging/fueling infrastructure, conduct appropriate education and outreach, and provide appropriate incentives through funding and grant programs. One example of this approach is the Department’s work with the Northeast States for Coordinated Air Use Management (NESCAUM), a non-profit association of 8 northeastern states, to finalize a multi-state zero-emission medium- and heavy-duty vehicle action plan.

To achieve these goals, the Department will:

Work with Treasury to develop both a standing State contract to enable the installation of electric vehicle chargers at State properties and a State fleet transition plan to ensure the maximum number of state vehicle purchases are electric, taking advantage of the State’s purchasing power to influence electric vehicle adoption and markets.	Short-term
In accordance with the Electric Vehicle Law, N.J.S.A. 48:25-1, develop goals for vehicle electrification and infrastructure development that address medium-duty and heavy-duty on-road diesel vehicles.	Short-term
Continue to develop and enhance public awareness and education by publicizing available transportation electrification resources through its “Drive Green” website (https://www.drivegreen.nj.gov), participate in the regional “Drive Change. Drive Electric” consumer awareness campaign, develop a State-specific consumer awareness campaign as required by the EV Law, pursue partnerships with car dealerships, and promote EV “Ride and Drive” events.	Short-term, Ongoing

Continue to implement Administrative Order 2021-05, establishing the Department’s policy to only purchase the most fuel-efficient vehicles possible, including purchasing combustion engine vehicles only where strictly necessary, and requiring the deployment of necessary EV charging infrastructure as well as the development of plans to deploy charging infrastructure on State-owned lands and at workplace facilities.	Short-term, Ongoing
Support the NJZIP truck voucher program administered by EDA and continue to identify and provide funding to electrify medium and heavy vehicles.	Short-term, Ongoing
Continue developing strategies and financial incentives to ensure all communities have access to clean transportation through electric ride sharing and ride hailing, (www.drivegreen.nj.gov/emobility).	Short-term, Ongoing
In coordination with agency partners (BPU/EDA/DOT), continue focused investment of available resources (e.g., National Electric Vehicle Infrastructure Formula Program, Infrastructure Investment and Jobs Act, New Jersey Clean Energy Program, It Pay\$ to Plug In program) and explore public-private partnerships to build charging infrastructure and incentivize electric vehicle adoption and transition.	Short-term, Medium-term
Work with DCA and legislative partners to update building codes to ensure adoption of the most progressive standards including those requiring new buildings to be “EV ready” which will lower barriers and costs of adoption for new EV users.	Medium-term

Lead program: AEMS

4.2.4.2 Regulatory Reforms

As part of the CPR 2.0 rulemaking, the Department will:

Proposal and adoption of the California Air Resources Board’s (CARB) recently proposed Advanced Clean Cars II (ACC II) regulations for model years 2026-2035 passenger and light truck vehicles which will increase the ZEV sales requirement to 100% by 2035.	Short-term
Evaluate the recently submitted Advanced Clean Truck fleet reports and monitor CARB’s Advanced Clean Fleets rule which would complement the Advanced Clean Truck rules adopted in December 2021. The Advanced Clean Fleets rule would require fleets to purchase the electric trucks that manufacturers are required to deliver as part of the Advanced Clean Trucks rule.	Short-term

Lead program: AEMS

4.2.4.3 Support Exploration of Complementary Reductions in VMT

Reducing consumption is another key component to reducing emissions. In the transportation sector, this includes reducing vehicle miles traveled (VMT). Amidst the challenges and difficulties of recent years due to the COVID-19 pandemic, the State has shown that institutions and businesses can successfully integrate remote work programs while maintaining productivity and providing demonstrable, immediate, and significant emissions reductions. Due to technical, financial, and practical limitations, it is not currently feasible to replace every fossil fuel-powered vehicle with electric. The Department therefore must evaluate and encourage additional methods of reducing VMT.

Accordingly, the Department will:

Engage stakeholders on potential regulatory amendments of its land management rules to encourage transit villages, transit-oriented development and other innovative VMT reduction strategies.	Short-term
Coordinate with its sister agencies to develop joint recommendations for sustainable funding mechanisms to replace fuel tax revenues currently used to maintain transportation infrastructure.	Short-term
Implement flexible work schedules in accordance with State policy.	Ongoing

Update the 80x50 Report to reflect a deeper consideration of VMT reduction strategies. Ongoing

Wherever possible, incorporate consideration of VMT reduction strategies into all comprehensive planning efforts, including watershed, resilience, open space, and healthy community planning. Ongoing

Lead program: AEMS

4.2.5 ENERGY TRANSITION

Electric generation is arguably the sector most advanced on the path to decarbonization. From a level of 34.1 MMT CO₂e in 2005, emissions have dropped steadily and reached 18.7 MMT CO₂e by 2020. While consideration of economic factors, such as the availability of low-cost natural gas and renewable energy, was one cause of this transition to lower-emitting generation, government policy has also played an important role. As such, the Department will continue to assist in expanding renewable energy, including solar photovoltaic (solar PV), offshore wind, green hydrogen, and other emerging clean energy technologies. Currently, New Jersey has the highest offshore wind goal in the nation, 11 GW by 2040. The Department is coordinating closely with offshore wind developers, the Bureau of Ocean Energy Management (BOEM), as well as other federal agencies, NJBPU, and NJEDA to ensure that the State’s goal is met, and natural resources are protected.

The EMP and the 80x50 Report recognize the State will continue to need fossil fuels as part of the State’s energy mix and electric generation. Ultimately, the goal is to achieve a 100% clean electric generation section, with emissions totaling zero by 2050.



“...NJDEP reexamined its guiding authorities in an effort to develop a consistent, flexible approach to solar developments.”

To continue towards this goal, the Department will:

Support OCAGE in efforts to secure federal funding towards the development of a regional hydrogen hub. Short-term

Continue to explore options for fossil fuel fired EGUs to build out alternative electric generating technologies and thereby reduce their overall emissions. Potential rules would be designed to provide appropriate flexibility to align with the growth of the State’s clean energy capacity. Ongoing

Explore legislative, regulatory, funding and administrative avenues to, as appropriate, require certain defined activities that directly increase greenhouse gas emissions to evaluate project consistency with the State’s clean energy and emissions reductions goals, including analysis of appropriate alternatives, mitigation measures and necessary justifications. Ongoing

Continue to implement the objectives of the 2019 Energy Master Plan and the 80x50 report and provide updated guidance and planning to the Governor and Legislature with subsequent GWRA reports and by partnering with BPU in developing its next Energy Master Plan.	Ongoing
Promote the objectives of RGGI, including support for partner agencies and investment in climate-supportive projects.	Ongoing
Provide the public and stakeholder communities with information and resources to promote equitable, fair, affordable, and convenient participation in the energy transition.	Ongoing
Continue to support the environmentally responsible development of the offshore wind industry by ensuring that windfarms and infrastructure; supply chain and manufacturing facilities; offshore wind transmission; and other support facilities; are planned and built in a way that avoids and minimizes impacts to natural resources.	Ongoing

Lead program: AEMS

4.2.5.1 Support Solar Development Through Improved Siting Guidance & Policy

To achieve the state’s clean energy and greenhouse gas emission reduction goals, the State must exponentially increase its solar PV installations. At the end of 2022, New Jersey exceeded 4 GW of installed solar PV capacity from over 169,000 installed systems. By 2050, New Jersey will need to increase installations to 32 GW of solar capacity. To better support solar development, the Legislature passed, and Governor Murphy signed, the Solar Act of 2021 which directs the BPU to enact sweeping changes to its programs incentivizing the construction of solar powered generation facilities to serve New Jersey customers. The Solar Act further directed BPU, NJ Department of Agriculture (NJDA) and the Department to work collaboratively to develop solar siting rules to guide solar development in a manner that facilitates the State’s commitment to affordable, clean, and renewable energy while minimizing, as much as is practicable, potential adverse environmental impacts and establishing a preference for development in the built environment (including expanded eligibility for contaminated sites and landfills). The Act specifies that the goal of the new incentive structures is to enable development of at least 3,750 megawatts of new solar power generation by 2026.

Accordingly, NJDEP reexamined its guiding authorities in an effort to develop a consistent, flexible approach to solar development. In doing so, NJDEP has developed siting guidance, adjusted policy positions, worked to streamline processes, looked inward for opportunities to lead by example, and assessed further opportunities for improvement. Taken together, each of these actions further NJDEP’s overarching policy to promote appropriate flexibility in its regulatory application to maximize opportunities for solar development throughout the state while ensuring activities are protective of human health and the environment, particularly on landfills and contaminated sites with NJDEP seeing significant opportunities to incentivize public-private partnerships in achieving complimentary solar and remediation goals. Critical to this effort are clear and transparent solar project siting guidelines that apply across the State and a complementary mapping tool that allows users to quickly and reliably identify areas best suited for solar development.

Continue to partner with BPU to support the success of the permanent Community Solar Energy Program by providing technical input on the straw proposal as well as developing a new/revised GIS Community Solar Siting Tool.	Short-term
Reform its internal review and evaluation procedures to conform with the updated eligibility criteria of the Solar Act and streamline internal review processes to ensure timely recommendations to BPU.	Short-term
Issue updated solar policy implementing reforms across programs.	Short-term
Update its 2017 Solar Siting Analysis tool to incorporate numerous datasets and align with statutory eligibility criteria to support the expansion of solar in New Jersey while protecting open and green space to the greatest extent possible.	Short-term

Explore complementary reforms in its land resource protection rules to further incentivize solar development in preferred areas, including contaminated sites, landfills, rooftops, and parking lots.	Short-term
Continue to streamline the internal solar project review process.	Short-term
Interface with Department of Treasury on Solar PPA process to ensure compatibility with installation of solar PV on Department assets.	Short-term

Lead program: AEMS

4.2.5.2 Assist in Evaluation of Clean Energy Utilization Options

Beyond dramatically expanding renewable energy and distributed energy resources, the State will also need to limit reliance on fossil fuel powered EGUs while, as called for by the EMP, concurrently working to maintain nuclear capacity and adapt existing infrastructure to accommodate distributed renewable energy and increasing electricity demand to achieve the EMP’s least cost scenario.

The Department will:

Conduct a study of potential biomass sources available to New Jersey and estimate biogas required for meeting electric generation demand by 2050.	Short-term
Evaluate options for “clean firm” dispatchable generation, including biogas-fired turbines, renewable energy-powered or hydrogen-powered fuel cells and other emerging technologies.	Short-term
Evaluate opportunities for biomass-to-energy and other projects, including electricity generation, based on source-separated food waste and anaerobic treatment technologies, as identified in 2019 EMP least cost scenario for 2040 and later implementation.	Medium-term

Lead program: AEMS

4.2.6 OTHER SOURCES & SECTORS

While the Department categorized its work according to different sectors, there is, of course, overlap. For example, electrifying the transportation sector will reduce black carbon emissions yet potential increases in emissions from the electric power generation sector must be accounted for as demand is expected to double as a result of large-scale transitions in transportation and other sectors.

Accordingly, the Department will also explore strategies and regulatory options to reduce emissions from landfill and wastewater treatment plant sources – targeting emission of methane (a highly warming gas) – as well as the industrial sector.

4.2.6.1 Industrial Sector

Industry is considered one of the harder-to-abate emissions sectors. Industrial processes vary immensely and are technically difficult to decarbonize. Few scalable methods exist today for generating the large quantities of high temperature heat required for many processes, other than burning fossil fuels and using process gases – both of which are emissions-intensive.

In New Jersey, industrial emissions account for 7% of New Jersey’s GHG emissions. Therefore, staying up to date on the latest emission reduction technologies and approaches for the industrial sector, with an initial focus on energy efficiency, is necessary to reduce emissions from this sector.

In addition to GHG reductions, anticipated outcomes could include reduced co-pollutant emissions and water discharges containing toxic chemicals, reduced solid waste generation and improvements to environmental and public health conditions in overburdened communities where many manufacturing operations exist.



“In New Jersey, industrial emissions account for 7% of New Jersey’s GHG emissions.”

Linden, NJ

The Department will:

Incentivize New Jersey food manufacturers to engage in energy benchmarking and pollution prevention opportunities, especially within the dairy manufacturing, animal processing, and fragrance and flavors sectors.	Short-term
Advise GO on the feasibility and regulatory considerations for projects in the DOE Hydrogen Hubs proposal.	Short-term
Participate in the United States Climate Alliance Industrial Decarbonization Workgroup. This workgroup facilitates peer-to-peer exchange among states, identifies and shares best practices, and develops technical documents and resources to assist state efforts.	Short-term, ongoing
As part of the Department’s Small Business Assistance Program (SBAP), continue to provide technical support and compliance assistance to industrial businesses in the State, at no cost for businesses with 100 or fewer employees. The SBAP services include: environmental and energy evaluations at participating facilities; recommending measures to improve a facility’s environmental and energy performance; and providing cost/benefit analysis of recommended measures improving environmental and energy performance.	Short-term, ongoing
Continue to research and evaluate technologies and practices to decarbonize industrial processes and inform regulatory options.	Ongoing
Continue to develop additional innovative methods to work with industry to increase education, awareness and adoption of broad sustainability practices.	Ongoing

Lead program: AEMS

4.2.6.2 Ozone Attainment

The State has shown significant improvements in tropospheric ozone air quality by addressing contributions from transportation and electric generation by reducing ozone precursors nitrogen oxides (NOx) and volatile organic compounds (VOCs). Because of these actions, ambient air monitors throughout NJ are measuring at or below the Federal standards (attainment). However, New Jersey is part of two regional airsheds, referred to as nonattainment areas, that include portions of other nearby states that do not have monitors measuring attainment. Recently, the US Environmental Protection Agency reclassified New Jersey's northern and southern non-attainment areas due largely to regional influences from emissions from large upwind industries. Although New Jersey is measuring attainment based on the form of the federal standards, our State still experiences days when elevated air quality levels could have a health impact on our citizens. As our climate continues to warm, the State will be further threatened with degradation of air quality, particularly ozone, and therefore must take additional, targeted steps to reduce tropospheric ozone to ensure the State will maintain its attainment, reduce the number and extent of unhealthy air quality days to protect public health, and further reduce impacts on the nearby states in our shared nonattainment area. Tropospheric ozone itself is also considered an important greenhouse gas.

Most immediately, this includes continuing to reduce VOCs from consumer products and architectural and industrial maintenance coatings, which represent the largest source of VOC emissions in the State's emission inventory. The Ozone Transport Commission (OTC), with New Jersey's input, developed model rules to reduce VOC emissions from these products. The Department is in the process of proposing regulations based on the OTC model rules and stakeholder outreach conducted prior to the initiation of rulemaking. The rule amendments will assist the State in attaining and maintaining the ozone NAAQS by lowering the VOC limits in certain categories of products, incorporating VOC limits in certain new categories, and eliminating other categories.

The Department will:

Propose rules based on the 2010 OTC model rule for architectural and industrial maintenance coatings.	Short-term
Propose rules based on the OTC model rule Phases III and IV for consumer products.	Short-term
Explore additional regulatory and policy reforms to further reduce ozone and its precursors.	Short-term

Lead program: AEMS

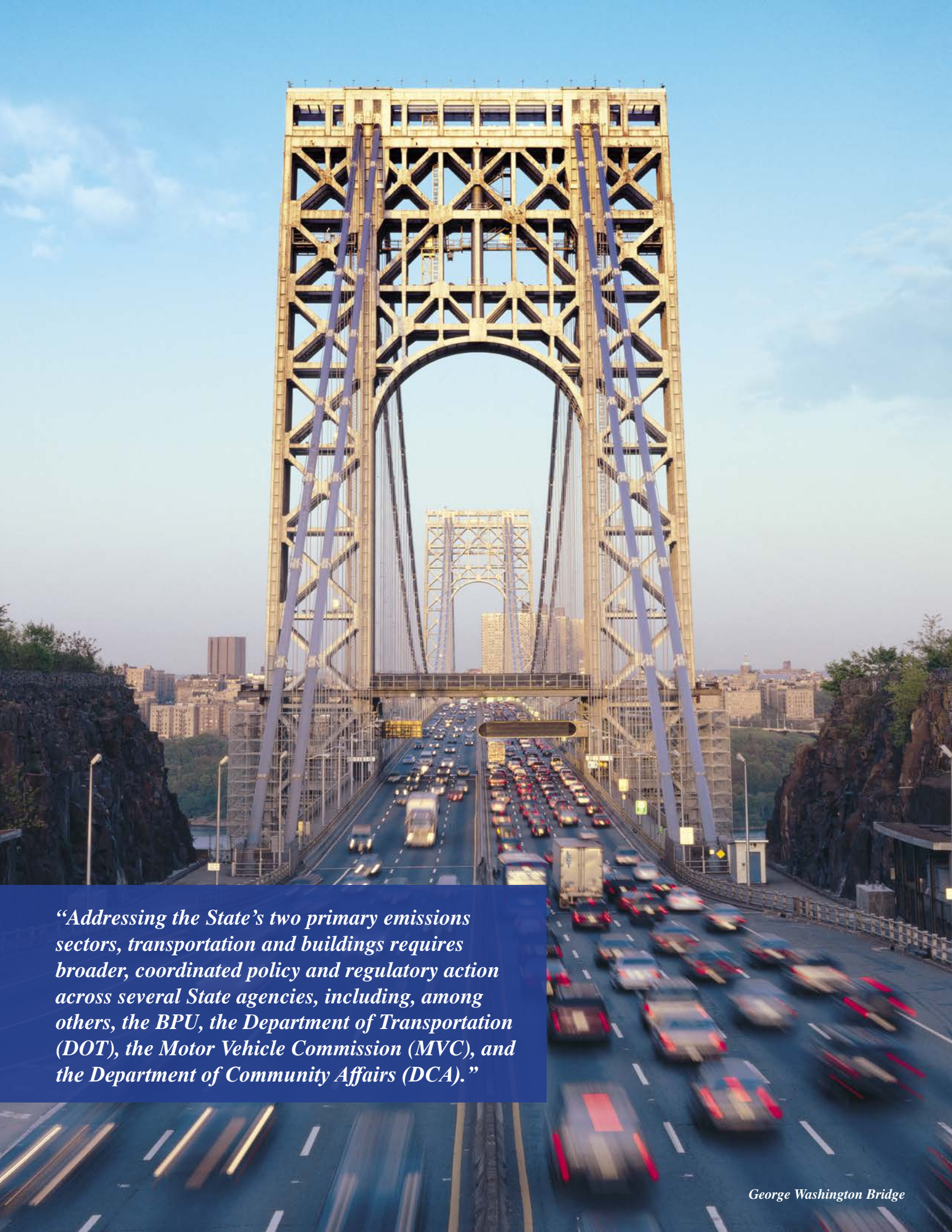
4.2.6.3 Landfills & Wastewater Treatment Facilities

Waste management – including landfills and wastewater treatment facilities – is the largest source of non-energy greenhouse gas emissions in the State (5.3 MMT CO₂e). The composition of landfill gas varies greatly depending on the makeup of the waste. Typically, the State's landfill gas consists of equal amounts of methane and CO₂ with trace amounts of hydrogen sulfide, siloxanes, and moisture. Wastewater treatment facilities are also a notable source of methane and CO₂. Emissions from the wastewater management sector alone would comprise more than 25% of the State's total 80x50 goal if left unchecked.

The Department will:

Engage stakeholders to discuss potential avenues for improvement.	Medium-term
Propose and adopt necessary regulatory reforms.	Medium-term, Long-term, Ongoing

Lead program: AEMS



“Addressing the State’s two primary emissions sectors, transportation and buildings requires broader, coordinated policy and regulatory action across several State agencies, including, among others, the BPU, the Department of Transportation (DOT), the Motor Vehicle Commission (MVC), and the Department of Community Affairs (DCA).”



5. RESILIENCE





Brigantine, NJ

Just as the State’s clean energy transition and climate pollutant reduction strategies are critical to abate the worst climate changes, the State also must adapt to current and likely future adverse climate impacts. The State is already facing increased intensity and frequency of extreme precipitation and associated flooding, stronger hurricanes, and extreme heat. These impacts are especially challenging for low-income and marginalized communities, where vulnerability to these impacts is exacerbated by historical disinvestment, which hinders both preparation and recovery. New Jersey’s critical ecosystems are also facing climate impacts that threaten their health and longevity, including shifts in species’ habitat ranges, increased erosion and drowning of tidal wetlands, and saltwater encroachment on our forests due to sea-level rise. Investing in and incorporating resilience into our infrastructure and ecosystems today will better prepare us for the effects of climate change in the future – reducing the burden of disaster recovery on New Jersey families and preserving New Jersey’s natural landscapes and vibrant communities for generations to come.

5.1 THOUGHT LEADERSHIP

In October 2019, Governor Phil Murphy signed Executive Order (EO) No. 89, which initiated several climate resilience programs and initiatives throughout the Department. EO 89 established the position of the State Chief Climate Resilience Officer (CRO) to oversee and provide recommendations on the Department’s policies, programs, and strategies related to climate resilience. In October 2021, the CRO and the Interagency Council on Climate Resilience (IAC) released the inaugural, Statewide Climate Change Resilience Strategy (Resilience Strategy), as directed under EO 89. The Resilience Strategy details over a hundred recommendations for building programs and policies that promote climate resilience throughout the State.

The actions listed in this section reflect and build on the Resilience Strategy by integrating



Governor Phil Murphy (center) signed an executive order to establish a statewide Climate Change Resilience Strategy on October 29, 2019 (Edwin J. Torres/Governor's Office).

and expanding resilience actions across existing Department programs and policies as well as create new initiatives that fill programmatic gaps in the State's climate resilience efforts. Although many of these actions will be led by the CRO, interdepartmental coordination will be critical to achieving equitable resilience in all aspects of the Department's work, from permitting and planning to funding and technical assistance.

5.2 POLICY DEVELOPMENT & INCENTIVES

5.2.1 REGULATORY REFORMS

The Department will propose the first phase of the NJ Protecting Against Climate Threats – Resilient Environments and Landscapes (REAL 1.0) rule changes include amendments to the Flood Hazard Area Control Act Rules (N.J.A.C. 7:13), the Freshwater Wetlands Protection Act Rules N.J.A.C. 7:7A), the Coastal Zone Management Rules (N.J.A.C. 7:7) and the Stormwater Management rules (N.J.A.C. 7:8). These rules will enable government, business, and residents to effectively respond to current and future climate threats, such as sea-level rise, extreme weather, and chronic flooding, through a targeted regulatory reform that will modernize the land use rules and will be undertaken in two steps.

First, in response to a pattern of increasingly intense rainfall events (which culminated with the remnants of Tropical Storm Ida), the Department will propose its Inland Flooding Rule to update the decades-old, insufficiently protective precipitation data that forms the basis of its flood hazard and stormwater regulatory standards to reflect the results of the New Jersey-specific current and future precipitation data. This ensures that new investments are better positioned to withstand present and future conditions over their useful life at modest marginal cost.

Subsequently, the Department will continue this effort through the proposal of its Coastal Flooding Rule designed to further modernize the land use rules and focus on increased resilience throughout the State with amendments focused on incorporation of projected 5-feet of sea-level rise and inundation risk, better protection of critical facilities and incentivizing of climate planning, resilience efforts, and renewable energy deployment.

Taken together, these changes will facilitate the building of resilient communities by avoiding flood prone areas, reestablishing chronically inundated wetlands, revegetating riparian areas, and encouraging green building and infrastructure.

Milestones and Targets:

Propose and adopt Inland Flooding Rules.	Short-term
Proposed and adopt Coastal Flooding Rules.	Short-term

REAL 2.0 will explore additional regulatory adjustments to build upon the amendments made under REAL 1.0 to ensure alignment of the Department’s flood resilience standards across all programs (remediation, planning, funding, solid waste, water resources) as well as implementing appropriate amendments to better focus on watershed-based regulation to protect water quality and alleviate existing conditions that exacerbate flooding, transit-oriented development, removing barriers to environmentally-sustainable renewable energy development, and further adjustments that may be necessary to facilitate the State’s clean energy transition. The Department will also explore additional mechanisms for ensuring coastal resilience such as coastal buffer zones, taking a more wholistic approach to beach, bluff and dune protection that will be critical to shoreline resilience.

Milestones and Targets:

Identify regulatory NJPACT 2.0 amendments.	Short-term
Stakeholder engagement to gather input on conceptual list of amendments.	Short-term
Propose NJPACT – REAL 2.0.	Short-term
Adopt rule amendments.	Short-term

Lead program: Watershed & Land Management Program (WLM)

5.2.2 COORDINATION, GUIDANCE & COMMUNICATION

5.2.2.1 Facilitate Action by the Interagency Council on Climate Resilience (IAC)

Pursuant to EO 89, the IAC is a body of State Agency representatives charged with coordinating the efforts of Executive Branch agencies to develop and implement the Resilience Strategy. The IAC will continue to collaborate on broad resilience efforts and develop initiatives to inform local governments, stakeholders, and the public to promote statewide resilience. Thus far, the IAC has successfully developed a template, guidance, and public engagement process for issue-specific Resilience Action Plans to implement the Resilience Strategy for each agency.

The Department will:

In collaboration with the IAC, develop resilience-related funding criteria for consideration across all relevant agencies.	Short-term
Facilitate an active IAC seeking to advance statewide resilience efforts	Ongoing

Lead program: CRO

5.2.2.2 Update the Statewide Climate Change Resilience Strategy

The first iteration of the Resilience Strategy serves as a baseline for state agency action and is required under EO 89 to be updated every two years to keep up with developing science and the status and progress of State priorities. To affect these updates, the CRO and IAC will prepare issue-specific Resilience Action Plans, developed with public engagement, which will detail how state agencies intend to support climate resilience and track agencies’ progress toward their resilience goals.

The Department will:

In coordination with the IAC, lead a stakeholder and public engagement process for the development of issue-specific Resilience Action Plans.	Ongoing
Release of the first issue-specific Resilience Action Plan on Extreme Heat.	Short-term
Track and maintain accountability across agencies in corporation with the IAC.	Ongoing

Lead program: CRO



“New Jersey is warming faster than the rest of the Northeast region and the world, and extreme heat is expected to get worse – increasing in duration and frequency across a larger area of the State.”

Newark, NJ

5.2.2.3 Improve County Environmental Health Act (CEHA) Resilience Training

Incorporate resilience training opportunities for county health agencies into bi-annual CEHA training events to increase literacy and responsiveness to climate change. These opportunities will allow for up-to-date trainings on all resilience efforts, to help keep agencies informed of the evolving efforts throughout the state and country.

The Department will:

Provide initial education and training to the county agencies.	Short-term
Provide updates and/or changes to the plan through CEHA.	Medium-term
Attend bi-annual CEHA meetings and outline changes in the plan.	Long-term

Lead program: Legal, Regulatory and Legislative Affairs (LRLA)

5.2.2.4 Address National Flood Insurance Program Consistency and Municipal Guidance

In the aftermath of a natural disaster, local and state officials take on many additional duties and often face the challenge of fulfilling them with few resources. Local and state officials may encounter a large number of damaged structures and a high volume of permit applications. When structures are “substantially damaged,” meaning the cost of restoring the structure to its pre-damage condition would equal or exceed 50% of the structure’s pre-damage market value, most property owners want to repair and rebuild as quickly as possible. But substantially damaged properties must be accurately assessed and documented by local and state officials to meet the requirements of the State’s participation in the National Flood Insurance Program (NFIP), and to ensure that these properties meet appropriate resilience standards.

The Bureau of Flood Engineering and Climate Resilience Design within the Department’s Watershed and Land Management program provides floodplain management assistance to local communities through its NFIP Community Assistance Program. The program reaches out to each participating municipality through a five-year cycle of Community Assistance Visits, Community Assistance Contacts, technical assistance, workshops, and other trainings. Maintaining an understanding of the requirements of the NFIP in each of these municipalities presents a considerable challenge, particularly when there is a high turnover rate among local floodplain administrators. Ensuring that local and state officials have sufficient management resources will help efficiently rebuild damaged areas and break the repetitive cycle of continuing flood damages on the same structures. It is equally important to ensure that the Department’s FHACA rules uphold and, where possible, exceed minimum federal standards so that all local, state and federal partners synoptically approach floodplain management in New Jersey. As a result of ongoing discussions with FEMA, a suite of regulatory amendments are warranted to achieve this goal, including the establishment of a State Floodplain Administrator to confirm that state-funded projects are designed to meet or exceed minimum NFIP standards, and adoption of regulatory reforms necessary to ensure that the Department’s permitting decisions do not contradict FEMA’s requirements under the NFIP. By instituting and affirming a holistic approach to floodplain management, buildings and infrastructure will be more resilient to the increasing challenges of a changing climate.

The Department will:

Work with Governor’s Office to establish a template for a response for locals after the next anticipated major flood.	Short-term
Work in coordination with Federal Emergency Management Agency (FEMA) to provide training and guidance to local and state officials on the development and preparation of substantial damage determinations.	Short-term
Work with communities to establish a Disaster Assistance Response Team (DART) to assist communities to handle their floodplain management responsibilities after a natural disaster.	Short-term
Work in coordination with FEMA to educate local and state officials on possible reimbursement funding for substantial damage determinations through FEMA Public Assistance DRRA 1206. DRRA 1206 authorizes FEMA to provide communities with resources to effectively administer and enforce building code and floodplain management ordinances following a presidential disaster declaration.	Short-term
Develop guidance and conduct outreach to locals regarding management of waste, particularly in flood prone areas or other vulnerable locations given specific catastrophic conditions. Post-event Temporary Debris Management Areas are critical for recovery and to allow reimbursement of State, county or local expenditures through FEMA.	Short-term
Continue working with the 553 NFIP participating communities to update ordinances to newer model code coordinated ordinances.	Short-term
Encourage communities that have extensive floodplains and significant numbers of flood-prone buildings to prepare for an increased workload post-event, provide guidance and promote use and implementation of the existing NJ Substantial Damage Management Plan template. This plan is also a requirement for Community Rating System (CRS) participating communities.	Medium-term
Utilize Floodplain Mapping Services Term Contract TC-007 to hire consultants to conduct substantial damage determinations of State-owned building structures located within floodplain areas after a Federal-declared disaster.	Medium-term
Update and present for adoption new model Flood Damage Prevention Ordinances that include standards established by NJPACT-REAL, including expanding the number of NFIP participating communities.	Medium-term
Propose necessary regulatory reforms to ensure that all state-owned assets as well as all permitted activities within the flood hazard area are compliant with minimum NFIP standards.	Medium-term
Continue to provide trainings and webinars to local floodplain administrators. Encourage local floodplain administrators to acquire Certified Floodplain Manager (CFM) certification. The Department will continue to apply for federal grants that can pay for the Certified Floodplain Manager (CFM) certification trainings and fees for local floodplain administrators.	Ongoing
Prioritize technical assistance and resources for communities with increased risk and/or fewer resources to ensure an equitable increase in resilience across all municipalities in the state.	Ongoing
Continue supporting local communities in their efforts for flood risk reduction for the residents. Support communities to improve community rating class so that higher discounts are provided on flood insurance policies to the residents.	Ongoing

Lead program: WLM

5.2.2.5 Develop Statewide Extreme Heat Mitigation Initiative

New Jersey is warming faster than the rest of the Northeast region and the world, and extreme heat is expected to get worse – increasing in duration and frequency across a larger area of the State. The threat of extreme heat must be addressed at the State level. The Department will seek to package and build off existing work done by state agencies to develop and implement a Statewide Extreme Heat Mitigation Initiative. Such actions may include, but are not limited to, communication and outreach, expansion of cooling centers, and promotion of energy efficiency.

The Department will:

Seek to expand Green Acres funding for natural infrastructure, including pocket forests and other tree planting, urban parks/parklets, green stormwater infrastructure as well as splash parks/water access.	Short-term
Evaluate methods to invest in and incentivize reduction of impervious surfaces and installation of less heat trapping alternatives like white or green roofs and cool pavement.	Short-term
Evaluate opportunities across state agencies and develop coordinated Statewide Extreme Heat Mitigation Initiative	Short-term
Develop communications/outreach regarding extreme heat.	Medium-term
Collect and analyze data to identify opportunities to mitigate extreme heat at the community level.	Medium-term
Explore and develop appropriate legislative, regulatory and funding mechanisms to provide energy efficiency assistance.	Long-term
Invest in A/Cs, cool pavements/roofs, mapping, and greening/conversion of payment.	Long-term

Lead program: CRO

5.2.3 SUSTAINABLY RESILIENT COMMUNITIES

5.2.3.1 Expand Blue Acres

The Department’s Blue Acres buyout program is a national model for successful flood risk mitigation, successfully acquiring over 1,000 flood damaged homes and converting those properties to open space. The Department will build on that success and transform and expand Blue Acres, adding proactive climate resilience planning activities to the existing disaster recovery function. Incorporating climate change-specific considerations will allow vulnerable locations to be more resilient when faced with the next severe storm and the growing threat of climate change.

The Department will:

Complete the organizational transition of the Blue Acres program, secure permanent sustainable staffing, and establish a workplan to transform the program.	Short-term
Develop a methodology to identify acquisition priorities that highlights current and future flood-prone areas and socially vulnerable populations, while expanding potential post-acquisition restoration opportunities.	Short-term
Improve and enhance state led buyout policies so the Blue Acres program better addresses the socioeconomic complexities and equity concerns that impact repetitively flood-prone homeowners.	Short-term
Implement the vision of Blue Acres as a proactive climate resilience program and begin work with municipalities to incorporate buyouts into broader climate resilience planning.	Short-term
Engage in resilience planning and buyout outreach and engagement opportunities that promote climate resilience policy making. Act as an ongoing advocate for flood risk awareness, NFIP participation and mandating flood disclosure.	Short-term
Promote creative approaches to the restoration of former buyout properties to mitigate climate impacts and to stimulate positive local or regional community benefits.	Short-term
In coordination with the NJ Office of Emergency Management and DCA, utilize existing and future federal infrastructure and disaster funding to further both Blue Acres disaster recovery response work and resilience planning functions.	Short-term
In coordination with the Resilient NJ program, evaluate future State land use and relocation policies to identify opportunities and obstacles that can be improved through the thoughtful and innovative analysis of planning, economic, and legal factors.	Medium-term

Lead program: CRO/LRLA

5.2.3.2 Increase Local Resilience Planning Through Resilient NJ

Resilient NJ is New Jersey’s preeminent resilience planning program and provides funding and technical assistance to support local and regional climate resilience planning through multiple means and multiple scales. It currently includes the development of four regional resilience plans funded by a one-time federal award from the Natural Disaster Resilience Competition; five Municipal Action Plan grants funding municipalities to develop climate change-related hazard vulnerability assessments required by the Municipal Land Use Law; technical assistance and voluntary review of municipal climate change-related hazard vulnerability assessments; and the Local Climate Resilience Toolkit, an online resource for local governments to develop resilience plans. The Resilient NJ program activities will be continued and expanded to fund local resilience plans, build on the Toolkit to provide comprehensive guidance to local governments, and provide technical assistance through a program developed through the Resilience GAP initiative.



The Local Climate Resilience Toolkit, an online resource for local governments to develop resilience plans

The Department will:

Lead a statewide initiative coordinating non-governmental organizations, academic institutions, and other state agencies to develop the data, tools, and guidance to support the inclusion of climate change in local planning efforts. Termed the Resilient NJ: Resilience Guidance and Assistance Program (Resilience GAP), this initiative will build upon the existing Local Climate Resilience Toolkit.	Short-term
Develop a coordinated and cooperative technical assistance program, leveraging the resources and expertise of NGOs, academic institutions, and other state agencies, to assist local governments develop and implement resilience plans (Local Climate Resilience Toolkit per CCRS 2.2.1).	Short-term
Utilize its annual coastal zone management award from NOAA to fund local resilience plans and activities.	Short-term
Incorporate Blue Acres acquisitions into its resilience planning framework.	Short-term
Build on the Local Climate Resilience Toolkit to provide comprehensive guidance for local governments through the Resilience GAP initiative.	Medium-term
Seek additional, and permanent, funding sources with a goal of providing support to every local government in New Jersey.	Medium-term
Consider additional funding opportunities to promote innovation and capacity building.	Medium-term

Lead program: CRO

5.2.3.3 Increase Tree Equity

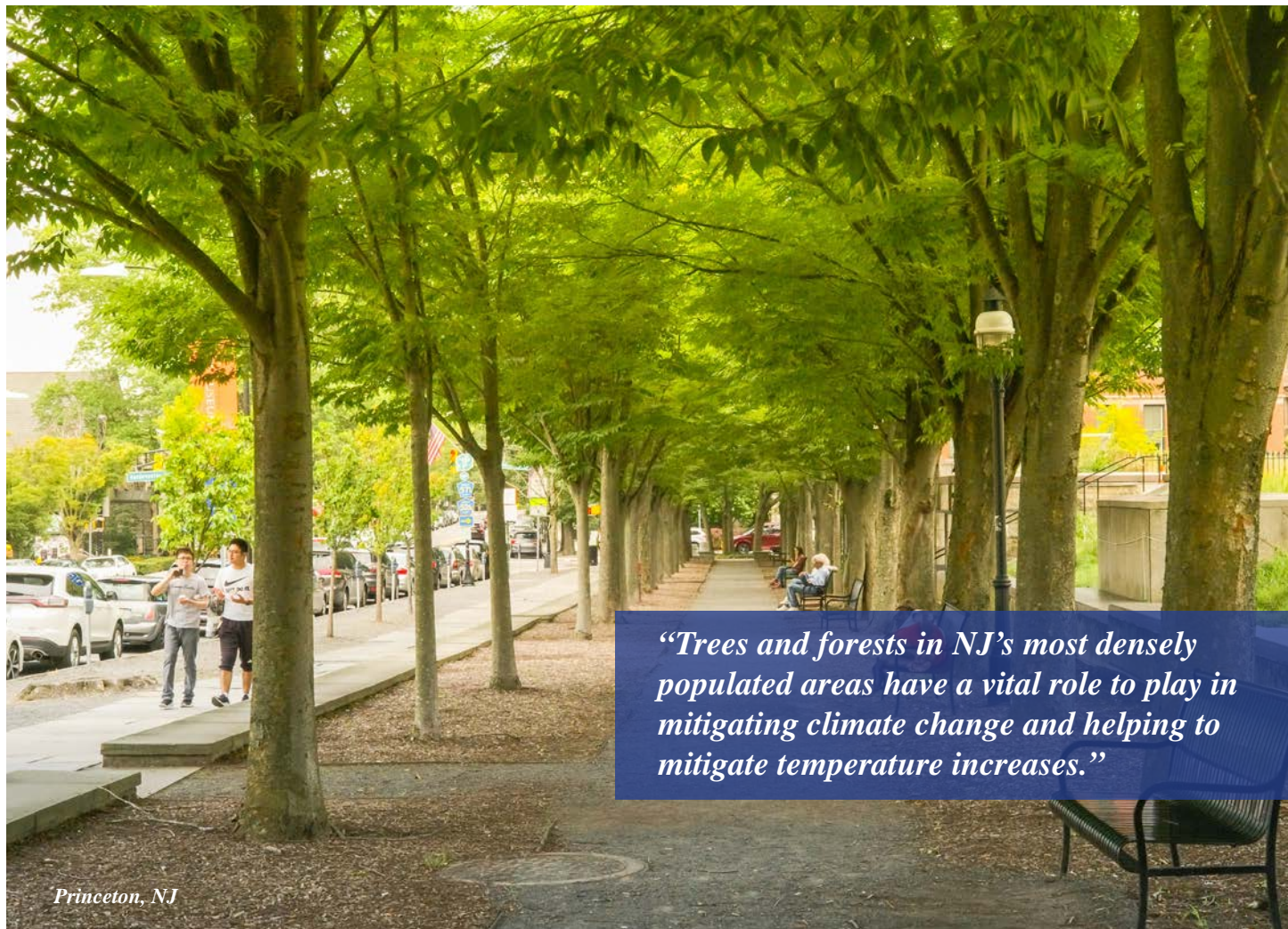
Trees and forests in NJ’s most densely populated areas have a vital role to play in mitigating climate change and helping to mitigate temperature increases. Urban forests and trees provide carbon storage and sequestration, demand-side energy reductions, reduction in urban heat island effect, stormwater mitigation and flood reduction, improved public health and economic benefits such as access to green jobs. NJ’s Urban and Community Forestry program currently utilizes and promotes advanced tools to inform decisions and maximize benefits from urban trees and forests including, local inventory, iTree, and Tree Equity Score. However, this program will need to scale up to effectively address the state’s climate challenges.

The Department will:

Evaluate the potential to leverage other funding sources to amplify the work of the urban and community forestry program.	Short-term
Assess the current structure and function of the program to identify opportunities to expand its reach and influence in communities across the state.	Short-term

Identify plant-able space in urban settings for potential afforestation.	Short-term
Continue to ensure that participating municipalities are compliant with necessary trainings and deadlines.	Short-term
Maintain existing Urban & Community Forestry grants program for urban tree planting.	Short-term
Continue to provide annual grants for tree planting and resilience planning and maintenance.	Short-term
Pilot statewide school focused tree planting grant program.	Short-term
Maintain current inventory agreement with USDA Forest Service FIA program.	Short-term
Evaluate the need for state-wide inventory program so that data collection amongst municipalities is consistent.	Short-term, medium-term
Recruit and onboard 10 new municipalities with management plans annually.	Medium-term
Issue 10 new or updated inventory grants per annual cycle.	Medium-term
Expand the Urban & Community Forestry grant programs for urban tree planting and maintenance.	Medium-term
Target to CORE train 100 individuals annually from participating municipalities.	Medium-term
Enroll all municipalities in the Urban & Community Forestry program by 2043.	Long-term

Lead program: State Parks, Forests & Historic Sites (SPFHS)



“Trees and forests in NJ’s most densely populated areas have a vital role to play in mitigating climate change and helping to mitigate temperature increases.”

Princeton, NJ

5.2.3.4 Assess Vulnerability of State Parks & Cultural Resources

Within the SPFHS program’s purview are an estimated 1,600 buildings, facilities, historic and cultural resources and structures, not to mention the network of roads, trails, campgrounds and other amenities. These assets are vulnerable to more frequent and severe storms due to climate change. To ensure that the SPFHS program continues to provide high quality outdoor recreation experiences that are accessible to all we must adapt the infrastructure for climate realities, which will include relocating and creating new facilities in more climate resilient locations. Further we must also lead by example, undertaking energy efficiency and sustainability evaluations to support the transition from fossil fuel supported heating and cooling to more sustainable energy systems, while also adopting energy saving measures.

The Department will:

Working with Watershed and Land Management, evaluate permit compliance for ongoing and anticipated capital development projects in flood hazard areas to proactively assess the need to adapt and relocate projects out of flood hazard areas.	Short-term
Contract with a consultant to conduct an evaluation of state park facilities, historic sites and infrastructure within locations of the state that have a high risk to be impacted by climate change threats, such as sea-level rise and flooding events to identify actions that can be implemented to avoid or reduce impacts and prioritize responsive actions.	Medium-term
Complete energy audits and implement energy saving measures at SPFHS facilities.	Medium-term

Lead program: SPFHS

5.2.3.5 Implement Climate Resilience Considerations for Critical Facilities

The Department seeks to require facilities regulated by the Bureau of Release Prevention to assess climate change impacts as part of their Discharge Prevention Control and Countermeasure Plan (DPCC) or their Toxic Catastrophe Prevention Act (TCPA) Plans. The program intends to consider whether this can be accomplished, with stakeholder input, through policy or if regulatory amendments will be needed.

The Department will:

Engage stakeholders to determine feasibility and framework for potential regulatory amendments for facilities to prepare Climate Resilience Plans.	Short-term
As interim measure until regulatory amendments are implemented, utilize Consent Orders and other authorizing documents for facilities to consider potential impacts from climate change in their designs, operations, maintenance, or procedures.	Short-term
Propose and adopt regulatory amendments	Medium-term

Lead program: AEMS

5.2.3.6 Improve Stormwater and Wastewater Infrastructure

As seen during Ida and subsequent extreme precipitation events, flooding will continue to be exacerbated, whether near stream or otherwise, due to inadequate, under designed and poorly maintained stormwater infrastructure. While the Department works to update its regulatory standards to more accurately reflect current and future precipitation rates, addressing new development and redevelopment alone, the issue can only be fully addressed through deliberate and meaningful action to upgrade and retrofit existing stormwater infrastructure, including addressing resilience of combined sewer overflow (CSO) systems. Sea-level rise impacts on the ability of these systems to drain or cause other negative effects must also be considered.

Much of the state’s water (storm, water, wastewater) infrastructure has aged past its useful life. The impacts of climate change will cause additional stress on that infrastructure causing inefficiencies and quality issues. It is crucial that municipalities and systems consider the impacts to climate change while planning for the installation and replacement of infrastructure.

As with most critical infrastructure needs, funding remains a significant barrier to entry. A key, yet underutilized, tool in this effort is the development of municipal or regional stormwater utilities under the Clean Stormwater and Flood Reduction Act. This Act authorizes local and county governments and certain utilities the ability to create stormwater utilities to properly operate, maintain, repair, and improve their storm sewer system through the assessment of fair and equitable fees based on proportionate stormwater contribution. In an effort to spur consideration of this powerful community protection tool, the Department is offering technical assistance to qualified entities to conduct stormwater utility feasibility studies, with priority given to overburdened and combined sewer overflow communities. Entities that complete this step will be well positioned to receive additional aid to establish their utility.

The Department has also developed a grant program totaling \$7m intended to fund green infrastructure, infrastructure retrofits and other innovative projects that will help communities become resilient to the increase in extreme rainfall events. Subsequent phases, of the program will seek to provide Technical Assistance to aid municipalities that are improving water quality and reducing flooding through better management of stormwater.

Additionally, the Department intends to incorporate resilience requirements into combined sewer outflow (CSO) permits to address climate change effects.

The Department will:

Launch its infrastructure program and publish opportunities for technical support in conducting stormwater utility feasibility studies and funding extreme rainfall resilience projects.	Short-term
Develop guidance to update resilience requirements for water infrastructure projects receiving funding through the Water Bank program.	Short-term
Develop and issue CSO permits that will incorporate requirements to address climate change impacts. New Jersey CSO permittees have selected the Presumption Approach under the Federal CSO Control Policy which requires an increase to wet weather capture. Many CSO permittees have selected increased conveyance to the wastewater treatment plant, sewer separation and green infrastructure. These improvements are anticipated to decrease CSO related flooding.	Short-term
Assist municipalities in stormwater management in order to improve water quality and reduce flood risk.	Short-term
Incentivize upgrades to stormwater systems by requiring resilience measures as a condition of funding and asset management programs for water infrastructure.	Short-term
Evaluate enhanced stormwater compliance and enforcement advisories, funding initiatives and educational opportunities.	Short-term
Codify the Water Quality Accountability Act, requiring water purveyors to develop asset management plans.	Short-term

Lead program: Water Resource Management (WRM)/LRLA

5.2.3.7 Implement One Water Initiative

Increased rainfall and changing weather patterns as a result of climate change will necessitate proactive assessments and coordinated watershed management across the State. Data collection and comprehensive management strategies will be crucial to addressing impacts of climate change, as well as improving and protecting New Jersey’s water quality.

The Department has already worked to assess gaps in current core watershed management functions and is developing and prioritizing new, coordinated management strategies, particularly in the light of a changing climate. In addition, the Department is working to expand public awareness of, and access to, watershed data by creating a new watershed management tool that will assess stressors and identify opportunities within localized parts of a watershed. The Department will continue to coordinate with agencies like NJDA and NJDOT to update and improve stormwater data and mapping.



“The Department has also developed a grant program totaling \$7m intended to fund green infrastructure, infrastructure retrofits and other innovative projects that will help communities become resilient to the increase in extreme rainfall events.”

To promote and protect water quality and as directed by United States Environmental Protection Agency (USEPA), the Department exercised its regulatory authority to reassign certain municipalities with municipal separate storm sewers systems (MS4s) from a “Tier B” designation (typically applied to less densely populated areas) to “Tier A,” requiring them to meet slightly elevated standards. MS4 permits and Watershed Improvement planning will include up-to-date integration of nonpoint source total maximum daily load (TMDL) controls, consideration of stormwater asset inventories, and current best management and restoration practices.

Finally, the Department is actively supporting communities to improve stormwater management and resilience. The Department offers technical support and funding to communities seeking to establish their own Stormwater Utilities and has developed guidance to assist in that process. Because some communities struggle to keep up with overlapping climate change impacts and local emergencies, the Department offers educational tools, trainings, and outreach to support local water managers in its One Water initiative.

The Department will:

Expand the NJ Hydrologic Modeling Database and related stormwater asset map.	Short-term
Promote reduction of nonpoint impairments across Department programs, including by implementing new or updated guidance.	Short-term
Update the MS4 Permitting process to include current, innovative measures for reducing stormwater pollution.	Short-term
Consider regulatory amendments consistent with underlying authorities to better address water quality impairments.	Short-term
Promote and provide capacity towards the creation of Stormwater Utilities to more effectively manage and maintain stormwater infrastructure and ensure equitable assessment of related financial obligations.	Short-term
Reevaluate Water Quality Management Planning process to better align with underlying statutory purposes and remove unnecessary process barriers detrimental to a meaningful planning approach.	Short-term
Review and explore updates to the New Jersey’s Continuing Planning Process Plan to articulate strategies and measures to achieve water quality goals.	Medium-term
Explore development of a stormwater/watershed infrastructure capacity development and permitting program.	Medium-term
Build and implement a Networked Watershed Program.	Ongoing
Consider and monitor community-based private public partnerships (CBP3) and integrated permitting approaches that have net environmental benefits and promote improvements in watershed management.	Ongoing

Lead program: WLM/WRM

5.2.3.8 Implement One Health Approach

As outlined in the Department’s Human Health and Communities addendum to the New Jersey Scientific Report on Climate Change, climate change will have direct, indirect, and wide-ranging influences on human health, such as exacerbating respiratory conditions and cardiovascular disease in vulnerable populations, causing heat-related stress, increasing the risk of diseases borne by mosquitoes and ticks, increasing the frequency of pathogen contamination of food and water supplies, and increasing mental health stressors. Extensive research shows that warmer winters, longer heat waves, heavier rains, flooding along inland streams and rivers, and more tidal flooding along the coast are all predicted to endanger public health and safety, destroy property, undermine critical infrastructure, and harm New Jersey’s economy.

The Department is working to expand public awareness of health-related issues to proactively plan and prepare for the climate change impacts. The One Health approach is a collaborative and transdisciplinary effort to achieve optimal health and well-being outcomes, by highlighting the connection between people, animals, and the environment. Recognizing One Health’s importance to better integration of public health across disciplines, Governor Murphy signed P.L. 2021, CHAPTER 117, requiring the establishment of a One Health Task Force under the direction of the NJ Department of Agriculture (NJDA). This One Health platform will serve as a resource for communication and outreach tools specific to the promotion of public health in the face of a changing climate.

The Department will:

Regularly update the Human Health and Communities addendum as part of the New Jersey Scientific Report on Climate Change.	Medium-term
Working with NJDOH, consider how the Healthy Community Planning NJ platform can support a One Health component to better support local health planning and outcomes.	Medium-term
Coordinate with other state agencies, including the NJ Departments of Health, Education, Human Services and Agriculture to identify and communicate health risks, especially in our Environmental Justice communities.	Ongoing
Collaborate through the One Health Task Force to leverage existing partnerships with colleagues in other states and public health organizations.	Ongoing
Broaden environmental public health strategies and recommendations through NJDOH’s Healthy NJ 2030 Initiative to consider cross-disciplinary health impacts to better prepare for changing ecosystems and emerging public health concerns.	Ongoing

Lead program: Environmental and Public Health Analysis (EPHA)

5.2.3.9 Require Climate Risk Analysis for Water Supply

The Scientific Report on Climate Change projects impacts on the availability and quality of water due to more frequent and prolonged droughts or drought-like conditions, extreme precipitation events, warmer temperatures, and saltwater intrusion caused by sea-level rise. As a result, both New Jersey’s natural systems and water supply infrastructure will be impacted, putting stress on their operation, and resulting increased impacts and costs to our communities and economy. The Department will issue a major update to the New Jersey Statewide Water Supply Plan that will place an emphasis on climate change impacts to water supply, as well as identify specific actions and identify any gaps needing additional research.

The Department will:

Release a major update to the New Jersey Statewide Water Supply Plan, with emphasis on climate change impacts to water supply. The draft will be released and available for public comment in the end of spring of 2023, with the final plan being released after review and incorporation of comments by the end of 2023.	Short-term
Provide recommendations on the maintenance and improvement of water supply infrastructure.	Short-term
Continue to support and expand monitoring to inform management decisions and to improve hydraulic models.	Short-term

Lead program: WRM

5.2.3.10 Implement Innovations for Shifting Fish Populations

Climate change is and will continue to affect changes in fish populations and migratory patterns. To more fully understand the issue, the Department is surveying and monitoring of commercial and recreation catches to track changes in population sizes and species occurrence. Results are distributed through a variety of channels, such as outdoor shows, guest lectures at schools and universities, presentations to stakeholder groups, public meetings, printed and web articles, and agency reports.

The Department will:

Work with partners to preserve working waterfronts and the industries they support. Climate change and sea-level rise are projected to result in more intense storms, larger storm surges, and increases in forceful flooding over the next 100 years. To the extent funding is available to make coastlines more secure or to rebuild after areas are damaged by climate-related impacts, funding can prioritize initiatives that incorporate working waterfronts and water-dependent businesses. Federal coordination can also help states and municipalities work on regional strategies regarding infrastructure needs for communities.	Medium-term, Ongoing
Work with partners to support training and marketing activities that explore/expand new fisheries and markets, develop and test novel gears that maintain harvest while reducing discard mortality, and promote new fishery products. This could also include new jobs training for individuals who are displaced from a fishery.	Medium-term, Ongoing
Support research into the impacts of climate change on fisheries and the most beneficial mitigation strategies, then communicate these research findings to stakeholders	Ongoing
Continue to strive for inclusivity of all sectors, particularly marginalized communities, in the decision-making process, with the goal of a zero-sum loss of accessibility to healthy fish stocks.	Ongoing
Broaden environmental public health strategies and recommendations through NJDOH's Healthy NJ 2030 Initiative to consider cross-disciplinary health impacts to better prepare for changing ecosystems and emerging public health concerns.	Ongoing

Lead program: New Jersey Fish and Wildlife (NJF&W)



Barnegat Light, NJ



“Some techniques, such as living shorelines, are most often associated with the coast, but there are opportunities to apply this approach elsewhere in the state to stabilize waterways impacted by increases in precipitation.”

South Cape May Meadows, NJ

5.2.3.11 Develop and Implement a Natural and Nature-Based Solutions Initiative

Natural and nature-based solutions can complement or act as alternatives to gray or hard infrastructure projects. These softer methods are frequently more cost-effective and can even outperform traditional approaches. Natural and nature-based solutions also often offer the additional benefit of providing ecosystem services beyond just the intended use, including beautification, carbon sequestration, habitat creation, and recreational opportunities. Some techniques, such as living shorelines, are most often associated with the coast, but there are opportunities to apply this approach elsewhere in the state to stabilize waterways impacted by increases in precipitation. The State can also encourage nature-based measures beyond its own asset management, policies, and investments. A concerted homeowner assistance program consisting of education, technical assistance, and financial incentives would help raise awareness of nature-based solutions and encourage their widespread application. In addition to education and outreach, the program could include grants for designing projects and other financial incentives, such as tax credits, which are already offered in several states.

The Department will:

Work with partners to preserve working waterfronts and the industries they support. Climate change and sea-level rise are projected to result in more intense storms, larger storm surges, and increases in forceful flooding over the next 100 years. To the extent funding is available to make coastlines more secure or to rebuild after areas are damaged by climate-related impacts, funding can prioritize initiatives that incorporate working waterfronts and water-dependent businesses. Federal coordination can also help states and municipalities work on regional strategies regarding infrastructure needs for communities.	Ongoing
Work with partners to support training and marketing activities that explore/expand new fisheries and markets, develop and test novel gears that maintain harvest while reducing discard mortality, and promote new fishery products. This could also include new jobs training for individuals who are displaced from a fishery.	Short-term
Support research into the impacts of climate change on fisheries and the most beneficial mitigation strategies, then communicate these research findings to stakeholders	Long-term
Continue to strive for inclusivity of all sectors, particularly marginalized communities, in the decision-making process, with the goal of a zero-sum loss of accessibility to healthy fish stocks.	Long-term

Lead program: WLM

5.2.3.12 Develop Marine Fisheries Guidance

Warming temperatures are shifting marine life distribution along our coast and altering habitat suitability. Evidence of new southern species may present new fishing opportunities but may also require new regulations. The loss of cold-tolerant species to the north may reduce some species' availability and affect fisheries markets and communities (processors, ports, bait and tackle shops, etc.). Warming waters due to climate change may also alter marine ecosystems and ecological function. Ongoing fisheries and enhanced habitat monitoring and modeling may help identify or predict these types of impacts.

The Department will:

Participate in Mid-Atlantic Fisheries Management Council (MAFMC) and Atlantic States Marine Fisheries Commission (ASMFC) collaborative efforts to assess how climate change might affect stock distribution, availability, and other aspects of east coast marine fisheries and develop set of near-term and long-term management priorities and policy initiatives recommendations, and identify data gaps, research priorities, and monitoring needs.	Short-term
Support scientific research into the impacts of climate change on fisheries, as well as research into the most beneficial mitigation strategies.	Medium-term, Ongoing
Work with partners to support training and marketing activities that explore/expand new fisheries and markets, develop and test novel gears that maintain harvest while reducing discard mortality, and promote new fishery products.	Medium-term, Ongoing
Continue to strive for inclusivity of marginalized communities in the decision-making process, with the goal of a zero-sum loss of accessibility to healthy fish stocks.	Medium-term, Ongoing
Continue ecosystem and fishery monitoring programs that track ecosystem and species trends.	Ongoing
Continue artificial reef program and evaluate whether modifications are necessary to ensure habitat maintenance and availability.	Ongoing

Lead program: NJF&W

5.2.3.13 Incorporate Consideration of Sea-Level Rise Projections into Supplemental Environmental Projects (SEPs)

When evaluating a SEP proposal, the Department should consider whether the proposed location may be subject to future inundation and whether – and to what extent – the proposed SEP would be impacted by the corresponding potential future change in site conditions.

The Department will:

Incorporate the Climate and Flood Resilience Program's guidance as a discretionary factor in evaluating a proposed SEP that that may be subject to future inundation as part of its initiative to revise the Standard Operating Procedures for Incorporating Supplemental Environmental Projects into Settlement Agreements.	Short-term
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Lead program: LRLA

5.2.3.14 Preserve and Enhance Working Waterfronts

Water-dependent industries are critical to the state's economy and residents, playing a key role in recreation, fishing, trade, renewable energy development, and many other industries. These industries face environmental and infrastructure-related challenges due to climate change. Particularly in South Jersey communities, there is growing concern that sea level rise could prohibit access to these water-dependent uses. To ensure these working waterfronts remain resilient in the face of climate change, development pressures, and shifting uses, the Department will explore regulatory changes that support working waterfronts, including changes that consider climate change impacts, offshore wind development needs and prioritize the wants and needs of the communities in which these key industries. This will require research to identify the types of working waterfronts in New Jersey and gain an understanding of their specific challenges and needs and the risks posed by climate change and strategies to ensure equity in their continued operations. Additionally, the Department will coordinate with local leaders and community members and explore funding to work towards local and regional planning strategies to preserve, equitable resilient waterfront uses.

The Department will:

Contract with an outside research entity to identify the various types of working waterfronts in New Jersey’s coastal zone and research environmental and infrastructure-related challenges	Medium-term
Assess the vulnerability of identified working waterfronts to extreme weather and climate change to inform the Department’s coastal management program for development of future rule changes and resiliency measures (related to storm protection, access, and stormwater management).	Medium-term
Establish a more formal definition of “working waterfront” in New Jersey.	Medium-term
Engage with local leaders and community members to identify needs and opportunities and explore further planning opportunities and opportunities to address equity considerations.	Ongoing

Lead program: WLM

5.2.4 INVEST IN RESILIENCE PROJECTS THAT ADDRESS CLIMATE CHANGE

The Division of Resilience Engineering and Construction (DREC) oversees large-scale coastal and fluvial flood protection projects, beach renourishment, flood risk analysis, dam safety, and the National Flood Insurance Program. DREC assists communities across New Jersey to become more resilient to storms, flooding, and other climate change impacts by prioritizing and implementing resilience projects. State funds will also be invested in upgrading critical infrastructure, such as dams, to ensure safety and integrity of these structures, thereby, protect people and property.

The Department will:

Prioritize construction of flood protection projects that maximize flood benefits to a project area and incorporates community co-benefits.	Short-term
Improve Operation and Maintenance processes of our constructed resiliency assets and ensure long-term financial sustainability of these systems.	Medium-term
Ensure resilience projects integrate community input, Language Access Plans and environmental justice considerations at all phases of feasibility, design and construction.	Ongoing
Continue efforts to upgrade dams and disseminate funding / low-interest loans through the Department’s Dam Restoration and Inland Waters Loan Program.	Ongoing
Evaluate, in coordination with USACE, the engineered beach and dune renourishment designs to consider the changing climate conditions.	Ongoing
Continue to map coastal resilience projects to prioritize connecting projects, increasing the level of protection throughout communities.	Ongoing
Invest in staff time to apply for funding opportunities at the State and Federal level to construct and maintain flood protection projects.	Ongoing

Lead program: WLM

“State funds will also be invested in upgrading critical infrastructure, such as dams, to ensure safety and integrity of these structures, thereby, protect people and property.”





6. NATURAL & WORKING LANDS

Natural and working lands, including forests, wetlands, developed lands, and agricultural lands, can play a major role in climate change mitigation by removing carbon dioxide (CO₂) from the atmosphere through long-term accumulation in vegetation and soils. By protecting New Jersey's existing carbon sinks, as well as enacting well-informed land restoration and management strategies, the State can dramatically increase the potential of natural and working lands to store and sequester carbon. By effectively utilizing the State's natural and working lands, the Department will be one step closer to meeting its carbon sequestration goals.

6.1 THOUGHT LEADERSHIP

New Jersey's 80x50 Report, released in October 2020, lays out strategies designed to reduce the State's carbon dioxide emissions to 80% below 2006 levels by 2050. The Report emphasized the need for coordination across sectors and highlighted carbon sequestration as an essential factor for success. To that end, the 80x50 Report recommended the development of a statewide carbon sequestration plan that: (1) expands upon existing State plans that address climate resilience in natural and working lands, (2) establishes 2030 and 2050 sequestration targets, and (3) improves current carbon sequestration estimates through additional research and monitoring.

The 80x50 goals are further refined through its Natural and Working Lands Strategy (NWLS). The NWLS, which is being developed in partnership with the Department of Agriculture is designed to identify and prioritize land management strategies and targets for land managers, including the state land managers at the Department. The NWLS will help mitigate climate change impacts through carbon storage and sequestration in New Jersey's natural and working lands. The NWLS will identify and prioritize near-term recommendations that are cost-effective and pragmatic, such as natural resource stewardship and management, as well as longer-term goals that require more effort and funding, including potential programmatic

changes. Each recommendation will also consider co-benefits, such as an increase in ecological services, economic opportunities, and community resilience, in addition to carbon sequestration benefits.

The Department’s existing Coastal Ecological Restoration and Adaptation Plan (CERAP) can also assist in identifying areas for ecological projects that meet the carbon sequestration goals of the NWLS while increasing community resilience and ecosystem health.

6.2 POLICY DEVELOPMENT & INCENTIVES

6.2.1 DEVELOP COASTAL ECOLOGICAL RESTORATION & ADAPTATION PLAN

The Department will continue and expand efforts to identify areas that are ecologically vulnerable to climate change and in need of resilience improvements or restoration along New Jersey’s tidally influenced coast, bays, and rivers. The Coastal Ecological Restoration and Adaptation Plan (CERAP) is a critical component of building a continuous pipeline of climate resilience and mitigation projects, some of which can be funded using Regional Greenhouse Gas Initiative funding for forests and coastal wetland (blue carbon) projects.

The Department will:

Prioritize coastal nature-based projects for ecosystem value, carbon sequestration, and community resilience based on project goals and objectives	Medium-term
Encourage Habitat Connectivity and ecosystem health in State funding decisions to assist migrating wildlife and encourage planting of native trees and wildlife gardens.	Medium-term
Complete and update the CERAP on a five-year cycle.	Ongoing
Identify critical habitats or habitat features threatened by sea-level rise and develop and incentivize implementation of scientifically-sound strategies and methodologies in insulate or adapt these resources to future conditions.	Ongoing

Lead program: WLM/Division of Science and Research (DSR)

6.2.2 SUPPORT CARBON SEQUESTRATION

Carbon sequestration is the process of removing carbon from the atmosphere and storing it in natural sinks, such as forests and wetlands. Carbon sequestration is an important component of New Jersey’s GHG inventory and management – in 2018, carbon sinks sequestered 8% of NJ’s net GHG emissions. But New Jersey’s continued development has caused a decline in natural ecosystems. By rethinking its land use policies and conservation efforts and promoting science-supported land restoration and management strategies to protect existing carbon sinks, the State can sequester 10.8 million metric tons of CO₂e – a major step toward achieving its 80x50 goal.

6.2.2.1 Implement Natural and Working Lands Strategy

The NWLS aims to access the expertise of subject matter experts and the best available science to develop recommendations, actions, and targets that will most effectively bring New Jersey’s climate goals to fruition. The NWLS will build off the current progress of state entities to present a set of statewide policies and recommendations for managing natural and working lands and implementing those recommendations within a proposed timeframe. The NWLS will also take into account the associated carbon sequestration benefits of those policies and recommendations. These actions will sequester carbon, build ecosystem and community resilience, and protect and enhance our economy. The Department and the New Jersey Department of Agriculture (NJDA) intend to release the first version of the NWLS in Q4 of 2023 after gathering input from stakeholders, but it is expected to evolve over time as new science emerges.

The Department will:

Release a NWLS that provides recommendations for NJ's natural and working lands to increase carbon sequestration and mitigate the impacts of climate change.	Short-term
Identify and prioritize near-term recommendations that are most immediately cost-effective and pragmatic, such as natural resource stewardship and management, as well as longer-term goals that may require more detailed planning, identification of funding sources, or policy and social changes.	Short-term
Establish specific targets (2030 and 2050) that address how much progress should be made within a certain timeframe (e.g., protect X acres by X year). These will be derived based on current scientific data/projections and input from experts.	Short-term

Once released, the Department will incentivize participation in the NWLS by:

Establishing a grant Program to provide funding to applicants for projects that match up with the recommendations set forth in the NWLS (e.g., urban forestry, nature based coastal projects).	Medium-term
Using RGGI funding to develop carbon sequestration projects and monitor the carbon sequestration benefits of the projects.	Ongoing
Using funding from the 319h grant program for coastal wetland projects that will conserve coastal wetlands to increase carbon sequestration within these resources.	Ongoing
Supporting wetland monitoring and restoration projects through Fish and Wildlife that will improve biodiversity while also increasing carbon sequestration of the wetlands.	Ongoing
Using the Department's Blue Acres program to conduct buyouts in floodplain areas that will be conserved as natural lands and potentially restored to more productive carbon sequestration use.	Ongoing

Lead programs: DSR (Science) and Climate Change, Clean Energy & Sustainability Element (CCCES) (Implementation)

6.2.3 EXPAND FOREST PROTECTION THROUGH SCIENCE-BASED MANAGEMENT TECHNIQUES

Forests effectively and efficiently sequester carbon. Sustainable stewardship and management of all NJ's forests ensures that forests stay as forests, thus protecting above and below-ground carbon pools as well as continuing beneficial carbon flux through growth. Properly managed forests are much more resilient in the face of change from threats such as forest pests, invasive species, diseases, and wildfire that could lead to catastrophic release of carbon. Restoration and replanting of forested areas that have been impacted by such threats increases the number of trees available to absorb carbon dioxide and produce oxygen or sequester carbon and reduce greenhouse gas emissions. Coordinated tree planting efforts in urban and community forests and urban wood reuse increases these beneficial processes as well. Additionally, working forests continue to provide locally sourced durable wood products which sequester carbon for the long-term life of that product.

The Department will:

Continue engagement with Legislative leaders and stakeholders to plan, develop and implement strategies that support the State's best management of its forests to fight climate change, minimize and mitigate the impacts of wildfire, improve ecosystems, and protect soil and water quality.	Short-term
Inventory 40,000 acres per year of state-owned forested land.	Short-term
Maintain our current inventory agreement (2x intensification on forest lands, and five-year buy-down, and urban FIA 1x intensity in the Trenton metro area with five-year buy-down) with USDA Forest Service FIA program.	Short-term
Maintain forest health damage causing agent (DCA) survey intensity for quick response to forest health threats.	Short-term

Across stands of strategic importance, manage forests to reduce tree stress/competition with specific intent to address and hinder invasive insect outbreaks and wildfire risk.	Medium-term
Develop a carbon model to provide projected forest carbon estimates statewide under a variety of simulated management scenarios relative to New Jersey’s emissions targets. The model will also provide optimized carbon storage and sequestration solutions among the simulated results to accurately assess carbon tradeoffs associated with a multitude of forest management strategies and policies.	Medium-term
Enroll more private landowners into stewardship program thereby keeping forest as forest and reducing forest conversion due to development.	Medium-term
Identify and prioritize degraded forests and plan to restore and/or enhance them to a forested condition that will efficiently capture and store carbon for the long-term.	Medium-term
Identify appropriate non-forested lands and plan to plant them to a forested condition that will efficiently capture and store carbon long-term.	Medium-term
Maintain and increase carbon storage through durable forest products sourced from local forests and support and foster the enhanced use of locally sourced wood products in place of concrete and steel in building codes and projects.	Medium-term
Explore enrollment of state forest lands in a forest carbon market.	Medium-term
Create external guidance documents and model ordinances to the public following input from local Shade Tree Commissions, Environmental Commissions, stakeholders, and collaborators on forest management practices.	Medium-term
Explore universal “no-net-loss of trees” requirement for projects funded by State dollars so that it also applies to any other government-funded project.	Medium-term

Lead program: SPFHS

6.2.4 IMPLEMENT WILDFIRE RISK REDUCTION ACTIVITIES

An average of 1,000 wildfires damage or destroy over 7,000 acres of New Jersey forests annually. Wildfires not only damage forests and other natural habitat but are becoming an increasing threat to life and property within or adjacent to forested areas. As the lead agency responsible for protecting life and property as well as the state’s natural resources, the Forest Fire Service objectives are to hold wildfire losses at a level commensurate with values protected and to do the job safely and efficiently. The goal is to limit the number of wildfires to under 1,400 annually and the acreage burned to less than one half of one percent (.5%) of the 3.15 million acres protected, or 15,750 acres. Educating the public about wildfire risk, supporting community resiliency and preparedness, equipping and training volunteer fire companies, managing forest ecosystems and fuel loading to reduce risk, and empowering a highly skilled workforce are examples of how the agency strives to achieve these goals.

The Department will:

Support community preparedness through grant programs such as Wildfire Risk Reduction (WRR) and Community Wildfire Defense Grants (CWDG).	Short-term
Prioritize and implement projects that target risk reduction in the Wildland Urban Interface.	Short-term
Seek opportunities to maintain and expand fuel reduction activities that promote healthy and resilient forests.	Medium-term
Analyze data, run fuel models and map risk to prioritize and target high risk areas.	Medium-term
Provide continual technical support for the development of Community Wildfire Protection Plans and Firewise Community designation.	Long-term
Develop Rules to implement prescribed burn legislation in order to expand capacity.	Long-term

Lead program: SPFHS



“Sustainable stewardship and management of all NJ’s forests ensures that forests stay as forests, thus protecting above and below-ground carbon pools as well as continuing beneficial carbon flux through growth.”

Ramapo Mountain State Forest

6.2.5 PROTECT, RESTORE, AND EXPAND CRITICAL WETLANDS

New Jersey has approximately a million acres of wetland habitat, including more than 200,000 acres of tidal wetlands and marshes. Both tidal wetlands and non-tidal wetlands are facing adverse impacts from climate change and additional research is needed to understand and quantify these effects and inform further policies and protection strategies. These wetland habitats provide numerous ecosystem services that benefit humans and wildlife, including carbon sequestration, buffering against sea-level rise, and flood control – all of which are also important in building climate change resilience and mitigation. The threat of sea-level rise to New Jersey’s wetland ecosystems is further exacerbated by the limits of wetland migration in heavily developed areas.

New Jersey must protect its wetlands and ensure the continuation of their ecosystem services by instituting a monitoring, maintenance, and restoration program analogous to DEP’s robust forestry program.

The Department will:

Finalize the Networked Wetland plan.	Short-term
Support the New Jersey Tidal Wetlands Monitoring Network, which tracks the response of tidal wetlands to climate change.	Ongoing
Support Blue Carbon projects, which promote the restoration and enhancement of tidal wetlands to maximize carbon sequestration.	Short-term
Explore further resource-based enforcement initiatives to address unauthorized encroachments on protected wetlands.	Short-term
Establish baseline information regarding patterns of accretion and loss of coastal wetlands, assess feasible mitigation strategies for vulnerable coastal areas and develop improved techniques and polices to stem accretion and support restoration.	Medium-term
Create a Non-Tidal Wetlands Monitoring Program/Network that can track the condition of non-tidal wetlands in the state.	Medium-term
Monitor and quantify carbon sequestration benefits of Blue Carbon projects.	Ongoing

Lead program: WLM/DSR/CRO



7. CLIMATE EQUITY





Atlantic City, NJ

The State of New Jersey has the opportunity to promote equity as a leader in the national formation and implementation of innovative climate change policies. Low-income communities and communities of color in New Jersey – and across the United States – are burdened with disproportionately high pollution, increased flood risk, and more intense heat waves as compared to wealthy, White communities due to decades of redlining and community disinvestment.

The Department remains committed to redressing these inequalities by creating policies that alleviate adverse environmental and public health impacts within New Jersey’s overburdened communities (OBCs).

7.1 THOUGHT LEADERSHIP

New Jersey’s 80x50 Report, released in Governor Murphy signed Executive Order 23 during his first 100 days in office, which directed all the executive branch to ensure that the principles of environmental justice - equal access to environmental benefits and protection from environmental hazards - are at the heart of the State’s programs and policies. On October 1, 2020, the Department issued “Furthering the Promise: A Guidance Document for Advancing Environmental Justice Across State Government.” The document provides a path for New Jersey’s executive agencies to weave the principles of environmental justice into their core functions, including development of EJ action plans, with an Interagency Council coordinating efforts to steer the State’s whole-of-government approach to EJ. The Department continues its work through both an extensive self-assessment and improvement initiative as well as with other agencies on the Environmental Justice Interagency Council.

Additionally, on September 18, 2020, Governor Phil Murphy signed New Jersey’s Environmental Justice (EJ) Law, N.J.S.A. 13:1D-157. The EJ Law requires the Department to conduct a comparative analysis to determine whether facilities subject to the law (e.g., major sources of air pollution, solid

“Low-income communities and communities of color in New Jersey – and across the United States – are burdened with disproportionately high pollution, increased flood risk, and more intense heat waves as compared to wealthy, White communities due to decades of redlining and community disinvestment.”



waste and sewage treatment facilities) that seek permits to construct and/or operate in overburdened communities (OBCs) will disproportionately contribute to environmental or public health stressors in that community. Critically, the EJ Law expands the Department’s jurisdiction from review of discrete aspects of an operation to a more fulsome consideration of facility-wide impacts.

The EJ Law defines OBCs as those census block groups with:

1. At least 35% of the households qualify as low-income households (at or below twice the poverty threshold as determined by the United States Census Bureau);
2. At least 40% of the residents identify as minority or as members of a State-recognized tribal community; or
3. At least 40% of the households have limited English proficiency (without an adult that speaks English “very well” according to the United States Census Bureau).

As part of its efforts to craft implementing regulations under the EJ Law, the Department has developed an online tool – the Environmental Justice Mapping, Assessment and Protection Tool ([EJMAP](#)) – that identifies those OBCs that are subject to disproportionate environmental and public health stressors when compared to non-OBCs.

As a threat multiplier, climate impacts are likely to have even greater effects in communities already overburdened by pollution. That includes threats from co-pollutants, emitted alongside greenhouse gases, which have localized health effects. Therefore, while the Department works diligently on Statewide climate action, it will continue to explore avenues to reduce pollution in overburdened communities.

7.2 POLICY DEVELOPMENT & INCENTIVES

7.2.1 IMPLEMENT THE ENVIRONMENTAL JUSTICE LAW

On April 17, 2023, after extensive and detailed stakeholder engagement, the Department adopted rules to implement the State’s groundbreaking and first-of-its kind Environmental Justice Law. The proposed rules set forth the process for Department review of permit applications to better address localized impacts and consider numerous climate-related environmental and public health stressors including ozone, fine particulate matter, truck and railway air impacts, impervious cover, tree canopy, CSOs and flooding. As facilities would be required to reduce their impacts on these climate stressors, the Department expects to see direct, localized climate benefits as a result of its implementation of the EJ Law.

Milestones and Targets:

Ensure that permits or approvals that may be issued to facilities subject to the EJ law include conditions as may be necessary to avoid or minimize environmental or public health stressors on the overburdened community, consistent with applicable statutes and regulations.	Ongoing
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Lead program: Department-wide

7.2.2 CONTINUE TO PRIORITIZE GREENHOUSE GAS MITIGATION PROJECTS IN OBCS

Reducing greenhouse gas emissions will also have co-benefits of reducing co-pollutants (such as particulate matter and ozone precursors), which are recognized to have harmful localized impacts on human health. Therefore, said reductions will improve air quality in these disproportionately affected communities, as well as throughout the State.

The Department will:

Explore statutory, regulatory or policy changes that may be necessary to implement appropriate measures to reduce harmful emissions in OBCs, including exploration of targeted emission reduction requirements.	Short-term
Continue to prioritize initiatives as part of the RGGI Strategic Funding Plan, which benefit communities disproportionately impacted by environment degradation and climate change, thereby prioritizing projects that benefit disproportionately impacted communities.	Ongoing
Continue to make air quality data more transparent and useful to the public, through its “What’s in my Community” online GIS application.	Ongoing

Lead program: AEMS

7.2.3 IMPLEMENT MANDATORY OBC CONSIDERATIONS IN PERMITTING AND POLICY DECISIONS

To effectively redress the historic inequities in treatment of overburdened communities in facility siting, the State and the Department will consider the presence and impacts to OBCs and their residents in planning endeavors and policy developments. This mandate is only further heightened by EPA’s emerging guidance on the utilization of Title VI of the Civil Rights Act to further deep consideration of disproportionate impacts in policy, funding and permitting decisions.

The Department will:

Develop EJ guidance to inform municipal planning efforts, including incorporation into their Plan Endorsement process.	Short-term
Develop Title VI guidance to inform Department decision making in accordance with EPA direction	Short-term
Explore requirements for state agencies to include analyses of implications on OBCs in State Plans.	Medium-term

Lead program: Office of Environmental Justice (OEJ)/LRLA

7.2.4 INCLUDE THE ENVIRONMENTAL JUSTICE CONSIDERATIONS IN ALL RULEMAKING

To ensure uniform and consistent analysis of environmental justice, including climate justice, considerations in all rulemaking, the Department intends to develop update guidance to require its specific inclusion in formal rulemaking.

The Department will:

Develop internal guidance for rulemaking teams to consider environmental justice in all rulemaking.	Short-term
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Lead program: LRLA

8. UPDATING SCIENCE & ECONOMIC INFORMATION



Many climate change impacts are already familiar to New Jersey's residents. New Jersey has seen the evidence of climate change in our increasingly mild winters, more frequent heavy rains, flooding along inland streams and rivers, and more "sunny day" tidal flooding along areas of the coast. These events can threaten public health and safety, destroy property, undermine critical infrastructure, and damage New Jersey's economy – especially the vibrant tourism industry supported by our waterfront communities. As we well know, climate change threats can wreak long-lasting economic damage.

8.1 THOUGHT LEADERSHIP

The Department published its first ever Climate Science Report with a specific focus on climate impacts in June 2020. This report is our first comprehensive effort to assemble the latest and most reliable scientific information on the current and predicted future impacts of climate change on New Jersey's natural and built environments. Chapter 6 is dedicated specifically to highlighting known gaps and next steps in existing research and data. Addressing data gaps and the need for further research is essential to building a comprehensive and up-to-date understanding of what climate change impacts New Jersey can expect in the near-term and in the long-term. Current, reliable data also ensures the development of well-informed rules, regulations, and guidance to deal with a changing climate.

The items listed below are designed to identify near-term recommendations to lead development of state-of-the-art, New Jersey-specific science that can be applied directly through State programs. Longer-term goals that require dedication of more time and funding, including potential programmatic changes, are also included. Each recommendation will consider several co-benefits, including ecological, economic, and community resilience. As such, the items listed below are expected to apply not just to Department programs, but also to external groups fighting to prepare for a changing

climate. Those external groups may include landowners and land managers, non-profit organizations, universities, and policymakers.

8.2 POLICY DEVELOPMENT & INCENTIVES

8.2.1 IMPLEMENT A CLIMATE RESEARCH AGENDA

The Department recognizes the science of climate change will continue to evolve. By cooperating with agency and academic experts, the Department will continue to monitor and track new developments in our understanding of climate impacts across the state, both scientific and economic.

As laid out in Strategy 4.4 of the State’s Climate Change Resilience Strategy, the Department will develop a Collaborative Climate Research Agenda across state agencies and with experts from several universities and academia to ensure the State response to climate change is based on current, sound scientific data, and to help State government properly prioritize resources that support further research and data collection.

The Department will:

Identify knowledge and data gaps that could help the State better understand and respond to the impacts of Climate Change.	Ongoing
Continue outreach to academic institutions (including universities) as well as other specialized research entities to identify climate experts who can help inform the State on research gaps across multiple disciplines.	Ongoing
Improve ongoing partnerships and foster new scientific collaborations to update the NJ Science Report on Climate Change.	Ongoing

Lead program: DSR

8.2.2 HOST A CLIMATE CHANGE SCIENCE RESEARCH FORUM

To better amplify the capacity to engage in all research necessary to fully inform the State’s actions to address climate change impacts, the Department will convene a research forum to better foster collaboration between academic research institutions and other research entities. The forum will provide the opportunity for the Department and external researchers to present their completed or ongoing research and share outstanding research needs. The forum will serve to identify active climate researchers and establish prospective partnerships.

The Department will:

Organize a research forum among academic research institutions and other research entities that will share ongoing areas of climate research and identify and prioritize climate-related data and knowledge gaps in New Jersey.	Medium-term
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Lead program: DSR

8.2.3 ESTABLISH A CLIMATE RESEARCH GRANT PROGRAM

The Department does not have the capacity to conduct all necessary climate change research on its own. Research grants will allow the Department to establish what research is necessary and define the desired scope of work. The Department will also establish and expand its partnerships with other research entities.

The Department will:

Identify grants to support research that would fill gaps and support updates to the Climate Science Report, NJPACT rules, department guidance, and other program area needs.	Ongoing
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Lead program: DSR

8.2.4 UPDATE 2019 SEA-LEVEL RISE & COASTAL FLOODING PROJECTIONS

The Department will periodically update sea-level rise projections as the science advances with new observational data, technological developments, and improved modeling capabilities. When new studies and reports are generated that provide implications specific to New Jersey’s sea-level rise and coastal flooding projections, the STAP is consulted to consider reevaluating the current scenarios and ensure the State is utilizing current and best available scientific information.

The Department will:

Update sea-level rise and coastal flooding information specific to New Jersey.	Short-term
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Lead program: DSR

8.2.5 UPDATE 2021 EXTREME PRECIPITATION PROJECTIONS

The Department will periodically update extreme precipitation projections as new observational data, technological developments, and improved modeling capabilities permit. Determination to update projections will be aligned with the release of regional updates to NOAA Atlas 14 precipitation values or sooner to ensure the State is utilizing current and best available scientific information.

The Department will:

Update projected changes in extreme rainfall information specific to New Jersey.	Medium-term
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Lead program: DSR

8.2.6 CHARACTERIZE THE IMPACTS AND RISKS FROM INVASIVE SPECIES

Climate change is proven to increase the susceptibility of New Jersey’s natural areas to conditions that foster the introduction of non-native invasive species. Our natural resources continue to be and will become further stressed and imperiled under the increased proliferation, abundance, and density of these organisms, including aquatic species, weeds, pests, and insects. Impacts will be seen not only in our forests, coastal wetlands, marine systems, agricultural systems, and fisheries but also in our communities with the increase of vector-borne disease.

Invasive species are plants, animals, fungi, and pathogens that through intentional or accidental introduction by humans, or through natural dispersion, take hold in a habitat that they are not native to and compete with native species for resources, or significantly alter the ecosystem in which they become established. The resultant effect is often the loss of native species and decreased biodiversity.

The Department will:

Develop a New Jersey invasive species website to reflect current guidance and practices.	In progress
Incorporate input from a diverse set of invasive species managers, experts, and stakeholders to create a scientifically sound strategy for revising the 2009 NJ Strategic Management Plan for Invasive Species and devise actionable items that can be successfully implemented.	Short-term
Consult with experts in NJ to develop effective strategies for invasive plant control on DEP properties.	Short-term
Manage forests in areas of strategic importance to reduce tree stress and competition with specific intent to address and hinder invasive insect outbreaks and wildfire risk.	Medium-term
Create an aquatic invasive species management plan that will provide updated information on species identified as being the most impactful and those that are an emerging threat to New Jersey, guide detection and monitoring, and establish oversight and coordination so that efforts to protect vulnerable resources, prevent introductions, rapidly respond, and control proliferation can be more effective.	Ongoing

Lead program: DSR/SPFHS/NJF&W



8.2.7 CONTINUE RESEARCH & MONITORING IN SUPPORT OF OFFSHORE WIND DEVELOPMENT

New Jersey’s current efforts to reduce GHG emissions rely on the decarbonization of the electric generation sector, primarily through offshore wind (OSW) energy production. Research on the potential environmental, ecological and socioeconomic impacts, both positive and negative, of renewable energy development is therefore necessary to guide the State’s clean energy transition efforts while upholding our mandate to protect and responsibly manage New Jersey’s natural resources. This work has already begun in the realm of OSW development, consistent with the State’s Offshore Wind Economic Development Act, Executive Order 8 and Executive Order 92, and the Energy Master Plan, New Jersey has established the OSW Research & Monitoring Initiative (RMI), jointly administered by the DEP and the Board of Public Utilities. The RMI addresses the need for regional research and monitoring of marine and coastal resources during offshore wind development, construction, operation and decommissioning as recommended in the New Jersey Offshore Wind Strategic Plan.

The Department will:

Produce scientifically rigorous reports and clearly communicate findings and conclusions.	Medium-term, Long-term
Collaborate with research entities to ensure efforts are consistent and complimentary among regional states.	Ongoing
Maintain a list of highest-priority environmental research and monitoring needs for OSW in New Jersey.	Ongoing
Facilitate and fund research consistent with established RMI principles and objectives in partnership with the BPU.	Ongoing
Convene stakeholders through the Environmental Resources Working Group to ensure communication and information sharing between fishing and conservation communities and state and federal agencies	Ongoing

Lead program: DSR/NJF&W

8.2.8 CHARACTERIZE & QUANTIFY CLIMATE IMPACTS ON WATER SUPPLY

Climate change is projected to affect temperature, precipitation, and sea-level in New Jersey. The Department’s understanding of these impacts will evolve over time, requiring research to continually assess how these changes affect the quantity and quality of surface and groundwater resources across the State.

The Department will:

Create guidance with specific metrics to track the effects of climate change on water supply (e.g., rainfall extremes, drought occurrences, changes to groundwater recharge and reservoir safe yield), water quality (e.g., ground water salinity, frequency of water quality impacts such as Harmful Algal Blooms (HABs) and turbidity on water availability and drinking water treatment processes), and water demands (e.g. extended growing season, increased potable demands, changing water use patterns).	Medium-term
Develop a plan to continuously improve the assessment of climate change impacts on water supply that includes monitoring, modeling, and research and which updates and revises action items and policy recommendations to reflect the current assessments.	Medium-term
Update statewide water availability estimates to address impacts of climate change.	Medium-term
Continue to evaluate climate change impacts on water supply as part of the Water Supply Plan update process.	Medium-term, Long-term
Annually update New Jersey's Extreme Temperature and Precipitation charts.	Ongoing
Assess changing state and regional temperature and precipitation patterns in order to inform adaptation and mitigation responses.	Ongoing
Continue to monitor the Drinking Water Supply Indicators on bi-weekly basis or more frequently as needed. Expand/modify indicators as needed.	Ongoing

Lead program: WRM

8.2.9 CHARACTERIZE & QUANTIFY CLIMATE IMPACTS ON MARINE WATER QUALITY – ECOSYSTEMS, FISHERIES & AQUACULTURE

As natural carbon sinks, the oceans are projected to continue to take up large amounts of carbon from the atmosphere in response to ongoing GHG emissions. This will result in major changes in seawater chemistry (e.g., ocean acidification) and potentially serious consequences to marine ecosystems. In addition, increased nutrient inputs to estuaries and the ocean due to changing precipitation patterns, can lead to algal blooms and eutrophic conditions that will alter the carbonate chemistry and result in lower pH levels. Understanding the effects of climate change to marine environments is thus a crucial component of the DEP's adaptation and mitigation efforts.

The Department will:

Identify gaps in monitoring, including geospatial gaps and data availability for useful metrics.	Short-term
Identify certified laboratories to allow for consistent analysis of alkalinity and/or dissolved inorganic carbon by funding staff for NJDEP lab expansion, or for contract laboratories.	Short-term
Inventory existing resources of data related to acidification, pH, alkalinity, and dissolved organic carbon.	Medium-term
Develop New Jersey's first Ocean Acidification Action Plan through research and engagement to coordinate and expand actions that address impacts of ocean acidification.	Medium-term
Develop a central repository for all data generated by all partners.	Long-term
Identify funding for expansion and use of continuous water quality monitoring (slocum gliders, buoys) including research for new technologies to monitor carbonate chemistry.	Long-term
Identify funding for research for the evaluation of water quality and links to biological impacts and impairments.	Long-term
Document and assess range expansions or contractions of native species and changes to habitat conditions.	Ongoing

Lead program: DSR/WLM/CRO

8.2.10 CHARACTERIZE & QUANTIFY CLIMATE IMPACTS ON GROUND & SURFACE WATERS

Beyond its impact on water supply, climate change is also likely to affect the quality of New Jersey’s ground water and fresh surface waters. An increase in intense storm events can lead to increased loadings of nutrients and bacteria from stormwater runoff and potential sewage infrastructure issues resulting in water quality impacts that can affect the ecosystem and public health. The State must therefore proactively plan to address threats to its water resources.

The Department would need funding to enhance the Ambient Nutrient Monitoring Network, dedicated field and laboratory staff, to support the addition of sampling stations that would increase spatial coverage in monitoring for Estuarine and Ocean Acidification. Data collected are nutrients and water quality parameters associated with acidification, pH and alkalinity. Funding could add dissolved inorganic carbon, a key measure of acidification, to the list of parameters analyzed. Another component would be the expansion of continuous water quality monitoring to evaluate the effect of increased nutrient loads to State waters and HABs and monitor pH conditions throughout the diurnal cycle, and storm events. Expand and fund the design and monitoring for special pollution source track down studies to identify key areas that are impacted by nutrients and other water quality parameters during storm events, will lead to remediation efforts in local areas that can help reduce HABs, eutrophication, and the potential pH changes due to eutrophication.

The Department will:

Evaluate existing data and identify Gaps in key parameters for the monitoring networks.	Short-term
Utilize existing data to evaluate and characterize locations where water quality is impacted by storm conditions, such as rainfall and tides, performed on an annual basis to prioritize areas for monitoring.	Medium-term
Evaluate the existing continuous water quality monitoring data with precipitation events to identify where storms impact HAB formation and water quality changes related to HABs and algal blooms. Also evaluate the daily changes in water quality that may inform when to collect samples.	Medium-term
Evaluate existing Network water quality data annually and identify areas that water quality is impacted by storm events.	Long-term

Lead program: WRM

Climate change exacerbates an increase in the severity of extreme weather conditions that could facilitate the need for road salt (melt/refreeze conditions). Data from 1971 to 2011 analyzed for four sites shows an upward trend in all for chloride and specific conductance and an upward trend in three of the sites for total dissolved solids (TDS). The Department will continue a project started in 2017 to assess the effects on water quality due to road salt application. This will be accomplished through continuous year-round monitoring of specific conductance as a surrogate measure for road salt chemicals. Specific conductance measurements will be entered into a database that will examine critical high specific conductance levels observed in the winter, the duration of these elevated levels, and comparisons to baseline levels and normal fluctuations throughout the year in a variety of New Jersey’s non-tidal, freshwater streams.

The Department will:

Assess levels of specific conductance in relation to winter precipitation/snow events.	Short-term
Develop a database to allow for better assessment of whether the application of road salt before, during and after snowfall events and below freezing temperatures, has a significant impact on water quality.	Short-term
Determine if additional study or a modification of the study is necessary to effectively assess impacts of road salt operations on stream water quality.	Short-term
Develop a white paper on road salt impacts on water quality.	Short-term
Seek stakeholder engagement on Policy document.	Short-term
Prepare a state-wide TMDL to address 39 TDS impairments and 8 Chloride impairments.	Medium-term

Assess the severity of potential impacts to inform and develop specific education and outreach materials in terms of best practices to minimize impacts of road de-icing.	Medium-term
Develop a drinking water policy document that includes statement about purpose of Statewide TMDL for total dissolved solids to address chlorides from road salt.	Long-term

Lead program: WRM

8.2.11 PROVIDE SUPPORT TO EDUCATORS, SCHOOLS & COMMUNITIES FOR STATEWIDE IMPLEMENTATION OF THE K-12 CLIMATE CHANGE EDUCATIONAL STANDARDS

As the lead scientific contributor to the creation and implementation of New Jersey’s nation-leading K-12 Climate Change Educational Standards, the Department will continue to work closely with the Department of Education and the Office of the First Lady to identify opportunities and resources to support educators, schools, and communities in climate change education. Based on the [K-12 Climate Change Education Needs Report](#), the Department will continue its work to address key needs in the areas of professional learning, curricular resources, and community-based education.

The Department will:

Identify overlap between Department/Program initiatives and climate change education	Short-term
Promote New Jersey Climate Change Education Hub , which provides New Jersey specific climate educational resources, lessons, and materials for teacher use	Short-term
Create an educator summary of the Climate Science Report to provide a climate change tutorial for New Jersey teachers	Medium-term
Provide and expand climate change speakers and exhibitors or videos for schools, communities, and businesses proactively and by request	Medium-term
Evaluate the effectiveness of NJDEP’s education program offerings	Long-term
Ensure that accurate, understandable, and current data and science is always available on DEP websites and publications	Ongoing
Work closely with DOE and partner agencies and organizations to fulfill statewide climate change education goals	Ongoing

Lead program: Communications

8.2.12 URBAN PARKS DEVELOPMENT

As one of the most densely populated States in the country, New Jersey is particularly vulnerable to various environmental stressors, including the urban heat island effect. Through the targeted development of urban parks, particularly in overburdened communities (as defined by the New Jersey Environmental Justice Law, N.J.S.A. 13:1D-157), New Jersey can integrate resilience strategies across the State while providing both outdoor recreational and alternative transportation opportunities. The development of urban parks has potential to serve as a catalyst for environmental improvements and economic development in any adjacent communities. To this effect, the Department is actively working on the development of two urban parks projects - the Greenway and Liberty State Park – while further prioritizing open space funding in urban and overburdened communities.

The Department will:

Explore opportunities during development of urban park assets to mitigate climate impacts through improved stormwater management, reduction of heat island effects, expansion of tree canopy, maintenance of habitat and pollinator pathways and other appropriate actions along the Greenway through underground and green infrastructure.	Ongoing
Continue to prioritize funding and identify additional acquisition opportunities in urban and overburdened communities	Ongoing

Lead program: SPFHS/ Community Investment & Economic Revitalization (CIER)/LRLA

9. SUSTAINABLE WASTE MANAGEMENT & RECYCLING



According to New Jersey's Global Warming Response Act 80x50 Report (the 80x50 Report), waste management is the largest contributor of GHG emissions in the state, after energy related sources. Disposal of municipal solid waste in landfills generates methane and carbon dioxide, primarily due to the decomposition of food waste and other organic materials. Greenhouse gas emissions from municipal solid waste have grown 4.2% from 2006-2018 and are projected to increase. For this reason, it is imperative to reduce the source of waste, and then take steps to reuse and recycle materials, in order to divert and reduce the waste that would normally go into landfills and incinerators for final disposition. This can be done through legislative, regulatory, and near-term policy action as outlined throughout this section. Collectively these strategies can reduce 2050 waste emissions by 1.6 MMT.

The Department is in the process of reimagining its approach to waste management, with sustainability the principal focus, and will undertake a series of steps to bring us to the next generation of waste management. The Department is also beginning to explore the concept of Extended Producer Responsibility (EPR), which is already the foundation of the E-waste recycling program, to shift the responsibility of end-of-life product management away from government and the public and instead to the producer thus incentivizing more sustainable production and packaging earlier in the supply chain. While much of EPR is applied to a specific industry, sector or brand, the Department will also look at cross-sector EPR concepts, such as packaging and shipping.

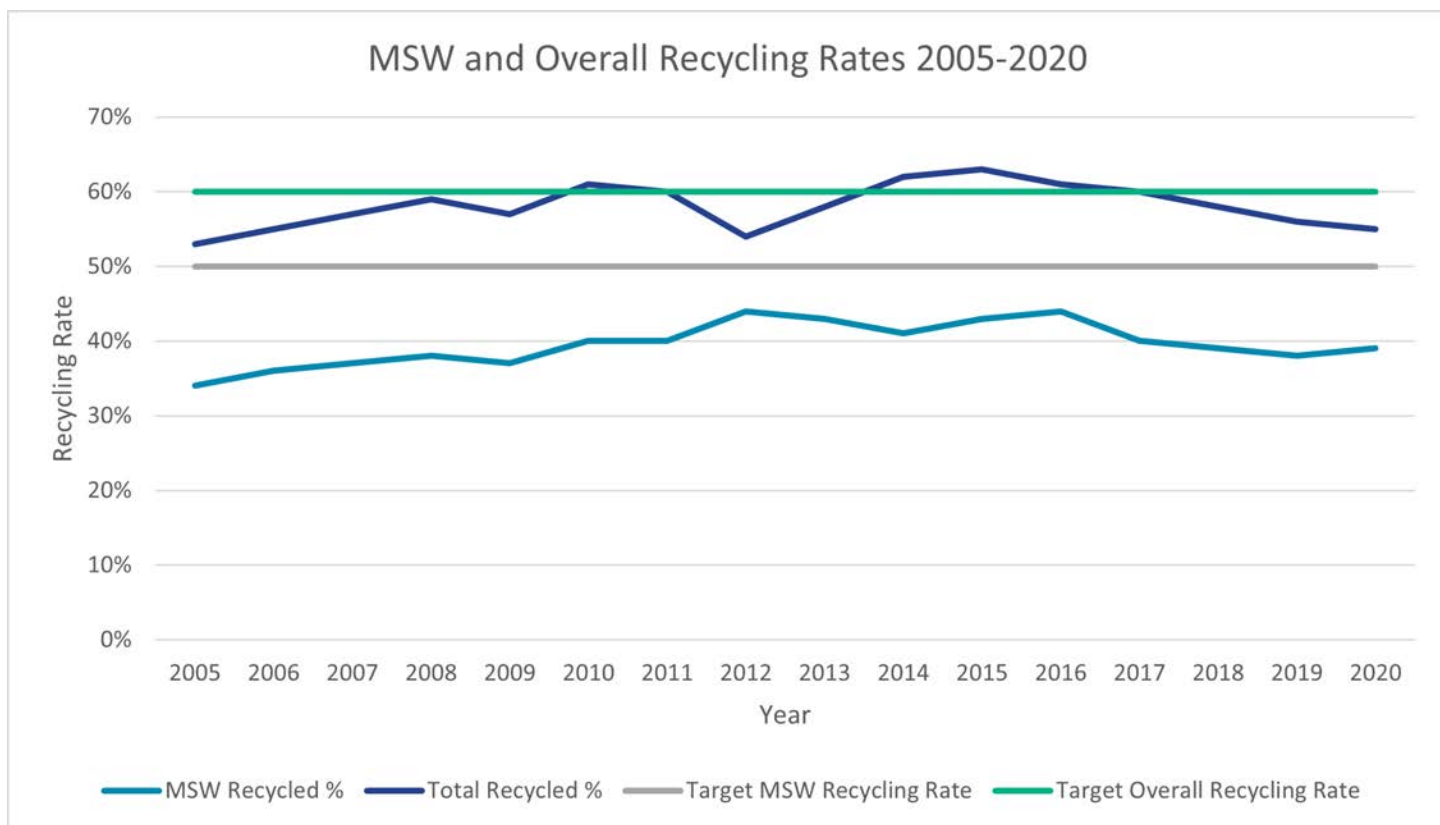
9.1 THOUGHT LEADERSHIP

In 1992, the New Jersey Legislature amended the "New Jersey Statewide Mandatory Source Separation and Recycling Act" (Recycling Act) to increase the State's recycling goal to 50% of the municipal solid waste (MSW) stream and 60% of the overall waste stream by the end of 1995. MSW is defined as waste originating in the community consisting of

household waste from private residences; commercial waste which originates in wholesale, retail, or service establishments, such as, restaurants, stores, markets, theaters, hotels, and warehouses; and institutional waste material originated in schools, hospitals, research institutions, and public buildings. In contrast, the overall waste stream factors in all other waste sources such as construction and debris.

As of 2020, the year most recent data is available, the MSW recycling rate was 39% and the overall recycling rate was 55%. These recycling rates fluctuate year-to-year based on end markets, oil prices, and economic forces. Between 2016 to 2020, two of the five years within the range met or exceeded the 60% overall waste recycling target. After 2017, recycling rates slumped due to China’s waste import ban, which dramatically reduced end markets for materials. In recent years, markets have bounced back, and NJDEP expects recycling rates to improve as a result. As shown in the table below, available trends between 2010 to 2020 demonstrate how recycling rates fluctuate with a low of 38% MSW (2019) and 54% overall (2012) and a high of 44% MSW (2012 & 2016) and 63% overall (2015).

Figure 5: MSW and Overall Recycling Rates 2005-2020



As shown in the data above, recycling laws and programs have been effective in managing the New Jersey waste stream; however, there has been no consistent improvement in recycling rates. As recycling rates fluctuate due to world markets, fossil fuel costs, and other factors, we are forced to ask if this is sustainable. The hierarchy as defined by USEPA remains the most valid approach in sustainable waste management efforts and reflects the understanding that the greatest and most efficient environmental benefit comes from reducing the source of the waste and reusing waste material. It is therefore imperative to focus on source reduction and reuse, which the Department is doing through the Single-use Reduction legislation to reduce plastic bags, polystyrene, and plastics straws, and will soon improve upon by implementing the minimum recycled content legislation recently signed into law.

Additionally, the minimum recycled content Law creates demand for recycled materials, ensuring the materials collected in New Jersey for recycling have a consistent demand thereby increasing the resiliency of the recycling industry. As material generation grows so will the opportunity for collection and recycling and the recycled content Law ensures the material intended for recycling will be incorporated into new products which can boost recycling rates in New Jersey and across the country.

9.2 POLICY DEVELOPMENT & INCENTIVES

9.2.1 REIMAGINE SUSTAINABLE WASTE MANAGEMENT

The Department recognizes that recycling initiatives alone will not be sufficient to manage the State’s waste. Instead, the Department will implement a multi-part system that includes a renewed focus on reducing single-use products in the first place. The Department will continue implementing and expanding its reduction programs, including minimum recycled content standards that work to leverage waste reduction with increased recycling market support.

The Department will:

Explore deliberate and systematic methods to reduce all waste sectors.	Short-term
Develop lead-by-example approaches to integrate sustainable waste management solutions in Department and statewide practices.	Short-term
Evaluate innovative solid waste and recycling developments in NJ, in the US, and internationally.	Medium-term
Develop new reduce, reuse, recycle models, zero waste initiatives and circular economy concepts.	Medium-term
Develop and support recycling markets with assistance from the recycling community and stakeholders.	Medium-term
Pursue statutory authority if required through amendments to enabling legislation.	Long-term

Lead program: AEMS

9.2.2 FOOD WASTE

As food waste decomposes, it emits methane, a powerful greenhouse gas. In 2017, New Jersey generated approximately 1.46 million tons of food waste. Food waste management includes managing emissions from decomposition of food waste in landfills, as well as from venting and flaring of landfill gas and digester gas—all of which contribute to the climate crisis. Not only does food waste implicate serious environmental concerns, but it also represents lost economic value and natural resources. In 2017, New Jersey set a goal to reduce its food waste generation by 50% by the year 2030.

9.2.2.1 Reduce Food Waste

Pursuant to P.L. 2017, c.136, the Department is charged with the development of a Food Waste Reduction Plan to encourage food waste reduction among consumers and businesses and recommend ways for large food waste generators to reduce the amount of food waste they generate to below the statutory threshold. This is in alignment with EPA’s Food Recovery Hierarchy, which prioritizes prevention of waste and diversion of waste food, and the Department’s own “Erase Food Waste” campaign. The Department will build upon the expertise and work done by other agencies such as the New Jersey Economic Development Authority (NJEDA) and the New Jersey Department of Agriculture.

The Department will:

Disseminate emerging management practices to reduce wasted food.	Short-term
Educate residents about the environmental, financial, and societal implications of wasted food.	Short-term
Publish an organics and composting policy guidance document.	Short-term
Promote programs targeting the supply chain for incentivizing food donation and conduct waste audits.	Medium-term
Create guidelines and recommendations for county siting and streamlined State planning and permitting of food waste recycling facilities.	Long-term
Promote the School Food Waste Guidelines developed pursuant to P.L. 2018, c.210.	Long-term
Implement statewide recurring solid waste composition audits.	Long-term
Study and monitor State’s progress in meeting food waste reduction goals	Ongoing

Lead program: AEMS

9.2.2.2 Recycle Food Waste

After food waste reduction strategies are implemented, any unavoidable food waste will be diverted from landfills and incinerators. Pursuant to P.L. 2020, c. 24, large food waste generators located within 25 road miles of an authorized food waste recycling facility are required to source-separate their food waste from the rest of their solid waste and recycle the food waste portion subject to specific parameters identified within the Law. This process adheres to New Jersey’s Renewable Portfolio Standards (RPS), which classify electricity generated by the combustion of methane gas from anaerobic digestion facilities as a Class I renewable energy.

The Department will:

Propose a community composting rule to streamline the approval process across the Department.	Short-term
Propose rules and regulations necessary to implement the statute’s requirements.	Medium-term
Promote community composting programs on the residential level.	Medium-term
Create incentives to site organic waste recycling, composting, or anaerobic digestion operations.	Long-term
Support the development of Regional Composting Facilities that function free of off-site odors for equine manure and incentives for smaller on- and off-farm composting facilities.	Long-term
Work with the N.J. Department of Agriculture to provide guidelines for soil management and agricultural practices to reduce greenhouse gas emissions or connect farmers with facilities that accept food waste.	Long-term

Lead program: AEMS

9.2.3 REDUCE SINGLE-USE PLASTICS

Pursuant to P.L. 2020, c. 117, the Department is restricting the use of single-use plastic carryout bags, single-use plastic straws, polystyrene foam food service products, and single-use paper carryout bags. No person or food service business will be allowed to provide or sell single-use plastic carryout bags, and no grocery store will be allowed to provide or sell single-use paper bags. Single-use plastic straws will be by request only, and no person or food service business will be allowed to provide or sell polystyrene foam food service products.

The Department will:

Continue to implement and enforce the law.	Short-term
Promote the law to the regulated community in collaboration with New Jersey Business Action Center, New Jersey Clean Communities Council, and New Jersey Food Council.	Short-term
Hold Stakeholder meetings to gain input from the regulated community on rules.	Short-term
Promulgate rules regarding the implementation of P.L. 2020, c.117.	Long-term
Develop and report on measures of success in the significant reduction of single-use plastics.	Long-term
Consider findings of the Plastics Advisory Council’s First-Year Report to improve effectiveness and implementation of the law.	Ongoing

Lead program: AEMS



“According to New Jersey’s Global Warming Response Act 80x50 Report (the 80x50 Report), waste management is the largest contributor of greenhouse gas (GHG) emissions in the state, after energy related sources.”

9.2.4 IMPLEMENT RECYCLED CONTENT LEGISLATION

New Jersey passed Recycled Content Legislation that sets minimum requirements for the percent of recyclable material that must be used in the manufacture of certain plastic, glass, and paper packaging material and bans the use of polystyrene packing peanuts. The legislation is designed to significantly reduce the use of virgin materials as contemplated in the reduce, reuse, recycle model.

The Department will:

Promote awareness of the law in the regulated community.	Short-term
Hold Stakeholder meetings to gain input from the regulated community on rules.	Short-term
Implement an online manufacturer registration process that will list all products covered by the law that are offered for sale in New Jersey.	Short-term
Promulgate rules regarding the implementation of the law.	Long-term
Evaluate the efficacy of the law by reporting on industry compliance.	Long-term
Continue to implement and enforce the law.	Ongoing

Lead program: AEMS

9.2.5 ELECTRONIC WASTE (E-WASTE) MANAGEMENT & EXTENDED PRODUCER RESPONSIBILITY

The State’s “Electronic Waste Management Act” P.L. 2007, c.347 as amended by P.L. 2008 c.130 and P.L. 2016, c.87 (N.J.S.A. 13:1E-99.94 et seq.) (the EWMA) implements the regulatory concept of Extended Producer Responsibility, which assigns financial and physical responsibility for a product’s end-of-life management to the manufacturer of that product, rather than onto consumers or taxpayers. Under the EWMA, electronics manufacturers are required to establish and finance a free, convenient, and environmentally sound recycling program for covered electronic devices. Electronics manufacturers must assure the Department that covered electronic devices are recycled in compliance with all applicable federal, state, and local laws, regulations, and ordinances, and that those devices are not exported for disposal in a manner that poses a risk to public health or the environment. The EWMA also imposes a disposal ban on covered electronic devices. Amendments to the law strengthened the manufacturer-driven system and provided the Department with greater control over the management of E-waste in New Jersey.

The Department will:

Research and evaluate Extended Producer Responsibility and model legislation in New Jersey and nationwide.	Short-term
Establish a working group with the recycling community and industry to prepare for upcoming legislative discussion on this topic.	Short-term
Promulgate rules to address rulemaking for EWMA amendments.	Medium-term

Lead program: AEMS

9.2.6 EVALUATE THE VULNERABILITY OF LANDFILLS

Another climate change-related stressor on New Jersey’s communities and their infrastructure is the possible release of contaminated water, ground water, leachate, sediment, and other materials from landfills. The Department recognizes the importance of planning for and responding to these types of impacts at landfills throughout the State.

The Department will:

Evaluate the vulnerability of landfills to sea-level rise as well as fluvial and stormwater flooding. These evaluations should include an assessment of potential impacts to surrounding communities in the event that water, ground water, leachate, sediment or other material is released into populated areas.	Short-term
Evaluate the need for extending post-closure care periods for landfills to enable the Department to retain regulatory oversight of previously closed landfills in the event it is necessary to prepare for and mitigate the effects of climate-related disasters.	Medium-term
Engage stakeholders in the evaluation, development and proposal of necessary regulatory reforms to include climate change and resilience considerations in solid waste planning and permitting and hazardous waste permitting.	Medium-term

Lead program: AEMS/CRO

9.2.7 EVALUATE THE VULNERABILITY OF CONTAMINATED SITES

The Department recognizes that as a result of climate change, more frequent and intense floods and storms could cause the release of contaminated water, soil, and sediment from remediation sites. Because New Jersey is a coastal state with the highest population density and over 14,000 contaminated sites, planning for and responding to these risks at contaminated sites is a top priority.

The Department will:

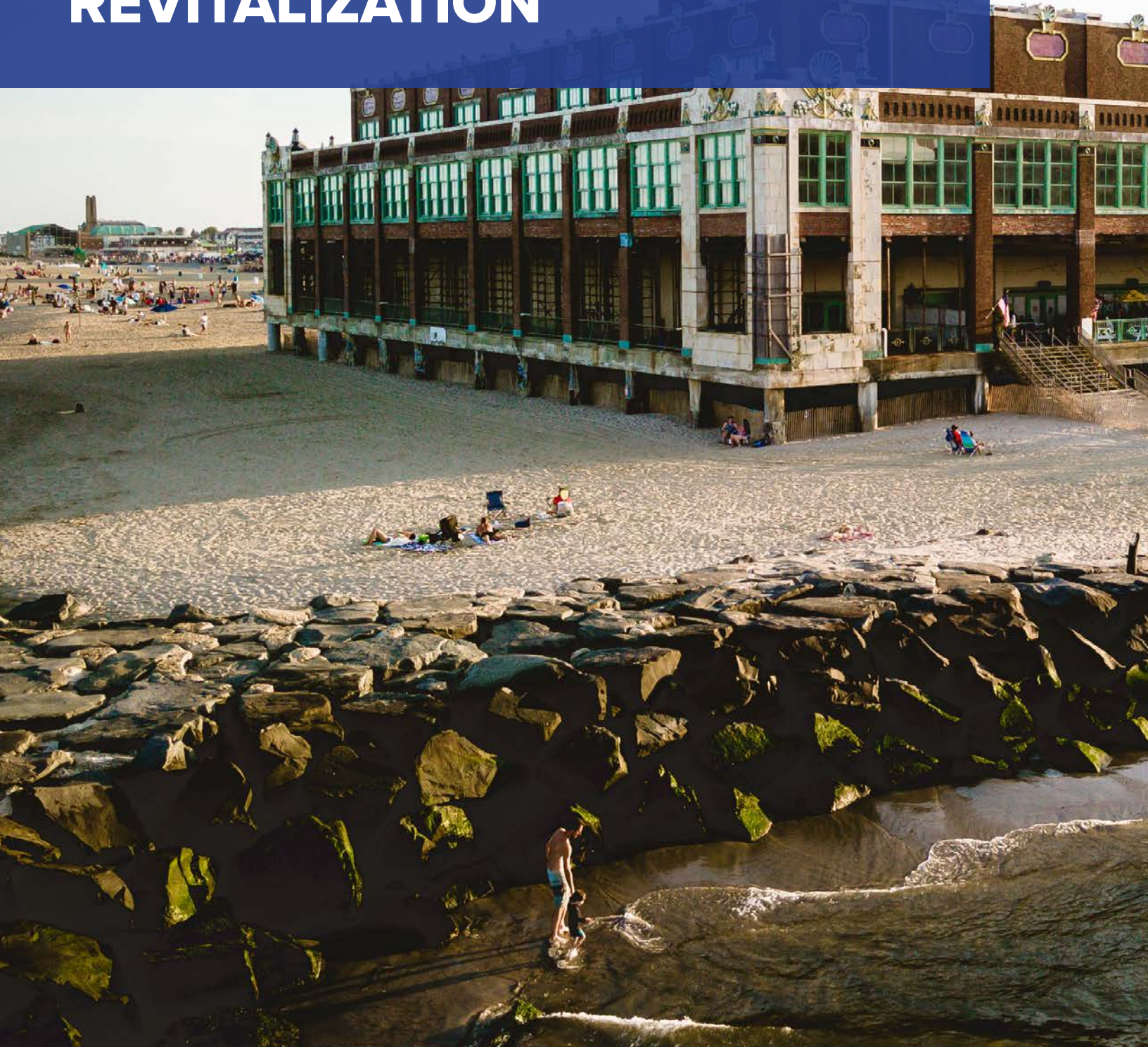
Evaluate the vulnerability of contaminated sites from climate risks, including sea-level rise and fluvial and stormwater flooding. These evaluations should include an assessment of potential impacts to surrounding communities should contaminants be released into populated areas.	Medium-term
Evaluate regulations and policy guidance, including the “Technical Guidance: Planning for and Response to Catastrophic Events at Contaminated Sites,” to identify modification needed to ensure resilience of remedial measures to effects of climate change.	Medium-term

Lead program: Contaminated Site Remediation & Redevelopment Program (CSRRP)/CRO

“Because New Jersey is a coastal state with the highest population density and over 14,000 contaminated sites, planning for and responding to these risks at contaminated sites is a top priority.”



10. COMMUNITY INVESTMENT & ECONOMIC REVITALIZATION



The Department's Community Investment & Economic Revitalization (CIER) program supports sustainable economic growth that restores, preserves, and protects New Jersey's natural, cultural, and historic resources. By coordinating and promoting Department initiatives at the intersection of environmental, social, and economic improvement, CIER works to strengthen investments in natural capital that can enhance quality of life for all New Jerseyans.

10.1 THOUGHT LEADERSHIP

Recognizing that the Department's mission sits at the intersection of environmental, health, social, and economic improvement, the Commissioner reorganized aspects of the Department between 2021 and 2022, establishing the Department's Community Investment & Economic Revitalization program within the Commissioner's Office. While working in concert with traditional environmental media-based programs, CIER strengthens the Department's overall investments in natural capital and community development to support sustainable economic growth that restores, preserves and protects New Jersey's natural, cultural, and historic resources consistent with Department's principle and priorities.

Through the formal recognition and reorganization of CIER in March 2022, the Department coalesced the Green Acres Program, Office of Natural Resource Restoration, Historic Preservation Office, Local Government Assistance, Community Collaborative Initiative, and Office of Economic Analysis and Development within the Commissioner's Office to ensure the unification of the Department's resources and to focus them on reducing and responding to climate change, protecting New Jersey's water, revitalizing our communities, protecting public health, and managing and promoting natural and historic resources, so that all of New Jersey will be able to maintain the free public services that clean, healthy, and equally accessible natural capital provides.

Asbury Park, NJ

10.2 POLICY DEVELOPMENT & INCENTIVES

10.2.1 Continue the Community Collaborative Initiative (CCI) Involvement with Local Community Members

The Community Collaborative Initiative (CCI) is a place-based partnership between the Department and communities that seeks to align community, economic, and natural resource needs and opportunities and facilitate improvements that promote quality of life, community revitalization, and equitable economic development in New Jersey’s distressed communities. CCI strives to continually evolve the Department’s role as a regulator through engaging the community as a partner by building and maintaining mutually beneficial relationships both internally and with community and local governmental partners and allow for and facilitate regional collaboration and support equitable climate resilience projects.

It is through these partnerships, regional collaboration, and equitable projects that CCI communicates and prioritizes Department’s missions and goals and connects and coordinates communities with subject matter experts which is overwhelmingly important with climate change impacts since the impact to these communities is exacerbated by historical disinvestment. By communicating, listening, understanding, and bridging gaps of environmental knowledge with communities; CCI connects these communities with the knowledge and tools to bring the communities the resources they need for revitalization and resiliency planning and implementation. Through this effort, CCI hopes to better realize the Department’s mission by bringing positive change to overburdened communities and being a leader in transformative government focused on community engagement, equity and environmental and climate justice.

The Department will:

Regionalize CCI communities to allow liaisons to identify municipal capacity gaps and prioritize communities most in need while better communicating regional impacts and issues, including climate change.	Short-term
Institutionalize the CCI program to bridge the gap of social, economic, and environmental improvements within the municipalities while prioritizing departmental goals, including resiliency.	Medium-term
Identify and implement equitable investments for the communities served, with the assistance of agency partners with quality of life improvements.	Ongoing

Lead program: CIER

10.2.2 Incorporate Climate & Equity Considerations into Department Funding Programs

The Department spends approximately \$8 million dollars annually on projects to further community and economic investment and revitalization. With this funding comes a tremendous opportunity to further facilitate and incentivize the Department’s key climate and equity policy objectives, particularly in water infrastructure. To take fuller advantage of its spending power, the Department is undertaking a comprehensive evaluation of its funding programs, including grants, loans, purchases, and investments, for opportunities to incorporate climate mitigation, resilience, and equity considerations programs. Once the Department has identified those opportunities, it will undertake necessary modifications to rules, guidance documents, solicitations, and other policy mechanisms as necessary to facilitate these goals.

The Department will:

Evaluate and identify all Department funding programs for opportunities to incorporate consideration of climate and equity with focus on prioritizing funding in adversely impacted OBCs and other underserved communities, including assessment of Federal Justice40 initiative.	Short-term
Incorporate climate risk analysis into the decision-making processes of asset management, capital funding, and grant programs for water infrastructure.	Medium-term

Lead program: CIER

10.2.3 Evolve Approach to Land Preservation

The Department is committed to building on its past success and utilizing its key land acquisition tools to better promote resiliency, protect New Jersey’s resources, and advance the Department’s environmental, social, and economic goals. Investing in the preservation, protection, and enhancement of the natural environment through a system of open spaces and recreation land will ensure that generations of New Jerseyans will be protected from the effects of climate change and be able to use and enjoy the State’s historic, scenic, natural, and recreational resources.

To address the climate crisis, the Department must more carefully identify its priorities and invest its acquisition funds and efforts to ensure New Jersey’s safety and vitality. The Green Acres Program will both broaden and focus the priorities used to acquire lands that serve to further the State’s overall policy goals. In doing so, the Department will listen to its stakeholders; identify assets; coordinate with the Division of Science and Research, the Watershed & Land Management Program, and the Climate & Flood Resilience Program; and use the Climate Resilience Strategy for investment in infrastructure and ecosystems. The newly established Land Acquisition Review Committee will use these enhanced priorities to better guide investments for climate resilience, ensure safe and healthy communities, be better prepared for storms and storm recovery, and make certain New Jersey’s investments have economic, ecological, and social benefits.

The Department will:

Adjust internal policy to broaden the basis for selecting properties for acquisition and account for climate change mitigation and resilience, e.g., carbon sequestration and storage.	Short-term
Work with stakeholders through the Outside, Together! planning process; develop and implement the Outside, Together! - A Statewide Comprehensive Outdoor Recreation Plan for New Jersey with actionable items to be submitted to the National Park Service by December 2023.	Medium-term

Lead program: CIER



“The Department’s Community Investment & Economic Revitalization (CIER) program supports sustainable economic growth that restores, preserves, and protects New Jersey’s natural, cultural, and historic resources.”

Stephens State Park, NJ