New Jersey LCV EDUCATION FUND

ENVIRONMENTAL POLICY GUIDE 2026

NEW LCV EDUCATION FUND

STAFF

Ed Potosnak, Executive Director
Allison McLeod, Deputy Director
Erika Attanasio, Executive Assistant
Milena Bimpong, Environmental Justice Policy Associate
Kathryn Fisher, Campaigns Manager
Jason Krane, Senior Director of Development
Laurie McLeod, Chief Operating Officer
Baylie McMahon, Donor Relations Manager
Jasmine Metellus, Politics and Government Relations Manager
Heather Natola, Development and Grants Associate
Luke Pavlov, Campaigns Manager
Susan Paschkes, Operations Manager
Michelle Peal, Director of Communications
Andrea Rojas, Digital Communications Coordinator
Jesse Sutherland, Political and Public Policy Director
Jay Weisbond, Policy Assistant
Kristin Zilcosky, Senior Director of Digital Engagement

New Jersey LCV EDUCATION FUND

PO Box 1237 · Trenton, NJ 08607-1237
609.331.9922
njlcvef.org
@NJLCV

ABOUT THE NEW JERSEY LCV EDUCATION FUND

The New Jersey LCV Education Fund is a nonprofit organization that guides and educates both to protect our families and communities, and to safeguard our natural resources, now and for future generations. We provide the public, policymakers, and opinion leaders with sound, objective information that encourages strong, equitable, and environmentally just solutions by connecting environmental policies to peoples' daily lives. In this way, we work to protect democracy by empowering and mobilizing people to engage in the democratic process. Our mission is to partner with and support marginalized communities to create policies that rectify environmental injustices and that establish a just, inclusive, and equitable environmental future. We cultivate environmental leaders who support policies that both protect New Jersey's natural resources for our children and grandchildren, and who ensure a prosperous economic future.

For more information, visit www.njlcvef.org

INTRODUCTION

The New Jersey LCV Education Fund is pleased to present the 2026 Environmental Policy Guide, a comprehensive roadmap to a cleaner, healthier, and more sustainable future for our state.

Drawing on the expertise of over 25 partner organizations—including environmental, social justice, community-based, health, and civil rights groups—this broad and holistic compendium illustrates environmental, jobs, equity, and public health issues and challenges facing New Jersey and our communities. It also illustrates the opportunities that lie ahead.

While we acknowledge that there are obstacles on our path, our optimism remains unwavering! New Jersey is at a pivotal moment, and through bold action, tireless public education, and innovative solutions, we can build a more sustainable and just future for all.

Over the years, the New Jersey LCV Education Fund has emerged as a national leader on climate and other environmental issues. Together with its partners, it has placed New Jersey ahead of the curve on environmental action. Since 2018, we have taken innovative actions on safe drinking water, a clean-energy economy, open spaces, and environmental justice, and we have made significant progress.

As you read through the guide, you will see that our goals are simple and straightforward. We are focused on building and modernizing a clean-energy future, safeguarding New Jersey families and businesses from climate change, and investing in resilient communities. We are committed to ensuring that all New Jerseyans can breathe clean air, to preserving open spaces and expanding access to parks, to expanding public transportation with clean and reliable options, and, finally, to safeguarding our state's clean water resources.

We expect the opportunities outlined in this guide to lead to very real and tangible results that effect positive changes for all New Jerseyans, and especially for our most vulnerable communities.

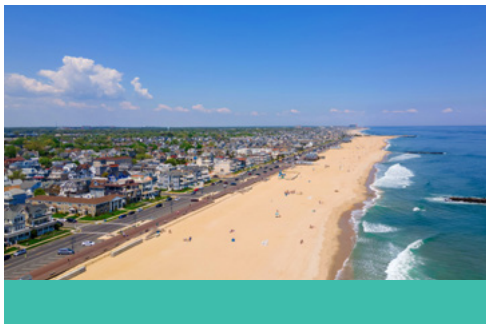
The journey toward a more sustainable future will be challenging, but our commitment has never been stronger. We invite you to join us in making New Jersey the greenest state in America. Together, we can build upon New Jersey's environmental successes and create a more equitable, healthier, and thriving state for generations to come.

Let's get to work.

Yours in conservation,

Ed Potosnak
Executive Director
New Jersey LCV Education Fund

TABLE OF CONTENTS



ABBREVIATIONS

- **CES** ..... **Clean Energy Standard**
- **CTE** ..... **career and technical education**
- **CO2** ..... **carbon dioxide**
- **CO2e** ..... **carbon dioxide equivalent**
- **DER** ..... **distributed energy resource**
- **EC** ..... **environmental commission**
- **GHG** ..... **greenhouse gas**
- **EPA** ..... **Environmental Protection Agency**
- **EV** ..... **electric vehicle**
- **LSL** ..... **lead service line**
- **NJBPU** ..... **New Jersey Board of Public Utilities**
- **NJDEP** ..... **New Jersey Department of Environmental Protections**
- **NJDOT** ..... **New Jersey Department of Transportation**
- **NO2** ..... **nitrogen dioxide**
- **PV** ..... **photovoltaic**
- **RPS** ..... **Renewable Portfolio Standard**
- **TMDL** ..... **total maximum daily load**
- **VMT** ..... **vehicle miles traveled**

CLIMATE

Climate Change is a Public Health Crisis

Perhaps one of the most understated yet wide-ranging effects of climate change is the negative impact it has on human health. While climate affects all of us, health impacts are disproportionately experienced by our most vulnerable populations, leading to a host of equity concerns. In 2019, over 70 US medical and public health groups declared climate change as a "health emergency," and the current trajectory suggests that the negative effects being observed now will compound over time.

From 2011 to 2023, New Jersey received $7.4 billion in postdisaster assistance from the federal government, and there were 14 federally declared climate disasters by county (New Jersey Atlas of Disaster).

Protecting New Jersey's vulnerable populations from the health impacts of climate change will require a holistic, multiagency approach that addresses the root causes of these disparities. It is critical that any incoming administration continue to build on—and expand—the prior administration's work to address climate change impacts.

Historically, New Jersey's low-income communities and communities of color have been subject to undue environmental and public health stressors, including exceptionally high levels of air and water pollution. Additionally, overburdened or environmental justice communities are likely to live near flood zones and have antiquated infrastructure that is not able to handle today's rainstorms. Climate change only exacerbates these stressors.

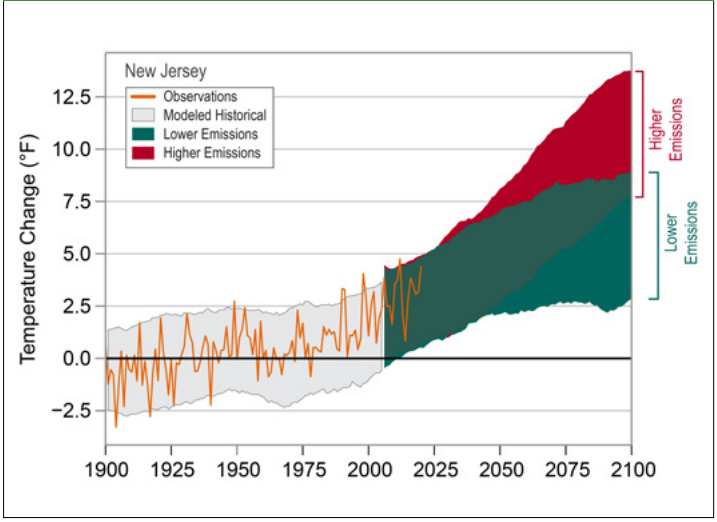
PRIMARY CONCERNS

Heat and Extreme Weather

New Jersey's average temperature is 3.5°F higher than the first recorded figures from 1895, according to a 2020 scientific report by the New Jersey Department of Environmental Protection (NJDEP). Continued warming at historically unprecedented levels is projected, with the state's average annual temperature expected to rise another 4.1 to 5.7°F by 2050.

Overburdened communities are some of the most impacted by this trend, as residents are less likely to have air conditioning and already carry a disproportionate energy burden on their utility bills. These communities also live among an abundance of heat-absorbing paved surfaces that lack shade from tree coverage, thereby increasing these communities' exposure to excessive heat. This is known as the Urban Heat Island (UHI) effect. The effects of urban heat islands are felt disproportionately by formerly redlined neighborhoods, where temperatures are on average 4.7°F warmer than nonredlined areas. Notably, heat-related illnesses led to approximately 10,000 emergency department visits by New Jersey residents from 2013 to 2022.

Observed and Projected Temperature Change

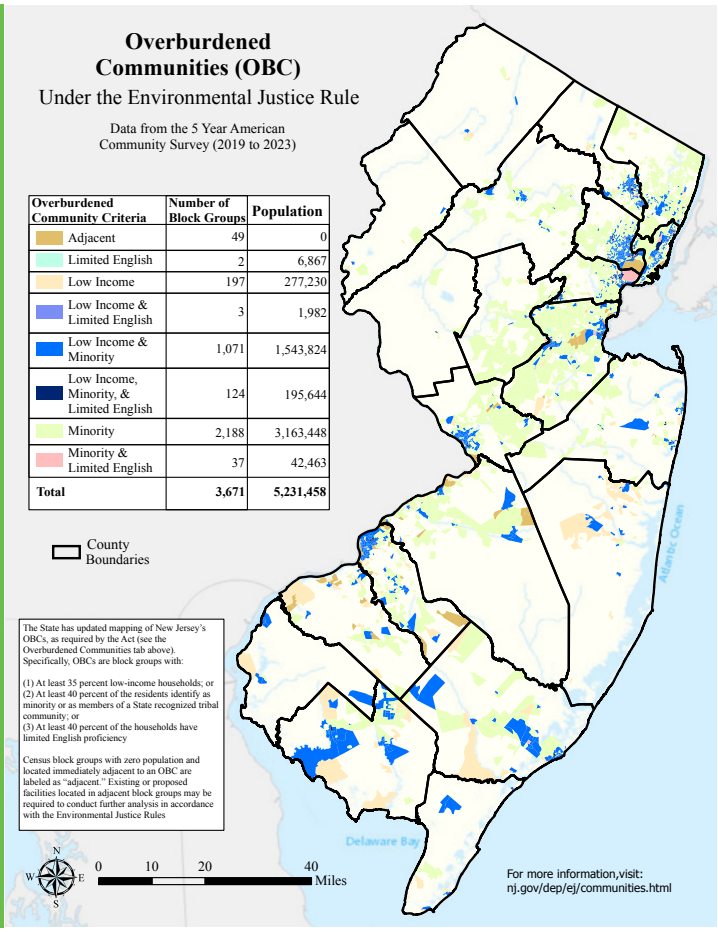


Observed and projected changes (compared to the 1901–1960 average) in near-surface temperature for New Jersey. Source: National Oceanic and Atmospheric Administration's National Centers for Environmental Information

What are Overburdened Communities?

In New Jersey, state law defines an overburdened community as block groups with (1) at least 35 percent of households are low-income; or (2) at least 40 percent of the residents identify as minority or as members of a State recognized tribal community; or (3) at least 40 percent of the households have limited English proficiency.
The state has mapped New Jersey's overburdened communities.

Source: New Jersey Department of Environmental Protection



What is Redlining?

Redlining describes the historic and discriminatory practice of fencing off areas where banks would avoid investments based on the racial makeup of certain communities. This practice was banned under the Fair Housing Act of 1968; however, its legacy has persisted in other ways, particularly where pollution and climate change continue to disproportionately impact former redlined communities.

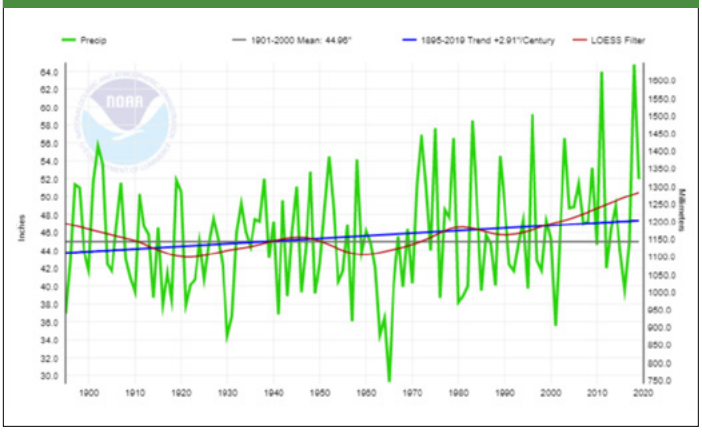
Extreme weather events are also on the rise. Superstorm Sandy—the strongest, most destructive hurricane of the 2012 Atlantic hurricane season—not only caused significant economic losses through damage to homes, businesses, and infrastructure, in addition to the associated losses in productivity; it also harmed the physical and mental health of many residents. The National Oceanic and Atmospheric Administration indicates that, from 1980 to 2024, there were 75 confirmed weather/climate disaster events affecting New Jersey that had losses exceeding $1 billion each. These events included 7 drought events, 4 flooding events, 1 freeze event, 32 severe storm events, 13 tropical cyclone events, and 18 winter storm events.

Flooding and Water Contamination

New Jersey is the most densely developed state, with just over 15 percent of its landmass covered by impervious or paved surfaces, as estimated by New Jersey Future in 2019. This makes stormwater management and water pollution increasingly problematic. Although precipitation varies from year to year, total precipitation has trended upward 2.9 inches per century since approximately 1900, and 2018 was the wettest year on record. In New Jersey, annual rainfall is expected to increase 7–11 percent by 2050, according to a 2020 report from the New Jersey Department of Environmental Protection, and such an increase will likely result in more frequent and intense rain events that cause localized flooding. Indeed, the Federal Reserve Bank of New York found that nearly 1.2 million people in New Jersey are located in properties at a high risk of flooding.

Heavy rains and flooding put many communities in New Jersey at risk of water contamination caused by antiquated combined sewer systems, which were designed to release sewage overflow into nearby waterways when rain overwhelms the system. During overflows, local waterways and streets can be flooded with raw sewage. Direct exposure to sewage, however, has many serious health implications, including an increased risk of infectious diseases, such as cholera, typhoid, hepatitis, polio, cryptosporidiosis, ascariasis, and schistosomiasis. New Jersey has more than 200 combined sewer outfalls, and they are mostly located in large, population-dense cities, such as Newark, Jersey City, and Camden.

New Jersey, Precipitation, January-December



Source: National Oceanic and Atmospheric Administration's National Centers for Environmental Information

Sea Levels are Rising and Oceans are Warming

Sea levels in New Jersey are rising at about twice the global average. The *New Jersey's Rising Seas and Changing Coastal Storms* report and the *New Jersey Scientific Report on Climate Change* indicate that sea-level rise will meet or exceed 2.1 feet by 2050 and increase to 5.1 feet by the end of the century. New Jersey's coastal zone—encompassing 1,792 miles of coastline from the Hudson River southward along Raritan Bay and the Atlantic Coast, and up to the Delaware River—is therefore vulnerable to rising sea levels.

Our atmosphere is not the only thing that is warming. Oceans absorb about 50 percent of carbon emissions along with heat from the atmosphere. This warming causes the oceans to become more acidic and threatens many delicate ecosystems that are major sources of the world's food supply and local fisheries here in New Jersey.

Create a Whole-Government Approach to Mitigate Climate Change

The previous state administration has taken significant steps to address climate change by doing the following:

- rejoining the Regional Greenhouse Gas Initiative
- releasing the *2021 New Jersey Climate Change Resilience Strategy,* the *New Jersey Extreme Heat Resilience Action Plan,* and the *Strategy to Advance Carbon Sequestration on New Jersey's Natural and Working Lands*
- creating a Chief Resilience Officer, Interagency Council of Climate Resilience, and Office of Climate Action and Green Economy
- developing municipal flood resource toolkits and assisting local governments through its Resilient NJ program
- funding natural climate solutions
- launching the New Jersey Green Bank to make investments in the clean-energy sector

It is critical that a new administration retains and builds on these efforts, moving New Jersey even further toward mitigating the impacts of climate change. In addition, it is equally critical that the state helps lead the way on building resilient communities.

While climate change is a global issue that will require a huge amount of international cooperation, coordinated action at the state and local levels is needed. The key to success will be driving state policies, decisions, and investments that align with the goals of addressing and mitigating climate change impacts.

Also critical will be the alignment of state commissions and authorities—including the Highlands Council, Pinelands Commission, State Planning Commission, New Jersey Transit (NJ TRANSIT), New Jersey Sports and Exposition Authority, state agencies such as the New Jersey Economic Development Authority, and others—with these goals.

PRIMARY CONCERNS

- Need for a whole-government approach that provides clear guidance, policies, and strategies for state and local decisions related to climate change mitigation.
- Need for all voices to be at the table in the development and implementation of policies for climate change mitigation and adaptation to ensure an equitable outcome.
- Need for more integration of public health outcomes into climate change mitigation work.

POLICY RECOMMENDATIONS

- Align all revenues across various state programs meant for climate change mitigation, adaptation, and investment in the clean-energy economy under a common strategy or rubric. This alignment should center on equity and ensure that a minimum of 40 percent of monies are dedicated to overburdened communities, especially those most impacted by climate change. Such an alignment is feasible, as demonstrated through current awards of funds from the Regional Greenhouse Gas Initiative.
  - ✓ Require the coordination of relevant agencies and ensure the involvement of the New Jersey Board of Public Utilities' (NJBPU) Office of Clean Energy Equity in the development and implementation of programs through an equity lens.
  - ✓ Oppose proposed cuts to federal funds that support clean energy and climate resilience efforts, and immediately draw down available federal funds.
- Stop diversions of NJBPU's Clean Energy Fund and provide more transparency on how funds are allocated and spent.
- Expand the New Jersey Economic Development Authority's Green Bank, which was proposed to support climate investments.
- Build on the New Jersey Department of Environmental Protection's New Jersey Protecting Against Climate Threats rules and policies, including addressing missed opportunities, and maintain both the position of Chief Resilience Officer and the Interagency Council of Climate Resilience.
- Put forward regulatory proposals to aggressively reduce emissions of carbon dioxide and other harmful greenhouse gases, while equally weighing the most problematic co-pollutants.
- Encourage state agencies and municipalities to utilize the *Sea Level Rise Guidance for New Jersey* documents and develop new guidelines for the consideration of climate change in state grants, loans, contracting, planning, infrastructure, and policy programs and projects.
- Empower local governments to make land-use and infrastructure decisions based on the best available climate science. Continue to provide training or certification in the mapping of climate change hazards and its application to local land-use policies. Ensure that state regulations and policies allow for innovative climate change strategies at the local level (e.g., natural solutions along the entire coastline, green infrastructure, composting).
- Include the social cost of carbon cost-benefit analysis in all new infrastructure and energy projects.
- Provide dedicated state funding for climate resilience.

Adapt to Worsening Climate Impacts

The impacts of climate change are worsening and are increasingly affecting New Jersey's communities. Sea levels are on the rise and are increasing faster in New Jersey than in other states. It is estimated by the Rutgers Climate Resource Center that—depending on the level of carbon emissions—sea levels in the state could rise as much as two feet by 2050 and over six feet by 2100. This would permanently flood portions of New Jersey's communities, make certain areas uninhabitable, and threaten the state's $30 billion shore tourism industry.

Annual precipitation in New Jersey is also expected to increase 4–11 percent by 2050, according to NJDEP, thereby threatening to flood communities and overwhelm the state's aging infrastructure.

Bearing a disproportionate share of the burden are frontline communities, which are typically low-income and/or communities of color, many of which are also often subject to the legacy of environmental injustice. There is a moral responsibility to right the wrongs that frontline communities endure by having an intentional focus on empowerment in the face of these existential threats.

Put plainly, worsening climate scenarios present a growing threat to the well-being and way of life of New Jersey's communities and businesses. Adapting to climate change will require a change in policies, behaviors, and long-established practices.

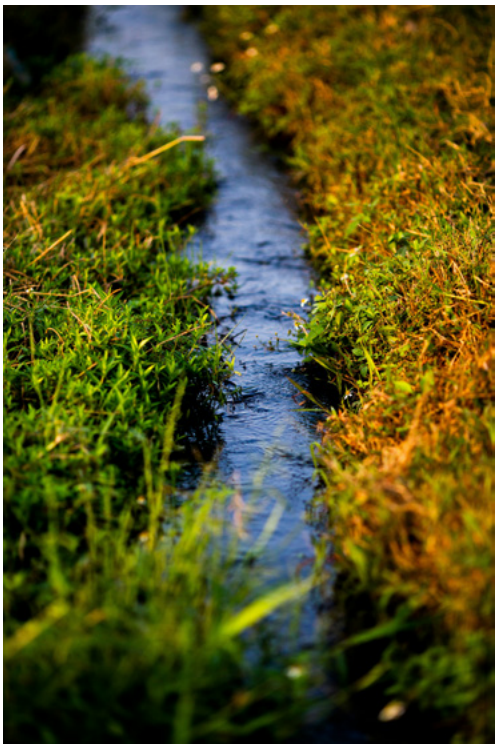
New Jersey must build on this progress, press on, and work quickly to advance these and additional measures, positioning the state as a leader in adaptation planning and implementation. Faced with increased flooding and worsening water conditions, local communities need better tools and resources to prepare for a healthy, safe, and resilient future. Adapting and protecting New Jersey's most vulnerable areas so that they are more resilient to extreme weather and climate change will take time, resources, and planning at the local, county, state, and federal levels.

PRIMARY CONCERNS

- Adaptation is very expensive, yet we have little to no permanent, dedicated streams of funding for planning or implementation.
- Current policies at the federal, state, and local levels still favor living in high-risk flood locations and new requirements for municipalities to build more affordable housing means more people could be placed in harm's way by building in areas that flood.
- Many community members and elected officials favor short-term flood protection measures over long-term transitions out of flood zones.
- While a recent law requires municipalities to perform hazard mitigation planning, many communities lack the capacity to adequately plan for and implement adaptation practices that include forward-looking climate data, such as projected sea-level rise.
- Legal authority for municipalities to implement regulatory and other adaptation programs is uncertain.
- Many municipalities lack the resources necessary to develop well-thought-out plans and to convert those plans into ordinances and land-use policies.
- Communities of color and low-income communities are disproportionately at risk of flooding.

What are the Green Acres and Blue Acres Programs?

The Green Acres Program was created in 1961 to meet New Jersey's growing recreation and conservation needs. The Blue Acres Program, a part of New Jersey's Green Acres Program, helps acquire floodprone properties from willing sellers. The program removes structures and restores floodplains to a natural state.



POLICY RECOMMENDATIONS

- Institute dedicated state funding for climate resilience projects (e.g., bond, insurance surcharge), with a baseline dedication to frontline communities.
- Support the proposed Climate Superfund legislation, which would create a "Climate Superfund Cost Recovery Program Fund" to support climate change adaptation and resilience projects. (See Senate Bill No. 3545 / Assembly Bill No. 4696 in the 2024–2025 NJ Legislative Session.)
- Prioritize critical infrastructure resilience, such as among hospitals and schools.
- Support local governments in their resiliency efforts through the following:
  - ✓ Provide support to municipalities to vacate floodprone areas and ensure protections and regulations are of the highest possible standard, including through the implementation of the New Jersey Resilient Environments and Landscapes rules.
  - ✓ Expand Resilient NJ activities to more inland and tidal communities that experience flooding, and provide technical assistance and funding.
  - ✓ Require proposed affordable housing projects to be located outside of flood hazard zones.
- Increase the funding for the Green Acres and Blue Acres programs, and encourage the use of flood-reduction practices—such as green infrastructure, tree plantings, wetland and stream restorations, and parks with stormwater infrastructure—on Green Acres and Blue Acres properties. Prioritize funding in overburdened communities. Continue to educate the public about the benefits of the Blue Acres Program, which removes properties from floodprone areas and returns the property to its natural state to absorb floodwaters more effectively.
- Require and sufficiently fund the inclusion of forward-looking climate data and the robust analysis of risk and vulnerability in all plans at all levels, from municipal master plans to the state plan.
- Develop measurable metrics and targets for climate change adaptation to provide direction and accountability.
- Establish a regional taxing and planning entity for the state's vulnerable coastal area, similar to the highly successful Meadowlands Commission. This would enable plans and investments specific to the region to be developed and coordinated to protect people and property. It would also capitalize on the Shore as a remarkable cultural and tourism asset.
- Position the state to capitalize on the $25 million in pass-thru federal funding under the Building Resilient Infrastructure and Communities (BRIC) program.

Manage Stormwater Sustainably to Reduce Flooding And Improve Water Quality

Many of New Jersey's communities experience the challenges of stormwater runoff that results in flooding and combined sewer overflows. Stormwater runoff, rain, or snowmelt that flow over impervious surfaces (e.g., streets, sidewalks, parking lots, and rooftops) carry pollutants such as fertilizers, animal waste, trash, debris, salt, and motor oil—often emptying into sewers and waterbodies. As a result of this runoff, a significant percentage of the state's waters are impaired. These issues are exacerbated by increases in the frequency and intensity of rain events due to climate change. Furthermore, the areas with the most impervious cover, and those with combined sewer and stormwater systems, are often home to low-income communities and communities of color.

There are solutions that can help.

Green infrastructure can work in combination with, or in some cases even replace, grey infrastructure (i.e., conventional piped drainage systems) to manage stormwater. Green infrastructure uses vegetation, soils, and natural processes—in effect, adding green features to neighborhoods—to manage water and create healthier environments by reducing polluted runoff and flooding. Green infrastructure works by soaking up and/or storing water, and then slowly releasing it into the ground so that it does not overwhelm the sewer system. Examples of green infrastructure include preserved natural areas, rain barrels, rain gardens, green roofs, and permeable pavement. In addition to the many environmental benefits of green infrastructure, there are also benefits for society and the economy. Green infrastructure can create construction and maintenance jobs, increase property values, improve mental and physical health, and aid in pedestrian safety when located along streets.

In order to increase the implementation of green infrastructure, and therefore improve stormwater management, revisions to regulations and increased funding are needed.

There are many opportunities:

- As of March 2021, the state's Stormwater Management Rules (NJAC 7:8) now require applicants of new developments to manage stormwater with green infrastructure first. This is a significant shift and an important step in the stormwater landscape, but further amendments are needed to improve water quality and reduce flooding.
- In 2023, NJDEP reassigned all former Tier-B municipalities to Tier-A Municipal Separate Storm Sewer permits. Other updates included the mapping of all stormwater infrastructure and the development of watershed improvement plans. These updated permits present an opportunity for stronger stormwater management, if enforced.
- The transportation sector has an opportunity to improve stormwater management through the installation of green streets (green infrastructure installed within the public right-of-way). The New Jersey Department of Transportation can incentivize green streets in its design guidance and grant funding.
- With the passage of the 2019 Clean Stormwater and Flood Reduction Act, local governments are permitted to create stormwater utilities that collect fees based on the amount of stormwater runoff a property generates from its impervious cover. Funds generated from these fees are dedicated to stormwater management and cannot be diverted for other purposes. Without a stormwater utility, the costs of managing flooding and runoff are included in other local government costs—typically in property taxes. This often leads to underinvestment in managing stormwater and can create inequities in who pays, since some property owners do not pay property taxes, while other owners of properties generating runoff do not pay a water or sewer bill. Stormwater utilities create and fund jobs, and a focus on a regional stormwater utility effort would holistically address problems by watershed, as stormwater does not respect municipal boundaries.

Communities are hard-pressed to meet today's many challenges, let alone prepare for those of tomorrow. State government must incorporate climate change projections in planning efforts, regulations, and guidance.

PRIMARY CONCERNS

- Stormwater management is a significant contributor to flooding and waterway impairments. Current funding for today's stormwater management and funding for the needs of the future are clearly not sufficient.
- Municipalities should not be limited in their ability to require stronger stormwater management.
- Harmful algal blooms are becoming more frequent in lakes across the state, due in large part to climate change, increased temperatures, poor stormwater management, and poor local septic maintenance.

POLICY RECOMMENDATIONS

- Amend NJDEP's Stormwater Management Rules (NJAC 7:8) to include the following: an onsite retention standard; the application of rule requirements to redevelopment projects in ways that do not disincentivize smart redevelopment while still improving onsite stormwater management; the incorporation of climate change projection data; a requirement for resilience planning; a requirement of volume and peak rate reductions; and the application of a water-quality standard to all types of impervious surfaces, including roofs and sidewalks.
- Update adopted Total Maximum Daily Loads (TMDLs) to include implementation plans and additional measures for municipalities to adopt in their Stormwater Control Ordinances and reviews of design. Without fully implementing the waste load allocations set forth in TMDLs, the improvement of water quality is unlikely to happen. Both the federal Clean Water Act and New Jersey's Water Pollution Control Act require the restoration of water quality.
- Provide improved guidance and technical resources to municipalities on how to implement their Tier-A Municipal Separate Storm Sewer permits.
- Ensure compliance with new permit deadlines for Tier-A Municipal Separate Storm Sewer permits, including the development of watershed improvement plans (due December 2027). For additional details and deadlines, see the *Understand the New MS4 Permit* report from New Jersey Future.
- Ensure that the next Tier-A Municipal Separate Storm Sewer permit (effective January 1, 2028) has a reasonable schedule for the implementation of projects identified in the watershed improvement plans. That time period should not exceed 20 years.
- Continue to support municipalities and counties examining the feasibility of creating stormwater utilities, including regional utilities, through permanent technical assistance and funding provided by NJDEP.
- Defend and protect federal pass-through programs that fund stormwater management projects, such as 319h and 604b, and increase the allocation where feasible.
- Help the transportation sector use green infrastructure as a way to manage road runoff by amending New Jersey Department of Transportation's (NJDOT) Complete Streets policy to include green streets. Additionally, encourage communities to apply for NJDOT local aid funds to implement green streets and provide technical assistance as needed. Showcase communities that have used funding from the American Rescue Plan Act for Complete and Green Streets.

Promote a Healthy and Resilient Coast

The ocean and coast are dynamic environments that produce ecological and societal benefits. The defining characteristic of many of these landforms—that is, beaches, dunes, and tidal wetlands—is that they are in motion and change in shape, relative position, and elevation. This dynamic environment exists within a range of limits that, when left undisturbed or unaltered, provide a multitude of benefits, some local and some global in scale. However, society continues to intercede in these processes by its use of coastal and ocean resources, overburdening the capacity of the ocean to absorb heat and carbon. Attempts to hold beaches in place for development, and the polluting of estuaries with excess nutrients from stormwater and altered landscapes, degrades the environment to such a degree that benefits from ocean and coastal resources are lost or diminished to New Jerseyans and the coast's ecology.

With over 1,700 miles of ocean, bay, and river shoreline, coastal New Jersey is squarely in the crosshairs of the climate crisis. Flooding from more frequent and intense storms, as well as the eventual permanent flooding due to sea-level rise, threatens to disrupt or displace hundreds of thousands of residents and businesses in urban, suburban, and rural communities around the state, all the while impacting the state's transportation, energy, water, and sanitary infrastructure.

The deluge of water from flooding does not occur solely within specific jurisdictional boundaries, nor are the impacts of flooding comprehensively or consistently addressed in the budgets or by the actions of any one program, department, or agency. Taken as a whole, the authority to act and the resources made available at all levels of government fall far short of what is needed for a challenge of this magnitude. In fact, the governance structure of the state around coastal adaptation and the limited capacity of hundreds of municipal governments, each responsible for the safety and well-being of residents (and particularly those who have been historically marginalized), all threaten the state's ability to effectively meet the challenge to be resilient in the face of climate change.

The good news is that there is interest in protecting, conserving, and enhancing coastal resources by the state. The Jersey Shore touches many peoples' lives and is a tremendous part of the state's economy. Indeed, Jersey Shore tourism in Monmouth County and Ocean County generated nearly $8.6 billion in revenue in 2023, to which one can add $16 billion in additional revenue from Jersey Shore tourism if Atlantic County and Cape May County are included.

The ocean more broadly supports recreational and commercial fishing, as well as an international commerce corridor to the ports of New York, New Jersey, and Philadelphia. Increasingly, the ocean is being eyed as a platform for renewable energy generation, and the role of beaches, dunes, and wetlands in mitigating storm hazards is being recognized.

Tidal wetlands, for their part, provide a multitude of simultaneous services, such as improving water quality and providing habitats to fish, shellfish, and wildlife that are the ecological basis of the bays and waters that support recreational and commercial fishing. They also serve as popular destinations for ecotourism. Additionally, tidal wetlands reduce greenhouse gases through carbon sequestration and provide both wave attenuation and a reduced risk of flooding and erosion, which are increasingly common impacts of climate change.

PRIMARY CONCERNS

- Increasing risk from flooding threatens to disrupt or displace hundreds of thousands of residents and businesses in coastal communities, and threatens infrastructure.
- Many communities lack the administrative, technical, and financial capacity to adequately plan for and implement flood-resilience practices.
- There are few incentives to collaborate or coordinate resilience efforts across municipal boundaries.
- Numerous threats generated primarily by poor development policies and controls along the coast are now exacerbated by stressors associated with climate change. Without significant changes in policy, there will be increasing costs to the public for hazard mitigation and response.
- Sea-level rise is inundating coastal wetlands, drowning them in place. The lack of sediment accumulating on the marsh "platform" keeps them from growing at a pace that would maintain their intertidal nature. While not extensively studied, some estimates put annual losses at almost 6,000 acres per year.
- Overdevelopment of coastal watersheds and the continued failure to manage polluted runoff effectively have impaired the waters of coastal bays and estuaries. Failing sewage treatment facilities and septic systems, as well as ongoing combined sewer overflows, contribute to bacterial contamination and the regular closing of waters to swimming, fishing, and shellfish harvests.
- Frontline communities along New Jersey's urban coast face unique challenges in adapting for climate change impacts, with many opportunities only associated with market-driven redevelopment. In the interim, these communities remain vulnerable to rising seas.

POLICY RECOMMENDATIONS

- Significantly expand the Resilient NJ regional planning program to provide funding for and technical support to additional regional groups of communities at risk from coastal flooding, and ensure that coastal communities make decisions based on the best available flood projection data.
- Continue the Interagency Council on Climate Resilience and ensure that each department prioritizes resilience in their budgets and through their activities.
- Specify mechanisms to enhance coordination between states and relevant regional planning entities, such as the New Jersey Sports and Exposition Authority, ensuring that coastal resilience policies are consistent and that projects advanced in both the coastal zone and coastal areas of regional jurisdictions are held to the highest standards of resilience.
- Instead of a dual review, shift the responsibility of Coastal Area Facility Review Act areas in the overlap zone of the Pinelands National Reserve from the New Jersey Department of Environmental Protection to the Pinelands Commission alone for decision-making. This will assist in increasing efficiency, the consistency of the application of environmental protections, and the expediency of reviews.
- Study the need for a Coastal Commission to better align state and local policies around resilience, coordinate and encourage collaborative adaptation, advance best practices, promote design guidelines, and ensure the presence of representative voices in resilience decisions.
- Incentivize and streamline mechanisms for municipal consolidation, particularly for small coastal communities, to increase potential revenue for struggling areas.
- Reassert control over managing growth along the coastal edge. Now is the time to create opportunities for new climate-friendly economies.
- Create new coastal parks and open spaces proactively in response both to inevitable storm damage and to the need for the mitigation of risk.
- Increase policy and funding support for nature-based solutions to address impacts from climate change. Continue the use of funding from the Regional Greenhouse Gas Initiative for forest and tidal marsh stewardship, and examine new approaches to sediment management within coastal and estuarine systems, living shorelines and habitat restoration, and landscape recovery through the Blue Acres Program.
- Create stronger coastal management policies and state regulations to protect coastal lands and related watersheds, including the Coastal Area Facility Review Act, Waterfront Development Act, Water Quality Management Planning Act, Pinelands Comprehensive Management Plan, and Tidal Wetlands Act.

Climateproof the Meadowlands

The New Jersey Meadowlands is a sanctuary for diverse wildlife, a network of communities where hundreds of thousands of people live, a major industrial and commercial employment center and tourist attraction, and a critical convergence of transportation, energy, waste, and wastewater infrastructure. As one of the state's regionally planned districts, the Meadowlands district serves as a unique model of governance that by nature takes a regional and long-term approach characterized by shared costs and opportunities. Thanks to the tireless efforts of advocates like the Hackensack Riverkeeper and others, the Meadowlands is the tristate region's largest remaining intact wetland habitat.

That said, the impacts of climate change—in particular, flooding from precipitation, storm surge, and sea-level rise—present an existential threat to the Meadowlands. By the end of this century, permanent flooding from sea-level rise could displace between 4,000 and 8,000 Meadowlands residents, and cost 51,000 jobs. The lives of another 40,000 people could be disrupted by periodic flooding from increased precipitation and storm surges, while infrastructure will be threatened by more frequent flooding and saltwater intrusion—a particularly vexing public health problem given the area's concentration of hazardous waste sites.

To begin addressing this challenge, the New Jersey Sports and Exposition Authority, which manages the district, adopted its updated 2020 Master Plan, 16 years after the publication of its predecessor. The plan notably included a chapter on resilience that highlighted the future risk of flooding, referencing estimates of at least three feet of sea-level rise by the end of the century. Recently, a Rutgers University Graduate Planning Studio completed a review of resilience planning in the New Jersey Meadowlands and found that "while there are a variety of efforts underway in the District and throughout the region to consider planning for resilience, these efforts fall short of building public support and a framework for a cohesive approach to climate resilience planning that benefits the Meadowlands region as a whole."

For the Meadowlands to have a sustainable future in the long term, a delicate balance must be struck with climate adaptation and economic development. Resilience must be an integral part of every decision made moving forward.

PRIMARY CONCERNS

- The Meadowlands region is a critical hub of communities, businesses, infrastructure, and ecology that is at significant risk of flooding from climate impacts.
- While under a regional planning management scheme, the Meadowlands District nonetheless suffers from little planning for adaptation or resilience among its 14 communities and other stakeholders, resulting in a lack of a cohesive approach to climate resilience planning.
- Significant adaptation measures will be needed, yet there is no dedicated stream of funding to pay for them.
- Protection for critical wetland habitats remains a primary need.

POLICY RECOMMENDATIONS

- Grant all applicable state-owned open space, natural lands, and waterways in the Meadowlands a special designation that recognizes the Meadowlands as a cohesive unit of park, preserve, or natural-areas system within the state's existing framework of natural-lands stewardship.
- Allow no further destruction of wetlands within the district's boundaries and acquire any high-priority, privately held wetlands remaining in the district. Additionally, better coordinate efforts to protect natural areas.
- Work with local municipalities to develop a comprehensive adaptation plan for the communities, infrastructure, and habitats within the Meadowlands District, including a long-term buyout plan (in partnership with New Jersey Blue Acres) for those properties at greatest risk of flooding.
- Expand the intermunicipal tax-sharing approach to develop a dedicated Meadowlands Adaptation Fund that would help support community- and infrastructure-resilience projects, buyouts, wetlands protection, and other nature-based projects.
- Showcase the Meadowlands as an innovative hub of climate adaptation through partnerships with universities, and through novel approaches that could include a regional climate park.

Explore Natural Solutions to the Climate Crisis

New Jersey's Global Warming Response Act requires the state to reduce economy-wide greenhouse gas emissions by 80 percent from 2006 levels by 2050. *The Global Warming Response Act 80x50 Report* produced in 2020 by the New Jersey Department of Environmental Protection, in conjunction with other state agencies, identifies carbon sequestration in the land sector as one of seven sectors where emissions reductions will be necessary to meet the Global Warming Response Act's 2050 target.

What are Carbon Sinks?

Carbon sinks are places that absorb more carbon than they release. Forests, for example, continually take carbon out of the atmosphere through the process of photosynthesis. The ocean is another example of a carbon sink, absorbing a large amount of carbon dioxide from the atmosphere.

New Jersey's land sector sequestered 8.1 percent of the state's net emissions in 2021, but continued development threatens forests, agricultural lands, wetlands, and forests (over 360,000 acres were lost to development between 1986 and 2015). Rising sea levels threaten coastal wetlands and salt marshes. Conversely, NJDEP estimates that the protection and conservation of New Jersey's natural carbon sinks could increase carbon stored in various land types by up to 33 percent by 2050.

The *Global Warming Response Act 80x50 Report* identifies five potential pathways for maintaining and enhancing carbon sequestration, with a potential additional carbon storage of two to three million metric tons of carbon dioxide equivalent (CO_2e) per year:

1. Afforestation and proforestation
2. Avoided conversion of natural lands
3. Salt marsh and seagrass restoration and enhancement
4. Conservation management of agricultural soils to enhance carbon sequestration
5. Creation of carbon-reserve forests and stewardship to promote and protect sequestered carbon

In New Jersey, proforestation—allowing intact preagricultural forests to continue to mature—represents some of the largest opportunities for carbon gains. That said, multiple natural solutions will be needed to defend and enhance carbon while providing important co-benefits, such as clean water, flood control, and wildlife habitat.

What is Carbon Sequestration?

Carbon sequestration is the process of capturing, securing, and storing carbon dioxide from the atmosphere. The idea is to stabilize carbon in solid and dissolved forms so that it does not cause the atmosphere to warm.

PRIMARY CONCERNS

- Our majestic native white-tailed deer have become so overabundant that they are out of balance with nature across much of New Jersey. As a result, their numbers are the greatest threat to New Jersey's forests, causing rapid declines in virtually all species of native forest trees, shrubs, and herbaceous species. With the food web diminishing, scientists point to a negative cascading impact on dozens of species of birds (including songbirds, pheasants, turkeys, small owls, and raptors), insects (including butterflies and bees), and small mammals. Research clearly shows that highly degraded forests that lack regeneration have a lower value for sequestering carbon as well.
- Deer overabundance must be addressed with new approaches, including policy changes, collaboration among stakeholder groups, and ecological restoration methods for our forests. Otherwise, local extinctions will become more prevalent and reforestation efforts for carbon sequestration will not be successful.
- The implementation of practices that improve soil health on New Jersey's agricultural lands is lacking.
- The loss of wetlands releases stored carbon into the atmosphere. Wetland plants regularly remove CO2 from the atmosphere and sequester it in the form of soil carbon, where it can remain for centuries.

POLICY RECOMMENDATIONS

- Accelerate efforts to work with stakeholders to manage deer impacts on forest ecosystems in order to encourage forest health and carbon sequestration.
- Reforest riparian buffers, protect floodplains from development, and reconnect floodplains to their waterways.
- Defend and enhance carbon stored in forests.
  - ✓ Identify suitable sections of publicly owned forests with undisturbed soil and outstanding qualities for designation as carbon reserves.
  - ✓ Ensure that any forest stewardship plans address all components of forest ecology, including structural and habitat diversity, soils, native species, carbon sequestration, wetland communities, water resource protection, and compatible recreational values.
  - ✓ Capitalize on the carbon benefits of forests.
  - ✓ Replant and restore degraded post-agricultural forests that are suffering vast mortality due to the emerald ash borer, other pathogens, and other alien species invasions.
  - ✓ Prevent the conversion of forested lands into development in all areas of the state using open-space acquisition, local ordinances, and other tools.
  - ✓ Defend carbon in the Pine Barrens from being lost through catastrophic wildfires by using modern, ecologically prescribed burning and forestry techniques that maintain the ecological interactions required for species conservation in this fire-evolved and fire-dependent ecosystem.
  - ✓ Restore Atlantic White Cedar swamp forests that sequester vast amounts of carbon in interior portions of the state's coastal plain, which are less susceptible to threats posed by sea-level rise.

continued →

POLICY RECOMMENDATIONS *continued from previous page*

- ✓ Implement reforestation projects with proper deer management, including urban and community forests that help reduce the impacts of New Jersey cities' heat islands.
- ✓ Explore the potential to generate revenues for carbon sequestration and forest regeneration on state lands through enrollment in voluntary carbon markets. Ensure that carbon gains are verifiable and do not facilitate continued pollution in environmental justice communities.

➤ Adopt climate-friendly agricultural practices, create additional incentives, and provide technical assistance to help farmers implement practices that improve soil health and increase organic matter, such as:

- ✓ Adding compost to the soil instead of synthetic fertilizers
- ✓ Implementing meaningful soil-protection standards for preserved farmland at the State Agriculture Development Committee
- ✓ Promoting the use of untreated and organic seed to increase the health of the food supply's critical pollinators, since these pollinators are negatively impacted by neonicotinoid-treated seeds, synthetic chemicals, and weather changes created by climate change
- ✓ Converting marginal agricultural lands to forests
- ✓ Promoting the transition of more farmland to less chemically dependent and/or organic production, and working with the Northeast Organic Farming Association of New Jersey to provide technical assistance
- ✓ Providing training and marketing assistance to grow new grain crops that are in high demand
- ✓ Promoting Adaptive Multi-Paddock grazing, an underutilized way to graze cattle that has helped innovative farmers increase carbon sequestration and improve soil health
- ✓ Adopting no-till and reduced-tillage practices
- ✓ Planting cover crops that sequester carbon and reduce erosion
- ✓ Incorporating agroforestry and perennial crops, including bramble, medicinal plants, and more
- ✓ Implementing manure management practices to decrease emissions

➤ Protect Wetlands.

- ✓ Accelerate the conservation and restoration of coastal wetlands and habitats, which are threatened by climate impacts such as rising sea levels, increased storm surges, and development pressure.
- ✓ Implement restoration and preservation techniques for salt marshes in coastal areas by increasing marsh platform elevations, and by protecting marsh fringes to prevent the loss of thousands of acres of tidal marsh, one of the best habitats at sequestering carbon.
- ✓ Research and develop techniques to transform drowned coastal forests lost to sea-level rise into useful, carbon-sequestering habitats.
- ✓ Focus on coastal wetlands, which have a natural adaptive capacity to migrate in response to changes in sea level and salinity environments. Set aside sufficient "migration zones" inland from the marsh edge to protect this opportunity to sustain tidal wetlands. In some cases, existing impediments to marsh migration can be removed to facilitate the process.

Support Climate Education and Career Development in New Jersey Schools

There is a broad consensus among climate scientists that human activities contributing to increases in greenhouse gas emissions are the dominant cause of climate change. To meaningfully act upon the changing climate and changed world, young people require education about its causes, consequences, anticipated future impacts, and possible solutions.

Climate Education

In June 2020, New Jersey became the first state in the nation to incorporate climate change education into its learning standards for K–12 students. Since then, the state has provided resources, such as instructional materials and grants for educators, and has created the Office of Climate Change Education. Preparing youth for the future provides them with the knowledge and resources needed to combat the climate crisis and to forge ahead in the green economy.

Career Development

In New Jersey, career and technical education (CTE), formerly known as vocational education, is offered through county vocational and technical schools. These are schools of choice for students who want to participate in an academic program and at the same time learn a trade while in high school. Career and technical education standards reflect the region's industry needs and best practices, outline a student's path to licensure before graduation, and prepare that student for college after high school graduation, if the student chooses that path. New Jersey's vocational-technical schools follow CTE 9.3 standards, and these should mirror the economy of the Northeast region of the United States in light of New Jersey's plan to transition to a green economy by 2030.

Investing and supporting CTE programs can also dramatically increase the likelihood of high school graduation. In one recent

study of vocational and technical high schools in Massachusetts, low-income students were 32 percentage points more likely to graduate if they attended such schools. It is the state's responsibility to form a technical workforce with skills that will guarantee an equal opportunity for success and advancement in a green economy.

A review of the CTE 9.3 standards found that New Jersey has not incorporated topics related to the study of sustainability, energy, or environmental impact/climate change in the following trades: agriculture, food, and natural resources; arts, A/V technology, and communications; business management and administration; education and training; the finance cluster; government and public administration; human services; and information technology and public safety. Career and technical education educators should receive training on how to embed the new standards into existing standards, goals, objectives, curricula, and lesson plans so that, upon high school graduation, the graduates of such clusters/programs can receive certifications to reflect skills in a green economy trade.

PRIMARY CONCERNS

- Environmental stewardship, environmental justice, and climate change standards are not embedded in the broader CTE standards, and vocational-technical high school curricula lack such critical concepts to reflect best practices. Since green economy opportunities are growing in New Jersey with the input and consultation of environmental organizations and the state's industries, it is imperative that CTE standards are reviewed and updated.
- Failing to update the CTE 9.3 standards compromises the licenses and certificates that the students obtain upon high school graduation.
- Failing to update the CTE 9.3 standards compromises students' abilities to take advantage of the green economy workforce.

POLICY RECOMMENDATIONS

- Continue supporting efforts in climate change education across all nine K–12 standards.
- Consider a teacher certification course for K–12 climate education.
- Update standards to include climate change, the green economy, and green energy through a mandate from the Perkins Act, or through an allocation of funds through the State of New Jersey. Funding would cover consultant expenses and CTE educators' professional development.
- Develop newly revised, customized CTE standards for New Jersey with environmental and climate justice perspectives. The education committees of the legislature, the New Jersey Department of Education, the New Jersey Office of the Secretary of Higher Education, and CTE educators, supervisors, and teachers can work together in this effort.
- Develop a state assessment that certifies vocational-technical school graduates to complete green economy/sustainability best practices for future employment. This effort should be led by the New Jersey Department of Education, the New Jersey Office of the Secretary of Higher Education, and the education committees of the legislature, along with CTE educators.

Establish a Civilian Climate Corps in New Jersey

Shortly after his inauguration in 1933, President Franklin Roosevelt created the Civilian Conservation Corps and affirmed that it would "conserve our natural resources, create future national wealth and prove of moral and spiritual value not only to those of you who are taking part, but to the rest of the country as well." Roosevelt's "Tree Army" ultimately employed over three million young men who planted three billion trees, created more than 700 state and local parks, and constructed trails across the country during its nine years of existence. The Civilian Conservation Corps was not perfect—segregation and discrimination permeated the program. But, if used as a model with equity at its core, a New Jersey program can achieve the same success by creating living-wage jobs in restoration, recreation, and resilience.

By establishing a 21st-century Civilian Climate Corps, leaders in Washington, DC, and New Jersey can put young people to work rebuilding New Jersey's ecosystem. To scale up quickly, the state can build on an existing AmeriCorps program in which young workers implement shovel-ready state, local, and federal plans. This might be most effective at the local level, where fiscal constraints may limit capacity to implement natural infrastructure projects that address climate change impacts, such as flooding and extreme heat.

PRIMARY CONCERNS

- Rapid loss of open space and habitat is pushing thousands of American wildlife species toward extinction and threatening the clean air, clean water, and food supplies that every person in the country needs to survive.
- Scientists warn that human degradation of nature may increase the risks of infectious diseases.
- The rapid loss of natural areas in recent decades has left many communities—especially overburdened communities—with too few parks and recreational areas, exacerbating climate change impacts.

POLICY RECOMMENDATIONS

- Create living-wage jobs for the young and underemployed through the creation of a civilian conservation corps in New Jersey.
- Focus on job creation in underserved communities.
- Identify natural infrastructure projects to address climate change impacts.
- Expand existing workforce development programs such as New Jersey AmeriCorps and county youth conservation corps through the federal AmeriCorps program.
- Convert volunteer programs into jobs programs.

Reduce Food Waste To Reduce Greenhouse Gas Emissions

According to surveys conducted by the Natural Resources Defense Council, 43 percent of food waste is generated from the residential sector, followed by 26 percent from the restaurant and caterer sector. Yet, in 2022, 11 percent of the population in New Jersey was food insecure, meaning they did not have reliable access to sufficient, nutritionally adequate food. Furthermore, the Food and Agriculture Organization of the United Nations estimates that one-third of all food produced globally is lost or goes to waste. If global food waste were a country, it would be the third largest emitter of greenhouse gases in the world.

Due to insufficient systems for food-waste tracking in New Jersey, it is difficult to estimate the full environmental impacts of food waste at the state level. In a national report conducted by ReFed, a national nonprofit dedicated to ending food loss, uneaten food consumes 4 percent of greenhouse gas emissions and 14 percent of all freshwater use. Food waste sent to landfills emits high amounts of methane, a greenhouse gas that is 84 times more potent than carbon dioxide over a 20-year time scale.

Wasted food occurs throughout the food supply chain and can be classified into three groups: food loss from unharvested crops, excess food recovered, and food waste thrown away by consumers and retailers. Excess food usually becomes food waste, as most businesses and retailers generally discard food.

The EPA has created a food recovery hierarchy that offers the best ways to manage food waste. The initial step to prevent food waste is to reduce the volume created at the source, followed by food donation and feeding animals. Thereafter, tactics such

Source: United States Environmental Protection Agency

as its conversion for energy and composting are suggested, while incineration and landfill deposition are recommended as to be avoided.

In New Jersey, a 2020 law requires large food waste generators to separate food waste by source and recycle it if they are within 25 miles of an authorized food waste recycling facility. Authorized food waste recycling facilities include those that use waste anaerobic or aerobic digestion to recycle food waste into renewable energy, compost, and recaptured packaging. Currently, there are only two facilities in the state that qualify.

Despite New Jersey's standing food-donation liability laws, which were enacted over 30 years ago, businesses often do not utilize food recovery programs due in part to misinformation and the lack of education about these protections.

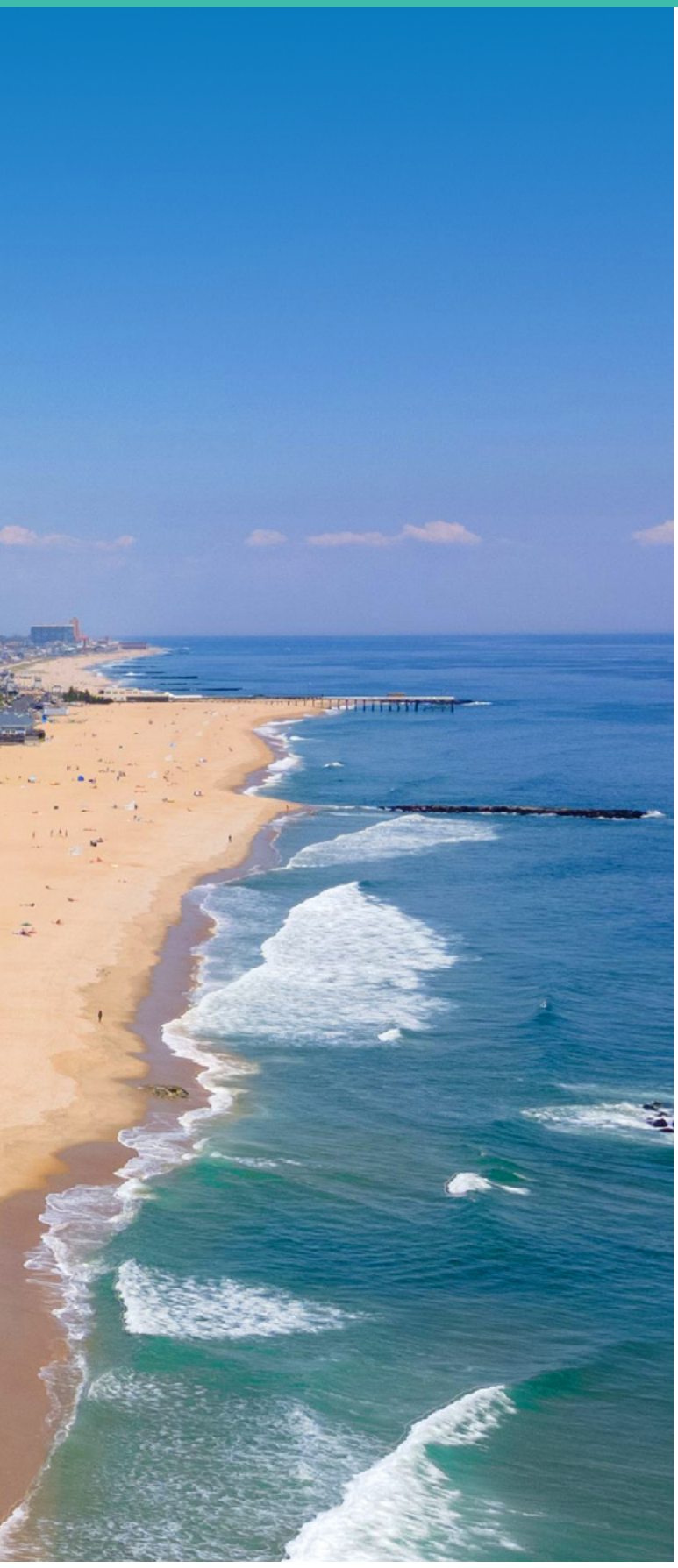
PRIMARY CONCERNS

- Lack of food-waste tracking makes it difficult to measure and understand the problem.
- Continued emissions from food waste sent to landfills does not help meet carbon reduction goals.
- Need exists for better food recovery networks to increase nutritional access for those experiencing food insecurity.
- Supportive regulations are lacking for large-scale food composting facilities, including municipal facilities.

POLICY RECOMMENDATIONS

- Finalize NJDEP's Food Waste Reduction Plan, which is in draft form, and establish the Food Waste Reduction Council.
- Fund and implement education campaigns for schools to minimize food waste in cafeterias.
- Educate industry on donation liability laws and establish food donation networks.
- Support food scrap microhaulers working with local governments to reduce residential food waste.
- Incentivize smaller businesses to implement strategies for food waste reduction and composting.
- Establish uniform standards for food labeling to prevent consumer confusion over expiration dates.
- Reform NJDEP regulations to authorize a tiered permitting system that would allow for small-scale composting sites, as well as state-of-the-art outdoor commercial composting facilities that could qualify as authorized food waste recovery facilities.
- Encourage more co-digestion options for institutions to overcome transportation concerns.

AIR



At the federal level, the Clean Air Act — the United States federal law that limits national air pollution — has been a successful piece of legislation in terms of health outcomes.

The United States Environmental Protection Agency (EPA) indicated that Clean Air Act amendments that reduce levels of fine particles and ozone prevented an estimated 230,000 premature adult deaths, 280 premature infant deaths, 2.4 million asthma attacks, 120,000 emergency visits, 5.4 lost school days, and 17 million lost workdays in 2020. While these statistics give much cause for celebration, New Jerseyans still breathe some of the worst air in the nation. In its 2024 *State of the Air* report, the American Lung Association found that the Newark-New York City metropolitan area was tied for the 13th-most ozone-polluted city in the nation. Ozone can reach unhealthy levels on hot sunny days in urban environments, making it more difficult to breathe and increasing the frequency of asthma attacks.

The health impacts of transportation powered by fossil fuels affect everyone, but especially vulnerable are children, the elderly, the chronically ill, and low-income households and communities near heavily trafficked freight corridors. In New Jersey, the transportation sector represents the single largest emitter of greenhouse gases (GHGs), accounting for 38 percent of the state's total GHG emissions in 2020. In addition to releasing GHGs, vehicle emissions release co-pollutants, such as particulate matter that can impair lung function and cause tissue damage.

Pollutants emitted from burning gas, oil, and propane in buildings—especially particulate matter (PM2.5) and gaseous pollutants like nitrogen oxides (NO_x), which form ground-level ozone—are a leading cause of poor air quality and premature deaths. In New Jersey, more than 600,000 adults and 167,000 children have asthma, and Black and Latino/a/x communities are more likely to be affected with asthma symptoms, according to the New Jersey Department of Health. Rates for emergency room visits due to asthma are highest in Cumberland, Essex, and Camden Counties.

In the United States, outdoor air pollution was estimated to be responsible for 5–10 percent of the total annual premature mortality in the contiguous United States, according to a 2020 report published in *Nature*. In New Jersey specifically, long-term exposure to particulate matter from fossil fuel combustion has been responsible for 17,646 premature deaths, according to a Harvard 2021 study, as reported by Environment New Jersey, Research and Policy Center.

In short, air pollution in New Jersey from cars, trucks, industry, and buildings must be reduced—and current air pollution standards enforced—to better protect public health.

Phase Out Fossil Fuel Infrastructure and Align Gas Regulations and Climate Goals

Reduction in the use of natural gas (primarily composed of methane), propane, and oil is critical to mitigating climate change, improve public health, and reach New Jersey's clean-energy goals:

- Reach a 2030 target of 50 percent below 2006 levels for greenhouse gas reduction
- Reach 20 million heat pump installations across a coalition of states by 2030
- Reach 100 percent in energy sales of clean electricity in New Jersey by 2035
- Produce 11,000 megawatts of offshore wind by 2040
- Reach 90 percent of residential heating, air conditioning, and water heating sales from heat pumps by 2040

New Jersey is working towards transitioning away from natural-gas electric generation through the development of large-scale renewables like offshore wind and solar. The New Jersey Energy Master Plan concludes that, in order to meet the state's climate goals, the overall consumption of natural gas must be reduced by approximately 75 percent between 2020 and 2050.

However, despite New Jersey's strong climate and clean-energy goals and policies, there is little reconciliation between the gas system's regulatory practices and goals. Without adequate early planning and transparency, there is a risk that New Jersey's climate transition will not only be delayed, but also significantly more costly and inequitable. Costs of stranded assets will continue to be borne by vulnerable customers as the affluent transition away from natural gas.

New Jersey has been faced with numerous new project proposals for fossil fuel infrastructure in recent years, including gas and oil pipelines, compressor stations, gas-fired power plants, and liquefied natural gas terminals. Some project proposals will not even supply power in the state, yet will contribute to New Jersey's overall emissions. Collectively, these projects represent a significant threat to critical natural resources, public health, and public safety, in addition to posing a block to the transition away from fossil fuels to 100 percent clean energy. These projects would shoulder ratepayers with billions of dollars in costs and result in stranded assets as the state shifts away from fossil fuels.

What are Stranded Assets?

Stranded assets are assets (e.g., a piece of equipment, resource, or infrastructure) that once had value or produced income but no longer do, usually due to some kind of external shift. For example, the rise of clean energy may leave behind fossil fuel infrastructure as a stranded asset.

PRIMARY CONCERNS

- Gas utilities and regulators continue to operate in a business-as-usual framework, assuming static or increased use of natural gas without reconciliation with New Jersey's climate and clean-energy objectives.
- Continued investment in gas infrastructure will leave ratepayers on the hook for decades, based on an assumed useful life of 60 years, and that raises the risk of stranded assets and increased rates.
- Natural gas rates will increase as consumption declines and the cost of maintaining the gas system is borne by fewer customers. A proactive, planned transition from gas to electric appliances for low-income and moderate-income consumers will protect these households from increasing gas bills.
- State and federal policies need to be strengthened to better protect against both unneeded, polluting projects and existing facilities that are inconsistent with environmental justice and clean-energy goals.
- New Jersey Natural Gas constructed the Southern Reliability Link, a project that provided no reliability benefit, through the protected Pinelands National Reserve. Problems with

horizontal directional drilling during construction resulted in 17 spills, the pollution of streams, and damage to one home that was so severe the homeowner was forced to evacuate.

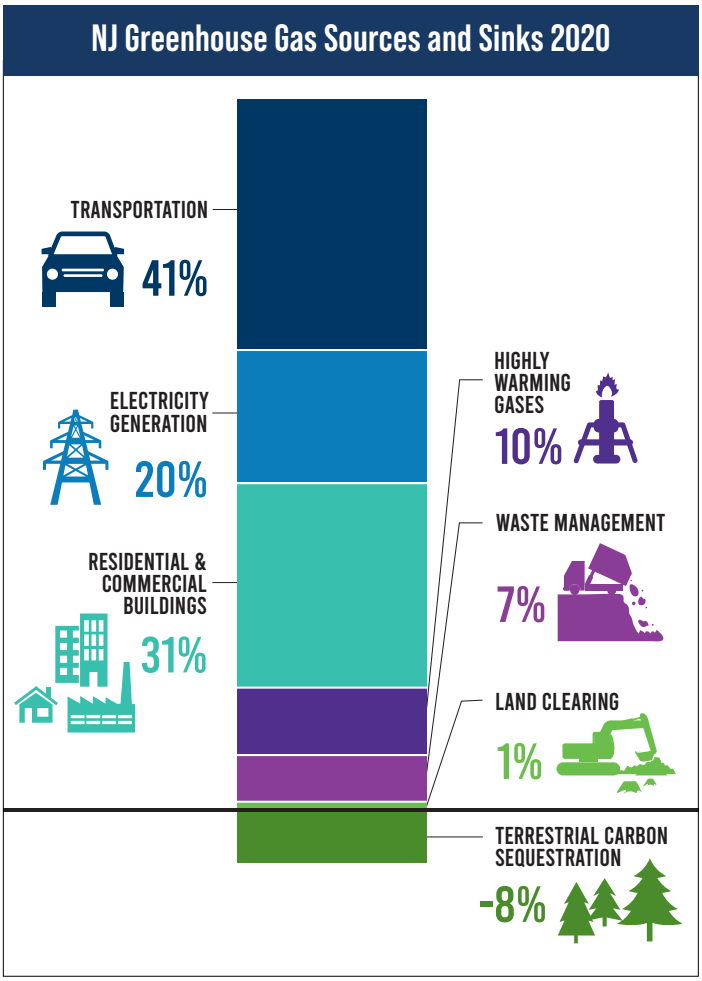
- Delaware River Partners is proposing to construct an export facility for liquified natural gas terminals in Gibbstown, New Jersey, across the Delaware River from Philadelphia. The facility would be the first in the majestic Delaware River Basin, which provides drinking water to approximately 15 million people. The completed project would also unleash a torrent of trucks and trains through low-income communities in Pennsylvania and New Jersey, each transporting a full load of dangerous, methane-emitting liquified natural gas from an upland facility to mammoth ships waiting in port.
- Williams has revived two proposed Pennsylvania to New York natural gas pipelines - the Northeast Supply Enhancement (NESE) and the Constitution Pipeline. The NESE project would cut through Raritan Bay and was previously denied permits by New Jersey and New York state agencies.
- Peaker plants disproportionately contribute to harmful air pollution in environmental justice communities.
- In 2019, over 1,568 miles of long-distance pipelines for the transmission of natural-gas crossed the state, and nearly 35,600 miles of distribution mains delivered gas to users through more than 2.3 million service connections. Methane, the primary component of natural gas, could potentially be released at any point in this infrastructure. In 2019, emissions from New Jersey's system of natural gas transmission and distribution totaled 2.3 million metric tons of CO_2e (out of New Jersey's overall GHG emissions of 98.5 CO_2e).

POLICY RECOMMENDATIONS

- Explore options to require mandatory emissions reductions from New Jersey businesses, and ensure enforcement of existing air pollution regulations.
- Reinvigorate and move forward with the New Jersey Board of Public Utilities' natural gas planning proceeding, initiated in March 2023, to achieve the goal of reducing greenhouse gas emissions below 2006 levels by 2030 through the development of natural-gas utility plans.
- Encourage NJBPU to make the decision-making processes for gas-utility activities more transparent and accessible to all stakeholders. These processes should include the detailed evaluation of the impact of potential actions on disproportionately impacted communities, as well as of the environmental and energy-justice implications of any approvals.
- Coordinate near-term decisions and long-term goals by considering both cumulative impacts on customer cost and alignment with long-term system planning and climate goals. In particular, decisions about building, repairing, or replacing infrastructure should consider the potential long-term need for that infrastructure, given climate goals. Any investment with long-term assets should include the evaluation of alternatives, including nonpipeline alternatives.
- Defend against the seizure of state-preserved lands for proposed projects for fossil fuel infrastructure.
- Require the New Jersey Department of Environmental Protection to fully enforce New Jersey's strong authority under the Clean Water Act, Freshwater Wetlands regulations, Flood Hazard regulations, and Coastal Zone Management regulations, and deny permits for projects that do not meet New Jersey's strict environmental standards.
- Move forward with NJDEP's general permit authorization for horizontal directional drilling to protect against releases of contaminants. Encourage NJDEP to require that applicants avoid sensitive natural resources rather than assuming that horizontal directional drilling will prevent impacts to these resources.
- Use data collected through NJDEP's new Greenhouse Gas Monitoring and Reporting Rule to strategically reduce leakage of methane from the natural-gas transmission and distribution system by requiring leak abatement, the replacement of leaky pipes, and the reduction of blowdown events.
- Transition peaker power plants that run on fossil fuel, often located in environmental justice communities, to clean renewables and battery storage.
- Defend against any proposed oil and gas leases off New Jersey's coast.

Reduce Harmful Emissions from New Jersey Buildings

Currently, residential and commercial buildings produce about 25 percent of the state's greenhouse gas emissions and represent the second largest source of emissions after transportation. These substantial greenhouse gas emissions are produced primarily by gas furnaces and water heaters, and, to a much lesser extent, by oil and propane furnaces.



Source: New Jersey Department of Environmental Protection

Weatherizing homes are a key strategy for reducing greenhouse gas emissions in the state, as New Jersey's housing stock is older and less energy-efficient than the national average. Research shows that for energy-inefficient (or leaky) homes in New Jersey, weatherization can substantially reduce heating and air-conditioning costs for homes using oil, propane, or natural gas. Weatherization, together with switching to electric appliances such as heat pumps, often reduces total energy bills for homes that currently rely on natural gas.

The installation of electric appliances not only eliminates the combustion of fossil fuels from homes and businesses—a critical strategy in addressing climate change—but also improves local air quality. Furthermore, the emissions benefit from electric appliances increases over time as electricity becomes cleaner and eventually carbon-free. A new gas furnace locks in GHG emissions over the lifetime of the appliance.

Heat pumps provide a number of advantages for all households, but particularly for low-income households. According to the US Department of Energy, "heat pumps can reduce household electricity use by up to 75 percent compared to electric resistance heating such as furnaces and baseboard heaters. High-efficiency heat pumps also dehumidify better than standard air conditions, resulting in less energy usage and more cooling comfort in summer months."

There are several best practices to encourage consumers to choose electric appliances. For example, electric appliances are often chosen over gas appliances when energy audits are conducted and consumers can follow expert recommendations for cost-effective weatherization at low costs, when HVAC installers are trained on the current generation of highly efficient electric appliances, and when retailers carry popular models and offer instant rebates.

PRIMARY CONCERNS

- Energy costs are disproportionately high as a percentage of income for low-income households.
- Buildings in New Jersey have a high carbon footprint, both because the housing stock is older and less energy-efficient, and because buildings rely on fossil fuels for space and water heating.
- Electric appliances, such as heat pumps, are highly effective in cold climates. Yet, despite heat pumps now outselling gas furnaces, market barriers make it challenging for consumers to choose them in New Jersey.
- Fossil fuel appliances contribute both to air pollution and GHG emissions, and need to be phased out.
- Increasing the number of energy codes is a cost-effective and foundational strategy for reducing energy usage and energy bills in New Jersey. Building energy codes dictate the minimum energy efficiency for new building construction, major renovations, and additions in existing buildings. In this way, energy codes represent the floor, that is, the least-efficient building standards by law. Municipalities should have the option to opt in to a zero-net-energy stretch code that is more aggressive than the base code to achieve higher energy savings.

POLICY RECOMMENDATIONS

- For existing residential and commercial buildings, the state should:
  - ✓ Set goals to achieve high levels of both energy efficiency and healthy homes for 80 percent of the existing housing stock that serves low-income households by 2030, and 50 percent of all residential housing within the state.
- For new residential and commercial buildings, the state should:
  - ✓ Create a roadmap, with stakeholder input, to place New Jersey on the path toward achieving 100-percent-electric new residential and commercial buildings by 2030, and prioritize investments in affordable, 55+ housing and multifamily projects. Include data on job creation related to this initiative.
  - ✓ Enact a zero-net-energy stretch code for New Jersey that is more aggressive than the base code to achieve higher energy savings for residential and commercial homes and buildings. Municipalities should be able to adopt this new stretch code voluntarily. Additionally, update the energy stretch code statewide, along with the energy base code updates, to ensure a consistent above-code option. Implement a mandatory, statewide zero-net-energy code no later than January 1, 2028.
- Reform the New Jersey Board of Public Utilities' Clean Energy Program to target the conversion of building heating from fossil fuels to electricity, prioritizing the conversion of heating oil and propane customers. There should be no incentives for gas connections for buildings or gas appliances.
- Pass legislation that requires NJBPU to reduce GHG emissions, consistent with New Jersey laws, and require utilities to achieve annual GHG-reduction targets in their energy-efficiency programs. In addition, such legislation would require NJBPU to comply with state environmental and public health goals when evaluating the development of new energy infrastructure. Ensure overburdened communities receive at least 40 percent of the benefits from emissions reductions.
- Pass legislation to require NJBPU to establish a beneficial program for building electrification and decarbonization, which would include electric public utilities. (See Assembly Bill No. 4844 / Senate Bill No. 249 of the 2024–2025 legislative session.)
- Implement and monitor New Jersey's building benchmarking law and consider how the data may be used to drive policies that make for greener, more resilient buildings.
- Revitalize and update the Office of Climate Action and the Green Economy to centralize governance around "clean buildings," creating a whole-government approach to the issue. Clean Buildings are defined as those designed, constructed, and/or retrofitted with energy-efficiency systems, and with 100 percent zero-emission space and water heating and appliances.
- Ensure that state-funded projects and buildings set the highest mark for "clean building" design practices, including the requirement of such practices as a condition of receiving state support for development.

Create Healthy Housing for Low-Income Households

According to a 2020 report from the American Council for an Energy-Efficient Economy, compared to white households, Black households spend 43 percent more of income on energy costs, Hispanic households spend 20 percent more, and Native American households spend 45 percent more across the nation. Current New Jersey programs, such as Comfort Partners, are designed to assess energy usage, weatherize homes, and then install efficient appliances, yet many low-income households do not qualify for such efficiency retrofits because of issues such as asbestos, lead, leaky roofs, or mold. New approaches are needed to address building updates in a holistic manner, starting with a healthy home and energy assessment, followed by a broader range of services. A holistic approach to building updates will improve access for low-income households, help reduce indoor pollution, and make buildings more comfortable and more efficient.

The New Jersey Board of Public Utilities launched the Whole House Pilot Program in Trenton in September 2022. The program takes a holistic approach to healthy housing, incorporating and coordinating energy-efficiency improvements while remediating health and safety hazards that pose a threat to human health and too often cause efficiency upgrades to be deferred or delayed.

Opportunities For Expanded Efforts

The NJBPU pilot program presents a tremendous opportunity to collect data on both its successes and failures, and to adjust program steps as needed to bring the Whole House approach to full scale in New Jersey's most vulnerable communities. Additionally, the program provides local jobs by utilizing community-based vendors to publicize the program, assess housing and energy needs, and provide energy upgrades in income-eligible housing.

Additionally, a law was signed in May 2024 establishing a new framework for determining and enforcing New Jersey municipalities' affordable housing obligations under the New Jersey Supreme Court's Mount Laurel doctrine and the State's Fair Housing Act (also known as the Fourth Round). With the implementation of the Fourth Round, there is a tremendous opportunity to expand energy-efficiency and electrification efforts in new or rehabilitated construction, especially for affordable housing units.

PRIMARY CONCERNS

- Multiple programs have different guidelines, intake protocols, and priorities. This creates differences in how owners versus renters are treated, as well as single-family dwellings versus multi-family dwellings.
- Impractical and unneeded documentation requirements exist for program participants.
- Serious structural issues prevail for a large percentage of low-income residences.

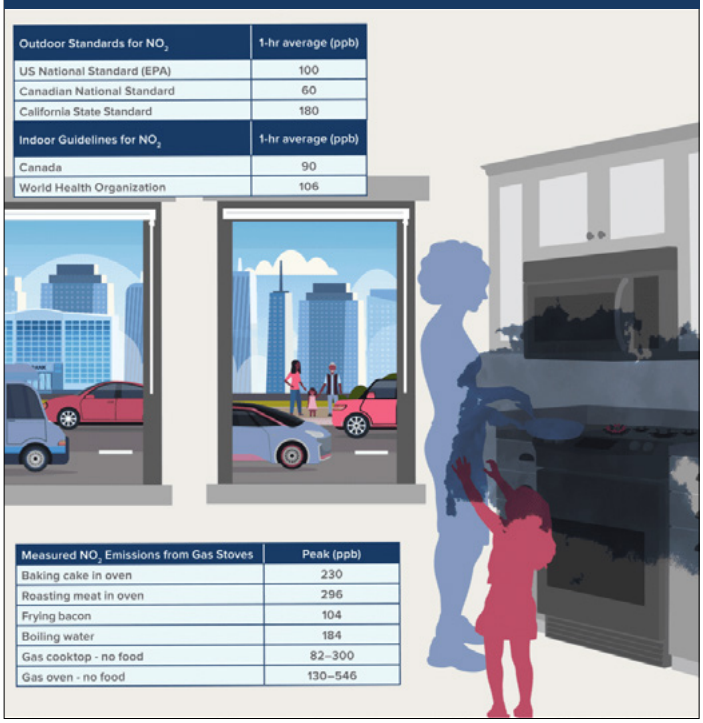
POLICY RECOMMENDATIONS

- Evaluate program outcomes for the Whole House Pilot Program, adjust the program, and expand it statewide. Bolster this work through robustly funding the Comfort Partners Program.
- Unify all low-income energy-efficiency programs in the state into a single source for energy efficiency.
- Remove all documentation requirements, except proof of ownership and identity, and eliminate the need for social security cards, W2s, and other such documents. Use low-income census tracts or defined overburdened communities for choosing homes and neighborhoods to weatherize, and review and standardize income tests for all energy-efficiency programs.
- Use funding from multiple programs and sources to address factors that create obstacles for installing energy-efficiency upgrades, such as roofing and/or other home-health issues, including lead abatement. By combining funds from non-energy-efficiency programs, this new program can flex the funding to the measures needed by each unit. Consider a set-aside for community education to spread awareness about the program.
- Any new affordable housing that receives state funding should be energy-efficient and not include any new natural gas connections.

Address Problems Associated with Indoor Air Pollution

According to the United States Environmental Protection Agency, Americans spend 90 percent of time indoors and 65 percent at home. Strikingly, concentrations of various pollutants in household air can often be higher than that of outdoor pollution. Multiple sources contribute to household air pollution, including tobacco smoke, the method of heating, poor ventilation, dampness, and chemicals in cleaning products, as well as some building materials and types of gas cooking stoves.

Gas Stoves Can Emit Elevated Indoor Nitrogen Dioxide (NO2) Levels Often Exceeding Indoor Guidelines and Outdoor Standards



Source: https://rmi.org/insight/gas-stoves-pollution-health

Indoor Air Health Affects All of Us

In the US, one in three households cooks with gas. While using exhaust-fan ventilation can reduce nitrogen dioxide (NO_2) concentrations and associated respiratory illnesses, a National Health and Nutrition Examination survey found that only 21 percent of gas stoves in homes with children were consistently used with the stove's exhaust vent.

Cooking with gas increases household air pollution: Cooking with gas generates nitrogen dioxide, carbon monoxide, particulate matter, and formaldehyde. Nitrogen dioxide levels are higher in homes with gas cooking stoves. Unlike other gas appliances, which have chimneys or outlets to vent these emissions, gas stoves are not uniformly required to be vented to the outside.

Health Impacts to Children: According to the US Environmental Protection Agency, short-term exposure to high levels of NO_2 has a causal relationship with asthma and can make asthma symptoms worse. Children are particularly vulnerable to the health effects of air pollution because they are more active, have immature respiratory systems, and have higher lung-to-body weight ratios. Nitrogen dioxide increases the risk of respiratory illnesses like asthma in children, and cooking with gas increases the risk of pediatric asthma by 42 percent. Children who have asthma have more severe symptoms in homes with higher NO2 levels.

Equity: Low-income households are more likely to live in smaller homes, where concentrations of NO_2 from cooking with gas tend to be higher than in larger homes. Low-income households where household air pollution levels are below EPA ambient standards are also more likely to suffer from asthma, chronic obstructive pulmonary disease, and heart disease. Energy-efficiency upgrades, which can reduce leaks in buildings through sealing cracks and gaps, can also result in an increase in the concentration of household air pollutants unless sources of pollution (e.g., gas cooking stoves) are removed or adequate ventilation is installed and used.

PRIMARY CONCERNS

- People spend most of their time at home, where household air quality is often worse than outdoor air quality.
- Cooking with a gas stove increases nitrogen dioxide levels in the home.
- Nitrogen dioxide increases the risk of respiratory illnesses (e.g., asthma) in children.
- Most people do not have or use adequate ventilation to clear air pollution (e.g., NO_2) from their homes.
- In smaller homes, cooking with gas can produce higher NO_2 concentrations than in larger homes, which can more severely impact health.

POLICY RECOMMENDATIONS

- Offer no-cost or subsidized options for low-income or affordable housing to install energy recovery ventilators, which are passive energy-recovery devices used to reduce the energy consumption of heating, ventilation, and air-conditioning systems by exchanging stale indoor air with fresh outdoor air.
- Prioritize rebates, incentives, and low-interest loans offered through the state or utilities to property owners and contractors who are installing electric appliances rather than gas appliances.
- Incentivize the sale and installation of new energy-efficient and zero-emission equipment, when replaced at the end of its predecessor's useful life in residential and commercial buildings.
- Create awareness among developers, landlords, contractors, retailers, and consumers through state-sponsored programs about the health risks of cooking with gas stoves. This should include education about the risks associated with cooking with gas (e.g., childhood asthma), and about the benefits gained from reduced gas use, proper ventilation, and switching to electric stoves (e.g., reduced pollution).
- Enhance government agencies' inspection regulations concerning home-safety, plumbing, and home inspections, and review and revise existing standards and procedures to reduce children's exposure to household air pollution generated by cooking with gas. The program must include rental units and affordable housing.
- Update building codes to require range hoods are outdoor-vented for gas stoves.
- Require the installation of outdoor-vented electric cooking stoves for new, state-funded low-income housing.
- Offer no-cost or subsidized options for programs to retrofit low-income or affordable housing with electric stoves, which would include funding for electric panel upgrades, the installation of outlets for electric stoves, and for shutting off gas lines. This could be incorporated into existing programs, such as Comfort Partners or the Whole House Program.

CLEAN ENERGY

Greenhouse Gas Emissions Continue to Soar

Despite the growth of clean-energy resources, GHG emissions and atmospheric concentrations of greenhouse gases continue to soar. The 2018 Intergovernmental Panel on Climate Change's special report, *Global Warming of 1.5 °C*, indicates that in order to produce clear benefits to people and natural ecosystems, it is advisable to avoid more than a 1.5 °C average warming. To accomplish this, overall global CO_2 emissions must decline by roughly 50 percent from current levels by 2030, with moderately negative (i.e., -110 percent) net reductions by 2050.

These reductions will be absolutely necessary if the worst impacts from climate change are to be avoided.

Decarbonizing the System

Decarbonization is the reduction of carbon dioxide emissions through the use of low-carbon power sources in order to achieve a lower output of greenhouse gases into the atmosphere. Reducing greenhouse gas emissions from the electricity-generation system will be important as more products and energy uses switch to electric. Keeping clean electricity affordable during the coming decades of rapid decarbonization is particularly important for low- and moderate-income consumers, as is the reduction/elimination of emissions. Fossil fuel use, including for electricity generation, often has a disproportionate impact on environmental justice communities.

Policies to avert the climate crisis through reduced GHG emissions must prioritize the reduction of local emissions of co-pollutants to address environmental injustices. Careful planning is required to ensure that existing pollutant generation is replaced with clean-energy resources, and that new fossil fuel projects and fossil fuel expansions are not located in overburdened communities. Careful planning must also consider the entire regional electric system, so that the Garden State's energy transition does not result in increased emissions—or "leakage"—in power plants located outside of the state.

Accelerate Decarbonization Through a 100% Clean Energy Standard by 2035

New Jersey policy makers recognize the critical need to decarbonize the state and the region to promote clean air and mitigate climate change. New policy tools and regional approaches to dramatically expanding the development of renewable resources within the regional electric grid, extending from Illinois to Virginia, have been explored and require finalization. New Jersey's 2019 Energy Master Plan called for a Clean Energy Standard (CES), a mechanism that would encourage increased sales of clean electricity on the market, to augment or replace the Renewable Portfolio Standard (RPS). After more than two years of policy exploration and development, technical conferences with national experts, and stakeholder input, it is time to mandate the adoption of a Clean Energy Standard.

Why a Clean Energy Standard is Necessary

An addendum to the existing RPS, New Jersey's CES would greenlight more aggressive clean-energy requirements for operation in order to generate additional reductions in GHG emissions in New Jersey and the wider regional grid. The current Renewable Portfolio Standard and Renewable Energy Credit market were important policy tools to begin the buildout of solar and wind resources, but they lack key features needed to reduce emissions at higher levels of renewable deployment. Based on the most recent findings of the Intergovernmental Panel on Climate Change, the new CES should require that 100 percent of all electricity sold be from clean electricity sources by 2035, with net negative emissions by 2050. At the same time, the CES should be structured so as to provide strong ratepayer protections against excessive costs, and to maximize benefits to New Jersey's in-state workforce.

How the Clean Energy Standard Would Work

Under the CES, each new or existing generating resource in the region that emits zero carbon (i.e., wind, solar, nuclear, and hydroelectricity) will be eligible to sell one Clean Electricity Attribute Credit for each megawatt-hour of electricity generated. All New Jersey load-serving entities who sell electricity to retail customers would be required to procure enough Clean Electricity Attribute Credits to meet the required share of clean electricity. Various types of Renewable Energy Credits used to meet existing RPS requirements would also count toward the CES requirement.

Every Clean Electricity Attribute Credit, like every regional Renewable Energy Credit, will represent one measured, verified, and real megawatt-hour of clean electricity that has been injected into the regional electric grid.

Because the grid cannot hold or store more electricity than is generated, each injection of a clean megawatt-hour displaces another megawatt-hour from an existing regional generator. A Clean Electricity Attribute Credit therefore demonstrates this displacement of existing generation, as well as the avoidance of the carbon-based emissions that would have been emitted. However, there is no guarantee that this displacement of existing generation will take place in communities disproportionately affected by local fossil-generation resources due to the electricity market and the disproportionate existence of existing fossil fuel infrastructure. Therefore, policies that encourage the displacement of fossil fuel combustion in lieu of clean-energy generation in and around overburdened communities should be prioritized under the CES. This will spur highly sustainable development in such communities.

New Jersey's CES Can Do the Following:

- Be structured to provide new clean electricity projects with a predictable multiyear revenue stream from the sale of Clean Electricity Attribute Credits. These additional, relatively stable revenues will directly support new investment in a variety of in-state and regional clean-energy resources needed for New Jersey and other PJM states with clean-energy goals to aggressively reduce emissions. Furthermore, since projects would compete to sell CAECs, the resulting competition will tend to select the best-managed projects, resulting in the most affordable mix of clean-energy resources being continually developed.
- Support a reliable clean grid. The CES will go beyond the limited incentives for wind and solar energy provided by the RPS and offer incentives for the entire mix of clean resources needed to maintain a reliable electric grid. A properly designed CES can support the rapid development and efficient deployment of flexible resources, such as transmission-scale energy storage systems (see Assembly Bill No. 5267 of the 2024–2025 legislative session) and

always-available clean firm resources (e.g., green hydrogen, new types of long-term storage, and potentially new, safe, and economical nuclear technologies) that will be essential for reliability and low costs during extended weather extremes.

- Support a mix of New Jersey and regional resources that ensures that energy is affordable and sufficiently supplied to all customers. Such a mix is critical for electrification goals. New Jersey has relied on regional clean-energy resources to meet RPS targets from the outset, a policy that was necessary to reduce the impact on electric rates. In 2020, regional resources provided 75 percent of New Jersey's RPS credits, while requiring only 12 percent of the total spent to meet the RPS target.
- Initiate the development of a large-scale, competitive regional clean-electricity credit market. Ensuring low-cost compliance with such an aggressive CES will require a highly competitive, regional market for clean-energy credits. New Jersey is well positioned to lead the development of such a market in collaboration with other clean-energy states and with PJM. This market will help keep costs low for consumers and maximize the amount of GHG emissions abated per dollar spent. Not only will it ensure a competitive price for clean-energy credits, but it could also further lower the development cost of new clean-energy projects by providing a multiyear revenue commitment to developers of clean-energy projects. With a more secure revenue stream and a much higher demand for CECs (and the clean megawatt-hours they represent), more clean projects can be financed and built in the near term and at lower cost, which is critical to averting the growing climate crisis.
- Create around 24,000 new family-sustaining union jobs in the next decade for roles building, operating, and maintaining electricity generators; an additional 10,000 jobs in large-scale solar energy; and about 7,000 jobs in offshore wind energy.

POLICY RECOMMENDATIONS

- Ensure that the administration and advocates work with the legislature to develop legislation for a Clean Energy Standard for New Jersey, requiring that 100 percent of all electricity sold be from clean electricity by 2035 and -110 percent (i.e., no emissions plus 10 percent of current emissions permanently removed from the atmosphere) by 2050.
- Build off of existing stakeholder processes, such as NJBPU's RPS process, to inform the development of legislation and implementation.
- Utilize agency expertise and resources to answer technical questions in the development of a CES.
- Allow for external and internal stakeholders to design the implementation of any program, including in the consideration of sources and budget.
- Set the target to achieve high levels of reduction of greenhouse gas emissions in overburdened communities while keeping electricity rates affordable for customers. Include savings from mitigating climate change and its public health implications in any cost-benefit analysis.
- Create and implement more policies that will reduce emissions through the electrification of vehicles, the improvement of building energy efficiency, and the rapid electrification of buildings. New approaches will be needed to reduce emissions from power plants located in New Jersey.
- Enact a CES to maximize in-state job growth and create jobs in the clean-energy economy. Ensure an equitable transition to clean energy through the creation of the Office of Just Transition.
- Fight attempts to ban clean energy at the state level.

Promote Responsibly Developed Offshore Wind

New Jersey residents are experiencing firsthand a fundamental altering of the natural world caused by the climate crisis. Homes, communities, and wildlife are all being threatened by historic floods and extreme weather, and natural systems and habitats are being lost. Simply put, climate change requires bold and urgent action.

Offshore wind provides many benefits, including generating electricity without emitting carbon dioxide, replacing fossil fuel–powered power plants, driving local investments and job creation, and potentially creating ocean habitat.

In September 2021, the prior administration signed an executive order increasing the state's goal for offshore wind energy generation to 11,000 megawatts (MW) by 2040. The New Jersey Board of Public Utilities approved the following offshore wind applications:

- **2019:** Ocean Wind (1,100 MW)
- **2021:** Atlantic Shores Offshore Wind Project 1 (1,510 MW)
- **2021:** Ocean Wind II (1,148 MW)
- **2024:** Leading Light (2,400 MW)
- **2024:** Attentive Energy Two (1,342 MW)

New Jersey is one of the states at the epicenter of the burgeoning offshore wind industry on the east coast of the United States. The geography of the state positions New Jersey to become one of the major hubs for this industry. With this opportunity comes a responsibility to ensure that offshore wind is developed with high standards for environmental and natural resource protection in order to protect recreational and commercial fishing and tourism industries. Offshore wind development and construction offers the promise of significant economic activity and jobs, which must be shared equitably across New Jersey's communities. While recognizing recent

events both at the state and federal levels that have impacted the progress of offshore wind, it is critical to take a longer-term view of this important industry.

Offshore wind development presents an unparalleled opportunity to collect research data about the ocean and its inhabitants. Never before have resources been available to track wildlife movements up and down the eastern seaboard ten or more miles from the shoreline. Having physical structures in the water creates a huge opportunity to expand scientific research and monitoring of coastal ecosystems. Therefore, monitoring equipment must be a component of every project, preceding, during, and after construction.

PRIMARY CONCERNS

- A new federal administration injects uncertainty into the offshore wind sector in the near term.
- Orsted's 2023 announcement that it would no longer pursue Ocean Wind I and II projects creates uncertainty surrounding New Jersey's future offshore wind capacity.
- Species of concern and New Jersey's commercial and recreational fishing industries should be protected through good planning and siting of turbines, cables, and onshore landings.

POLICY RECOMMENDATIONS

- Continue a whole-government approach to support offshore wind development, including the Wind Institute for Innovation and Training at the New Jersey Economic Development Authority, and to support workforce development.
- Continue efforts and participation under the Research and Monitoring Initiative and the Regional Wildlife Science Collaborative for Offshore Wind, which support regional research and monitoring of marine and coastal resources during offshore wind development, construction, operation, and decommissioning.
- Continue the regular adaptive solicitation and review process to create a pipeline of projects to meet New Jersey's aggressive clean-energy goals.
  - ✓ Regularly review and update solicitations to incorporate best practices that address potential wildlife impacts or other environmental concerns, and to incorporate new knowledge gained from previous solicitations, current projects in various stages of development, and other states.
  - ✓ Require strong environmental and natural resource protections that focus on avoidance as a precondition of any approved project.
  - ✓ Use the best available data to avoid sensitive habitats to the maximum extent possible in both state and federal waters.
  - ✓ Look holistically at all aspects of offshore wind development—including port, inland, and near-shore activities—when reviewing potential impacts to the environment and marine life.
- Bring focus and action on transmission needs and potential community benefits during the next four years.
- Require monitoring and open-source data (as feasible) before, during, and after construction to expand scientific knowledge of ocean ecosystems, and use that data for future projects.
- Support additional offshore wind leases rather than oil and gas leases.
- Fight attempts to ban clean energy at the state level.

Advance Clean, Affordable, Well-Sited Solar Energy

According to the Solar Energy Industries Association, "New Jersey is ranked 10th in the United States for total cumulative installed solar photovoltaic (PV) capacity as of the third quarter of 2024." Specifically, New Jersey has more than 5 gigawatts of installed solar PV capacity from over 210,000 individual solar PV installations. The state's 2019 Energy Master Plan envisions continued growth in New Jersey solar power as part of the least-cost pathway to achieve both 100 percent clean energy and the Global Warming Response Act's targets. The analysis underlying the Energy Master Plan provided the insight that New Jersey—as a small, densely populated state with relatively expensive solar and other renewable energy resources—will benefit from relying on a mix of in-state renewable development coupled with imports of clean-energy resources from the region.

The state must pursue a judicious mix of low-cost regional clean-energy resources that maximizes the reduction of GHG emission, and in-state solar energy, which can achieve additional community and economic benefits, such as reducing peak load during high demand. The Clean Energy Act of 2018 requires the state to use competition in the procurement of in-state solar power as a way to help drive continuing cost reductions in these resources, which would support greater deployment.

A key piece of providing solar options to low- and moderate-income customers and renters is through the Community Solar Project. Community solar refers to a solar array where output is virtually divided among multiple participants, known as subscribers. Subscribers are not directly connected to the solar array, which means that access to renewable electricity is opened to more community members who may have previously been unable to transition to solar power due to associated costs, an unsuitable roof, or lack of roof control. Additionally, subscribers receive guaranteed savings on their electric bills when they participate.

Local solar generation also provides important benefits, including cleaner air, reduced health costs, and local jobs.

PRIMARY CONCERNS

- New Jersey needs a suite of policies that will continue to ensure growth in the state's solar resources, along with continued reductions in its cost, all the while ensuring that ratepayer expenditures on clean-energy resources result in the maximum reduction in CO2 from all state and regional power plants.
- Solar projects in New Jersey must be sited in a manner that does not conflict with the state's long-standing commitment to open-space and farmland preservation, nor result in the clearing of forests that sequester carbon or provide a myriad of other benefits. While there may be some role for large in-state solar development, sound siting criteria are needed to prevent such projects from taking place on New Jersey farmland or on currently forested sites, as this type of PV placement directly conflicts with both farmland preservation and carbon reduction goals.
- Individual access to solar energy where people live is unequal, either because they rent, because of financing concerns, or because of the upfront costs.

POLICY RECOMMENDATIONS

- Increase the amount of New Jersey solar generation, as informed by actual costs, to develop a budget that is designed to maximize GHG-emission reductions and achieve cost-effective local benefits. The Community Solar Program should remain a priority program within the total clean-energy budget, and at least half of community solar generation should serve low- and moderate-income households.
- Ensure that any NJBPU solar-power incentive programs prioritize projects on rooftops, brownfields, landfills, parking lots, or marginal lands, and that incentives are not provided for solar projects on prime farmland prioritized for preservation or for projects that would clear forests. Communities and developers should use NJDEP's Solar Siting Tool when planning for solar installations.
- Incentivize new, solar-ready residential development.
- Incentivize the coupling of medium- and large-scale solar arrays with battery storage.
- Defend and implement the recent federal award of $156 million under the US Environmental Protection Agency's Solar for All initiative. The award is anticipated to enable the state to deploy more than 175 MW of solar energy to benefit 22,000 overburdened households.

Create a 21st-Century Electric Grid

In 1882, New Jersey and New York shared the distinction of having built the country's first modern, commercial electric-power distribution system to service individual customers. While that is a fact to be proud of, the downside is that there have been no significant technological upgrades to the system since then. Updates are way past due. What is more, most distribution lines in the United States (and most likely in New Jersey) were built over 60 years ago. Updates to the distribution system are critical to energy conservation, bringing new clean-energy projects online. As the state moves toward a clean-energy future, such updates are also critical to cost savings and to the future prevention of and response to outages.

Without modernization of the distribution grid, consumers will face higher costs, brownouts and blackouts will become more prevalent, and the adoption of clean energy will plateau or drop.

Additionally, as New Jersey brings more clean distributed energy resources (DERs) and demand-side response opportunities online—including solar power, energy efficiency, electric vehicles with flexibility to manage charging, and battery storage—the state will require an electric distribution system that can leverage the benefits these technologies provide.

The new, clean DER technologies being deployed fundamentally change the way customers and utilities interact with the grid. Consumers become more aware of their usage patterns and utilities have better insight into vulnerabilities and opportunities in the system. New Jersey will have to transform from a traditional one-way system (that merely provides electricity to customers) to a bidirectional system that uses smart, state-of-the-art technologies in order to provide customers and utilities with more real-time information. Currently, the distribution grid needs to evaluate DER installation on a case-by-case basis to determine whether a particular circuit can handle additional load. This leads to situations where new DERs cannot be interconnected to the distribution system without costly upgrades to the system.

A "smarter" grid also informs consumers of energy use. When combined with time-varying rates, the grid will inform consumers of the least expensive times to charge cars and run appliances. This is especially important for consumers with high energy burdens, which circumstances are often influenced by the quality of housing stock and income. A recent report found that Black households spend 43 percent more of their income on energy costs than white households, and Hispanic households spend 20 percent more than white households. Providing better access to local, affordable, and clean sources of energy, combined with information on individual households' energy usages and costs, has the opportunity to significantly reduce consumer energy burdens.

Implementing grid modernization in New Jersey not only will achieve the benefits already outlined—energy cost savings, energy conservation, resiliency—but also has the opportunity to create well-paying local jobs throughout the state. The process of grid modernization will make certain jobs obsolete (e.g., meter reading), but with job training or other mechanisms, new jobs can be created (e.g., installing smart meters and sensors).

	OUTDATED GRID	MODERN GRID
Flow of Energy	One way, with energy flowing from power plants to homes and businesses.	Multiple ways, allowing people to make, move and sell their own energy.
Customer Control	Next to none, other than manually turning lights and appliances on and off.	Customers can preset and control – via smartphones or tablets – how and when their homes or businesses use energy or they can contract with a third party.
Automation	Utility employees physically check meters monthly to measure usage. Utilities may only know of an outage if a customer reports it.	Sensors continuously track usage and can detect and resolve problems quickly.

PRIMARY CONCERNS

- If the grid is not modernized, customers will face higher costs and clean-energy projects will not be able to interconnect with the grid.
- The current grid is not prepared to handle new clean-energy DERs.
- Increased electricity use by data centers/AI is hampering efforts to reduce overall electricity use.

POLICY RECOMMENDATIONS

- Move forward with a grid modernization plan that identifies the most beneficial and cost-effective projects to modernize New Jersey's electric distribution system, integrates energy storage systems, increases the capacity of the system to interconnect with distributed energy resources (e.g., solar power), and improves the resilience of the system against hazards associated with climate change, including extreme heat and flood risk. (See Senate Bill No. 258 of the 2024–2025 legislative session.)
- Set standards for advanced metering infrastructure, which is one of the best tools New Jersey has to modernize its grid. Advanced metering infrastructure refers to electric meters that can communicate wirelessly with the distribution network in real time to provide customers and utilities information on electricity usage, outages, and other more granular information on what sections of the grid are stressed. Deploy advanced metering infrastructure in 10 percent of all households by 2050 and ensure secure communication networks between customers and utilities to transfer data.
- Require any new AI data centers to power themselves with renewable energy, combined with battery storage, that does not take existing renewable energy off the public grid.
- Continue efforts to reform the regional grid (i.e., PJM Interconnection) to speed up resource-interconnection timelines for clean-energy electric storage systems, such as batteries. Require long-term transmission planning, which also protects New Jersey consumers and ratepayers by addressing rising costs. Additionally, encourage PJM to consider energy reliability through additional factors, including approving complementary clean-energy and energy-storage projects to ensure that these resources are not undervalued in respect to reliability.
- Monitor and enforce provisions of the Second Triennium Energy Filings from the state's utilities for demand response programs. The New Jersey Board of Public Utilities approved the filings on October 30, 2024, and they include new demand response programs to reduce customer peak-electricity demand and lower stress on the grid.
- Design rates that maximize benefits for customers to use DERs. The Board of Public Utilities and electric utilities should work together to design time-varying rates that incentivize customers to consume energy off-peak when the grid is less stressed. Using time-varying rates—which include peak-time rebates, critical peak pricing, and time-of-use rates—would result in more expensive electricity rates during the time of day when there is more demand on the grid, and lower rates when there is less demand on the grid. Consider ways to insulate low-income customers from experiencing significantly higher bills as a result of changing the rate design.

MOBILITY

"Transportation is the act of moving goods or people. Mobility is the ability to freely move or be moved.

The important difference here is the word ability. Transportation ('across-carry' in Latin) describes the act of moving something or someone, whereas mobility ('capable of movement') describes the ability of a person to move or be moved.

In other words: transportation is something you do and mobility is something you have."

— Forum for the Future

Innovate Public Transportation

Public transportation has traditionally meant mass transport via buses, trains, and ferries. The current landscape may offer individuals in high-density areas other options as well, including rental bicycles, e-bikes, and scooters. Mobility innovations continue to show how roadways can create various options that circumvent the use of cars. This new industry of "shared mobility" helps transit riders overcome the "first mile/last mile" challenge—easing the burden of getting to and from local transit networks to final destinations. Shared mobility can expand the potential catchment area for transit users where additional bus or rail service may not be feasible.

Innovations in shared mobility and microtransit can expand the size of catchment areas to encourage more people to use public transport services in the future, creating equity for all commuters and thus reducing the use of motorized vehicles that congest roads, highways, and parking areas.

➤ *What Is a Catchment Area and Why Is It Important?*

A catchment area is the geographic area from which a facility—such as a subway, train, or bus station—attracts clients or customers.

Similarly, low- and mid-density areas are candidates for innovative transportation options as well. Microtransit is one such concept that complements fixed-route transportation services by allowing users to schedule or hail rides in a shared vehicle within a geographic region. Microtransit vehicles connect to high-frequency bus services, major points of interest, or generally curb-to-curb services within the coverage area. These services may be operated by a public transportation authority, allowing for the same trained, professional service from bus operators and creating new employment opportunities within a transportation authority. This concept may be suitable for suburban and rural areas to reduce single-car trips and parking burdens when riders converge in a denser area. By allowing for regular connectivity with established transit lines, microtransit services also may help mitigate transit deserts (i.e., places where there are no transit options) and, as such, both reduce the number of cars needed and improve mobility options for residents.

➤ *GOTrenton!*

The GOTrenton! service is a collaborative effort spearheaded by Isles Inc., state partners, and local partners to bring affordable and reliable transportation to the Trenton community. Its fully electric shuttles and vans connect people to jobs, healthcare, and other services while working to improve local air quality—all at no cost to riders.

Source: https://www.gotrenton.org/

Given this evolving approach to public transit and the many options available to New Jersey communities, there are ways to make these programs profitable while improving usage. For instance, New Jersey has a law (NJAC 16-41C) that inhibits municipalities' ability to use bike-share infrastructure for advertising purposes. Ad space is at a premium in many of New Jersey's cities and would offset many programmatic costs associated with bike sharing programs. There are plenty of inadvertent hurdles such as advertising restrictions that New Jersey may easily resolve to allow for pilots and the full implementation of some of these mobility solutions.

PRIMARY CONCERNS

- Shared-mobility pilots are getting stuck in the pilot phase.
- New Jersey needs better innovation and integration with transportation authorities.
- Shared e-mobility, micromobility, and microtransit options have much room for growth regarding equity, including ensuring affordability and making options available for lower-income families (e.g., cash options).

POLICY RECOMMENDATIONS

- Direct the New Jersey Department of Transportation to ensure that funds are available for municipalities to provide shared-mobility options, including "innovation funds" that allow municipalities to implement various transportation options (e.g. bike sharing, scooter sharing, car sharing, electric van sharing).
- Expand and make permanent the state's microtransit program.
- Create accessibility-friendly spaces, making bus stops, train stations, and car sharing easier, especially for people with disabilities.
- Include e-bike rebates in policy development around long-term incentives for electric vehicles at a state level.
- Institute a bicycle-commuter benefit for state employees, which could enable the gathering of metrics on adoption and the generation of proposals for ways to expand the program.
- Resolve New Jersey Administration Code legal issues to allow for advertising opportunities with bicycle-sharing.

Futureproof New Jersey Transit

NJ TRANSIT is the third-largest transportation authority in the country, providing almost 270 million passenger trips per year, and the engine behind the region's economy. Despite its crucial role moving commuters around the state—as well as providing connections to the New York and Philadelphia metro regions—NJ TRANSIT has faced historic funding raids, ongoing funding transfers, and historic infrastructure losses after Hurricane Sandy. This volatility has hamstrung NJ TRANSIT's ability to meaningfully plan ahead or stay on par with peer agencies' system evolutions, such as electrifying bus fleets, connecting to bicycle and pedestrian infrastructure, or updating bus routes to reflect geographic and demographic changes.

Dedicated Source of Revenue

NJ TRANSIT lacks a permanent, dedicated funding source for the agency's annual operating budget, leaving this critical funding at the mercy of the annual political budget process and the priorities of any given administration.

Postpandemic Reevaluation

New Jersey Transit historically relies heavily on farebox revenue to fill its budget. However, at the height of the pandemic, when emergency executive orders mandated work-from-home options for all nonessential employees, NJ TRANSIT saw its ridership dip by 90 percent. In 2023, bus ridership was more than 80 percent back to prepandemic levels, and in 2024, NJ TRANSIT was utilized by 59,447,200 riders. This long-term reduction in ridership is a call for action for the state to reevaluate and futureproof NJ TRANSIT's funding streams.

There is an opportunity now to repurpose NJ TRANSIT service to meet the state's mobility needs, capture more riders, reduce dependency on automobiles, reduce harmful emissions, and improve the overall quality of life for all New Jersey residents. For example, NJ TRANSIT has stepped in to service additional bus routes after private bus companies shut down after the pandemic. Now is an opportune time to create an equitable, safe, and accessible bus network for residents.

Gateway: The Most Urgent Infrastructure Program in America

The Gateway Program will increase resiliency and capacity along a 10-mile stretch of the Northeast Corridor rail line between Newark, New Jersey, and New York Penn Station. This section of the Northeast Corridor handles approximately 450 trains per day and over 200,000 daily Amtrak and NJ TRANSIT passenger trips; it also directly serves New York Penn Station—the busiest rail station in America. The project includes the Hudson Tunnel Project, which will build two new rail tracks under the Hudson River and rehabilitate the existing North River Tunnel and its two tracks. Additionally, the Gateway Project consists of multiple construction projects, all designed to improve reliability, resiliency, and redundancy in the system.

Transition to an All-Electric Bus Fleet

Signed into law in January 2020, Senate Bill No. 2252 statutorily mandated NJ TRANSIT's transition to an all-electric bus fleet. The new law stipulates that by December 31, 2024, at least 10 percent of the new bus purchases made by the New Jersey Transit Corporation shall be zero-emission buses; this subsequently increases to 50 percent by December 31, 2026, and to 100 percent by December 31, 2032, and thereafter.

NJ TRANSIT's *Five-Year Capital Plan* (2020) calls for modernizing its 16 bus garages to support electrification of its bus fleet. Through recent federal funding, NJ TRANSIT has received hundreds of millions of dollars to upgrade its bus garages and purchase electric buses. The US Department of Transportation also awarded a $6.8 million grant to the agency to complete a zero-emission bus study to determine needed upgrades at existing and planned future garages as it transitions to a zero-emission bus fleet by a state goal of 2040. It is essential that NJ TRANSIT also budget to train bus mechanics and operators to ensure that the buses can be safely and efficiently operated and maintained. Finally, this transition must inform the recently started bus redesign process to make sure that new routing takes into account electric bus ranges and charging needs, as well as routing and infrastructure planning needs.

PRIMARY CONCERNS

- There is no permanent, dedicated funding source for NJ TRANSIT.
- NJ TRANSIT historically uses capital-to-operating transfers, as well as transfers from other sources (e.g., the Clean Energy Fund), to keep its system moving.
- Future capital planning, including "state of good repair" projects and future system electrification projects, are delayed or nonexistent due to volatile funding.
- Progress remains slow on the transition to an all-electric bus fleet, with only eight busses purchased for a pilot project in Camden in 2022.

POLICY RECOMMENDATIONS

- Make the Corporate Transit Fee permanent to provide reliable, dedicated funding to NJ TRANSIT to ensure a consistent operating budget.
- Design a holistic approach to bus route redesigns for the entire NJ TRANSIT bus system, including community outreach, accounting for technology changes (e.g., electric buses), and connectivity with rail schedules, bike trails, and pedestrian infrastructure.
- Spend down awarded federal funds to upgrade bus garages and purchase electric buses. This will move NJ TRANSIT towards being climate- and electrification-ready.
- Support the construction of the Gateway Project and secure its completion by 2035.

Electrify New Jersey's Transportation System

Reducing greenhouse gas emissions is a critical issue facing our planet. In New Jersey, the transportation sector represents the single largest emitter of greenhouse gases, accounting for 38 percent of the state's total GHG emissions in 2020.

With the enactment of a significant market-leading electric vehicle (EV) law on January 17, 2020, New Jersey has begun carving out a leadership path toward the electrification of the transportation system, bolstered by the following:

- focus on electric vehicles in the Energy Master Plan
- the Regional Greenhouse Gas Initiative Strategic Funding Plan
- the Volkswagen (VW) settlement investment awards
- New Jersey's status as a signatory to the Northeast States for Coordinated Air Management Memorandum of Understanding, a multistate effort to develop state action plans to deploy zero-emission medium- and heavy-duty vehicles
- the adoption of Advanced Clean Truck rules, which are intended to accelerate a large-scale transition to zero-emission medium- and heavy-duty vehicles
- the adoption of Advanced Clean Car II rules, which require vehicle manufacturers to comply with an annual Zero-Emission Vehicle requirement that culminates in a 100-percent requirement for zero-emission vehicles in 2035
- the state's award of nearly $540 million since 2019 for electric vehicles, charging stations, e-mobility projects, electric trucks and cargo vans, electric school buses, and electric airport and port vehicles and equipment

In particular, the Integrated Energy Plan that underpins the 2019 Energy Master Plan made it clear that electrifying transportation was a necessary but not sufficient least-cost–pathway initiative to reach emission goals.

Part of the rationale for New Jersey's focus on electrifying the transportation system is because this one action captures several important high-level priorities:

- Improving the health and well-being of frontline communities.
- Reducing toxic health and environmental emissions, including co-pollutants, such as particulate matter, sulfur dioxide, and ozone.
- Reorienting New Jersey's economy as a green innovation engine that provides opportunities for all to participate.

If done thoughtfully, and with public input, this initiative has the potential to lead to a significant economic boom for New Jersey. Moreover, with the potential for significant investment coming from the federal government, it will be crucial to fully mine all the opportunities available.

The landscape is shifting quickly, as evidenced by the fact that New Jersey's market-leading EV law is already out of date. While the law set goals for light-duty vehicles at 330,000 registered plug-in electric vehicles by 2025, California recently called for 100 percent of car sales to be for zero-emission vehicles by 2035. New Jersey' law calls for 85 percent of car sales/leases to be for zero-emission vehicles by 2040. EVs now comprise 12 percent of new vehicle sales in New Jersey.

PRIMARY CONCERNS

- There is the potential for loss of federal funding for electrification efforts, including funding to deploy medium- and heavy-duty EV-charging infrastructure along the I-95 corridor.
- The timetable for electrification needs to be accelerated and state agencies need to achieve system changes to reach these goals.
- Without stakeholder involvement, the state risks failing to generate creative solutions and resolving community-level issues.

POLICY RECOMMENDATIONS

- Recognize that vehicle electrification will have impacts on the electric grid infrastructure, and revisit NJBPU's authority to ensure a modern grid that can support electrification of the transportation system. NJBPU should be empowered by statute and/or executive order to balance several priorities: reliability, affordability, and energy products and services with the lowest-possible emissions.
- Defend the New Jersey Department of Environmental Protection's adopted Advanced Clean Truck rule, which increases EV truck sales for manufacturers.
- Focus on feasible medium and heavy sectors, in addition to including micromobility solutions and shuttles between transit hubs that can improve access.
- Incentivize local, high-paying jobs in electrification industries (e.g., advanced manufacturing) that target residents of low-income communities.
- Improve interconnection processes that help streamline charging stations and Distributed Energy Resources (DERs); establish rules for communication standards to ensure interoperability and open access for fleets.
- Launch initiatives to incorporate energy storage, other DERs, and managed charging solutions with charging stations to maintain stable electrical rates and maximize benefits to all ratepayers.
- Encourage the development of innovative business models that offer "charging as a service" to public and private fleets. Similar to solar power purchase agreements, these arrangements can result in savings to end users, eliminating upfront investment by entering into a long-term contract for fueling. These contracts could also be considered for vehicles, including their operation and maintenance.

Reimagine Roadways: Future Uses and Mechanics

New Jersey has earned its designation as a corridor state. Its geography connects the mid-Atlantic to the Northeast, and westward to interior states. Its crisscrossing roadways, tunnels, and bridges move vehicles around the state and beyond. Maintenance of these massive pieces of infrastructure is of the utmost importance. However, the state consistently lacks the needed resources and dedicated funding to keep roads safe and operational. The American Society of Civil Engineers indicates that driving on roads in need of repair costs each driver $713 per year, and that 7.8 percent of bridges are rated as structurally deficient. Instead of focusing on a "fix-it-first" policy, where the New Jersey Department of Transportation focuses on important maintenance, New Jersey continues to pursue costly road-widening projects.

Decades of research show the incredible environmental cost of single-occupancy vehicle transportation. Along with the proven concept of induced demand—when highways expand and increase the number of lanes, more traffic fills those lanes instead of alleviating congestion—further growth is encouraged in undeveloped areas rather than in existing centers and corridors.

New Jersey has found itself in an endless cycle of increasing vehicle use and roadway expansion across formerly undisturbed areas.

Additionally, expanded roadways reduce available land and opportunities for recreation, stormwater management, carbon sinks, and cleaner air. Highways in New Jersey and throughout the country have accelerated the inequities for communities of color by cutting off neighborhoods and concentrating mobile air emissions from vehicles. Moving forward, highway planning must ameliorate these inequities rather than exacerbate them. There are significant ways to change how New Jerseyans, and those passing through, use these roadways, and there are avenues that the state can take to best improve the way roads are maintained. These changes would serve to improve the health of surrounding communities, reduce crashes, provide economic benefits to vehicle owners through reduced maintenance costs, and diversify the way New Jerseyans are able to move around the state.

Roundabouts

The first modern roundabout in New Jersey was built in 2014 in Chesterfield Township, Burlington County. The roundabout won the National Roadway Safety Award, as it reduced serious crashes by 100 percent. In addition to improved traffic safety, roundabouts also reduce tailpipe emissions through decreased idling.

Changing how New Jersey molds its transportation infrastructure requires proactive planning to ensure the availability of accessible, equitable, and efficient public transportation, as well as improved ways of moving freight and other heavy-duty vehicles. Single-occupancy vehicles are unlikely to phase out in the near future, so prioritizing electric vehicles on roadways, as well as ensuring the improved availability of electric vehicle supply equipment throughout New Jersey, are strategies to reduce emissions near large roadways and overall in the state. Additionally, increased use of modern roundabouts can reduce idling time and congestion that occurs at traffic lights. This emissions-reduction goal both enhances New Jersey's positive contribution to addressing the effects of climate change and, importantly, reduces health-harming emissions for residents living in proximity to large highways.

PRIMARY CONCERNS

- New Jersey does not currently follow a strong "fix-it-first" roadway maintenance mandate.
- There is a need for increased transparency in the way NJDOT manages planning, including a lack of community input on level-of-service analysis.
- Future expansion of warehouses and other suburban/rural development will change and increase traffic congestion throughout the state, leading to the perception that more roadways are a solution. This will likely create new overburdened communities while exacerbating existing air-quality hazards.
- Labor components in future planning needs are not sufficiently reviewed to ensure union labor expertise is utilized for new development.
- NJDOT's level-of-service analysis does not provide alternative ways to address capacity that do not default to widening a roadway.

POLICY RECOMMENDATIONS

- Follow the "fix-it-first" mandate to keep existing infrastructure safe and to reduce overall maintenance costs as structures continue to age.
- Enact policies to mitigate the environmental harm from roads and bridges, such as using low-carbon concrete, using green infrastructure practices to manage stormwater runoff, using art to enhance traffic barriers or walls, and accounting for wildlife crossings.
- Implement alternative roadway uses to eliminate the perceived need for additional lanes, including identifying suitable locations for shuttle and HOV lanes, electric vehicle access and amenities, and bicycle/pedestrian paths along highways and bridges.
- Redefine the metrics that calculate the need for road widening versus implementing other traffic mitigation techniques first.
- Require transportation projects that are expected to increase emissions to implement components and mechanisms to offset the emissions increases.

Implement Complete and Green Streets Programs

Over the past several years, the popularity, design, political support, and implementation of Complete Streets has grown substantially. When the conversation began, the Complete Streets program was a tool to improve personal safety: it eliminated road fatalities of motorists, pedestrians, and cyclists; reduced crash severity and injury; and minimized crime risk. The program is a key tool to improving the quality of life for communities in New Jersey, which is classified as a "Federal Highway Administration Pedestrian and Bicycle Safety Focus State" due to its high rate of pedestrian fatalities.

In 2019 the New Jersey Department of Transportation published the *Complete and Green Streets For All: Model Complete Streets Policy and Guide*, a one-stop resource for New Jersey municipalities, counties, transportation agencies, and advocates. This resource is helpful in implementing Complete Streets in communities interested in an expanded vision in policies concerning economic vitality, health, equity, and environment.

Complete Streets is the path to the following:

- economic vitality, with increased foot traffic for downtown businesses, marketing and branding tools, transportation tourism, and active transportation events, such as summer streets/ open-streets events
- better health, by providing opportunities for increased physical activity and social connectivity, all with the goal of lowering the risk of obesity, reducing chronic disease, and promoting wellness
- opportunity and equity, when used as a tool to assure that policies are implemented, funding is distributed, and other resources are used equitably and responsibly in all neighborhoods, especially when it comes to improving non-auto-focused transportation systems and access to transportation
- achieving environmental benefits, such as improved air quality, water quality, and stormwater management, and reduced greenhouse gas emissions through green stormwater infrastructure called "green streets"

Despite the success of the Complete Streets program, many of New Jersey's roads are still dangerous due to outdated design standards. Pedestrian and bicyclist deaths are frequent: in 2024 there were 223 pedestrian deaths, the highest number since 1988, and cyclists had the third-highest number of deaths since 1990. Pedestrian deaths in 2024 made up 32 percent of all traffic fatalities, the highest rate in the 52 years since the New Jersey State Police started collecting the data.

While New Jersey has led the nation with the adoption of this Complete Streets policy, the program has yet to realize its full potential. Municipalities and counties have passed policies, but have not implemented them. Many state and local roads lack maintained sidewalks and well-lighted, marked crosswalks. Bicycle facilities, including protected bike lanes and bicycle parking, are almost nonexistent.

The next step—setting a clear target of zero deaths on New Jersey's roads (or "Target Zero")—may jumpstart universal adoption and enforcement.

The ultimate goal of Complete and Green Streets, and Target Zero (or Vision Zero), is to prevent traffic deaths in New Jersey. Through thoughtful street design and an emphasis on bicycle and pedestrian infrastructure, New Jersey can also create meaningful downstream effects to reduce emissions by making it safer to move around the state without a car.

PRIMARY CONCERNS

- Complete and Green streets policies are not being meaningfully implemented in New Jersey.
- Current street design policies do not go far enough to stop traffic deaths.
- Policies that center cars before people are prohibitive to biking and walking, making the reduction of emissions by taking cars off the road difficult.

POLICY RECOMMENDATIONS

- Update and follow NJDOT's 2009 Complete Streets Policy to include all the benefits derived from strategic road design using the 2019 Complete and Green Streets Model Policy, with a targeted focus on priority communities and users, as defined by model policy.
- Fully implement the new law that creates a statewide Target Zero Commission, which has the goal of eliminating traffic deaths and serious injuries in New Jersey by 2040 to make roads safer for pedestrians. Make sure project problem statements include Complete and Green Streets.
- Vet all NJDOT projects (with the Complete Streets checklist) through a process that ensures Complete Streets principles are agencywide rather than limited to one department.
  - ✓ Include the recommendation for the public posting of accepted and exempted projects.
  - ✓ Remove the 20 percent financial exemption.
- Host regular and required trainings for all pertinent project management and engineering staff on Complete and Green Streets principles and how they are to be implemented in all projects.
- Work with the New Jersey Department of Environmental Protection to ensure that stormwater and other environmental regulations are problem-solved proactively and effectively so that they do not pose a barrier. Include regulations for sidewalks, bicycle lanes, and multiuse paths and trails in NJDOT projects, such as constructing trails through wetlands or putting in sidewalks that now require stormwater management.
- Incentivize and encourage municipalities/counties to adopt and implement the revised Complete and Green Streets Model Policy, and incentivize and encourage those who have existing policies to make appropriate updates/amendments.

Reduce Transportation Pollution

The health impacts of transportation powered by fossil fuels affect all of us, but especially vulnerable are children, the elderly, the chronically ill, and low-income households, and communities of color near heavily trafficked freight corridors. As stated earlier, the transportation sector represents the single largest emitter of greenhouse gases in New Jersey, accounting for 38 percent of the state's total GHG emissions in 2020. In addition to releasing GHGs, vehicle emissions release copollutants (e.g., particulate matter) that can impair lung function, cause tissue damage, and contribute to respiratory and cardiovascular disease.

PRIMARY CONCERNS

- State-level discussions of GHG reduction have been dominated by vehicle electrification, but this solution alone will not allow us to reach our GHG-reduction targets, nor does it address traffic congestion or generate the same ancillary benefits as the reduction of total vehicle miles traveled (VMT).
- The *Global Warming Response Act 80x50 Report* focuses primarily on vehicle electrification and does not adequately address strategies and solutions to reduce VMT.
- The Department of Transportation, whose investment decisions are primary drivers of travel behavior, is not among the state agencies taking the lead on coordinating the state's climate-change response strategies.

Decarbonizing Travel Versus Reducing Travel

Total emissions from the movement of people and things can be thought of as the product of total VMT and the amount of GHGs emitted for each mile of movement (emissions per mile). A decrease in total emissions can thus be obtained by reducing either or both of these factors. New Jersey's *Global Warming Response Act 80x50 Report*, which currently represents the state's definitive statement as to how it intends to confront the challenge of reducing GHG emissions, focuses overwhelmingly on decarbonizing travel by reducing emissions per mile traveled via the electrification of the vehicle fleet. Solutions geared toward reducing the need to travel in the first place—such as those involving the planning, development, and preservation of land, as well as the investment in transportation infrastructure—are given much less attention.

Simply put, decarbonizing travel alone (i.e., vehicle electrification) will not get New Jersey to its GHG-reduction goals if VMT continues to rise. It is imperative that reducing vehicle miles traveled be treated with the same weight and urgency as decarbonizing vehicle miles traveled.

Supply-Side Solutions Versus Demand-Side Strategies

Supply-side solutions, such as electrifying the transportation system, have the benefit of being simple to frame. The challenge with demand-side strategies like VMT reduction is that they lack this simplicity and require broader vision, planning, and coordination. However, the advantage of this approach is that GHG reductions can be accelerated in a fair and more equitable manner while improving communities, local economies, and individual health outcomes; and in many cases, it can do this in a way that stretches a dollar of investment.

Cobenefits of VMT Reduction

Unlike merely decarbonizing the transportation sector, reducing VMT creates a host of other societal benefits. The most obvious is a reduction in traffic congestion. Lower VMT leads to fewer vehicles on the road (and lower road construction and maintenance costs), while an electric vehicle takes up just as much space as a gasoline- or diesel-powered vehicle. Fewer vehicular trips would also lead to a reduced need to store vehicles, freeing up some surface parking lots to be redeveloped for productive uses. Reducing VMT is a quality-of-life issue. Less driving means less time behind the wheel and more time for discretionary activities.

Reducing VMT can also aid in making future land development patterns more pedestrian- and transit-friendly, and it generally encourages a less sedentary lifestyle for individuals. Additionally, VMT reduction strategies can advance social equity. By increasing the viability of walking and public transit as options for getting around, the kinds of land-use changes that lead to lower VMT will also make life easier for households that cannot afford to buy and maintain a vehicle. Electrifying the vehicle fleet would accomplish none of this.

POLICY RECOMMENDATIONS

- Set a state goal of reducing Vehicle Miles Travelled by 10 percent by 2025 and by 20 percent by 2050. Issue a governor's executive order articulating specific strategies for reducing VMT with clear and measurable objectives, and with estimated GHG-reduction outcomes. Assign ownership of these objectives to specific state departments to develop actions and timelines.
- Incentivize fewer vehicles on the road and secure funding mechanisms for public transit.
- Direct the Motor Vehicle Commission to begin collecting odometer readings as part of the vehicle inspection process. This would enable the measurement of VMT at the level of individual vehicles rather than by measuring vehicle counts at the road-segment level.
- Direct key state agencies—in particular, the Department of Environmental Protection, the Economic Development Authority, and the Board of Public Utilities—to include VMT-reduction measures in their strategies for addressing climate change. Develop a statewide strategy for reducing VMT.
- Engage with the Department of Transportation as a partner in developing strategies to reduce vehicular travel rather than enabling more of it. Change the culture at the New Jersey Department of Transportation to focus on moving people rather than vehicles, and on ending highway expansions.
- Consider replacing level of service (a measure of vehicular traffic flow estimated using the Highway Capacity Manual's delay-based methodology) with VMT as the metric by which the transportation impacts of new development are to be evaluated, as has been successfully implemented in other states.
- Prioritize clean transportation investments in projects that benefit communities most harmed by pollution, with at least 50 percent of proceeds targeted toward New Jersey's more than 300 overburdened communities.
- Explore a low-carbon transportation standard, centered on environmental justice, to consider the use of lower-emitting fuel types for hard to electrify sectors, including aviation.
- Improve overall connectivity through installing broadband internet access in all corners of the state.

CLEAN WATER

Water is the lifeblood of our society—we rely on it for drinking, recreation, and to meet our most essential needs—and clean water is a basic human right.

We all must continue to work to protect the waters that our families, communities, and economy depend on.

The water we all rely on faces threats from every corner. Pollution from manufacturing, old industrial sites, and stormwater runoff can contaminate waterways that we rely on for recreational use and drinking water sources. Aging infrastructure and lead pipes can contaminate drinking water coming into our homes, schools, and businesses.

Ensure Safe, Plentiful, and Affordable Drinking Water

New Jersey's drinking water comes from a variety of sources, including surface-water bodies and aquifers. The state's 9.3 million residents, $800 billion economy, and diverse ecosystems depend on a clean, secure, and resilient water supply.

While the sources of drinking water may be different, the threats to the quantity and quality of the water are the same, and are negatively affected by land-use decisions and the resulting polluted runoff. The New Jersey Department of Environmental Protection completed an updated New Jersey State Water Supply Plan in 2024. In addition to reflecting the most current and best-available science, the 2024 plan also provided the first assessment of water supply challenges resulting from climate change. Unfortunately, the state issued a statewide Drought Watch in the fall of 2024 due to significantly below-average rainfall, resulting in diminished streamflow, reservoir, and groundwater levels. This ongoing drought has underscored the need for effective drought management.

Prior to widespread development, water would purify through natural filtration by traveling through soil particles and organic matter, then slowly flowing into waterways over hours and days after a rain event. Now that New Jersey's land area is covered with impervious surfaces, water rushes straight toward streams and rivers without being purified. Impervious surfaces change how rain recharges aquifers, reducing that recharge and/or carrying with it various levels of pollutants picked up from streets, parking lots, and lawns that can contaminate drinking water supplies. Not only does this cause flooding and increased pollution, but it also erodes the streambanks and riparian areas along waterways. Additionally, this rush of water will continue to be exacerbated from the effects of climate change. New Jersey now receives more of its rainfall in heavy downpours versus longer, more gentle rains. The state also receives more rain annually.

PRIMARY CONCERNS

- Rapidly changing climate, rising sea levels, warmer temperatures, and unprecedented precipitation variability pose water management risks.
- New Jersey has an antiquated water supply and treatment infrastructure. The maintenance, repair, and replacement of this infrastructure is not adequately funded.
- Harmful algal blooms can endanger water supplies.
- The growth of consumptive water use and shifts in residential populations, energy production, and industrial base make projects founded on historic trends more difficult.
- In many cases, rates will need to increase to provide revenue for the improvement and maintenance of water infrastructure. Affordability for consumers will be an ongoing concern in many areas of the state.
- Improvements are needed to the Private Well Test Act to encourage more frequent testing and treatment of contamination.
- Current NJDEP regulations only require that agricultural withdrawals under agricultural water-usage certifications be documented and reported.

POLICY RECOMMENDATIONS

- Protect water sources by addressing discharges to groundwater and surface water, and by providing for stronger protections for riparian zones. This should include stepping up the acquisition of riparian zone lands, which act as filters of pollution and provide protection for drinking water sources.
- Implement the updated 2024 Statewide Water Supply Plan's recommendations and action items to ensure sustainable water supplies, and require regular public updates via the New Jersey Water Supply Advisory Council meetings. Additionally:
  - ✓ Link the planning and analysis in the plan to permit considerations.
  - ✓ Ensure water permits are linked to drought-management plans, requiring permit holders to adhere to adjusted usage limits during drought periods, and prioritize essential uses (e.g., drinking water, agriculture, critical infrastructure) during drought conditions.
  - ✓ Promote efficient water use and encourage water conservation.
- Adopt a "One Water" approach whereby all water is managed in an integrated, inclusive, and sustainable manner to improve the overall, long-term benefits of all types of water resources. For example, better integrate impacts to water quality in land-use permits (e.g., building in wetland transition or riparian areas, filling wetlands).
- Create and fund a statewide low-income customer assistance program. Authorize all water utilities to create their own customer assistance programs.
  - ✓ Permit water utilities to reduce water, sewer, and stormwater fees and other charges for low-income persons (see Senate Bill No. 286 of the 2024-2025 legislative session).
  - ✓ Establish the New Jersey Low Income Household Water Assistance Program to provide both water service and water-bill payment assistance to certain low-income households (see Senate Bill No. 3888 of the 2024-2025 legislative session).
- Update the Private Well Testing Act
  - ✓ Require landlords to treat drinking water from contaminated wells, as opposed to merely reporting on the test results.
  - ✓ Provide low-cost testing to private residences to encourage the testing of wells absent a change in ownership.
  - ✓ Utilize the sale of homes and test results for outreach and targeted testing of adjacent properties.
- Provide clear legislative authority to state agencies to require more effective and cost-effective utility management, including requiring NJDEP to enforce the provisions of the Water Quality Accountability Act. Similarly, provide clear legislative authority to the New Jersey Department of Community Affairs to review water-utility budgets to ensure that they are adequate for implementing asset management plans.
- Continue the analysis of agricultural and landscaping water use. Gather more data on actual use and whether irrigation water is returned to the resources, or if there are consumptive losses. Implement strategies to reduce excessive outdoor residential and commercial water use, and promote lowest-quality water for the intended use.
- Address harmful algal blooms by doing the following:
  - ✓ Establish a Clean Lakes program that has dedicated funding to support lake restoration projects that address nutrient load, water-quality monitoring, and pollution studies. Require nature-based restoration projects, including restoring wetlands and riparian buffers and adding green infrastructure.
  - ✓ Enhance technical assistance and coordination between state agencies, municipalities, research institutions, and nonprofits to address harmful algal blooms, prioritizing both lakes with high ecological value to prevent degradation, and those used for recreational purposes, especially in overburdened communities.
  - ✓ Reduce nutrient runoff into lakes through stronger stormwater management policies and stormwater utilities, the enforcement of regulations on fertilizer use, the replacement of failing septic systems, and the promotion of land-use and lawn-care strategies that minimize impacts to lakes.

Address Unregulated Contaminants in Drinking Water

Over the past several decades, human health protection from chemical contaminants in drinking water has been accomplished by the development of chemical-specific standards or a "one-at-a-time" approach. This approach alone will not address multiple contaminants in drinking water, as there is little or no information on the health effects, occurrence, or best-available treatments to remove classes of chemicals.

Establishing health-based Maximum Contaminant Levels for unregulated compounds detected throughout the country's waters is challenging for several reasons: the large numbers of compounds, the fact that many compounds are breakdown products manufactured unintentionally (and thus are not readily available as test materials), and the time and expense associated with developing the animal-based toxicological data that the studies require. States may regulate chemicals at more protective levels than the federal government or can set standards for chemicals that the federal government does not regulate. This makes sense because some contaminants are found in certain areas of the country and not in others. New Jersey has been a leader in setting drinking water standards for emerging chemicals of concern to the state. For example, in the 1990s, New Jersey identified a contaminant in the Toms River drinking water supply. It took over eight years and $5 million to review the appropriate science needed to establish a chemical-specific drinking water standard for styrene-acrylonitrile trimer in New Jersey.

The process of obtaining and evaluating the information needed to develop a health-based regulatory standard for a given contaminant is costly and time consuming—it took over a decade to consider adopting drinking water standards for per- and polyfluoroalkyl substances (PFAS), a class of chemicals that has been detected throughout the country in recent years. When first detected, there were only two PFAS of concern. Today, there are over 4,700 individual chemicals in the class, according to the National Institutes of Health, yet the development of health-based standards for individual chemicals takes years. Additionally, the regulatory criteria to justify the development of new chemical-specific standards are very stringent. Although this chemical-specific approach will continue to be useful for addressing some emerging contaminants, it does not represent a sustainable approach for addressing low-level contamination with multiple chemicals that are now known to occur in many rivers, groundwater sources, and finished drinking water in the United States. Today, it is PFAS. What will it be in a year or a decade?

Perhaps a focus on preventing the contamination of water sources and reducing human and ecological exposures would better protect human health compared to focusing on determining exact toxicities of chemicals in whole-animal studies and removing just those chemicals from drinking water. Considering that the treatment necessary to remove some of these chemicals can be expensive or simply not feasible, an approach that prevents the chemicals' introduction into water sources would be more effective.

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of manmade chemicals that includes PFOA, PFOS, GenX, and many other chemicals.

PFAS have been manufactured and used in a variety of industries around the globe, including in the United States since the 1940s. PFOA and PFOS have been the most extensively produced and studied of these chemicals.

Both classes of chemicals are very persistent in the environment and in the human body—that is, they do not break down and can accumulate over time. Additionally, there is evidence that exposure to PFAS can lead to adverse human health effects.

The federal Toxic Substances Control Act regulates the introduction of new and existing chemicals. A major limitation of the Toxic Substances Control Act is that it does not adequately address chemicals already being used extensively by industry. Additionally, it does not address chemicals in food, drugs, cosmetics, and pesticides. In fact, the environmental impact of persistent chemicals such as PFAS is not included at all in Toxic Substances Control Act's regulations, and the emerging contaminant policy is fragmented at best. The implementation of all aspects of the Toxic Substances Control Act for existing chemicals has been incomplete and difficult. To control chemicals at the manufacturing stage in the United States, more incentives for manufacturers to consider safer alternatives, and more toxicity information on existing and new chemicals, are needed.

PRIMARY CONCERN

- Per- and polyfluoroalkyl substances are prevalent in New Jersey's environment and are impacting water resources.

POLICY RECOMMENDATIONS

- Regulate PFOAs as a class (as opposed to regulating individual chemicals in drinking water standards) and establish a clearer connection between groundwater and surface water regulations.
- Update the Maximum Contaminant Levels to standards set by the US Environmental Protection Agency in 2024.
- Investigate the use of chemical-mixture screening by the federal and/or state governments to assess toxicity.
- Explore the use of water treatment–based standards to complement individual chemical-by-chemical standards. Fund large pilot projects to evaluate the effectiveness of large-scale contaminant removal by carbon (or other) treatment.
- Regulate new chemicals at the manufacturing stage. Revise the federal Toxic Substances Control Act to require manufacturers to develop toxicity information on chemicals' effects before use.
- Track PFAS reporting statewide to better understand trends, and make this data publicly available.

Improve Drinking Water and Wastewater Infrastructure and Management

Every day each of us depends on clean drinking water, wastewater treatment, and stormwater management. These "invisible" essential services are foundational to the environment, public health, and economic prosperity. But, despite the many well-run water infrastructure systems in New Jersey and across the country, some are inadequate and all face multiple challenges, such as unresolved legacy issues concerning lead and combined sewers, new regulatory requirements for emerging contaminants, growing threats from climate change, algae-infested lakes and ponds, and age-related degradation. Low-income residents and residents of color are more likely to face the impacts of inadequate water infrastructure. Many low-income customers already find water and sewer bills unaffordable, which can impede rate increases and capital investment.

Combined sewer systems are shared underground pipe networks that carry both sewage from homes and businesses and stormwater from streets and land to a central treatment system before being discharged into a waterway. During heavy precipitation, those pipes have to handle the extra water as well. When pipes get too full, the sewage-contaminated, untreated water and debris overflow into waterways. Combined sewer systems are remnants of the country's early infrastructure and are still found in 21 municipalities in New Jersey. Communities with combined sewer overflow outfalls are disproportionately low-income and communities of color. These communities with combined sewer overflows have submitted draft plans to NJDEP specifying the types of upgrades that will be built to eliminate combined sewer overflows, including gray infrastructure, underground tunnels, sewage plant expansions, and green infrastructure. Together, the combined plans would cost $2.6 billion and take 20 to 40 years to complete.

PRIMARY CONCERNS

- New Jersey is home to more than 200 wastewater treatment plants, nearly 600 drinking water systems, and thousands of miles of water and sewer pipe leading to a fragmentation. Many drinking water systems are tiny: the 314 smallest systems serve fewer than 3,000 customers.
- New Jersey has over 19,000 miles of rivers and streams; nearly 48,000 acres of lakes, ponds, and reservoirs; approximately 948,000 acres of freshwater and tidal wetlands; and 127 miles of ocean coast. All of these are at risk from pollution from aging and inadequate water infrastructure that can make the water unsafe for fishing, swimming, boating, drinking, and other uses protected by state and federal law.
- It is estimated that 130 million gallons of treated, potable water are wasted across the state each day due to cracked water mains, leaks, and water loss. Jersey Water Works estimates that infrastructure repairs alone could save 50 million of those gallons per day—an amount equal to the daily water usage of about 700,000 New Jersey residents, or a population 2.5 times the size of Newark—and pay for themselves through increased revenues and decreased costs.
- The EPA estimates that the state's drinking water, wastewater, and stormwater systems need $30 billion of investment over the next 20 years. While the Bipartisan Infrastructure Law provided a surge of federal funding for water infrastructure improvements, that funding is now gone, leaving future funding up in the air.

According to the Jersey Water Works collaborative, there are three priority solutions for water infrastructure: ADEQUATE FUNDING, ROBUST ASSET MANAGEMENT and STAKEHOLDER ENGAGEMENT

Source: Jersey Water Works

POLICY RECOMMENDATIONS

- Provide new state and federal funding for water infrastructure, especially in environmental justice communities, and fully fund the State Revolving Fund's Water Infrastructure budget (implemented through the Infrastructure Bank).
- Ensure the upkeep of effective water systems by authorizing NJDEP to enforce the Water Quality Accountability Act, and improve public reporting. Enact a similar law for wastewater systems.
- Continue to push forward the implementation of NJDEP's Combined Sewer Overflow permits and Long-Term Control Plans. Require NJDEP to do the following:
  - ✓ Ensure equitable financing of these plans, whereby costs are shared between sewage treatment utilities and municipalities to reduce impacts on ratepayers
  - ✓ Require combined sewer overflow permit holders to set bold, clear, and immediate targets for earlier implementation of green infrastructure projects
  - ✓ Use the most recent climate change data and projections in the selection, implementation, and evaluation of combined sewer overflow plans
  - ✓ Adopt new NJDEP combined sewer overflow permits that require the permit holders to continue public outreach on the projects that have been selected in the LTCP
- Mandate an appropriate balance of green and gray infrastructure in water-quality regulatory or permitting mechanisms, including the remaining combined sewer overflow permits from NJDEP.
- Replenish the water workforce and create pathways to job and career opportunities for local residents through training and apprenticeship programs, and through competitive wages.
- Empower residents to participate actively and influence decision-making regarding water, sewer, and stormwater systems. Ensure that members of utility boards and commissions are well trained and representative of the communities they serve.
- Provide incentives for small water systems to consolidate and/or share services.
- Charge a water advisory council both with calculating the capital funding gap for water infrastructure and recommending ways to fill it, including the proposal of state budget line items.
- Make data on the state's enormous water infrastructure sector accessible to build public support for upgrades. As of this year, residents can learn about their drinking water and wastewater systems, as well as statewide performance figures and trends, on Jersey WaterCheck.
- Support the establishment of the New Jersey Water Infrastructure Center at an institution of higher learning to support research, technology development, and innovation in the water sector. (See Senate Bill No. 998 of the 2024–2025 legislative session.)
- Continue to support municipalities and counties examining the feasibility of creating stormwater utilities, including regional utilities, through permanent technical assistance and funding provided by NJDEP.

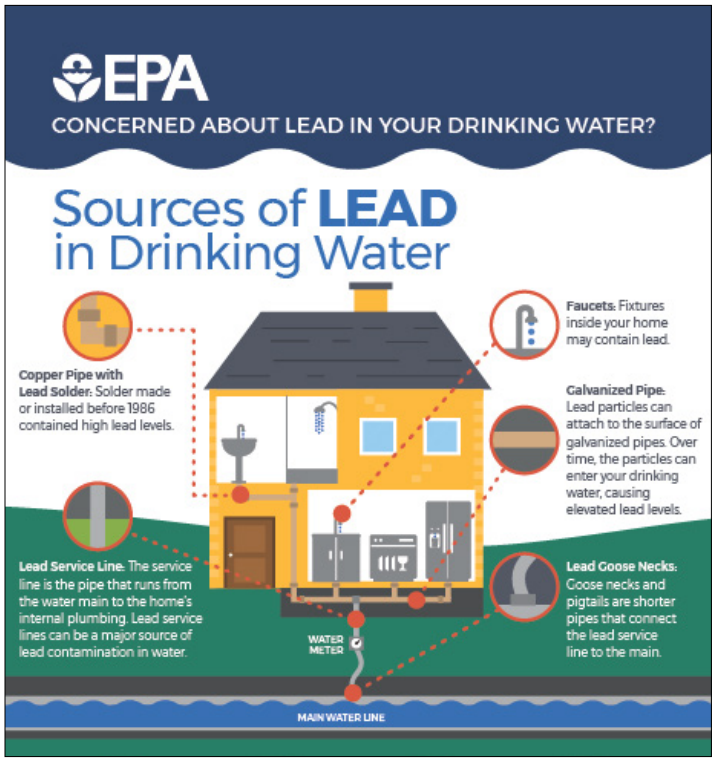
What is Grey Infrastructure and Green Infrastructure?

Grey infrastructure refers to structures such as pipes, treatment plants, storage basins, or other constructed structures. Green infrastructure refers to natural systems used to manage stormwater, such as wetlands, rain gardens, or other vegetation or permeable surfaces.

Eliminate the Risk of Lead in Drinking Water

Lead in pipes and plumbing continues to leach into drinking water, even though drinking water from treatment plants is virtually lead-free. There is no safe level of lead exposure. Lead threatens human health, causing permanent brain damage in children who will face lifelong learning and behavioral issues. Lower-income children and children of color are at greatest risk of lead exposure. Although paint is the leading source of lead exposure, water is also a prominent source, especially for infants fed with formula made with tap water that contains lead.

The best estimates suggest that across New Jersey there are 350,000 lead service lines (LSLs), the hose-sized pipes that connect water mains to homes. In addition, many homes, apartments, schools, and childcare centers have internal plumbing containing lead. In 2021, New Jersey enacted a state law that established that local water utilities must develop an inventory of service lines and prepare a plan to replace all lead service lines by 2031.



Source: United States Environmental Protection Agency

NJDEP estimates that the cost for LSL replacement is between $2.1 billion and $3.2 billion statewide. Most New Jersey water customers are served by utilities that can afford to replace LSLs over a 10-year period with modest rate increases. They must be authorized to use rate revenues for this purpose.

In order to minimize lead leaching, state regulations and training must be strengthened to ensure more effective corrosion control at water treatment plants. Proper use of in-home filters and flushing offers additional layers of protection that community education efforts can promote, along with the gradual replacement of plumbing fixtures.

Awareness and transparency are critical. Short-term measures—such as online maps showing the number and location of LSLs, statewide LSL inventories, improved data accessibility, and the disclosure of LSLs to homebuyers and renters—are needed to get the state to a lead-free water future in the long term. (See Lead-Free NJ for additional information.)

PRIMARY CONCERNS

- According to the New Jersey Department of Health, from July 1, 2021, to June 30, 2022, some 2,848 New Jersey children were found to have elevated blood lead levels.
- Lead poisoning in New Jersey disproportionately impacts children living in predominantly Black, Brown, and low-income communities. The New Jersey county with the highest percentage of children younger than six with an elevated blood lead level is Cumberland County, which is also the county with the highest percentage of persons in poverty.
- New Jersey has an estimated 350,000 LSLs, which are responsible for 50 to 75 percent of lead in the state's water.
- Internal plumbing in older buildings, homes, schools, and childcare facilities also contains lead, which can be managed by water utilities that use corrosion-control measures and residents who flush and filter water.

POLICY RECOMMENDATIONS

- Dedicate state funding to replace lead service lines.
- Support legislation and programs that require the replacement of lead service lines at no cost to customers statewide.
- Enact legislation that requires the disclosure to renters of the hazards associated with lead in drinking water. See Assembly Bill No. 2929 / Senate Bill No. 1034 of the 2024–2025 legislative session, which would both require the disclosure of the hazards associated with lead drinking water to tenants of residential units, and prohibit landlords from obstructing the replacement of lead service lines.
- Adopt a new NJDEP Lead and Copper Rule that would protect public health through improved water sampling, quick public notification, and interim protections, corrosion control, and public education.
- Ensure safe drinking water in childcare centers and schools by providing support for water filters. See Assembly Bill No. 2938 / Senate Bill No. 1050 of the 2024–2025 legislative session, which requires landlords of certain properties that provide childcare services, but who refuse lead service line replacements, to install and maintain water filters.
- Direct $100 million in already-approved bond proceeds through the New Jersey Department of Education to school districts with the most lead poisoning. Only $6.6 million has been spent in these existing funds to remediate lead in drinking water in schools.

Restore and Enhance New Jersey's Waters

In 1977, New Jersey set out to restore, enhance, and maintain more than 19,000 miles of rivers and streams; almost 50,000 acres of lakes, ponds and reservoirs; plus 950,000 acres of freshwater and tidal wetlands, 650 square miles of estuaries, and 127 miles of coastline. New Jersey relies on these natural resources for tourism, recreation, drinking water, and agriculture, as well as for habitats for fish, wildlife, and plants. While New Jersey has made strides in reaching the goals of restoring and enhancing our waterways, much more work lies ahead.

New Jersey has a multitude of statutes and regulations pertaining to activities in and around waterways. These statutes include the Federal Water Pollution Control Act (Clean Water Act), New Jersey's Water Pollution Control Act, the Flood Hazard Area Control Act, the Freshwater Wetlands Protection Act, the Wetlands Act of 1970, and the Water Quality Planning Act, among others.

The Flood Hazard Area Control Act and the Freshwater Wetlands Protection Act regulate activities in and around our waterways and wetlands. Activities are regulated through general permits, permits by rule, permits by certification, and individual permits. One aspect of these regulations is the creation of buffers (e.g., riparian zones for waterways and transition areas for wetlands) between these environmental features and upland activities. The width of these buffers depends on the classification of the waterway or wetland. Buffers not only protect streams and wetlands from the effects of development, but also provide protection to development from flooding, which will only increase with the increased precipitation and storm intensity from climate change. The state's regulatory scheme allows too many opportunities to invade these buffers without demonstrating that the activity will not negatively impact the regulated feature. Furthermore, New Jersey's rules do not consider the health of the waterway before allowing these impacts. The rules also do not require or encourage the restoration of disturbed or impacted buffers. Thus, more urban areas where historical development occurred right up to the edge of the waterway have not been restored to include natural shorelines.

Another method of protecting waterways is through classification. For waterways, streams are classified as Freshwater 1 (FW1) or Freshwater (FW2). The FW2 waters are further classified as either nontrout, trout maintenance, trout production, or Category One (c1). There are also the Pinelands Waters and Highlands waters classifications. Estuary waters are similarly classified as SE1, SE2, SE3, and SC. The classification of

these waters then results in different water-quality standards and designated uses. For freshwater streams, the classification results in different buffer widths. Freshwater wetlands are also classified as ordinary value classifications, intermediate value classification, or extraordinary value classification wetlands. The various classifications result in different buffer widths and different levels of protection. In many instances, more urban waterways have fewer protections because of their classifications, resulting in less stringent water-quality standards and smaller buffers.

For our impaired waters, the Clean Water Act requires the New Jersey Department of Environmental Protection to develop a Total Maximum Daily Load for a particular portion of the stream, which is in essence a pollution budget. In creating a TMDL, NJDEP determines how much of a pollutant is allowable in a body of water for that waterway to still meet the appropriate water-pollutant criteria. This pollutant amount is then allocated between the different sources of pollution: point sources (or direct dischargers) and nonpoint sources. Examples of point sources include dischargers with permits for water pollution

discharge. Examples of nonpoint sources include stormwater or agriculture runoff. These budgets are then supposed to be implemented by the point source discharges. The nonpoint sources, as they are not directly regulated, are targeted by various grants and other voluntary actions. There are many TMDLs currently in place, but they are not necessarily fully acted upon.

PRIMARY CONCERNS

- As reported in NJ Spotlight News, many of New Jersey's waterways are polluted from land-use practices and the resulting stormwater pollution.
- In spite of the protections afforded to wetlands, we continue to lose wetlands to development. Wetlands not lost are also being degraded.
- The state continues to lose forested areas, which provide numerous benefits. These benefits include absorbing stormwater runoff, providing habitats for wildlife, and providing temperature regulation and nutrients to waterways. Forests are also important for carbon sequestration.
- New Jersey's waterways continue to be impaired and New Jersey's regulatory program is geared to minimizing the damage, not avoiding it. Also, recreational uses are not directly considered when the state makes decisions related to pollution discharge permitting.
- Land-use regulatory decisions are not incorporating water-quality data or TMDLs.
- Gaps remain in the protection of small headwater streams—the sources of all of the state's surface waters—from becoming parking lots and storm drain outlets.

POLICY RECOMMENDATIONS

- Protect headwater streams with more policies through the Freshwater Wetland and Flood Hazard Area Control Act rules to recognize and preserve headwaters with riparian zones. For example, the state could update Category 1 stream designations and improve protections of wetlands classified as "ordinary."
- Integrate water-quality standards for surface water, water impairments, and TMDLs into the land-use permitting process.
- Recognize that discharges to groundwater may result in direct discharges to surface water. The most protective discharge standard must be utilized in determining discharges.
- Revise Flood Hazard Area Control Act and Freshwater Wetland rules to minimize the various permits (e.g., permit by rule, permit by certification, and general permit) where encroachments into the buffers (e.g., riparian zones or transition areas) are allowed. Require stricter analysis and review in environmental justice communities and waters with TMDLs.
- Ensure that recreational waters are not degraded when permitting discharges, and support attainment for all public waterways to be fishable and swimmable, no matter their location.
- Protect the state's five National Wild and Scenic Rivers, and its only National Water trail, by granting them the highest level of protection—that is, as Outstanding National Resource waters—and support additional Wild and Scenic River designations.
- Require municipalities to implement the Waste Load Allocations in approved TMDLs.
- Ensure that regulations related to restoring shorelines or permitting living shorelines treat all of New Jersey's shores equally; this will open up opportunities to restore urban shorelines.
- Eliminate the Residential Site Improvement Standards' control over stormwater management.
- Support the implementation of stormwater utilities at the local level to allow the collection of fees based on the amount of stormwater runoff that a property generates from its impervious cover. The revenue from these fees should then be dedicated to stormwater management.

Protect the Delaware River Watershed

The Delaware River Watershed provides drinking water to more than 13 million people in the region, including several million living in New Jersey. It is unique in providing drinking water to two of the five largest metropolitan centers in the country: New York City and Philadelphia. Two major drinking water sources for New Jersey are also partially located in the watershed: the Highlands (in the north) and the Kirkwood-Cohansey Aquifer in the Pinelands National Reserve (in the south).

The watershed supports more than $25 billion in annual economic activity, including recreation, ecotourism, hunting and fishing, water supply support, and ports. Additionally, the watershed provides an estimated $21 billion in ecosystem services to the region, including water filtration and carbon sequestration, as well as habitats, such as forests and wetlands.

What is a Watershed?

A watershed is an area of land that drains all streams and rainfall into a common outlet, such as a river, bay, or lake.

As the longest undammed river east of the Mississippi, the Delaware River provides habitats for more than 200 resident and migratory fish species, hosts significant recreational fishers, is an important source of oyster and blue crabs, and hosts the largest population of American horseshoe crabs. The watershed is also home to the Delaware Water Gap (one of the country's most visited national parks), more than 400 miles of National Wild and Scenic Rivers, six National Wildlife Refuges, and one of the largest systems in the National Estuary Program. In 2015, the US Geological Survey's Water Census identified the Delaware River Watershed as one of three areas of national focus.

The Delaware River flows into the Delaware Bay, a region comprised of a complex patchwork of tidal rivers, salt marshes, forests, farms, towns, and small cities. The bay's coastline supports commercial crabbing, oystering, and fishing. The southernmost part of the watershed overlaps with 150 miles of the Pinelands National Reserve. In addition to the Delaware Bayshore's being recognized for its importance to migratory waterfowl, songbirds, and shorebirds, the watershed is also home to four National Wild and Scenic Rivers.

The largest New Jersey tributary to the Delaware River is the Musconetcong River, a 42-mile Category-One and national Wild & Scenic River, recognized for its high water quality, exceptional ecological significance, and value as a drinking water source. This status means that it is protected from any measurable changes in water quality and it requires impaired (polluted) water to be restored. See "Resilient Musconetcong 2050: The Comprehensive Vision Plan for the Musconetcong Watershed."

Protection of the diverse cultural and environmental characteristics of the Delaware Bay region is possible through sustainable planning and land preservation initiatives that work to protect water quality and habitats, a necessary task in this economically disadvantaged region.

PRIMARY CONCERNS

- Water quality and quantity issues have resulted from increased development in the Delaware River watershed. In some cases, permitted water-use allocation exceeds sustainable levels.
- Pollution runoff from stormwater and agricultural sources has increased within the watershed.
- Residential demand for water is higher, including for nonconsumptive irrigation use, which leads to greater withdrawals and a growing threat of droughts that will affect New Jersey's water resources.
- Flooding issues are becoming more prevalent and economically costly with increased development in and around the floodplain.
- Other states and the federal government have not met their full funding obligations for the Delaware River Basin Commission, despite New Jersey fully funding its share. This makes New Jersey's funding critical to the success of the multistate agency.
- Habitat degradation and loss of are negatively impacting wildlife, including vulnerable shorebirds, horseshoe crabs, and fish species.
- The development of open space has impacted local outdoor recreational economies.

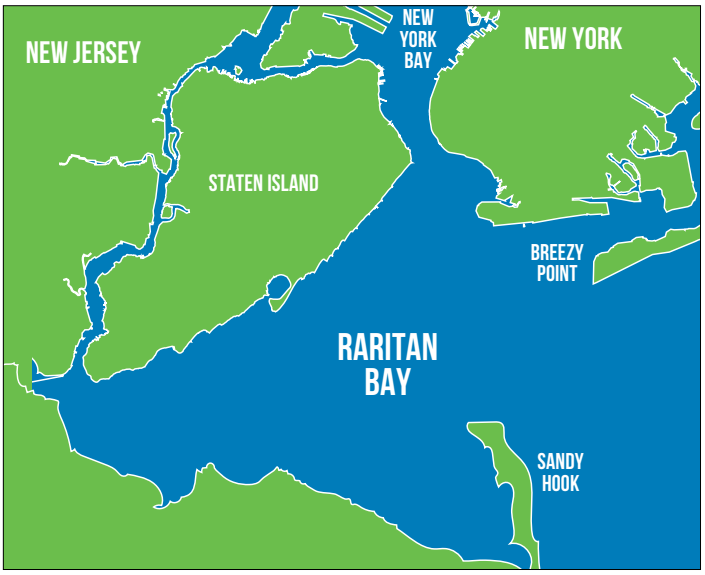
POLICY RECOMMENDATIONS

- Fund and incentivize open-space and farmland preservation projects within the watershed. Prevent any diversions of public lands for private development and uphold restrictions on the use of preserved lands to ensure the integrity of preservation programs.
- Support policies that encourage the protection of the Highlands and Pinelands regions, and uphold the integrity of the Highlands Council and Pinelands Commission.
- Continue to fully fund New Jersey's share of $893,000 for the Delaware River Basin Commission, which manages, protects, and improves the basin's water resources.
- Restore the Payment In Lieu of Taxes Program to help municipalities address the loss of ratables.
- Encourage sustainable shellfish aquaculture through the coordinated activities of the Delaware Bay Aquaculture Development Zone and ongoing stakeholder groups that bring industry and conservation organizations together to resolve issues of concern.

Restore Raritan Bay

The Raritan Bay is an untapped New Jersey resource whose economic and recreational potential is limited by poor water quality. In the late 1800s, Raritan Bay hosted a booming commercial shellfish industry. Today, only hard-shell clams are harvested from the bay and they require expensive depuration due to poor water quality. Since the 1970s—thanks to the Clean Water Act and the work of dedicated advocates—the Raritan Bay has been taking baby steps toward improved health. However, there are still algae blooms, combined sewer discharges, polluted runoffs, and trash floating in the water. Additionally, skin-to-water contact poses health risks.

People think of the Jersey Shore as ending at Sandy Hook, but, in fact, it extends to Perth Amboy. Raritan Bay is thus the backyard for millions of New Jerseyans, providing opportunities for recreational activities such as fishing, boating, kayaking, crabbing, swimming, and bird watching. Additional reading about the area's harbors and estuaries has been made available by the NY/NJ Harbor and Estuary Program.



PRIMARY CONCERNS

- Legacy landfills and Superfund sites discharge pollution into the bay.
- Combined sewer overflows discharge raw sewage into the water during times of heavy precipitation.
- There is a lack of regular water-quality testing.
- Unsafe conditions for recreational use prevail.

POLICY RECOMMENDATIONS

- Eliminate combined sewer overflows that discharge raw sewage directly into the water.
- Request that the US Environmental Protection Agency designate the Raritan Bay as a No Discharge Zone to prevent vessels from discharging sewage.
- Preserve land along the shoreline of and the tributaries to the Raritan Bay; restore existing natural areas to reduce flooding and to filter water before it enters the bay and its tributaries.
- Improve stormwater management, with a goal of zero runoff into Raritan Bay.
- Revive research about and work towards the restoration of oysters throughout the Bay in order to take advantage of their ability to serve as natural water filters.
- Designate beaches along the Raritan Bayshore as bathing beaches and perform both regular, protective water-quality testing and timely notification of water quality when the latter poses a health risk.
- Develop a consistent and meaningful sampling program for Raritan Bay to track trends over time, isolate pollution sources, and understand the health of the bay.

LAND

New Jersey is a national leader in the preservation of open space, farmland, and historic sites.

The state's preservation programs and its policies for wetland protection that have been implemented over the last five decades have resulted in the public ownership or purchase of development rights for more than a third of New Jersey's land area, protecting over 1.5 million acres, according to the New Jersey Department of Environmental Protection. However, even with this success, New Jersey will likely be the first state to reach full build-out in the next 25 years or fewer, resulting in no more buildable vacant land.

Data shows that of New Jersey's roughly five million acres, more than two million remain in their natural state as forests, wetlands, beaches, and grasslands. Some of these landscapes would benefit from restoration. Despite being the most densely populated state in the nation, New Jersey provides habitats for more than 400 species of land-dwelling vertebrate wildlife, as well as for 134 freshwater fish species, 336 marine fish species, and thousands of terrestrial and aquatic species. Moreover, 1.5 million shorebirds and as many as 80,000 raptors make migratory stopovers in New Jersey each year.

Preserve Habitat, Wildlife, and Natural Areas

Despite its small size and dense population, New Jersey hosts an impressive array of wildlife, habitat, and unique ecosystems. Spanning five geologic provinces, New Jersey's landscapes range from the Appalachian Ridge and Valley in the northwest to the Outer Coastal Plain in the south. There is a broad diversity of animal, fish, and plant species. Numerous plant and animal species reach either their northern or southernmost limits in New Jersey, because the state spans both northern and southern ecosystems. New Jersey is also one of the most important pathways in the world for an abundance of migrating birds.

Scenic and natural beauty are apparent in all reaches of the state, and the state's ecological treasures are appreciated and enjoyed by residents and nonresidents alike, bringing significant revenue from outdoor recreation, including hunting, fishing, and wildlife watching. These treasures include the deep forests of the Highlands and the vast sandy aquifer of the Pinelands National Reserve, which is recognized as an International Biosphere Reserve. New Jersey is also home to extensive salt marshes, free-flowing river systems, freshwater wetlands with forested swamps, and the dunes and bays of the Atlantic barrier islands.

In addition to nonprofit conservation organizations that preserve natural lands, various government agencies are charged with managing our wildlife and wild places. New Jersey is home to five national wildlife refuges (Great Swamp, Forsythe, Cape May, Supawna Meadows, and Walkill) and two National Recreation Areas (Gateway and the Delaware Water Gap). There are more than 170 state-owned wildlife management areas, state parks, and state forests that contain wildlands, as well as hundreds of tracts of forests, meadows, and wetlands owned and managed by counties and municipalities. The New Jersey Natural Lands Trust owns or manages more than 30,000 acres across the state and manages its properties to "conserve elements of natural diversity, such as habitat for rare plant and animal species and rare ecological communities." Within the lands held by the different divisions of the state's Department of Environmental Protection, there are designated "natural areas." Today, this system consists of 47 designated natural areas encompassing over 40,000 acres, and it extends from the Dryden Kuser Natural Area in High Point State Park to Cape May Point Natural Area on the tip of Cape May Peninsula.

Ancestral Lands

For over 14,000 years, New Jersey has been the ancestral homeland to the Lenapehoking (Lenni-Lenape), who were forcibly removed and displaced by European colonizers. New Jersey has recognized several Indigenous tribes, including the Nanticoke Lenni-Lenape, Powhatan Renape Nation, and Ramapough Lenape Indian Nation.

Source: By User: Nikater - File: Delaware01.png, CC BY-SA 3.0

The natural areas system and the Natural Lands Trust have seen declining staffing resources and a largely dormant governance, resulting both in fewer preserved natural areas and less oversight and management of these critical ecosystems. The science of ecological restoration must eventually guide habitat rejuvenation of degraded landscapes to counter ecological stressors like forest fragmentation, pollution, overabundant deer, and climate change.

Habitat connectivity is also a critical component of this strategy. Through the use of the science-based landscape map, the New Jersey Conservation Blueprint, and the Connecting Habitat Across New Jersey program, land can be evaluated based upon the likelihood of the presence of certain species, with a goal of connecting landscapes to create corridors for wildlife. This also creates transparency and predictability in planning and development in order to protect vital wildlife. Finally, the management of wildlife is critically underfunded. Relying heavily on federal funds from the State and Tribal Wildlife Grants program, the New Jersey Department of Environmental Protection's Endangered and Nongame Species Program manages New Jersey's many wildlife and bird species with limited staffing and support.

PRIMARY CONCERNS

- There is a continued loss of natural lands that sustain a rich diversity of both flora and fauna and a clean water supply, which are essential to residents' quality of life and the tourism industry.
- Funding is lacking for wildlife management, including research, monitoring, and restoration.
- Populations of rare plant and animal species are declining due to a variety of stressors, including development, illegal dumping, the destruction of wetlands, an overabundant deer population, the advancement of invasive species and pathogens, rising sea levels, salt intrusion, storm surges, and shoreline erosion.
- Damage from illegal off-road vehicle traffic on public lands is increasing to the detriment of important habitats
- The inclusion of Indigenous voices in land conservation and restoration strategies is lacking.

POLICY RECOMMENDATIONS

- Increase the preservation and stewardship of natural lands through the state's Green Acres Program, focusing on restoring connectivity between large preserves, by using the Conservation Blueprint and the Connecting Habitat Across New Jersey effort.
- Increase overall funding and staff resources for the New Jersey Department of Environmental Protection's work protecting natural resources, including enforcing laws regarding off-road vehicle use.
- Fully fund the Natural Heritage Program and hire additional staff to support the identification, research, and protection of rare plants.
- Increase funding for the Endangered and Nonngame Species Program.
- Revitalize and significantly expand lands in New Jersey's Natural Areas System; revitalize and expand the Natural Lands Trust Board of Trustees.
- Institute landscape-scale planning for state lands that considers and protects the range of natural resource values, and continue to expand coordination among state agencies.
- Implement best practices for sustainable wildlife management.
- Designate publicly owned forests with undisturbed soil as carbon reserves.
- Expand opportunities for the inclusion of Indigenous representation on state boards and commissions, and in policy decisions.
- Pursue policies with the support of tribal voices to empower their action on environmental issues, including the federal recognition of state-recognized tribes, if supported by tribal members.

Promote the Robust Preservation of Open Space, Farmland, and Cultural Heritage

As reported in NJ Spotlight News, federal, state, county, local, and private funds have permanently preserved more than one-third of New Jersey's total land area. However, since the 1940s, development and urbanization have led to the loss of well over a million acres of wetlands, forests, and farmland. (See New Jersey Conservation Foundation's *Nature for All: A 2050 Vision for New Jersey.*)

Public Support for Parks, Farmland, Open Space, Natural Areas, and Cultural Resources

New Jerseyans have increasingly turned to parks and open spaces in record numbers to find refuge in the beauty of nature and in the benefits of outdoor recreation. Research demonstrates that time in nature can improve our mental and physical health. Unfortunately, many residents do not have adequate access to parks and natural areas, especially in urban areas of the state. Funding for park maintenance is also a necessity, as some local, county, and state parks have deteriorated in quality and safety over time. Adequate resources need to be made available to state workers to steward New Jersey's public resources.

Studies show that for every $1 invested in open-space preservation, $10 is returned in the form of ecosystem services (e.g., water purification, waste treatment, and flood mitigation), natural goods (e.g., fish and farm products), and outdoor recreation. The restoration of historic sites creates more jobs than new construction and can often revitalize urban neighborhoods, allowing for the preservation and, in some cases, repurposing of valuable historic places. Residences adjacent to parks and preserved open spaces have real estate values 15 to 20 percent higher than those a block or more away.

New Jerseyans have consistently supported state funding for open-space, farmland, and historic preservation at the ballot. In 2014, after supporting every land preservation bond measure since 1961, nearly two-thirds of New Jerseyans voted to constitutionally dedicate a percentage of the Corporate Business Tax for open-space, farmland, and historic preservation and stewardship. This dedication provides regular and reliable state funding, which is critical to leveraging millions in additional funding from federal, county, municipal, nonprofit, and corporate entities. Because of the Corporate Business Tax dedication, nearly $1.9 billion since 2015 has been earmarked for both land preservation and for stewardship programs.

State Preservation Programs

- Green Acres: Established in 1961, the program has helped preserve over 681,000 acres of land, and has provided more than 1,200 park development projects in all 21 counties.
- Farmland Preservation: Established in 1983, the program has preserved more than 250,000 acres.
- New Jersey Historic Trust: Since 1990, more than $200 million has been invested in historic site projects.
- Blue Acres: Established in 1995, Blue Acres has facilitated the purchase of hundreds of floodprone properties to help families move to safer locations and decrease repeated home flooding.

PRIMARY CONCERNS

- Parties to the United Nations Convention on Biodiversity have agreed to conserve 30 percent of the earth's land and seas by 2030, but progress needs to be accelerated.
- Adequate access to parks and natural areas is lacking, especially in urban areas of the state.
- Need exists for additional funding and staff to maintain and operate state parks.

POLICY RECOMMENDATIONS

- Set a goal of preserving 50% of the most critical remaining lands that are ranked highly for ecological, water, and agriculture values by 2050 to secure a legacy of preservation.
- Preserve approximately 315,000 acres of additional farmland to ensure a sustainable agricultural industry, and reach the Jersey State Agricultural Development Committee's goal of preserving a total of 550,00 acres of farmland.
- Protect New Jersey's cultural heritage, which will require more than $700 million in additional funding.
- Permanently protect additional lands in the Highlands and Pinelands regions, which provide clean drinking water to more than 75 percent of the state, and provide for additional staff focused on the impacts of climate change on these important regions.
- Rapidly spend additional program funding from Blue Acres to purchase floodprone properties and return these lands to their natural state; adjust the program so that property owners can move faster through the process to sell their homes.
- Ensure that affordable housing siting does not conflict with preservation or protection strategies for habitat, wildlife, and natural lands.
- Continue to fund parks, open space, farmland, and cultural resources preservation through the allocation of funding from the Corporate Business Tax.
- Fully fund the state's Payment in Lieu of Taxes Program to compensate municipalities that host state-preserved lands. Encourage county and local governments to continue pursuing open-space funding programs, including the Payment In Lieu of Taxes Program.
- Encourage the state to fund preservation using federal funding, including the Agricultural Conservation Easement Program and other Natural Resources Conservation Service programs.
- Identify additional sources of funding to address critical unmet need for land preservation.
- Utilize the Conservation Blueprint as a tool to identify priority lands for protection.
- Adequately fund staffing and maintenance for state parks. See the "Fix Our Parks" campaign being coordinated by the Pinelands Preservation Alliance to keep public lands open and available for wildlife to thrive and for the public to have safe access for eco-friendly recreation.

Protect Farmland

Since its inception, New Jersey's Farmland Preservation Program has protected more than 250,000 acres of farmland across the state, which, among a myriad of benefits, ensures that future generations will have access to arable land. To sustain New Jersey's agricultural industry in the long term, the New Jersey State Agricultural Development Committee has set a goal of preserving a total of 550,000 acres of farmland. However, farmland in New Jersey is currently under siege. New Jersey farmland is increasingly threatened by the ongoing conversion of farmland to residential and commercial development, including warehouse placement.

Preserved farmland can play a significant role in stopping sprawl and protecting the rural, historic, and scenic character of the landscape. Promoting sustainable agriculture that works in harmony with natural systems benefits New Jersey residents by providing locally grown, fresh food choices, and greater proximity to green spaces.

PRIMARY CONCERNS

- The boom in online shopping has led to an increase of warehouse development on farmland in New Jersey. This type of development competes with preservation programs. Alternative siting requirements must be implemented to uphold the state's long-standing commitment and goal of preserving more land and open space as outlined in a report by New Jersey Future, *Warehouse Sprawl: Plan Now or Suffer the Consequences*.
- Farms can help protect the state's water supply and wildlife habitat, particularly if measures are taken to decrease the use of synthetic chemicals, neonicotinoid pesticides, and treated seeds in commercial settings. Neonicotinoids (neonics) are a group of insecticides used widely on farmland and in urban and suburban landscapes, and have been proven to be highly toxic to insects, including the pollinators and bees that the state depends upon for its food supply. Birds, insects, and other wildlife have experienced dangerous declines in many regions of the world, and will continue to do so. Research clearly shows ecosystem collapse throughout the food chain due to neonics in lakes, stream corridors, forests, and meadows in proximity to agricultural areas, and in heavily suburbanized areas. Many European countries have already taken steps to ban neonicotinoids.

  Implementing practices such as cover cropping, decreased tilling, and adding compost not only helps retain rainwater onsite and increase soil health, but additionally combats climate change by increasing soil carbon sequestration. Given the increase in demand for locally grown food, protecting high-quality soil also ensures that preserved farmland in New Jersey continues to produce healthy food crops. Limiting the amount of building coverage and that of other impervious structures that can damage soil is an important step to meeting that objective.
- For nearly 20 years, there have been multiple proposals to allow commercial nonagricultural businesses on preserved farmland, including venues for large weddings, fairs, and concerts. The number of large events held on preserved farms should be limited and should require both municipal approvals and other limitations set by the State Agricultural Development Committee. Holding many large events, or the inclusion of permanent structures, creates a commercial use of farmland and removes the original focus of this taxpayer-funded agricultural program. Such events undermine the original intent of the program. They also often create traffic problems in rural areas, necessitating additional parking areas and other infrastructure that can negatively impact the soils and natural resources that the program was meant to protect.
- The Natural Resources Conservation Service, in the US Department of Agriculture, offers a variety of conservation programs that protect land and promote more sustainable

farming and land stewardship, including protecting grasslands, transitioning land to organic production, and installing riparian and wetlands buffers. The federal Agriculture Conservation Easement Program provides critical preservation resources, and these funds have preserved thousands of acres of farmland in New Jersey, often in partnership with nonprofit organizations.

- Access to land is one of the primary needs of a thriving, sustainable agriculture system, but the high cost of land in New Jersey poses an enormous challenge to minority, young, and beginning farmers. There are very few people of color who own farmland in our state—a problem the Northeast Organic Farming Association of New Jersey is working to address—but additional assistance is needed from the New Jersey Department of Agriculture. Additionally, consideration should be given to provide access to farmland for Indigenous tribes for sustenance farming and the education of their children and families in the traditional ways of their ancestors. The State Agriculture Development Committee hosts the Farm Link Program, which connects farmers with landowners interested in leasing or selling farmland.

POLICY RECOMMENDATIONS

- Strengthen soil protections to discourage deep soil cuts, stockpiling, compaction, and other harmful practices on preserved farmland, while supporting soil carbon sequestration.
- Uphold policies that limit nonagricultural commercial development on preserved farms, as well as buildings and other impervious surfaces, to ensure minimal impact on farming activities and soil health.
- Encourage agricultural production and assist with the marketing for new products, including organic grains.
- Continue to robustly and consistently fund farmland preservation through federal, state, and local programs, focusing on the access and ownership of land for minority, young, and beginning farmers, and for Indigenous tribal nations.
- Phase out the use of neonicotinoids in all forms, similar to how DDT was phased out over 50 years ago.
- Grow and promote New Jersey's Farm Link Program to engage minority, young, and beginning farmers with landowners interested in selling or leasing land for agriculture.
- Prohibit the location of warehouses, energy infrastructure—including renewable energy infrastructure—and nonfarming-related commercialization on New Jersey's prime agricultural soils to ensure farmlands remain viable and healthy for food production. Encourage the use of solar power on existing buildings or fences to avoid impacting prime agricultural land.
- Promote sustainable agricultural practices by using funding from the Natural Resources Conservation Service's conservation programs and additional incentives that work in harmony with natural systems.

Steward Open Space and Increase Access

New Jersey's open space provides a variety of environmental and economic benefits, including the protection of water resources, preservation of biodiversity and wildlife habitats, creation of greenways, enhancement of urban centers, and the support of recreational opportunities. Proper stewardship is essential for keeping these areas functional and in pristine condition.

Preserved parks and open spaces require funding for stewardship of natural resources, and some parks need revitalization, improved facilities, and increased public access. As more land is preserved, it is imperative that additional stewardship funding be made available. More than ever before, New Jerseyans rely heavily upon neighborhood playgrounds, city and state parks, forests and wildlife management areas, and the statewide trail system for healthy outdoor recreation. Proper stewardship of these resources will benefit present and future generations.

Part of this work must include making nature more accessible for people with disabilities, so that everyone can enjoy our parks and open spaces. (See The Pinelands is for Everyone project as an example.)

Sound stewardship includes the following:

- well-funded state, county, and municipal park districts
- parks that serve the needs of area residents, including residents with physical or other disabilities
- parks that protect natural and historic resources
- habitat protection and restoration balanced with public recreation opportunities
- deer and invasive species management
- encouragement for alternative ways of creating and supporting parks—either through public-private partnerships or through nonprofit entities that advocate for parks
- utilization of school playgrounds as open public amenities during nonschool hours

POLICY RECOMMENDATIONS

- Increase budgetary support and allocate more money for staffing for the New Jersey Department of Environmental Protection, particularly in the enforcement of wetlands protections and for stopping illegal off-road vehicles, dumping, and more.
- Institute long-term landscape planning for stewardship at all publicly owned parks, wildlife management areas, natural areas, and forests, including aggressive management of deer and invasive species.
- Increase grant-funding support for Inclusive Healthy Communities through the New Jersey Department of Human Services to increase outdoor recreational opportunities for people with disabilities.
- Ensure that forest stewardship plans address all components of forest ecology, including soils, native species, carbon sequestration, wetland communities, water resource protection, and compatible recreational values.
- Address the critical backlog of capital park improvements at the state, county, and local levels through planning and increased funding.
- Inventory, map, record, monitor, and enforce conservation easements to ensure that natural resources are permanently protected.
- Support the availability and expansion of natural and restored areas in New Jersey's more urban parks.

Develop New Trails and Maintain Existing Trails

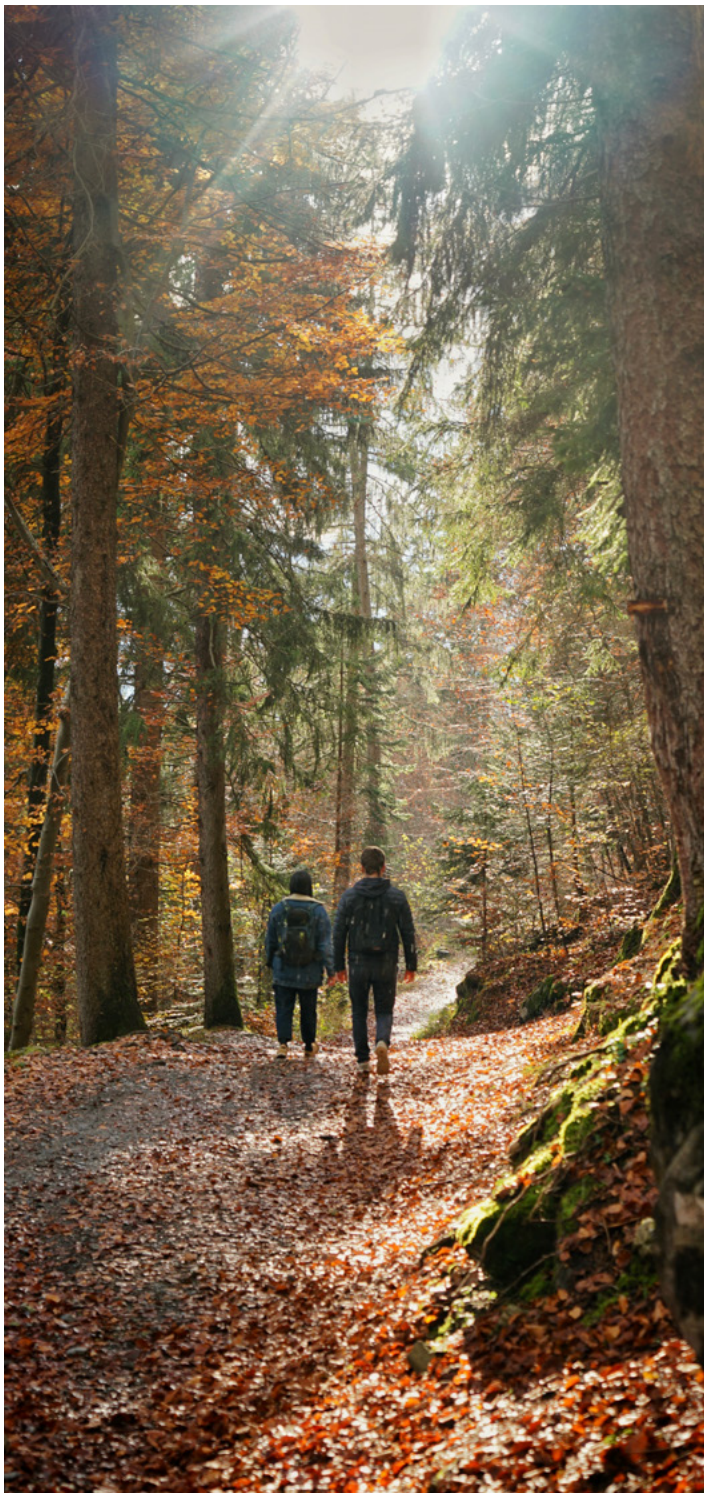
New Jersey is the most densely populated state in the country, which makes public access to open spaces absolutely vital. Trails provide this critical access to residents and visitors. The challenges of connecting people with nature, and particularly of ensuring safe and equitable access for people of color, must be addressed.

In addition, providing secure, well-maintained trails is essential to accommodating high volumes of visitors to more populated parks and outdoor areas.

Stories of overused natural areas are increasingly common. At the Dunnfield Creek trailhead along I-80, Trail Stewards counted over 7,000 hikers in a single day. The Appalachian Trail boardwalk in Vernon Township has been a longtime challenge for locals, with hundreds of cars parked illegally along high-speed roads and residential areas. For hiking locations with limited parking, there is often an overflow of cars into nearby neighborhoods, causing challenges for residents living there. These visitor numbers and parking problems often distract from the more subtle damage caused by unprecedented use—trampled vegetation, accelerated erosion, litter, confusing unapproved "social trails," and search-and-rescue calls to rescue lost hikers. With this skyrocketing use and impact, it is critical that support for trails grows to accommodate the demand.

Part of the lack of support stems from poor public understanding of how trails are maintained and built. Many assume that trails are natural pathways kept open by foot traffic. Others believe that cadres of dedicated park personnel are the ones who cut back vegetation, mount trail markings, and pick up trash. Neither of these common misconceptions is true, which thereby contributes to the challenges in securing the resources needed to properly steward trails across the state.

The construction and maintenance of trails in New Jersey is undertaken as a partnership between land managers and partner nonprofits, with volunteers contributing thousands of hours annually to ensure the development and maintenance of the state's trails—the equivalent of many full-time paid staff. Any model of sustainable trail infrastructure must have nonprofit partners at its core, recognizing that they multiply the value of every dollar by leveraging volunteers in the execution



of important projects. Beyond providing funding mechanisms for partners, this means designing protocols that encourage volunteer and partner involvement rather than serving as obstacles, such as liability agreements, permit applications, and reporting requirements

If the environmental integrity, recreational value, and safety of these trails is to be preserved into the future, a commensurate rise in investment in New Jersey parks is critical.

PRIMARY CONCERNS

- Funding requests made to the NJDEP's Recreational Trails Program show increasing funding demand and interest in trails.
- Considering the increased public attention to the link between health and parks, the demand for recreation facilities in New Jersey will likely continue.
- The use of illegal off-road vehicles on trails creates safety issues for park users and impacts wildlife habitats and other important ecological features.
- Delays and expenses in obtaining approvals to repair trail infrastructure stymies timely upkeep.

POLICY RECOMMENDATIONS

- Fund public land managers to handle trail infrastructure, such as parking lots, kiosks, restrooms, staffing, and enforcement.
- Provide easier access to and from more trail locations, both as a mode of transportation and for recreation, and reduce stress on existing parking areas using federal infrastructure funding.
- Extend trail plans into urban areas and older suburbs to address racial equity, diversity, and inclusion, bringing the state closer to the goal of having a park or open space within one mile of every New Jersey home.
- Design trails for people of all ages and abilities, and improve and ensure accessibility to trails for those with mobility challenges.
- Fund nonprofit partners to address trail monitoring, maintenance, repair, improvement, construction, relocation, and general upkeep.
- Continue efforts on the New Jersey Trails Playbook, a collaboration between NJDEP and NJDOT that was designed to ensure that everyone has safe and equitable access to quality recreational trails.
- Support the full build-out of the Essex-Hudson Greenway (AKA Garden State Greenway).
- Collaborate with local police to enforce off-road vehicle laws and other issues of public safety on trails.
- Review permit processes with local park superintendents and on-the-ground trail-building partners to identify where regulations are causing gridlock, resulting in environmental degradation and threats to visitor safety.

Create and Invest in More Urban Parks

Local parks and urban green spaces improve physical and psychological health, strengthen communities, provide environmental and economic benefits to area residents, and make neighborhoods and cities more attractive places to live and work. New Jersey's exceptional population density demands our attention on the abundance, location, and maintenance of state parks.

American adults and children rarely engage in the recommended levels of physical activity needed for a healthy lifestyle. The epidemic of inactivity is partially due to car-based development patterns and to inadequate access to parks and open spaces. Studies show that when people live near parks, they exercise more. Physical activity also relieves symptoms of depression and anxiety, and enhances overall psychological well-being.

Local parks and green spaces provide benefits beyond physical activity. Community gardens and urban farms can provide access to healthy food and allow residents to make social connections within communities, relieving isolation and providing a connection to others. Many of the mental health benefits of parks come from access to natural areas, including trees and water. Lastly, expanding, maintaining, and acquiring open spaces boost local property values while creating jobs.

Despite the well-known benefits of access to outdoor recreation in green spaces, communities of color and low-income communities are still less likely to have access to parks, trails, and gardens than their counterparts. In order to confront the challenge of inequitable access, the state should strive for every resident in more developed areas of New Jersey to live within a 10-minute walk of a park or green space.

Reclaiming Abandoned and Polluted Sites

Abandoned or contaminated properties are a detriment to the health and wellbeing of the communities they are located within. These sites—often located in formerly or presently industrial urban areas, or along waterways or old rail lines—can be prime opportunities for new parks. An example of this is the proposed Essex-Hudson Greenway.

In New Jersey's urban areas—which see a mix of high-density residential buildings, commercial buildings, and transportation corridors—parks provide a unique opportunity to improve the economic vitality and quality of life of neighborhoods. Cleaning up formerly contaminated sites for parkland or other green gathering spaces can become the centerpiece of a revived neighborhood. Parks have the potential to connect redlined neighborhoods to city centers and vital resources, repair and improve the natural environment, and allow for artistic expression and community-building (See page 3). Moreover, parks provide vital ecosystem services through the addition of vegetation, which can improve air quality, create shade canopy, and reduce stormwater runoff.

Strategic park placement can repair environmental damage and add much-needed open space to neighborhoods without adequate parkland, thereby providing families with a space that contributes to health, happiness, and well-being.

Creating Friends Groups

The state should encourage the development and support a network of nonprofit or community-based "friends" groups that can address equity issues where resources are most needed; they can also become effective advocates for the care, maintenance, and management of local parks and park matters, from design and stewardship to programming and management. The processes associated with these activities can be designed to support community involvement.

Establishing Safe Routes to Parks

Parks should not only be created and well maintained; establishing a Safe Routes to Parks initiative is also key. A Safe Routes to Parks initiative would mean creating accessible, safe, and comfortable walking and biking paths to parks, ensuring that people of all ages and abilities can easily and conveniently reach them. Neighborhood issues of public safety, including unsafe public infrastructure (e.g., lack of sidewalks or pedestrian crosswalks), must be addressed to encourage use and to welcome area residents.

PRIMARY CONCERNS

- Many residents of New Jersey lack adequate access to a well-designed, well-funded, well-maintained, and well-programmed park, playground, or green space within a 10-minute walk from their home or place of work.
- Parks have been lost from diversions of public parkland for private and commercial purposes, including at least 10 in 2021.
- There is a disparity of access to and of quality of parks across the state.
- Insufficient parks and greenspaces are generally most acute in urban neighborhoods, where the least land is available to address the situation and where economic injustice has occurred. This often results in abandoned, contaminated industrial land and abandoned or unused rail corridors or vacant lots.
- Existing brownfields and blighted properties are a drain on community and city resources.
- Communities can be activated and strengthened by their involvement in the creation and care of local parks and green spaces.
- Numerous existing parks suffer from insufficient maintenance and programming.

POLICY RECOMMENDATIONS

- Ensure that urban families in New Jersey have access to well-designed, well-funded, well-maintained, and well-programmed parks, playgrounds, or green spaces within a 10-minute walk from home or workplace.
- Ensure that the Capital Park project in Trenton is constructed in a way the public wants so that it can become a destination for the community and for visitors to the area.
- Prioritize funding for the development of parks and green spaces, in areas that historically have been impacted by pollution and contamination.
- Prioritize the use of funds from Natural Resource Damages settlements to expand parkland, urban green space, and restoration projects near affected neighborhoods and waterways using community input.
- Continue to support the spending of Green Acres dollars in urban areas, and strengthen the Green Acres rules to make it harder to divert all publicly preserved land for private commercial uses.
- Leverage the recent federal recommitment and support for funding for the Land and Water Conservation Fund, and leverage other federal park funding mechanisms.
- Establish more New Jersey state parks in urban areas. While local and county parks play an important role in our urban areas, state parks are funded by all taxpayers in the state, yet residents of urban areas may have barriers to travel long distances to state parks.
- Continue and increase funding for the state's Hazardous Discharge Site Remediation Fund for brownfield cleanup, including its use for brownfield-to-greenfield park development projects.
- Leverage the Long Term Control Plan goals for wastewater treatment plants and their need to develop green infrastructure projects. Parks and school grounds are ideal locations for such projects, which would also help provide funding for the development of those projects.
- Expand access to waterfronts and tidal waters in urban communities that have historically been denied entry due to industrial development along the shoreline.
- Establish a Safe Routes to Parks program, similar to the Safe Routes to Schools Program, where neighborhoods are reviewed as a whole and parks are made accessible and welcoming.
- Create safe, dedicated bicycle trails/lanes/systems that can help connect neighborhoods to work, schools, and play areas.
- Create food parks and small-scale agricultural spaces in densely populated areas so local growers can work with the community to cultivate nutritious and culturally appropriate foods.
- Create a statewide support system for "friends" groups in all communities across the state, and provide financial support and technical assistance for existing groups.
- Create green jobs and career pathways in green industry, as well as food service entrepreneurial opportunities.

Promote Schoolyards for Public Use

There are thousands of public schools across the state of New Jersey. Nearly every one includes a schoolyard. Yet across the state, few of these schoolyards are open to the public for use during nonschool hours, and many are designed without the kinds of green space and play features that a school or a neighborhood deserve. Instead, the majority of schoolyards are expanses of asphalt. Accordingly, not only do thousands of playgrounds not provide quality spaces for play and recreation for children, nor outdoor education spaces to help teachers teach, these spaces also miss an opportunity to provide mental, physical, and aesthetic benefits to local neighborhoods.

Schoolyards Should be a Green, Healthy Place or All to Enjoy

Both during and after school, schoolyards should provide a place that is green and healthy. Play equipment, sports fields, and games for students should be available to maximize the benefits of recess and gym class. Trees and gardens that reduce the heat island effect, along with rain gardens and other green infrastructure tools, can help manage stormwater runoff on-site rather than allowing storm events to impact the neighborhood with flooding or to contribute to combined sewer overflow issues. Outdoor classrooms would allow lessons to be taught outside.

One of the important facts to keep in mind is that a green, healthy schoolyard is good for the students, teachers, neighborhood, city, and state overall. Land owned by the state's school districts adds up to significant acreage. In communities where green space is scarce or where opportunities for green infrastructure to help with reducing flood risks are limited, schoolyards can make a significant difference.

Serving Many Needs and Providing Many Benefits

First and foremost, the schoolyard is an outdoor education space. The space should enhance the learning environment, improve educational outcomes, and support the reduction of achievement gaps. This can be accomplished through outdoor classrooms, education gardens, the arts, teacher materials, and the necessary training to maximize outdoor education experiences.

Green healthy schoolyards do the following:

- Improve social determinants of health: As attractive places for relaxation and recreation, green schoolyards reduce climate-related health impacts, such as lowering heat island effects and helping lower the impact of flooding events. In addition, studies show that students who get a chance to play during the day do better at school.
- Address climate resilience by helping to improve clean air and clean water: When designed to be resilient to climate change, green schoolyards can improve the environmental literacy of the students, staff, and community members.
- Double as parks: When equitably designed and when access to the public is allowed, green schoolyards can double as parks. Most schoolyards are within a 10-minute walk in many neighborhoods where other options are not available, often because new greenspace is too expensive to purchase and redevelop into a meaningful space.

Open Hours and Maintenance

Student safety is a primary concern. Therefore, it is appropriate for schools to close and secure the campus during the school day. However, the school, school district, and community can work together to find ways to keep playgrounds open outside of school hours during the evening, on weekends, and in the summer. Playgrounds should be monitored to ensure safety and adherence to rules, and they should be maintained on a regular basis by the school and the community.

An open schoolyard could be designed to include elements for the larger community, including a play area for pre-K children, adult fitness equipment, and areas for senior citizens to meet and gather, or to watch their grandchildren. Green schoolyards can also be places for community gardens or summer markets.

PRIMARY CONCERNS

- The state has lots of land owned by school districts in schoolyards that do not best serve their students.
- Many schoolyards are not open to the public to provide recreation or other benefits to surrounding neighborhoods outside of school hours.
- Paved schoolyards contribute to environmental issues in urban areas.
- According to the Trust for Public Land, over 29 million kids in America do not have a park with-in a ten minute walk of home.
- Student safety is a high concern within existing asphalt schoolyards.
- The responsibility for the cost of converting a paved schoolyard to a green healthy schoolyard is not clear.
- The responsibility for the cost of cleaning and maintaining an open schoolyard should not be borne solely by the school staff.

POLICY RECOMMENDATIONS

- Enact state policies and regulations that encourage or require green schoolyards as part of school development or redevelopment.
- Identify state funding to help local school districts pay for green schoolyards.
- Assist local school districts and municipalities to tap into federal funding that is becoming available for projects.
- Focus funding on communities experiencing social or environmental injustice.
- Create model programs for municipalities to work with their local school districts on policies, shared agreements, and identifying responsibilities and sources of funding to build, maintain, and manage green schoolyards.
- Include friends of schoolyards in the statewide effort to support park friend groups.
- Involve the community in projects aimed at improving the spaces. Such involvement will also improve community cohesion between school and their surrounding neighborhoods.

Support and Promote Urban Agriculture

Urban agriculture is the practice of cultivating, processing, and distributing food in or around urban areas. Urban agriculture is also the term used for animal husbandry, aquaculture, urban beekeeping, and horticulture.

Policy that supports the creation, protection, and long-term sustainability of urban agriculture helps create career pathways for students graduating with degrees ranging from botany and agriculture to business administration and public health.

Strong policy around urban agriculture would also stimulate a local economy and give rise to a new generation of ecopreneurs, or people who either create or sell sustainable products and services, along with spreading awareness about the environment. These products and services could include growing and selling organic foods, undertaking recycling efforts, or generating green-conscious construction.

What are Food Deserts?

Food deserts are regions where people have limited access to healthful and affordable food. This may be due to having a low income or to having to travel farther to find healthful food options. There are 50 designated food-desert communities in New Jersey.

PRIMARY CONCERNS

- Purchasing land in densely populated and densely developed areas is almost always more expensive than purchasing land elsewhere. Some urban farmers have found ways around purchasing property through the use of the adopt-a-lot program, which is the temporary lending of a lot in exchange for incredibly low prices, sometimes as low as $1 dollar per year. The program was born to help revitalize communities with dilapidated properties and to deter illegal dumping from unused, abandoned lots, but it has been used by some urban farmers and gardeners as a means to provide themselves with temporary land access for gardening and/or urban farming. However, without proper pathways to land ownership, urban farmers on short-term leased land can often face difficulties accessing the infrastructure they need to operate, and they face the threat of eviction in the event of an interested property buyer.
- Access to water for irrigation is essential to farming. However, with temporary ownership of properties, farmers are not able to establish permanent water infrastructure on the properties they operate out of. Even when farmers own their own lot, establishing a water system on a property can be expensive and requires permits and approvals from the city.
- There are currently about 300,000 children receiving New Jersey SNAP (formerly food stamps) benefits. While SNAP is an essential program for low-income families to receive supplementary nutrition, it does not guarantee that produce is available at a family's nearby grocery store or market, nor that families may have the time or understanding of the produce to prepare it for themselves. Access to nutritious and culturally appropriate foods, and particularly fruits and vegetables, is critically important to promote these communities' well-being and flourishing.

POLICY RECOMMENDATIONS

- Create a pilot program to financially support urban agriculture and urban farmers across the state that will demonstrate positive impact and results on nutrition and food access in communities.
- Create a state program to help farmers who intend to operate or are operating in urban areas acquire land for long-term leases or for purchase.
- Increase municipal support for community gardens, particularly in and around communities experiencing food insecurity and lack of food access. This can be done through the adoption of a resolution or policies that support the creation, protection, and long-term sustainability of community gardens.
- Implement suggestions from the Rutgers Cooperative Extension's Office of Urban Extension and Engagement's 2022 *Urban Agriculture Strategies for the State of New Jersey: A report that frames the Garden State's challenges and opportunities.*

End Warehouse Sprawl

The need for warehouse space has been growing in New Jersey due to a combination of global and local forces. While trade policies and markets can shift and impact the demand for warehouse space, the Port of New York and New Jersey's major operations in Newark, Elizabeth, and Bayonne will likely continue to generate the need for large sorting, storage, and distribution facilities to handle the volume of goods arriving at the port from other countries. Meanwhile, the growth of e-commerce has resulted in a need for a new generation of smaller, more locally focused warehouses. While larger facilities value proximity to the port, small warehouses value proximity to customers.

The Port of New York and New Jersey is a major driver of the state's economy. Industries devoted to the movement and storage of goods provide jobs to nearly one out of every eight employed New Jersey residents, according to a report by NJ Future. This is the highest proportion among the 50 states. Additionally, traffic at the port is growing due to increasing US trade with South Asia (the preferred shipping route from South Asia traverses the Atlantic and ends in East Coast ports like Newark and Elizabeth). In fact, the Port of New York and New Jersey is the largest container complex in the world and is ranked third in the country for container throughput. All told, this economic activity has an impact on local communities through increased air pollution and truck traffic; it also impacts marine life through increased vessel traffic.

Alongside shifting patterns of international trade, the growth in online shopping has further increased demand for warehousing across the country. The gradual decline of brick-and-mortar retail has helped catalyze the growth of the industrial real estate market for at least the last decade. For example, in 2020 Amazon was New Jersey's largest employer and has opened facilities of various sizes across the state.

Warehouse Sprawl

The pattern of warehouse development is changing. Previously, former industrial or manufacturing sites in northern New Jersey were targeted, but now warehouse development is moving west along I-78 and into Pennsylvania's Lehigh Valley, consuming farmland at an alarming rate. Sprawl has begun to proliferate south along the New Jersey Turnpike, generating enough new truck traffic to prompt an expensive widening of the New Jersey Turnpike southward into Burlington County. Higher land values may be the only thing that has prevented a similar loss of prime farmland along I-78 in Warren and Hunterdon counties. However, recent warehouse development proposals in western and central New Jersey indicate that the protection afforded by land-value differentials may prove short-lived.

Complicating matters further, local officials may be attracted to warehouse development, since it produces property tax revenue without demanding much in terms of government services. But leaving the fate of one of New Jersey's most important industries, as well as its associated land-use decisions, solely in the hands of a myriad of local governments and their fiscal self-interests does not guarantee a regionally optimal solution. By adopting a regional perspective, communities can make sure that port-oriented storage and distribution functions are not consuming outlying lands that are better used for farming, recreation, or other nonindustrial uses. Additionally, communities can ensure that redevelopment opportunities near the port that are ideal for warehousing are not instead allocated to other land uses that lack the same location constraints. In 2022, the New Jersey State Planning Commission's Office of Planning Advocacy released *Distribution Warehousing and Goods Movement Guidelines* aimed at encouraging a proactive, regional approach to planning, siting, and facilitating warehouses.

From a commerce standpoint, locating large warehousing and distribution facilities as close to the port as possible is a desirable outcome. But, from a local perspective, these location decisions concentrate the negative effects of goods movement, such as truck traffic and subsequent noise and air pollution, in communities adjacent to the port. Many of these communities are home to significant low-income populations of color, which have historically borne the worst health and quality-of-life impacts of New Jersey's industrial past.

To help rectify these environmental injustices, the state's push to electrify vehicles should prioritize heavy-duty trucks, medium-duty trucks, and port equipment before devoting attention to personal vehicles and charging infrastructure. Beginning in 2022, New Jersey requires that all new warehouses over 100,000 square feet be "solar-ready." Policies that build on that law—such as mandating clean energy—and include improved stormwater management for sites should be considered, including vegetated green roofs. Now that warehouse development has come to other peoples' backyards, considerations about placement, operation, and external impacts need to be applied equitably across the region.

PRIMARY CONCERNS

- New Jersey is losing prime farmland and other open space.
- Truck traffic and associated local pollution, noise, and congestion is on the rise.
- Induced demand for new and larger road infrastructure has increased.
- Local officials are increasingly considering the fiscal incentives of zoning for warehouses.
- There is a notable lack of regional perspective when addressing the issue of warehouse sprawl.

POLICY RECOMMENDATIONS

- Involve regional governments, port officials, and shippers in land-use planning to identify redevelopment locations that are particularly well suited to the needs of the goods movement industry.
- Provide municipal officials with legal and land-use tools to rezone and avoid as-of-right warehouse development in inappropriate locations, and require municipalities to consult with and obtain consent from neighboring towns in determining appropriate locations for warehouses.
- Create a program through the Office of Planning Advocacy to provide incentives for municipalities to reexamine their master plans and zoning ordinances in light of warehouse sprawl, and to appropriately plan for their community's development prior to the receipt of a warehouse application.
- Encourage warehousing to continue using redevelopment sites in appropriate locations. For port-dependent functions, sites near the port should get high priority and facilities located in environmental justice communities should move to become zero-emissions zones; for smaller, more customer-focused distribution facilities, obsolete shopping centers or office parks could make for ideal locations.
- Prioritize and incentivize the cleanup and reuse of brownfield sites in optimal warehousing locations. Consider a fee on warehouses located outside of these areas that is dedicated to programs for the reduction of air pollution in environmental justice areas.
- Minimize impervious surfaces by building up rather than out, and install permeable pavement, bioswales, or other green infrastructure (e.g., green roofs) to mitigate stormwater runoff.
- Broaden the scope for "solar-ready" warehouses. Enable more goods to be shipped by rail, as trains emit far fewer pollutants and greenhouse gases per ton-mile than trucks.
- Prioritize heavy-duty trucks, medium-duty trucks, and port equipment for vehicle electrification in order to mitigate the effects on port-adjacent communities.

Enhance Local Environmental Power

In 1968, legislation was enacted that provides a municipal authority in New Jersey the ability to create environmental commissions (ECs) with the primary goal of protecting natural resources. The legislation enabling environmental commissions (NJSA 40:56A-1 et seq.) states that an environmental commission has responsibility for "the protection, development or use of natural resources, including water resources, located within its territorial limits." Moreover, New Jersey's Municipal Land Use Law states that "whenever the environmental commission has prepared and submitted to the planning board and the board of adjustment an index of the natural resources of the municipality, the planning board or the board of adjustment shall make available to the environmental commission an informational copy of every application for development submitted to either board" (NJSA 40:55D-27).

Expanding the Role of New Jersey's Environmental Commissions

While ECs have the responsibility for the protection, development, or use of natural resources located within their municipalities (including water resources), they operate in an advisory-based capacity and without the legal powers of decision-making authority under the law. This inconsistency between their responsibilities and their lack of authority to carry out their duties limits environmental commissions' effectiveness at the expense of New Jersey's shared natural resources.

Given the tremendous environmental challenges facing New Jersey, more than 50 years after ECs were first established, the time has come to expand and codify the decision-making power and authority of ECs to protect local natural resources. All municipalities should be required to establish an EC, as the time for optional environmental protection is gone. Additionally, required training for planning board members should be expanded to include planning for climate change and resiliency. Currently, training for planning board members is limited to a one-time requirement. Since the impacts of climate change are evolving and laws and policy change over time, compulsory training at regular intervals should be the standard.

EC authority should be expanded to ensure environmental planning, review, and compliance at the municipal level. Granting ECs decision-making authority similar to other municipal land-use boards will ensure that development and redevelopment plans include climate-crisis assessment reviews, minimize the impacts of the climate crisis, reduce impacts on overburdened communities, and protect natural resources and habitats for ecological and human use. Given New Jersey's existing municipal authority structure, existing land-use boards are overwhelmed with affordable housing and zoning requirements, traffic plans, community character, etc. Environmental planning and protection too often fall to the wayside at land-use board meetings. Expanding the authority of ECs will ensure dedication to municipal environmental protections and planning.

➤ *What is the New Jersey Municipal Land Use Law?*

The Municipal Land Use Law (NJSA. 40:55D-1), first established in 1975, grants towns the power to enact a master plan to set land-use priorities and direction, as well as adopt a zoning ordinance to dictate where and in what form development should happen, all with the purpose of protecting the health, safety, and welfare of citizens.

PRIMARY CONCERNS

- Natural resource protection, planning for climate threats, and development/redevelopment impacts on overburdened communities are often given little to no consideration at the municipal level, specifically within the context of reviews of site plan applications.
- Approximately 400 of New Jersey's 564 municipalities have established environmental commissions to advise on natural resource protection, with about 300 active with current appointments. Local governing bodies will allow appointments to expire and ECs to go dormant when they want to fast-track development without hearing about or abiding by environmental best practices at the local level.
- ECs often provide thoughtful review of and comments on site plan applications, but since ECs are advisory only, land-use boards often ignore their advice in the pursuit of increasing ratables (i.e., more taxes) to the peril of natural resources and the people living in the municipalities.

POLICY RECOMMENDATIONS

- Amend the Municipal Land Use Law to require every municipality to establish an Environmental Commission.
- Expand the powers and authority of ECs to include their required review and approval of environmental impacts development and redevelopment plans, and environment-related ordinances, such as stormwater management. Such environmental impacts include stormwater, development upon or infringement into steep slopes, tree removal, construction phasing, and landscape planning. (See Assembly Bill No. 4791 of the 2024–2025 legislative session as a potential starting point for this consideration.)
- Ensure that all development plans include a climate impact assessment for EC review.
- Include an environmental justice impact assessment in any development plan that is in an environmental justice community, as defined by recent state legislation.
- Ensure ECs approve and review all new environmental ordinances in the town before ordinances go to the municipal council for voting.
- Allow the enforcement or review of permits for items such as tree removal, impervious cover variances, etc., by ECs.
- Require ECs and land-use board members to attend appropriate training on an annual basis.

Nurture Ecotourism

PRIMARY CONCERNS

- There is no broad, coordinated statewide program to promote and support outdoor recreation users and businesses.
- Economic health requires fully maintained parks and facilities to attract tourists.
- Recreational and commercial fishing and hunting permits are insufficient to fund the maintenance of parks and wildlife management areas.
- Public transportation connections to popular attractions are needed to reduce parking overflow and to provide access to all people.

According to a 2019 report from the Outdoor Industry Association, outdoor recreation accounts for almost $12 billion in economic gains and employs about 132,000 people in New Jersey. In Cape May County alone, more than 470,000 tourists visit to seek out migratory birds, with an estimated economic impact of $313 million each year between expenditures on lodging, food, recreation, and shopping.

New Jersey released *Outside, Together! A Statewide Comprehensive Outdoor Recreation Plan* in 2023. While the plan provides direction on funding policies, as well as priorities for statewide recreation needs and opportunities, New Jersey can take the next step to more actively promote the state's robust outdoor recreation economy.

There are 18 states that have outdoor recreation units, task forces, or policy advisors. Vermont and Maryland have active organizations dedicated to promoting and supporting outdoor recreation (both established in 2017). In Vermont, the Vermont Outdoor Recreation Economic Collaborative provides annual status reports to the governor that include recommendations to increase residents' connection to nature. They also include recommendations to attract both high-quality employers and a sustainable workforce in all economic sectors supported by the outdoor recreation economy. The Collaborative is an invaluable partner to the government agencies that maintain the parks and open spaces in the state.

POLICY RECOMMENDATIONS

- Create an Outdoor Recreation Council in New Jersey.
- Launch a recreation hub marketing campaign: This campaign would coordinate a public-awareness effort that organizes New Jersey's outdoor products, services, and places geographically to redirect participation or visitation to underutilized recreation areas or higher-priority destinations. A rebranding could drive patronage of nearby businesses, spread out visitations, incentivize small groups, and encourage local shopping, all while reinforcing public health, quality of life, and outdoor community building.
- Secure innovative financing for outdoor recreation-economy businesses: Continue to tailor grants, loans, and sources of capital to the needs of small businesses and startups, especially for opportunities that are unique to outdoor recreation, such as investments in infrastructure and facilities.
- Establish a statewide platform for outdoor workforce development: Build an outdoor jobs portal that facilitates the ongoing hiring and training of outdoor professionals and seasonal workers.

Restore the Pinelands

The Pinelands regional planning program was the result of the National Parks and Recreation Act of 1978 and the state Pinelands Protection Act of 1979. Thirty-seven years later, the Pinelands program is still the country's strongest regional planning authority. A central goal of the Pinelands program is to protect the Kirkwood-Cohansey aquifer by preserving the forests that collect and cleanse rainfall across the aquifer's two million acres. The aquifer provides more than 35 billion gallons of water per year to residents, farmers, businesses, and industry in southern New Jersey. In addition to farmers who use the aquifer for irrigation, the region's cranberry industry is dependent on this water to maintain its bogs. A 2009 report by the US Department of Agriculture identified the Pinelands watershed as one of the northeastern US's most critical sources of water.

Currently, the 1.1 million acres of the Pinelands National Reserve are home to 800,000 acres of forest, 300,000 acres of which are owned privately. An additional 60,000 acres of the reserve is farmland, and the rest is composed of communities ranging from new suburbs to towns tracing their history to early colonial settlers.

Pinelands Program

The Pinelands program has two key components. The Pinelands Comprehensive Management Plan consists of a land-use map and regulations that govern all development in the Pinelands. The plan establishes mandatory regional zoning for conservation and economic growth zones, and is designed to protect both the natural functioning of the Pine Barrens habitats and the integrity of the Kirkwood-Cohansey aquifer. The Pinelands Commission is responsible for overseeing and amending the Comprehensive Management Plan. It is composed of 15 volunteer commissioners: seven appointed by the governor, seven chosen by counties in the Pinelands region, and one representative from the US Department of the Interior.

PRIMARY CONCERNS

- Empty seats on the commission are often not filled with conservation-minded leaders, and the commission is often used as a tool for political favors.
- Funding is lacking for the implementation of decade-old recommendations and for the hiring of adequate staff, which in turn leads to a lack of focus on critical issues like climate change.
- The aquifer is contaminated by increased development, leading to increased levels of nitrogen from lawn and farm stormwater runoff.
- There is increased demand for clean water, resulting in saltwater intrusion into the aquifers, periodic water supply crises, and the drying out of wetlands, streams, and ponds.
- Public lands and habitats are being destroyed by off-road vehicles in environmentally sensitive areas.

POLICY RECOMMENDATIONS

- **Pinelands Commission**
  - ✓ Advance a list of nominees to the Pinelands Commission that reflects gender and ethnic diversity, along with years of experience and expertise in governance and environmental protections.
  - ✓ Increase funding for the Pinelands Commission to restore lost positions rather than shrinking the agency.
  - ✓ Support changes to the Comprehensive Management Plan to ensure that infrastructure projects are properly reviewed by the Pinelands Commission before they can move forward.
- **Habitat and Water Protection**
  - ✓ Revise the Comprehensive Management Plan to establish no-net-tree-loss and other measures to combat climate change.
  - ✓ Employ comprehensive planning between the Pinelands Commission and the New Jersey Department of Environmental Protection to address emerging contaminants and inconsistent land development projects, such as artificial turf facilities.
  - ✓ Promote infrastructure planning and repairs to eliminate water lost from public supply systems.
  - ✓ Establish new rules requiring water protection measures in site preparation and in the design of new construction.
  - ✓ NJDEP should adopt a comprehensive, science-based plan for controlling motor vehicle usage for each state forest to protect peoples' safety and natural resources; NJDEP should also provide vehicle access maps.
  - ✓ Enforce any existing vehicle use maps and maintain a sustained public communications initiative to change the expectations of those doing the damage; engage the broader public in enjoying state lands through low-impact recreation.
  - ✓ Use state's existing regulatory authority to deny fossil fuel infrastructure projects in the Pinelands region.

Protect the New Jersey Highlands

The New Jersey Highlands region covers an area of approximately 1,250 square miles and 88 municipalities in 7 counties. The Region's water travels as far south as Camden and Gloucester counties and makes its way east to the most densely populated areas of New Jersey. With 70% of New Jersey residents getting at least some of their drinking water from this region, including 8 out of every 10 people residing in an identified overburdened community, and given the mounting impacts of more severe storms and droughts, the need to protect our drinking water supplies increases every day. Highlands open spaces and forests, however, provide no-cost filtration and protection for the region's drinking water. By protecting the Highlands Region's farmland, forests, and open spaces, the state will be protecting the drinking water supply for approximately seven million New Jerseyans.

The Highlands Water Protection and Planning Act, passed in 2004, was implemented to protect this water supply, along with the many other assets in the region, including recreation and ecotourism, historic areas, agriculture, other industry, and much more. But today, approximately 230 square miles of the Highlands remain threatened by some form of development: there are some 19,000 privately owned properties at risk of being converted.

In addition to the water resource that Highlands forests provide, the 320-square-mile core mature forest is home to a great diversity of native plant and animal species, many of them rare, threatened, or endangered. The forest offers abundant, accessible outdoor recreational opportunities, filters our air, and moderates flooding, and its outstanding ability to capture and store atmospheric carbon makes it a significant part of New Jersey's developing climate resiliency strategies.

Highlands Preservation And Planning Areas

By statute, the Highlands region is delineated by two distinct areas. The first is the Preservation Area, which became subject to the strict land-use regulations of NJDEP with the passage of the Highlands Act. The second is the Planning Area, which balances growth and development with capacity-based protections for water resources through voluntary municipal conformance to the Highlands Regional Master Plan.

The water resource protection goals for the Preservation and Planning Areas are the same. But, whereas in the Preservation Area the goals are achieved by regulation, in the Planning Area they are achieved through innovative regional planning. Of the Highlands' 88 municipalities, 5 are located entirely within the Preservation Area, 36 are entirely within the Planning Area, and 47 are split between the Preservation and Planning Areas.

Highlands Regional Master Plan

The capacity-based Highlands Regional Master Plan was adopted by the Highlands Council in 2008, primarily to balance natural resource protection with appropriate economic growth in the Planning Area. Since municipal conformance to the Regional Master Plan is voluntary, and because the goals and objectives of the Highlands Act are implemented in the Planning Area through ordinances that are consistent with the Regional Master Plan and adopted by conforming municipalities, the work of the Highlands Council to promote municipal conformance is extremely important.

PRIMARY CONCERNS

- Vacancies on the Highlands Council remain a concern. The council is currently operating with only 11 of its statutorily mandated 15 members.
- Funding challenges mean the council cannot fulfil its responsibilities.
- Approximately 6.2 million people rely on the Highlands for drinking water, but many of these waters continue to be degraded because of inadequate protection.

POLICY RECOMMENDATIONS

- Fully fund the Highlands Council and its programs. The Highlands Council needs more funding for staff and land preservation.
  - ✓ Provide dedicated, repeated funding for the Highlands Open Space Partnership program from the existing Corporate Business Tax's preservation funding. This funding should be used to protect upland forests, farmland, and other natural resources.
  - ✓ Provide a modest budget increase to allow for enough staff to address climate change, agricultural policy, water resource management, and environmental resource stewardship.
  - ✓ Restore the Highlands Council's grant budget (currently funded from an allocation of the Realty Transfer Tax) to implement the Highlands Act and Highlands Regional Master Plan.
  - ✓ Provide funding for restoration and stewardship projects that are intended to protect the state's water supply and future needs. Funding for this policy area could also come from the Regional Greenhouse Gas Initiative's proceeds.
- Fill current Highlands Council vacancies.
- Require that all state agencies, including NJDEP, defer to the Highland's Council for findings of consistency with the Regional Master Plan for activities that have impacts on Highlands protected resources.

Protect The New Jersey Palisades

The Palisades Interstate Park Commission was created in 1900 by the states of New Jersey and New York to protect the cliffs of the Palisades, an internationally significant geological formation. Palisades Interstate Park, stretching 12 miles north of the George Washington Bridge, was established in 1909.

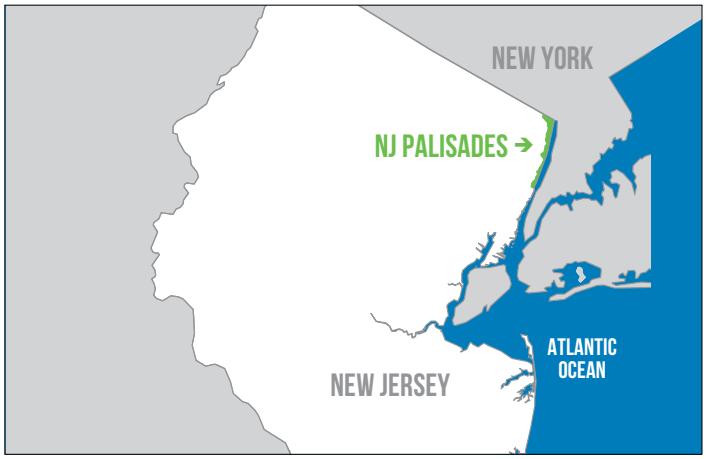
To further protect the Palisades, a narrow strip of land at the summit, going west from the edge of the escarpment and running the length of the park, was purchased by John D. Rockefeller and donated to the Commission in 1933. Existing buildings along the summit were removed to return the tree line to its unbroken natural state. This was followed in 1948 by the construction of the Palisades Interstate Parkway, complete with overlooks and service buildings hidden from view among the trees. The parkway was completed in 1958, since which time the Palisades have stood pristine, surrounded on both the New Jersey and New York sides by some of the densest development in the world.

In 1965, Congress designated the Palisades Interstate Park a National Historic Landmark, noting, "The Palisades Interstate Park represents an unusual effort by two states, New Jersey and New York, to preserve the scenic beauty of the cliffs on the lower western side of the Hudson River." In 1983, "The Palisades of the Hudson" was designated a National Natural Landmark, and in 1998 the Palisades Interstate Parkway was designated as a National Landmark by the National Park Service.

For decades, the New Jersey towns north of the George Washington Bridge acted as guardians of this national treasure, the Palisades, preserving the unspoiled view through zoning laws that limited building heights to 35 feet.

Threats

In 2012, Englewood Cliffs granted LG Electronics a variance to build a 143-foot office tower that would rise far above the tree-line, marring the iconic cliffs that are National Natural and National Historic Landmarks. The variance sparked protests from conservation groups, residents, and elected officials in New Jersey and New York. The New Jersey Conservation Foundation joined the Natural Resources Defense Council and Scenic Hudson in a lawsuit challenging the variance. After extensive advocacy and negotiations, and a call by four former New Jersey governors for a low-rise alternative, a settlement was reached in 2015. The agreement allows for a five-story wing just shy of 70 feet and a three-story wing, with landscaping, lighting, and other design features to reduce visual impacts. The settlement was hailed as a win by advocates, LG, and the town, but the struggle made clear the tenuous nature of the protection.



In 2020, a zoning overlay adopted under an affordable housing court settlement between Englewood Cliffs and Fair Share Housing permits another tract critical to the Palisades viewshed to be developed in violation of the State Plan and against the regulations of the Council on Affordable Housing. The site under consideration is surrounded by parkland and is designated as Planning Area 5 (i.e., environmentally sensitive) by the State Development and Redevelopment Plan; it was also removed from the NJDEP's sewer service area. The Council of Affordable Housing's regulations for affordable housing require that any proposed Planning Area 5 development be in a designated center, which is not the case for this site. Any further development on this site will almost certainly have a negative impact on the integrity of the Palisades.

PRIMARY CONCERN

- Without a higher level of protection through state action, the Palisades remain vulnerable to zoning changes, proposed development at the local level, and other threats.

POLICY RECOMMENDATIONS

- Pass state legislation that preserves the Palisades Cliffs and creates the Palisades Cliffs Preservation Council (see Senate Bill No. 273 / Assembly Bill No. 1377 of the 2024–2025 legislative session).

Create Compact, Walkable Communities

For the latter half of the 20th century, New Jersey's dominant development pattern was car-centric suburbia, with homes, stores, and offices confined to different quadrants of town, thereby requiring residents to get in the car for just about every trip purpose. This pattern persisted into the first half of the 2000s. By the end of the decade, demographic and economic trends steered development back into already-developed places. Redevelopment became the new normal, with built-out cities, towns, and older suburbs suddenly absorbing the majority of the state's population growth. Thanks mainly to the residential preferences of younger generations, compact, walkable communities are now the locus of residential demand.

Unmet Demand For In-Town Living

This shift first happened slowly and then suddenly, putting upward pressure on housing prices in many cities and in walkable suburban downtowns. It also put pressures on existing outdated infrastructure. Some cities and towns, mainly those that were abandoned en masse in the great suburban wave and have struggled through the intervening decades, are experiencing a renaissance. Others are enforcing zoning codes that prescribe mostly single-family detached housing, limiting opportunities for the construction of smaller and more affordable housing types that might make the town accessible to a wider range of households.

Despite the obstacles, it is imperative that the need for affordable housing and job growth be addressed in older, walkable centers in order to retain younger residents in the live-work-shop-play environments they prefer. In-town living hosts a number of other societal benefits for all age groups and benefits the economy and ecology as a whole.

Multiple Benefits

Studies show that people who live in mixed-use in-town communities tend to drive less, especially if public transit is available. This results in cleaner air, fewer greenhouse gas emissions, and less time behind the wheel. Residents also tend to walk more, which can support individual health. And for those

15-Minute Neighborhoods

provide residents with easy access to parks, schools, gathering places, social services, places to buy healthy and fresh food, and (in urban settings) public transit within a comfortable walk or bike ride. They have walkways, bicycle facilities, and other amenities to encourage people to drive less.

who can no longer drive, living in a walkable or transit-friendly town where destinations are nearby means that the loss of a driver's license does not negatively affect quality of life.

Compact development helps to conserve land. Infrastructure—roads, sidewalks, pipes, and power lines—serve more people per linear foot than in a low-density environment, thereby reducing per-capita costs for building and maintenance. This results in a good long-term strategy for keeping property taxes down.

Enhancing Centers And Creating New Ones

Strategies for meeting the demand for in-town living will differ depending on the kind of development that is already in place. For older towns with "good bones" (i.e., a fine-grained street grid with small blocks and a variety of housing options), the secret is finding opportunities for redevelopment and infill, such as repurposing old buildings, building on surface parking lots, and sometimes demolishing outdated land uses and reusing the land. In car-dependent suburbs without clear downtowns or main streets, new future centers of activity can be identified and planned out. Using large redevelopment parcels (such as defunct shopping centers) or existing single-use developments can be good candidates for main street centers if they are properly designed and integrated into the surrounding community, and if a clear path for future expansion and connectivity is outlined.

PRIMARY CONCERNS

- Aging infrastructure in many older centers limit the absorption of new population and business growth.
- There is a lack of coordinated state support to invest in walkable communities, unlike the support in maintaining suburban sprawl infrastructure investment patterns, such as highway and road capacity expansions.
- Many streets are unsafe for pedestrians and bicyclists of all ages.
- There is insufficient allowable density that would enable a strong mix of uses and enough built-in residential demand.
- There is an insufficient mix of housing options in walkable, mixed-use centers at prices that are affordable to a wide range of household incomes.
- Investment is lacking for future and existing transit systems to foster more transit-oriented development.
- The overabundance of car-centric communities will require significant planning and investment to retrofit into walkable places.

POLICY RECOMMENDATIONS

- Provide assistance for economic development and land-use planning to municipalities that want to improve an existing downtown.
- Increase allowable densities and incentivize a mix of uses in downtowns, centers, main streets, and transit station areas.
- Devote more land to people and less to cars. Incentivize shared parking and reduce or eliminate minimum parking requirements in appropriate locations.
- Support the implementation of form-based codes, which regulate the height and bulk of buildings but not their use. This would allow residential and nonpolluting commercial uses to locate in the same neighborhood.
- Initiate a Main Street program at the New Jersey Department of Transportation that focuses on rethinking and investing in state and county roads that serve as main streets to make towns more pedestrian- and business-friendly.
- Fully implement the new law creating a statewide Target Zero Commission, which has the goal of eliminating traffic deaths and serious injuries in New Jersey by 2040, to make roads safer for pedestrians.
- Provide affordable financing, including grant funding, to upgrade municipal infrastructure, so that older centers are able to accommodate new residents and businesses.
- Increase the diversity of housing choices in walkable towns. Implement zoning reform similar to what Oregon and some individual cities elsewhere in the country have done. In these instances, towns are no longer permitted to create residential zones in which only single-family detached homes are allowed. Similarly, California has removed restrictions on accessory dwelling units (e.g., above-garage apartments or in-law suites).
- Support the regionalization of school districts to lessen municipal resistance to zoning for more housing.
- Explore restrictions on cul-de-sacs and new residential development in places served by public water and sewer systems that do not support grid patterns and design for walkability. Provide incentives for redevelopment in car-oriented suburbs to seek ways to increase overall street network connectivity by creating new through-streets and connections to surrounding development.
- Change the culture at NJDOT to focus on moving people and supporting economic development rather than moving vehicles.
- Expand NJDOT's Transit Village program to make it more proactive, so that the state is actively promoting transit-oriented development in as many places as possible.
- Expand the charge of NJ Transit's real estate division to plan and partner with communities to repurpose state assets and foster more transit-oriented development.
- Invest in transit improvements in already-developed areas to meet current demand, and expand capacity to meet future demand.
- Focus on pedestrian accessibility at transit stations. Make sure sidewalks are continuous and well maintained, and that safe routes to nearby destinations are easy to find.
- Create or maintain incentives for economic development and job growth in transit hubs. Locating jobs near transit is an effective way to take cars off the road and reduce the state's carbon footprint.

Encourage Inclusive Redevelopment

Home to approximately nine million people on only 8,721 square miles, New Jersey is a highly developed state with the highest population density in the country, with little land left for development or preservation.

According to NJDEP's 2015 land-use estimates, roughly 86 percent of New Jersey's land is either developed (33 percent) or preserved/ constrained (53 percent), leaving only 14 percent as developable. For comparison, 41 percent of New Jersey's land was developable in 1986, illustrating the extent of new development that occurred over the three decades that followed.

The state continues to encourage new development and growth. The best way to accommodate this pressure is through redevelopment. This a more efficient way to grow and it relieves pressure to convert farmland and other open spaces into development. This will be especially critical as New Jersey municipalities begin to implement the Fourth Round of affordable housing obligations in 2025.

New Jersey continues to be one of the top five most diverse states in the country based on statewide demographic data, according to WorldPopulationReview.com. At the community level, however, New Jersey can do better. According to the US Census Bureau, approximately 52 percent of New Jersey's residents identify as white alone (i.e., not Hispanic or Latino), 22 percent as Hispanic or Latino, 15 percent as Black alone, and 1 percent as Asian alone. At the same time, approximately one-fifth of New Jersey municipalities have populations where

➤ *What Is Redevelopment?*

Redevelopment is the practice of reusing sites that have been previously developed and that have the necessary infrastructure and proximity to other developments.

90 percent of individuals identify as white, and 75 percent of residents in about half of the state's municipalities identify as white. Redevelopment can help begin a process of establishing communities that are more representative of the various groups and rich cultures throughout the state.

Benefits and Challenges of Inclusive Redevelopment

The two major environmental benefits from redevelopment are (1) reduced air pollution (more people commute by walking, cycling, and public transit), and (2) decreased development pressure on open spaces, which are necessary both for protecting the state's water quality and habitats, and for sequestering carbon to aid in cleaning the air. The benefits are even greater when brownfields are redeveloped, as cleaning up these contaminated sites results in reduced soil and water pollution.

Redevelopment does not begin at a city's borders. A major component of redevelopment includes a sizeable investment in infrastructure as well. Redevelopment becomes an opportunity to rebuild infrastructure for the next century.

All told, communities that succeed in fostering good redevelopment will spur other towns to do the same, as increased demand boosts real estate values and brings new growth to cities. Keeping a balance will no doubt require ongoing management to ensure that the vibrant, walkable places that are being created will produce opportunities for residents with a mix of incomes (including the elderly and the disabled) and, ultimately, a more equitable society.

PRIMARY CONCERNS

- Current policies support outdated growth and development patterns, which threaten open space and do not encourage the redevelopment of existing properties.
- Redevelopment is more complicated and expensive than greenfield development.
- Single-family and antiquated zoning prevents appropriate, forward-looking redevelopment from being planned and implemented.
- Weak real estate markets and overburdened communities have many barriers that discourage the redevelopment and revitalization of their communities.
- Lower-income communities and communities of color rarely have an appropriate seat at the table when redevelopment projects are being planned and developed.
- Redevelopment without public input and guidance will likely continue New Jersey's historic, outdated patterns of growth.

POLICY RECOMMENDATIONS

- Align state department policies and investment decisions around the New Jersey State Development and Redevelopment Plan, which coordinates planning activities and establishes statewide planning objectives in land use and housing, among several other topics.
- Reuse existing buildings, especially historic buildings, with incentives, including improving and expanding the state's historic preservation tax credit.
- Promote mixed-use development and zoning to reduce single-use development.
- Provide incentives for redevelopment projects, especially those in car-oriented suburbs, to seek ways to increase overall street network connectivity by creating new through-streets and connections to surrounding development.
- Invest in transit in already-developed areas to meet current demand and expand capacity to meet future demand.
- Minimize investment in new road miles, especially in low-density areas, and direct those scarce resources to redeveloping areas where the most people would benefit.
- Provide affordable financing (including grant funding) to upgrade municipal infrastructure and invest in new energy and broadband assets.
- Provide priority funding and treatment to redevelopment projects that maximize affordable housing. Do not treat redevelopment projects and greenfield projects equally when prioritizing funding or developing land-use rules.
- Provide additional support and subsidies for redevelopment in weak economic markets. Create new and enhance existing programs to reduce barriers and to incentivize redevelopment in these communities.
- Develop a redevelopment inclusion toolkit for municipalities that can be used in both gentrifying communities and in already-wealthy exclusionary communities, and pass laws to support their implementation. Elements of the toolkit would include the following:
  - ✓ Removing a percentage of housing units from the market and making them permanently affordable to lower-income residents
  - ✓ Instituting an inclusionary housing ordinance that results in a percentage of all new residential units being permanently affordable to lower-income residents
  - ✓ Reducing the cost structure of a percentage of commercial and retail spaces to ensure that small mom-and-pop and start-up businesses can exist
  - ✓ Developing public space guidelines to ensure all people have access to appropriate public spaces and facilities
- Require Community Benefits Agreements in more instances. Expand the traditional scope of these agreements to include physical and quality-of-life benefits, and ensure that community members are party to the agreements.
- Pilot a Community Design Advocates program that pays community leaders in overburdened communities to coordinate input from community members, and then ensure that the input is incorporated into the design and development of redevelopment projects. This can be combined with Community Benefits Agreements.

Connect Communities through Boulevarding

In the mid-20th century, federal and state highway policies led to the widening of existing urban arterials and the development of freeways. The construction of many new roadways was sized to accommodate cars at the expense of urban living. When these superroads passed through cities, they often were elevated, sometimes built below grade, and sometimes passed right through cities at ground level. This caused enormous damage to existing neighborhoods, sometimes completely erasing communities and displacing city residents. Most affected were people of color and low-income families with little political power to fight these proposals. The cultural, financial, and emotional toll this took on communities is immeasurable and lasts to this day.

Now, more than half a century later, these structures are reaching the ends of their useful lives. Many urban freeways cut off key parts of what made cities attractive (e.g., access to waterfronts), separated once-cohesive neighborhoods, and negatively impacted walkability between neighborhoods. New roadways also consumed land that is much more valuable as urban real estate.

Today, rather than spend tax dollars to rebuild these highways, many cities are turning to the concept of boulevarding—a departure from mid-century highway standards and a return to human-scale design. Boulevarding creates additional uses for roads that are built around the pedestrian and ecological needs of a community, and may factor in the use of road diets, which reduces the girth of urban arterials across the state.

A Review Of Land-Use Patterns

The land-use patterns that arose in response to the suburban New Jersey lifestyle has brought about the proliferation of freeways and urban arterials. Owning a vehicle is a necessity for travel out of these areas. Over time, the proliferation of single-occupancy vehicles for access to cities has increased throughout the state, adding to the congestion. As a result, walking along these roadways is difficult, unpleasant, and dangerous, given the speed of vehicles, the absence of pedestrian infrastructure, and the overall vehicle-centric nature of the landscape. Drivers, businesses, and residents along these roadways are exposed to noise, concentrated traffic congestion, and dangerous pollutants from vehicle emissions; pedestrians face the added risk of injury or death from encounters with motor vehicles.

Moving toward a boulevard model and a "re-ownership of roads" would allow roadways to provide access while slowing down traffic—making it safer for pedestrians to access neighborhood amenities. Boulevarding would provide drivers with access to other roadways as well, spreading out existing transportation emissions while improving transit, bicycle pathways, and pedestrian pathways in and around cities.

Route 29 in Trenton has been a prime candidate for boulevarding for over a decade. By routing a new boulevard more inland and repurposing the existing roadway, NJDOT would accomplish the dual goals of transportation resiliency and improved connectivity with Trenton's neighborhoods. This would also open up the waterfront for development, completing the secondary goal of developing safe pedestrian access to the Delaware River and the recently daylighted Assunpink Creek.

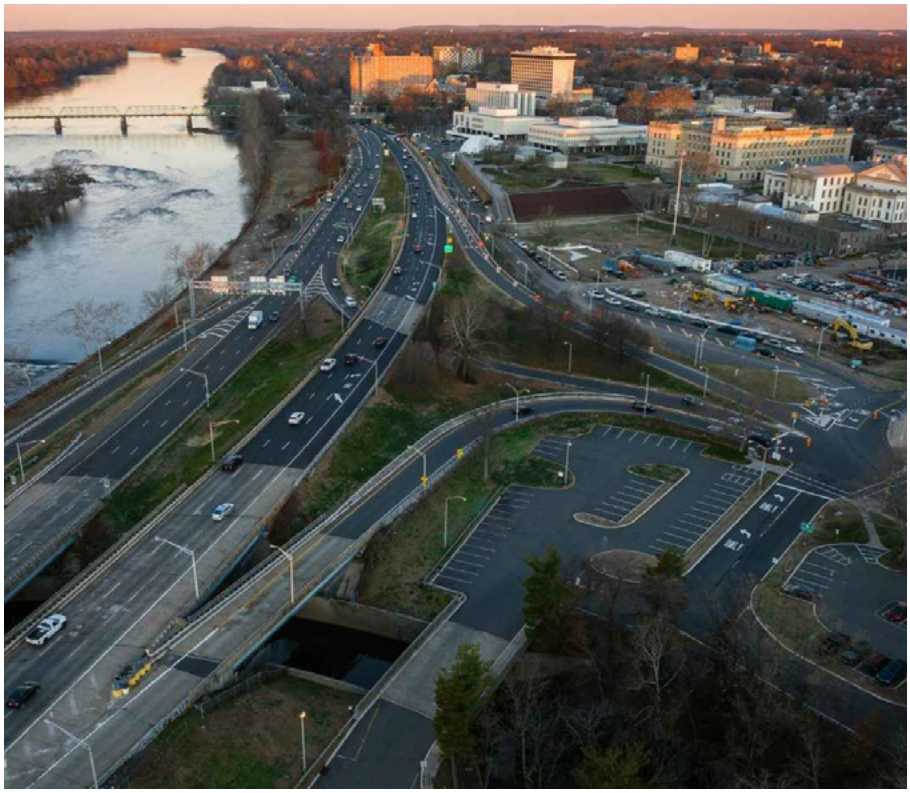
Moving toward a boulevard model also generates construction jobs and increases opportunities for small-business and union labor. In Rochester, New York, the conversion of the "Inner Loop" to a boulevard has created an environment prime for redevelopment. This will allow existing community members to determine what they want their neighborhoods to look like, as well provide the potential for economic development for the city.

➤ *What Are Road Diets?*

A road diet calls for restriping a stretch of road to remove at least one lane and turning that pavement over for other purposes.

What is Daylighting?

Daylighting rivers or streams is the process of removing obstructions that are covering the waterway and restoring the latter to its previous condition. A portion of the Assunpink Creek in downtown Trenton was reopened by removing a concrete culvert that was covering the waterway.



Route 29, Trenton, NJ Source: ROI-NJ.com

PRIMARY CONCERNS

- Freeways and wide urban arterials concentrate air pollution locally and in nearby neighborhoods.
- Freeways create segregated communities within cities, especially across racial lines, and increased car reliance.
- Massive arterial highways take up vital land in cities that could be used for business, residential, or green space.

POLICY RECOMMENDATIONS

- Support community efforts to reimagine Route 29 in Trenton to reconnect the community with the Delaware River.
- Conduct research on air-quality monitoring along these roadways to quantify changes to emissions levels, particularly NOx and SOx, and to ensure emissions reductions for nearby communities.
- Ask the New Jersey Department of Transportation, the New Jersey Economic Development Authority, the New Jersey Department of Environmental Protection, and the Office of State Planning to lead the way by creating templates and pursuing pilots for boulevarding redevelopment plans. This should emphasize centering local community business, minority- and women-owned enterprises, and community amenities in future plans.

TOXINS AND WASTE REDUCTION

Protecting families, workers, and our communities from harmful toxins and reducing waste, such as plastics, electronics, and textiles, that clog landfills and incinerators is critical, especially in the face of potential rollbacks by the federal government.

New Jersey needs to take steps to strengthen laws and rules that evaluate potential risks and ensure safer processes from facilities that use hazardous materials, eliminate lead poisoning in children, and close the cycle of waste with plastics, textiles, and electronics.

Stop Plastic Pollution and Address Microplastics

New Jersey took a huge leap forward tackling single-use plastic waste in 2020 with the passing of the nation's strongest and most comprehensive Plastic Pollution Reduction Law. The law phases out the use of carryout plastic and paper bags, polystyrene foam, and straws. However, other single-use plastics—including plastic bottles, utensils, and packaging—continue to be a threat to the state's public health and economic and environmental futures.

Plastic production fuels the climate crisis with increased greenhouse gas emissions and damages local communities where plastic is made with toxic air and water pollution. Plastic is also a threat to human health. Food and drinks in single-use plastic wrappers and containers expose the population to chemicals linked to many of the known public health crises of our time, including infertility, obesity, ADD/ADHD, and many forms of cancer. And now, researchers are starting to get concerned about the health impacts of inhaling airborne microplastics.

Microplastics

Microplastics are formed when larger pieces of plastic break down into smaller pieces through weathering, wear and tear, and industrial production. Plastic waste can take 20 to 500 years to decompose, but it never fully disappears.

Across the globe, 350 million tons of plastic are produced annually, and this volume is increasing each year, according to PlasticOceans.org. By 2050, global plastic production is projected to triple, and it will account for 20 percent of all fossil fuel consumption. As much as two-thirds of plastic produced then becomes waste.

According to the United States Environmental Protection Agency, the plastic recycling rate in the United States in 2018 was an anemic 8.7 percent. Furthermore, according to data from the American Chemistry Council cited by the EPA, in 2018 plastics generation was 35.7 million tons in the United States—12.2 percent of municipal solid waste generation. This plastic is then burned or landfilled.

Plastic products typically enter local waterways by means of littering, stormwater runoff, and improper waste management. Once in a local waterway, plastic does not biodegrade. Instead, water currents and sunlight act like paper shredders, transforming larger plastics into microplastic (i.e., plastic about the size of a grain of rice or smaller). To make matters worse, many wastewater treatment plants are unable to capture tiny floating plastics and discharge them into waterways. These microplastics then serve as sponges, absorbing contaminants already present in the water, such as pesticides and heavy metals. Thus, when plankton, fish, or birds mistake microplastic for food, the contaminants adhered to the plastic bioaccumulate and travel up the food web. Microplastics have been found in fish and shellfish tissue, indicating that microplastics are entering aquatic and human food chains.

The solution to plastic pollution is simple: stop it at its source by reducing the amount of unnecessary plastic that is produced, and require producers to shoulder the responsibility for the full lifecycle of their products. Additional bold policy changes are

needed to support the movement away from single-use plastics. All of these changes must be rooted in extended producer responsibility, whereby the originator of these items takes responsibility for zero waste.

PRIMARY CONCERNS

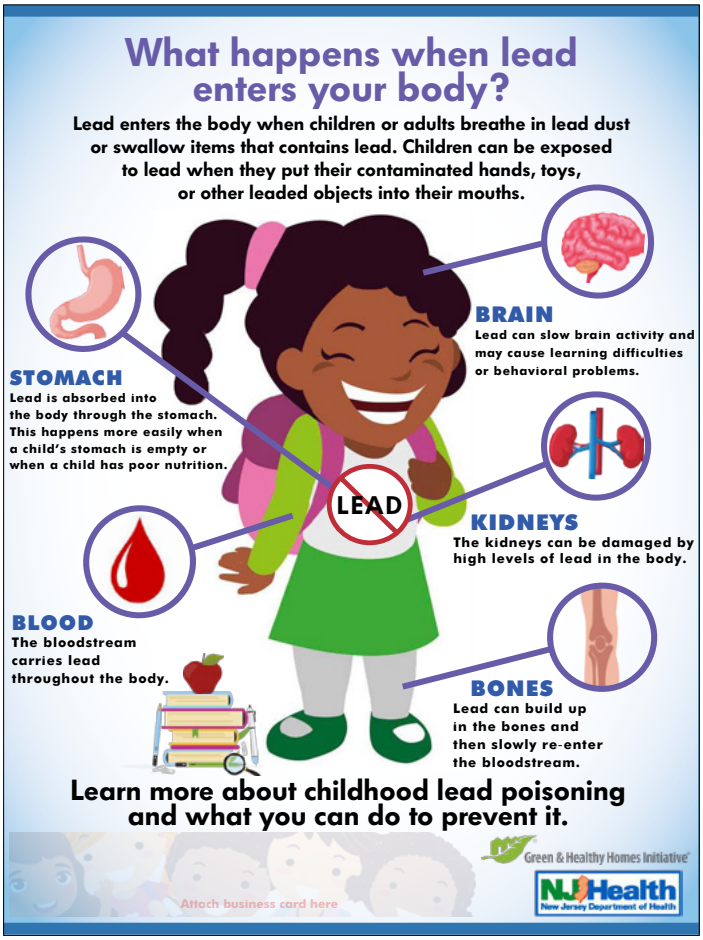
- Plastics manufacturing facilities, along with landfills and incinerators, are disproportionately located in overburdened and vulnerable Black, Brown, and Indigenous communities, exposing those communities to air pollutants from plastics manufacturing and disposal processes.
- From their generation to their degradation into waste, plastics have created a health crisis for humans, wildlife, and marine life. Once in waterways, plastics never degrade; they break down into microplastics.
- Plastics are produced by fossil fuels. The entire life cycle of plastic production fuels the climate crisis with the resulting greenhouse gas emissions.
- Plastics recycling infrastructure and markets are weak. Municipalities have been struggling with rising solid waste and recycling costs.
- Zero-waste systems create over 200 times as many jobs as landfills and incinerators, yielding both the most environmental benefits and the most jobs of any waste management approach.
- Manufacturers are not responsible for the full life cycle of their products. Ultimately, consumers and municipalities pay the price for proper disposal.
- Balloons and their attachments (plastic ribbons, valves, tie-off disks, and clips) present a threat of entanglement and ingestion to birds and marine wildlife, as well as horses, cows, and other animals.

POLICY RECOMMENDATIONS

- Continue to advance the successful implementation of the Plastic Pollution Reduction Act by doing the following:
  - ✓ Ensure robust education and enforcement.
  - ✓ Review the findings of the Plastic Advisory Council, formed as part of the law for monitoring the implementation and evaluation of its effectiveness in reducing single-use plastics and plastic waste in the state. Move forward with recommendations or adjustments to achieve the goals of the law.
- Pass legislation directing the New Jersey Department of Environmental Protection to conduct a needs assessment regarding the recycling of packaging products, and establish the Statewide Recycling Needs Assessment Advisory Council. (See Assembly Bill No. 4902 / Senate Bill No. 1034 of the 2024–2025 legislative session.)
- Pass legislation aimed at prohibiting the intentional outdoor release and tethering of balloons and other floating devices.
- Amplify the importance of shifting to reusable and refillable nonplastic alternatives.
- Enact Extended Producer Responsibility legislation that would require producers of packaging and paper products to develop and implement product stewardship plans that provide for better end-of-life management of their products.

Create Lead-Free Healthy Homes

It is a horrible truth: lead poisoning at an early age can rob children of their potential in life. According to the New Jersey Department of Health's 2022 Annual Report, in New Jersey's large municipalities the average percentage of children 6 to 26 months of age with an elevated blood lead level was 1.4 percent. In Trenton, the elevated blood lead level was 6.5 percent. No child should begin life burdened by lead.



Source: Lead-Free NJ

Most children with lead poisoning are exposed in their homes from lead paint that becomes dust when it is dislodged from windows, doors, walls, and other interior and exterior surfaces. Lead dust spreads to floors, toys, counters, and window ledges, eventually making it to the mouths, lungs, and brains of vulnerable children. Lead is a dangerous neurotoxin that affects a child's learning, memory, and even behavior, as it damages the part of the brain that controls impulse. It may also be found in drinking water and soil where children play.

Lead-poisoned children are six times more likely to be involved in the criminal justice system and seven times more likely to drop out of school. According to studies by researchers at Princeton University and Brown University, lead exposure explains 37 to 76 percent of racial disparities in educational test scores.

New Jersey is a leader among states in many aspects of its response to lead hazards. New Jersey requires universal screening of all children at both ages one and two, and its threshold for public intervention is consistent with the Center for Disease Control and Prevention. State resources are available to nearly every county in the state for the removal of lead hazards, and locally based nonprofits receive state funds to assess and make homes lead-safe before a child can be poisoned. New Jersey and other public entities blended resources to develop a national model for replacing old lead service lines.

PRIMARY CONCERNS

- Lead exposure impacts a child's learning, memory, and behavior.
- New Jersey needs more robust funding for a holistic approach to eliminating lead in homes and neighborhoods.
- Additional protections are needed for renters and pregnant women.

POLICY RECOMMENDATIONS

- **Housing:**
  - ✓ Deliver integrated lead (i.e., in paint, water, and soil), health, safety, and weatherization improvements per home within an expanded statewide Whole House program.
  - ✓ Continue to advance the implementation of New Jersey's law requiring periodic lead paint inspections of certain rental housing units.
  - ✓ Spend down all federal American Rescue Plan Act funds dedicated to the New Jersey Department of Community Affairs' Lead Paint Remediation and Abatement Program by the December 2020 deadline. Secure sustained funding for this program once the federal money expires.
  - ✓ Support legislation that would require the disclosure of lead drinking water hazards to tenants of residential units, and prohibit landlords from obstructing the replacement of lead service lines. (See Assembly Bill No. 2929 of the 2024–2025 legislative session.)
  - ✓ Require that Section 8 rent-subsidized units and affordable housing be inspected for lead hazards prior to occupancy.
  - ✓ Require that home sellers provide a lead risk assessment to buyers, like what is now required for radon.
  - ✓ Streamline application processes for housing improvements by allowing New Jersey Department of Community Affairs applicants to be approved based on their home addresses within a state-approved geographic designation.
- **Health:**
  - ✓ Train community health workers who work with families in the principles of healthy homes.
  - ✓ Require health workers to conduct a healthy homes assessment in client homes and to make referrals to lead services as needed.
  - ✓ Support efforts that increase and standardize reimbursements for childhood blood lead level testing.
  - ✓ Increase local and county health department resources for responses to elevated blood lead levels.
  - ✓ Require health care professionals to perform lead screening on pregnant persons under certain circumstances. (See Assembly Bill No. 4848 / Senate Bill No. 3616 of the 2024–2025 legislative session.)
  - ✓ Invigorate the lead poisoning education campaign so that the public knows to demand lead-safe housing, paint, water, and soil.
  - ✓ Improve the *New Jersey Annual Lead Surveillance Report* by adding geocoded maps of lead surveillance data by census tracts, and make it easily accessible for political leaders, school officials, and the public.

Stop the Growing Stream of E-Waste

Technologies are becoming ever important in our lives, causing an upsurge in electronics sales. Concurrently, the lifespans of these technologies are decreasing, with consumers often buying new devices after just a few years. This causes a rapid and devastating cycle of consumption. In 2019 alone, nearly seven million tons of e-waste was generated in the United States, according to Earth911, and only 15 percent of e-waste was recycled.

The materials used in electronic devices are complex and often valuable, including gold, silver, platinum, and cobalt. However, these precious materials are combined with lead, mercury, dangerous chemicals, and other materials that are toxic to human health and the environment.

While New Jersey enacted the Electronic Waste Management Act in 2011 to put in place recycling standards, it only considers "covered electronics," leaving out many other devices. There is currently no strong national standard that covers the e-waste recycling process, resulting in 25 states with varying recycling processes and regulations. Therefore, no state individually has the market power to incentivize large manufacturers to design more durable products and change practices.

When e-waste is not recycled, it is often sent to commercial incinerators or landfills. Both commercial incinerators and landfills are located disproportionately near low-income and minority communities in the United States, feeding into vicious cycles of pollution burdens and poor public health outcomes. When e-waste is burned, it releases plastics, gases, and metals into the air, contributing to air pollution and climate change.

The precious materials used in electronics can be recovered through recycling, either formally or informally. While formal e-waste recycling has increased in New Jersey in the past few years, informal recycling is much cheaper for producers, so e-waste is still shipped to developing countries, often in Asia, where regulations are less stringent. All told, about 23 percent of developed countries' e-waste is sent to foreign nations.

At these locations, both adults and children work to recover these valuable materials, often without protective equipment or knowledge of the true dangers of the substances they are handling, thereby causing major health issues that can include decreased lung functions, adverse pregnancy outcomes, and behavioral changes. However, many make their living off of the e-waste recycling business.

While recycling standards have improved in New Jersey, the root issue of built-in obsolescence has been untouched. Built-in obsolescence is the practice of technology manufacturers purposely decreasing the lifespan of their products in order to increase product sales over time, thereby ensuring greater profits for their business. These trends are at the heart of the current e-waste issue, and they are not solved through e-waste recycling.

PRIMARY CONCERNS

- Recycling is currently seen as the leading solution of e-waste, but it does not solve the root issues of built-in obsolescence and overconsumption in developed nations.
- Valuable raw materials found in e-waste are often not recovered, causing the producers of new products to drain more of the needed materials for their devices.
- A patchwork of laws across the United States means that no state has enough market share to force companies to design more durable products.
- When e-waste is not recycled, it is often dumped in landfills, where toxins often leech into the local environment, or burned in incinerators, contributing to air pollution.
- Landfills and incinerators in the United States are disproportionately near minority and low-income communities, exacerbating health inequalities.
- Developing nations are being shipped e-waste for informal recycling, greatly harming the health of people and the environment.

POLICY RECOMMENDATIONS

- Incentivize the New Jersey Department of State Business Assistance program to support small and medium electronics repair businesses.
- Support federal or state initiatives, including by the following:
  - ✓ Enacting a right-to-repair law to give consumers an avenue to repair rather than toss their electronic devices
  - ✓ Directing agencies charged with consumer protection to investigate built-in obsolescence as a manufacturing strategy, with public reporting
- Collaborate with other states in the region to create a standard for e-waste recycling focused on extended producer responsibility.
  - ✓ Ensure that companies that produce products are responsible for disposal and/or material reuse.
- Promote leasing programs for electronic devices.

Close the Loop on Textile Waste

Textile waste consists of all-fiber-based products, such as clothing, linens, shoes, etc. Waste is generated at all levels. This includes waste from spinning, weaving, knitting, dyeing, finishing, and consumer use. In clothing alone, Vox reports that 60 percent of garments are made with synthetic materials. These are largely oil-based materials (e.g., polyester, acrylic, nylon), which make them by-products of the fossil fuel industry. This contributes to two large problems: microplastics in waterways and climate change. According to the US Environmental Protection Agency, the recycling rate for all textiles in 2018 was nearly 15 percent, or 2.5 million tons. Landfills received 11.3 million tons of municipal solid waste textiles and 3.2 million tons of textiles were combusted with energy recovery (i.e., incinerated). In a world with finite resources on top of the global threat of climate change, these statistics are quite alarming. Like other waste streams in New Jersey, textile waste is disproportionately incinerated in low-income, minority communities.

Fast Fashion

The Council for Textile Recycling indicates that the average consumer disposes of 70 pounds of textiles per person per year. This can be widely attributed to a cultural shift that is often called "fast fashion." Consumers are expected to follow trends in style that change every week. This has led consumers to increase their purchasing of products while at the same time prioritizing cheaper goods. Items such as garments and home decor are now short-term investments that are expected to become "unfashionable" quickly.

All told, moving toward the establishment of a circular economy (where products have long lifecycles) can help mitigate current waste and disposal trends that negatively impact the planet.

PRIMARY CONCERNS

- The volume of textiles that Americans send to landfills and incinerators as waste is growing, according to the United States Environmental Protection Agency.
- There is a shortage of curbside textile recovery programs.
- The laundering and wear of consumer textiles is the largest contributor of microplastics in our waterways.
- The manufacturing process of synthetic textiles consumes high levels of energy and utilizes oil-based chemicals, all while generating high levels of pollution.
- Preliminary studies show that synthetic fibers likely contribute to poor health in humans.

POLICY RECOMMENDATIONS

- Introduce legislation that incentivizes markets for the recovery of textile waste and mandates extended producer responsibility for the proper reuse or disposal of products at the end of use.
- Request that the New Jersey Department of Environmental Protection create educational resources both on the harms of microplastics and on how to prevent their shedding from textiles.
- Promote circular-economy markets in order to reduce textile waste at all levels of manufacturing and consumer use. This would not only help close the loop for this waste stream, but also create a new economic sector.

What is a Circular Economy?

Rather than the familiar "take, make, use, and dispose" cycle of our current economy, a circular economy is restorative and regenerative in that it takes the waste and disposal aspects out of products, thereby establishing a closed loop for what we consume (e.g., it is shared, repaired, reused, or recycled).

Ensure Workplace Health and Safety

In 1983, the New Jersey Legislature found that, when enacting the Worker and Community Right to Know Act, "the proliferation of hazardous substances in the environment poses a growing threat to...public health, safety, and welfare...and that individuals have an inherent right to know the full range of risks they may face so that they can make reasoned decisions and take informed action concerning their employment and their living conditions." It further declared "that it is in the public interest to establish a comprehensive program for the disclosure of information about hazardous substances in the workplace and community."

This precedent-setting law has protected our health and environment. It has saved countless lives because of its requirements for thousands of New Jersey facilities—from chemical plants to hospitals—to report to the public any chemicals that are used on-site, to label chemical containers, to train employees, and to make hazardous substance fact sheets available. The grassroots campaign for the law—and the impact of the 1984 chemical disaster in Bhopal, India—also led to passage of the state's Toxic Catastrophe Prevention Act in 1986, which required high-hazard chemical facilities to develop comprehensive accident prevention plans.

There are approximately 90 facilities in New Jersey using hazardous materials that are regulated under federal and state law. Almost all of these chemicals are necessary for industry operations, but that does not negate their risks if workers and the public are exposed as a result of an unintended disaster.

PRIMARY CONCERNS

- Potential rollbacks of federal worker health and safety protections place New Jersey workers at risk.
- The state's Toxic Catastrophe Prevention Act was last updated in 2003 and needs to be updated based on new data and threats.
- The transportation of highly hazardous chemicals by rail poses a risk, and rail safety standards lack protections for disasters originating in facilities.
- For both facilities and rail, first responders and the public more broadly should be given more information so that they can be better prepared in the event of a disaster.

POLICY RECOMMENDATIONS

- Strengthen the Toxic Catastrophe Prevention Act.
  - ✓ Formally adopt the Safer Communities by Chemical Accident Prevention rule, which finalizes revisions to the US Environmental Protection Agency's Risk Management Program, to further protect vulnerable communities from chemical accidents, especially those living near facilities in industrial sectors with high accident rates.
  - ✓ Cover industrial warehouses (and potentially other types of facilities) that store large quantities of "hazardous" substances, not just "extraordinarily hazardous."
  - ✓ Improve the rules of the Toxic Catastrophe Prevention Act for the better evaluation of potential risks and the implementation of practicable, inherently safer processes and designs.
  - ✓ Increase public transparency around chemical safety information submitted by facilities to the New Jersey Department of Environmental Protection.
- Support rail safety legislation that requires two-person crews, wayside detectors, the sharing of bridge inspection reports with the state, and limits on the length of trains carrying hazardous materials. (See Assembly Bill No. 4460 / Senate Bill No. 3389 of the 2024–2025 legislative session.)
- Expand the "right to know" for first responders and the public.
  - ✓ Create and expand information-sharing systems for first responders so that they include details about chemicals stored and being transported in their jurisdiction. This way first responders can have the ability to properly respond in the event of a disaster.
  - ✓ Secure funding for additional training for first responders on how to appropriately deal with various chemical disasters.
  - ✓ Increase public transparency, without compromising security, so that the public can take appropriate steps to protect themselves and their communities from chemical disasters.

Eliminate Lead Exposure to Wildlife

Spent lead ammunition and tackle are dangerous when ingested by wildlife and carry long-term environmental impacts. The United States Fish and Wildlife Service prohibited lead shot in the hunting of waterfowl and coots in 1991. Lead has been used to manufacture ammunition and fishing tackle for centuries, though its use is being phased out in many states. Lead ammunition and tackle can be ingested directly by wildlife or dissolved into the soil. Once in the soil, lead can be biologically incorporated into plants and invertebrates, which are then ingested by wildlife. In some parts of the United States, the use of lead shot for hunting waterfowl in North America has been banned. Some states have even more stringent guidelines restricting such uses of lead. These restrictions on the use of lead were successful in reducing lead exposure to waterfowl species, resulting in less lead in animal tissue. In New Jersey, it is illegal to hunt ducks, geese, brant, rails, snipe, or moorhens while possessing shot other than approved nontoxic shot. However, the continued use of lead tackle and lead ammunition in other hunting and fishing pursuits maintains some risk for wildlife. Mortality rates linked to lead toxicity in wildlife remain high in some localized areas despite some legislative action to phase out the use of lead. Scavengers such as condors, vultures, and eagles can be exposed to lead by consuming carcasses of animals harvested with lead ammunition.

There has been an extensive effort in the development, testing, and regulation of alternatives to lead-based ammunition in recent years. Manufacturers have developed nontoxic ammunition that can be used safely in all gauges of modern shotguns, as well as nontoxic rifle bullets. Dozens of substitutes for lead fishing tackle have entered the marketplace in recent years. Nontoxic substitutes for tackle and ammunition include bismuth, steel, tin, and tungsten.

PRIMARY CONCERNS

- According to the Center for Biological Diversity, as many as 20 million birds and other animals die each year from lead poisoning.
- Although there are numerous sources of lead in the environment, research reveals that spent lead ammunition and lost fishing tackle are the most frequent causes of lead exposure and poisoning in wildlife.
- Lead can cause damage to the nervous system, paralysis, and even death in wildlife, and particularly birds. At lower levels, lead causes damage to tissues and organs, the immune system, the reproductive system, and the neurological system.

POLICY RECOMMENDATIONS

- Restrict the use of lead in ammunition and tackle. New Jersey should ban the use of small lead sinkers in all parks and wildlife areas.
- Create nonlead zones in parks and wildlife areas.
- Promote alternatives to lead in fishing and hunting materials.

THANK YOU

The New Jersey LCV Education Fund would like to thank the over 30 partner organizations that contributed to the creation of the 2026 Environmental Policy Guide. We greatly appreciate their contributions to this effort, their expertise, and their commitment to safeguarding New Jersey's environment for generations to come.

We acknowledge and thank Isabel Molina, James Thompson, Adam Nolan, Anthony Taddeo, and Alissondra Gutierrez for their thoughtful input, not only on this project, but in the development of important environmental policies and programs for the NJ LCV Education Fund. We also thank Debbie Mans of TWENTYTWENTY public affairs for her expertise and guidance in managing this project.

As with any collaborative effort many views were expressed during the writing of the Environmental Policy Guide and it is important to note that the perspectives presented herein solely reflect those of the New Jersey League of Conservation Voters Education Fund.

New Jersey LCV EDUCATION FUND

PO Box 1237 · Trenton, NJ 08607-1237

609.331.9922

njlcvef.org

@NJLCV

Printed on recycled paper. Union.